Markets and operations

This article reviews developments since the 2006 Q4 *Quarterly Bulletin* in sterling financial markets. It summarises asset price movements in conjunction with market intelligence gathered from market contacts, and evaluates them in the context of the Bank's core purposes. This article also outlines changes in market structures and reviews the Bank's official operations.[1]

Sterling financial markets

Overview

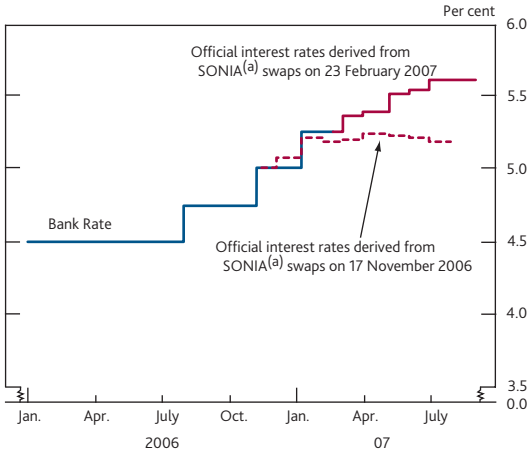
Sterling interest rates rose over the review period. This prompted a further increase in the value of sterling against other major currencies, and was accompanied by further rises in equity prices. These developments seem consistent with market participants having revised upwards their near-term outlook for UK economic growth, following the decision of the UK Monetary Policy Committee (MPC) to increase Bank Rate at its January meeting and some stronger-than-expected macroeconomic data. However, towards the end of the period, these moves in market interest rates and the sterling exchange rate partly unwound.

After the period reviewed in this article, sterling markets were caught up in a period of increased volatility in international capital markets. Global equity markets fell sharply and credit spreads widened, particularly those for low-rated borrowers. Sterling depreciated, particularly against the yen. Market contacts suggested this was partly driven by some traders seeking to close out yen-funded sterling investments — so-called 'carry trades'. At the time of writing it is unclear whether these moves represent a short-term market correction, a widespread reappraisal of the global economic outlook, or a significant change in investors' risk appetite.

Recent developments in sterling markets

The MPC increased Bank Rate by 25 basis points to 5.25% on 11 January. Forward market interest rates also increased, suggesting that market participants had revised upwards their views about the future path of Bank Rate. On 23 February, forward interest rates derived from overnight interest rate swaps were consistent with at least one further increase in Bank Rate by mid-2007 (**Chart 1**). In a survey of UK economists conducted by Reuters in February, the most common view among respondents was that Bank Rate would be 5.5% at the end of 2007, compared with 5% in the November and January surveys (**Chart 2**).

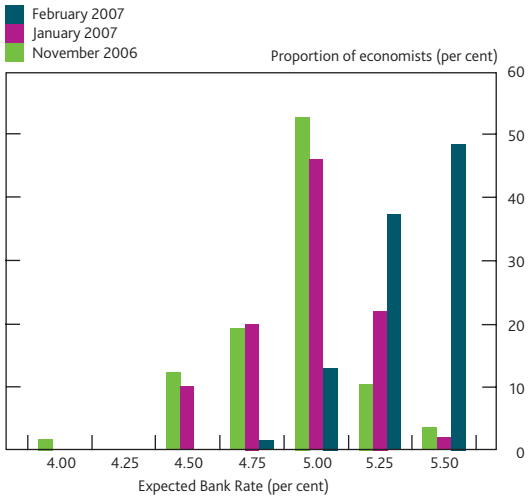
Chart 1 Bank Rate and forward market interest rates



Sources: Bank of England and Reuters.

(a) Sterling overnight index average.

Chart 2 Economists' forecasts for Bank Rate at end-2007(a)



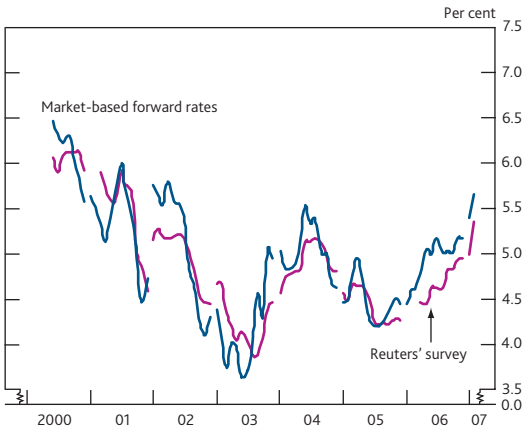
Source: Reuters.

(a) Note that the sample size across surveys can differ. As a result, proportions may change owing to different samples and/or respondents revising forecasts.

(1) This article focuses on developments in sterling capital markets since 17 November (the data cut-off for the previous article). The data cut-off for this article is 23 February.

Following January's rise in Bank Rate, the mean expectation of its future level from the Reuters survey moved closer to market-based measures of future Bank Rate (**Chart 3**).[1] The convergence of these measures suggests that economists' and financial market participants' views about the UK economic outlook and hence the path of future interest rates became more aligned.

Chart 3 Survey expectations and sterling forward interest rates[a]

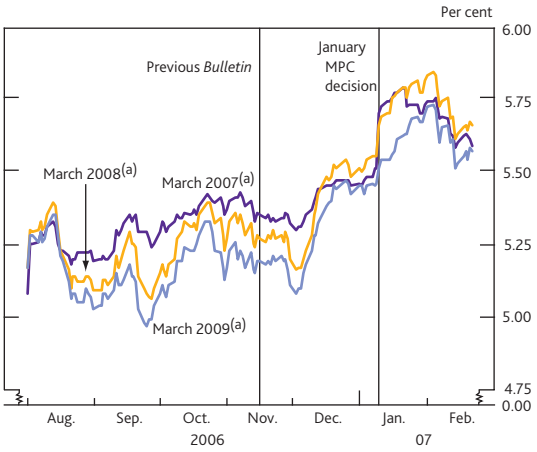


Sources: Bank of England, Bloomberg and Euronext.liffe.

(a) Breaks in each series occur where the data refer to a different calendar year. The chart shows mean interest rate expectations for the end of the full calendar year following the survey date. Forward interest rates are taken from the Bank's bank liability curve, with rates adjusted downwards by a moving average of the spread between six-month Libor rates and six-month GC repo rates to account crudely for the credit risk implicit in Libor rates.

Over the period, the short end of the sterling yield curve rose by around 30 basis points (**Chart 4**). The biggest daily move in market rates coincided with the increase in Bank Rate on 11 January. Implied volatility for near-term sterling interest rates also rose around the time of the increase in Bank Rate. By contrast, implied volatility for dollar and euro rates fell through much of January (**Chart 5**).

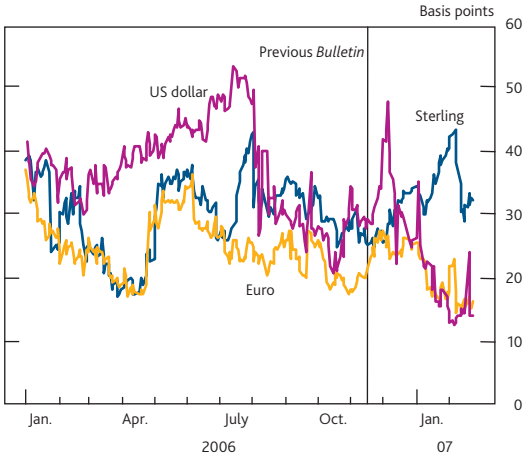
Chart 4 Implied sterling interest rates from short sterling futures contracts



Sources: Bank of England and Bloomberg.

(a) Dates refer to the maturity of the futures contract.

Chart 5 International three-month implied volatility from interest rate options



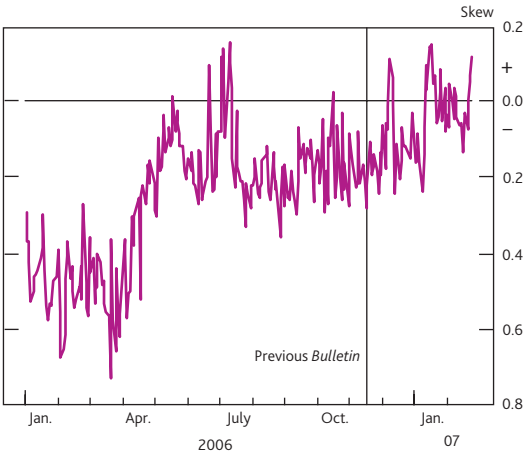
Sources: Bank of England and Euronext.liffe.

Towards the end of the review period, short-term sterling market interest rates and sterling implied volatility fell. This followed the decision not to change Bank Rate at the February meeting and the publication of the February *Inflation Report*. At longer horizons, implied volatilities changed little suggesting that uncertainty about the path of sterling interest rates over the medium term was broadly unchanged.

The skew of the implied distribution of future interest rates moved closer to zero. This may indicate that market participants perceived the risks around the future path of interest rates to be broadly balanced, having been negatively skewed throughout most of 2006 (**Chart 6**).

Against the background of these developments in short-term interest rates, the sterling effective exchange rate index (ERI)

Chart 6 Sterling six-month skew from interest rate options

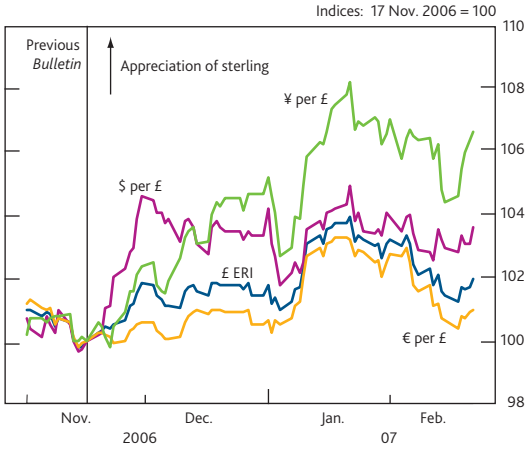


Sources: Bank of England and Euronext.liffe.

(1) The co-movement of market interest rates and survey expectations was discussed in the box, 'Forward rates and economists' expectations' in the Summer 2006 *Quarterly Bulletin*, page 129.

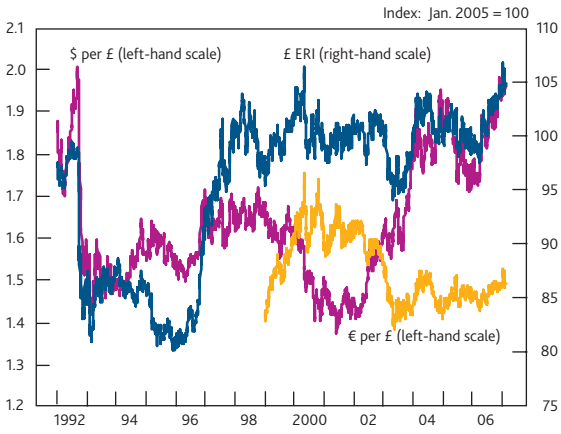
rose by 1.9%. This reflected a broad-based appreciation against the major currencies (**Chart 7**). These moves continued the general increase in the value of sterling that occurred during 2006. Indeed, the ERI reached its highest level (on the basis of the current index construction) of 106.7 on 23 January, when the dollar/sterling exchange rate reached a fourteen-year high of $1.98 (**Chart 8**).(1) Implied uncertainty, derived from options prices, about the future level of sterling was marginally higher by the end of the review period. But both realised and implied exchange rate volatility remained close to their historically low levels (**Chart 9**).

Chart 7 Cumulative changes in sterling exchange rates since November 2006



Sources: Bank of England and Bloomberg.

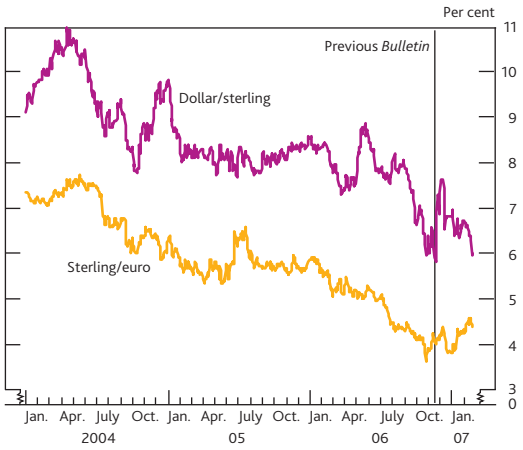
Chart 8 Long-run sterling exchange rates



Sources: Bank of England and Bloomberg.

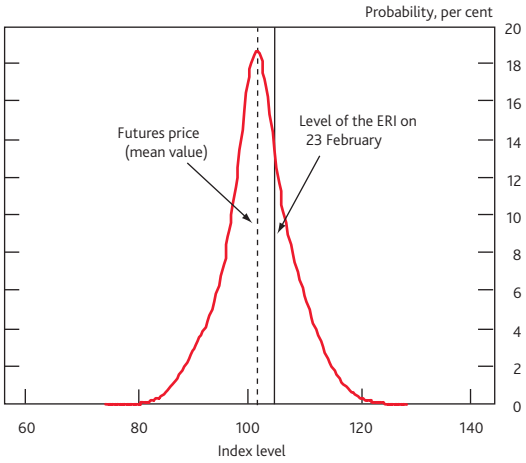
Looking ahead, futures prices suggest that market participants expected the sterling ERI to depreciate a little over the next two years (**Chart 10**). But currency option prices implied that the distribution of expectations for the sterling ERI was roughly symmetric. In other words, market participants believed that large rises in the sterling ERI were as likely as large falls.

Chart 9 Three-month implied sterling exchange rate volatility



Sources: Bank of England and Bloomberg.

Chart 10 Two-year unconditional sterling ERI probability distribution(a)



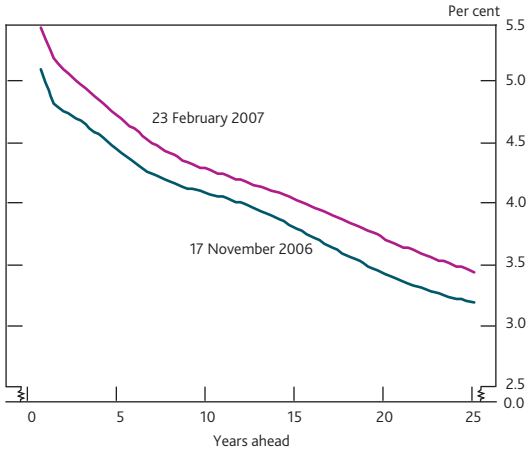
(a) Probability of the sterling ERI being within ±0.5 index points of any given level. For example, the probability of the ERI being at 100 (between 95.5 and 100.5) in two years' time was around 18%. For details of how this probability distribution is constructed see the box on page 130–31 of the Summer 2006 *Quarterly Bulletin*.

Further along the sterling yield curve, nominal forward interest rates increased by around 25 basis points from the low levels experienced in November 2006 (**Chart 11**). This largely reflected higher real interest rates (**Chart 12**). Sterling breakeven inflation rates, derived from the difference between yields on conventional and index-linked gilts ended the period little changed (**Chart 13**).

Despite higher real interest rates, UK equity prices continued to rise over the review period, with particularly strong increases in the share prices of small and medium-sized companies (**Chart 14**). Measures of implied uncertainty about expected future equity prices, derived from options prices,

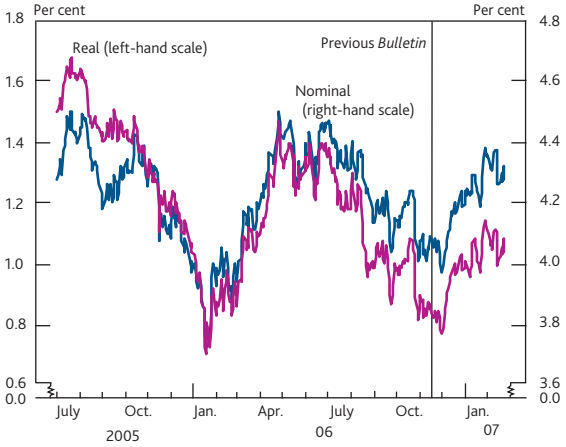
(1) As described in the minutes of the MPC's February meeting, during January the sterling ERI reached its highest level, in both nominal and real terms, since the early 1980s.

Chart 11 Sterling nominal forward rates[a]



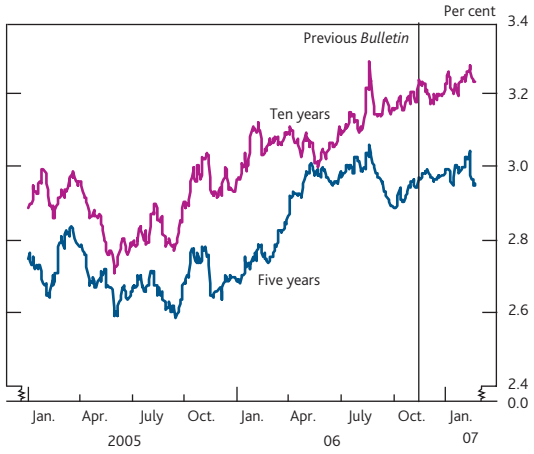
(a) Instantaneous forward rates derived from the Bank's government liability curve.

Chart 12 Sterling ten-year nominal and real forward rates[a]



(a) Instantaneous forward rates derived from the Bank's government liability curve.

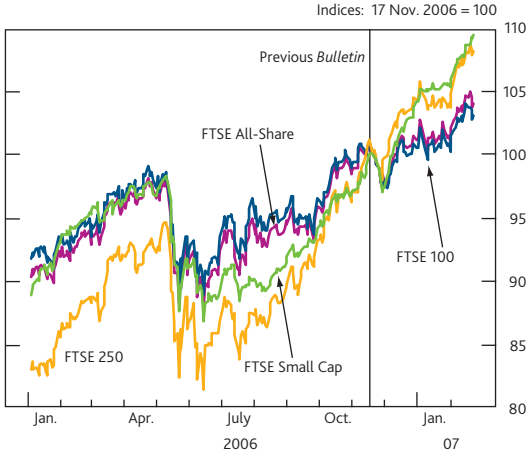
Chart 13 Sterling breakeven inflation forward rates[a]



(a) Implied instantaneous inflation rates five and ten years ahead, based on the difference between yields on nominal and inflation-linked government bonds. The instruments used are linked to RPI, rather than CPI, and so are not directly comparable to the Bank's inflation target.

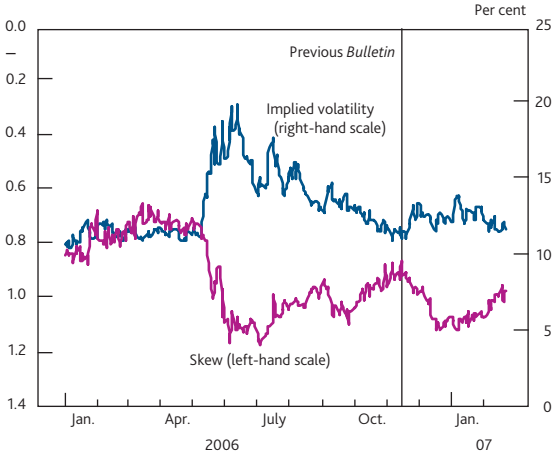
were little changed over the period (**Chart 15**). But the skew of the expected distribution of future equity prices became slightly more negative. Consistent with this, some market commentators have mentioned increased buying of put options to protect against falls in equity prices.

Chart 14 Changes in UK equity indices since 3 January 2006



Sources: Bloomberg and Bank calculations.

Chart 15 FTSE 100 option-implied volatilities and skews[a][b]



Sources: Bank of England and Euronext.liffe.

(a) Calculated from the distribution of returns implied from three-month options prices.
(b) A negatively skewed distribution is one for which large negative deviations from the mean are more likely than large positive deviations.

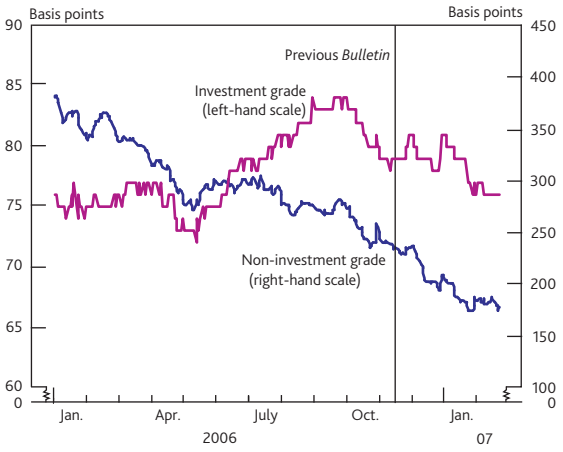
Sterling credit markets remained buoyant and spreads on sterling-denominated corporate bonds narrowed further (**Chart 16**). This was most pronounced for non-investment grade bond spreads, which ended the period at around half the level prevailing at the start of 2006.

Key influences on sterling markets

Monetary policy and macroeconomic news

MPC interest rate decisions and publications have been an important influence on sterling asset prices in recent months. Market interest rates and surveys of sterling interest rate expectations shifted higher around the time of the interest rate decision in January. Contacts suggested that the change was largely unanticipated by market participants. At near-term horizons, market rates increased by up to 17 basis points immediately after the announcement, making this the

Chart 16 Sterling-denominated corporate bond spreads[a]



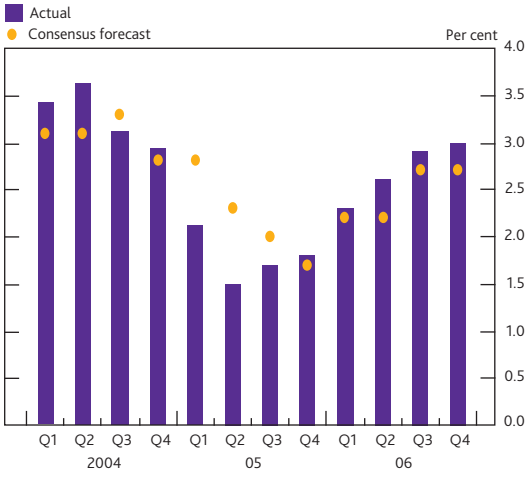
Source: Merrill Lynch.

(a) Option-adjusted spreads.

fourth-largest reaction to MPC-related 'news' since 2001.[1] This was consistent with market participants revising up their outlook for UK economic growth. Subsequently, expectations for future Bank Rate fell following the decision in February to keep rates on hold.

For most of the period, this impression of a robust macroeconomic environment was reinforced by strong data for both real economic activity and inflation. In particular, GDP growth for 2006 Q4 was stronger than expected (measured by survey data). This continued a pattern of stronger-than-expected news on activity observed through 2006 (**Chart 17**).[2] In contrast, during 2005 those surveyed were typically surprised on the downside.

Chart 17 Consensus forecasts of annual GDP growth[a] compared to official data for annual GDP growth[b]

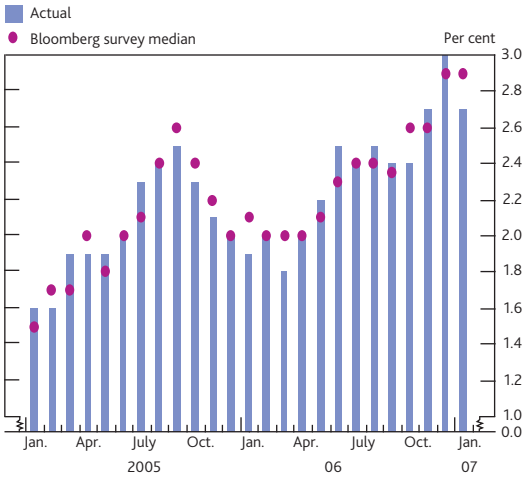


Sources: Consensus Economics and ONS.

(a) Consensus forecasts are conducted in the last month of each quarter — for example, the Consensus forecast for Q4 is undertaken in December.
(b) The official GDP data refer to 'final' estimates in all instances except 2006 Q4, which refers to the 'preliminary' estimate. Typically, these data are released three months after the end of the quarter — for example, the 'final' estimate for 2006 Q4 will be released in March 2007.

Chart 18 shows that CPI inflation outturns were also higher than had been expected for November and December (2006), but not for January. The earlier upside news to inflation may have been interpreted by markets as an indication of a faster pickup in underlying demand conditions.[3] According to market commentators, the weaker-than-expected outturn for inflation in January was an important influence behind the fall in short-term market interest rates towards the end of the period.

Chart 18 Economists' forecasts of annual CPI inflation[a] compared to CPI inflation outturns

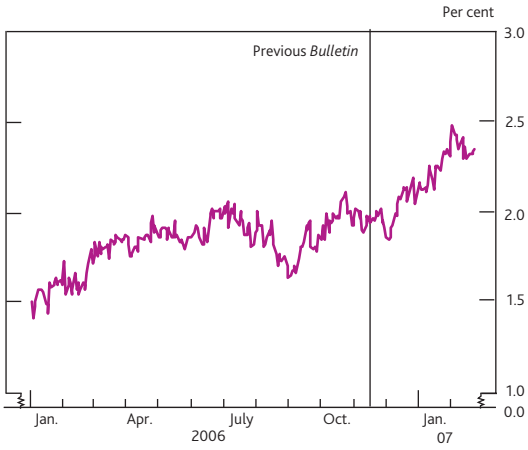


Sources: Bloomberg and ONS.

(a) Bloomberg surveys economists for an estimate of CPI inflation about a week before the official CPI data are released.

Overall, financial markets appear to have revised up their assessment for the near-term outlook for real economic activity in the United Kingdom. Consistent with that, market based measures of short-term real interest rates have risen since the previous *Bulletin* (**Chart 19**).

Chart 19 Sterling two-year real forward rates[a]



(a) Instantaneous real forward rates derived from the Bank's government liability curve.

(1) Defined as policy decision announcements and the publication of the minutes or the *Inflation Report*. See Bell, J and Windle, R, *Quarterly Bulletin,* Summer 2005, pages 169–78.
(2) A caveat to this is that it is not clear whether Consensus survey respondents report GDP forecasts that relate to the early estimates or to the 'final' estimates, or indeed whether this differs across respondents.
(3) The box on page 32 of the February 2007 *Inflation Report* proposed that the recent strength in CPI inflation probably reflected a combination of underlying pressures on demand, the recent increases in the price of energy and imports and possibly a rise in near-term inflation expectations.

Expectations about the future path of Bank Rate have also been an influential factor behind the recent strength of the sterling ERI. As discussed in the February *Inflation Report*, a rise in sterling in response to higher interest rates is part of the transmission mechanism of monetary policy. Higher sterling interest rates relative to foreign currency interest rates increase the relative profitability of sterling assets. This drives up the demand for sterling assets and the sterling exchange rate.

The box on page 12 considers in more detail the extent to which movements in interest rates can explain the recent strength of sterling. It concludes that interest rate movements can account for around 45%–60% of the increase in the sterling ERI since its recent trough in April 2006.

Market contacts have also suggested some additional explanations for the continued strength of sterling, notably the importance of foreign exchange 'carry trades'. A foreign exchange carry trade occurs when an investor borrows in the currency of a country with low interest rates (for example, the yen or Swiss franc) and invests in the currency of a country with higher interest rates (for example, sterling or the Australian dollar).

In theory, market arbitage should ensure that carry trades are not profitable — high interest rate currencies should be expected to depreciate so that the potential gain from interest differentials (or the carry trade) is exactly offset by a fall in the value of the high interest rate currency.(1) However, the recent low levels of realised and implied volatility in exchange rates (**Chart 9**) may mean that investors with a sufficiently short-term investment horizon might anticipate a positive expected return from investing in high interest rate currencies.

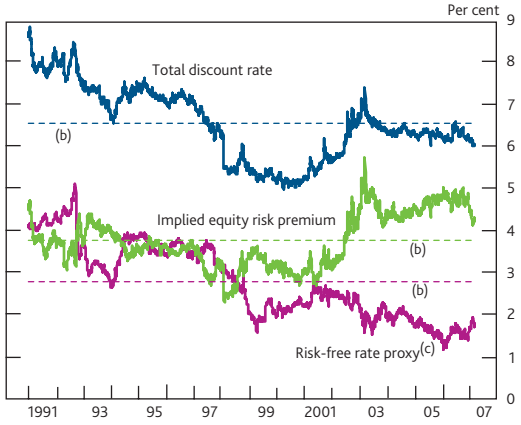
Developments in required risk premia

Alongside signs of a robust macroeconomic outlook, which would tend to support future earnings and underpin continuing low default rates, the compensation required by investors to bear financial risk (ie risk premia) may also have fallen further. Other things being equal, lower risk premia on financial assets would tend to reduce the discount rate on future cash flows and thereby sustain higher asset prices.

According to market contacts, there are few signs that the well-documented 'search for yield' has come to an end, and this could have led to further falls in required risk premia. Indeed, this seems consistent with the further narrowing of sterling credit spreads in recent months. Market contacts suggest the recent narrowing was driven by two main factors.(2) First, the level of corporate defaults was expected to remain relatively low. Second, speculators who had been positioned for wider spreads unwound those loss-making trades and were reluctant to reinstate them.

Risk premia are unobservable. A decomposition of recent developments in the FTSE 100 index using a simple dividend discount model (DDM) suggests that the implied equity risk premium may have fallen since the end of last year (**Chart 20**). But the same decomposition would also suggest that the equity risk premium may have generally drifted higher over the past few years. Such a development, if true, does not sit easily with the continuing low levels of implied equity market volatility, or a further narrowing of credit spreads, typically associated with the ongoing search for yield.

Chart 20 Equity discount rate decomposition(a)



Sources: Thomson Financial Datastream and Bank calculations.

(a) Using a one-stage dividend discount model, with an exogenous long-term dividend growth rate equal to 3%.
(b) Dotted lines represent averages since 1991.
(c) Real yield on long-term index-linked gilts.

One argument that might support increased equity risk premia is that they partly reflect a shift in investors' preferences away from equities and in favour of fixed-income instruments.(3) In particular, over recent years managers of official foreign exchange reserves in Asia seem to have had a preference for fixed-income securities, including sterling-denominated assets. Similarly, UK defined-benefit pension fund trustees and managers have been placing greater weight on investing in bonds since they may better match their liabilities.(4) In both cases, there may have been a shift in demand from equities to fixed-income securities of various kinds, which may have altered relative risk premia between the two types of financial asset.

On average over long periods, bond and equity prices have tended to move in the same direction — higher interest rates (lower bond prices) are typically associated with weakening stock markets. But over the past few years, the correlation between prices of equities and bonds has been unusually negative. This could reflect, at least in part, a change in preferences in favour of bonds (**Chart 21**).

(1) For more details see the box 'Carry trades in the foreign exchange market', *Bank of England Quarterly Bulletin*, Winter 2003, page 401.
(2) For a fuller discussion of the low levels of risk spreads and their determinants see the July 2006 *Financial Stability Report*.
(3) See the speech by Paul Tucker, 'Macro, asset price, and financial system uncertainties', Roy Bridge Memorial Lecture, December 2006 and reprinted in this *Bulletin*, on pages 122–30.
(4) See the box, 'Pension fund valuation and liability driven investment strategies', *Bank of England Quarterly Bulletin*, Spring 2006, page 8.

How much of the recent change in exchange rates reflects changes in interest rates?

The sterling effective exchange rate index (ERI) has appreciated in recent months, continuing the gradual drift higher since April 2006 (**Chart A**). At the same time, expectations about future interest rates have increased. This box considers whether the recent strength in sterling can be explained by the recent moves in market interest rates.

Chart A Sterling exchange rate index

The notion that exchange rate movements are linked to interest rate movements is formally captured by the so-called *uncovered interest parity* (UIP) condition. UIP is based on the idea that arbitrage opportunities should be eliminated by market trading, so that the expected returns on similar assets in different currencies should be the same. Hence, if sterling interest rates are higher than foreign interest rates, the sterling exchange rate must be expected to depreciate against other currencies, in order for investors to be indifferent between holding sterling assets and foreign currency assets. In other words, UIP indicates that future changes in the exchange rate are determined by the difference between the *level* of domestic and foreign interest rates (or the interest rate differential). It is important to note that UIP does not determine the level of the exchange rate.

UIP can also be used to relate *changes* in interest rate differentials to *changes* in the exchange rate. But this only holds under certain assumptions, in particular constant risk premia, constant medium-term exchange rate expectations and perfectly functioning markets. This UIP relationship states that as expectations about future domestic interest rates rise relative to those abroad (ie there is interest rate 'news') there would be an immediate appreciation (or jump) in sterling's exchange rate to a point from where it would be expected to depreciate.

Table 1 documents the movements in sterling since its recent trough in April 2006 and how far they might be consistent with UIP. Line (1) shows that, over this time period, the sterling ERI has increased by 7.4%. Line (2) computes the extent to which changes in the exchange rate can be attributed to changes in interest rate 'news' — to reflect UIP.(1) Interest rate 'news', as defined here, captures unexpected changes in the future interest rate differential over a window of the next eight to twelve years.(2) The table shows that, over the period, changes in interest rate news can explain around 40% to 60% of the rise in the sterling ERI, the sterling-dollar and sterling-euro bilateral exchange rates.

Table 1 Sterling exchange rate movements
5 April 2006–23 February 2007

		£ ERI	$ per £	€ per £
Actual change (per cent)(a)	(1)	7.4	12.2	4.6
Change explained by interest rate 'news' (sensitivity range in percentage points)	(2)	3.3–4.2	6.2–7.6	2.2–3.0

Sources: Bloomberg and Bank calculations.

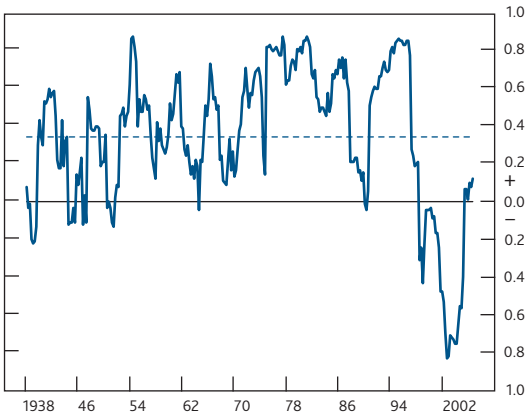
(a) A positive number represents an appreciation of the value of the base currency.
(b) The interest rate differential is calculated using eight, nine, ten, eleven and twelve-year UK and foreign government bond yields. The sensitivity range reports the maximum and minimum values.

The results in **Table 1** suggest that a large part of the strength of the sterling ERI between April 2006 and February 2007 can be explained by movements in expectations about UK and foreign interest rates over the same period.

Of course, it may be that the assumptions underlying UIP do not hold in practice. And indeed, the empirical evidence on whether future exchange rate moves are in accordance with the predictions of UIP is mixed.(3) Some studies have found that exchange rate changes are unrelated to or move in the opposite direction to that predicted by UIP. This may be because, in practice, investors may not be indifferent between domestic and foreign assets and may require a time-varying excess return on foreign assets; the expected medium-term exchange rate may also move over time as economic fundamentals, such as the rate of productivity growth change; and markets may not always work efficiently. However, other studies have found more support for UIP based on different choices of financial instruments and statistical techniques.(4)

(1) For more information on the analytics required to compute line (2), see Brigden, A, Martin, B and Salmon, C (1997), 'Decomposing exchange rate movements according to the uncovered interest parity condition', *Bank of England Quarterly Bulletin*, November, pages 377–89.
(2) The choice of these future time horizons follows previous practice (see *Bank of England Quarterly Bulletin*, Autumn 2003, page 265) and Brigden *et al* (*op cit*).
(3) McCallum, B (1994), 'A reconsideration of the uncovered interest parity condition', *Journal of Monetary Economics*, Vol. 33, No. 1–2, pages 3–24.
(4) See for example, Chinn, M D and Meredith, G (2005), 'Testing uncovered interest parity at short and long horizons during the post-Bretton Woods era', *NBER Working Paper no. 11077*.

Chart 21 Conditional correlation between changes in UK bond and equity prices[a][b]



Sources: Global Financial Data and Bank calculations.

(a) Based on quarterly data between 1938 Q1 and 2006 Q4.
(b) Dotted line represents the historical average.

Of course, it is possible that the simple DDM decomposition gives a misleading impression of developments in equity risk premia. Specifically, it assumes long-term index-linked government bond yields provide a reliable signal of expected future risk-free real interest rates. But these market rates have recently been at historically low levels, in part related to high demand for index-linked gilts. Consequently, when valuing equities, investors may have chosen largely to ignore the falls in real long-term interest rates over the past few years and not adjusted their own discount rates to the same extent. In this case, the 'true' equity risk premium may be lower than suggested by the measure inferred from the simple DDM.

Idiosyncratic influences on equity markets

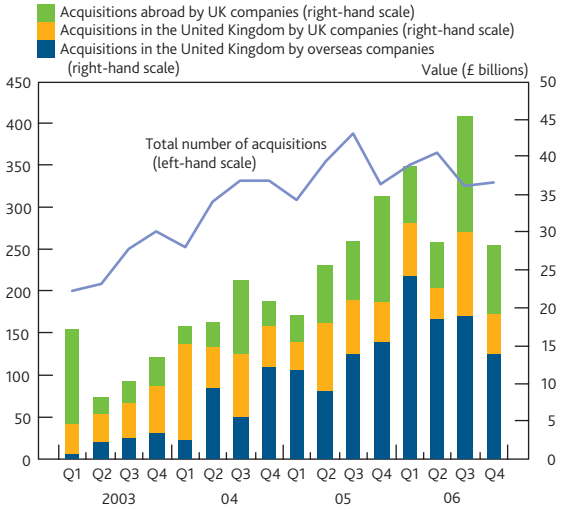
Market contacts have suggested that equity market indices may also have been supported by company and sector-specific developments. In particular, the recent increases in merger and acquisition (M&A) activity, leveraged buyouts and private equity investments seems to have been largely sustained. Although in aggregate the value of acquisitions involving UK companies fell towards the end of last year, the total number of transactions has remained firm, indicating the involvement of small/medium-sized rather than large companies (**Chart 22**).

To the extent that takeovers and buyouts are perceived by investors as potentially increasing companies' revenues or offering possible cost efficiencies, such developments could have boosted equity valuations. Possibly consistent with small and medium-sized companies having been the main beneficiaries of M&A activity and private equity bids, equity prices of these types of firms have increased more sharply than those of large firms.

Longer-term inflation expectations remained anchored

Medium to long-horizon breakeven inflation rates drifted gradually higher through 2006 (**Chart 13**). That could have reflected either an increase in market participants'

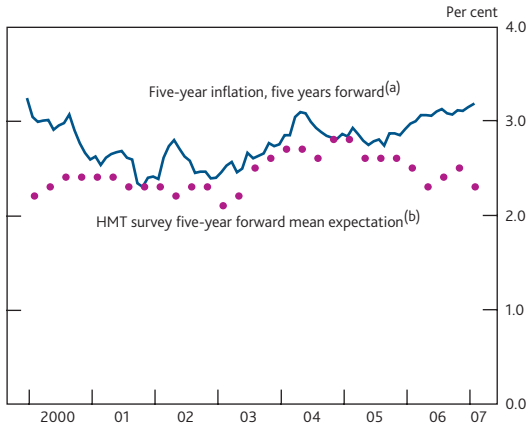
Chart 22 Acquisitions involving UK companies



expectations of future inflation or a larger risk premium to compensate investors for uncertainty about future inflation.

It is difficult to distinguish the influence of these two factors. However, discussions with market contacts did not indicate that there had been any substantial upward shift in long-term inflation expectations, which they viewed as having remained well anchored. And this view is supported by surveys of professional economic forecasters (**Chart 23**). Instead, contacts thought the small increases in breakeven rates might be consistent with an increase in inflation risk premia, due to greater uncertainty about future inflation.

Chart 23 Long-term breakeven inflation rates and surveys of inflation expectations



Sources: Bloomberg, ONS and Thomson Financial Datastream.

(a) Inflation forward rate derived from the Bank's government liability curve.
(b) HMT survey average forecasts of RPIX five years ahead. These surveys are conducted on a quarterly basis, in February, May, August and November. For the latest forecast in February 2007, the forecast was for annual RPIX in 2011.

A small increase in inflation uncertainty may have resulted from recent increases in the level and variability of UK inflation outturns.[1] Furthermore, breakeven inflation rates are derived from instruments that settle on RPI inflation. Hence the

(1) Uncertainty about the near-term outlook for inflation was discussed in the minutes of the MPC's February meeting, paragraph 31.

increase in observed rates may have reflected greater uncertainty about the outlook for RPI inflation that does not apply to the outlook for CPI inflation — the measure that is targeted by the MPC. Indeed, allowing for the historical difference between RPI and CPI inflation, the level of breakeven rates remained broadly consistent with CPI inflation expectations being close to the MPC's target.

At very long horizons (beyond fifteen years ahead), breakeven inflation rates rose by around 20 basis points over the review period. Market contacts report that movements in these rates often reflect the lumpiness of investment and issuance flows in the index-linked market rather than changes in underlying inflation expectations. In particular, against the background of strong demand from institutional investors, at least some of the recent increase in breakeven inflation rates may have been due to a slowdown in issuance of long-dated non-government inflation-linked bonds, which had increased in 2006.

Developments in market structure

Asset managers' use of derivatives

As reported in previous *Bulletins*, over the past few years asset managers have started to make more use of derivatives alongside traditional 'long only' investment strategies, for example using interest rate swaps as part of liability-driven investment solutions for pension funds.(1) Many of the Bank's contacts in the asset management industry expect investments in products and strategies that make use of derivatives to continue to grow. In part, this reflects two new European Directives, together known as UCITS III,(2) which have extended traditional fund managers' investment mandates to include derivatives. Since February 2007, all UCITS funds authorised by the FSA have had to be fully compliant with UCITS III.

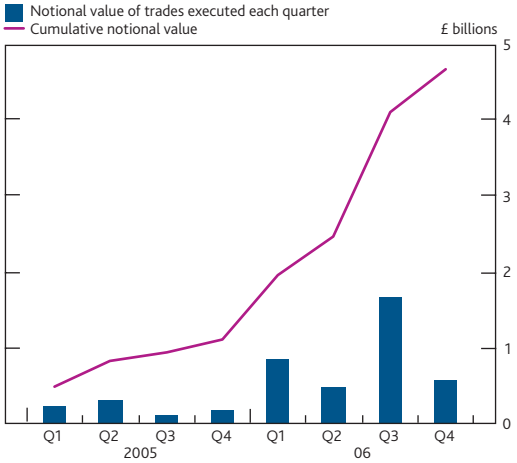
Under the new regulations, UCITS investment funds are authorised to use derivatives for investment as well as hedging purposes. Contacts suggest this should lead to significant changes in business practices, in particular to funds' governance and risk management frameworks. In addition, over time the changes may further blur the distinction between hedge funds and traditional fund managers.

UK property derivatives

Increased use of derivatives by asset managers may be one driver of recent growth in UK property derivative trading. Growth in the market for commercial property derivatives, which began in 2004, increased sharply during 2006 (**Chart 24**).

The main players in the market have been the large mortgage lending banks, institutional asset managers and some large life insurance companies, and banks seeking to hedge structured notes sold to retail investors. Firms that naturally have large property exposure (such as mortgage banks and some life insurers with large property portfolios) use the market for hedging. Other banks and asset managers typically take the other side of these trades (ie they take property exposure). Contacts have suggested that the market became more balanced during 2006; previously there was far more demand to shed property exposure.

Chart 24 Notional value of UK commercial property derivatives trades



Source: Investment Property Databank.

Several large investment banks act as intermediaries in the UK property derivative markets. Dealers typically aim to find clients for both sides of each transaction rather than retaining any exposure themselves. However, the recent growth in the market may have given them greater confidence to 'warehouse' risks. Offsetting these warehoused risks can be difficult as there is no perfect hedge.

Derivatives linked to residential property prices have been much less widely traded; the market has remained more one-sided with mortgage banks seeking to hedge their property lending books but with few investors willing to take on the exposure. Asset managers have been reported as having fewer reasons for using residential property derivatives, possibly because many of their clients already have large residential property exposures.

Recent developments in the sterling market for bank capital securities

Demand from asset managers has been reported as one reason for the issuance of sterling-denominated bank capital securities, which rose sharply during 2006. Market contacts report that many large fund managers (both traditional asset managers and hedge funds) have invested heavily in bank

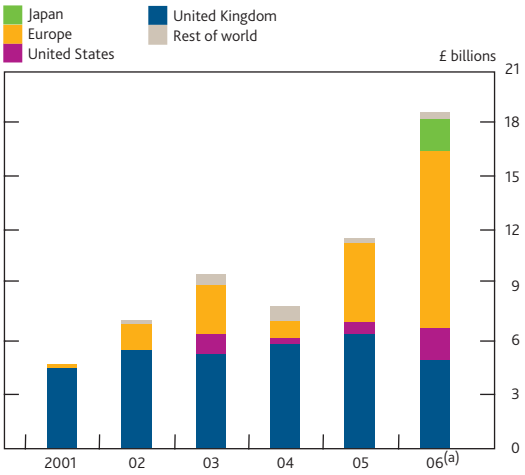
(1) See, for example, McGrath and Windle (2006), 'Recent developments in sterling inflation-linked markets', *Bank of England Quarterly Bulletin*, Vol. 46, No. 4, pages 386–96.
(2) Undertakings in Collective Investments and Transferable Securities (UCITS) are a set of European regulations designed to harmonise the regulatory framework for selling funds across Europe.

capital securities, which are subordinated to senior debt and hence typically offer higher yields.(1) Also, compared with corporates banks are less likely to be targeted for leveraged buyouts, which tend to reduce the value of outstanding debt.

Several other factors may also have influenced the issuance of bank capital securities. On the supply side these include greater emphasis on regulatory-capital management in the banking sector; the growth in risk-weighted assets (which may necessitate a capital injection); and an increase in acquisitions by banks (which are often funded by capital securities).

Banks can issue capital securities in several discrete markets, typically split by the investor base — institutional and retail — and by currency (principally US dollar, euro and sterling). During 2006, growth in issuance was most pronounced in sterling. Indeed, available data suggests sterling-denominated issuance increased by more than 60% year on year (**Chart 25**). The increase was entirely attributable to issuance by non-UK banks (issuance by UK banks actually fell by around 20% year on year). It was the first time that non-UK issuance had exceeded UK banks' issuance.

Chart 25 Issuance of sterling-denominated bank capital securities



Source: Goldman Sachs.

(a) Year to 21 November 2006.

There are three specific factors underlying higher sterling-denominated capital issuance. First, the market reacted to a decision by the US insurance regulator, the National Association of Insurance Commissioners (NAIC). From late 2005, until the issue was resolved in September 2006, the NAIC classified many new issues of hybrid capital securities as common equity rather than debt or preferred stock. This resulted in a marked increase in the capital charge faced by US insurers, which market contacts report account for around a quarter of the institutional investor base in the US dollar market. Consequently, primary and secondary market spreads rose, so banks, especially European, reconsidered US dollar issuance and instead issued in other currencies. Second, according to some contacts, the UK asset management industry has been more comfortable with the duration (including potential maturity extensions), complexity and subordination of capital securities, than its continental European equivalent. In turn, the premium demanded in sterling has been lower than in euro. Third, the rates at which issuers can swap floating-rate cash flows from sterling into foreign currencies (known as basis swap rates) have tended to confer a funding advantage to non-UK banks issuing in sterling.(2) Market contacts note the latter arose, in part, owing to the increased issuance of US dollar and euro-denominated (tranches of) retail mortgage-backed securities (RMBS) by the UK banks.

Project Turquoise

Seven of the largest equity dealers have announced their intention to create a multilateral trading platform for European equities, known as 'Project Turquoise'. A trading platform is an electronic system in which multiple participants have the ability to execute trades by accepting bids and offers made by other participants in the system. Shares traded on this platform will continue to be listed on exchanges. Project Turquoise will attempt to capture high volume, low margin 'black box' or automated rule driven trading.

The launch of this platform is intended to coincide with the introduction of the Market in Financial Instruments Directive (MiFID) in November 2007. MiFID will enable Multilateral Trading Facilities (MTFs) such as 'Project Turquoise' to compete more effectively with stock exchanges, through the removal of domestic rules favouring trading on stock exchanges.

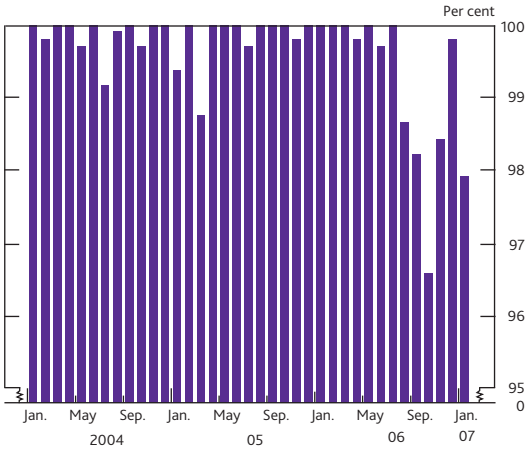
CREST settlement

The 2006 Q4 *Quarterly Bulletin* reported that CREST had taken steps to improve performance. This was in response to a short period when CREST settlement was completed later than scheduled owing to problems encountered following the transfer of major aspects of CREST settlement to Euroclear's Single Settlement Engine (SSE) in August 2006.
Reflecting these changes, the settlement timetable returned to normal. CREST 'outages' were fewer and the time that the CREST system was available for settlement was more than 99.5% in December 2006 (**Chart 26**).

However, there were some more recent incidents. For example, a software release generated errors that triggered a very significant CREST 'outage' during the morning of 22 January and led to a very late close of sterling payments. In addition, there were a small number of short service interruptions, some of which had resulted in extensions at the

(1) Capital securities are so-called 'hybrids': fixed-income instruments that have equity-like properties.
(2) For more details on basis swaps see the box on page 120 of the Summer 2004 *Quarterly Bulletin*.

Chart 26 CREST system availability for settlement



Source: CRESTCo.

end of the day.[1] As noted in the box on page 18, issues surrounding the implementation of the SSE were discussed by the Bank's Securities Lending and Repo Committee.

Bank of England official operations[2]

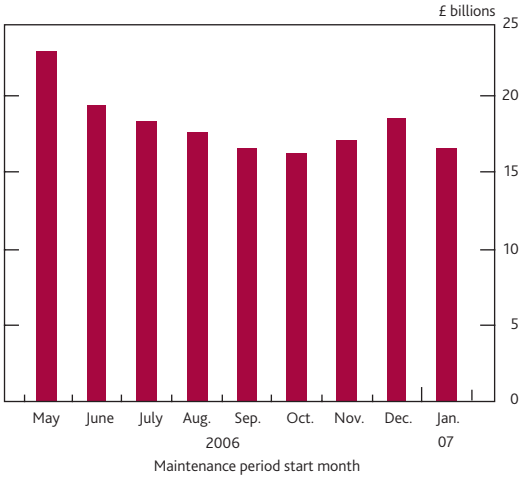
The Bank's management of its balance sheet is directed to policy purposes. Changes in the Bank's assets and liabilities are, accordingly, related to the implementation of monetary policy through establishing Bank Rate in the money markets; management of the Bank's foreign exchange reserves; provision of banking services to other central banks; provision of payment services for the UK financial system and the wider economy; and management of the Bank's free capital and cash ratio deposits from financial institutions.

Monetary policy implementation

The overall size of the Bank's balance sheet fell over the review period, in part reflecting slight falls in the notes in circulation (**Table A**). These falls were partially offset by bank and building society reserves-scheme members opting to increase their aggregate target reserve balances.

Between May and October 2006, members of the reserves scheme generally reduced their reserves targets as they became more familiar with the new regime. However, there was a notable increase in reserves targets for the maintenance period starting 6 December, which spanned the year end (**Chart 27**). This may have been due to increased uncertainty surrounding customer flows over the year end and reserves-scheme members therefore wishing to hold more reserves over this period to absorb any unanticipated payment flows.

Chart 27 Aggregate reserves targets



During the run-up to the first calendar year end under the new framework, several market contacts had expected market interest rates to rise as some banks were believed to have put limits on interbank lending and reduce the size of their risk-weighted assets for regulatory and internal reporting purposes. In the event, there was indeed a rise in the spread between Bank Rate and unsecured overnight interest rates, which increased to 20 basis points (**Chart 28**). The impact was similar to the effect of the half-year end in June. Market contacts reported that there was ample liquidity over the year end.

Table A Simplified version of Bank of England consolidated balance sheet[a][b]

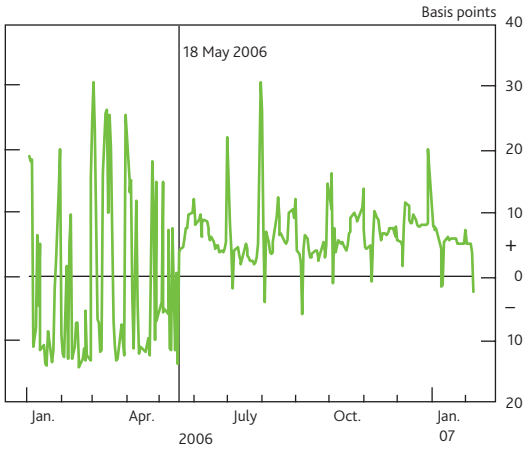
£ billions

Liabilities	7 Feb.	8 Nov.	Assets	7 Feb.	8 Nov.
Banknote issue	38	39	Short-term sterling reverse repo	31	31
Reserves account balances	17	16	Long-term sterling reverse repo	15	15
Standing facility deposits	0	0	Ways and Means advance	13	13
Other sterling deposits, cash ratio deposits and the Bank of England's capital and reserves	12	13	Standing facility assets	0	0
Foreign currency denominated liabilities	13	12	Other sterling-denominated assets	4	4
			Foreign currency denominated assets	15	16
Total[c]	**78**	**80**	**Total**[c]	**78**	**80**

(a) The Bank Charter Act 1844 requires the Bank of England to separate the note issue function from its other activities. Accordingly, the Bank has two balance sheets: Issue Department and Banking Department. See 'Components of the Bank of England's balance sheet' (2003), *Bank of England Quarterly Bulletin*, Spring, page 18.
(b) Based on published weekly Bank Returns. The Bank also uses currency, foreign exchange and interest rate swaps to hedge and manage currency and non-sterling interest rate exposures, see the Bank's 2006 *Annual Report*, pages 36–37.
(c) Figures may not sum to totals due to rounding.

(1) For more details, see Chapter 2 of the Bank's *Payment System Oversight Report*, February 2007.
(2) This section reviews the three maintenance periods from 9 November to 7 February.

Chart 28 Spread to Bank Rate of unsecured sterling overnight interest rates[a]

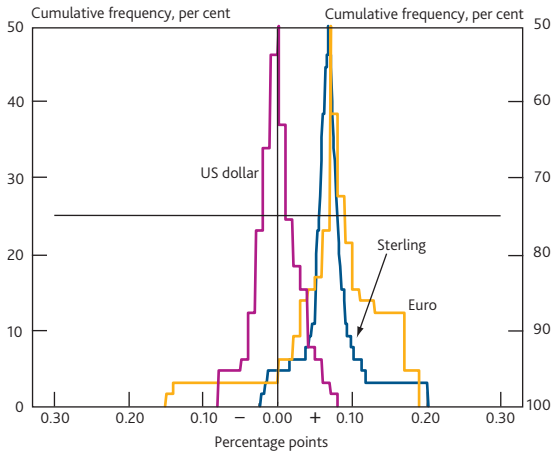


Sources: Wholesale Market Brokers' Association and Bank calculations.

(a) Sterling overnight index average fixing less Bank Rate.

Other than at the year end, overnight unsecured interest rates continued to trade fairly close to Bank Rate and day-to-day volatility of unsecured sterling rates continued to compare favourably to that of overnight rates in other currencies (**Chart 29**). The tendency for unsecured overnight rates to increase at month ends, which has been reported in previous *Bulletins*, was less evident during the current review period. Reflecting this, the range of rates at which overnight unsecured trades were executed, relative to Bank Rate, narrowed further during the period, with the vast majority of trading occurring within a 10 basis points range (**Chart 30**).

Chart 29 Folded cumulative distribution[a] of spread of international unsecured overnight interest rates to official interest rates[b]

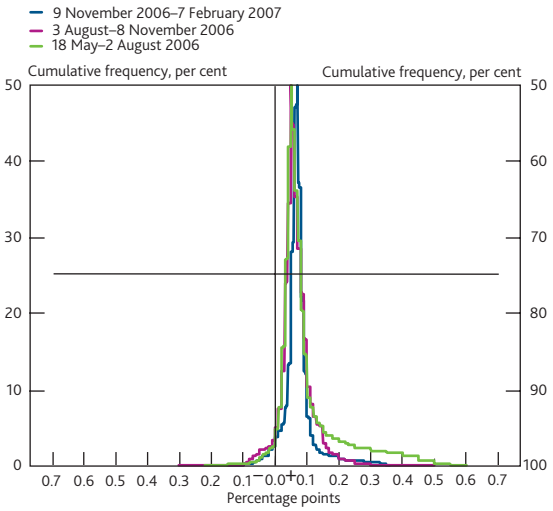


Sources: Wholesale Market Brokers' Association and Bank calculations.

(a) Distribution of the spread between the overnight interest rate at end-of-day and the official interest rate. The distributions are folded at the median so that cumulative probabilities for values above (below) the median are indicated by the right-hand (left-hand) scale.
(b) Chart shows the distribution for period 9 November 2006–7 February 2007. Differences in the median level of the spread of unsecured rates to official interest rates are due to differences in the way official operations are conducted.

Secured overnight market interest rates also tracked Bank Rate closely. There were no episodes similar to the end of July 2006

Chart 30 Folded cumulative distribution[a] of spread of sterling unsecured overnight interest rate (trade weighted) to Bank Rate

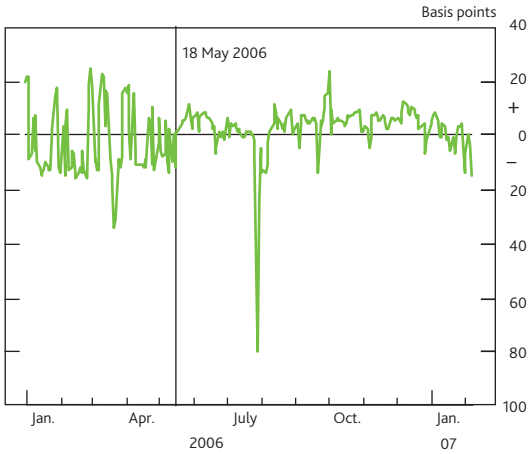


Sources: Wholesale Market Brokers' Association and Bank calculations.

(a) Distribution of the spread between the overnight interest rate at end-of-day and the official interest rate. The distributions are folded at the median so that cumulative probabilities for values above (below) the median are indicated by the right-hand (left-hand) scale.

when secured rates fell sharply. However, in late January, an apparent shortage of gilt collateral caused secured rates to fall, narrowing the spread between overnight secured rates and Bank Rate (which for short periods was negative) (**Chart 31**) and causing the spread between secured and unsecured rates to widen.

Chart 31 Spread to Bank Rate of secured market interest rates[a]



Sources: ICAP and Bank calculations.

(a) ICAP GC overnight repo fixing less Bank Rate.

In the Bank's new operational framework, overnight market interest rates should be kept in line with Bank Rate during the monthly maintenance periods given the possibility of active management of reserves by members. One way of gauging the degree of active management is the difference between each bank's actual reserves balance at the end of each day and the average balance it would have needed to hold over the remainder of the maintenance period in order to hit its reserves target exactly. **Chart 32** shows the sum of (the

The work of the Securities Lending and Repo Committee

The Securities Lending and Repo Committee (SLRC), chaired by the Bank, was formed in 1990. It provides a forum for discussion of market, infrastructure and legal developments in securities lending and repo markets. The SLRC includes representatives of international repo and securities lending practitioners, together with bodies such as CREST, the UK Debt Management Office, LCH.Clearnet, the London Stock Exchange and the Financial Services Authority. Further background on the SLRC can be found in the Summer 2006 *Quarterly Bulletin*.

Over the past year, the SLRC has discussed developments in the infrastructure supporting the UK securities lending and repo markets, including:

LCH.Clearnet gilt DBV repo clearing project

The new service aims to introduce the benefits of a central counterparty, including netting, for repos against bundles of gilts selected using the DBV service offered in CREST. It is scheduled to be introduced on 14 March 2007 following successful testing with around 20 market participants. The SLRC has discussed the potential impact on sterling liquidity flows. SLRC members were also interested in the amount of trading that would move to the new platform and the extent to which balance sheet netting would be permitted by the product as this would allow a more efficient use of capital for participants who trade on both sides of the repo market.

CREST Single Settlement Engine (SSE)

The SSE was launched on 29 August 2006. Following its introduction, there were several issues that led to CHAPS extensions and extensions to the DBV (Delivery-by-Value) settlement timetable (as discussed on page 15). The SLRC discussed the impact of these extensions on the repo market and also provided one forum for CREST to outline their implementation schedule of system improvements to resolve these issues. In particular, the SLRC discussed contingency arrangements in the event that DBVs failed to settle. The Bank outlined to the Committee some of the tools available in its new sterling money market framework for participants to manage banking system liquidity in the event of market disruption. The SLRC also proposed that CREST should discuss the actions that would be appropriate for euro and US dollar positions with its customer banks. The SSE achieved a much greater degree of stability after the initial post-implementation issues were resolved.

The SLRC's market participant members have also continued to review the impact of proposed regulatory changes affecting securities lending and repo markets, in particular two new EU Directives:

The Transparency Directive

The Transparency Directive took effect from 20 January 2007 and contained requirements regarding notification of interests in shares in securities lending transactions. SLRC practitioner members had raised concerns about the limited value of disclosing all securities lending activity. The requirements were implemented in a way that meets the requirements of the Directive while being workable and cost-effective for market participants. Lenders are exempt from making major shareholding disclosures, by allowing them to treat their right to recall lent stock as an 'acquisition' to be set-off against their lending ('disposal') of the stock. The notification requirements apply to securities borrowers, although intermediaries that borrow securities that are then on-lent within one business day and do not exercise voting rights are also exempt.

The Markets in Financial Instruments Directive (MiFID)

MiFID is due to be implemented in November 2007. It is likely that MiFID's implications for repo and securities lending will be limited; for example, the best execution requirement will not apply to repo and security lending transactions conducted between Eligible Counterparties (over 90% of the total securities lending market). The SLRC continues to review the interpretation of best execution requirements and their effect on repo and securities lending activities.

Proposed amendments to the FSA's New Collective Investments Scheme sourcebook

The SLRC has discussed several modifications proposed to the sourcebook, including extending the list of permitted counterparties with which securities lending may be undertaken and extending the list of acceptable collateral, and also permitting the use of Euroclear Bank's Securities Lending and Borrowing Programme. The group also discussed proposed rules on the treatment of income generated by securities lending programmes and recommended further workshops to ensure that the treatment takes into account, where relevant, how the custodians manage their lending programmes.

Gilt Repo Code

Following a recent consultation exercise with market participants and discussions in SLRC, it has been decided to update the Gilt Repo Code. A Working Group which will produce the updated code is being established.

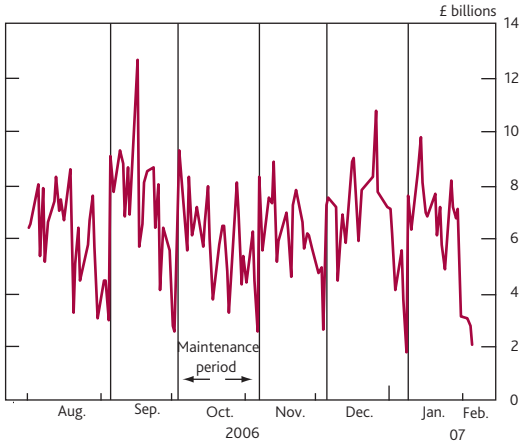
Review of the Global Master Securities Lending Agreement (GMSLA)

A review of the GMSLA is under way, covering tax, legal and operational aspects. A draft version of the updated agreement will be reviewed by the SLRC in due course.

Harmonising the gathering of legal opinions across jurisdictions

An SLRC subgroup, comprising trade association representatives and legal advisers, is responsible for obtaining legal opinions on the effectiveness of the close-out netting provisions in the GMSLA, the Overseas Securities Lender's Agreement (OSLA) and the Master Gilt Edged Stock Lending Agreement (GESLA) under various jurisdictions throughout the world. UK authorised firms are required to obtain these legal opinions in order to support the reporting of securities lending exposures to the FSA (on a net basis) for capital adequacy purposes. The SLRC and the subgroup have continued to discuss the harmonisation of this exercise in gathering legal opinions with the similar process organised by the International Capital Market Association (ICMA) and the Securities Industry and Financial Market Association (SIFMA) for repo transactions under the Global Master Repurchase Agreement (GMRA). That would probably yield cost savings and efficiency gains for participating firms. It has been agreed to harmonise this process beginning in the 2007/08 opinion-gathering round. In addition, the subgroup have been reviewing the harmonised format for the opinions and will consider the coverage in terms of counterparty and jurisdiction.

Chart 32 Management of reserve accounts[a]



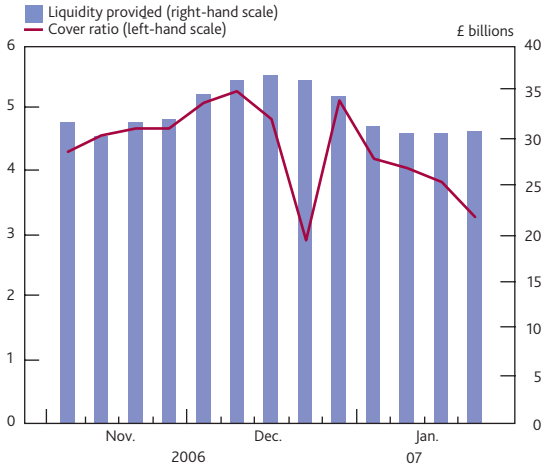
(a) The line indicates the extent to which reserves-scheme members were actively managing their reserve accounts. For each day, it sums the absolute difference between each member's observed balance and the average balance it would have needed to hold in order to hit its reserve target. Higher values suggest a greater degree of active reserves management.

absolute value of) this difference across all reserves-scheme members; a higher value indicates more active reserves management. Over the current review period, active management appears in general to have been similar to that in the review period for the 2006 Q4 *Bulletin*.

To enable reserves-scheme members to meet their chosen target during each maintenance period, the Bank aims to provide through its open market operations (OMOs) the exact amount of cash so that, collectively, all scheme members can achieve their reserves targets exactly, at the mid-point of the +/-1% range around these targets. Reserves-scheme members face interest penalties if they hold a balance outside (either above or below) the target range.

The Bank corrects for any excess or deficient reserves relative to target in its weekly or fine-tune OMOs to ensure that reserves-scheme members are collectively still able to meet their reserves targets exactly. The size of the weekly short-term OMO increased slightly during December, reflecting higher aggregate reserves targets and note demand over the Christmas period (**Chart 33**). Cover (the ratio of bids to the amount on offer) in the short-term OMOs was fairly steady, but dipped slightly around year-end. This may have been because counterparties expected cover to fall and did not want to overbid in case they were allocated their full amount, which would in turn require them to find additional collateral on the last day of the year, when it might be scarce.

Chart 33 Liquidity provided in weekly operations and cover ratio



Three fine-tuning OMOs were conducted. On 6 December, the fine-tune supplied reserves of £1.5 billion. On 10 January, the fine-tune drained £1.8 billion of reserves from the system. This was underbid by £354 million. On 7 February, the fine-tune drained £1.1 billion and was underbid by £212 million.

The Bank's long-term repo OMOs are conducted in variable-rate tenders. They were more than fully covered at each maturity in all operations over the review period. In the January operation, cover fell for the three-month maturity but increased at longer maturities (**Table B**). Yield tails remained small, particularly at nine and twelve-month maturities.

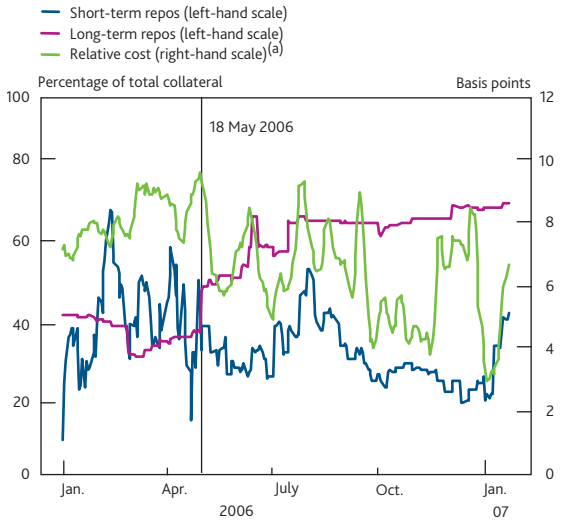
The proportion of euro-denominated collateral provided in the Bank's short-term repo OMOs increased, particularly in January, in line with a decrease in its relative cost (**Chart 34**).

Table B Long-term repo operations

	Three-month	Six-month	Nine-month	Twelve-month
14 November 2006				
On offer (£ millions)	1,500	750	400	200
Cover	3.16	2.02	1.88	2.25
Weighted average rate[a]	5.073	5.152	5.205	5.245
Highest accepted rate[a]	5.075	5.165	5.205	5.245
Lowest accepted rate[a]	5.070	5.140	5.205	5.245
Tail[b] basis points	0.3	1.2	0	0
19 December 2006				
On offer (£ millions)	1,500	750	400	200
Cover	3.23	1.68	1.50	2.35
Weighted average rate[a]	5.153	5.230	5.310	5.360
Highest accepted rate[a]	5.155	5.240	5.310	5.360
Lowest accepted rate[a]	5.151	5.230	5.310	5.360
Tail[b] basis points	0.2	0.5	0	0
16 January 2007				
On offer (£ millions)	1,600	750	400	150
Cover	1.41	2.53	3.27	3.84
Weighted average rate[a]	5.429	5.537	5.625	5.668
Highest accepted rate[a]	5.440	5.540	5.625	5.685
Lowest accepted rate[a]	5.400	5.535	5.625	5.665
Tail[b] basis points	0.3	0	0	0

(a) Per cent.
(b) The yield tail measures the difference between the weighted average accepted rate and the lowest accepted rate.

Chart 34 Relative cost and use in OMOs of euro-denominated EEA government securities[a]



(a) Cost of euro-denominated collateral relative to sterling-denominated collateral is calculated as the five-day moving average of the difference between the sterling and euro secured-unsecured (one-month) interest rate spread.

This may have reflected higher demand for gilt collateral in the wider repo market which, as mentioned above, was cited by the Bank's contacts as a reason behind the widening in secured-unsecured overnight interest rate spreads. To help prevent shortages of gilt collateral, in September 2006 the Bank extended the deadline for its counterparties to notify substitutions of euro-denominated for gilt collateral and this facility has been used. As described in the box on page 21, that was one of a series of technical changes to the Bank's sterling monetary operations.

Foreign currency reserves

Reflecting the remit given by the Chancellor of the Exchequer in 1997, the Bank holds its own foreign exchange reserves. These assets, together with others used to facilitate participation in the euro area's TARGET payment system, have been financed by issuing foreign currency securities.

On 15 December 2006, the Bank announced that the foreign exchange reserves will in future be financed by a new programme of medium-term securities issuance. Issuance under the new programme will be regular, highly transparent, and marketed and distributed via a group of banks. Subsequently on 22 February the Bank announced that Barclays Capital, Citi, Goldman Sachs International and JPMorgan had been appointed to bring a three-year US dollar transaction. The Bank currently expects to execute a $2 billion issue in the week beginning 12 March.

The new issuance programme replaces the previous Euro Note auctions; the final issue under the old programme was therefore the €3 billion nominal Euro Note maturing 27 January 2009. There is one other outstanding Euro Note maturing on 28 January 2008, for €2 billion nominal.

Under current arrangements, the Bank holds approximately €3$^{1}/_{2}$ billion of euro-denominated assets to facilitate the United Kingdom's participation in TARGET. As detailed in the 2006 Q3 *Quarterly Bulletin*,(1) the Bank will no longer participate as a direct member when the European System of Central Banks (ESCB) replaces TARGET with TARGET2.(2) The changes to TARGET arrangements mean that the Bank will eventually be able to hold fewer foreign currency assets, thereby reducing its need for foreign currency financing below the €6 billion nominal previously provided by the Euro Note programme.

Capital portfolio

As set out in previous *Quarterly Bulletins*, the Bank holds an investment portfolio comprised of gilts and other high-quality sterling-denominated debt securities together with some short-term repos. This portfolio is approximately the same size as the Bank's capital and reserves (net of equity holdings, for example in the BIS and ECB, and the Bank's physical assets) and aggregate cash ratio deposits.

The portfolio currently holds around £2 billion of gilts and £1 billion of other debt securities. Purchases are typically made monthly, with the exception of December. Details of forthcoming purchases are published in a quarterly announcement on the Bank's wire service pages. Over the

(1) See page 287 of the Autumn 2006 *Bulletin*.
(2) The planned changes to the euro area's payment system, including the introduction (and membership) of TARGET2, are detailed on the ECB's website www.ecb.int/paym/target/target2/html/index.en.html.

Technical changes to the Bank's documentation for the sterling monetary framework

On 16 February 2007, the Bank published updated versions of the legal and operational documentation for its sterling money market operations. The documentation was updated to reflect a number of changes on which the Bank had previously consulted market participants and which had also been discussed in the Money Market Liaison Group (MMLG).(1) The main changes are:

1. Full collateralisation of both principal and interest amounts for all term repos entered into with the Bank in its open market operations (OMOs).

This change eliminates the Bank's unsecured intraday exposure to accrued interest on term gilt repos with its OMO counterparties. In future, the Bank's counterparties will be required to deliver securities equal to the adjusted market value of the accepted request for funds (as was the case under the previous policy) *plus* the full amount of interest that will be payable to the Bank at maturity. This change will come into effect for new OMOs on 19 April 2007. Collateral will not be required against the interest payable at maturity on outstanding repos from long-term repo open market operations before 19 April 2007 for which the previous arrangements will continue to apply until maturity ('grandfathering').

2. The removal of the current one-day grace period for breaches of the collateral concentration limit.

The Bank applies an issuer concentration limit to the collateral provided by its OMO counterparties and settlement banks in order to ensure some diversification of the bonds it would hold following a counterparty/settlement bank failure. Under the previous policy, banks had a one-day grace period to address any breaches of the limit. But in response to persistent one-day breaches, the Bank decided to remove the grace period.

3. The introduction of a single, group-level threshold for concentration limits to apply.

The Bank sets a concentration limit such that once the total collateral provided by a single OMO counterpart or settlement bank exceeds £1 billion, the institution must ensure that the securities of any single issuer (other than the UK government or the Bank of England) comprise no more that 25% of the total collateral provided to the Bank. Under the previous policy the threshold applied at institution and not group level. Separate concentration limits for OMO participants and sterling settlement banks that are different legal entities within the same group will continue to apply under the revised policy. Changes to the concentration limit came into effect on 26 February 2007.

4. The extension of the deadlines for some substitutions of collateral.

Partly in response to shortages of gilt collateral which, on occasion, have caused sharp falls in secured interest rates, the Bank has changed its operational timetable to allow for later substitutions of euro-denominated collateral for gilts in repos to which it is a counterparty.(2) This change should help to free up gilt collateral on days when it is in short supply, thereby helping to stabilise secured interest rates. This change took effect at the end of September 2006.

(1) See minutes of the MMLG's meetings in July and October 2006 and February 2007 (www.bankofengland.co.uk/markets/money/smmlg).
(2) For a more detailed discussion of the impact of collateral shortages on secured market interest rates, see the box entitled 'Idiosyncratic volatility in the overnight gilt repo market' in the 2006 Q3 *Quarterly Bulletin*, page 286.

current review period, gilt purchases were made in accordance with the 1 December announcement: £37.6 million in both January and February. In January, the Bank also made two sales from the portfolio as provided for in its market notice.