Markets and operations

- Over the first half of the review period, from September to the beginning of November, UK-focused asset prices underperformed international equivalents. Market contacts suggested this was associated with changing perceptions of the United Kingdom's future trading arrangements with the European Union. There was a marked depreciation in the sterling exchange rate, as well as sharp increases in UK measures of inflation compensation. These developments, alongside upside surprises in economic data, contributed to markets pricing a less accommodative path for monetary policy in the United Kingdom. The Monetary Policy Committee's communications in the November *Inflation Report* were also interpreted as being more directionally balanced than in August, contributing to the rise in UK short rates since.
- In November, the perceived implications of Donald Trump's victory in the US presidential election became the key driver of global financial markets. Markets appeared to focus on the growth and inflationary impacts of expected fiscal stimulus, with spillovers to other advanced economies and a sharp increase in global government bond yields. Emerging market economy currencies depreciated against the US dollar.

Overview

Developments in UK asset prices since the beginning of the review period in September up until the end of the period on 1 December can be split into two distinct phases. In the first half of the review period, sterling depreciated sharply, UK-focused asset prices fell and UK government bond yields rose more than international equivalents. This followed an increased perception among market participants that the United Kingdom's future trade arrangements with the European Union may be less open than previously anticipated. Measures of inflation compensation rose alongside the weakening exchange rate and increase in UK yields. Contacts suggested that increased inflationary pressure arising from sterling's depreciation, as well as better-than-expected economic data decreased the likelihood of further monetary easing from the Bank of England in the near term. The communication in the November *Inflation Report* was also interpreted as less accommodative and more directionally balanced.

Over the second half of the review period, the implications of Donald Trump's presidential election victory were the key driving factors behind financial market moves globally. The moves were consistent with a focus on expansionary fiscal policy and the associated growth and inflationary impacts. In particular, the US dollar exchange rate index has strengthened 4% since the result and US ten-year government bond yields are 64 basis points higher. Other advanced-economy government bond yields moved higher, but by less than US Treasury yields. US banking stocks have outperformed broader indices since the election. Emerging market economy exchange rates have depreciated against the US dollar, with the JPMorgan emerging market currency index down 6% since the election result.

Over this latter period, sterling strengthened, alongside the US dollar, against other major currencies. Contacts suggested that this reflected a combination of a change in sentiment about euro-area political uncertainty and, to a lesser degree, around the United Kingdom's future trading relationships.

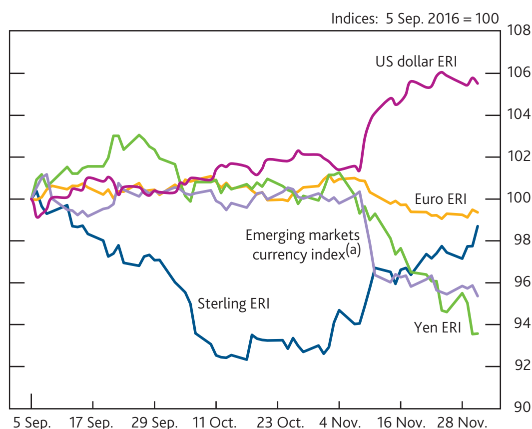
In September, the Bank of England commenced purchases of corporate bonds under the Corporate Bond Purchase Scheme (CBPS). The Bank purchased £4 billion over the first two months of the scheme. Although sterling investment-grade corporate bond spreads fell on the announcement of the scheme in August, they have since risen gradually over the review period. After a strong pickup over the summer, issuance of sterling investment-grade corporate bonds slowed over the review period. Contacts linked these developments to market volatility over the review period, as well as strong sterling issuance immediately following the announcement of the CBPS in August.

In discharging its responsibilities to maintain monetary and financial stability, the Bank gathers market intelligence from contacts across a range of financial markets. Regular dialogue with market contacts provides valuable insights into how markets function, and provides context for the formulation of policy, including the design and evaluation of the Bank's own market operations. The first section of this article reviews developments in financial markets between the 2016 Q3 *Quarterly Bulletin* and 1 December 2016. The second section goes on to describe the Bank's own operations within the Sterling Monetary Framework.

Foreign exchange

Sterling was among the most volatile of the major global currencies over the review period, developments in which can be split into two distinct phases. The first half of the review period was characterised by sterling weakness and its exchange rate index (ERI) depreciated by 7% by the end of October and by 10% since the European Union (EU) referendum, reaching a record low in October (**Chart 1**). Over the second half of the review period, the sterling ERI retraced much of this move to end the period down 1%. The major theme of the second half of the review period was the strength of the US dollar, which appreciated by 4% following Donald Trump's presidential election victory. This coincided with a sharp depreciation of the Japanese yen. The euro remained mostly range-bound over the review period but weakened towards the end.

Chart 1 Selected exchange rate indices since the start of the review period

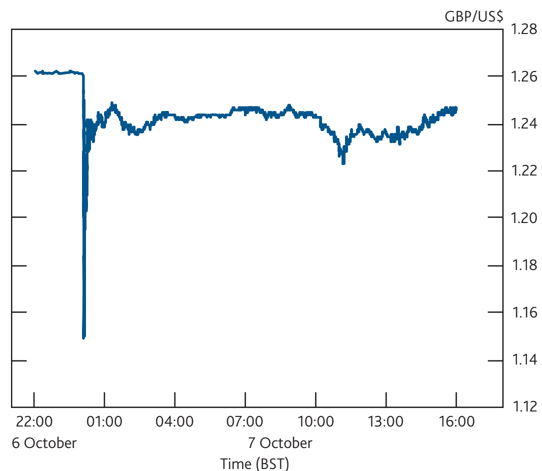


Sources: Bloomberg, European Central Bank and Bank calculations.

(a) JPMorgan emerging markets currency index.

The depreciation of sterling was broad-based across major currencies, suggesting a UK-specific driver of the moves over the first half of the period. Contacts attributed the move to increased perceptions that the United Kingdom's future trading arrangements with the European Union might be less open than previously thought. Much of the depreciation occurred in the week following the Conservative party conference, including the sterling 'flash event' on 7 October during which sterling depreciated around 9% versus the dollar in early Asian trading, before quickly retracing much of the move (**Chart 2**).[1] The sterling ERI remained close to the new low until the beginning of November when the victory of Donald Trump in the US presidential election became a major driver of foreign exchange (FX) markets.

Chart 2 Sterling-dollar exchange rate in the hours around the 7 October 'flash event'



Source: Thomson Reuters Datastream.

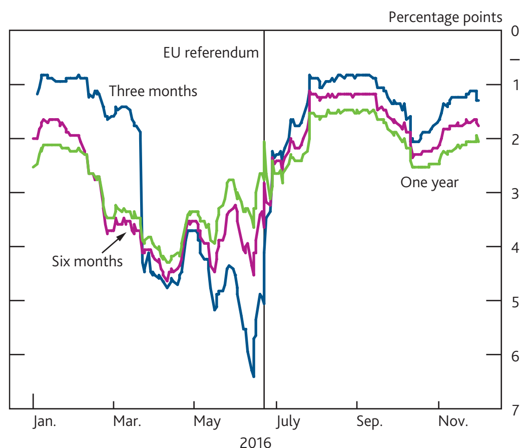
Since the US election, markets have focused on the growth and inflationary impacts of potential fiscal stimulus, and the US dollar has experienced a broad-based appreciation. Market pricing has also been consistent with tighter monetary policy (this is covered in more detail in the following section). This has led to a greater divergence in global monetary policy expectations, most notably with Japan where the Bank of Japan (BoJ) implemented changes to their monetary policy framework (discussed in further detail in the next section) and the yen depreciated sharply against the US dollar. Emerging market economy (EME) currencies depreciated 6% on average since the US election. Contacts attributed these moves to the fast pace of repricing of US rates and the risks of reduced global trade.

By contrast, sterling was the only G10 currency to appreciate against the US dollar since the election. Contacts suggested that this reflected a slight improvement in sentiment around the United Kingdom's future trading relationships, driven in part by the High Court ruling on Article 50 in early November and in part by the election result changing perceptions of the potential for early US trade negotiations. Since the US election result, sterling has also appreciated against the euro, which contacts believe reflects elevated concerns around euro-area political risk.

(1) For more detail, see Box 3 of the November 2016 *Financial Stability Report*; www.bankofengland.co.uk/Pages/reader/index.aspx?pub=fsrnov16&page=1.

Sterling weakness in the first half of the review period was accompanied by a pickup in implied volatility across tenors. Options markets also priced in a relatively greater likelihood of further large moves coming to the downside as indicated by the falls in risk-reversal measures (**Chart 3**). But neither measure reached levels close to those observed around the EU referendum, and the moves retraced as sterling recovered later in the review period.

Chart 3 Sterling-dollar 25 delta risk reversals at different maturities(a)

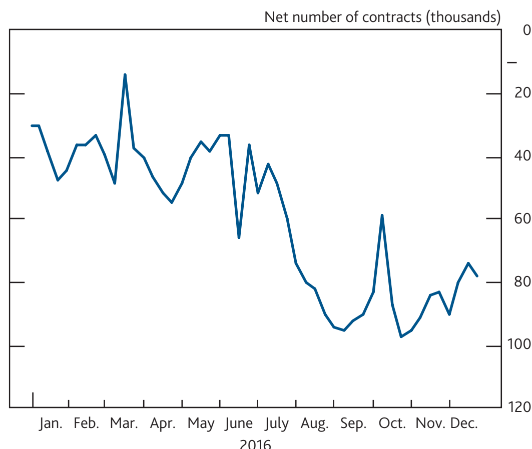


Source: Bloomberg.

(a) Risk reversals measure the difference in implied volatility between out of the money call and put options.

The reduced perception of downside risks to sterling was also reflected in sterling-dollar futures positioning data (**Chart 4**). As indicated by the Commodity Trading Futures Commission (CFTC) data, speculative investors' short positions reached the highest level this year around the beginning of October, amidst elevated political uncertainty in the United Kingdom, but have fallen back a little since then.

Chart 4 CFTC sterling-dollar non-commercial net futures positions(a)



Sources: Bloomberg and Bank calculations.

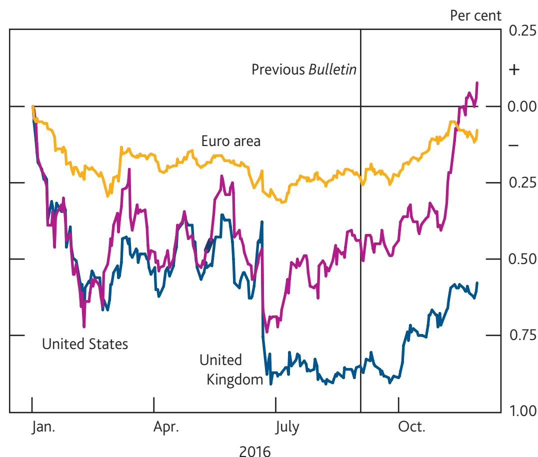
(a) A positive number indicates a net long position and a negative number indicates a net short position.

Monetary policy and interest rates

Like FX markets, domestic factors were relatively more important in driving sterling interest rate markets in the first half of the review period, while global forces were relatively more important over the latter half of the period.

One-year, one-year forward overnight index swap (OIS) rates in the United Kingdom have risen by 28 basis points over the review period (**Chart 5**). The equivalent rates for the United States and the euro area have also increased by 58 basis points and 17 basis points respectively. Overall, market contacts highlighted the role of greater near-term inflationary risks internationally, which contacts perceive as warranting a less accommodative path of monetary policy globally.

Chart 5 Cumulative change in one-year OIS rates, one year forward since January 2016(a)



Sources: Bloomberg and Bank calculations.

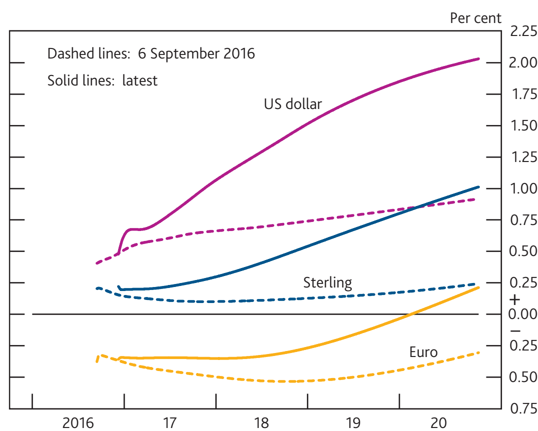
(a) Forward rates derived from the Bank's OIS curves.

In the United Kingdom, at the beginning of the review period short rates continued to imply some expectations for a further cut in Bank Rate, following the Monetary Policy Committee's (MPC's) guidance in the August *Inflation Report* that a majority of members expected to support a further cut to Bank Rate if incoming data were consistent with the August forecast. But over the review period, the market-implied path for Bank Rate steepened (**Chart 6**). Contacts attributed this to better-than-expected domestic economic data and the further decline in sterling, which were expected to contribute to greater domestic inflationary pressure in the near term. Contacts generally interpreted the MPC's communications in the November MPC minutes that 'monetary policy can respond, in either direction' and in the November *Inflation Report* regarding the 'limited tolerance for above-target inflation' as reflecting a more directionally balanced policy stance relative to the August *Report*.

In the United States, the Federal Open Market Committee (FOMC) voted to keep policy rates unchanged in September

and November. FOMC members' forecasts for the policy rate were revised down for the coming years. But a series of stronger-than-expected economic data releases and communications from FOMC members were perceived by market contacts as supportive of an increase in the federal funds rate before the end of the year. These developments were followed by the US presidential election result, after which US short rates moved sharply higher (**Chart 5**). The profile of US forward rates is now considerably closer to the Fed's 'dots' as markets focus on the reflationary impact of possible fiscal stimulus. Markets were pricing a high probability of a rate rise at the FOMC's December policy meeting. (Indeed, in the event the FOMC raised the policy rate by 25 basis points on 14 December after the end of the review period.)

Chart 6 Instantaneous forward interest rates derived from OIS contracts(a)



Sources: Bloomberg and Bank calculations.

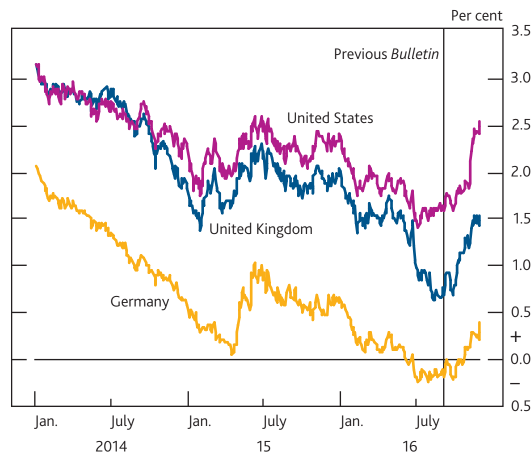
(a) Instantaneous forward rates derived from the Bank's OIS curves.

The BoJ announced changes to its monetary policy framework in September, launching 'quantitative and qualitative easing (QQE) with yield curve control'. The changes included a target for ten-year government bond yields and a commitment to overshoot its 2% inflation target. As part of this, they introduced fixed-rate purchase operations, the first of which was held in November (for two and five-year bonds) in response to rising yields. Although the operation attracted no sellers, contacts have commented on the success of the policy in providing a 'ceiling' to short and medium-term Japanese yields. Some contacts have noted this helped accelerate the depreciation of the Japanese yen as US yields have increased.

The European Central Bank (ECB) left policy unchanged at both its September and October policy meetings. Some market contacts were disappointed that the Governing Council had not signalled that it had considered an extension of the Public Sector Purchase Programme (PSPP), or a change to the scheme's parameters. Contacts anticipated that the ECB would announce a continuation of the PSPP beyond March 2017 at the 8 December meeting, with some expectations that this could be at a slower monthly pace. (Indeed, after the end of the review period, the ECB announced an extension of the PSPP to December 2017 and reduced the monthly pace to €60 billion, effective from April 2017. The Governing Council also changed some of the parameters of the scheme to ensure its 'continued smooth implementation'.)

Longer-term government bond yields followed a similar path to short-term interest rates over the review period, although moves were of a larger magnitude (**Chart 7**). In particular, ten-year government bond yields have increased by around 50–100 basis points since the previous *Bulletin*, unwinding their falls in the first half of 2016, with full retracement in the case of the United States. Contacts saw these increases as consistent with higher short-term rates, as well as higher inflation expectations globally. By contrast, following changes to the Japanese monetary policy framework, Japanese government bond yields did not increase materially.

Chart 7 Selected ten-year government bond yields(a)



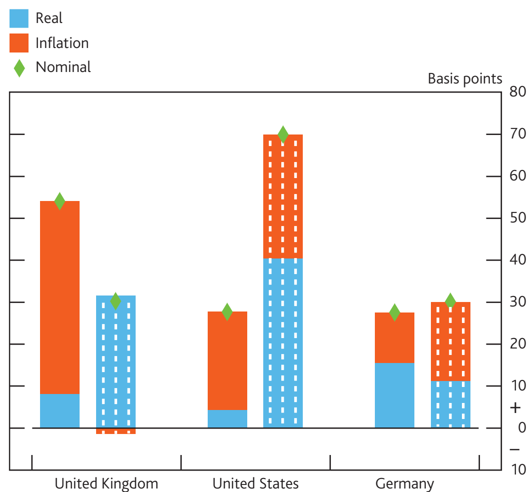
Sources: Bloomberg and Bank calculations.

(a) Yields to maturity derived from the Bank's government liability curves.

During the first half of the review period, UK longer-term rates rose sharply relative to their US and German counterparts, suggesting a UK-specific driver of the moves. The increase in UK nominal yields over this period was predominantly led by an increase in inflation compensation which rose sharply in October (**Chart 8**). In addition to a weaker exchange rate, contacts highlighted the influence of technical factors in driving these measures, including increased hedging demand from liability-driven investors during a period of limited supply of index-linked bonds.

Contacts also noted expectations for an increase in government spending to be announced at the Autumn Statement on 23 November, which contributed to the rise in gilt yields over the first half of the review period. In the event, the announcement was broadly in line with market expectations.

Chart 8 Decomposition of changes in ten-year government bond yields[(a)(b)(c)]



Source: Bank calculations.

(a) Solid bars 6 September–2 November, dashed bars 3 November–1 December.
(b) The real rates for the United Kingdom and the United States are the differences between nominal government bond yields and inflation swap rates. For Germany, it is the difference between the German nominal yield and euro-area HICPx-linked inflation swap rates.
(c) Data derived using the Bank's liability and swap curves.

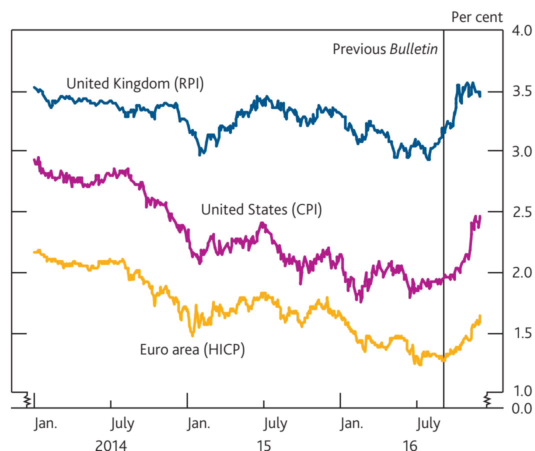
Over the second half of the review period, US government bond yields increased sharply. These moves have been attributed to a combination of higher real yields and higher inflation compensation (**Chart 8**). Contacts suggested that this reflected an anticipated boost to US growth and inflation from expansionary fiscal policies coupled with accordingly tighter monetary policy in the United States. Financial markets also suggested some spillovers to other advanced economies. In particular gilt yields have extended their previous increases, with a greater role for real yields since the November *Inflation Report*. The rise in German yields, by contrast, was driven by inflation compensation which contacts have attributed to the weakening of the euro. Market-implied measures of inflation compensation across core markets therefore ended the review period higher (**Chart 9**). In particular, five-year inflation swap rates, five years ahead have risen by around 30–50 basis points in the United Kingdom, United States and euro area.

Corporate capital markets

Risky asset prices have been less volatile than earlier in the year, although a few idiosyncratic risk events have led to intermittent periods of volatility. Of the major developed market equity indices, the Topix and S&P finished up on the period (+10.4% and 0.5% respectively), while the FTSE All-Share and the Euro Stoxx fell 1.7% and 1.4% respectively.

Early in the review period, global monetary policy developments were interpreted by market participants as somewhat less accommodative than previously anticipated. In particular, contacts suggested that markets had been disappointed by the lack of any indication of further stimulus

Chart 9 Selected five-year inflation swap rates, five years forward[(a)]

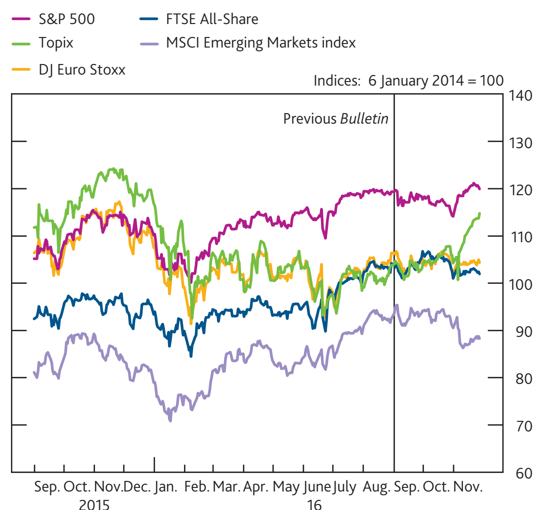


Sources: Bloomberg and Bank calculations.

(a) Swap rates derived from the Bank's inflation swap curves.

in the ECB's September policy meeting, while the BoJ's launch of QQE with yield curve control was thought to signal a reduced desire to loosen policy further. This perception of less aggressive monetary policy weighed on risky assets, particularly equity markets. Major equity indices fell by 2%–3% in the days after the ECB's meeting (**Chart 10**), while option-implied volatility as measured by the VIX index rose sharply (albeit from record lows).

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



Sources: Bloomberg and Bank calculations.

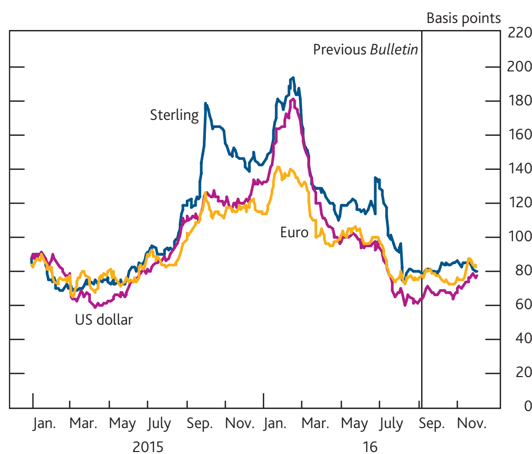
(a) Indices are quoted in domestic currency terms, except for the MSCI Emerging Markets index, which is quoted in US dollar terms.
(b) The MSCI Emerging Markets index is a free-float weighted index that monitors the performance of stocks in global emerging markets.

In October, UK-focused equity prices underperformed a majority of international equivalents, alongside the depreciation in sterling and focus on trade relations with the European Union. But as the sterling ERI recovered over the second half of the period, shares of UK-focused firms recovered relative to the broader FTSE index although ended the review period down 6%.

As with FX and interest rate markets, the US election was a major driver of equity markets in November. Major equity indices fell sharply in the week preceding the election, but largely rebounded following the result (with the exception of emerging market equities). The S&P 500 reached all-time highs, driven in part by a notable recovery in US bank equity prices (this is covered in more detail in the next section). The VIX has also fallen following the US election to end the review period below its long-term average.

Corporate bond market performance over the review period was also mixed. In the United Kingdom, the Bank of England began purchases of sterling corporate bonds on 27 September, as announced in August. After the sharp falls in corporate bond spreads following the announcement of the scheme, there was little market reaction after purchases began or after eligibility lists were updated in subsequent weeks. Over the review period sterling investment-grade credit spreads widened by 2 basis points (**Chart 11**), against the backdrop of somewhat weaker sentiment towards UK assets as noted earlier. In euros and US dollars, non-financial investment-grade corporate credit spreads widened by 6 and 14 basis points respectively. Market contacts suggested that European political risks were an important driver of the underperformance of euro spreads.

Chart 11 Investment-grade PNFC three and five-year bond spreads (converted to sterling equivalent)[a]



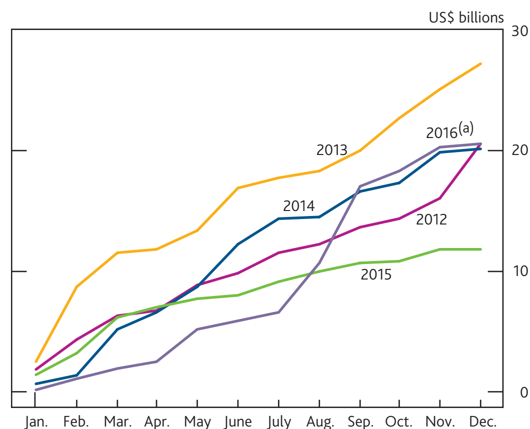
Sources: Bank of America Merrill Lynch, Bloomberg and Bank calculations.

(a) Euro and US dollar spreads converted into spreads over six-month sterling Libor using an average of three and five-year cross-currency and Libor basis swap rates.

Spreads on high-yield issuers' corporate bonds followed a similar trend to that for investment grade over the review period, as dollar-denominated spreads tightened 45 basis points while sterling and euro spreads widened. Market contacts continue to highlight the influence of 'search for yield' behaviour in supporting the demand for higher-yielding assets.

After a relatively quiet start to the year, sterling investment-grade corporate bond issuance picked up sharply in August and September following the announcement of the CBPS, but this slowed in October and November (**Chart 12**). Market contacts partly attributed this to the volatility in gilt yields during the period. Euro and dollar-denominated corporate issuance was relatively higher over the review period. Market contacts highlighted that a large proportion of recent dollar issues included long-dated tranches, consistent with issuers looking to lock-in lower funding rates ahead of potential rises in interest rates.

Chart 12 Cumulative gross bond issuance in sterling by UK private non-financial corporations



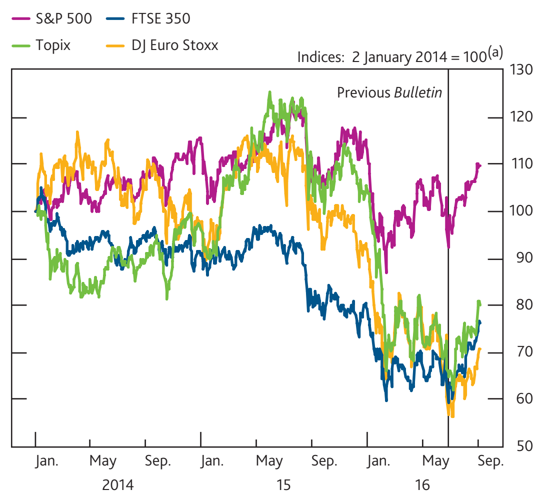
Sources: Dealogic and Bank calculations.

(a) Data to 1 December 2016.

Bank funding markets

Bank equities in developed markets had been broadly stable at the beginning of the review period, but mostly increased after the US election and a strong earnings season in the United States. The US S&P bank sub-index increased 21% over the review period, outperforming Japanese (+16%), UK (+8%) and European (+8%) banks (**Chart 13**).

Chart 13 Selected bank equity sub-indices



Source: Bloomberg.

(a) The Topix series is indexed to 6 January 2016 due to additional bank holidays.

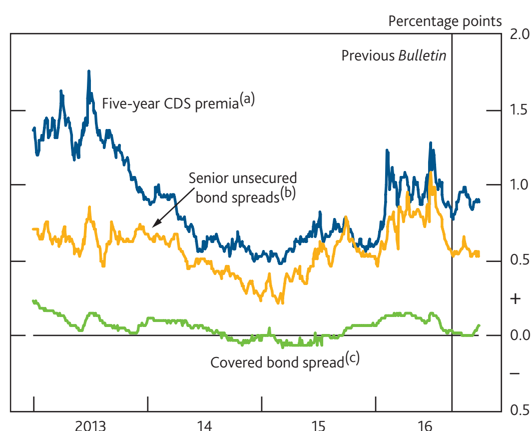
Contacts reported that the outperformance of US bank equities relative to the broader index was due to a range of factors. These included market expectations of improved bank profitability prospects following the steepening of the US yield curve, and less onerous regulatory requirements following the US election. There were positive spillovers to UK and Japanese banking sectors. Japanese banking stocks were also supported by the BoJ's decision to not cut policy rates further into negative territory.

By contrast, European banks have generally underperformed. In September, Deutsche Bank was in focus after market commentary that the US Department of Justice may have requested a settlement for US$14 billion related to Deutsche's US RMBS business, against reported provisions of €5.5 billion. The turbulence was short-lived as the Euro Stoxx bank index recovered and continued increasing throughout October, alongside a recovery in Deutsche's share price. But in the latter half of the review period, concerns around the Italian banking sector, in particular perceptions of high levels of non-performing loans, and a change in sentiment about political uncertainty have weighed on the European banking sector.

Developments in the Deutsche case also contributed to some widening of bank credit spreads across regions in early October. Some measures of funding stress increased as a result. But funding markets reportedly continued to function well and spreads subsequently retraced through October.

UK senior unsecured bank funding spreads widened marginally over the review period (**Chart 14**), and UK banks' bond issuance was limited over the review period.

Chart 14 UK banks' indicative longer-term funding spreads



Sources: Bloomberg and Bank calculations.

(a) Unweighted average of five-year euro-denominated senior CDS premia for the major UK lenders.
(b) Constant-maturity unweighted average of secondary market spreads to mid-swaps for the major UK lenders' five-year euro-denominated senior unsecured bonds or a suitable proxy when unavailable.
(c) Constant-maturity unweighted average of secondary market spreads to mid-swaps for the major UK lenders' five-year euro-denominated covered bonds or a suitable proxy when unavailable.

On 8 November the Bank of England published final statements of policy on the UK approach to setting MREL. Market contacts have broadly reacted positively to the Bank's approach, noting there were no particular surprises compared to the 2015 proposal. There was muted reaction in secondary bank spreads to the publication.

Operations

Operations within the Sterling Monetary Framework and other market operations

This section provides an update of the Bank's operations within the Sterling Monetary Framework (SMF) over the review period, as well as its other market operations. Collectively, these operations help implement the Bank's monetary policy stance and provide liquidity insurance to institutions when deemed necessary.

On 4 August, the MPC announced a package of measures designed to provide additional support to growth and to achieve a sustainable return of inflation to the target.[1] This package comprised: a 25 basis point cut in Bank Rate to 0.25%; a new Term Funding Scheme (TFS) to reinforce the pass-through of the cut in Bank Rate;[2] the purchase of up to £10 billion of UK corporate bonds over an 18-month period;[3] and an expansion of the asset purchase scheme for UK government bonds of £60 billion, taking the total stock of these asset purchases to £435 billion.[4] The last three elements will be undertaken via the Asset Purchase Facility (APF) and financed by the issuance of central bank reserves.

The aggregate level of central bank reserves is monitored by the Bank, as it affects monetary conditions in the UK economy. The level of central bank reserves is affected by (i) the stock of assets purchased, and TFS advances made, via the APF; (ii) the level of reserves supplied by operations under the SMF; and (iii) the net impact of other sterling flows across the Bank's balance sheet. Over the review period, aggregate reserves increased to around £358.716 billion[5] driven primarily by the expansion of the asset purchase scheme for UK government and corporate bonds.

SMF 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. As a consequence, there is little incentive for reserves account

(1) For more details, see www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2016/aug.pdf.
(2) For more details, see www.bankofengland.co.uk/markets/Documents/marketnotice160804apftfs.pdf.
(3) For more details, see www.bankofengland.co.uk/markets/Documents/marketnotice160804apfcbps.pdf.
(4) For more details, see www.bankofengland.co.uk/markets/Documents/marketnotice160804apfgilt.pdf.
(5) See www.bankofengland.co.uk/publications/Documents/weeklyreport/2016/3011.pdf.

holders to use the deposit facility. Reflecting this, the average use of the deposit facility was £0 million in the three months to 2 November 2016.(1)

The rate charged on the Operational Standing Lending Facility remained at 25 basis points above Bank Rate. However, given the large aggregate supply of reserves, there was no demand from market participants to use the lending facility. The average use of the lending facility was also £0 million over the quarter to 2 November 2016.

Indexed Long-Term Repo operations

The Bank conducts regular Indexed Long-Term Repo (ILTR) operations as part of its provision of liquidity insurance to banks, building societies and broker-dealers. The final weekly ILTR operation, run as a precautionary measure around the date of the referendum, was completed on 27 September.(2) During the review period, the Bank offered a minimum of £5 billion via six-month repos in each of its ILTR operations (**Table A**).

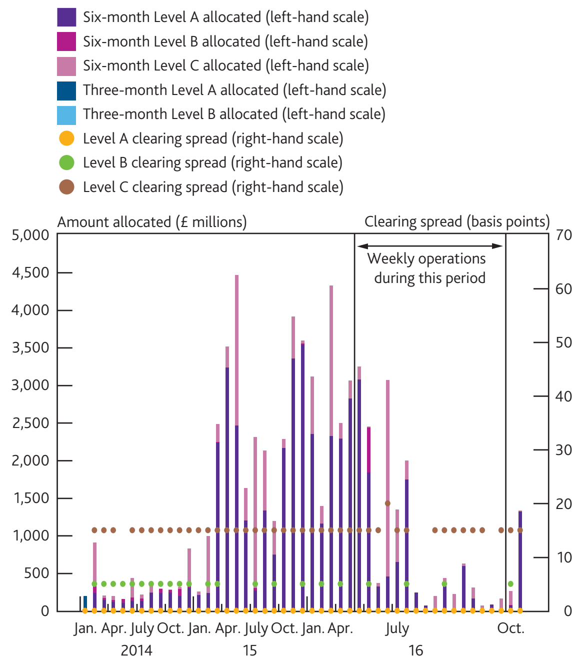
Table A Indexed Long-Term Repo operations(a)

	Total	Collateral set summary		
		Level A	Level B	Level C
6 September 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	310	170	0	140
Amount allocated (£ millions)	310	170	0	140
Clearing spread (basis points)		0	n.a.	15
13 September 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	70	20	0	50
Amount allocated (£ millions)	70	20	0	50
Clearing spread (basis points)		0	n.a.	15
20 September 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	85	85	0	0
Amount allocated (£ millions)	85	85	0	0
Clearing spread (basis points)		0	n.a.	n.a.
27 September 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	170	0	0	170
Amount allocated (£ millions)	170	0	0	170
Clearing spread (basis points)		n.a.	n.a.	15
4 October 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	265	75	5	185
Amount allocated (£ millions)	265	75	5	185
Clearing spread (basis points)		0	5	15
8 November 2016 (six-month maturity)				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	1,335	1,325	0	10
Amount allocated (£ millions)	1,335	1,325	0	10
Clearing spread (basis points)		0	n.a.	15

(a) The minimum amount on offer is the size of the operation that the Bank is willing to allocate, in aggregate, across all collateral sets at the minimum clearing spreads.

The stock outstanding in ILTR operations peaked at £20.5 billion on 29 September, before falling back to £16.6 billion by the end of the review period. The total amount allocated in each operation remained well below the minimum £5 billion on offer (**Chart 15**). Over the review period a total of £9,899 million of ILTRs matured and £2,235 million of new ILTRs were allocated, resulting in a net decrease of central bank reserves of around £7,664 million from ILTR operations.

Chart 15 ILTR reserves allocation and clearing spreads(a)



(a) Where there has not been any allocation to a collateral set, no clearing spread is marked.

Contingent Term Repo Facility

The Contingent Term Repo Facility (CTRF) is a contingent liquidity facility that the Bank can activate in response to actual or prospective market-wide stress of an exceptional nature. The Bank reserves the right to activate the facility as it deems appropriate. In light of market conditions throughout the review period, the Bank judged that CTRF auctions were not required.

Discount Window Facility

The Discount Window Facility (DWF) is a bilateral on-demand facility provided to institutions experiencing a firm-specific or market-wide liquidity shock. It allows participants to borrow highly liquid assets in return for less liquid collateral in potentially large size and for a variable term. The Bank publishes quarterly data of DWF usage with a lag. The average daily amount outstanding in the DWF in the three months to 30 June 2015 was £0 million.

(1) Operational Standing Facility usage data are released with a lag.
(2) For more details, see www.bankofengland.co.uk/markets/Documents/marketnotice070316.pdf.

APF operations

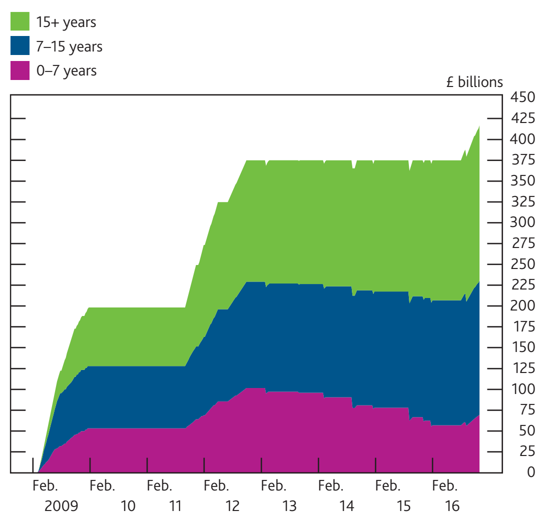
In the publication of the *Inflation Report* on 3 November 2016, the MPC agreed that it remained appropriate to continue the asset purchase programmes announced on 4 August, financed by the issuance of central bank reserves.

Gilt purchases

On 4 August 2016, the MPC announced an expansion of the asset purchase scheme for UK government bonds of £60 billion, taking the total stock of asset purchases to £435 billion.

Over the review period, the total stock of gilts outstanding in the APF, measured as proceeds paid to sellers, increased from £379.1 billion on 8 September to £415.9 billion on 30 November. The stock of gilts comprised of £69.5 billion (an increase of £13.4 billion) of purchases in the 3–7 years residual maturity range, £160.3 billion (an increase of £11.2 billion) in the 7–15 years residual maturity range and £186.1 billion (an increase of £12.2 billion) with a residual maturity of greater than 15 years (**Chart 16**).

Chart 16 Cumulative gilt purchases by maturity(a)(b)



(a) Proceeds paid to counterparties on a settled basis.
(b) Residual maturity as at the date of purchase.

In the Market Notice of 3 November 2016, the Bank announced it would purchase gilts for the second three months of the APF gilt programme in smaller operations, but otherwise in the same format. It also made a provision for purchasing the £52 million shortfall from the uncovered long operation on 9 August, which was successfully completed as part of the 8 November auction. All APF gilt purchases over the review period were fully covered.

Gilt lending facility

The Bank continued to offer to lend gilts held in the APF via the Debt Management Office (DMO) in return for other UK government collateral. In the three months to 30 September 2016, the daily average value of gilts lent, as part of the gilt lending facility, was £456 million. This is higher than the previous quarter at £131 million and the same quarter the previous year at £152 million. This is in part because following the cut in Bank Rate on 4 August, the DMO reduced the cost of its Standing Repo Facility from 40 basis points to 25 basis points, thus reducing the cost of this facility for market participants.

Term Funding Scheme

The Term Funding Scheme (TFS) is designed to reinforce the transmission of Bank Rate cuts to those interest rates faced by households and businesses by providing term funding to banks at rates close to Bank Rate. The TFS is a monetary policy tool of the MPC and is operated as part of the APF.

The Bank began accepting applications to join the TFS on 22 August 2016. During the drawdown period, which runs from 19 September 2016 to 28 February 2018, participants can borrow reserves for four years in exchange for eligible collateral. The quantity and price of funding available from the TFS is based on the amount of eligible lending undertaken by a participant's TFS group. Participants in the Funding for Lending Scheme (FLS) will be permitted to repay FLS drawings in order to redraw in the TFS, subject to having sufficient borrowing allowance in the TFS.

As of 30 November 2016, £5,779 million of loans had been made through the TFS.

Corporate Bond Purchase Scheme

The Corporate Bond Purchase Scheme (CBPS) is designed to impart monetary stimulus by: lowering the yields on corporate bonds, thereby reducing the cost of borrowing for companies; triggering portfolio rebalancing; and stimulating new issuance of corporate bonds.

Purchases of sterling corporate bonds, financed by the creation of central bank reserves, are undertaken via the APF.

The Bank will look to purchase, via the CBPS, a portfolio of up to £10 billion of sterling non-financial investment-grade bonds representative of issuance by firms making a material contribution to the UK economy, in order to impart broad economic stimulus.

In the Consolidated Market Notice of 12 September, the Bank announced details of the CBPS for market participants. The first operation took place on 27 September 2016. Aggregate results showing the total level of purchases that have been made through the CBPS are published every Thursday at 3pm. As of 30 November this stood at £3,964 million. A table showing the representative share for each of the nine sectors of the Corporate Bond Purchase Scheme and the Bank's

holdings in each of these sectors is published at 3pm on the first Thursday of each month (**Table B**).[1]

Table B Representative share of each sector of the CBPS and the Bank's holdings in each[a]

	CBPS holdings as at close of business 30 Nov. 2016[b] (per cent of portfolio)	CBPS sector share as at 3 Nov. 2016 (per cent of eligible list)	Updated CBPS sector share as at 1 Dec. 2016 (per cent of eligible list)
Sector			
Electricity	21	19	20
Consumer, non-cyclical	17	15	15
Industrial and transport	14	13	13
Communications	15	13	13
Consumer, cyclical	11	11	11
Water	11	12	12
Gas	7	8	8
Energy	2	3	3
Property and finance	2	6	6
Total	100	100	100

(a) The Bank measures purchases against the MPC target based on proceeds paid, but the assessment of progress towards attaining a balanced portfolio is based on face value.
(b) CBPS holdings are reported on a settlement date basis.

Other operations

Funding for Lending Scheme

The Funding for Lending Scheme (FLS) was launched by the Bank and HM Treasury on 13 July 2012. The initial drawdown period for the FLS ran from 1 August 2012 until 31 January 2014. The drawdown period for the FLS extension opened on 3 February 2014 and will run until 31 January 2018, following the extension beyond January 2016 announced on 30 November 2015.[2] The quantity current participants can borrow in the FLS is linked to their lending to the UK real economy from 2013 Q2 to 2015 Q4, with the incentives skewed towards supporting lending to small and medium-sized businesses. On 1 August 2016, participants' borrowing allowances were reduced by 25% and will be reduced by the same amount every six months thereafter, phasing the scheme out gradually by 31 January 2018.

US dollar repo operations

On 23 April 2014, in co-ordination with other central banks and in view of the improvement in US dollar funding conditions, the Bank ceased the monthly 84-day US dollar liquidity-providing operations. The seven-day US dollar operations will continue until further notice. The network of bilateral central bank liquidity swap arrangements provides a framework for the reintroduction of further US liquidity operations if warranted by market conditions. There was no use of the Bank's US dollar facilities throughout the review period.

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, though sales may be made from time to time, reflecting, for example, risk or liquidity management needs or changes in investment policy. At the end of the review period the portfolio included around £5.8 billion of gilts and £0.1 billion of other debt securities.

(1) See www.bankofengland.co.uk/markets/Pages/apf/results.aspx.
(2) For more details, see www.bankofengland.co.uk/publications/Pages/news/2015/096.aspx.