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The Term Funding Scheme: design, operation and impact



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- In August 2016 the Bank of England's Monetary Policy Committee announced a package of measures, with mutually reinforcing elements, to support growth and return inflation to target. The measures included a Term Funding Scheme (TFS), which provided funding to participating banks and building societies at interest rates close to Bank Rate.
- The design of the TFS reflected its primary objective which was to reinforce the pass-through of the August 2016 cut in Bank Rate to the interest rates faced by households and businesses, against a backdrop where Bank Rate was close to zero.
- The Scheme appears to have achieved its primary objective with evidence suggesting that the reduction in Bank Rate was passed on to lower lending rates on loans such as mortgages, without significant compression in lenders' net interest margins or the supply of credit to the economy.

Overview

The Term Funding Scheme (TFS) was part of a comprehensive package of easing measures announced by the Monetary Policy Committee in August 2016. The aim of the package — which also included a 25 basis point reduction in Bank Rate to 0.25% and an expansion of asset purchases of £70 billion — was to provide additional support to growth and achieve a sustainable return of inflation to the 2% target.

The primary objective of the TFS was to reinforce the pass-through of the August 2016 cut in Bank Rate to the interest rates faced by households and companies, allowing the reduction from 0.5% to 0.25% to have broadly the same impact as cuts made when rates were further from zero.

The design of the Scheme reflected this primary objective and it was calibrated so that the reduction in Bank Rate could have a broadly neutral impact on lenders' margins in aggregate.

Under the TFS, participating banks and building societies were able to borrow funds from the Bank of England at a rate close to Bank Rate for up to four years. The Scheme closed to new lending in February 2018, as envisaged when it was introduced, having made £127 billion of loans.

Quantitative and qualitative evidence, including feedback from participants, suggests that the primary objective of the Scheme

was achieved. Observations from the period after the TFS was launched suggest that the reduction in Bank Rate was passed through to lower lending rates on loans such as mortgages, without any significant compression in lenders' net interest margins, or in the supply of credit to the economy (see **summary chart**).





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Introduction

In August 2016, following the United Kingdom's vote to leave the European Union, the Monetary Policy Committee (MPC) announced a comprehensive package of easing measures designed to provide support to economic growth and achieve a sustainable return of inflation to the 2% target.

This package comprised a 25 basis point reduction in Bank Rate to 0.25%, a new funding scheme for banks and building societies (called the Term Funding Scheme (TFS)), an expansion of the asset purchase scheme for UK government bonds of £60 billion and the purchase of up to £10 billion of UK corporate bonds.

This article focuses on the TFS, which lent funds (described in the Scheme as 'drawdowns') to participating banks and building societies from 19 September 2016 to 28 February 2018. It outlines what the TFS was intended to achieve; sets out its key design features and channels of transmission; and offers some initial analysis on its likely impact.

The objectives of the TFS

The TFS aimed to reinforce the cut in Bank Rate...

As set out in the August 2016 *Inflation Report*, the primary objective of the TFS was to reinforce the pass-through of cuts in Bank Rate to the interest rates charged by banks and building societies on loans to households and companies (collectively referred to as the 'real economy').

In addition to that primary objective, the TFS was also designed to provide participants with a cost-effective source of funding to support lending, providing insurance against the risk that conditions tightened in bank funding markets.

...addressing the risk that cuts in Bank Rate from a point close to zero could be less effective than when rates are higher.

Evidence from a number of economies suggests that, as the level of interest rates set by the central bank becomes lower, the extent to which further cuts are passed on by commercial banks and building societies to other interest rates in the economy decreases, making monetary policy less effective.⁽²⁾

As can be seen in **Chart 1**, UK banks and building societies have historically paid a lower rate of interest on deposits than they charge on the loans that they make. The 'spread' between these rates is known as the net interest margin (NIM).⁽³⁾ This margin covers the cost to these institutions of making loans and offering other services.

When Bank Rate moves, lenders have typically acted to adjust both their deposit rates and lending rates broadly in tandem in order to maintain this 'spread', while also passing on the Chart 1 Effective rates on household mortgages and deposits



change in Bank Rate to loan rates paid by households and businesses.

Between 2000 and 2008, for example, the average rate paid on UK households' instant access deposit accounts was 2.6%, while the average rate charged across all mortgages was 5.7%, with the spread between the two being relatively stable even as Bank Rate moved up and down.

The potential difficulty, from a monetary policy transmission perspective, arises when interest rates are close to zero because it is likely to be difficult for banks and building societies to reduce deposit rates much further. This constraint means that lenders may then face a choice between reducing the pass-through of lower official rates to those they charge on loans — in particular rates on new loans — or a period of lower profitability, which, were it to persist, could reduce the supply of lending.

Figure 1 shows a stylised representation of this issue. When interest rates are sufficiently far from zero a cut in Bank Rate prompts banks and building societies to reduce both their lending rates and their deposit rates, passing on the change in Bank Rate while maintaining the spread between the two (Panel 1).

However, when Bank Rate is closer to zero, deposit rates can no longer practically be cut by as much because they approach their lower bound. In this case lenders face a choice: they could limit the extent to which they lower their lending rates, protecting margins but offsetting some of the intended monetary stimulus from the cut in Bank Rate (the solid lines in Panel 2). Alternatively, they could reduce lending rates by as

⁽²⁾ For further details on the effective transmission of monetary policy when the central bank's policy rate is low see the box on pages iii–vii in the <u>August 2016 Inflation</u> <u>Report</u>.

⁽³⁾ Deposits are just one way in which banks and building societies may finance their lending. Where several sources are used, the NIM may be calculated based on a weighted average of all funding.

Figure 1 Stylised depiction of reduced monetary policy pass-through with rates close to zero

Panel 1: Bank Rate cut away from the lower bound







much as previously, in which case they would see their margins decline (the dashed lines in Panel 2).

When interest rates are close to the lower bound, the potential for a cut in Bank Rate to impact lenders' margins — and therefore their ability to transmit monetary policy — is reinforced by the existence of variable rate loans on their balance sheets. These are loans on which the rate of interest is either explicitly linked to Bank Rate (for instance, a 'tracker' rate mortgage), or tied to a 'standard variable rate' (SVR). SVRs are not contractually linked to Bank Rate, but are discretionary rates that have historically tended to move closely with it.⁽⁴⁾

The existence of these products means that, as Bank Rate is cut near zero, the return on existing loans of this type is reduced with little space for an offsetting fall in the cost of deposit funding. To recoup this loss of margin on existing loans banks and building societies might, in the extreme, even increase the rates they charge on new lending, tightening monetary conditions counter to the aim of the cut in Bank Rate.

The TFS was designed to ensure that the reduction in Bank Rate from 0.5% to 0.25% had broadly the same impact on lending rates as cuts made when rates were further from zero.

The TFS provided funding for banks and building societies at interest rates close to Bank Rate, and was calibrated such that any reduction in Bank Rate had a broadly neutral impact on banks' and building societies' margins in aggregate. Lenders' funding costs were reduced, allowing them to pass on the Bank Rate cut to lending rates without diminishing their margins.

As the cut in Bank Rate could now be passed on, this reduced the lower bound for Bank Rate, which the MPC now judges to be close to, but a little above, zero.⁽⁵⁾

Design features

This section describes the main design features of the TFS: eligibility for participation in the Scheme and the term of lending; the fee charged; the amount participants were able to borrow; the decision to lend reserves; and the decision to operate the TFS as part of the Bank's Asset Purchase Facility (APF).

While in some ways the TFS resembles a previous funding scheme, the Funding for Lending Scheme (FLS), there were also a number of key differences which relate to the different objectives of the Schemes. Box 1 describes the FLS.

The TFS loaned term funds to eligible institutions.

Banks and building societies were deemed eligible for the TFS if they were participants in the Bank of England's Sterling Monetary Framework and signed up to the Discount Window Facility. There were 125 institutions that met these requirements at the start of the drawdown period.⁽⁶⁾

Eligible institutions could borrow funds for a term of four years. The long-term nature of TFS lending was intended to provide banks and building societies with a stable source of funding that they could build into their financing plans.

The fee that participants paid for TFS drawdowns was tied to the growth rate of their lending to households and businesses...

In order to ensure that the TFS would achieve its primary objective while also supporting lending to the real economy, the fee structure was linked to participants' lending.

⁽⁴⁾ Currently around 15% of mortgages held by UK households and individuals are Bank Rate 'tracker' products and a further 15% are linked to SVRs. When the TFS was launched in August 2016 variable rate mortgages made up an even higher percentage of the outstanding stock of mortgages. Bank Rate trackers and SVR mortgages represented around 20% and 23% of the total stock respectively.

⁵⁾ See the June 2018 Monetary Policy Committee Summary and minutes.

⁽⁶⁾ Data as at 15 September 2016

Box 1 The Bank's Funding for Lending Scheme

This box sets out the main design characteristics of the Funding for Lending Scheme (FLS), facilitating a comparison with the structure of the TFS. Although both the TFS and the FLS provided four-year funding to Sterling Monetary Framework participants, the design of the Schemes reflected their different objectives.

The FLS was launched in 2012 by the Bank of England and the Government with the objective of encouraging banks and building societies to lend more to households and businesses by providing low-cost funding to participating institutions for a four-year term.

UK lenders' funding costs had been pushed up over the year preceding the launch of the FLS by developments in the euro area, and the flow of credit through the banking system was impaired. One proxy for UK lenders' marginal funding costs — the sum of three-month Libor and average credit default swap premia — had increased by around 100 basis points between August 2011 and June 2012. An extension to the FLS was announced in 2013, and the drawdown window for the Scheme closed in January 2018. The criteria for eligibility to participate in the FLS and its extension were the same as the criteria for the TFS.

FLS transactions were structured as 'collateral swaps' in which the Bank lent short-dated government securities (Treasury bills) in exchange for eligible collateral. Participants could then use the Treasury bills that they accessed in the

Participants that maintained or expanded net lending to the real economy between 30 June 2016 and 31 December 2017 — the 'reference period' — would be charged Bank Rate on their TFS drawings (ie 25 basis points when the Scheme was launched).

For those TFS participants whose net lending was negative over the reference period a fee was charged on top of Bank Rate. For each 1% fall in an institution's net lending, the cost of TFS funding rose by 5 basis points to a maximum of 25 basis points over Bank Rate (**Chart 2**).

...while the amount that could be borrowed was tied to both the stock and the growth of lending.

The amount that each participant was able to borrow from the TFS was based on a combination of their outstanding lending and their new lending over the 18-month reference period.

Scheme to borrow money from markets at rates close to the expected path of Bank Rate. The total direct cost of funding for a participant using the FLS therefore combined those rates with the fee paid to the Bank. Alternatively, banks and building societies could retain those Treasury bills as liquid assets and meet cash outflows for lending using cash reserves held at the Bank. Although the Bank chose to lend reserves in the TFS, Treasury bills remain an option open to the Bank in the design of future funding schemes.

When the FLS was first launched, the fee was based on participants' net lending during the 18 months from end-June 2012 to end-December 2013, starting at 25 basis points if net lending was unchanged or positive, and increasing linearly up to a maximum of 150 basis points if net lending fell by 5% or more. Similarly to the TFS, the amount that participants could borrow was linked to their net lending. Both of those features served to incentivise lending.

The design of the borrowing allowance for the FLS extension in 2013 particularly encouraged lending to smaller businesses, as improvements in credit conditions since the launch of the FLS had been more pronounced for secured household borrowers and large businesses than for smaller firms. The TFS did not provide incentives to lend to a particular sector as its main purpose was to encourage pass-through of the cut in Bank Rate across the real economy.

More detail on the FLS can be found in the 2012 Q4 *Quarterly Bulletin* (Churm *et al* (2012)) and the explanatory note on the FLS extension.⁽¹⁾

(1) Available <u>here</u>.

Chart 2 TFS fee on drawings



Source: Bank of England.

The initial amount that participants could borrow was set at 5% of the stock of their outstanding lending to UK households and businesses as of 30 June 2016. This meant that participants had access to a sizable borrowing allowance of over £75 billion in aggregate from the outset, enabling the TFS to reinforce the cut in Bank Rate more rapidly.

Participants were also able to generate £1 of additional borrowing allowance for every £1 of additional cumulative net lending they undertook during the reference period. Linking the borrowing allowance to net lending in this way ensured the Scheme provided support for new lending to the real economy. The design also ensured that participants with growing balance sheets would not be unduly constrained by a smaller initial borrowing allowance.

Funds were lent in the form of central bank reserves against eligible collateral.

Under the TFS, funds were lent to participants in the form of central bank reserves, which are balances held by eligible institutions at the Bank of England and the asset via which all payments are ultimately settled.

The TFS was designed as a 'secured' form of borrowing meaning that participants could obtain funds only if they provided collateral. This meant that the Bank could take ownership of the collateral if a participant defaulted on the repayment of its TFS drawings when due.

The collateral eligible to be used in obtaining funding through the TFS was the same as for the Bank's other sterling market operations. In principle, the Bank accepts as eligible collateral any asset it judges it can effectively and efficiently risk-manage, and the eligible collateral list is broad.⁽⁷⁾

In order to account for risks associated with collateral, the Bank routinely applies haircuts. The haircuts effectively reduce the amount that can be lent against a given set of collateral in order to provide further protection should a participant default on its obligations.

The fact that the Bank applies haircuts to collateral means that the aggregate value of collateral taken in the TFS exceeds aggregate drawings. Residential mortgage loans make up the majority of both the collateral against which TFS drawings are secured and the overall collateral delivered to the Bank.

The TFS was conducted through the Bank's Asset Purchase Facility, with a government indemnity...

The TFS operated as part of the APF, which is managed through a wholly-owned subsidiary of the Bank — the Bank of England Asset Purchase Facility Fund Limited. HM Treasury indemnifies the Bank and the APF for any losses arising out of, or in connection with, the Facility. Any surplus from these operations — after the deduction of fees, operating costs and any tax payable — is due to HM Treasury.

...but will be transferred directly to the Bank of England's balance sheet by 2019 Q1.

All existing TFS drawings and collateral backing them will be transferred from the APF to the Bank's own balance sheet by the end of the 2018/19 financial year.⁽⁸⁾

This is in line with new financial arrangements agreed between the Bank and HM Treasury in June 2018.⁽⁹⁾ The new arrangement recognises the wider monetary and financial stability responsibilities the Bank has been given by Parliament since the last funding agreement in 2013. It will increase the amount of capital on the Bank's balance sheet, significantly increasing the Bank's ability to provide collateralised, market-wide liquidity facilities in the future.

Channels of transmission

The TFS was expected to achieve its primary objective by ensuring that banks and building societies could lower their lending rates in response to the cut in Bank Rate, without a contraction in their net interest margins. It did this by lowering lenders' funding costs, both directly and indirectly.

The TFS was expected to have direct and indirect impacts on lenders' funding costs and, through that, the lending rates facing households and companies (see Figure 2).

The *direct funding cost* effect was expected to come from banks and building societies being able to fund a significant portion of their new lending more cheaply through the TFS than through other sources of funding. Both deposit rates and wholesale funding rates were higher than Bank Rate in August 2016. Being able to borrow from the TFS at close to Bank Rate would lower the average funding costs of TFS participants, allowing that reduction to be passed on to borrowers.

The expected *indirect funding cost* effect was that the TFS would allow funding costs for banks and building societies to reduce more broadly. By acting as an alternative form of funding, the TFS was expected to reduce the amount of debt that lenders would have to issue in the market. Assuming that investors' demand for bank and building society debt remained largely unchanged, the reduction in supply of new debt prompted by the TFS would potentially lead to a fall in the interest rates paid by banks and building societies to borrow from market sources. This general reduction in funding costs

⁽⁷⁾ See here for more detail on the collateral accepted by the Bank.

⁽⁸⁾ See Carney, M (2018).

⁽⁹⁾ See <u>here</u> for more information on the financial relationship between HM Treasury and the Bank of England.



Figure 2 Transmission channels of the TFS

would benefit all lenders issuing debt, regardless of whether they drew funds from the TFS or not.

As highlighted in the August 2016 Inflation Report that accompanied the launch of the TFS, the Scheme was not expected to lead to significantly faster aggregate loan growth. However, it is possible that, at the margin, the TFS may have interacted with other developments to produce an intensification of competition between lenders. For instance, as the amount and cost at which TFS participants could borrow was tied to their lending behaviour, participants may have been induced to compete harder for borrowers' business in order to get more TFS funding on the best terms. Increased competition would result in lower lending rates than there would otherwise have been, relative to funding costs, as banks and building societies lowered prices to attract new business. In the case of the TFS, this channel of transmission was not expected to be large as the UK credit market was already competitive prior to the Scheme's launch.

Impact

Interest rates on loans such as mortgages fell following the August 2016 policy package. Participants in the Scheme have reported that the TFS was a significant factor in their decision to pass on the August 2016 cut in Bank Rate to borrowers.

Over the TFS drawdown period, interest rates on loans such as mortgages fell significantly (**Chart 3**). The Scheme's objective of ensuring the cut in Bank Rate was passed on to the real economy was therefore achieved.

In fact, the rates on many mortgage products fell by more than the changes in Bank Rate and relevant measures of funding costs would have implied. Consistent with the channels of transmission in **Figure 2**, this may have, in part, been driven by the TFS increasing competition in this market. However, discussions with lenders and analysis by the Bank suggest that a more important driver was growing lender risk

Chart 3 Changes in quoted mortgage rates from launch of the August 2016 policy package



Source: Bank calculations.

appetite, as banks and building societies sought to maintain volumes in the face of weak demand. The forthcoming 'ring-fencing' of major UK banks, whereby core retail banking activities are separated from investment and international banking activities, may also have affected competitive dynamics in the mortgage market.⁽¹⁰⁾

Despite pass-through to lending rates, lenders' margins saw no significant compression.

Chart 4 shows that major UK banks' and building societies' loan margins — a proxy for NIMs calculated as net interest income divided by average customer lending — have remained stable through 2016 and 2017, even as lenders passed on the August 2016 Bank Rate cut.⁽¹¹⁾

⁽¹⁰⁾ For more information on the drivers of competition in the mortgage market see the June 2018 Financial Stability Report.

⁽¹¹⁾ Customer lending excludes lending activity between banks and building societies.

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(a) Estimates derived from published accounts for the six largest UK banks and building societies: Barclays, HSBC, Lloyds Banking Group, Nationwide, Royal Bank of Scotland and Santander UK. Series calculated as the net interest income divided by average customer lending. Data are measured annually at the group level.

Offsetting the reduction in lending rates, bank and building society funding costs fell, consistent with both the direct and indirect channels of transmission.

Drawings from the TFS between August 2016 and February 2018 totalled £127 billion across 62 participating institutions. Of these, 54 participants delivered positive net lending over the reference period and so were able to borrow funds at Bank Rate. The remaining eight pay between 1 and 25 basis points above Bank Rate on their borrowings.

In all cases, TFS funding was cheaper than if the participants had raised the same funds in the market. The average market rate on wholesale and term retail funding over the drawdown period was around 70 basis points above Bank Rate. The difference between the rate paid on the £127 billion borrowed from the TFS and the alternative sources of funding represents a saving for participants in line with the direct source of funding channel in **Figure 2**.

Alongside the direct funding cost effect, the TFS was expected to lower wholesale funding costs for banks and building societies via the indirect funding cost channel. Participants reported that plans to issue other forms of term funding had been delayed or suspended during the drawdown period. That may have contributed to a reduction in supply and a wider downward pressure on funding spreads.

Chart 5 shows that wholesale bank funding costs fell significantly in the period after the launch of the TFS. To identify how much of this fall might be attributable to the TFS the Bank looked at the historical drivers of one measure of wholesale bank funding costs prior to the TFS being launched, and projected what those historical relationships would have implied for spreads during the period over which the TFS was open to new drawdowns.

Chart 5 UK banks' indicative long-term funding spreads^(a)

- Senior unsecured bond spreads operating company (OpCo)^(b) (left-hand scale)
- Five-year CDS premia^(c) (left-hand scale)
- Senior unsecured bond spreads holding company (HoldCo)^(d) (left-hand scale)
- IG non-financial corporate bond spreads^(e) (left-hand scale)
- Additional Tier 1^(f) (right-hand scale)



Sources: Bloomberg Finance L.P., IHS Markit and Bank calculations

- (a) UK banks are Barclays, HSBC, Lloyds Banking Group and Royal Bank of Scotland.
 (b) Constant maturity unweighted average of secondary market spreads to mid-swaps for the major UK lenders' five-year euro-denominated senior unsecured bonds issued by the
- operating company or a suitable proxy when unavailable. (c) Unweighted average of five-year euro-denominated senior CDS premia for the major
- UK lenders.
 (d) Constant maturity unweighted average of secondary market spreads to mid-swaps for the major UK lenders' five-year euro-denominated senior unsecured bonds issued by the holding company or a suitable proxy when unavailable.
- (e) Option-adjusted spreads. Refers to non-financial euro-denominated investment-grade
- corporate bonds issued in Eurobond or euro member domestic markets (f) Simple average of secondary market spreads over government bonds.

This analysis follows Churm *et al* (2012) and estimates a model of how the five-year senior unsecured spread is related to the CDS rates of UK and euro-area lenders (measures of perceptions of bank risk) and the spread on investment-grade non-financial corporate bonds (to control for spillovers from the Corporate Bond Purchase Scheme). This relationship is based on daily data from January 2011 to the end of July 2016 and then an out-of-sample forecast over the TFS drawdown period is produced, conditioned on the observed data for the control variables.

Chart 6 shows that banks' funding costs were persistently lower than predicted by this simple model in the year following the introduction of the TFS, by some 10–30 basis points. This implies a significant downward influence beyond the factors controlled for in our analysis. To the extent that the unexplained component is driven by the TFS, this provides an approximate estimate of the Scheme's impact on wholesale bank and building society funding costs through the indirect channel. This impact on wholesale funding costs ensured average funding costs for banks and building societies fell in line with what would be expected for Bank Rate cuts further away from zero, even though deposit rates were more constrained.

From August 2017 onwards, the negative unexplained component wanes and observed funding spreads rise above the model prediction. While this could represent a diminution

Chart 6 Largest UK lenders' wholesale funding spreads versus model prediction

- Unexplained component
- Model implied



Sources: Bloomberg Finance L.P. and Bank calculations

(a) Constant-maturity, unweighted average of secondary market spreads to mid-swaps for the major UK lenders' five-year euro-denominated senior unsecured bonds issued by the operating company, or a suitable proxy when unavailable.

of the impact of the TFS, market intelligence suggests that this was instead driven by an increase in global volatility spilling over into funding costs and the response of banks and building societies to new regulation around minimum requirements for own funds and eligible liabilities (MREL).

At the end of July 2017, the Bank of England published a consultation paper on MREL.⁽¹²⁾ Since this date, lenders have begun issuing more unsecured debt to be compliant ahead of the interim deadline in 2020. That increased issuance will have acted in the opposite direction to the indirect supply effect of the TFS, pushing up on the cost of funding for banks and building societies.(13)

Closing the TFS drawdown window

In August 2017 the MPC voted to close the TFS to new drawings on 28 February 2018, as envisaged when the Scheme was introduced. At this meeting, the MPC noted some tightening of monetary policy would be required to achieve a sustainable return of inflation to the target, and that any increases in Bank Rate would be expected to be at a gradual pace and to a limited extent.⁽¹⁴⁾ The MPC voted to increase Bank Rate from 0.25% to 0.50% in their November 2017 meeting. This meant that there was no longer a role for the TFS in reinforcing pass-through of the August 2016 cut in Bank Rate.

Conclusion

This article provides an overview of the design of the TFS and initial analysis of the Scheme's impact.

The design of the Scheme reflected its primary objective, which was to reinforce the pass-through of the cut in Bank Rate to the lending rates faced by households and companies.

This article also provides some initial analysis of the impact of the Scheme. That analysis, consistent with market intelligence, suggests that the TFS has been effective in allowing participants to pass through the reduction in Bank Rate into lower lending rates. At the same time, the Scheme enabled the reduction in Bank Rate to have a broadly neutral impact on lenders' aggregate margins in a manner similar to cuts made when rates were further from zero.

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⁽¹²⁾ For more information see the Bank's Statement of Policy on MREL.

⁽¹³⁾ The large part of this issuance has been conducted at the Holding Company level but the increase in the supply of bank debt generally is likely to have also increased the Operating Company level debt used in our analysis. The cost of the two forms of funding generally move closely together.

⁽¹⁴⁾ For more information see the August 2017 Monetary Policy Committee Summary and minutes.