

Sterling Monetary Framework Annual Report 2015–16

June 2016



BANK OF ENGLAND





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The Bank reviews its published framework for implementing monetary policy and providing liquidity insurance on an annual basis. The SMF Annual Report is the output of this review process and draws on the views of internal and external stakeholders to identify areas where the SMF works well, and areas where it might be improved.

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Executive summary

In 2015–16, the Bank conducted the third formal annual review⁽¹⁾ of its published operational framework for implementing monetary policy and providing liquidity insurance, known as the Sterling Monetary Framework (SMF). Key changes implemented in 2015–16 are summarised in the box opposite. This year's review draws on views from internal and external stakeholders to help identify where the SMF functions well and where further work is necessary.

SMF membership

Overall, SMF membership increased by 26 in 2015–16, to 175. This increase reflected: (i) newly eligible broker-dealers and central counterparties (CCPs) joining the SMF; (ii) banking groups taking advantage of being able to access the SMF through multiple group entities; (iii) engaging with firms on access to SMF facilities earlier in the Prudential Regulation Authority (PRA) authorisation process to allow them to be on-boarded sooner after obtaining banking licences; and (iv) the further extension of the Funding for Lending Scheme (FLS) generating additional interest in the Discount Window Facility (DWF), which is a prerequisite for accessing the FLS.

Monetary policy implementation

The Bank's approach to ensuring sterling overnight rates remain around Bank Rate — remunerating all reserves balances at Bank Rate — remained effective at keeping market rates close to Bank Rate throughout 2015–16. Bank Rate was maintained at 0.5% over this period and the stock of purchased assets financed by the issuance of central bank reserves was maintained at £375 billion.

To secure and improve the information available to it on conditions in sterling money markets, the Bank has commenced a new transaction-level data collection. It has also set out its plans to reform SONIA⁽²⁾ by broadening the range of transactions underpinning the benchmark to include bilaterally negotiated as well as brokered overnight unsecured deposit transactions.

Liquidity insurance

In 2015–16, usage of the Bank's liquidity insurance facilities grew somewhat, although it remains significantly lower than during the crisis. Increased usage of the monthly, market-wide Indexed Long-Term Repo (ILTR) reflected banks' actively managing their liquidity including in response to changing market conditions.

In February 2016, the Bank published a consultation on the feasibility of models for providing Shari'ah compliant central bank liquidity facilities to UK Islamic banks. It expects to respond to feedback from the consultation by around the turn of the year.

Key changes to the SMF in 2015–16

The Bank continued to evolve the SMF in 2015–16, to further improve the effectiveness of implementing monetary policy and the flexibility of liquidity insurance. Key developments were:

- **Developing contingency plans to drain reserves, if needed.** Should excess liquidity lead to market rates regularly settling materially below Bank Rate, the Bank has developed plans to issue Bank of England bills. This would drain reserves and should put upward pressure on market rates.
- **Consulting on establishing Shari'ah compliant facilities.** The Bank consulted on potential models that could form the basis of future Shari'ah compliant SMF facilities.
- **Reviewing haircuts on collateral.** A review of the methodology used to calculate haircuts on residential loans resulted in a reduction in average haircuts on loans.
- **Extending the FLS.** The Bank and HM Treasury announced that the FLS extension would remain open for an additional two years and that new banks and building societies would be able to join. Incentives remain skewed towards SME lending. Borrowing allowances will taper from August 2016 and reduce to zero by January 2018.

Risk management

The level of pre-positioning and the number of counterparties with collateral pre-positioned at the Bank continued to increase during 2015–16. During the year, the Bank conducted a review of the methodology used to calculate haircuts on residential loans, which resulted in average haircuts decreasing while maintaining the Bank's standard of risk management. Work continues to ensure there are no technical obstacles to the Bank's ability to accept equities as collateral, should the need arise.

Governance

The Bank's Governors, the Monetary Policy Committee (MPC), Financial Policy Committee (FPC) and PRA Board were actively engaged in the annual review process that has culminated in this Report. Views were also sought from SMF counterparties and there was confidence that the SMF facilities continue to provide adequate liquidity insurance, when needed. Through the Annual Report process, and in line with its responsibilities, the Bank's Court has reviewed the performance of the SMF over the past year, and considered objectives for the coming year. Court endorses the publication of this Report.

(1) Covering the period from 1 March 2015 to 29 February 2016.

(2) SONIA is the Sterling Overnight Index Average, the daily weighted average interest rate of unsecured transactions brokered by members of the Wholesale Markets Brokers' Association (WMBA).

Introduction

The SMF is the published operational framework through which the Bank implements monetary policy and provides liquidity insurance to SMF participants. It underpins the Bank's mission to maintain monetary and financial stability by implementing the MPC's decisions in order to meet the inflation target, and by reducing the cost of disruption to the critical financial services supplied by SMF participants (see the box opposite).

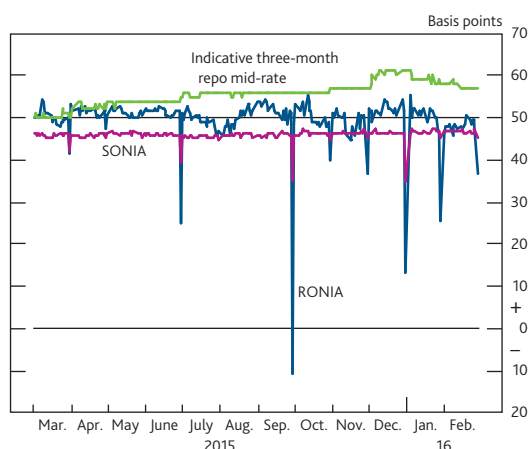
The SMF is reviewed annually and the outcomes of these annual reviews are published in the SMF Annual Report. This year's Report summarises the outcomes of the third formal annual review and changes to the SMF introduced over the past year.

The Bank welcomes thoughts or comments from interested parties on this Report or on the SMF more broadly. Details of how to submit views are provided at the end of this Report.

I Recent developments in sterling money markets

Volatility in sterling money markets remained low throughout 2015–16, although overnight rates continued to diverge from Bank Rate at key reporting dates (**Chart 1**). Secured overnight rates, as indicated by RONIA,⁽¹⁾ remained in line with Bank Rate over the year albeit with notable volatility around key reporting dates. Term repo rates rose over the year. Market contacts suggested that deteriorating liquidity contributed to these moves. This was also reflected in widening bid-ask spreads for term repo.

Chart 1 Sterling rates



Sources: Bank of England and WMBA.

Unsecured overnight rates, as indicated by SONIA, have also remained broadly stable over the past year, although consistently 3–5 basis points below Bank Rate. As discussed in

Aims and objectives of the Sterling Monetary Framework

The Bank of England's mission is to promote the good of the people of the United Kingdom by maintaining monetary and financial stability. The Bank's operations in the sterling money markets — known as the SMF and outlined in the Bank's Red Book⁽¹⁾ — serve that mission. The operations are designed to:

- **Implement the MPC's decisions in order to meet the inflation target.** This is usually achieved by paying interest at Bank Rate on the reserves balances held at the Bank of England by commercial banks, building societies, designated investment firms ('broker-dealers') and CCPs — collectively known as 'SMF participants'. In exceptional circumstances, the Bank may choose to vary the structure of its remuneration on reserves and to supply whatever reserves it deems necessary to meet the MPC's monetary policy objectives, by changing the size or composition of its balance sheet.
- **Reduce the cost of disruption to the critical financial services, including liquidity and payment services, supplied by SMF participants to the UK economy.** The Bank does this by standing ready to provide liquidity in the event of unexpected developments by offering to swap high-quality but less liquid collateral for liquid assets (a so-called 'liquidity upgrade').

(1) See www.bankofengland.co.uk/markets/Documents/money/publications/redbook.pdf.

previous SMF Annual Reports, some lenders do not have reserves accounts and may be willing to lend cash overnight at below Bank Rate. In addition, reserves account holders may be disinclined to arbitrage the difference between SONIA and Bank Rate as this could increase gross balance sheet metrics, including reported leverage ratios.

Increased use of Term Delivery-by-Value

A key structural development in sterling secured money markets this year has been the migration of the majority of Delivery-by-Value (DBV) gilt repo business from CREST's⁽²⁾ legacy 'DBV' product to its newer 'Term DBV' product. DBV is a settlement mechanism in CREST where a member can specify the delivery of a basket of securities (such as gilts or equities) to a counterparty solely by value, rather than needing to detail the quantities of each individual security. DBV can be settled bilaterally, and DBV gilt repo trades can

(1) RONIA is the Repurchase Overnight Index Average, the daily weighted average interest rate of transactions secured against UK government debt, brokered by members of the WMBA.

(2) Owned by Euroclear UK & Ireland (EUI).

also be centrally cleared via LCH.Clearnet Ltd's RepoClear service. Before July 2011, it was only possible to settle DBV on an overnight basis, irrespective of the economic term of the underlying trade; this resulted in unnecessary intraday cash flows and operational risk. In 2011 however, CREST introduced the Term DBV product to allow settlement to reflect the term of the underlying trade; this supports trades of any length between one night (overnight) and two years.

In conjunction with key stakeholders such as EUI, LCH.Clearnet Ltd (LCH) and the London Money Market Association, the Bank of England has been supporting the migration of new and existing settlement business to the Term DBV product. This has been achieved through a sub-committee of the Money Markets Liaison Committee (MMLC). In September 2014, LCH launched a new RepoClear product — Term £GC — which uses the CREST Term DBV mechanism. All existing and new RepoClear DBV business was successfully migrated to the Term £GC product by September 2015. Work is now focused on enabling a smooth migration of the remaining bilateral gilt DBV business to Term DBV, ahead of CREST decommissioning the legacy gilt DBV product on 3 October 2016.

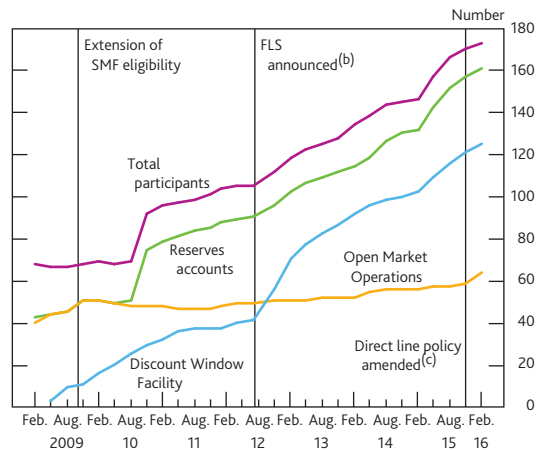
II SMF membership

Following the significant reforms to the SMF introduced in October 2013, and the widening of SMF access to broker-dealers⁽¹⁾ and CCPs⁽²⁾ in November 2014, the number of firms joining the SMF has continued to increase. Broker-dealers, as well as banks and building societies, now have access to the suite of SMF facilities, and CCPs can access a reserves account, Operational Standing Facilities (OSFs) and the DWF.⁽³⁾

At the end of February 2016, there were 175 SMF participants, up from 149 in February 2015 (Chart 2). In addition, 23 existing participants have signed up for new facilities. Banks and building societies that are SMF participants account for 98% of total sterling deposits.

The increase in new SMF participants in 2015–16 has been more rapid than in previous years. A number of factors have contributed to this. First, newly eligible broker-dealers and CCPs have begun joining the SMF. Second, banking groups continued to take advantage of the ability to access SMF facilities via multiple group entities, which was introduced in 2013. Third, the Bank now engages earlier with banks and building societies going through the PRA authorisation process or through a change in control, enabling them to access SMF facilities sooner after obtaining their banking licences. Fourth, the further extension of the FLS announced in November 2015⁽⁴⁾ has generated additional interest in the DWF, access to which is a prerequisite for accessing the FLS. Access to the SMF has provided firms with improved flexibility in managing their liquidity and meeting regulatory requirements.

Chart 2 SMF membership^(a)



Source: Bank of England.

- (a) Quarterly averages.
 (b) FLS is the Funding for Lending Scheme, launched on 13 July 2012.
 (c) From November 2015, smaller firms have been able to access OMOs without installing a direct telephone line.

The Bank has also worked to further reduce barriers to accessing SMF operations for smaller banks and building societies. In November 2015, the Bank implemented an improved control framework for telephone bids which now enables smaller firms to access Open Market Operations (OMOs) without the need for a direct telephone line. This largely accounts for the increase in OMO participants from 57 to 66 during 2015–16.

Engagement with SMF members is important and, as outlined in previous SMF Annual Reports, the Bank executes this through a number of forums:

- **The SMF relationship management framework.** This provides a point of contact for each firm to discuss topics relating to the SMF, and to provide information to the Bank on the sterling markets in which it operates. A representative selection of SMF participants provided valuable feedback which fed into this Report.
- **The risk management framework.** The Bank's risk management team maintains contact with firms through risk assessments and reviews of loan collateral, which includes site visits.
- **Formal committees.** The MMLC provides a forum for participants in the sterling money markets and the authorities to discuss structural issues.⁽⁵⁾ Sub-committees

(1) The term 'broker-dealers' refers to PRA-designated investment firms, see www.bankofengland.co.uk/prs/pages/authorisations/designatedfirmslist.aspx.
 (2) Central counterparties (CCPs) operating in UK markets, either authorised under European Market Infrastructure Regulation or recognised by the European Securities and Markets Authority, are eligible to apply for participation in the SMF.
 (3) In managing reserves account balances, CCPs are required to meet a target balance agreed between the CCP and Bank.
 (4) See www.bankofengland.co.uk/publications/Pages/news/2015/096.aspx.
 (5) For more information on the MMLC, see www.bankofengland.co.uk/markets/Pages/money/smmmlg.aspx.

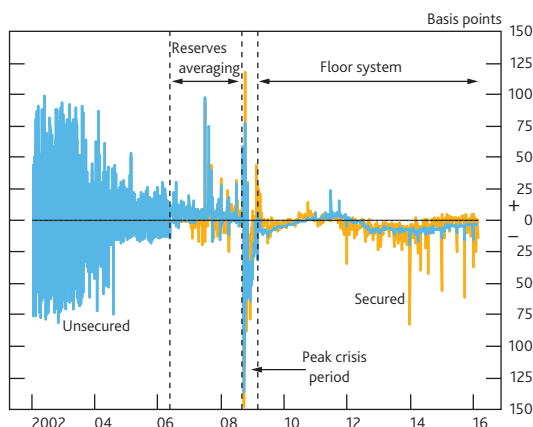
allow significant infrastructure changes to be managed collaboratively across the industry. This includes the current work to migrate bilateral DBV gilt repo trades to the Term DBV product.⁽¹⁾ The Securities Lending and Repo Committee provides a forum for repo and securities lending practitioners and the authorities to discuss structural (including legal) developments.⁽²⁾

III Monetary policy implementation

The first objective of the SMF is to implement decisions made by the MPC. Since March 2009, when quantitative easing was initiated, this has involved maintaining overnight market rates in line with Bank Rate and undertaking large-scale asset purchases financed by the creation of central bank reserves. Bank Rate was maintained at 0.5% throughout the 2015–16 financial year and the stock of purchased assets financed by the issuance of central bank reserves was maintained at £375 billion.

The Bank keeps overnight market rates in line with Bank Rate by paying Bank Rate on all cash held in reserves accounts. This ‘floor’ system remained effective in keeping market rates close to Bank Rate during 2015–16. Throughout most of 2015–16, volatility of overnight interest rates remained at historically low levels and both secured and unsecured overnight rates have remained close to Bank Rate (**Chart 3** and **Table A**).

Chart 3 Spreads of sterling overnight interest rates to Bank Rate^(a)



Sources: WMBA and Bank calculations.

(a) The unsecured rate is represented by SONIA. The secured rate is represented by RONIA. For further details on RONIA and SONIA, see www.wmba.org.uk.

The Bank pays close attention to developments in the sterling money markets in part because they are linked with the SMF insofar as interbank transactions are settled directly or indirectly by transfers between banks’ reserves accounts at the Bank. The sterling interbank market is therefore also a market for sterling reserves balances. As such, the robustness of overnight rates is important to the ability of the Bank to judge the effectiveness of monetary policy implementation.

Table A Deviation of sterling overnight interest rates from Bank Rate^(a)

Basis points	Mean		Standard deviation	
	Unsecured	Secured	Unsecured	Secured
Pre-reserves averaging ^(b)	-4	–	37	–
Reserves averaging:				
to August 2008 ^(c)	6	3	9	11
peak crisis ^(d)	-27	-19	29	34
Floor system:				
to February 2013 ^(e)	-2	-1	4	5
in 2013/14 ^(f)	-7	-7	1	6
in 2014/15 ^(g)	-7	-4	1	6
in 2015/16 ^(h)	-4	0	1	6

Sources: WMBA and Bank calculations.

(a) The secured and unsecured rates are RONIA and SONIA respectively, as defined in **Chart 1**. (RONIA data not available before January 2007.)

(b) January 2002–May 2006.

(c) May 2006–August 2008.

(d) September 2008–March 2009.

(e) March 2009–February 2013.

(f) March 2013–February 2014.

(g) March 2014–February 2015.

(h) March 2015–February 2016.

The dynamics of secured and unsecured rates reflect a continuation of market trends present for the past few years. The tendency for unsecured interest rates to trade slightly below Bank Rate during 2015–16 reflected the fact that some lenders without reserves accounts at the Bank may have been willing to lend cash overnight at below Bank Rate. In addition, reserves account holders are less willing to arbitrage away all of the difference between unsecured overnight rates and Bank Rate in part because doing so would increase gross balance sheet metrics, including reported leverage ratios.

Secured overnight interest rates continued to fall sharply at quarter ends during 2015–16 and on some month ends. Market contacts continue to attribute this to banks looking to reduce the cash deposited with them at reporting dates, and thus the size of their own balance sheets, when such borrowing would impact published leverage ratios. As a result, market participants without access to a reserves account at the Bank were only able to place deposits at reduced rates.

As with previous calendar year ends, sterling overnight secured and unsecured money market rates fell on 31 December 2015, albeit by less than on previous year and quarter ends for secured rates. RONIA fixed at 0.13% compared with -0.05% at end-2014 and SONIA fixed at 0.35% compared with 0.36% at end-2014. As in previous years, overnight secured and unsecured market volumes fell significantly on the day. Contacts reported that better preparation and communication between banks and clients reduced market dysfunction on 31 December 2015 compared with previous year ends. In

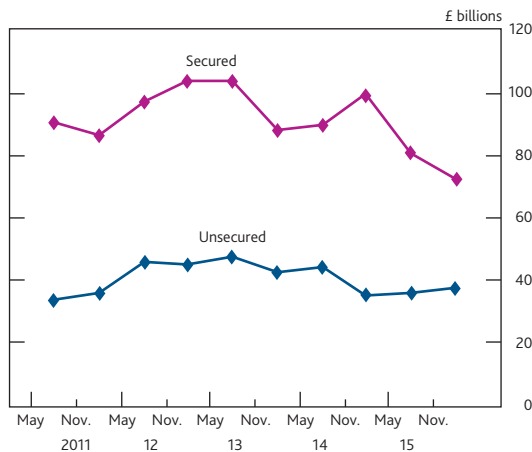
(1) For more information on the MMLC Term DBV Sub-Committee, see www.bankofengland.co.uk/markets/pages/money/ctdbv.aspx.

(2) For more information on the Securities and Lending Repo Committee, see www.bankofengland.co.uk/markets/Pages/gilts/srlc.aspx.

particular, the sharp decline in secured rates at end-September 2015 motivated early discussions between banks and clients before year end. Both secured and unsecured rates and volumes recovered to usual levels on the next business day.

More generally, as reported in the latest MMLC Sterling Money Markets Survey, secured money market turnover fell by 29% in the year to November 2015 (**Chart 4**).⁽¹⁾ Contacts thought that the main driver continued to be pressure to reduce balance sheet size due to regulatory requirements such as the leverage ratio. A lower availability of collateral, in part due to it being increasingly used for margining, was also thought to have contributed. Unsecured market turnover increased by 6% in the year to November 2015 but remained at a relatively low level.

Chart 4 Reported daily average transactions in the sterling money market^{(a)(b)}



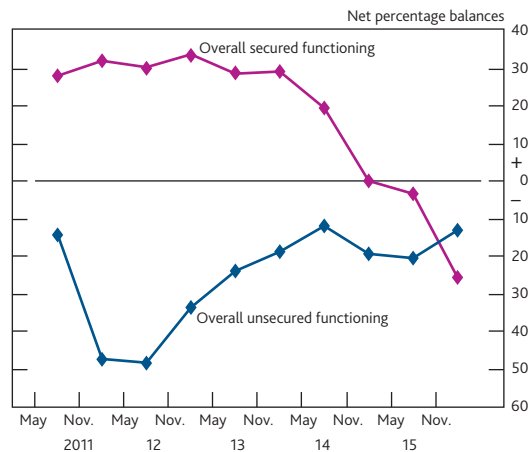
Sources: MMLC Sterling Money Market Survey and Bank calculations.

- (a) Daily average flows are reported as the value of sterling money market transactions in the survey month divided by the number of working days during that period.
 (b) The calculation adjusts for the double counting of matched interbank borrowing and lending.

Contacts characterised both secured and unsecured market functioning as poor (**Chart 5**). In the secured market, declining liquidity was potentially reflected in widening bid-ask spreads, and conditions were reported as worse at longer maturities. In the unsecured market, a lack of market depth and a low number of dealers were reportedly the main factors.

The Bank has carried out work to understand the implications of changes in market structure for liquidity. In particular, in the statement from its policy meeting of 23 March 2016, the FPC noted that 'continued developments in financial market liquidity motivated a careful review of the implementation and precise design of internationally agreed post-crisis regulations. The objective is to determine whether there are opportunities to enhance sustainable liquidity without compromising underlying resilience.'⁽²⁾ The FPC intends to publish its assessment later in 2016.

Chart 5 MMLC Sterling Money Market Survey respondents' views on overall market functioning^(a)



Sources: MMLC Sterling Money Market Survey and Bank calculations.

- (a) 'Net percentage balance' is calculated as the difference between the balance of lenders reporting that, on a scale of 1–5, the market was functioning very poorly (1) to very well (5). The net percentage balances are scaled to lie between ± 100 : more extreme responses (1 and 5) attract a weight of 100%, less extreme responses (2 and 4) attract a weight of 50% and central responses (3) attract a weight of zero.

The Bank continually monitors developments in sterling markets by scrutinising data and surveys and through its conversations with market contacts. In order to secure and improve the information available to it on conditions in sterling money markets, the Bank has commenced a new data collection of transaction-level data from those most active in both the secured and unsecured sterling money markets. This information will provide the Bank with a better understanding of developments in short-term interest rates, benefiting the Bank's analysis of both monetary and financial conditions. It will also provide a richer picture of activity in the sterling money market, enabling the Bank to better assess overall market effectiveness.

The Bank has also set out its plans to reform SONIA; this is seen as necessary given its role as a critical benchmark in sterling markets, and in view of the limited size of the market for brokered deposits on which SONIA is currently based. The new sterling money market data collection will provide an opportunity to strengthen SONIA by broadening the range of transactions underpinning the benchmark to include bilaterally negotiated as well as brokered overnight unsecured deposit transactions.

The Bank consulted on its plans for both in July 2015 'A new sterling money market data collection and the reform of SONIA'⁽³⁾ and became SONIA's administrator on 25 April 2016. The Bank intends to consult on its detailed plans for the reform of SONIA later this year.

(1) See www.bankofengland.co.uk/publications/Pages/other/mmlc/default.aspx.
 (2) See www.bankofengland.co.uk/publications/Documents/news/2016/032.pdf.
 (3) See www.bankofengland.co.uk/publications/Pages/news/2015/080.aspx.

As well as maintaining overnight market rates in line with Bank Rate, implementing the MPC's monetary policy decisions currently involves maintaining the stock of purchased assets at £375 billion through the reinvestment of cash flows associated with the redemptions of gilts held in the Asset Purchase Facility (APF).⁽¹⁾ In making these purchases, the Bank considers the value that individual offers constitute and retains the right to not accept certain offers, as set out in the APF Consolidated Market Notice.⁽²⁾ The MPC provided further clarity regarding the future of the APF in the November 2015 *Inflation Report*, namely that: (i) in its view, APF gilt sales and reinvestment decisions are equivalent from a monetary policy perspective; (ii) it expects to maintain the APF stock until Bank Rate has reached a level from which it can be cut materially; and (iii) based on historical experiences, the threshold for materiality is currently judged to be around 2%.⁽³⁾

The Bank expects that the 'floor' system will remain effective at keeping market rates in line with Bank Rate in the near term. Nevertheless, in the spirit of being prepared, the Bank has developed plans should excess liquidity lead to market rates regularly settling materially below Bank Rate. In such a scenario, the presumption is that the Bank would issue one-week Bank of England bills in order to drain reserves. This would be expected to put upward pressure on market rates, tightening the link between market rates and Bank Rate. The Bank issued Bank of England bills in 2008 in order to drain excess reserves following an increase in the size of long-term repo operations. Bank of England bills would be widely tradable, offering a close substitute to deposits for most participants in the money markets, and would provide additional supply of high quality collateral.⁽⁴⁾

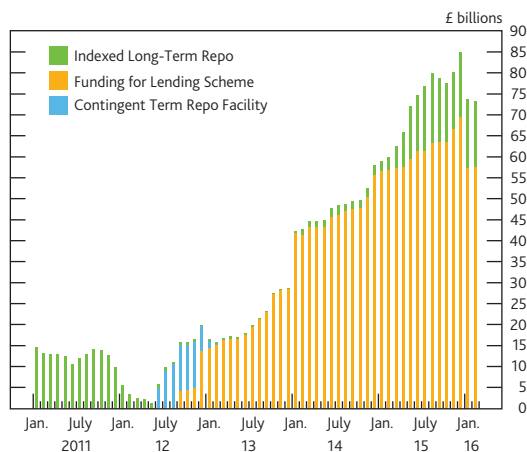
IV Liquidity insurance

In 2015–16, usage of the Bank's liquidity insurance facilities increased (**Chart 6**, further details are provided in the annex).

The monthly, market-wide ILTR auctions were made more flexible in February 2014, with reduced prices, a longer maturity, a wider range of eligible collateral and built-in flexibility for the quantity of liquidity provided to vary in response to market conditions. The majority of usage in these operations in 2015–16 has reflected firms actively managing their liquidity, including in response to changing market conditions, and improving familiarity with the facility. Some participants also continued to use the ILTR as a means of converting UK Treasury bills borrowed under the FLS into central bank reserves.

Usage of the ILTR directly affects the level of aggregate central bank reserves. As a result, the net increase in outstanding lending through the ILTR increased central bank reserves by £12.5 billion over 2015–16. Reserves created through new ILTR drawings remain small relative to the stock

Chart 6 Outstanding amounts lent in SMF liquidity facilities and the FLS^(a)



Source: Bank of England.

(a) Prior to January 2014, the Contingent Term Repo Facility (CTRF) was called the Extended Collateral Term Repo facility. The FLS (including the two FLS extensions) is separate to the SMF and is not a liquidity insurance facility, but has the result of providing liquidity to the banking sector. There has been no DWF usage up to the most recent disclosure point (as specified in the Red Book.)

of reserves created through the Banks quantitative easing programme.

SMF participants continued to sign-up for the DWF in 2015–16, with the number of DWF counterparties increasing by 21 over the year. There was no DWF usage recorded up to the most recent DWF disclosure period.

The FLS, launched in July 2012, is designed to incentivise banks and building societies to boost their net lending to the UK real economy by providing funding (in the form of UK Treasury bills) for a four-year term. While the FLS sits outside the SMF, there are important interlinkages: all banks and building societies with DWF access are eligible to participate in the FLS; eligible collateral for the FLS consists of all collateral eligible in the SMF; and, like SMF operations, the FLS provides a liquidity upgrade for participants.

On 30 November 2015, the Bank and HM Treasury announced an amendment to the FLS Extension, extending the drawdown period by two years to January 2018. For existing participants, no new borrowing allowances can be generated by lending after end-2015. In addition, borrowing allowances will taper from August 2016, and reduce down to zero by end-January 2018. New banks and building societies that have been authorised or had significant change in control since 1 August 2013 and with a lending stock smaller than £50 million at end-2015 are able to join the FLS and will generate borrowing allowances from positive net lending in

(1) See www.bankofengland.co.uk/publications/Documents/other/markets/apf/2016/q116.pdf.

(2) See www.bankofengland.co.uk/markets/Pages/apf/notices.aspx.

(3) See www.bankofengland.co.uk/publications/Pages/inflationreport/2015/nov.aspx.

(4) See www.bankofengland.co.uk/publications/Pages/speeches/2015/830.aspx.

2016 and 2017. Incentives for new participants remain skewed towards lending to small and medium enterprises.

Finally, recognising that Islamic banks are currently unable to use the Bank's existing liquidity facilities, the Bank announced in October 2014 that it would assess the feasibility of establishing a Shari'ah compliant SMF facility. Work on this has progressed during 2015–16 with the Bank publishing a consultation paper in February 2016 (see box below).

Establishing Shari'ah compliant central bank liquidity facilities

In the second half of 2015, the Bank began assessing the feasibility of establishing Shari'ah compliant central bank liquidity facilities. This would further increase the flexibility with which the Bank can provide liquidity insurance. There are significant challenges inherent in this work, since some of the fundamental features of the SMF would, at present, not be Shari'ah compliant. For instance, the SMF is the mechanism by which the Bank sets interest rates, and interest-based facilities are not deemed Shari'ah compliant.

On 12 February 2016, the Bank published a consultation paper which outlined the potential models for providing Shari'ah compliant facilities to UK Islamic banks.⁽¹⁾ The Bank has sought public feedback, which will shape future work on establishing any new facility. The closing date for responses was on 29 April 2016, and the Bank is currently considering the feedback received.

In addition, as part of the Bank's broader engagement on Islamic finance issues, the Bank became an associate member of the Islamic Financial Services Board (IFSB) in December 2015.

(1) See www.bankofengland.co.uk/markets/Pages/sterlingoperations/shariah-compliant-facilities.aspx.

V Risk management

When the Bank lends in its operations, it does so against collateral of sufficient quality and quantity to protect itself from counterparty credit risk. Due diligence is carried out on new applicants to the SMF alongside regular reviews of all existing participants. The Bank also encourages SMF participants to maintain sufficient amounts of 'pre-positioned' collateral at all times. Pre-positioned collateral can be used for borrowing on the same day allowing funding requests to be executed quickly and smoothly should the need arise. This reduces operational and financial risk and improves the efficiency with which the Bank is able to provide liquidity insurance.

The Bank sets the criteria for eligible collateral and has three collateral categories (Level A, B and C).⁽¹⁾ These categories determine the operations in which the assets can be used and the price of drawing in those operations. Assets are designated based on market liquidity, with less liquid securities and portfolios of loans designated as Level C and the most liquid securities designated as Level A.

All collateral has a 'haircut' applied. This is a discount to the value of assets to protect the Bank against loss should a counterparty fail to repay. Haircuts on securities assets typically depend on their liquidity, historical price volatility and underlying credit risk. Haircuts start at 0.5% for government securities and 12% for retail mortgage-backed securities (RMBS) and covered bonds, and vary depending on underlying risk characteristics. All haircuts are calculated to account for potential extremely stressful conditions, thereby reducing the risk of procyclicality throughout the economic cycle. Pools of raw loan collateral are also eligible for counterparties to deliver in return for funding. These can be residential mortgage assets, commercial or corporate loan assets. These loan pools are subject to a more granular haircut methodology. The outcomes of a recent review of the methodology used to calculate haircuts on residential loans is set out in the box overleaf.

Both the level of pre-positioning and the number of counterparties with collateral pre-positioned at the Bank have increased during 2015–16, a continuation of the trend seen in previous years. As at end-February 2016, SMF counterparties had over 240 loan portfolios pre-positioned with an aggregate nominal value of £410 billion. After applying the Bank's valuation, haircuts and accounting for current drawings, the total drawable value of all collateral was around £288 billion.

The Bank in principle accepts as eligible collateral any asset that it judges it can effectively and efficiently risk manage, and so the Bank has actively sought to extend the range of eligible collateral as well as the range of lenders with access over time. The Bank has for some time accepted asset finance, personal loans, auto loans, corporate loans, SME loans and revolving credit facilities. This enables a broader range of counterparties to have access to SMF facilities. Residential mortgages continue to make up the bulk of loans pre-positioned, reflecting their prominence on UK banks' and building societies' balance sheets (**Chart 7**). The Bank will continue to review the breadth of collateral eligible for use in its facilities. Most notably, work is underway to ensure that there are no technical obstacles to its ability to accept equities as collateral, should the need arise. Work on this will continue throughout 2016.

(1) See www.bankofengland.co.uk/markets/Pages/money/eligiblecollateral.aspx.

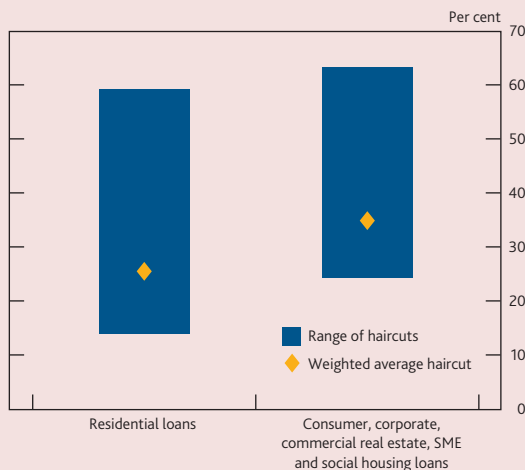
Review of residential loan haircut methodology

The Bank started accepting pools of loans as collateral in 2011 and since then the portfolio of residential loan collateral has built to around £380 billion (in nominal terms). In response to the growing importance of loan collateral, the Bank created a Loans Data System, which was introduced in 2015. This allows for more efficient management of the large set of loan-level data, which have been brought together into a single system with improved tools for modelling and analysis. In turn, this has supported the implementation of a new haircut methodology.

The new methodology for determining improved haircuts has been in development for the past couple of years, drawing on expertise from around the Bank. This methodology builds on the previous approach but with improved coverage of risk factors, including additional inputs and more granularity in the calculations. The implementation of this methodology resulted in the reduction of haircuts in aggregate: the weighted average haircut for

residential loan pools fell from 36% to 28% (Chart A). The Bank is committed to reviewing its haircuts and methodologies on an ongoing basis.

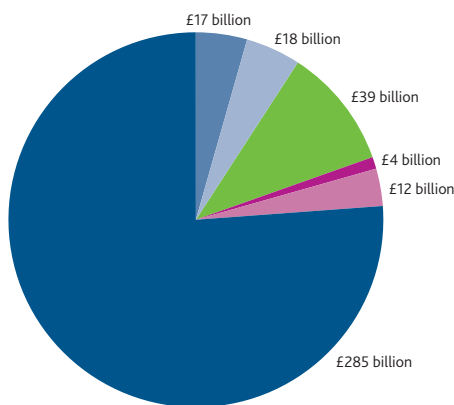
Chart A Haircuts applied to loan portfolios delivered to the Bank^(a)



Source: Bank of England.
(a) As at 29 February 2016.

Chart 7 Total collateral by asset class^(a)

■ Level A (10%)
■ Level B — sovereign bonds (1%)
■ Level B — non-sovereign bonds (3%)
■ Level C — residential loans (76%)
■ Level C — securities (5%)
■ Level C — other loans (5%)



Source: Bank of England.
(a) As at 29 February 2016. Level A comprises highly liquid, high-quality sovereign debt; Level B comprises other high-quality sovereign bonds, supranational bonds, covered bonds and liquid securitisations and corporate bonds; and Level C comprises own-named securities, portfolios of loans and less liquid securitisations and corporate bonds.

The Bank also continually assesses the eligibility of new market issuances of securities. Currently around 1,300 securities are eligible in addition to the securities classed as Level A. The Bank continues to work with counterparties to meet minimum transparency requirements and improve the available data quality for marketable securities (such as RMBS). This ensures that the Bank, as well as other market participants, has sufficient information to appropriately risk manage these assets.

During 2015–16, the Bank also implemented a new financial risk management framework that delivers independent assessments and challenge on issues relating to risk in the SMF (see the box overleaf). Developments in the SMF outlined in this Report have benefitted from the new risk management arrangements.

VI Governance

The SMF is governed through Court oversight of the SMF Annual Report, regular consultation with key stakeholders and engagement with the MPC, FPC and PRA Board.

In particular, frameworks for SMF engagement with both the MPC and the FPC are set out in concordats first published in 2013.⁽¹⁾ A key aspect of these frameworks is the annual review process, which has culminated in this Report, and in which the MPC, FPC and the PRA Board have been engaged.

As in previous years, as part of the 2015–16 annual review process, the Bank also sought views on the functioning of the SMF from large and small SMF counterparties. There was broad-based confidence that the SMF facilities continued to provide adequate liquidity insurance, when needed.

Through the Annual Report process, and in line with its responsibilities,⁽²⁾ the Bank’s Court has reviewed the

(1) The MPC Concordat is available at www.bankofengland.co.uk/about/Documents/legislation/mpccconcordat.pdf. The FPC Concordat is available at www.bankofengland.co.uk/about/Documents/legislation/fpccconcordat.pdf.
(2) See www.bankofengland.co.uk/about/Documents/matters122014.pdf.

The Bank's financial risk governance arrangements

During 2015 — following a review of its financial risk management arrangements — the Bank implemented changes to expand its financial risk management framework. As part of the changes, risk management responsibilities have been oriented towards the 'three lines of defence' governance model, whereby (i) the 'first line of defence' owns and manages risk, and implements controls; (ii) the 'second line of defence' oversees, assesses and challenges risks, and owns the risk management framework; and (iii) the 'third line of defence' provides independent assurance that the risk management framework is robust and internal controls are effective (internal audit):

- The **Financial Risk Management Division (FRMD)** — a long-established function — sits within the Bank's Markets Directorate and represents the first line of defence for financial risk. It is responsible for the day-to-day risk

management of the Bank's market operations, for carrying out credit and collateral assessments, and managing risk in the design of new facilities and operations.

- The **Financial Risk and Resilience Division (FRRD)** — a newly created function — sits within the Bank's Banking, Payments and Financial Resilience area and represents the second line of defence for financial risk. It is responsible for providing independent challenge of risk implications from policy proposals, and of risk assessments or tools developed by the first line. It is also responsible for the forward-looking assessment of financial risks to the Bank's balance sheet across all its operations.

Representatives from both areas are members of all of the Bank's financial risk committees. This allows the Bank to manage its financial risks effectively and to make well-informed decisions through ongoing support and challenge across its risk functions.

performance of the SMF over the past year, and considered objectives for the coming year. Court endorses the publication of this Report.

The Bank welcomes ongoing feedback from interested parties on any aspect of this Report or the SMF. Comments can be sent to:

Head of Sterling Markets Division
Bank of England
Threadneedle Street
London, EC2R 8AH

or by email to: SMFfeedback@bankofengland.co.uk.

Annex

Table A.1 Results of SMF operations, FLS drawings and reserves balances

£ millions	2015 Q1		2015 Q2		2015 Q3			2015 Q4			2016 Q1		Total stock outstanding Feb. 2016
	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	
SMF													
OSF	0	0	0	0	0	0	0	0	0	0	0	0	0
ILTR	2,485	3,520	4,470	1,637	2,315	2,135	1,195	2,290	3,920	3,600	3,121	1,396	15,522
Level A	2,245	3,245	2,470	1,207	275	1,340	745	2,170	3,365	3,550	2,356	1,159	13,345
Level B	5	0	0	0	40	0	10	0	0	10	0	10	30
Level C	235	275	2,000	430	2,000	795	440	120	555	40	765	227	2,147
CTRF ^(a)	0	0	0	0	0	0	0	0	0	0	0	0	0
FLS^(b)	3,073			5,059			2,446			6,348			58,022^(c)
Reserves balances^(d)	304,794	310,587	316,445	314,827	316,602	315,614	298,818	306,574	311,648	307,991	312,637	315,184	313,519^(e)

(a) The CTRF was not activated during this period.

(b) FLS extension, net drawdowns for each quarter (drawdowns less repayments).

(c) Aggregate outstanding FLS drawings as at 31 March 2016.

(d) Monthly reserves balances are averages for maintenance periods (the period between MPC meetings).

(e) Aggregate reserves as at 29 February 2016.