

Markets and operations

This article reviews developments in international and domestic financial markets in the first quarter of 1999, and describes official operations in financial markets.

- *The euro was successfully launched on 4 January.*
- *Euro-denominated bond issuance was heavy during the first quarter.*
- *Economic indicators in the euro area were generally disappointing, and the euro exchange rate weakened over the quarter. After the end of the quarter on 8 April, the European Central Bank (ECB) announced a cut in interest rates of 50 basis points to 2.5%.*
- *Economic indicators in the United States were unexpectedly strong, and market expectations of the path of US interest rates were revised upwards, but there was no change in the official target for the federal funds rate. Equity prices rose further.*
- *Japanese monetary policy was eased and public debt management policy was modified. Bond prices were volatile and equity prices rose.*
- *In the United Kingdom, the Bank of England's repo rate was reduced on two occasions during the quarter, by a total of 75 basis points, to 5.5% (and by a further 25 basis points on 8 April).*
- *Implied future sterling short-term interest rates fell over the quarter, but the implied short-term interest rate curve became upward-sloping, suggesting a rise in short-term interest rates during 2001. Equity prices rose.*

International markets

The euro area

The euro was successfully introduced over the New Year weekend. All the necessary infrastructure for the new currency, including the TARGET payments system, was fully operational at the opening of business on 4 January, and most securities denominated in 'legacy currencies' had been re-denominated as planned. There was a spate of euro-denominated bond issues in the wake of the launch of the euro. Over the quarter as a whole, total issuance of corporate euro-denominated debt securities amounted to almost \$120 billion (see Table A).

Euro-area economic data released during the first quarter generally indicated low inflation and weaker-than-expected output growth, particularly in Germany and Italy; forecasts of output growth in the euro area were revised downwards. Against this background, expectations grew that the ECB would reduce official interest rates; and the euro exchange rate weakened, contrary to some earlier expectations that it would appreciate sharply at the beginning of the year (see discussion of foreign exchange markets below). On 8 April, the ECB announced a 50 basis point reduction in its two-week repo rate to 2.5%, with effect from 12 April.

Changes in government bond yields were generally modest in the quarter (see Chart 1). In Germany, ten-year yields rose by around 15 basis points, but yields on shorter-dated government securities

Table A
Corporate bond issuance by currency

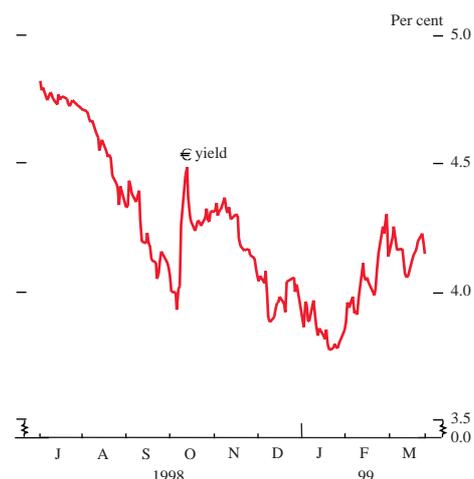
\$ billions; *percentage share of total in italics*

		US\$		Sterling		Euro		Other	
1998	Q1	116	48	28	12	72	30	23	10
	Q2	96	52	14	8	59	32	17	9
	Q3	58	46	14	11	41	32	14	11
	Q4	71	52	21	15	33	24	11	8
1999	Q1	131	45	24	8	119	41	19	7

Note: Totals of percentages may not sum to 100% because of rounding.

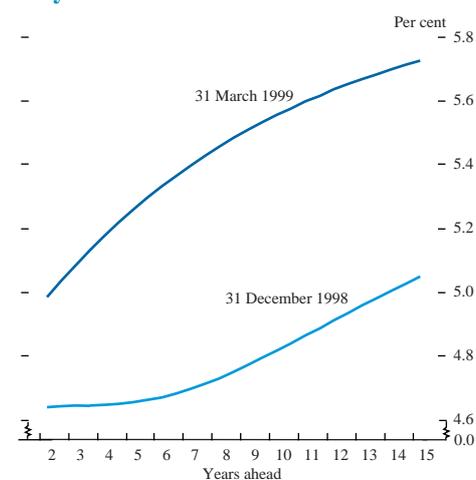
Source: CapitalData Bondware.

Chart 1
Ten-year euro government bond yields^(a)



(a) Derived from Svensson par yield curve for French and German government bonds.

Chart 2
US yield curve^(a)



(a) Derived from Svensson par yield curve.

fell by up to 25 basis points, largely in anticipation of lower ECB rates. Spreads among euro-area government securities changed little during the quarter: short-dated yields converged, while longer-dated yields in Italy, Spain and Portugal moved away slightly from German levels.

European equity market performance in the first three months of the year was mixed, and appeared to reflect output growth and business confidence within each country. In Germany, the Dax index fell by 2%; in contrast, in France, where economic growth indicators were stronger, the CAC index gained 6%. The Dow Jones Euro Stoxx 50 price index (covering 50 blue-chip stocks across the whole of the euro area) rose by 7% over the quarter.

US developments

Three-month interest rates implied by eurodollar futures for June, September and December 1999 rose by some 10 to 20 basis points, and implied rates beyond mid 2000 increased by around 50 basis points. Over the quarter as a whole, the US yield curve shifted upwards by more than 50 basis points for ten-year bonds, to 5.6% (see Chart 2).

Early in the quarter, major government bond markets were supported by 'safe-haven' flows from emerging markets, especially Brazil. The upward shift in the yield curve was concentrated in late January and February, when some safe-haven flows were reversed, and when a number of data releases were key in changing perceptions about the US economy. Stronger-than-expected data for fourth-quarter GDP were published towards the end of January, followed in early February by a strong employment report. Markets feared that a tightening of monetary policy would follow. In his 23–24 February ('Humphrey-Hawkins') testimony on monetary policy, Federal Reserve Chairman Alan Greenspan said that 'the Federal Reserve must continue to evaluate, among other issues, whether the full extent of the policy easings undertaken last fall to address the seizing-up of financial markets remains appropriate as those disturbances abate'. This added to market expectations that official interest rates might be raised, but those expectations quickly diminished, as the markets failed to find much sign of a pick-up in inflationary pressure in the official data released in March. In particular, the February labour report, released on 5 March, showed a smaller-than-expected rise in average hourly earnings and a higher-than-expected unemployment rate. These data led to a fall in yields not only in the United States but in all major government bond markets. The Federal Open Market Committee left the official federal funds target rate unchanged at 4.75% at its 30 March meeting.

US equity prices rose in the first quarter, continuing the recovery begun in the final months of 1998. Information technology stocks performed particularly strongly, despite rising price/earnings ratios, investor concerns over earnings potential, and Microsoft's continuing anti-trust case. Stock prices rose sharply after the release of the February employment report, which reduced fears of higher interest rates, and later in March, when oil shares rose in the light of OPEC agreements to restrict oil production in order to maintain prices. The Dow Jones Industrial Average rose by 7% on the quarter, briefly exceeding 10,000; the S&P 500 and the Nasdaq Composite rose by 5% and 12% respectively.

Japanese developments

Japanese money and bond markets were dominated by developments in monetary and public debt management policies, and by continuing uncertainty about the economic outlook. In the light of disappointing economic data releases, rising long-term interest rates and yen appreciation, the Bank of Japan (BoJ) lowered its target rate, the overnight call rate, on 12 February by 10 basis points to 0.15%, and indicated that it intended to keep the overnight call rate as low as possible. In the second half of the quarter, the overnight call rate fell further, and remained at around 3 basis points during March.

By pushing the overnight call rate close to zero through its open market operations, the BoJ sought to depress term money-market rates and bond yields. In addition, from 12 February, the BoJ broadened the range of eligible collateral in its market operations, a move announced on 13 November 1998, in a further attempt to stimulate credit expansion.

Volatility in Japanese government bonds (JGBs) remained high. Ten-year yields, which had been as low as 0.7% on 2 October 1998, traded between 1.6% and 2.4% during the first quarter, reaching a peak closing-level on 5 February, largely reflecting market concern about the scale of upcoming bond issuance and the reduced role of the Trust Fund Bureau (TFB) in the bond markets (see Chart 3). However, the cut in the overnight call rate on 12 February and announcements by the Ministry of Finance (MoF) the following week encouraged investors back to the market. The MoF announced that the TFB would resume secondary market purchases of JGBs, albeit at around half the previous rate. At the same time, the MoF announced that it would switch funding away from supply of ten-year bonds in favour of more two and six-year issues. These arrangements were extended on 18 March, with the MoF announcing that the TFB would continue to purchase bonds for three months after April. The MoF also indicated that it would continue to reduce the issuance of ten-year JGBs in favour of issuance of four to six-year bonds and Treasury bills. These developments, together with the easing monetary stance, helped ten-year JGB yields to decline sharply.

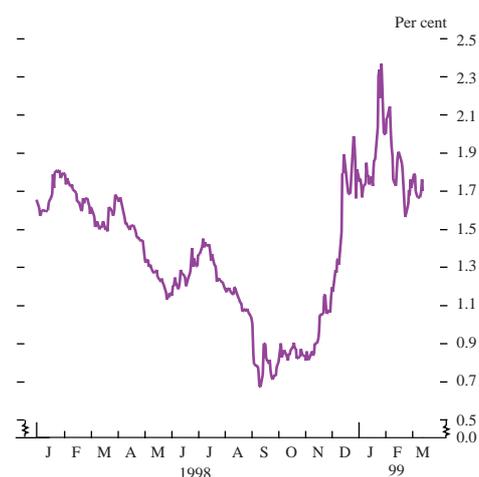
Equity prices moved sharply higher during the quarter, especially in March, with the Nikkei 225 index rising by 14%. These gains have been sustained since the end of March, which suggests that they were not purely seasonal changes in advance of the end of the fiscal year. There appeared to have been some positive re-rating of Japanese stocks by foreign fund managers, who had been underweight in Japanese securities for some time, perhaps in the light of news of corporate restructurings, merger and acquisition activity, and an improving outlook for the banking sector in the wake of the official recapitalisation programme. The market may also have become more optimistic about the macroeconomic outlook for Japan, although data releases failed to provide any conclusive evidence of recovery.

Foreign exchange markets

G3 currencies

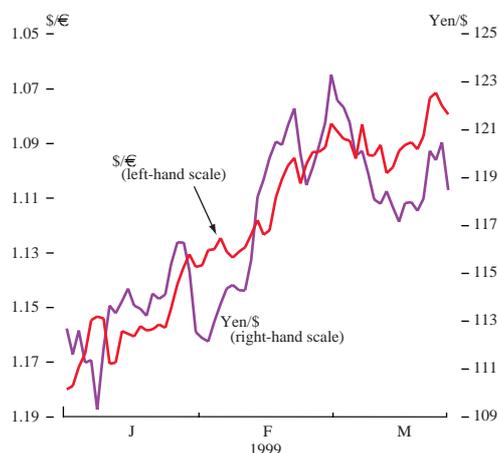
The US dollar appreciated against other major currencies in the first quarter of 1999 (see Chart 4). According to market participants, the main factors behind the dollar's strength were the continuing strong

Chart 3
Ten-year Japanese government bond yields^(a)



(a) Derived from Svensson par yield curve.

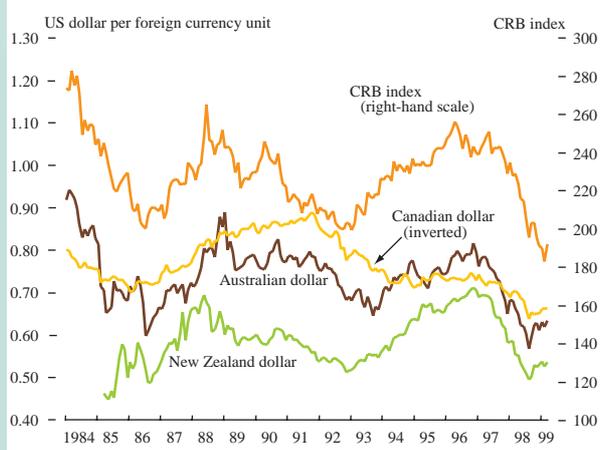
Chart 4
Dollar exchange rates



Commodity currencies

The currencies that usually move most closely with commodity prices have been strong this year despite continued falls in commodity prices, in some cases to historic lows. The benchmark Commodity Research Bureau (CRB) commodity price index was broadly unchanged over the first quarter of 1999, and at one point touched its lowest level in more than 25 years. But the Australian, New Zealand and Canadian dollars all appreciated against the US dollar in the first quarter of 1999. Chart A shows the typically strong correlation between the nominal US dollar exchange rates of these countries and commodities prices as measured by the CRB index.

Chart A
Nominal US dollar exchange rates vs the CRB index

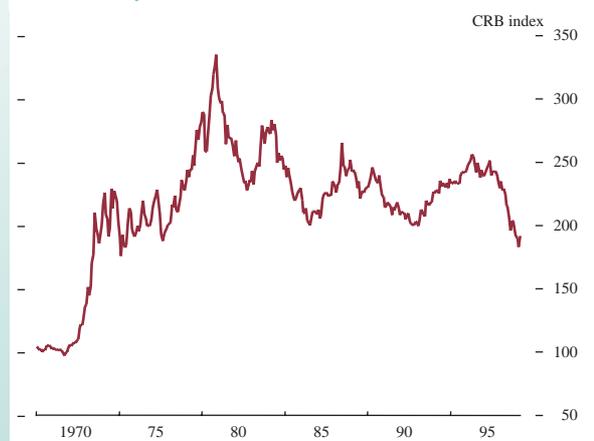


The correlation between the commodity currencies and commodity prices has declined significantly this year. For example, in 1998 the correlations between daily movements in the Australian and New Zealand currencies and the CRB index were around 75% and 80% respectively. However, in the first quarter of 1999, they fell to around 5% and 30% respectively.

Various reasons explain the recent strength of these commodity currencies, including the following:

- Positive domestic economic indicators have strengthened, reinforcing the impression (in the case of the Australian and New Zealand dollars) that the impact of the Asian crisis may be receding.
- Commodity prices have been at their lowest since the early 1970s (see Chart B). There is now a growing perception among investors that commodity prices may not be far from bottoming out, or at least that they are unlikely to continue to fall as fast as they did in 1998. This view reflects the relatively strong performance of some major industrial economies and the fact that many economies, especially in Asia, have had a significant easing in monetary conditions and an improvement in external competitiveness.
- Many of the currencies in question are recognised as being at or near to previous cyclical lows, in both real and nominal terms.

Chart B
Commodity Research Bureau index



performance of the US economy, robust stock markets, and a perception that the sustainable growth rate of the US economy might have increased. Interest rate differentials moved in the dollar's favour, as other countries cut official rates, and perceptions that US interest rates might be raised gained ground, particularly after the Humphrey-Hawkins testimony in late February. However, fears of a tightening of US monetary policy abated in March, for the reasons described above.

The rise in the dollar was not uniform. Against the yen, the dollar strengthened by 5% overall, although it fluctuated much more widely. In the first few trading days of 1999, the dollar fell, to a low of ¥108.70 on 11 January, its weakest level in 28 months. With the market nervous that the yen might appreciate very sharply at that point, rumoured intervention by the BoJ reversed the rise in the yen and took the exchange rate back above ¥110. Official

statements from Japan in January and February assisted the dollar's recovery: the BoJ and the MoF both indicated that they would be content with a weaker yen.

The dollar strengthened rapidly against the yen in mid February, when the BoJ lowered its overnight call rate. As a result, the dollar reached as high as ¥123.71 in early March. For the rest of March, the dollar traded lower, between ¥117–121, but was fairly volatile within this range. The exchange rate was subject to a number of short-term influences over the month, including the rally in the Nikkei 225, signs of investor optimism about the Japanese economy, and capital inflows relating to the Japanese fiscal year-end. Implied volatilities for the dollar-yen rate from the options market were lower than in the previous quarter; however, implied volatilities remained higher for the yen than for other currencies.

The dollar appreciated steadily against the euro in the first three months of 1999, by 8.3%, despite some initial expectations that the euro would appreciate sharply against the dollar early in the New Year. The euro exchange rate reached a high of €1=\$1.1892 on 4 January, but fell to €1=\$1.0794 by the end of the quarter.

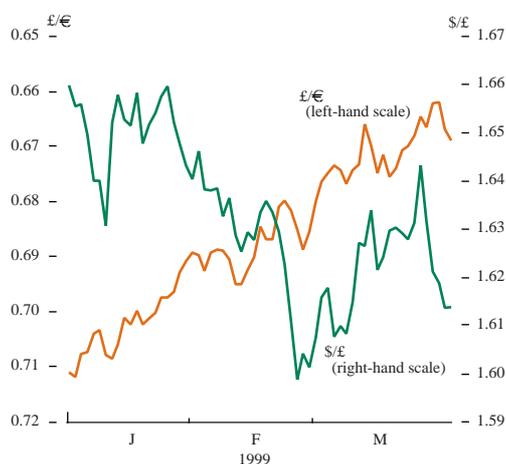
Market participants suggested that some of the depreciation of the euro against the dollar could be explained by the unexpected strength of the US economy. US interest rates and bond yields rose during the quarter in absolute terms and relative to those in the euro area, making the dollar a more attractive currency for investors to hold. However, the euro depreciated against other currencies, such as sterling, which suggests that euro-specific factors were also influential. Economic data releases from the euro area in the first quarter were generally weaker than expected. Despite reasonably strong consumer sentiment, industrial production and confidence were lower than market expectations. Market sentiment was also affected by indications that euro-area governments would not welcome an appreciation of the euro. In the context of concerns about euro-area growth, markets were uncertain about the monetary policy response of the newly established ECB. This combination of influences pushed the euro lower.

Towards the end of the quarter, the euro depreciated further as the situation in Kosovo deteriorated: NATO's commencement of air strikes on 24 March provoked selling of the euro, which reached lows for the quarter on 29 March at \$1.0683 and £0.6608. The conflict in Kosovo also caused some nervousness in central and eastern European currencies, and in the Greek drachma. The drachma weakened from GrD 321.5 against the euro on 23 March to GrD 326.5 at the end of the quarter. However, it remained stronger than its central parity against the euro in the Exchange Rate Mechanism II (ERM II) throughout the period. The other ERM II currency, the Danish krone, was stable over the quarter.

Sterling

Sterling appreciated by 5.2% against the euro over the quarter, but depreciated by 3.0% against the dollar (see Chart 5). Sterling's effective exchange rate index (in which the euro has a 65% weight) appreciated by 3.2%. Some market participants attributed sterling's movements to the same factors, described in previous sections, that influenced the euro and the dollar. UK official interest rates were reduced by a total of 75 basis points during the quarter; although

Chart 5
Sterling exchange rates



such a fall had been anticipated by the market at the beginning of the year, the path of sterling short-term interest rates implied by futures contracts for the second half of 1999 fell during the quarter (see Chart 6). The path of implied future euro short-term interest rates also fell, but that of dollar rates rose.

Among other factors, mergers and acquisitions added to the demand for sterling. The market may also have increased its estimate of the United Kingdom's trend growth rate relative to that of the euro area, potentially increasing the relative attractiveness of UK equities, which could have encouraged demand for sterling.

Emerging market currencies

The focus generally shifted away from the emerging markets in the quarter, as many of the Asian currencies hit by the emerging market crisis in 1997 began to recover. The main exception was Brazil, where the real depreciated significantly early in the quarter, before recovering a little in March.

On 12 January, the Brazilian authorities shifted the top of their intervention band for the real from R1.21 to R1.32 against the US dollar, in the light of increasing capital outflows. However, the market did not see these new bands as credible, and started to sell the currency, ultimately forcing the Brazilian authorities to abandon their exchange rate target on 15 January and officially float the real on 18 January. At the same time, Brazilian short-term interest rates rose by around 15 percentage points, to 45%. In early March, the real reached a low of R2.195 against the dollar,

Bank of England participation in BIS loan to Brazil

The Bank for International Settlements (BIS) is involved with the IMF and other multilateral organisations in a financing package for Brazil. The BIS facility to Banco Central do Brazil (BCB) totals \$13,280 million. The loan is effectively guaranteed by 19 participating central

banks (PCBs), including the Bank of England, and the BIS. In the event of any default by the BCB in the payment of interest or repayments of amounts drawn under the BIS facility, the BIS may require the PCBs to substitute for the BIS in the provision of the facility. The United Kingdom, France and Germany have the same share of the facility, each at \$1,250 million. The Federal Reserve Bank of New York (FRBNY) has the largest share, at \$5,000 million (see the table).

Two drawings have been made under the BIS facility to date:

- \$4,150 million on 18 December (UK share \$391 million).
- \$4,500 million on 9 April (UK share \$426 million).

The Bank of England's participation in the Substitution Agreement with the BIS is indemnified by HM Treasury.

The Bank of Japan has chosen not to participate in the BIS facility, but has provided BCB with a separate facility of \$1,250 million.

Participation in the BIS facility to Brazil

	Maximum amount of principal (\$ millions)
Banque Nationale de Belgique	300
Bank of Canada	500
Danmarks Nationalbank	50
Deutsche Bundesbank	1,250
Bank of England	1,250
Banco de Espana	1,000
Suomen Pankki—Finlands Bank	50
Banque de France	1,250
Bank of Greece	50
Central Bank of Ireland	50
Banca d'Italia	830
Banque Centrale du Luxembourg	50
Osterreichische Nationalbank	50
De Nederlandsche Bank N.V.	300
Banco de Portugal	350
Schweizerische Nationalbank	250
Sveriges Riksbank	300
FRBNY	5,000
Norges Bank	50
BIS	350
Total	13,280

representing a 45% depreciation in the dollar value of the currency since 4 January.

The Managing Director of the International Monetary Fund (IMF), Michel Camdessus, announced on 8 March his intention to recommend the revised economic programme for 1999–2001, proposed by the Brazilian government, to the IMF Executive Board. A growing recognition that the real had become undervalued and that the proposed macroeconomic reforms were credible lent support to the currency. By the end of March, Brazilian financial markets had stabilised: the real had steadily recovered to around R1.75, and short-term interest rates had eased slightly to 42%. A rally in the domestic stock market also reflected increased economic confidence, and the IMF approved the revised economic programme on 31 March. The situation continued to improve in April.

The events in Brazil had some knock-on effects in other markets, but there was generally much less contagion than there had been from the Russian crisis last year. For example, the real's devaluation drew renewed attention for a time to Hong Kong and China, where there was already concern at the scale of debts at GTIC, China's second-largest finance firm, which had gone into liquidation.

Sterling markets

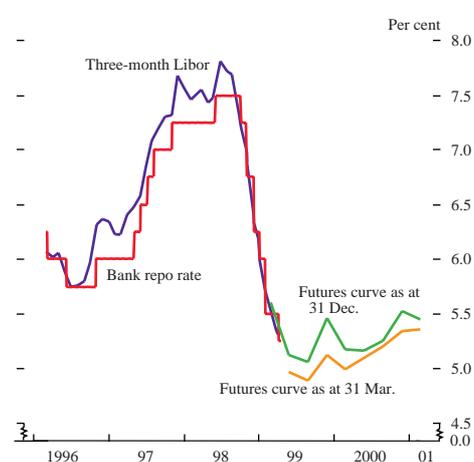
Short-term interest rates

In the United Kingdom, the official repo, cash money-market rates and interest rates implied by short sterling futures for the second half of 1999 all continued to fall in 1999 Q1 (see Chart 6). By the end of the quarter, the official repo rate stood at 5.5% and three-month Libor was 5.32%, compared with end-1998 levels of 6.25% and 6.26% respectively. Implied short-term interest rates from mid 2000 onwards changed relatively little, and at the end of the quarter, the rate curve implied by the short sterling futures market and the interest rate swap market for dates in and beyond 2001 was fairly flat in the range 5¹/₄%–5¹/₂%.

The official repo rate was cut twice in the quarter, by 25 basis points on 7 January and by 50 basis points on 4 February. A 75 basis point cut in the quarter had been largely discounted in the short sterling futures market at the beginning of the year: on 4 January, the March contract implied three-month Libor at 5.56%. In the first quarter of 1999 as a whole, implied interest rates derived from the June and September 1999 short sterling futures contracts fell by around 15 basis points (see Chart 6). At the same time, the 'Millennium spike'⁽¹⁾ in this market became less pronounced, with the interest rate premium of the December 1999 over the average of the September 1999 and March 2000 contracts falling from 34 to 18 basis points. The successful and orderly launch of the euro may have given markets more confidence that technical challenges would be overcome. Before 1998, a year-end premium had not normally been observed in the sterling market.

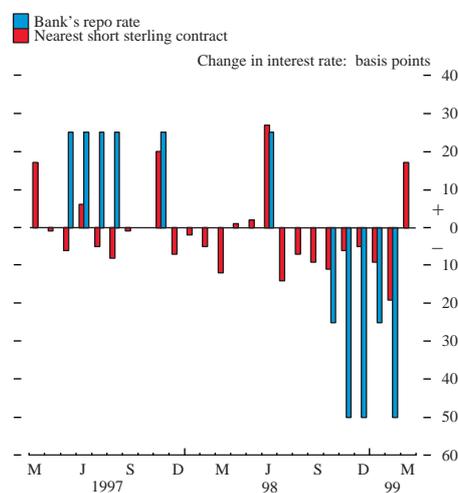
Domestic factors continued to dominate changes in implied future UK interest rates. In the first half of the quarter, market

Chart 6
UK three-month Libor cash and futures markets



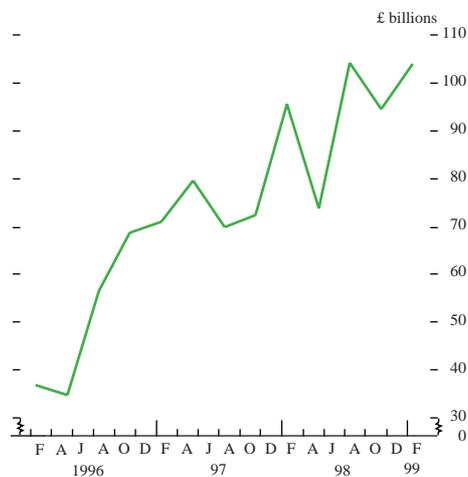
(1) The 'Millennium spike' refers to the high three-month interest rate implied by the December 1999 short sterling future. It probably reflects speculation that systems difficulties could lead to tighter liquidity conditions around the year-end.

Chart 7
Interest rate announcements: change on the same day in nearest short sterling contract^(a)



(a) In the contract delivery months of March, June, September and December, the next nearest contracts are used.

Chart 8
Growth of repo outstanding: February 1996–February 1999



expectations about future output growth and inflation were revised down. At the same time, the trend in implied short-term interest rates was reinforced by the Brazilian crisis and the associated fall in implied future US interest rates. The three-month interest rate implied by the June 1999 short sterling contract fell to 4.99% on 11 February. The fall in expected future rates extended to rates implied for 2002 and beyond. Implied rates for 2002 fell by more than 40 basis points, and ten-year swap rates were around 25 basis points lower than at the end of 1998.

Market sentiment changed after mid February. This partly reflected the emergence of survey evidence showing some recovery in business optimism. In addition, the projection in the *Inflation Report*, published on 10 February, indicated that, in the Monetary Policy Committee's view, inflation was likely to exceed the 2½% target if interest rates changed as implied by short sterling futures markets. Market concerns about the possibility of a rise in US interest rates also put upward pressure on implied UK rates for a period, but the release of US labour statistics on 5 March reversed some of this upward international pressure. Thus, on balance, implied future UK interest rates rose in the second half of the quarter. The largest increases during this period were in interest rates implied for 2001 and beyond, steepening the curve and reversing the earlier fall in rates implied for these dates.

Although the reduction in short-term interest rates over the first quarter had been largely anticipated at the end of 1998, the timing of the step reductions was not certain and the announcements, on the days when they came, did affect the interest rates implied by the nearest short sterling futures contract, as Chart 7 shows.

Trading conditions in short sterling futures were generally more stable than in the previous quarter. Volatilities implied by options markets were lower than in 1998 Q4, but remained above the levels seen before their sharp upturn in September 1998.

Gilt repo

According to the Bank's quarterly survey, the gilt repo market grew from £94 billion at end November 1998 to £105 billion at end February this year (see Chart 8). The latest figure for repo outstanding is just above its previous high, reached in August 1998. There are several possible reasons for the growth of the gilt repo market between end November and end February.

First, the stock of refinancing (the amount of assets held by the Bank as a result of its open market operations) was high in February for seasonal reasons, and was £3 billion higher than in the previous November. As a result, the Bank's counterparties had to operate in larger size in the repo market to distribute cash provided in the Bank's open market operations. The maturity profile of the repo market (shown in Table B) shows a marked increase in activity at the nine-day to one-month maturities, consistent with this interpretation.

Second, in November, the effects of the late-summer market turmoil were fresh in the minds of many, and this was thought to have led to some disengagement, even from such a relatively safe instrument as repo, when participants were unsure of the creditworthiness of some of their counterparties. Moreover, at the

Table B
Maturity breakdown of repo outstanding and reverse repo over time^(a)

Per cent	On call and next day	2–8 days	9 days to 1 month	1–3 months	3–6 months	Over 6 months
Repos						
1996 year average	25	32	24	15	4	1
1997 year average	24	24	26	20	5	1
1998 Feb.	14	23	25	19	11	7
May	20	24	19	19	12	8
Aug.	27	15	17	18	11	11
Nov.	23	18	20	16	12	10
1999 Feb.	16	18	28	17	14	7
Reverse repos						
1996 year average	26	29	21	20	4	1
1997 year average	19	25	25	23	6	2
1998 Feb.	14	29	23	19	10	5
May	22	28	17	13	12	10
Aug.	28	20	18	15	7	12
Nov.	24	14	19	20	11	11
1999 Feb.	16	23	19	21	13	8

Note: Totals of percentages may not sum to 100% because of rounding.

(a) From the data reported under the voluntary quarterly arrangements.

Chart 9
Interbank and CD rates vs GC repo (three months)

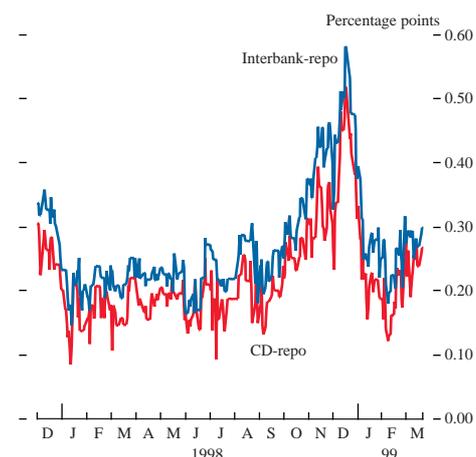


Chart 10
Two and ten-year gilt yields^(a)



(a) Derived from Svensson par yield curve.

end of 1998, the approach of the euro led many to wind down positions in order to make the transition as smooth and as risk-free as possible. This exaggerated the lack of activity in what is, in any case, normally a quiet time for the market. After the successful introduction of the euro and the calming of markets in the New Year, however, both of the latter two effects were probably largely reversed by the time that the end-February figures were collected.

The spread between unsecured and secured borrowing rates widened sharply at the end of last year, reflecting heightened liquidity and credit concerns. Chart 9 shows that the spread between three-month general collateral repo and interbank rates increased steadily from 20 basis points at the start of September to nearly 60 basis points by the end of the year. Following the introduction of the euro and the easing of some emerging market concerns, the spread reduced to more normal levels.

Throughout the period, two particular gilt-edged stocks were consistently expensive to borrow in the repo market. Institutional demand for long-dated stock has exceeded the limited supply of gilts. As a result, the market has been persistently short of 6% Treasury 2028 (which is the longest-dated gilt and is relatively small in size—£5 billion in issue). This has pushed up the price of the stock and increased the need for market-makers to borrow the stock to cover short positions. In addition, hedging of the 30 and 40-year tranches of the London and Continental Railways issue and other large long-dated issuance (see section on sterling bonds below) will have added to the borrowing demand for 6% Treasury 2028, over which the bonds were priced. This stock is therefore trading special over the period until the end of May, when further supplies are scheduled to be auctioned. Futures-related activity also increased the borrowing demand for 9% Treasury 2008 over the delivery periods for the June and September LIFFE long gilt contracts.⁽¹⁾

The European Banking Federation introduced a new repo agreement, the European Repo Agreement (ERA), early in 1999. Its aim is to consolidate the various master agreements used within the euro area and neighbouring countries into one harmonised standard document. Though the ERA is in most respects similar to the existing Public Securities Authority/International Securities Markets Association (PSA/ISMA) agreement, there are some technical differences and, unlike the PSA/ISMA agreement, it includes financial transactions other than repo, such as swaps and foreign exchange.

Long-term interest rates

Gilt yields rose modestly during the first three months of the year. Movements during the quarter can be split into three phases: yields fell to fresh lows in January, rose during February, then declined in March (see Chart 10). By the end of the quarter, the yield on 5¾% Treasury 2009 had risen on balance by around 25 basis points, to 4.5%. With short-dated yields falling as the Bank repo rate was lowered, the curve became less inverted during the quarter: the spread between the ten and two-year gilt yields narrowed from around -60 basis points to around -30 basis points.⁽²⁾

(1) The 9% Treasury 2008 is by far the cheapest to deliver into these contracts, and so market participants take account of the risk of a potential shortage of the stock for delivery on expiry of the futures contracts.

(2) This spread is calculated using 5¾% Treasury 2009 and 8% Treasury 2000.

The main domestic influences in the early part of the quarter were the downward revisions to the market's expectations for UK output growth and inflation as described in the section on short-term interest rates above. Externally, major government bond markets continued to be supported by safe-haven flows away from emerging markets, especially Brazil.

By late January, these supportive influences were beginning to fade, and yields began to rise. JGB yields rose sharply at the end of January, markets became concerned about a possible rise in US interest rates, and safe-haven flows were partly reversed.

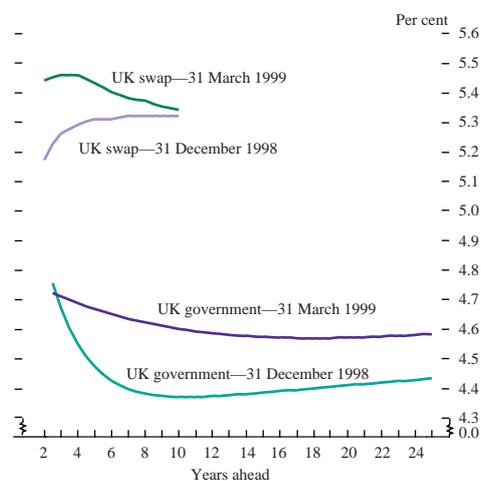
Domestically, market expectations about the economy, and so about the future path of short-term interest rates, were revised upwards. Issuance of long-dated euro-sterling bonds helped to meet the demand left unfilled by long gilt supply (see the section on other sterling bond issues below). Later in the quarter, yields fell back as concerns about a possible rise in US interest rates diminished. The Budget had little obvious influence on the gilt market other than in the very short term.

Institutional factors continued to influence the demand for sterling bonds, including gilts. The minimum funding requirement (MFR) applied under the Pensions Act 1995 to pension funds since 1997 has led to strong institutional demand for bonds, especially long-maturity and index-linked gilts.⁽¹⁾ In addition, there has been substantial demand by insurance companies for bonds, to hedge liabilities arising from guarantees of minimum returns on annuities sold several years ago when yields were much higher than now. Moreover, the demand to borrow gilts on repo means that holders can readily increase their effective yield by being prepared to lend gilts. These factors have led to strong demand for sterling bonds and, given a very limited new supply of gilts and a reduction in liquidity in the gilt market, gilts have become more expensive (ie lower-yielding) than government securities in other countries, relative to comparable instruments such as interest rate swaps. For example, at the end of March, ten-year swap spreads above government bond yields were more than 80 basis points in the United Kingdom, compared with 40 basis points in Germany. This appears to be too big a difference to be accounted for by different perceptions of the credit risk of swaps. In addition, market participants reported a decline in gilt market liquidity, temporarily aggravated by the introduction of electronic trading for the long gilt futures contracts at LIFFE.

These institutional influences on supply and demand in the gilt market have been strong enough to suggest that in current circumstances, gilt yields do not provide an accurate guide to market expectations about future short-term interest rates. The swap market, where liquidity is reported by participants to be greater, provides useful additional information about the expected future path of Libor, given that this rate is directly used on one side of the transaction.

Swap rates fell as official UK interest rates were cut in January and February, and by the end of the first quarter, the swap yield curve had become very slightly upward-sloping, whereas the gilt yield curve was slightly inverted (see Chart 11). This suggests that the swap market foresaw higher future short-term interest rates.

Chart 11
UK gilt and swap curves^(a)



(a) UK government Svensson par yield curve and market swap rates.

(1) A review of the MFR is now under way, to be carried out by the Faculty and Institute of Actuaries Pension Board in conjunction with the Department of Social Security.

Table C
Gilt issuance

Auctions

Date	Stock	Amount issued (£ millions)	Cover	Yield at common accepted price
27.01.99	2½% Index-linked Treasury Stock 2024	450	1.83	2.01%

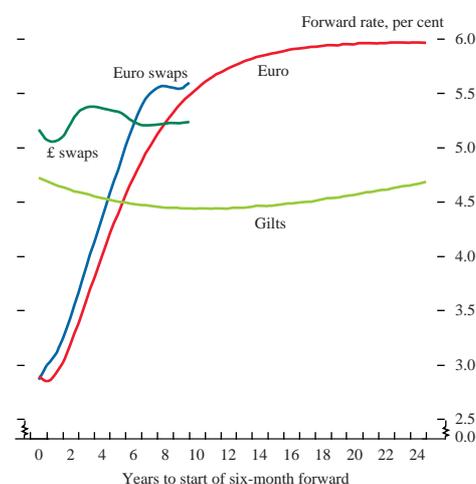
Other

11.01.99 (a)	5¾% Treasury Stock 2009	400		
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Note: Real yields are calculated using a 3% inflation assumption.

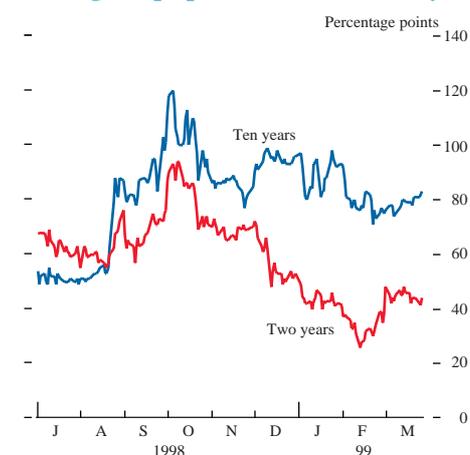
(a) Issued to the DMO as part of a facility to switch holdings of 8% Treasury Stock 2009 into 5¾% Treasury Stock 2009.

Chart 12
Sterling and euro six-month forward rates:^(a) gilts, euro and swaps—31 March 1999



(a) These forwards are derived using Svensson curves.

Chart 13
Sterling swap spreads: two and ten years^(a)



(a) Derived from Svensson yield curves.

Chart 12 compares the forward short-term interest rates implied by sterling and euro swap rates, and by gilts and euro-denominated government securities, as at 31 March 1999. Forward rates implied by gilts were well below those implied by euro government securities for dates beyond about five years in the future, but rates implied by swaps showed closer convergence.

Swap spreads (over government securities) reflect not only supply and demand conditions in the government securities market but also other influences, including market perceptions of the creditworthiness of swap counterparties. Chart 13 shows how UK swap spreads narrowed in the second half of January and February as credit concerns declined, particularly about Latin America and Asia. At shorter maturities, this also reflected a weakening of demand from mortgage borrowers to borrow at fixed rather than floating interest rates.⁽¹⁾ However, short-maturity spreads rose in March, and finished higher on the quarter. This partly reflected a greater demand for short-dated liquid collateral, rather than a rise in credit concerns, triggered by large gilt redemptions (notably the Floating Rate Treasury 1999 on 11 March and 12¼% Treasury 1999 on 26 March). It is also possible that increasing concerns about collateral over the Millennium year-end added to the demand for liquid short-dated gilts and led swap spreads higher.

The Government’s financing programme for 1999/2000 was described in the March *Debt Management Report* (available from HM Treasury). The Debt Management Office (DMO), on behalf of the Government, will aim for gross gilt sales of approximately £17.3 billion in 1999/2000, at a broadly even pace through the year. The DMO will aim to make about 20% of its gilts sales in index-linked stocks, subject to upper and lower limits. On the initial financing requirement, this would result in sales of £3.5 billion by value of index-linked stocks. Five auctions of conventional stocks are planned in 1999–2000: two each in short (3–7 years) and long (15 years and over) maturities and one at medium (7–15 years) maturity. On 20 April, the DMO announced that the estimated gilt sales overshoot for 1998–99 had been revised to £4.1 billion, from £2.3 billion estimated in the March report. The volume of planned gilt sales for 1999–2000 (and the number of gilt auctions) would be unchanged, but planned Treasury bill issuance would be lower. This revision followed publication of the preliminary Central Government Net Cash Requirement for 1998–99, showing a repayment of £4.5 billion, higher than the £2.7 billion forecast in the Budget.

UK investment institutions (insurance companies, pension funds and trusts) made very little net investment in gilts in 1998 Q4,

(1) Mortgage lenders, who have floating-rate liabilities, often pay fixed and receive floating interest in the swaps market, to hedge income from fixed-rate mortgages.

Table D
Official transactions in gilt-edged stocks

£ billions; not seasonally adjusted

	1998/99	1999		
	Apr.–Dec.	Jan.	Feb.	Mar.
Gross official sales (+) (a)	7.3	0.8	0.0	-0.1
Redemptions and net official purchases of stock within a year of maturity (-)	-6.6	-1.9	0.0	-8.5
Net official sales of which net purchases by:	0.7	-1.1	0.0	-8.5
Banks (b)	0.1	-0.5	0.5	-5.7
Building societies	-0.2	-0.1	0.3	-0.1
M4 Private sector	-4.2	0.9	-0.4	-4.1
Overseas sector	4.0	-1.4	-0.5	1.4
LGs & PCs (c)	1.1	0.0	0.0	0.0

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

(b) Excluding repurchase transactions with the Bank of England.

(c) Local Government and Public Corporations.

following disinvestment of £4.6 billion in 1998 Q3. Within the 1998 Q4 total, long-term insurance funds bought £1.6 billion (net) of gilts, compared with net sales of £2.6 billion in the previous quarter. Institutions have been increasing total net investments in UK company securities—which reached a record £8.3 billion in 1998 Q4—and overseas securities.

Strips

Strips turnover continued to be relatively low, averaging around £120 million a week over the first quarter of this year. This is equivalent to under 0.5% of turnover in the conventional gilts market. Some market observers had thought that the inverted yield curve made strips less attractive relative to conventional gilts, and the volume of strips fell from £2.45 billion to £2.35 billion over the quarter.

Index-linked gilts

Real yields for most maturities of index-linked gilts (IGs) fell during the first three months of this year. For instance, the yield on the 2½% Index-linked Treasury 2009 eased from 2.0% to 1.8% on 31 March. Although it is difficult to quantify, institutional demand for IGs from pension funds is believed to have continued to be robust. In addition, supply remained limited.

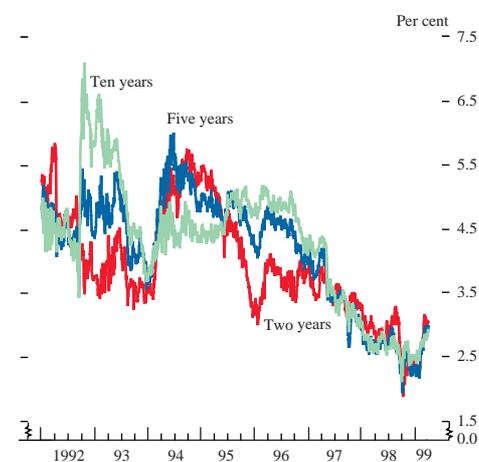
At the turn of the year, ten-year IG yields dipped below 2% for the first time since their launch in 1981. But as new-year trading got under way, there was uncertainty about how strong institutional demand would prove to be for the IG in the upcoming auction. On 27 January, the DMO auctioned £450 million nominal of 2½% Index-linked Treasury 2024. The common price was £181.60, giving a real yield of 2.01%, and the auction was 1.83 times covered. Prices of IGs ticked higher in the market after the result of the auction was announced.

The Minimum Funding Requirement led to strong institutional demand for IGs. The combination of strong and rather price-insensitive demand (largely from pension funds) with limited supply, has pushed real yields down, perhaps more than in the conventional gilt market. Consequently, real yields in the IG market may not be a good guide to the real yields prevailing in the economy at large.

Implied inflation expectations derived from the conventional and index-linked gilt markets rose steadily in the first three months of 1999, albeit from low levels. These implied inflation expectations had been falling steadily over the past few years, with five and ten-year expectations reaching historic lows (since 1981 when IGs were first launched) in autumn 1998 (see Chart 14). These lows were nearly reached again for five and ten-year expectations in late January at around 1.9% and 2.1% respectively, but rose thereafter to 2.5% and 2.7% by end March.

Break-even inflation rates⁽¹⁾ derived from overseas government debt markets have shown a similar pattern to those exhibited in the United Kingdom during the first quarter, although levels are lower. For instance, break-even inflation rates derived from ten-year

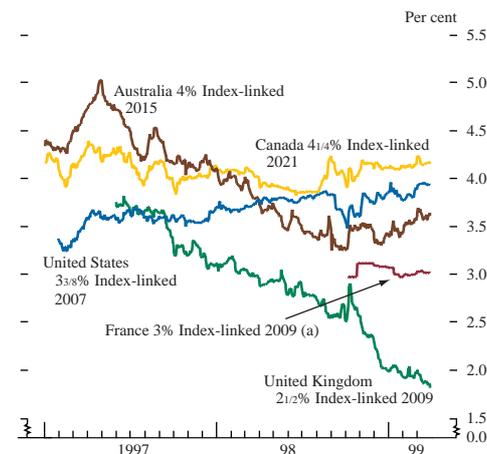
Chart 14
UK implied inflation rates^(a)



(a) Derived from Svensson yield curves.

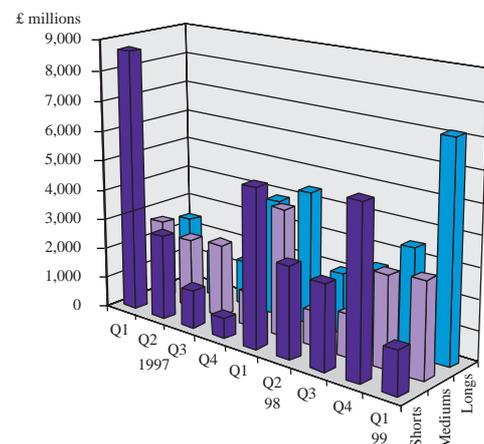
(1) The inflation rate above which it would pay an investor to hold an index-linked bond in preference to a conventional bond of the same maturity.

Chart 15
Real yields on index-linked government bonds



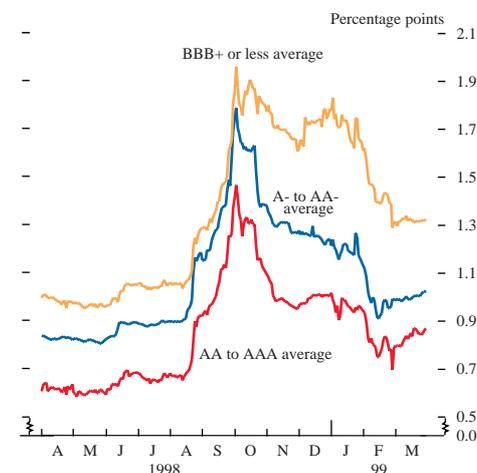
(a) Some data interpolated.

Chart 16
Fixed-rate issuance



Source: Bank of England.

Chart 17
Average yield spreads: UK corporates vs benchmark gilts



Sources: Bloomberg, Bank of England.

conventional and index-linked US Treasuries rose by around 50 basis points in the quarter, to 1.3%. In general, real yields on index-linked bonds in the United States, France and Sweden remained broadly stable during the quarter (see Chart 15), while nominal yields rose.⁽¹⁾ This need not indicate that global inflation expectations have picked up over the past few months. In many countries, conventional yields were probably depressed in the early part of the quarter by the flight to liquidity in late 1998, which subsequently reversed.

Other sterling bond issues

Total fixed-rate issuance (other than gilts) in the first quarter was £11.7 billion, roughly equal to that in the previous quarter, but below the £13.8 billion in 1998 Q1. Issuance was heavily concentrated at longer maturities, with long-dated issues amounting to £7.1 billion; shorts and mediums totalled £1.5 billion and £3.1 billion respectively (see Chart 16). Corporate bond spreads fell during the quarter as credit concerns receded further (see Chart 17).

The first quarter normally has high issuance levels—issuers and arrangers are keen to get their new-year funding under way, and institutional investors have newly allocated funds and investment strategies to pursue. However, the sterling debt primary market was relatively subdued for the first five weeks of the year, as the market awaited the launch of £2.65 billion Government-guaranteed bonds issued by London & Continental Railways (LCR) to finance the Channel Tunnel Rail Link (initially scheduled for January but delayed until early February). Some borrowers had brought forward funding in order to avoid clashing with these bonds and to take advantage of still-attractive swap rates, so that issuance was relatively high in 1998 Q4. In addition, the narrowing of swap spreads in January (see above) reduced the scope for arbitrage-driven issues, and international interest became focused on the launch of the euro, with significant demand for euro-denominated paper, particularly from the Far East.

Although a large proportion of UK institutional funds had been earmarked for LCR bond issues, a few large long-dated issues were brought in the first few weeks of 1999 (for National Grid, Norsk Hydro and Severn Trent Water), targeted at institutional demand, as well as a limited number of swap-driven shorter-dated issues (for Abbey National, Tesco and AAA-rated supranational borrowers). Bookbuilding for the first two tranches of the LCR bonds finally began on 8 February. However, the amount of institutional funds that had been set aside for the deal far exceeded the amount of bonds on offer, and the £1.2 billion 30-year and £425 million 40-year LCR bonds were heavily oversubscribed. Other AAA-rated borrowers (EIB, KfW and IBRD) quickly brought further long-dated issues to soak up the unsatisfied demand. The third LCR tranche, due in 2010, was brought the following week and also went well, with the shorter maturity attracting a wider interest from both continental and UK investors. With no conventional gilt supply until Q2 (and some large redemptions), and a continued need to match long-term liabilities, institutional demand for sterling bonds remained strong through the rest of the quarter. When the LCR bonds had been absorbed, UK companies

(1) The ten-year US index-linked yield rose by 10 basis points, but this was modest by comparison with the nominal Treasury yield rise.

were keen to take advantage of low long-term financing rates, and longer-dated issuance volumes increased. Other issuers were also able to tap UK institutional demand for long-dated issues, including the Kingdom of Spain—the first sovereign to bring a 30-year sterling bond since the Republic of Italy last July.

With low gilt yields and reduced credit concerns, investors increasingly looked for yield enhancement, and sub-investment grade borrowers were able to come to market for the first time since last year's Russian debt crisis. In February, Coral (the UK bookmaker) became the first high-yield debt issue since Hurst Publishing last August. The marketing of new corporate bond funds, with the approaching final deadline to buy PEP funds before they were replaced by ISAs, was an additional source of demand for sterling bonds in March. This stimulated the issue of a number of PEP-eligible bonds (for Bass, Capital Shopping and Wessex Water), and several bonds for lower-rated UK companies (London Exhibition Centre, engineering group Luxfer, cable companies NTL and Telewest) had also been issued or were in the pipeline by the end of March.

Securitised deals further boosted sterling issuance toward the end of the quarter. In addition to the familiar asset and mortgage-backed deals, there were two Private Finance Initiative related bonds (for Stirling Water and Worcester Hospital) and the recapitalisation of the Unique Pubs Group (allowing Nomura to divest its venture capital). Barclays also issued a bond backed by shared-appreciation mortgages,⁽¹⁾ following the structure used by the Bank of Scotland in 1997.

In addition to the substantial fixed-rate issuance, £2.9 billion in floating-rate notes were brought during the quarter. Of these, £1.2 billion were short-dated, mainly issued by building societies and banks, with the remainder almost exclusively long-dated, securitised issues. Previously, all such deals were to refinance sub-prime mortgages or other assets. However, higher-rated mortgage lenders have also seen opportunities to use securitisation to release capital, and Abbey National brought its first securitised deal during the quarter (through a special-purpose vehicle, Holmes Funding).

Equities

UK equity prices rose steadily in the first quarter of 1999, after the volatility experienced in the second half of 1998. Behind this recovery was the cumulative effect of recent months' interest rate cuts, corporate earnings sometimes on the high side of market expectations, signs of the economic slowdown being less severe than initially feared, the recovery in the oil price, PEP-related year-end cash inflow, and a firm equity market in the United States. The FT-SE 100 had a relatively subdued start to the year, but the index gained 6% by the end of the quarter. Implied volatilities continued to decline over the quarter, falling to levels comparable with the first half of 1998.

Early in the quarter, there was concern about earnings potential among investors. But broadly speaking, fourth-quarter corporate profit results were at worst neutral, and in some cases were at the

(1) Shared-appreciation mortgages allow the mortgagee to give up (effectively to the bondholder) part of the valuation gains on the property in exchange for a lower loan rate.

Chart 18
OMOs—instrument overview

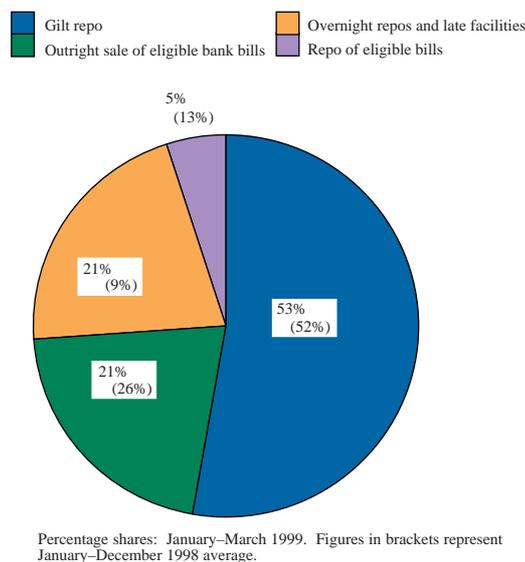
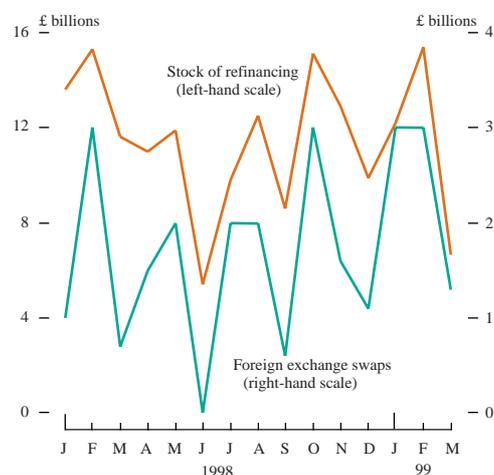


Table E
Average daily money-market shortages

£ millions

1996	Year	900
1997	Year	1,200
1998	Year	1,400
1999	January	1,400
	February	2,200
	March	1,200

Chart 19
Stock of money-market refinancing and foreign exchange swaps outstanding (at end-months)



high end of market expectations, notably in the UK banking sector. The speed and extent of cuts in the Bank repo rate since October 1998 were cited by markets as helping to underpin equity prices. As the quarter progressed, publication of economic surveys dispelled some of the market gloom on the economic outlook. The FT-SE 250 index, which is more domestically oriented than the FT-SE 100, and which had earlier underperformed the FT-SE 100, rose by 13% on the quarter.

Two particularly active sectors during the quarter were oil and telecommunications. Last year, oil was the worst performing of the four largest sectors in the FT-SE 350 index, in which BP Amoco has the largest weighting.⁽¹⁾ Oil shares were chiefly responsible for the FT-SE 100's rally in early March this year. Hopes of oil production cuts to maintain prices, which were announced at the OPEC meeting on 23 March, buoyed the sector. The FT-SE 100 was also boosted at the end of March by BP Amoco's announcement that it is to buy the US oil company Atlantic Richfield. The share prices of telecommunication companies continued to rise in the quarter, supported by merger and acquisition activity.

The moves in the US Dow Jones Industrial Average and the FT-SE 100 were positively correlated during the first quarter. Both indices rose by similar amounts over the quarter, and reached record highs. The Dow's impact on the FT-SE 100 was particularly marked in the second half of March. For example, as the Dow struggled to close above 10,000, the rise in the FT-SE 100 also faltered and temporarily reversed.

Market operations

Open market operations and Treasury bill issuance

The stock of money-market refinancing held by the Bank rose from £8 billion in December to £15 billion in February (see Chart 18 for composition). The high stock in January and February reflected the seasonal government revenue surplus and the pattern of gilt financing and redemptions over the year as a whole. The high stock of refinancing in February resulted in average daily shortages of some £2.2 billion, compared with £1.4 billion in 1998 as a whole (see Table E). Foreign exchange swaps are used as an additional means to provide money-market liquidity, particularly when the stock of refinancing is high. The use of foreign exchange swaps was heavy in the first two months of the year, and £3 billion were outstanding at the end of February (see Chart 19 and Table F).

The stock of refinancing fell in March as around £5.7 billion of Floating Rate Treasury 1999 and £3.0 billion of 12¹/₄% Treasury 1999 both matured, coupled with the seasonal rise in government spending at the end of the financial year. Money-market conditions softened ahead of this, as the market anticipated a period of smaller shortages. Accordingly, the Bank increased the size of the sterling Treasury bill tender; this helped support the size of the money-market shortages at a daily average of £1.2 billion. From 26 February, the three-month tender was increased from £100 million to £200 million a week and a tender of £500 million a week of one-month Treasury bills was introduced. This was the

(1) The four largest sectors in the FT-SE 350 by market capitalisation were retail banks, pharmaceuticals, telecoms and integrated oil.

ECB monetary policy operations

The European Central Bank (ECB) conducts its operations through the national central banks of the eleven countries that adopted the euro on 1 January 1999. Together, they are known as the Eurosystem. Within the ECB, the Governing Council is responsible for the formulation of monetary policy, and the Executive Board implements monetary policy. The primary objective is to maintain price stability across the euro area. The ECB has three main instruments to achieve its objectives:

- open market operations;
- standing facilities; and
- minimum reserves.

Open market operations

The ECB uses refinancing operations to steer interest rates and manage liquidity in the Eurosystem, enabling eligible institutions to meet their reserve requirements. The main instrument used is reverse transactions (either repo or collateralised loans). Two types of reverse transaction operations are routinely used: the main refinancing operation (MRO) and the longer-term refinancing operation (LTRO).

The MRO is conducted weekly with a two-week maturity. It provides the bulk of the liquidity required, and to date has been conducted at fixed-rate tenders, with the ECB using it to signal its main refinancing rate (which was 3% throughout the first quarter of 1999). The ECB meets to review this rate fortnightly, setting it for the next two MROs. On 8 April, the ECB Governing Council announced that it would lower its main refinancing rate by 50 basis points to 2.5% with effect from 12 April. The liquidity provided at each MRO is determined by the ECB, which has so far provided between €39 billion and €102 billion at weekly tenders, depending on the estimated liquidity needs of the system at the time of each tender.

The LTRO is conducted monthly with a three-month maturity. It is not used as a signalling mechanism, and is conducted through variable-rate tenders. Tenders usually take place on the first Wednesday of each maintenance period. To set up this pattern, the ECB conducted three tenders for settlement on 14 January of 42, 70 and 105 days' maturity. Each LTRO has provided €15 billion of liquidity to the market to date. As each tender matures, it has been rolled over, maintaining a total provision of €45 billion through this facility. The ECB has announced that it intends to continue rolling over the maturing amounts until September.

The four LTRO tenders conducted in January and February were variable-rate tenders, using a single-rate ('Dutch auction') allotment method. Allotment decisions for variable-rate tenders are made by ordering bids in diminishing order of offered interest rates. The bids with the highest interest rate levels are satisfied, then successively lower bids are accepted until the total liquidity to be allotted is reached. The lowest interest rate level accepted is the marginal interest rate. In a Dutch auction, the liquidity is provided to all successful bidders (those at the marginal interest rate and above) at a single rate—the marginal interest rate. The ECB announced on 4 March that the LTRO tender for settlement on 24 March and subsequent tenders would use the multiple-rate ('American auction') allotment method. Here, the bids are collected in a similar fashion to the Dutch auction. However, the allotment to successful bidders is at the interest rate actually bid, rather than at the marginal interest rate.

The ECB has a number of fine-tuning operations available either to provide or absorb liquidity for short periods and at short notice as necessary. These were not used during the first three months of the year.

first time since the third quarter of 1997 that one-month sterling Treasury bills had been offered. The use of one-month bills allows more flexibility to reduce the outstanding stock of assistance quickly if required.

Demand for the extra Treasury bills was high. Cover at the one and three-month tenders averaged five or six times the amount of bills on offer in March. The new bills were a welcome addition of stock liquidity following the two gilt redemptions.

The DMO announced on 20 April that following the decrease in the estimated cash requirement for 1998/99 (see the long-term interest rate section on page 141), its estimated net Treasury bill issuance during 1999/2000 had been revised downwards from £3.6 billion to £1.9 billion.

Standing facilities

The refinancing operations provide two-week or three-month funds to institutions that are successful in the tenders. Standing facilities are used to provide and absorb overnight liquidity, limiting the overnight interest rate. The provision of overnight liquidity is via the marginal lending facility. Liquidity is provided against collateral to institutions eligible to take part in ECB operations. There is no limit to the amount that can be borrowed, providing that an institution has sufficient collateral. Institutions with excess funds can use the overnight deposit facility. The marginal lending rate was 4.5% and the deposit rate 2% in the first quarter of 1999. To smooth the introduction of the euro, the ECB Governing Council set the marginal lending and deposit rates at 3.25% and 2.75% respectively from 4–21 January. The marginal lending and deposit rates provide a corridor for the overnight rate for euro (see the chart).

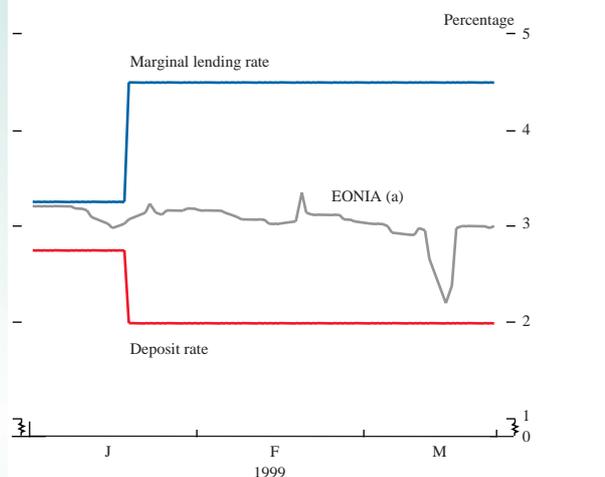
When the ECB announced the lowering of the main refinancing rate on 8 April, it also reduced the marginal lending rate by 1 percentage point to 3.5% and the deposit rate by 0.5 percentage point to 1.5%, with effect from 9 April. The corridor for the overnight rate was thus narrowed from 250 basis points to 200 basis points, with the main refinancing rate positioned centrally within it.

Minimum reserve requirement

The ECB operates a minimum reserve system to create (or enlarge) the structural liquidity shortage within the Eurosystem. Each institution eligible to take part in ECB operations has to keep a zero or positive balance on a reserve account at its national central bank at the end of each day. This balance must average at least 2% of an institution's eligible liabilities over the 'maintenance period', usually one month. This is the ECB's reserve requirement. Holdings of required

reserves are remunerated at the key operational rate (the main refinancing rate), but excess reserves are not remunerated. There are penalties for failing to meet the reserve requirement at the end of the maintenance period.

EONIA and standing facility rates



(a) The Euro Overnight Index Average (EONIA) is published daily by the European Banking Federation.

The ECB publishes an estimate of the aggregate level of required reserves for the Eurosystem as a whole. The ECB publishes any revisions to its estimates as the maintenance period progresses, and publishes the definitive level near the end of the period. It also publishes a rolling average of actual holdings of reserves by institutions against the estimate to give an overview of the liquidity situation across the Eurosystem.

For the Eurosystem, the reserve requirement was €98.3 billion from 1 January to 23 February and €100.6 billion from 24 February to 23 March. The preliminary figure for the period 24 March to 23 April was €100 billion.

The DMO is expected to take over the Government's cash management during the course of 1999/2000, though the timing is dependent on successful systems implementation.⁽¹⁾ After the transfer of cash management, Treasury bills will be the primary short-term financing instrument used to meet the seasonal fluctuation of the Government's within-year cash requirements. Daily changes in the net cash position will be reflected in the DMO's holdings of short-term cash instruments. Previously, this role was performed by the Ways and Means overdraft with the Bank of England. When the DMO takes over cash management, Ways and Means advances will cease to be used as the means of balancing the Government's day-to-day needs, and Ways and Means advances will be frozen.

(1) See *The Future of UK Government Cash Management: the New Framework*, UK Debt Management Office, 4 December 1998.

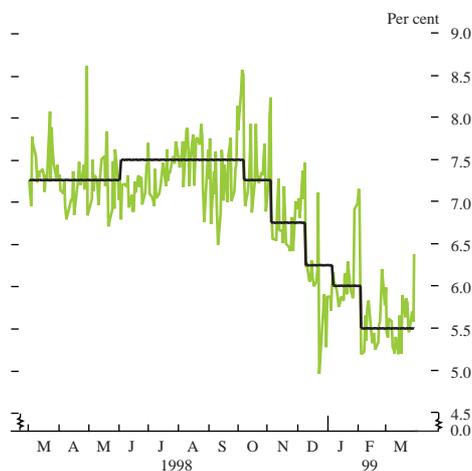
Table F
Influences on the cash position of the money market

£ billions; *not seasonally adjusted*
 Increase in settlement banks' operational balances (+)

	1998/99	1999		
	Apr.–Dec.	Jan.	Feb.	Mar.
CGNCR (+)	1.2	-10.9	-0.5	5.8
Net official sales of gilts (-) (a)	-0.7	1.0	0.1	8.5
National Savings (-)	-0.8	-0.1	0.2	0.3
Currency circulation (-)	-4.9	2.4	-0.1	0.6
Other	3.2	3.0	-2.8	-2.3
Total	-2.0	-4.6	-3.2	12.9
Outright purchases of Treasury bills and Bank bills	-0.2	1.1	-0.6	-0.3
Repos of Treasury bills, Bank bills, and British Government stock and non-sterling debt	1.8	0.6	4.3	-8.5
Late facilities (b)	-0.3	0.6	-0.5	0.1
Total refinancing	1.3	2.3	3.2	-8.7
Foreign exchange swaps	0.8	1.9	0.0	-1.7
Treasury bills: Market issues and redemptions (c)	0.1	-0.1	0.0	2.4
Total offsetting operations	2.0	4.3	3.2	-12.8
Settlement banks' operational balances at the Bank	0.0	-0.3	0.0	0.1

- (a) Excluding repurchase transactions with the Bank.
 (b) Since 3 March 1997, when the Bank introduced reforms to its daily money-market operations, discount houses and settlement banks have been eligible to apply to use the late facilities.
 (c) Issues at weekly tenders plus redemptions in market hands. Excludes repurchase transactions with the Bank (market holdings include Treasury bills sold to the Bank in repurchase transactions) and tap Treasury bills.

Chart 20
Repo rate and SONIA



On 1 April, the Bank announced that bids at the one and three-month Treasury bill tenders could be made at price intervals of 0.1 pence (previously, the interval had been 0.5 pence). This technical change was designed to allow counterparties to aim their bids more precisely at their target yield. The difference was particularly important at the one-month maturity, where each halfpenny bidding interval implied a yield difference of some seven basis points.

The Bank announced three technical changes to its money-market operations on 30 March:

- From 15 April, the Bank of England euro bills have been eligible as collateral in repo transactions (more detail on Bank euro bills is given later in this article).
- Also from 15 April, the Bank accepted gilt strips in member-to-member repo transactions. This adds to the existing capability to use gilt strips in deliveries-by-value in the Bank's operations.
- From 24 May, the yield at which bills may be sold outright to the Bank in its operations will be the Bank's repo rate. This replaces the discount rates currently posted for bills with different maturities.

Short-dated interest rates

Chart 20 shows the Bank's repo rate and SONIA for the past six months.⁽¹⁾ At the end of January and February, when tax payments were high, the money-market shortages were particularly large.⁽²⁾ This in turn put upward pressure on short rates, with SONIA rising relative to the Bank's repo rate.

The chart also shows SONIA rising in the days just before the interest rate cuts in October, November, December and February. This is one illustration of the extent to which the market had anticipated those repo rate cuts. During the week of those MPC meetings, many of the Bank's dealing counterparties preferred to roll over short positions overnight rather than lock in borrowing at up to two weeks from the Bank at the prevailing repo rate. This tended to push up overnight interbank rates to around a maximum of one percentage point over the Bank's repo rate (because that is the penalty rate at which counterparties can borrow overnight from the Bank at 3.30 pm).⁽³⁾ In each case when rates were subsequently cut, counterparties resumed borrowing from the Bank in the two-week facility at the new lower repo rate.

HM Treasury and Bank of England euro issues

The Bank of England, on behalf of HM Treasury, continued to hold regular monthly auctions of €1 billion of euro Treasury bills during the first quarter, comprising €200 million of one-month, €500 million of three-month and €300 million of six-month bills each month. The auctions continued to be oversubscribed, with issues covered an average of 4.0 times the amount on offer in the first quarter of 1999. During the first quarter, bids were accepted at average yields of 20, 22 and 23 basis points below the euribid rate

(1) SONIA is the sterling overnight interest rate average.
 (2) On the last days of January and February 1999, the shortages were £3.7 billion and £2.4 billion respectively.
 (3) This penal rate can rise by up to 1½ percentage points above the Bank's repo rate at the 4.20 pm round.

for the one-month, three-month and six-month maturities respectively. At end March, there were €3.5 billion of UK Government euro Treasury bills outstanding.

On 5 January, the Bank of England announced that during the course of 1999 it intended to take over from HM Treasury as the issuer of euro bills. The details are set out in the Bank of England Euro Bill Information Memorandum published on 6 April 1999. Apart from the change in issuer, there are no other changes to the main features of the euro bill programme. The first Bank of England euro bills were auctioned on 13 April, and the Bank will have fully taken over the programme from HM Treasury by October. The proceeds of Bank of England euro bills will be used by the Bank to finance the provision of intra-day liquidity, on a secured basis, to participants in CHAPS euro, as part of the arrangements for TARGET.

€500 million of a new three-year euro Treasury Note, the eighth in the programme of annual new issues, was auctioned on 19 January 1999. Cover at the auction for the 2.75% January 2002 issue was very strong, at 4.8 times the amount on offer, and accepted bids were in a range of 2.83% to 2.89%. At the end of January, the Note issued in 1996, for €2.0 billion, matured. The total of Notes outstanding with the public under the UK euro Note programme thus fell from €6.0 billion in the fourth quarter of 1998 to €4.5 billion in the first quarter of 1999. Further auctions of the new Note are planned for April, July and October 1999.