Markets and operations

This article reviews developments in sterling financial markets, including the Bank's official operations, between the 2010 Q4 *Quarterly Bulletin* and 25 February 2011.[1] The article also summarises market intelligence on selected topical issues relating to market functioning.

Sterling financial markets

Overview

Over the review period, financial markets continued to be strongly influenced by changes in expectations of future monetary policy developments, and concerns about the sustainability of fiscal positions in some euro-area periphery countries.

In the major economies, market expectations of policy tightening increased during the review period. In the United Kingdom, a continuation of above-target CPI inflation outturns and policy-related statements contributed to expectations of an increase in Bank Rate being brought forward. Financial market measures of UK medium-term inflation compensation were, however, little changed over the review period.

In the euro area, uncertainty about how the fiscal challenges facing some member countries would be resolved persisted. This was compounded by ongoing discussions about how investors might be affected by official proposals on the resolution of banks facing financial difficulty. The improvement in UK bank funding conditions that began in the second half of 2010 was, however, sustained. UK banks made a solid start to 2011, having broadly met their funding requirements in 2010, but a significant funding challenge nonetheless remains.

Contacts reported an increase in uncertainty in financial markets in response to the emergence of political tensions in a number of countries in North Africa and the Middle East. The cut-off date for this article preceded the devastation caused by the earthquake and the tsunami that hit Japan.

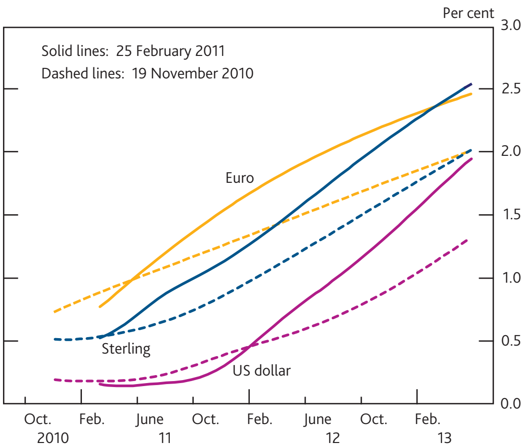
Recent developments in sterling capital markets

Monetary policy and short-term interest rates

The Bank of England's Monetary Policy Committee (MPC) maintained Bank Rate at 0.5% and the stock of purchased assets at £200 billion throughout the review period.

A continuation of above-target CPI inflation outturns and policy-related statements contributed to market participants bringing forward their expectations of the timing of a rise in Bank Rate. And the subsequent pace of monetary tightening was expected to be faster than assumed at the start of the review period. Consistent with this, sterling short-term overnight index swap (OIS) rates rose (**Chart 1**). A Reuters poll released at the end of February showed that most of the economists surveyed expected the MPC to raise Bank Rate in 2011 Q3. That was a quarter earlier than at the time of the 2010 Q4 *Bulletin*, albeit a quarter later than implied by sterling OIS rates. Thirty per cent of economists polled expected the MPC to start unwinding asset purchases during 2011.

Chart 1 Instantaneous forward interest rates derived from OIS contracts(a)



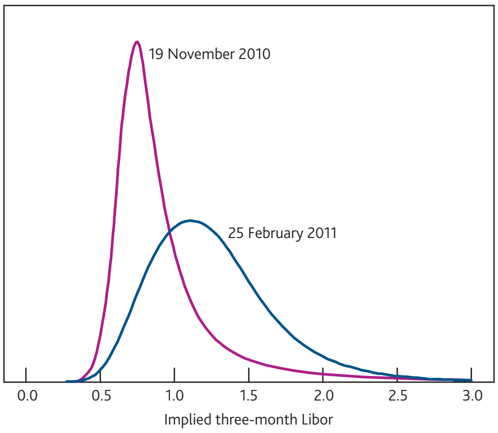
Sources: Bloomberg and Bank calculations.

(a) Instantaneous forward rates derived from the Bank's overnight index swap (OIS) curves.

Contacts noted that there had been uncertainty about what weaker-than-expected activity data, combined with stronger-than-expected inflation data, meant for the timing and degree of monetary policy tightening. Consistent with this, the option-implied distribution of six months ahead short-term interest rates widened (**Chart 2**).

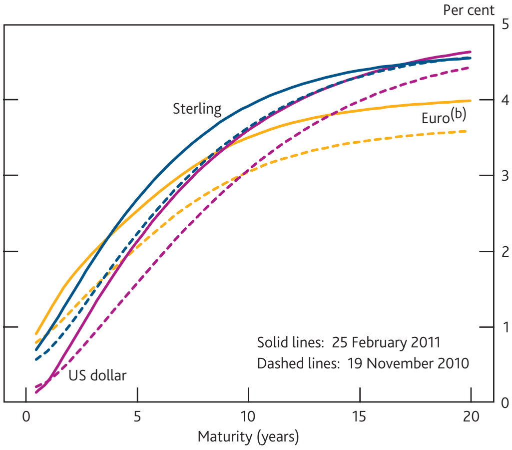
(1) The data cut-off for the previous *Bulletin* was 19 November 2010.

Chart 2 Option-implied PDFs for three-month Libor, six months ahead



Sources: Bloomberg and Bank calculations.

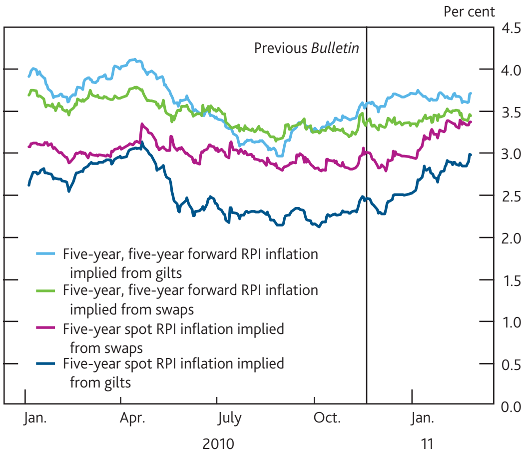
Chart 3 International nominal government bond spot yield curves(a)



Source: Bank calculations.

(a) Spot interest rates derived from the Bank's government liability curves.
(b) Derived from government bonds issued by France and Germany.

Chart 4 Implied RPI inflation rates(a)



Sources: Bloomberg and Bank calculations.

(a) Derived from the Bank's government liability and inflation swap curves.

Elsewhere, in the United States, the $600 billion of additional asset purchases announced by the Federal Open Market Committee (FOMC) at the start of November 2010 was on course. The FOMC was expected to start raising policy rates from early 2012 and the US dollar OIS curve had steepened as market participants revised up their rate expectations (**Chart 1**). In the euro area, both the expected level and speed of policy tightening were greater than at the time of the previous *Bulletin*. After the review period, the euro OIS curve rose further in response to policy statements by the European Central Bank (ECB) Governing Council.

At the very short end of the money market curve, sterling overnight interest rates generally traded at or around Bank Rate over the review period. The box on pages 8–10 describes the Bank's operations in the sterling money market. In the euro area, the euro overnight index average rate (EONIA) was close to its average in the previous review period. But for short periods in January and February, it moved above the ECB's main refinancing rate, coinciding with temporary falls in the volume of aggregate liquidity held by euro-area banks over and above that necessary to meet reserve requirements.

Long-term interest rates

Bond yields in the major industrial economies rose over the review period (**Chart 3**). By the end of the review period UK, US and euro-area ten-year spot yields had risen between 90 and 110 basis points from their near historic low levels in the autumn of 2010.

In the United Kingdom, the increase in ten-year spot yields largely reflected developments at the shorter end of the yield curve, out to five years. Much of the increase at the five-year horizon could in turn be accounted for by higher implied inflation rates (**Chart 4**). But market contacts noted that a lack of liquidity in short-maturity inflation-linked instruments meant that it was difficult to attribute this rise to any particular maturity within the five-year horizon. The rise was, however, consistent with growing concerns about the near-term inflationary impact of continued price rises across a range of commodities, such as oil and metals (**Chart 5**). Turning to the medium term, five-year implied inflation rates five years forward were little changed over the review period (**Chart 4**).

The cost of purchasing protection against credit events fluctuated for a number of euro-area member countries (**Chart 6**).[1] According to market contacts, this reflected ongoing uncertainty about how the fiscal challenges facing some of these countries would be resolved. These concerns about debt sustainability were also reflected in investors' appetite for investing in less liquid bonds, which, in turn,

(1) For further details, see 'The sovereign credit default swap market' in the 2010 Q1 *Bank of England Quarterly Bulletin*, pages 8–9.

Operations within the sterling monetary framework and other market operations

Over the review period, the level of reserves continued to be determined by (i) the stock of reserves injected via asset purchases, (ii) the level of reserves supplied by long-term repo open market operations (OMOs), and (iii) the net impact of other sterling ('autonomous factor') flows across the Bank's balance sheet. The box on pages 12–13 provides more detail on the Asset Purchase Facility (APF). This box describes the Bank's operations within the sterling monetary framework over the review period, and other market operations.

Operational Standing Facilities

Since 5 March 2009, the rate paid on the Operational Standing Deposit Facility has been zero, while all reserves account balances have been remunerated at Bank Rate. Reflecting this, average use of the deposit facility was £0 million in each of the maintenance periods under review. Average use of the lending facility was also £0 million throughout the period.

Indexed long-term repo OMOs

As part of its provision of liquidity insurance to the banking system, the Bank conducts indexed long-term repo (ILTR) operations. The Bank offers reserves via ILTRs once each calendar month; typically, the Bank will conduct two operations with a three-month maturity and one operation with a six-month maturity in each calendar quarter. Participants are able to borrow against two different sets of collateral. One set corresponds with securities eligible in the Bank's short-term repo operations ('narrow collateral'), and the other set contains a broader class of high-quality debt securities that, in the Bank's judgement, would normally be expected to trade in liquid markets ('wider collateral').

The Bank offered £5 billion via three-month ILTR operations on both 14 December 2010 and 11 January 2011, and £2.5 billion via a six-month operation on 15 February 2011 (**Table 1**).

Cover in the three-month December operation was similar to earlier ILTR operations. The three-month January operation, however, was the first ILTR operation where the total bids received were less than the amount on offer (known as an uncovered auction). The stop-out spreads (the difference between clearing spreads for wider and narrow collateral) in both the December and January operations were similar to the previous three-month operation in October, although clearing spreads for both collateral sets were around 5 basis points higher (**Chart A**).

The proportion of the three-month funds allocated to wider collateral in the December and January operations rose compared with those held in September and October, from an average of 12% to 19%.

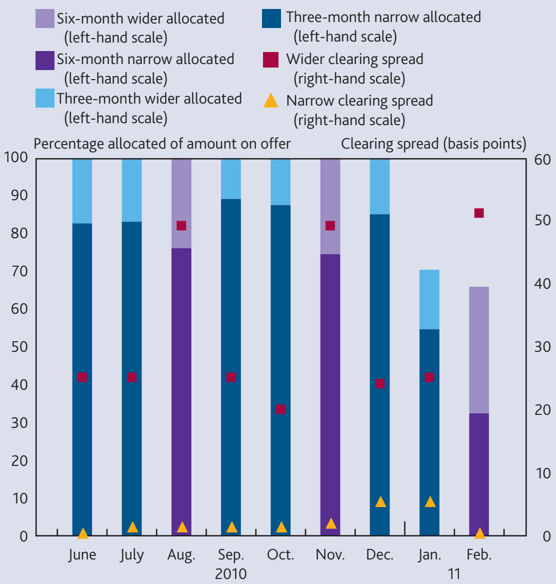
Table 1 Indexed long-term repo operations

	Total	Collateral set summary	
		Narrow	Wider
14 December 2010 (three-month maturity)			
On offer (£ millions)	5,000		
Total bids received (£ millions)[a]	7,230	6,445	785
Amount allocated (£ millions)	5,000	4,238	762
Cover	1.45	1.29	0.16
Clearing spread above Bank Rate[b]		5	25
Stop-out spread[c]	20		
11 January 2011 (three-month maturity)			
On offer (£ millions)	5,000		
Total bids received (£ millions)[a]	4,720	2,720	2,000
Amount allocated (£ millions)	3,502	2,720	782
Cover	0.94	0.54	0.40
Clearing spread above Bank Rate[b]		5	26
Stop-out spread[c]	21		
15 February 2011 (six-month maturity)			
On offer (£ millions)	2,500		
Total bids received (£ millions)[a]	2,158	808	1,350
Amount allocated (£ millions)	1,640	808	832
Cover	0.86	0.32	0.54
Clearing spread above Bank Rate[b]		0	52
Stop-out spread[c]	52		

(a) Due to the treatment of paired bids, the sum of bids received by collateral set may not equal total bids received.
(b) Amounts shown in basis points.
(c) Difference between clearing spreads for wider and narrow collateral in basis points.

The six-month operation on 15 February produced the first uncovered six-month ILTR, with a cover ratio of 0.86. The stop-out spread was 52 basis points. This compares to stop-out spreads of 49 basis points and 48 basis points in the August and November six-month ILTRs respectively. The proportion of reserves allocated against wider collateral in February rose to 51%, from 26% in November, the highest

Chart A ILTR allocation and clearing spreads



proportion in any three or six-month ILTR operation to date. This in part reflected the significantly smaller quantity of bids received against narrow collateral.

Market contacts suggested that the reduced level of participation in January and February reflected the increased availability of term funding in the market at the start of the New Year.

Reserves provided via new ILTRs were more than offset by the maturity of the previous LTR operations. Consequently, the stock of liquidity provided through longer-term operations declined.

Discount Window Facility

The Discount Window Facility (DWF) is a permanent facility to provide liquidity insurance to the banking system. It allows eligible banks to borrow gilts against a wide range of collateral. On 4 January 2011, the Bank announced that the average daily amount outstanding in the 30-day DWF between 1 July and 30 September 2010 was £0 million. The Bank also announced that the average daily amount outstanding in the 364-day DWF between 1 July and 30 September 2009 was £0 million.

Eligible collateral in the Bank's operations

On 11 February, the Bank announced changes to the eligibility criteria for sovereign, central bank and supranational debt taken as narrow and wider collateral in its operations. All sovereign, central bank and supranational debt currently eligible as collateral in the Bank's operations will remain eligible as either narrow or wider collateral. The narrow collateral set will be expanded to include US and Canadian government securities, which are currently eligible as wider collateral. But a number of other sovereigns, in addition to supranationals, will move from the narrow to the wider collateral set. In addition, the wider collateral set will be expanded by the inclusion of a small number of sovereigns whose debt is not currently eligible as collateral in the Bank's operations. These changes will take effect from 1 July 2011.

As a result of these changes, narrow collateral will in future include only those securities which in the Bank's view are likely to remain liquid in all but the most extreme circumstances, and are issued by sovereigns with sufficiently deep debt markets to facilitate broad access to the Bank's operations, consistent with the monetary policy purpose of narrow collateral. And consistent with the purpose of wider collateral of providing liquidity insurance to the banking system, wider collateral will comprise high-quality securities that would normally be expected to trade in liquid markets.

Haircuts on all narrow and wider collateral will continue to be based on the Bank's estimates of the risks to the value of the collateral — including market and liquidity risk — in the event of the default of the counterparty that has pledged the collateral. The Bank reserves the right to vary haircuts on an individual basis to reflect, for example, changes in market conditions or idiosyncratic risks.

Other operations

Special Liquidity Scheme

The Special Liquidity Scheme (SLS) was introduced in April 2008 to improve the liquidity position of the banking system by allowing banks and building societies to swap their high-quality mortgage-backed and other securities for UK Treasury bills for up to three years. The Scheme was designed to finance part of the overhang of illiquid assets on banks' balance sheets by exchanging them temporarily for more easily tradable assets.

When the drawdown period for the SLS closed at the end of January 2009, £185 billion of UK Treasury bills had been lent under the SLS. In order to prevent a refinancing 'cliff', the Bank has held bilateral discussions with all users of the Scheme to ensure that there are funding plans in place to reduce their use of the Scheme in a smooth fashion. By end-February 2011, £94 billion had been repaid, compared with £75 billion at end-November 2010.

US dollar repo operations

In response to renewed strains in the short-term funding markets for US dollars, from 11 May 2010 the Bank, in concert with other central banks, reintroduced weekly fixed-rate tenders with a seven-day maturity to offer US dollar liquidity. As of 25 February 2011, there had been no use of the Bank's facility.

Bank of England balance sheet: capital portfolio

The Bank holds an investment portfolio that is approximately the same size as its capital and reserves (net of equity holdings, for example in the Bank for International Settlements, and the Bank's physical assets) and aggregate cash ratio deposits. The portfolio consists of sterling-denominated securities. Securities purchased by the Bank for this portfolio are normally held to maturity; nevertheless sales may be made from time to time, reflecting for example, risk management, liquidity management or changes in investment policy.

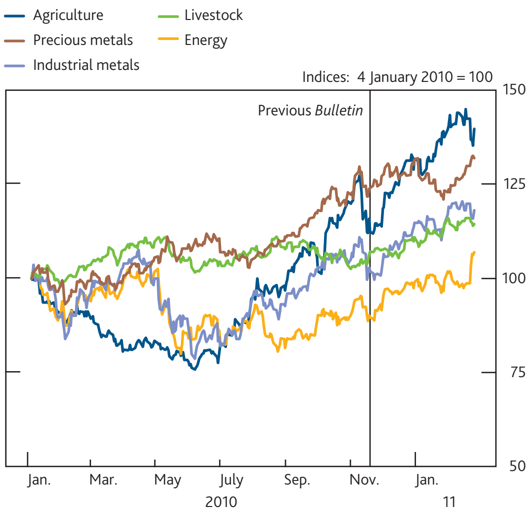
The portfolio currently includes around £3.4 billion of gilts and £0.5 billion of other debt securities. Over the period from 19 November 2010 to 25 February 2011, gilt purchases were made in accordance with the quarterly announcements on 1 October 2010 and 4 January 2011.

The Bank's foreign currency reserves

As part of the monetary policy framework introduced in 1997, the Bank holds its own foreign exchange reserves. These reserves can be used by the MPC in support of monetary policy. In December 2006, the Bank announced that its foreign exchange reserves would be financed by issuing medium-term securities on an annual basis, with a regular timetable, a high degree of transparency, and a group of banks to market and distribute each issue. The first bond was issued in March 2007, followed by issuance each subsequent year in March. Subsequent to the cut-off date for this *Bulletin*, the Bank issued a three-year dollar bond on 28 February 2011.[1]

(1) Further details are in the Market Notice available at www.bankofengland.co.uk/markets/reserves/marketnotice110228.pdf.

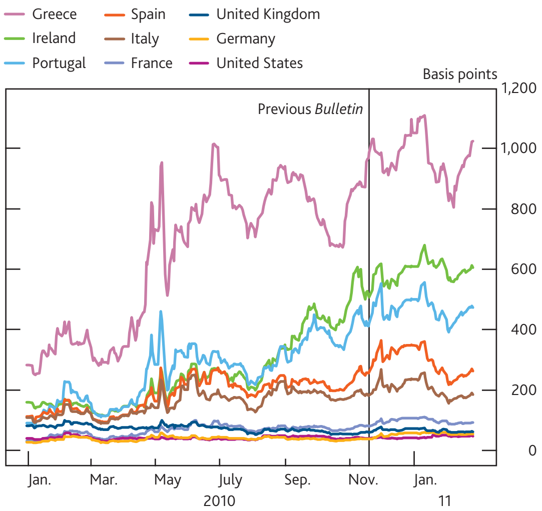
Chart 5 Selected commodity price indices[a]



Source: Standard & Poor's.

(a) Series refer to S&P GSCI total return indices.

Chart 6 Selected sovereigns' credit default swap premia[a]

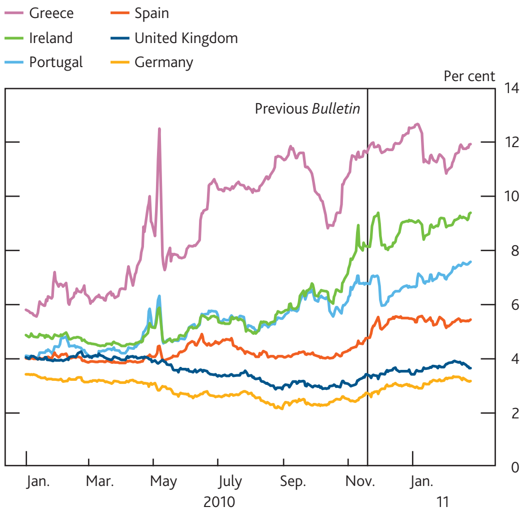


Source: Markit Group Limited.

(a) From five-year credit default swap (CDS) prices.

affected yields in more liquid markets, such as Germany and France. Over the review period, the spread of Irish and Portuguese government bond yields over German bond yields rose. The absolute level of compensation required to invest in government bonds from these countries remained elevated relative to their averages over the past ten years (**Chart 7**).

Chart 7 Selected European ten-year spot government bond yields[a]



Source: Bloomberg.

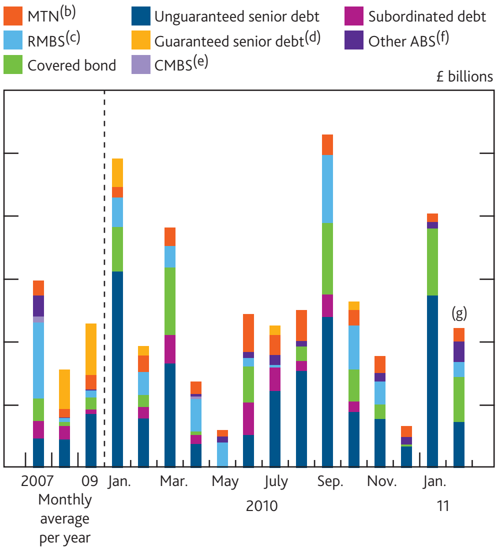
(a) Yields to maturity on ten-year benchmark government bonds.

Bank funding markets

The major UK banks reported that they had broadly achieved, and in some cases exceeded, their term issuance plans for 2010. Banks also made a solid start to 2011, issuing £20 billion of debt in public markets in January, followed by a further £11 billion in February up to the end of the review period (**Chart 8**). This compared with average monthly issuance in public markets of around £13 billion in 2010. A significant funding challenge nonetheless remains for UK banks.

The composition of UK banks' issuance in public markets was somewhat different from previous quarters, reflecting banks' increased use of covered bonds and US dollar unsecured markets. Contacts attributed the increase in the proportion of covered bond issuance to a number of factors. Regulatory developments had made covered bonds more attractive to insurance companies. Moreover, even though a European Commission (EC) consultation paper published in early January stated that its proposals for a crisis management framework would not apply to unsecured debt issued prior to any provisions becoming law, investors appeared more willing to hold covered bonds, which are expected to be outside the scope of any future resolution framework. Investors had also been attracted by the spreads on covered bonds, which were

Chart 8 Term issuance by the major UK lenders in public markets[(a)]



Sources: Bank of England, Dealogic and Bank calculations.

(a) Includes debt issued by Banco Santander, Bank of Ireland, Barclays, Co-operative Financial Services, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, Northern Rock and RBS. Term issuance refers here to securities with an original contractual maturity or earliest call date of at least 18 months. It includes subordinated lower Tier 2 and Tier 3 capital instruments with debt features.
(b) Medium-term notes.
(c) Residential mortgage-backed securities.
(d) Senior debt issued under HM Treasury's Credit Guarantee Scheme.
(e) Commercial mortgaged-backed securities.
(f) Asset-backed securities.
(g) Data are up to 25 February 2011.

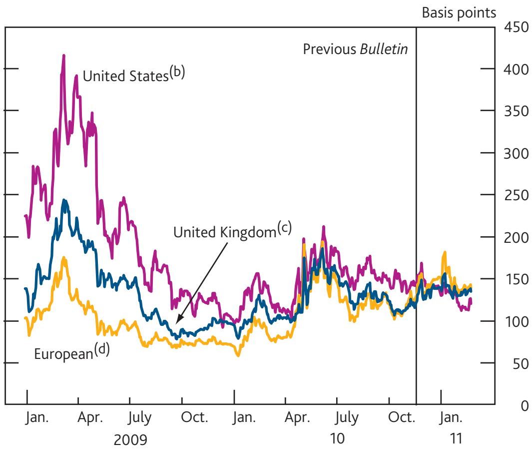
similar to those on unsecured issuance, but offered recourse to the underlying pool of assets in addition to the issuer. Some contacts noted, however, that increased covered bond issuance meant that unsecured creditors had recourse to a smaller proportion of a bank's balance sheet in the event of a bank resolution. Primary market activity in asset-backed security (ABS) markets had remained limited and, according to contacts, reliant on a small number of large investors.

Five-year UK bank credit default swap (CDS) premia, one indicator of long-term funding costs, rose in mid-January (**Chart 9**). Contacts suggested that this rise largely reflected an initially negative reaction to the EC's consultation paper. CDS premia subsequently returned to levels only slightly above those at the time of the 2010 Q4 *Bulletin* for the majority of major UK and European banks, although some tiering among institutions remained. The spread of short-term interbank borrowing rates relative to OIS rates, an indicator of short-term bank funding conditions, was little changed since the previous *Bulletin*.

Corporate capital markets

Equity prices in the United Kingdom and other advanced economies had continued to rise since the previous *Bulletin* (**Chart 10**). Contacts largely attributed these rises to increased corporate profitability stemming from an improvement in global growth prospects. This is consistent with the Bank of America/Merrill Lynch Fund Manager survey which showed that, in February, a net 51% of respondents expected the

Chart 9 Selected international banks' CDS premia[(a)]

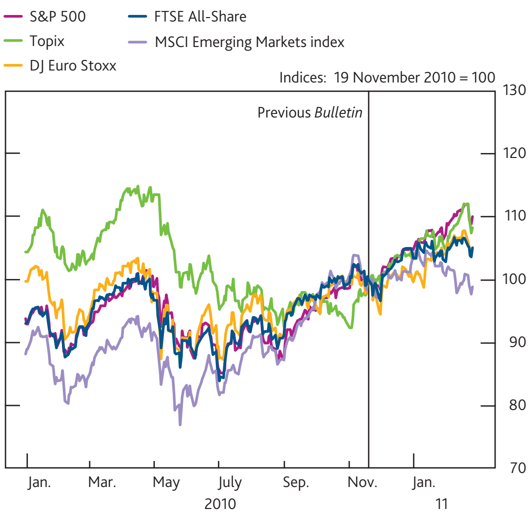


Source: Markit Group Limited.

(a) Unweighted averages of five-year, senior CDS prices.
(b) Average of Bank of America, Citi, Goldman Sachs, JPMorgan Chase & Co. and Morgan Stanley.
(c) Average of Barclays, HSBC, Lloyds Banking Group, RBS and Standard Chartered.
(d) Average of BBVA, BNP Paribas, Crédit Agricole, Credit Suisse, Deutsche Bank, Santander, Société Générale, UBS and UniCredit.

global profit outlook to improve, up from a net 36% in November 2010. But contacts noted that equity markets in emerging economies had fallen since the start of the year, reversing the rise earlier in the review period. Contacts attributed this fall to concerns about rising inflation and monetary tightening in these economies.

Chart 10 International equity indices[(a)(b)]



Sources: Bloomberg and Bank calculations.

(a) Indices are quoted in domestic currency terms, except for the MSCI Emerging Markets index, which is quoted in US dollar terms.
(b) The MSCI Emerging Markets index is a capitalisation-weighted index that monitors the performance of stocks in emerging markets.

Contacts attributed some of the rise in equity prices in advanced economies to a fall in the risk premium required to hold equities. Perhaps consistent with this, option-implied equity volatility, a measure of equity market uncertainty, fell for most of the review period. Volatility rose, however, towards the end of the period as political tensions in North Africa and the Middle East intensified (**Chart 11**).

Asset purchases[1]

The Bank did not undertake any Asset Purchase Facility (APF) gilt purchases over the review period. As a result, the stock of gilts held by the APF in terms of the amount paid to sellers remained at £198.3 billion.[2] The Bank continued to offer to lend some of its gilt holdings via the Debt Management Office (DMO) in return for other UK government collateral.

Purchases of high-quality private sector assets financed by the issuance of Treasury bills and the DMO's cash management operations continued, in line with the arrangements announced on 29 January 2009.

Table 1 summarises operations under the APF over the review period by type of asset.

Corporate bonds

The Bank continued to offer to purchase and sell corporate bonds via the Corporate Bond Secondary Market Scheme. Reflecting the improved conditions in the corporate bond market since the Scheme was introduced in March 2009 the Bank announced on 15 November 2010 that it would adapt its reserve prices to permit relatively more sales of corporate bonds in the future. The Scheme continues to serve a useful role as a backstop, particularly during periods of market uncertainty.

Over the review period, activity in the Bank's auctions continued to be driven by broader market conditions. Sales of corporate bonds rose, while purchases fell, and so as of 24 February 2011 the Bank's portfolio totalled £1,304 million, compared to £1,516 million at the end of the previous review period. Market contacts suggested that this pattern of usage of the Scheme reflected more positive market sentiment and continued limited new issuance. The higher level of corporate bond sales, and lower level of purchases, is in part also likely to have reflected the adjustment in reserve prices announced on 15 November 2010.

Commercial paper

The Bank continued to offer to purchase sterling-denominated investment-grade commercial paper (CP) issued by companies that make a material contribution to UK economic activity. On 15 November 2010, the Bank provided twelve months' notice of its intention to withdraw this scheme, reflecting a sustained improvement in the sterling commercial paper market.

Average spreads on sterling-denominated CP over the review period were broadly stable and remain well below the levels seen in early 2009. Usage of the APF Commercial Paper Facility remained at £0 million over the period.

Table 1 APF transactions by type (£ millions)

Week ending[a]	Commercial paper	Secured commercial paper	Gilts	Corporate bond		Total[b]
				Purchases	Sales	
18 November 2010[c][d]	0	0	198,275	1,516		199,792
25 November 2010	0	0	0	8	4	4
2 December 2010	0	25	0	23	3	45
9 December 2010	0	0	0	0	23	-23
16 December 2010	0	25	0	2	4	23
23 December 2010	0	0	0	0	14	-14
30 December 2010	0	0	0	0	0	0
6 January 2011	0	0	0	6	0	6
13 January 2011	0	0	0	0	48	-48
20 January 2011	0	25	0	0	45	-20
27 January 2011	0	0	0	0	26	-26
3 February 2011	0	0	0	0	22	-22
10 February 2011	0	0	0	0	5	-5
17 February 2011	0	25	0	2	8	19
24 February 2011	0	0	0	0	6	-6
Total financed by a deposit from the DMO[d][e]	0	25	–	283		308
Total financed by central bank reserves[d][e]	0	0	198,275	1,021		199,297
Total asset purchases[d][e]	0	25	198,275	1,304		199,605

(a) Week-ended amounts are for purchases in terms of the proceeds paid to counterparties, and for sales in terms of the value at which the Bank initially purchased the securities. All amounts are on a trade-day basis, rounded to the nearest million. Data are aggregated for purchases from the Friday to the following Thursday.
(b) Weekly values may not sum to totals due to rounding.
(c) Measured as amount outstanding as at 18 November 2010.
(d) In terms of proceeds paid to counterparties less redemptions at initial purchase price on a settled basis.
(e) Data may not sum due to assets maturing over the period.

Secured commercial paper facility

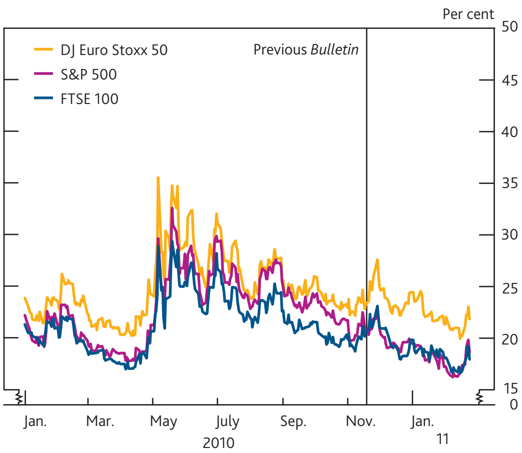
The Bank continued to offer to purchase secured commercial paper (SCP) backed by underlying assets that are short term and provide credit to companies or consumers that support economic activity in the United Kingdom.[3] The Bank announced on 15 November 2010 that it had made a programme eligible for this facility. This programme has subsequently issued SCP to the APF.

Gilt lending facility[4]

In the three months to 31 December 2010, a daily average of £1,241 million of gilts were lent as part of the gilt lending facility. This was an increase from an average of £279 million in the previous quarter. The increase in the amount of gilts lent to the DMO resulted from an apparent lack of availability of particular gilts, which meant that market participants chose to borrow from the DMO rather than obtain the gilts in the market.

(1) The data cut-off for this box is 24 February 2011, unless otherwise stated. For further discussion on asset purchases, see the *Asset Purchase Facility Quarterly Report* available at www.bankofengland.co.uk/publications/other/markets/apf/quarterlyreport.htm.
(2) Further details of individual operations are available at www.bankofengland.co.uk/markets/apf/gilts/results.htm.
(3) The SCP facility is described in more detail in the Market Notice available at www.bankofengland.co.uk/markets/marketnotice090730.pdf.
(4) For more details on the gilt lending facility, see the box 'Gilt lending facility' in the *Bank of England Quarterly Bulletin*, Vol. 50, No. 4, page 253.

Chart 11 Six-month option-implied volatility for international equity indices



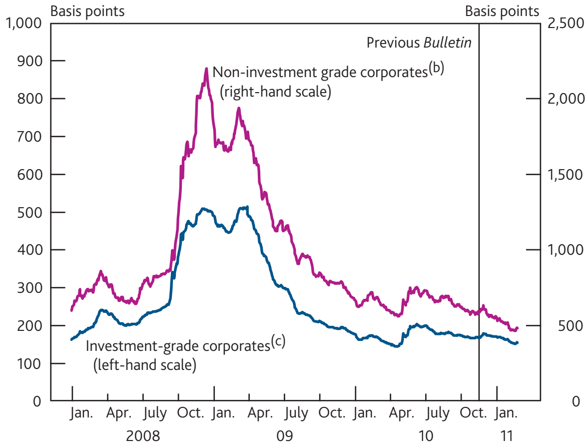
Sources: Bloomberg, Chicago Mercantile Exchange, NYSE Liffe and Bank calculations.

The yields on investment-grade and non-investment grade corporate bonds fell relative to government bond yields (**Chart 12**). Demand for high-yield bonds had reportedly been strong. According to market contacts, this was dominated by pension funds and insurance companies, including investors that had not previously been active in high-yield bond markets, rather than leveraged investors.

In the United Kingdom, despite the reduction in sterling corporate bond spreads, the cost of corporate bond finance for investment-grade non-financial companies increased slightly, on account of the rise in government bond yields. An indicative measure of the nominal cost of equity finance for UK companies had also risen slightly (**Chart 13**).

Over the review period, gross corporate bond issuance by UK private non-financial corporations (PNFCs) was broadly in line with the average between 2003 and 2008 but below the 2009 level. But aggregate net bond issuance by PNFCs was negative as the amount of maturing bonds exceeded that of new bond issuance (**Chart 14**).

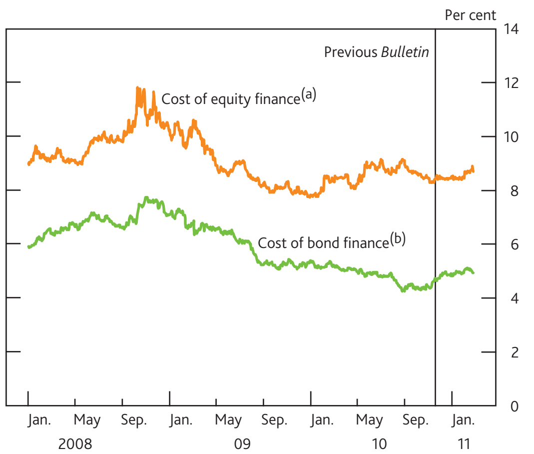
Chart 12 Corporate bond spreads in advanced economies[a]



Source: Bank of America/Merrill Lynch.

(a) Option-adjusted spreads over government bond yields.
(b) Based on the Bank of America/Merrill Lynch Global High Yield index.
(c) Based on the Bank of America/Merrill Lynch Global Broad Market Corporate index.

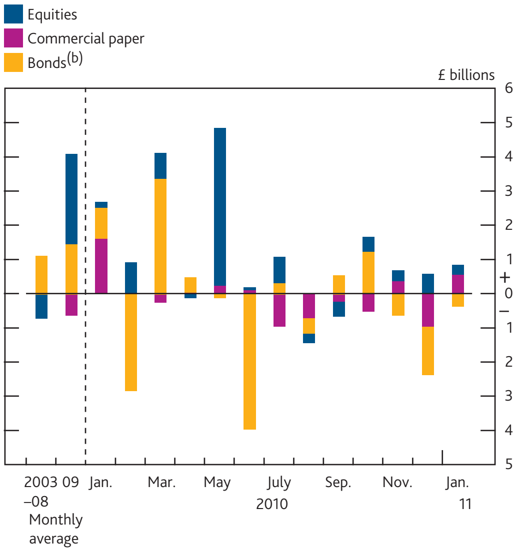
Chart 13 Indicative cost of sterling corporate bond and equity finance



Sources: Bank of America/Merrill Lynch, Thomson Reuters Datastream and Bank calculations.

(a) The cost of equity is measured as a risk-free rate plus an equity risk premium. The risk-free rate is approximated by a ten-year nominal gilt yield and the equity risk premium is inferred from a dividend discount model. For further details of the latter, see Inkinen, M, Stringa, M and Voutsinou, K (2010), 'Interpreting equity price movements since the start of the financial crisis', *Bank of England Quarterly Bulletin*, Vol. 50, No. 1, pages 24–33.
(b) The cost of bond finance is measured as the average yield-to-maturity on the Bank of America/Merrill Lynch Sterling Corporate Industrials and Utilities indices.

Chart 14 Net capital market issuance by UK PNFCs(a)



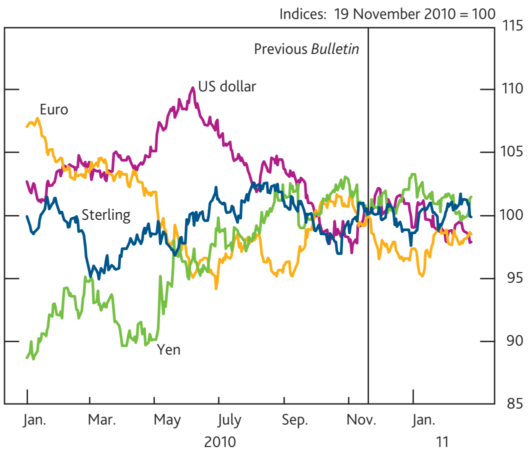
(a) Non seasonally adjusted.
(b) Includes stand alone and programme bonds.

Gross equity issuance and equity issuance net of share buybacks declined from the level in 2009. Contacts suggested that an increasing number of companies had used new equity capital to fund investments as opposed to deleveraging. Consistent with this, respondents to the *Deloitte Chief Financial Officer Survey* reported that UK companies' balance sheets were, on average, considered to be appropriately leveraged in 2010 Q4, having been overleveraged in 2009. Equity issuance by UK non-financial companies is described in more detail on pages 15–16.

Foreign exchange

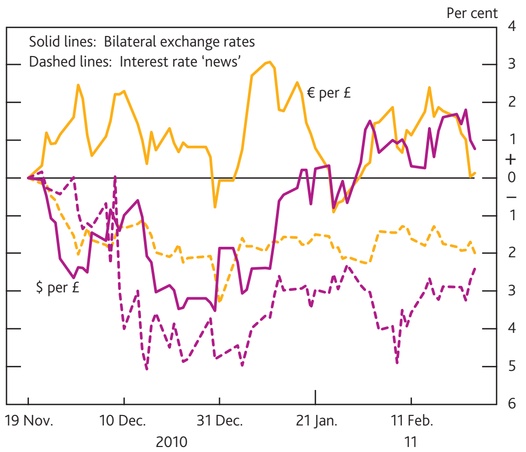
Internationally, the major exchange rate indices were little changed from their levels at the time of the 2010 Q4 *Bulletin*, but changes in sentiment about fiscal positions in some euro-area member countries contributed to movements in the euro ERI within the review period (**Chart 15**).

Chart 15 International nominal effective exchange rates



These changes in sentiment towards the euro were also reflected in bilateral exchange rates. Movements in the sterling-euro exchange rate within the review period could not be accounted for by changes in relative interest rates, suggesting that changes in relative risk premia accounted for the moves (**Chart 16**). Sterling depreciated against the dollar in late 2010, consistent with movements in relative interest rates. Sterling ended the period against the euro and the US dollar little changed.

Chart 16 Implied contribution of interest rate 'news' to cumulative changes in sterling bilateral exchange rates since the previous *Bulletin*(a)

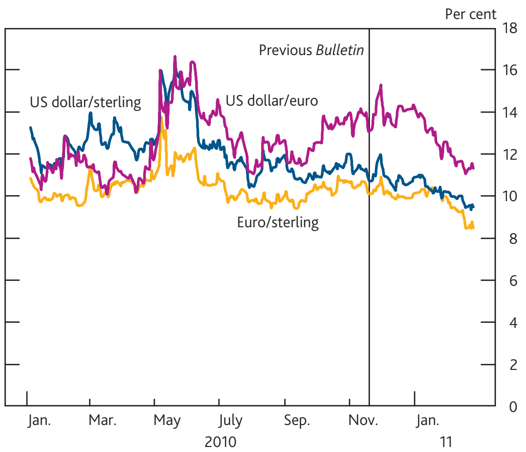


Source: Bank calculations.

(a) For more information on the analytics required to isolate the impact of interest rate 'news' on exchange rates, see Brigden, A, Martin, B and Salmon, C (1997), 'Decomposing exchange rate movements according to the uncovered interest rate parity condition', *Bank of England Quarterly Bulletin*, November, pages 377–89.

Option-implied volatility fell for a number of currency pairs over the review period (**Chart 17**). Contacts noted, however, that the recent civil and political unrest in North Africa and the Middle East could lead to increased volatility in some exchange rates.

Chart 17 Three-month implied exchange rate volatility



Sources: Bloomberg and Bank calculations.

Market intelligence on developments in market structure

In discharging its responsibilities to maintain monetary and contribute to financial stability, the Bank gathers information from contacts across a wide spectrum of financial markets. This intelligence helps inform the Bank's assessment of monetary conditions and possible sources of financial instability and is routinely synthesised with research and analysis in the *Inflation Report* and the *Financial Stability Report*. More generally, regular dialogue with market contacts provides valuable insights about how markets function, which provides a context for policy formulation, including the design and evaluation of the Bank's own market operations. And the Bank conducts occasional market surveys to gather additional quantitative information on certain markets.

Based on intelligence of this kind, this section first reviews developments in primary public equity issuance markets for UK non-financial companies in recent years. It then describes some initial results from a pilot survey on sterling money markets.

The primary market in equities for UK non-financial companies

Public equity markets enable companies to raise capital by selling shares to investors. The means by which they do so depends on their motivations and the amount of capital being sought. Privately owned companies can raise equity capital via an initial public offering (IPO). Companies that are already publicly listed can raise further capital via follow-on issues such as open offers, placings and rights issues. This section examines the structure of the primary equity market for UK non-financial companies and reviews recent trends in issuance.

Market participants

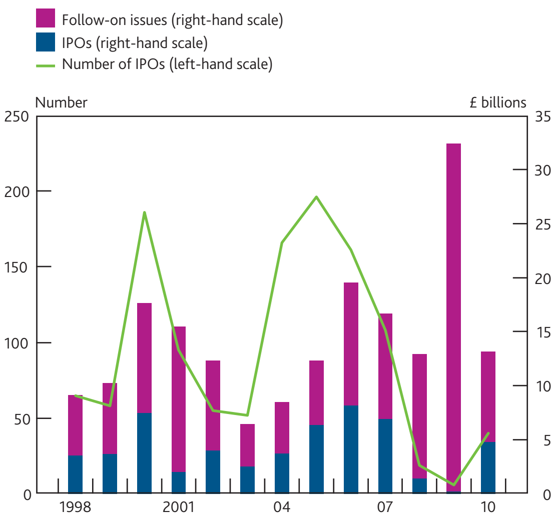
In most cases, companies looking to issue equity appoint a selection of banks to intermediate between themselves and potential investors. The main function of this 'syndicate' is to underwrite the sale of shares. In addition, members of the syndicate will provide advice and help ensure that all legal requirements are met. Historically, syndicates were typically comprised of investment banks, although they have broadened in recent years to more frequently include commercial banks with which issuing companies have established lending relationships.

Underwriting services can be provided on a 'best efforts' or a 'hard' basis, depending on the type of issue. Banks underwriting on a best-efforts basis do not guarantee that shares will be sold at certain prices, but simply act as an intermediary between companies and potential investors. By contrast, hard underwriting locks the underwriters into selling a fixed amount of shares at a pre-specified price, with any excess being purchased by the underwriters at that price. Typically, IPOs are underwritten on a best-efforts basis while follow-on issues are underwritten on a hard basis.

Recent trends in equity issuance

During 2009, the primary market in equities functioned well for those companies that had previously accessed public equity markets. Over £30 billion of follow-on equity was issued by UK private non-financial companies in 2009 (**Chart 18**).[1] This was mainly in the form of rights issues, which give a company's existing shareholders first refusal to purchase new shares or allows them to sell this option to other investors. Contacts said the proceeds were used largely to reduce leverage and strengthen balance sheets, reflecting the response of companies and investors to a worsening macroeconomic outlook and uncertainty about future access to capital markets. Follow-on equity issuance fell back in 2010 and was thought to have been used more to fund investment as the macroeconomic outlook improved and investors became more comfortable with companies' leverage.

Chart 18 Equity issuance by UK non-financial companies[(a)]



Sources: London Stock Exchange (LSE) and Bank calculations.

(a) LSE provides data on all new and follow-on equity issuance. This series excludes equity issuance by financial institutions, such as banks, insurers and asset managers.

The price at which new shares are offered can be compared with the hypothetical price of a share following the issuance of further shares — the theoretical ex-rights price (TERP).[2] New shares tend to be offered at a discount to this TERP in order to encourage current investors to take up their option to inject further capital into the company, or to sell their rights to other

(1) For more information on follow-on equity issuance by UK companies, see Office of Fair Trading (2011), 'Equity underwriting and associated services' available at www.oft.gov.uk/shared_oft/market-studies/OFT1303.pdf.

(2) The theoretical ex-rights price equals the market value of the company prior to the offer plus the amount of capital intended to be raised, divided by the number of shares outstanding prior to the offer plus the number of new shares offered.

investors who would inject capital. Contacts noted that this discount increased in 2009 and remained higher than historical averages in 2010.

According to market contacts, the increase in discounts reflected, at least in part, a reduced willingness of investors to inject capital into companies looking primarily to reduce leverage. It may have also reflected higher underwriting costs, with banks being more reluctant to commit capital to underwriting services, and a reduced willingness by institutional investors and other banks to sub-underwrite offerings. Some of these factors were reported to have since subsided.

Turning to first-time equity issuance, there was little issuance in late 2008 and 2009, as investors' appetite to take risk fell and companies reduced investment. IPO volumes increased in 2010, although remained below historical averages. UK non-financial companies issued £5 billion during 2010 via IPOs, accounting for around 35% of total equity issuance.

Contacts noted that the low volume of IPOs during 2010 partly resulted from the high number of companies that had intended to issue but withdrew from the market prior to issuance, or failed to attract sufficient investor demand to complete the issue. This feature was common to the global IPO market and reflected the response of both companies and investors to periods of substantially higher-than-anticipated volatility in equity markets.

Some contacts reported that the high number of failed IPOs was somewhat exacerbated by structural features that impeded the success of executing an IPO during volatile market conditions. First, contacts noted that the nature of equity markets meant that, other than the price, it was hard to adjust the details of an IPO in response to unanticipated volatility. There are few details that can be changed in an IPO besides the price. This contrasted with bond markets, which could relatively easily adjust coupons, size, maturity, covenants and execution dates close to the time of issue to respond to investor preferences.

Second, contacts noted that the average number of banks participating in a syndicate had risen to nearly four, from around two prior to 2008. That was reported to reflect both the increasing prominence of companies that look to advise on IPOs helping to foster competition among banks, and the increasing inclusion within the syndicate of banks with which the issuing company had an established lending relationship. Contacts suggested, however, that the reputational loss accorded to any individual member of the syndicate for overseeing a failed issuance was likely to be less in a larger syndicate. This in turn reduced the incentives to ensure that an IPO succeeded in volatile conditions. That said, contacts suggested that the growing prominence of advisory companies may help to ensure that reputational considerations remain important.

Third, according to contacts, banks were updating prospective investors about the size of the order book on a more frequent basis. This helped to enhance market transparency, but contacts suggested that it also meant that the success of an IPO became more dependent on the early bidding behaviour of key large investors, which other investors used to inform their investment decisions.

In response to the incidence of failed IPOs, contacts reported that companies had increasingly looked at alternatives to becoming publicly listed. Contacts noted that many companies were planning an IPO while simultaneously looking at the alternative of attracting investment from private equity companies, which appeared to be less sensitive to short-term volatility in secondary markets.

Preliminary results of the Money Market Liaison Group pilot survey of the sterling money market

There is limited consistent information about the size, structure, liquidity and efficiency of the sterling money market.(1) To fill this gap, the Money Market Liaison Group (MMLG) — a discussion forum for structural issues concerning the sterling money market, chaired by the Bank — has agreed to conduct a regular, six-monthly survey of the sterling money market.(2)

The survey will be launched in May 2011 and cover activity in the sterling money market during that month. To help improve the design of the survey, the MMLG ran a pilot survey covering activity in the sterling money market during November 2010. This section reports a selection of preliminary findings from the November pilot survey. The Bank intends to provide a more comprehensive analysis of the results of the May 2011 and subsequent surveys.

The findings reported should be interpreted with caution. Contacts noted that activity in the sterling money market is subject to quarter-end and year-end effects, so any one month may not be representative. In addition, November 2010 was characterised by a rise in market perceptions of risk associated with the banking sector in some euro-area economies, which may have affected activity in the sterling money market. In the light of findings from this pilot, the MMLG may also decide to make changes to improve the content or the coverage of

(1) One consolidated quantitative data source on the secured market that is currently available is the International Capital Market Association (ICMA) European repo survey.
(2) The Money Market Liaison Group comprises representatives from market participants, trade associations and the authorities. For further details see: www.bankofengland.co.uk/markets/money/smmlg.htm.

subsequent surveys. Despite best endeavours to ensure the accuracy of the results presented here, any such changes could alter the results from May onwards.

Composition of the pilot survey

A sample of 31 commercial banks, building societies and investment banks took part in the November 2010 pilot survey. These institutions were selected based on the scale of their involvement in the Bank of England's sterling market operations during the period 2006–09, and are likely to account for the overwhelming majority of bank participation in the sterling money market. Non-bank participants, such as pension funds and large non-financial corporates were not surveyed.

The survey comprised both quantitative and qualitative questions, covering the secured and unsecured segments of the sterling money market. The quantitative questions asked survey participants to record the value, volume and type of sterling money market activity conducted over the survey period. Qualitative questions were designed to ascertain how market liquidity and efficiency were evolving.

Quantitative survey questions

The pilot survey asked participants to record sterling money market borrowing and lending transactions conducted via their main London desks during November 2010. For each, they were asked to record the amounts traded and the number of trades according to maturity and instrument type in both the secured and unsecured market. Participants were asked to record all these flows on a daily average basis, based on activity over the whole month.

Money market borrowing and lending was defined as having a maturity no longer than one year. Participants were also asked to exclude non-sterling and intragroup trades, trades conducted with the Bank of England and the DMO, along with any retail business.

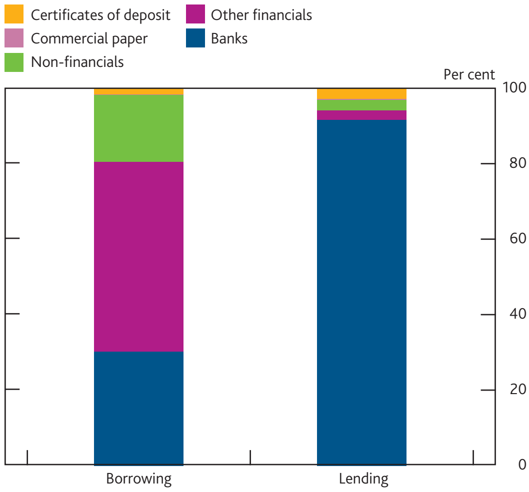
Sterling money market flows split by activity type

Survey respondents reported greater amounts of sterling money market borrowing than lending. This was true for both secured and unsecured transactions, although the difference was materially smaller for the former.

The survey suggests that when banks lend unsecured it tends to be to other banks (**Chart 19**). In contrast, while 30% of banks' unsecured borrowing flows were attributed to deposits from other banks, half of unsecured borrowing was attributed to deposits from the non-bank financial sector. This is consistent with market intelligence that some banks fund themselves by absorbing unsecured deposits from non-bank participants, such as money market funds.

Chart 19 also shows that sales or purchases of certificates of deposit (CDs) and sterling commercial paper (CP) accounted for a small proportion of reported unsecured flows. But these deals were typically longer maturity than other unsecured activity. And the survey did not cover the US dollar or euro-denominated CP markets, which are both much larger than the sterling CP market, and are likely to represent a more important source of funding for banks included in the survey.

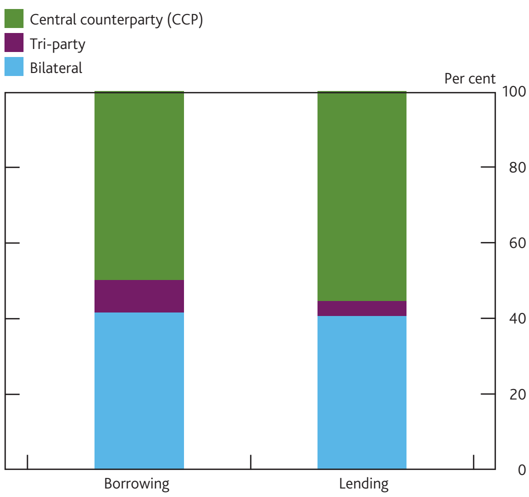
Chart 19 Unsecured flows by source of borrowing and destination of lending[(a)]



(a) Purchases of sterling CP issued by non-banks/building societies not included.

Half of secured borrowing was conducted via a central counterparty (CCP), with the CCP transacting with both the borrower and the lender, taking on any credit risk (**Chart 20**). The remainder of secured borrowing was largely conducted bilaterally, with the lender and the borrower transacting directly. A minority of deals were transacted via a tri-party arrangement, with a third party acting as agent, holding associated collateral in a custodian capacity. The split between CCP, bilateral and tri-party activity was similar for secured lending. Survey responses also suggested that a majority of secured borrowing and lending flows were interbank.

Chart 20 Secured flows by transaction type



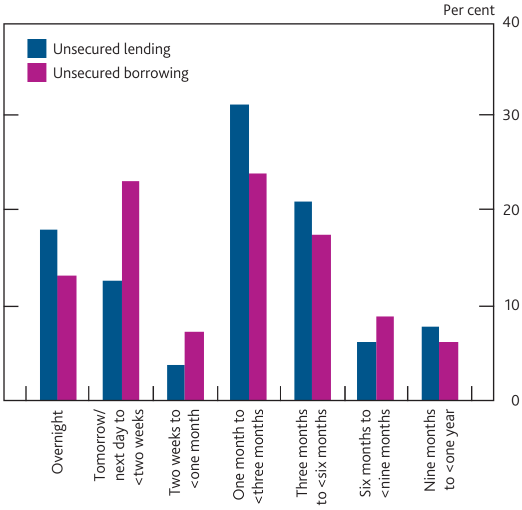
Secured money transactions are predominantly against the highest quality, liquid collateral. Over 90% of the collateral used in secured transactions (by value) consisted of Unstripped British Government (UBG) debt, which is mainly comprised of gilts but also includes UK Treasury bills and Bank of England bills.

As discussed in the previous *Quarterly Bulletin*, market contacts report that there has been an increase in secured wholesale market borrowing using other forms of collateral over the past year. But reportedly, this activity is mainly for terms in excess of one year, so would not be captured in the MMLG sterling money market survey.

Sterling money market flows split by maturity

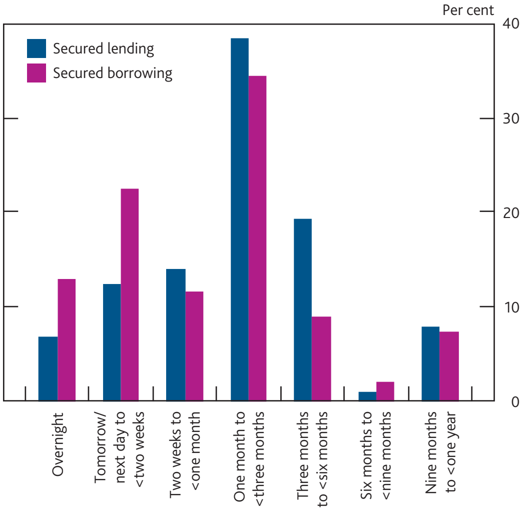
The majority of flows captured in the pilot survey were overnight, reflecting the volume of overnight transactions which are rolled over each day. But scaling reported flows according to the approximate term of the transaction highlights the importance of unsecured lending and borrowing at longer maturities (**Charts 21** and **22**).[1] Contacts report that incoming FSA liquidity regulations provide an incentive for banks to borrow at maturities greater than three months.

Chart 21 Unsecured flows by maturity[(a)]



(a) Flows have been scaled by term of transaction.

Chart 22 Secured flows by maturity[(a)]



(a) Flows have been scaled by term of transaction.

Qualitative survey questions

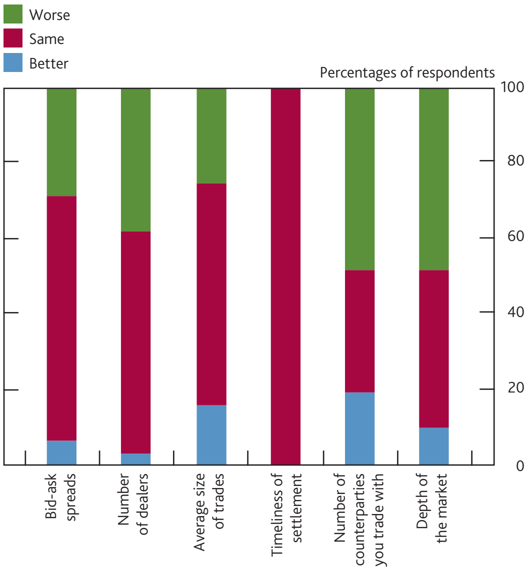
The qualitative section of the November 2010 pilot survey contained six questions on both the secured and unsecured markets. These questions asked participants about different aspects of the functioning of the sterling money market at the end of November 2010 relative to the situation six months earlier. They were:

(1) Are bid-ask spreads tighter, the same or wider?
(2) Is the number of dealers higher, the same or lower?
(3) Is the average size of trades larger, the same or smaller?
(4) Is the timeliness of settlement better, the same or worse?
(5) Has the number of counterparties you trade with increased, stayed the same or decreased?
(6) Has the depth of the market got better, stayed the same or got worse?

Survey responses suggested that, overall, the functioning of both the secured and the unsecured sterling money market had remained broadly the same (**Charts 23** and **24**). Two exceptions were that around half of respondents reported that the number of counterparties they trade with, and the depth of the unsecured market had got worse, compared with six months earlier. This deterioration may have been an artefact of the increasing concerns about some euro-area banking systems during November.

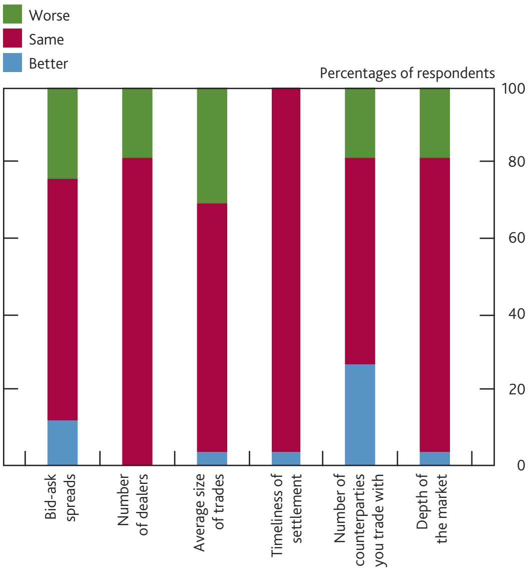
(1) The ECB presents the maturity of money market flows on a similar maturity-weighted turnover basis when reporting the results of its *Euro Money Market Survey*: www.ecb.int/press/pr/date/2010/html/pr101221.en.html.

Chart 23 Qualitative results for the unsecured market[(a)]



(a) Better (worse) = tighter (wider) bid-ask spreads; higher (lower) number of dealers quoting; larger (smaller) average size of trades; better (worse) timeliness of settlement; increased (decreased) number of counterparties; better (worse) depth of the market.

Chart 24 Qualitative results for the secured market[(a)]



(a) See footnote (a) to **Chart 23**.