



BANK OF ENGLAND

# Quarterly Bulletin

2017 Q1

Recent economic and financial developments

Markets and operations



# Markets and operations

- At the start of the review period, government bond yields and prices of risky assets continued to rise, as they had in the review period for the previous *Quarterly Bulletin*. The main drivers were continued momentum in global growth expectations, and anticipated growth benefits from potential US fiscal stimulus. In the first half of the review period the sterling exchange rate depreciated as markets focused on the United Kingdom's potential future trading arrangements with the European Union, although much of this fall unwound following Prime Minister Theresa May's speech in mid-January. From January, uncertainty over the new US administration's economic policies started to weigh on financial markets, with the US dollar weakening.
- Over the second half of the review period, UK short rates and government bond yields fell by more than US and German yields. Towards the end of the review period, some euro-area asset prices underperformed US and UK equivalents, as political risks related to the upcoming French presidential elections were perceived to rise.

## Overview

There were a number of key themes driving movements in global asset prices since the beginning of the review period on 1 December 2016 up until the end of the period on 1 March 2017. At the start of the review period, global asset prices continued the trends described in the previous *Quarterly Bulletin*, as government bond yields and risky asset prices rose, while the US dollar continued to strengthen. In December, the US Federal Reserve tightened monetary policy — as expected — and the median FOMC member rate projection implied three more rate rises than it had previously projected. Also in December, the European Central Bank announced an extension to its asset purchase programme, albeit at a slower pace than current purchases.

Over the first half of the review period, the sterling exchange rate depreciated as markets focused on the United Kingdom's potential future trading arrangement with the European Union, following the referendum in June 2016. Much of this reversed from mid-January, following the Prime Minister's speech on the Government's approach to the EU exit process. Sterling remained broadly flat for the rest of the review period. The February 2017 *Inflation Report* forecast a slightly lower path for near-term inflation. A number of contacts focused particularly on the lower estimate of the non-accelerating inflation rate of unemployment. Subsequent weaker-than-expected UK economic data caused

UK short rates and government bond yields to fall over the second half of the review period. Measures of UK interest rate expectations fell, while yields on UK government bonds and inflation compensation both fell by more than international comparators.

From January, uncertainty over the new US administration's economic policies started to weigh on asset markets, with the US dollar depreciating. Contacts noted uncertainty over the size and composition of any potential fiscal stimulus from the new US administration. Despite this, equity prices continued to rise, with US and UK equity indices reaching record highs in the review period. Corporate bond yields fell over the review period, while primary markets opened with strong issuance in January. UK and European bank equities underperformed US equivalents, as Q4 financials earnings were worse than expected, although they remained higher over the review period.

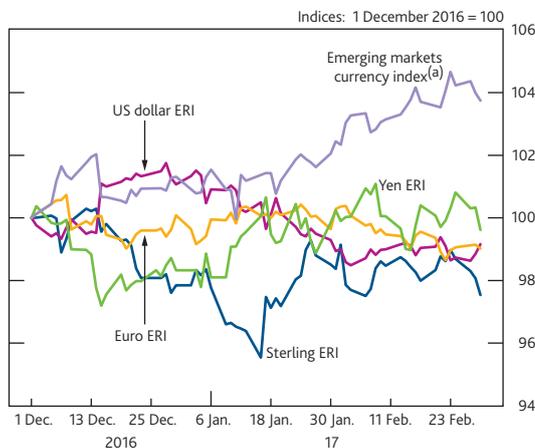
Towards the end of the review period, there was increased focus on upcoming European elections. The euro exchange rate index and European equity prices fell, while the spread between French and German government bond yields widened. Contacts attributed these moves to an increase in political risks associated with the French presidential elections.

In discharging its responsibilities to maintain monetary and financial stability, the Bank gathers market intelligence from contacts across a range of financial markets.<sup>(1)</sup> 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 Q4 *Quarterly Bulletin* (data cut-off on 1 December 2016) and 1 March 2017. The second section goes on to describe the Bank's own operations within the Sterling Monetary Framework.

### Foreign exchange

Over the review period sterling remained sensitive to news related to negotiations over the withdrawal from the European Union. The sterling exchange rate index finished the period 2.4% lower (**Chart 1**) and 12.4% lower than before the EU referendum in June 2016. Over the first half of the review period, up to the day before Theresa May's 'Lancaster House' speech on 17 January — where she addressed the Government's plans for the EU withdrawal process — sterling depreciated 4.5%. Following the Prime Minister's speech, sterling ERI retraced much of this move, and then remained relatively stable over the rest of the review period.

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



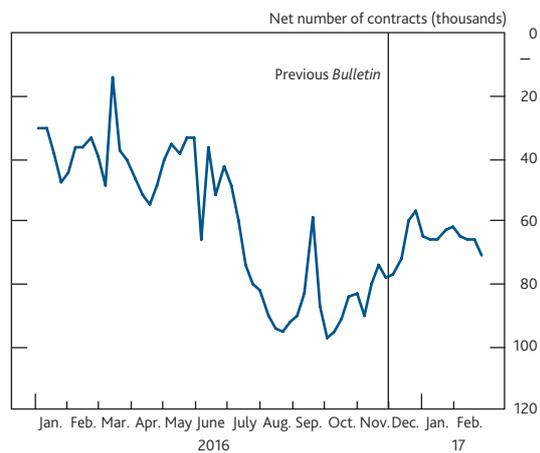
Sources: Bloomberg, European Central Bank and Bank calculations.

(a) JPMorgan emerging markets currency index.

The depreciation of sterling in the first half of the review period was broad-based across major currencies, suggesting a UK-specific driver. Contacts attributed the move to uncertainty over the United Kingdom's future trading arrangements with the European Union and other countries. Much of the depreciation occurred in the period leading up to Theresa May's speech. Over the second half of the review period, implied volatility on sterling-dollar fell significantly, consistent with expectations for a more stable level of sterling. On balance, speculative investor positioning for sterling-dollar remained net short over the period — meaning these investors

were positioned for a fall in sterling relative to the US dollar. However, one proxy of this net short position reduced over the first half of the review period, and was relatively stable over the second half (**Chart 2**). This measure had reached its largest ever net short level in October 2016, a period reflecting elevated uncertainty.

**Chart 2** CFTC sterling-dollar non-commercial net futures positions

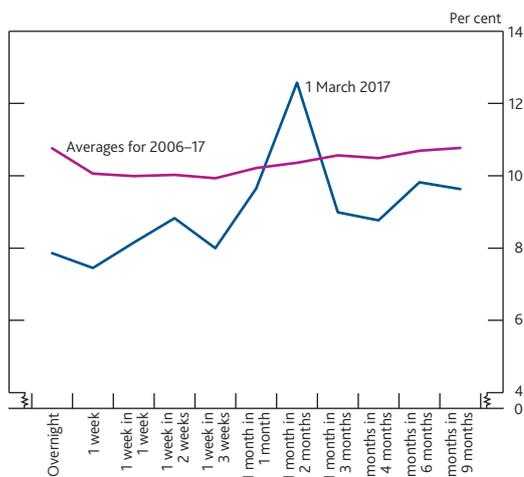


Sources: Bloomberg, Commodity Futures Trading Commission (CFTC) and Bank calculations.

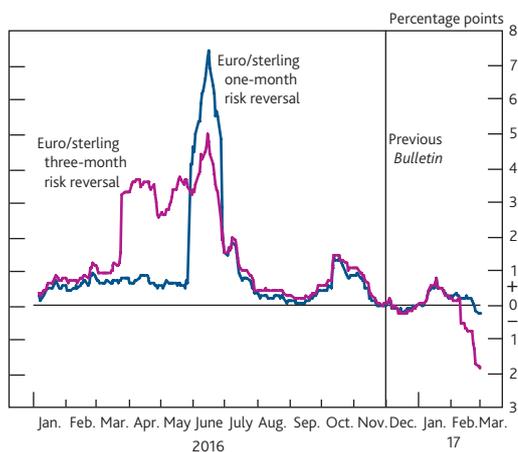
The US dollar ERI rose over December, reflecting the expected consequences of potential supply-side reforms and fiscal policy measures by the new US administration. This move reversed over the rest of the review period, with the US dollar ERI 0.8% lower overall. Contacts noted growing uncertainty over specific details of any accommodative US policies, in addition to comments from the US President and his Treasury Secretary about the unwelcome strength of the dollar. Another development has been the strong performance of the emerging markets, with the JPMorgan emerging market currency index up around 4% over the second half of the review period, in the context of a weaker dollar (**Chart 1**).

The euro ERI was broadly unchanged over the first half of the review period, supported by better-than-expected German and euro-area inflation data in January. However, it fell in the second half as markets focused on upcoming European political events, with the euro ERI finishing the review period 1.0% lower. Contacts point to uncertainty related to the upcoming French elections as a key driver of the euro exchange rate over the second half of the review period. Contacts also reported that uncertainty was evident in foreign exchange option prices. The estimated forward implied volatility of euro-dollar spikes in the period which coincides with the second round of the French election (**Chart 3**). Increased euro-area political risk is also apparent in the euro-sterling risk reversals, which show markets pricing in a relatively greater likelihood of a sharp depreciation in the euro

(1) [www.bankofengland.co.uk/publications/Pages/quarterlybulletin/2017/q1/a2.aspx](http://www.bankofengland.co.uk/publications/Pages/quarterlybulletin/2017/q1/a2.aspx).

**Chart 3** Euro-US dollar forward implied volatility curves

Sources: Bloomberg and Bank calculations.

**Chart 4** Euro-sterling one-month and three-month 25 delta risk reversals<sup>(a)</sup>

Source: Bloomberg.

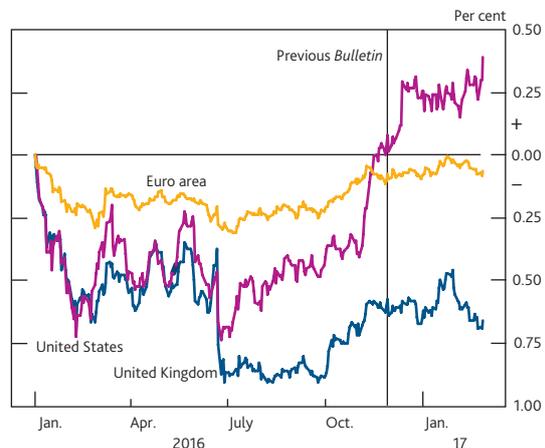
(a) Risk reversals measure the difference in implied volatility between out-of-the-money call and put options.

relative to sterling, compared to the probability of a sharp appreciation over the next three months (**Chart 4**).

### Monetary policy and interest rates

UK short rates were broadly unchanged at the start of the review period, as better-than-expected data was offset by uncertainty over the United Kingdom's eventual trading arrangements with the European Union and other countries (**Chart 5**). Rates rose over January, but fell following the February MPC decision and *Inflation Report (IR)*. Ahead of the February *IR*, some contacts had expected the forecast for near term inflation to be higher than in the November *IR*. Contacts focused on two particular revisions in the *IR*. Firstly the slight decrease in the MPC's forecast for near term inflation, and secondly the downward revision to the estimate of the level of unemployment below which inflation is expected to rise (non-accelerating inflation rate of unemployment, or NAIRU). After the *IR*, UK short rates fell in response to weaker-than-expected UK economic data, including January

CPI, wage growth and retail sales. Indeed, since the release of the *IR* the UK one-year, one-year forward overnight index swap (OIS) rates fell by 13 basis points, ending the review period 8 basis points lower overall (**Chart 5**).

**Chart 5** Cumulative change in one-year OIS rates, one year forward since January 2016<sup>(a)</sup>

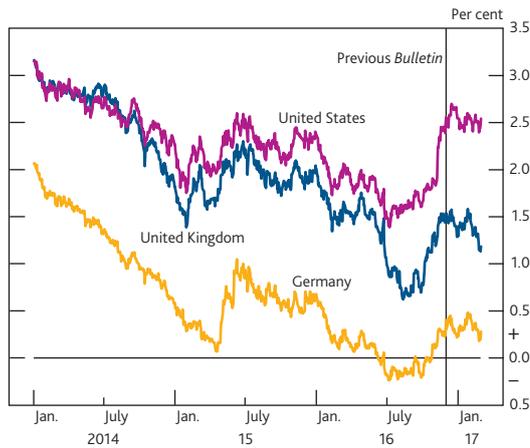
Sources: Bloomberg and Bank calculations.

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

Ten-year government bond yields increased across core markets at the beginning of the review period, continuing the trend seen over 2016 Q4 (**Chart 6**). Market contacts attribute this increase to greater momentum of near-term global growth expectations and an anticipated expansion of fiscal policy in the United States which have spilled over to global longer-term government bond yields. But between mid-December and mid-January, developed markets yields retraced some of their increases. Market contacts explain these moves as consistent with increased uncertainty over the size and composition any US fiscal stimulus package. While the consensus regarding improved global growth prospects has not changed, the degree of conviction with which this view is held reportedly diminished. These factors led to a pause in the upward move in global longer-term government bond yields.

Since the publication of the February *IR*, UK ten-year government bond yields have declined by 28 basis points, a larger fall than for other government bonds. This meant that UK ten-year government bond yields fell 36 basis points over the whole review period, while US equivalents were broadly unchanged, and German yields were 12 basis points lower. The majority of the fall in UK government bond yields came over February. Contacts attributed these falls to weaker-than-expected UK economic data, and increased demand for 'safe haven' assets as European political risks were perceived to rise.

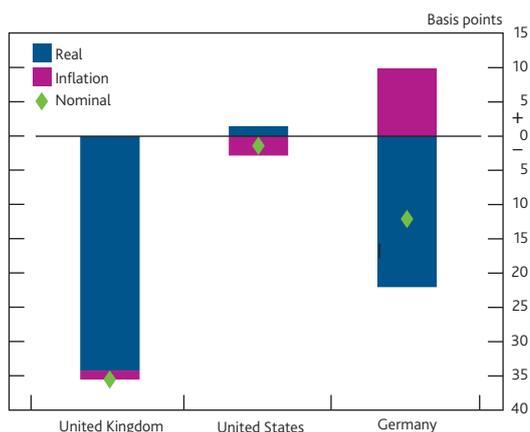
The fall in nominal UK government bond yields over the review period was predominantly driven by a fall in real rates, rather than inflation compensation (**Chart 7**). In comparison,

**Chart 6** Selected ten-year government bond yields<sup>(a)</sup>

Sources: Bloomberg and Bank calculations.

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

the rise in German inflation compensation meant German real rates fell by more than nominal rates. Market-implied measures of UK inflation compensation trended down following the February *IR* (**Chart 8**), having risen over the first half of the review period. In addition to lower expectations for near-term domestically generated inflation following the February *IR*, market contacts have pointed to weaker-than-expected UK inflation and wage data as weighing on UK inflation expectations. Contacts also noted that some of the fall in longer-term inflation compensation is likely to reflect a concentrated supply of index-linked gilts in February.

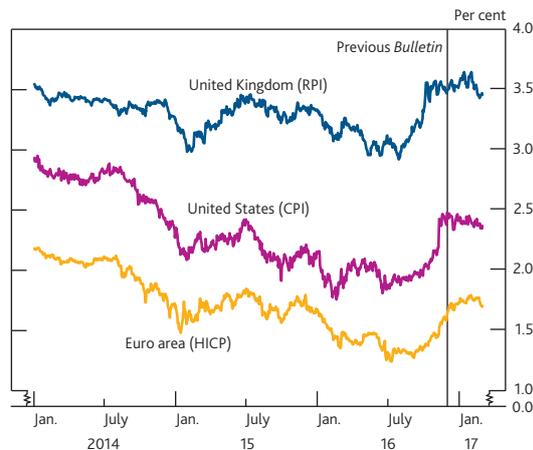
**Chart 7** Decomposition of changes in ten-year government bond yields over the review period<sup>(a)(b)</sup>

Source: Bank calculations.

(a) 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 HICP-linked inflation swap rates.

(b) Yields and swap rates derived using the Bank's liability and swap curves.

In the United States, the Federal Open Market Committee (FOMC) tightened US monetary policy by raising the target range for the federal funds rate by 25 basis points (to a 0.50%–0.75% range). This was the first increase in the fed funds rate since December 2015 and only the second increase in eight years, although the move was widely anticipated by market participants. There were, also, small unexpected

**Chart 8** Selected five-year inflation swap rates, five years forward<sup>(a)</sup>

Sources: Bloomberg and Bank calculations.

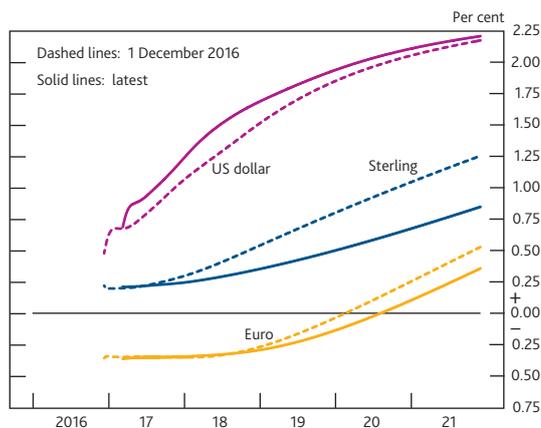
(a) Swap rates derived from the Bank's inflation swap curves.

upward revisions to FOMC members' policy rate projections. The September 2016 FOMC members' median dot projection had implied two rate rises over 2017, but the median dot in the December projections implied three 2017 rate rises. The market profile of interest rates in the United States rose following the announcement with one-year, one-year forward US OIS rates 31 basis points higher over the review period. Contacts also attached a higher probability of another policy rate increase in the March FOMC meeting, following a number of FOMC member speeches towards the end of the review period.

In December, the Governing Council of the European Central Bank (ECB) confirmed that it would continue its asset purchase program at the current monthly pace of €80 billion until the end of March 2017, and announced purchases would be extended beyond that at the slower pace of €60 billion per month until the end of December 2017. Contacts suggested that while the reduction in pace represented a surprise, on balance the announced extension was a little more stimulus than had been expected. The ECB made no changes to its policy stance in January — in line with market expectations. At the end of the review period, the market profile of the forward OIS curve in the euro area had moved lower (**Chart 9**).

In addition to US policy, market contacts suggested European political risks as another explanation of recent moves in some longer-term European government bond yields. Specifically, political risks associated with the upcoming French elections led to a rise in peripheral euro-area spreads to bunds since the US election. Compared to the beginning of the review period, spreads of ten-year Italian and French government bonds over German equivalents increased by 16–18 basis points (**Chart 10**). This move is supported both by reduced demand for peripheral debt (increasing their yields) and increased safe haven demand for German debt (decreasing their yield).

**Chart 9** Instantaneous forward interest rates derived from OIS contracts<sup>(a)</sup>

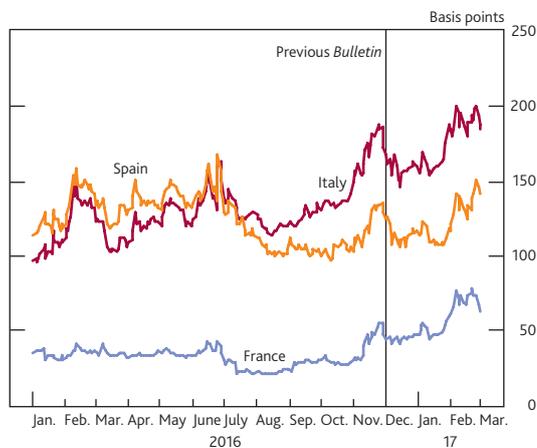


Sources: Bloomberg and Bank calculations.

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

Combined, both factors have contributed to the widening in peripheral European government bond spreads to German bunds. But at the end of the review period, these political risks were perceived to have partially receded as polls suggested more certainty over the outcome of the French presidential election.

**Chart 10** Selected euro-area spreads to bund



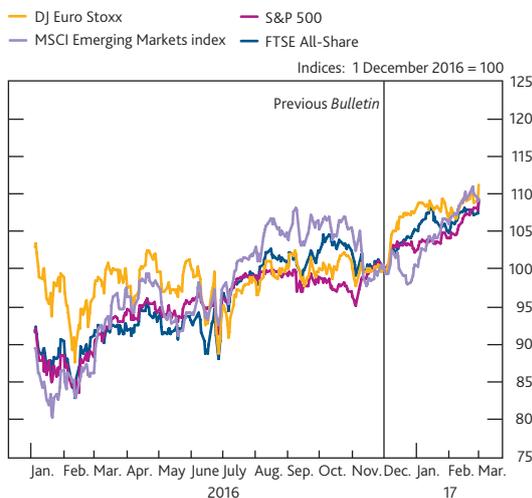
Sources: Bloomberg and Bank calculations.

### Corporate capital markets

The majority of equity indices rose strongly over the review period. Some US and UK indices reached record high levels, continuing their upward momentum following the US election (Chart 11). Contacts noted that in the first half of the period, some market participants were placing more weight on the benefits of expected fiscal stimulus and other policies from the new administration in the United States. Over the second half of the review period, strong US economic data were thought to continue to support the equity market despite the increased expectation for additional US rate rises this year and uncertainty over the new US administration's economic policies. Consistent with this view, US and emerging market equity indices rose 9.4% and 9.3% respectively. Despite the

uncertainty over policy initiatives in the United States, the equity implied volatility, measured by the VIX index, remained close to a three-year low.

**Chart 11** International equity indices<sup>(a)(b)</sup>

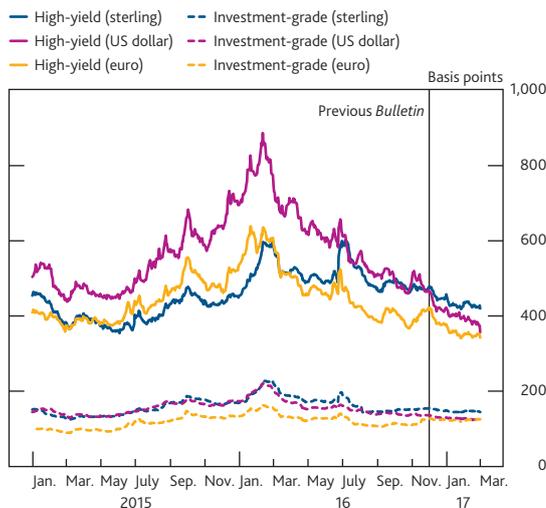


(a) Indices are quoted in domestic currency terms, except for the MSCI Emerging Markets index, which is quoted in US dollar terms.

(b) The MSCI Emerging Markets index is a free-float weighted index that monitors the performance of stocks in global emerging markets.

The FTSE All-Share index rose 9.2%, broadly in line with US equities. European equities ended the review period up 11.3%, outperforming UK and US equities. At the start of the review period European equities rose more than UK and US equivalents, following the Italian constitutional referendum in early December. Contacts noted that the passing of an event with a previously uncertain outcome had supported European equities. Contacts also attributed the outperformance over the first half of the review period to (i) renewed investor interest in the euro area at the beginning of this year, (ii) positive euro-area economic data, and (iii) continued accommodative monetary policy, including the extension to the ECB's asset purchase scheme. The Euro Stoxx, however, fell slightly towards the end of the review period in line with European political risks beginning to weigh on investor sentiment.

In corporate bond markets, investment-grade and high-yield US dollar credit spreads tightened by 13 and 87 basis points respectively, in line with the increase in international equity indices (Chart 12). Sterling investment-grade corporate bond spreads ended the review period slightly lower, and remained below their prevailing level, prior to the announcement of the Corporate Bond Purchase Scheme (CBPS) in August 2016. Euro-denominated corporate bond spreads ended the review period broadly unchanged, having widened towards the end. This widening in euro-denominated investment-grade corporate bonds is thought to reflect an increase in European political risks, with contacts noting some underperformance in French corporate bond yields.

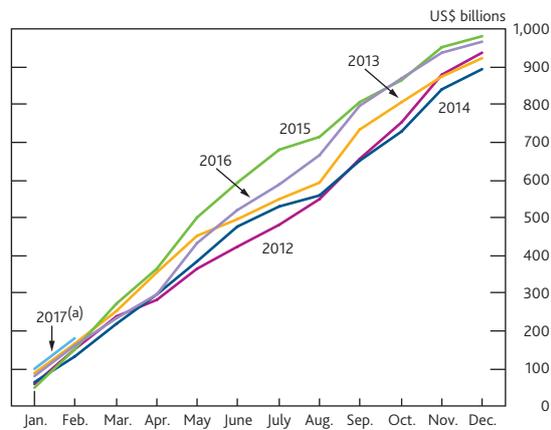
**Chart 12** International corporate bond option-adjusted spreads

Source: Bank of America Merrill Lynch Global Research.

Contacts were, however, increasingly considering the end of CBPS given that the Bank of England had already purchased £7.7 billion of its planned £10 billion of purchases. Over the review period, purchases continued at a faster pace than had initially been expected. Some contacts suggested the Scheme had supported secondary market liquidity for sterling corporate bonds, as the operations provide a liquidity point for the market that can catalyse trading activity. This may have dampened the volatility of sterling corporate spreads relative to comparable equity and government bond markets.

Following the usual seasonal lull in corporate bond issuance in December, primary market activity in both US dollars and euros picked up significantly in January. Supply continued at a modest pace over the remainder of the review period. Supply of dollar-denominated investment-grade and high-yield debt was strong (**Chart 13**), reflecting favourable issuance conditions supported by tighter secondary market spreads and strong demand from investors, particularly at shorter maturities in US dollars. At the end of February, year-to-date issuance of combined US dollar investment grade and high-yield corporate debt was higher than in any of the 25 preceding years, and 12% higher than in 2016. Contacts also noted strong issuance and demand for US leveraged loans at the start of 2017, as a number of corporates repriced pre-existing loans at lower rates. As leveraged loans typically feature floating interest rates, investor demand was supported by the increased expectations for FOMC rate increases in 2017.

The sterling high-yield corporate bond market saw a record January issuance, with year-to-date issuance volume already greater than half of total 2016 sterling high-yield issuance. Contacts noted that there had been very strong demand for high-yield corporate bonds with corporates thought to be locking in borrowing ahead of upcoming euro-area political events. Indeed, in the second half of the review period there

**Chart 13** Cumulative US dollar high-yield and investment-grade gross bond issuance by private non-financial corporations<sup>(a)</sup>

Sources: Dealogic and Bank calculations.

(a) Data to 28 February 2017.

was some slowing in euro-denominated issuance by private non-financial corporations, partly reflecting the increased European political risks.

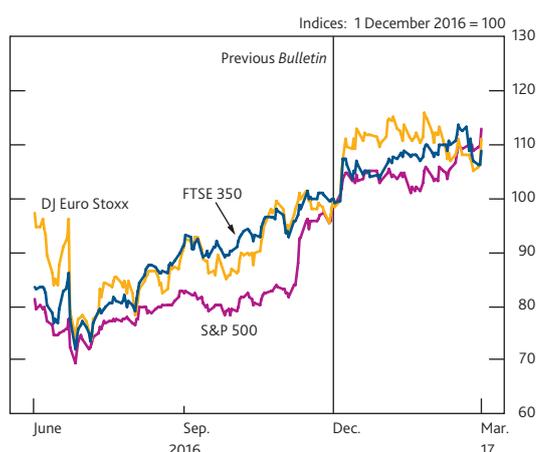
### Bank funding markets

Bank equities in most developed markets rose over the review period (**Chart 14**). The US bank equity index (+13.0%) outperformed UK (+8.7%) and European equivalents (+10.9%) over the review period, reflecting expectations for an easing of US regulations in the new US administration (**Chart 13**). The FTSE bank sub-index rose steadily in the run-up to fourth-quarter earnings releases for the major UK banks. Contacts attributed this to the depreciation of sterling, higher interest rates, and higher expected profitability as headwinds to bank profitability — notably legal costs — had abated. However, towards the end of the review period, the earnings announcements from major UK banks were overall thought to have been below expectations, leading to the subsequent revision of future earnings expectations. This contributed to a sharp fall (4.3%) in the FTSE bank sub-index between mid-February and the end of the review period.

European lenders also underperformed their US counterparts, in part due to disappointing earnings releases and subsequent concerns over future profitability. In recent weeks, contacts also attributed some of the relative underperformance of European banks to increasing European political risks.

At the start of 2017, there was a marked rise in US dollar issuance by UK banks, as they took advantage of the tighter spreads in US dollar senior debt markets than in euros. Contacts also attributed this to the greater depth in US dollar markets and US bond market investors' greater familiarity with loss-absorbing senior debt issued by bank holding companies. Contacts noted that such issuance by UK lenders

Chart 14 Selected bank equity sub-indices



Source: Bloomberg.

had been well received, evidenced by their spreads tightening in secondary market trading.

## 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 2016, 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.<sup>(1)</sup> 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;<sup>(2)</sup> the purchase of up to £10 billion of UK corporate bonds over an 18-month period;<sup>(3)</sup> 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.<sup>(4)</sup> 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 £411 billion<sup>(5)</sup> driven primarily by drawings in the TFS and 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 holders to use the deposit facility. Reflecting this, the average use of the deposit facility was £0 million in the three months to 1 February 2017.

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 1 February 2017.

### Indexed Long-Term Repo operations

The Bank conducts regular Indexed Long-Term Repo operations (ILTR) operations as part of its provision of liquidity insurance to banks, building societies and broker-dealers. During the review period, the Bank offered a minimum of £5 billion via six-month repos in each of its ILTR operations. The total amount allocated in each operation remained well below the minimum £5 billion on offer (Table A).

Table A Indexed Long-Term Repo operations<sup>(a)</sup>

	Total	Collateral set summary		
		Level A	Level B	Level C
<b>6 September 2016 (six-month maturity)</b>				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	3,465	2,865	350	250
Amount allocated (£ millions)	3,465	2,865	350	250
Clearing spread (basis points)		0	5	15
<b>3 January 2017 (six-month maturity)</b>				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	2,020	1,675	220	125
Amount allocated (£ millions)	2,020	1,675	220	125
Clearing spread (basis points)		0	5	15
<b>7 February 2017 (six-month maturity)</b>				
Minimum on offer (£ millions)	5,000			
Total bids received (£ millions)	1,635	740	205	690
Amount allocated (£ millions)	1,635	740	205	690
Clearing spread (basis points)		0	5	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.

(1) For more details, see [www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2016/aug.pdf](http://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](http://www.bankofengland.co.uk/markets/Documents/marketnotice160804apftfs.pdf).

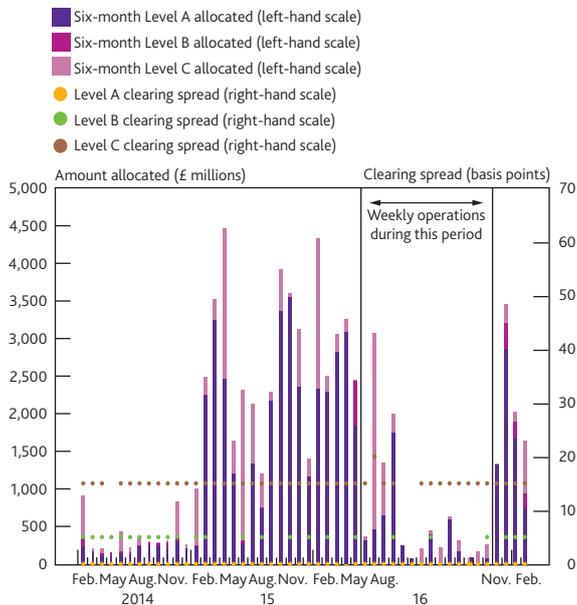
(3) For more details, see [www.bankofengland.co.uk/markets/Documents/marketnotice160804apfcbps.pdf](http://www.bankofengland.co.uk/markets/Documents/marketnotice160804apfcbps.pdf).

(4) For more details, see [www.bankofengland.co.uk/markets/Documents/marketnotice160804apfgilt.pdf](http://www.bankofengland.co.uk/markets/Documents/marketnotice160804apfgilt.pdf).

(5) [www.bankofengland.co.uk/publications/Documents/weeklyreport/2017/0103.pdf](http://www.bankofengland.co.uk/publications/Documents/weeklyreport/2017/0103.pdf).

The stock of outstanding ILTR drawings fell over the review period. A total of £14,331 million of ILTRs matured and £7,120 million of new ILTRs were allocated (Chart 15), resulting in a net decrease of central bank reserves of around £7,211 million from ILTR operations.

**Chart 15** ILTR reserves allocation and clearing spreads<sup>(a)</sup>



(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 September 2015 was £0 million.

### APF operations

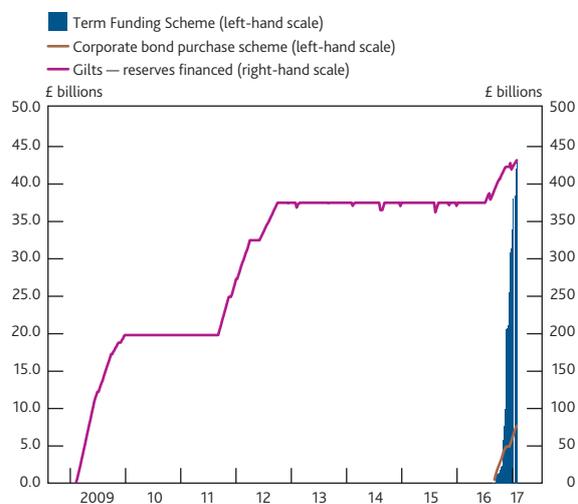
At its meeting ending on 1 February 2017, the MPC voted unanimously to continue with the programme of sterling non-financial investment-grade corporate bond purchases, financed by the issuance of central bank reserves, totalling up to £10 billion. The MPC also voted unanimously to maintain the stock of UK government bond purchases, financed by the issuance of central bank reserves, at £435 billion. Consistent with this, the MPC agreed to reinvest the £11.6 billion of cash

flows associated with the redemption of the January 2017 gilt held by the APF.

### Gilt purchase operations

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 overall stock of APF gilt purchases, less redemptions, valued at initial purchase price increased from £416.9 billion on 1 December 2016 to £431.9 billion on 1 March 2017 (Chart 16). All APF gilt purchases over the review period were fully covered.

**Chart 16** Cumulative net value of APF transactions by type, including TFS drawings<sup>(a)</sup>



(a) Data based on settled transactions.

In a Market Notice published on 2 February 2017, the Bank announced the structure of operations to reinvest the £11.6 billion of cash flows associated with the maturity on 22 January 2017 of a gilt owned by the APF. Reinvestment operations began on 6 February 2017. The size of reinvestment operations was £775 million and purchases were spread evenly across the three gilt maturity sectors.

### 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 31 December 2016, the daily average value of gilts lent, as part of the gilt lending facility, was £1,117 million. This was higher than the previous quarter at £456 million and the same quarter the previous year at £320 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.

The total amount of loans made through the TFS since the drawdown window opened on 19 September 2016 until 1 March 2017, less redemptions, was £42,931 million (**Chart 16**).

## 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 a Consolidated Market Notice, published on 12 September 2016, the Bank announced operational details of the CBPS. Since the first APF Corporate Bond Purchase Scheme operation on Tuesday 27 September 2016 until Wednesday 1 March 2017, the sum of corporate bonds purchased, less redemptions, valued at initial purchase price was £7,705 million (**Chart 16**). 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**).

## 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

**Table B** Representative share of each sector of the CBPS and the Bank's holdings in each sector

Sector	CBPS holdings as at close of business 1 March 2017 (per cent of portfolio)	CBPS sector share as at 2 March 2017 (per cent of eligible list)
Electricity	20	19
Consumer, non-cyclical	15	15
Communications	13	12
Industrial and transport	13	13
Water	12	12
Consumer, cyclical	12	11
Gas	8	8
Property and finance	4	6
Energy	2	3
Total	100	100

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. 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. Following the first reduction on 1 August 2016, participants' borrowing allowances were reduced by a further 25% of their Extended Borrowing Allowance on 1 February 2017. Participants' borrowing allowances will be reduced by the same amount every six months going forward, 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.