



# **The Framework for the Bank of England's Operations in the Sterling Money Markets**

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# THE FRAMEWORK FOR THE BANK OF ENGLAND'S OPERATIONS IN THE STERLING MONEY MARKETS

This paper (the 'Red Book') describes the Bank of England's framework for its operations in the sterling money markets. It can also be found on the Bank's website at [www.bankofengland.co.uk/markets/money](http://www.bankofengland.co.uk/markets/money), where it will be updated periodically.

Full and definitive details of the Bank's framework are contained in the Bank's Documentation, which sets out the legal terms and conditions for the operations and the Bank's full operating procedures. The Documentation can be found at [www.bankofengland.co.uk/markets/money/documentation](http://www.bankofengland.co.uk/markets/money/documentation).

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# I Aims and objectives

1 The Bank of England's framework for its operations in the sterling money markets is designed to implement the interest rate decisions of the Monetary Policy Committee (MPC)<sup>(1)</sup> while meeting the liquidity needs, and so contributing to the stability of, the banking system as a whole.

2 The Bank has four specific objectives:

- **Objective 1:** Overnight market interest rates to be in line with the official Bank Rate, so that there is a flat money market yield curve, consistent with the official Bank Rate, out to the next MPC decision date, with very limited day-to-day or intraday volatility in market interest rates at maturities out to that horizon.
- **Objective 2:** An efficient, safe and flexible framework for banking system liquidity management — both in competitive money markets and, where appropriate, using central bank money — in routine and stressed, or otherwise extraordinary, conditions.
- **Objective 3:** A simple, straightforward and transparent operational framework.
- **Objective 4:** Competitive and fair sterling money markets.

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(1) For the purposes of the Red Book, the rate decided by the MPC is called the official Bank Rate.

## II Summary of the framework

3 The framework has three main elements:

- **Reserves-averaging scheme.** UK banks and building societies that are members of the scheme undertake to hold target balances (reserves) at the Bank on average over maintenance periods running from one MPC decision date until the next. If a member's average balance is within a range around their target, the balance is remunerated at the official Bank Rate.
- **Standing facilities.** Standing deposit and (collateralised) lending facilities are available to eligible UK banks and building societies. They may be used on demand. In normal circumstances they carry a penalty, relative to the official Bank Rate, of +/- 25 basis points on the final day of the monthly reserves maintenance period, and of +/- 100 basis points on all other days.
- **OMOs.** Open market operations (OMOs) are used to provide to the banking system the amount of central bank money needed to enable reserves scheme members, in aggregate, to achieve their reserves targets. OMOs comprise short-term repos at the official Bank Rate, long-term repos at market rates determined in variable-rate tenders, and outright purchases of high-quality bonds.

### III Delivery of the Bank's objectives

**Objective 1: Overnight market interest rates to be in line with the official Bank Rate, so that there is a flat money market yield curve, consistent with the official Bank Rate, out to the next Monetary Policy Committee (MPC) decision date, with very limited day-to-day or intraday volatility in market interest rates at maturities out to that horizon.**

4 The Bank's primary objective is to ensure that short-term sterling market interest rates are consistent with the official Bank Rate. The Bank is able to implement monetary policy because it is the sole issuer of sterling central bank money. It can therefore establish itself as the rate-setter by being the marginal supplier or taker of funds at its chosen rate(s).

5 Central bank money in the UK economy takes two forms: banknotes and banks' balances with the Bank of England (reserves). As a risk-free asset, reserves are used by banks for settlement of interbank payments and liquidity management. The Bank is seeking to control market interest rates and not the quantity of central or commercial bank money in the economy. Thus it supplies banknotes on demand, and it allows banks and building societies that are members of the reserves scheme to vary their reserves balances from day to day and their reserves targets from month to month.

6 On the final day of the monthly maintenance period, the Bank's framework is designed to ensure that market rates are close to the official Bank Rate, primarily using a narrow standing facility 'corridor'. On earlier days in the maintenance period, reserves averaging ensures by arbitrage that market rates do not diverge materially from those expected on the final day.

#### *Rate setting on the final day of the maintenance period*

7 The Bank undertakes a routine fine-tuning, overnight open market operation (OMO) on the final day of the maintenance period in order to be as sure as possible that reserves banks collectively can hold reserves close to their aggregate target, with balanced risks to the upside and downside. The standing facility corridor is narrower on the final day than on other days of the maintenance period: +/-25 basis

points around the official Bank Rate. Because the banking system as a whole should be close to its aggregate reserves target, the excess balances of 'long' banks by definition offset the deficit balances of 'short' banks. In order to achieve their reserves targets, banks face a choice between trading in the market and using the standing facilities. The relative cost of using one or other of the standing facilities depends on the level of market rates. For example, if market rates are below the official Bank Rate, banks have an incentive to borrow in the market, lowering the probability of having to use the relatively more expensive standing lending facility. That tends to increase market rates towards the official Bank Rate. Conversely, if market rates are above the official Bank Rate, banks have an incentive to lend into the market, lowering the probability of needing to use the relatively more expensive standing deposit facility. That tends to reduce market rates towards the official Bank Rate. In this way, the standing facilities help to keep market rates towards the centre of the +/- 25 basis point corridor and close to the official Bank Rate.

8 The reserves scheme is also designed to assist in keeping market rates consistent with the official Bank Rate on the final day of the maintenance period. Reserves scheme banks can choose between transacting in the market and varying their reserves balance with the Bank within the range in which the Bank will remunerate that balance at the official Bank Rate. For example, if market rates are higher than the official Bank Rate, banks have an incentive to run down their reserves and lend in the market. Whereas, if market rates are lower, they have an incentive to build up their reserves by borrowing in the market. This arbitrage mechanism also encourages market rates to stay close to the official Bank Rate. Its effectiveness is affected by the width of the range and by the willingness of banks to take reserves close to the edge of their ranges given that unexpected late payment flows could leave them needing to use a standing facility at the end of the day.

#### *Rate determination on earlier days of the maintenance period*

9 On earlier days in the maintenance period, arbitrage works differently, through the averaging

mechanism giving reserves banks a choice between holding reserves today and holding reserves later in the maintenance period. How they exercise their choice should depend on the prevailing market rates compared to those that they expect later in the maintenance period. For example, if overnight market interest rates are higher on a particular day than the level that a reserves bank expects to prevail over the remainder of the maintenance period, it can run down its reserves balance in order to lend in the market, expecting to be able to borrow more cheaply in the market in order to hold higher reserves balances on subsequent days.<sup>(2)</sup> By contrast, if market rates are lower, it can borrow in the market in order to build up its reserves balance. Provided the Bank is expected to maintain market interest rates in line with the official Bank Rate on the final day of the maintenance period, banks should always expect the rate prevailing over the remainder of the maintenance period to be close to the official Bank Rate. Averaging should therefore keep overnight market interest rates in line with the official Bank Rate throughout the maintenance period, ensuring a flat money market yield curve out to the next scheduled MPC meeting.

10 For averaging to work effectively, the potential flow of funds between reserves accounts with the Bank and the money market must be sizable enough to be able to smooth market interest rates. That depends on three conditions being met. First, the level of aggregate reserves must be sufficiently large. If aggregate reserves were too low, banks might be reluctant to run down reserves in response to high market interest rates because of a concern that they might need to use the standing lending facility in order to cover an unexpected payment outflow. The Bank remunerates reserves at the official Bank Rate in part to encourage a broad range of banks and building societies to choose significant reserves targets. Remuneration at the official Bank Rate also means that the Bank's operational framework is broadly revenue-neutral for the Bank *vis-à-vis* the banking sector as the same rate is paid on reserves and charged on short-term OMO repos.<sup>(3)</sup> Second, reserves banks must be willing to vary their reserves balances actively from day to day in response to changing market interest rates. The Bank encourages

reserves banks not to operate their reserves account as a 'savings account'. Third, a reasonably broad range of banks and building societies must participate in the reserves scheme.

11 The reserves range on the final day of the maintenance period and averaging on earlier days should tend to dampen any effect on market rates of both imbalances in the distribution of reserves around the banking system and any under or over-supply of aggregate reserves by the Bank. In the first case, if one reserves bank, whether deliberately or inadvertently, builds up a large long or short position, other banks are able to vary their reserves in the opposite direction rather than trade with that bank, which should limit any impact on market rates. In the second case, day-to-day fluctuations in the supply of aggregate reserves balances as a result of changes in other elements of the Bank's balance sheet, such as banknotes in circulation, can be offset through the averaging mechanism. The reserves range, meanwhile, is designed to be wide enough to prevent any impact on market rates from errors in the quantity of reserves supplied by the Bank over the maintenance period as a whole.

12 The role of OMOs in the operational framework is to provide, in an efficient and transparent way, the necessary central bank money to the banking system to meet demand (principally targeted reserves and banknotes), and thus to avoid forcing reserves scheme banks into the standing facilities with a consequent potential impact on market interest rates. As far as possible, the Bank's aim over the course of a maintenance period is to provide through its OMOs the exact amount of reserves needed by the system as a whole. That makes it possible for all individual reserves scheme banks to hold their target balances provided the market works effectively to distribute the reserves. In particular, the routine fine-tuning OMO on the final day of the maintenance period is used to offset any errors in the Bank's liquidity forecasts earlier in the maintenance period. Any over or under-supply over the maintenance period as a whole should therefore reflect only the Bank's forecast error for the period after the fine-tuning OMO on that final day.

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(2) If a reserves scheme member needs to hold £X reserves each day on average to achieve its reserves target and chooses to hold less than £X today, it will need to hold more than £X on one or more days later in the maintenance period.

(3) There is a very small difference due to compounding because interest on reserves is paid monthly whereas interest on short-term OMOs is charged weekly.

13 The Bank's objective is for overnight market interest rates to be in line with the official Bank Rate so that there is a flat money market yield curve, consistent with the official Bank Rate, out to the next MPC decision date, with very limited volatility in market interest rates out to that horizon. But the Bank is not seeking to control credit risk premia or the cost of collateral in the market. Unsecured overnight market interest rates may, therefore, be somewhat higher than the official Bank Rate. Similarly, secured market rates may differ from the official Bank Rate, as they are based on bundles of collateral different from the population of securities eligible in the Bank's OMOs and standing lending facility.

**Objective 2: An efficient, safe and flexible framework for banking system liquidity management — both in competitive money markets and, where appropriate, using central bank money — in routine and stressed or otherwise extraordinary conditions.**

14 The Bank of England is the sole issuer of sterling central bank money, the final, risk-free settlement asset in the United Kingdom. This enables the Bank to implement monetary policy, and makes the framework for the Bank's monetary operations central to liquidity management in the banking system as a whole and by individual banks and building societies.

15 The Bank provides three main channels through which liquidity can pass between it and the banking system — variation in reserves balances, OMOs to provide financing to the market as a whole, and use of the standing facilities.<sup>(4)</sup> UK banks and building societies can build these arrangements into their sterling liquidity planning, both routine and emergency, alongside raising funds in the money markets or, where available, by drawing on committed lines. In the case of major operational or financial disruption to the wider market or its supporting infrastructure, the Bank can operate within its framework to meet demand for additional liquidity and to increase its intermediation of the interbank

flow of funds while maintaining market interest rates in line with the official Bank Rate.

16 All UK banks and building societies that are required to hold Cash Ratio Deposits at the Bank<sup>(5)</sup> are eligible to join the reserves-averaging scheme and to have access to the standing facilities. The Cash Ratio Deposit regime finances the Bank's monetary and financial stability functions. One of its rationales — set out by HM Treasury<sup>(6)</sup> — is that UK banks and building societies benefit from the Bank's provision of sterling liquidity services, which lies at the heart of its monetary and financial stability mission. The Bank's framework delivers this by giving such institutions right of access to remunerated reserves and standing facilities as liquidity management tools, as well as by providing liquidity to the system as a whole via OMOs.

17 Participation in the reserves-averaging scheme is voluntary other than for CHAPS<sup>(7)</sup> sterling and CREST<sup>(8)</sup> sterling settlement banks, which join the scheme automatically because their role in the payments system entails their having accounts, and so maintaining balances, with the Bank. The level of reserves targeted (up to the ceilings set by the Bank) is also a choice for individual scheme members, made monthly ahead of each reserves maintenance period.

18 Subject to meeting the monthly target balance and avoiding overnight overdrafts, reserves balances can be varied freely to meet day-to-day liquidity needs. For example, funds can be moved on and off reserves accounts up to the close of CHAPS in order to accommodate unexpected end-of-day payment inflows and outflows. In this way, reserves balances can be used as a liquidity buffer. Within the Bank's ceilings on reserves targets, reserves banks can also change their reserves target from month to month in response to, for example, variations in the size or uncertainty of their payments flows.

19 CHAPS and CREST sterling settlement banks can also draw on reserves balances during the day to bridge any gap between payments made and expected

(4) The Bank also provides sterling central bank money during the day, via intra-day reverse repos of eligible securities, with CHAPS sterling and CREST sterling settlement banks.

(5) The Cash Ratio Deposit Scheme is described in footnote 13.

(6) See [http://www.hm-treasury.gov.uk/media/9914A/crd\\_279.pdf#page=3](http://www.hm-treasury.gov.uk/media/9914A/crd_279.pdf#page=3) and [http://www.hm-treasury.gov.uk/newsroom\\_and\\_speeches/press/1998/press\\_54\\_98.cfm](http://www.hm-treasury.gov.uk/newsroom_and_speeches/press/1998/press_54_98.cfm).

(7) CHAPS (Clearing House Automated Payments System) is the sterling high-value payment system, providing members with Real Time Gross Settlement (RTGS) of transfers in central bank money across accounts at the Bank of England.

(8) CREST is the United Kingdom's securities settlement system, providing a Delivery versus Payment (DvP) settlement service for UK securities with associated sterling payments made in central bank money across RTGS accounts at the Bank of England.

receipts.<sup>(9)</sup> For this purpose, holding reserves is an alternative to borrowing from the Bank during the day against eligible collateral. Since reserves can be financed in the money markets as well as in the Bank's OMOs (against eligible collateral), that gives some added flexibility, which should help to encourage a wider range of banks with significant sterling payments flows to become settlement banks. The Bank believes that having a broad group of settlement banks makes the UK payment system more robust, and so supports financial stability by reducing the scope for large, unsecured exposures between banks during the day, especially in stressed conditions.

20 Individual institutions also need to have plans to manage liquidity in times of stress. Smaller banks can obtain liquidity 'insurance' from larger banks by paying for committed lines of credit. But larger banks cannot buy insurance from each other without incurring an unacceptable level of (contingent) counterparty credit risk. They have to self-insure, which they do in sterling by holding either balances on their reserves account at the Bank or high-quality assets that can be exchanged for central bank money in the Bank's OMOs or through the standing lending facility.<sup>(10)</sup> The Bank's framework is designed to provide flexible access to central bank money, including in unlimited size against eligible collateral at a penalty rate through the standing lending facility. Banks can therefore make their contingency liquidity plans in the knowledge of the terms on which the Bank's facilities are available. In the United Kingdom, the Financial Services Authority treats reserves balances with the Bank (which are the final settlement asset in sterling) and assets that are eligible collateral in the Bank's operations as high-quality liquid assets for the purpose of liquidity regulation (see Section V for details).

21 The Bank's framework is also designed to enable it to continue achieving its primary rate-setting objective while responding to any sudden or pronounced shifts in demand for central bank money. Such changes might occur in the face of major operational or financial disruptions to the sterling money markets or their supporting infrastructure, including:

- Operational breakdown of the high-value payment or securities settlement systems (CHAPS and CREST) so that they were unable to process payments and/or securities settlements.
- Operational problems affecting one or more major settlement banks so that they were unable to process payments.
- Major operational disruptions to the wider market, for example as a result of terrorist attacks or extreme weather.
- Concerns about banks that were sufficient to interrupt the flow of funds in the sterling money markets.

22 In such circumstances, demand for central bank money might rise if the money markets were no longer working effectively to distribute reserves around the banking system. There might also potentially be large imbalances between long and short banks. In the extreme, this could lead to more widespread concerns about liquidity, disrupting the payments system and affecting financial markets and the wider economy. In order to maintain short-term sterling market interest rates in line with the official Bank Rate and to ensure effective liquidity distribution, the Bank could, if necessary, operate within its framework to meet any additional demand for central bank money or to increase the scale of its intermediation between banks. Broadly, the framework gives the Bank two instruments for doing so. First, if money markets and payment systems were not operating, the Bank could narrow the interest rate 'corridor' between its overnight standing facilities, keeping it centred on the official Bank Rate. If necessary, the Bank could offer both standing facilities at the official Bank Rate; ie a zero-width corridor. Second, if money markets and payment systems were disrupted but still functioning, the Bank could increase its lending via OMOs beyond that previously needed for banks to achieve their aggregate reserves targets, while keeping control of market interest rates by paying the official Bank Rate on these larger balances, either by increasing reserves targets *pro rata* or by widening the range around existing targets.

(9) CREST settlement banks are able to transfer liquidity from their RTGS accounts into CREST via Automatic Liquidity Transfers and intraday Ordinary Account Transfers.

(10) Where they have significant activities in currencies other than sterling, they may also need to make plans to raise liquidity from the relevant overseas central banks, taking into account the relevant operational frameworks.

**Objective 3: A simple, straightforward, transparent framework.**

23 The Bank's intention is that the architecture of its framework should be central to achieving its policy objectives. The framework should operate in practice as it is understood to in theory.

24 As far as possible, the Bank wants its objectives to be delivered through the design of the framework, without discretionary operations in normal market conditions. The choices available to the Bank within the framework in response to stressed or otherwise extraordinary market conditions are similarly set out transparently.

25 The framework is designed to be straightforward to operate for the Bank and for participants in the three facilities — reserves, standing facilities and OMOs. Reserves averaging makes the end-of-day balancing process simple for banks, with the constraint to hit a target balance biting only towards the end of the monthly maintenance period.

26 Reserves averaging also means that the Bank does not need to conduct frequent OMOs because the level of aggregate reserves actually held by the banking system, rather than the amount of central bank money provided through OMOs, can vary from day to day in order to offset other sterling flows between the Bank and the banking system.

27 The framework is designed to work in a predictable way, according to published procedures. If the objectives were not being achieved, the Bank would seek to understand why and to make any necessary changes to the framework in a transparent way, consulting market participants where appropriate.

**Objective 4: Competitive and fair sterling money markets.**

28 A wide range of eligible institutions have access to the Bank's facilities, which is both fair and helps to promote stability.

29 Achieving the Bank's primary objective of keeping short-term market rates stable, in line with the official Bank Rate avoids incentives to try to influence the level of sterling overnight rates. Stable

short-term interest rates should also mean that no one is discouraged from participating in the sterling money markets because they believe other market participants have more expertise or knowledge.

30 At longer maturities, market participants should be confident that the level of future overnight rates depends only on the future decisions of the MPC, together with any spreads between different instruments related to, for example, credit risk or the value of collateral. The liquidity of sterling cash and derivative instruments in the money markets and at longer maturities should benefit from stable short-term financing rates for dealers and other users.

## IV Central bank money and management of the Bank's balance sheet

31 The Bank is the sole issuer of sterling central bank money: banknotes and balances on the reserves accounts of banks and building societies. The quantity of central bank money, and equivalently the size and composition of the Bank's sterling liabilities, is largely demand-determined.

32 The Bank manages its assets according to the expected maturity of, and interest rates (if any) payable on, its liabilities. Because the Bank's Monetary Policy Committee decides the official Bank Rate, it is important that the Bank provides sterling financing in a transparent and non-discretionary way. It does so, within its overall framework for the implementation of monetary policy, predominantly through scheduled open market operations (OMOs).

33 The assets and liabilities of the Bank are allocated to one or other of its two balance sheets: Issue and Banking.<sup>(11)</sup> Reserves accounts are held on Banking Department. The Bank ensures that its stock of short-term repo lending on Banking Department is always at least as large as aggregate reserves targets, so that it can adjust the size of its weekly OMOs to offset any change in banks' aggregate reserves targets or any other sterling flows (so-called autonomous factors)<sup>(12)</sup> between the banking system and the Banking Department's balance sheet. Matching aggregate reserves with short-term repo lending also avoids interest rate exposure on Banking Department as the Bank pays the official Bank Rate on targeted reserves and earns the official Bank Rate on its short-term repo lending. The other sterling liabilities of Banking Department include non-interest bearing Cash Ratio Deposits and the Bank's capital. The Bank maintains a portfolio of sterling bonds, on a 'buy and hold' basis, linked to the size of these liabilities.

34 Banknotes are a liability of the Bank's Issue Department. The value of banknotes in circulation

fluctuates throughout the year: for example, demand for banknotes tends to rise around Christmas. Short-term repo lending is used to accommodate such temporary, seasonal increases in the banknotes in circulation. In addition, some short-term repo lending is held on Issue Department as a precautionary buffer against any dip in banknote demand, in which case the Bank's short-term repo lending could also be reduced. The underlying growth of the banknote issue has, however, been steady for many years, and so most of the necessary financing for banknotes can be provided via the purchase of longer-maturity assets. (Purchasing a five-year bond, for example, provides central bank money to the banking system for five years; injected on the day of purchase and withdrawn on the day of maturity.)

35 In part these longer-maturity assets acquired by the Bank in the implementation of monetary policy comprise long-term repo lending at market rates determined in variable rate tenders. These repos have maturities of 3, 6, 9 and 12 months, and are for eligible collateral.

36 The Bank also plans to hold on Issue Department a portfolio of conventional gilts and high-quality foreign-currency bonds (with the cash flows swapped into fixed-rate sterling in order to create synthetic sterling bonds). Bonds will be purchased out to a maximum disclosed residual maturity (initially of 20 years), and the portfolio will be designed to match broadly the maturity distribution of UK government sterling fixed-rate debt in issuance in that part of the curve. In this way, the maturity distribution should ensure that sufficient bonds are maturing every year to enable the Bank to adjust the size of the portfolio if demand for banknotes should fall in the future: for example, following innovations in payments technology. The portfolio will be 'buy and hold' in normal circumstances.

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(11) The Bank Charter Act 1844 requires the Bank of England to separate the note issue function from its other activities. Accordingly, the Bank has two balance sheets: Issue Department and Banking Department. Issue Department comprises the banknote issue and the assets backing it. Banking Department comprises all the other assets and liabilities of the Bank of England. The Issue and Banking Department balance sheets can be found in the Bank of England's *Annual Report* and in the weekly *Bank Return* (both available at [www.bankofengland.co.uk](http://www.bankofengland.co.uk)).

(12) For example, any short-term (out to the horizon of the next scheduled MPC decision date) or call deposits held by the Bank's customers, principally overseas central banks.

37. The Bank's objective in purchasing bonds is to provide longer-term financing for the banking system to ensure, as a necessary precondition for implementing monetary policy effectively, that it provides the right amount of central bank money for the banking system in aggregate to meet the reserves target. In so doing, the Bank will seek to avoid actions or arrangements that would:

- undermine the efficient functioning of the gilt market; or
- conflict with the Government's debt management policy and the operational requirements of the UK Debt Management Office in implementing that policy.

38. Consistent with the Bank's other operations to implement monetary policy, bonds will be purchased in regular Open Market Operations. Purchases will be conducted transparently, with the Bank's OMO counterparties. The operational framework for the purchases will be set out publicly as an update to this publication, after further consultation with the DMO and discussion with OMO counterparties.

39. Typically during the day, the Bank's balance sheet is larger than at close of business because of the routine provision of liquidity to settlement banks against the same eligible collateral taken in OMOs and the standing lending facility. This lending, together with reserves balances, provides the necessary 'oil' to smooth the working of the sterling payments system, ensuring that settlement banks are able to make payments in advance of expected receipts later in the day. Intraday repos are provided interest free provided they are repaid in full before the end of the day. Settlement banks can use the standing lending facility to borrow overnight from the Bank at a penalty rate. If intraday repos are not repaid in full, a much higher penalty rate of interest is charged on any (collateralised) overdraft. In this way, the provision of zero-interest intraday liquidity is made consistent with the framework for the implementation of monetary policy.

## V Detailed description of the framework

40 This section provides a full description of the Bank's framework, covering eligibility to participate in the Bank's facilities, the reserves scheme, open market operations, the standing facilities, and eligible collateral.

### Eligibility to participate in the Bank's facilities

41 There are eligibility criteria for each of the facilities — reserves scheme membership; access to the standing facilities; and being a counterparty in the open market operations.

#### *The Reserves Scheme*

42 Given their role in the payments system, CHAPS sterling and CREST sterling settlement banks are members of the reserves scheme automatically. They hold reserves on their Real-Time-Gross-Settlement (RTGS) accounts: Sterling Settlement and Sterling Ordinary Accounts respectively.

43 Access to remunerated reserves is also available to all other banks and building societies that are required under the Bank of England Act 1998 to place Cash Ratio Deposits (CRDs) at the Bank (such banks and building societies are 'eligible entities' for this purpose).<sup>(13)</sup>

44 Within any group,<sup>(14)</sup> only one such eligible entity may become a reserves scheme member. Groups are therefore required to nominate one eligible entity within a group to join the scheme and hold the group's reserves.

45 An eligible entity may access its reserves account through a branch located either in the United Kingdom or in any other EEA (European Economic Area) country.<sup>(15)</sup>

46 The Bank publishes a list of reserves scheme members.

#### *Standing facilities*

47 Given they enable participants in the reserves scheme to meet their reserves targets, the Bank requires reserves scheme members to have access to the standing overnight deposit and lending facilities.

48 All the other banks and building societies that are required to place CRDs at the Bank are also eligible to have access to the standing facilities.<sup>(16)(17)</sup> Provided that the Bank is satisfied that the legal documentation underpinning its operations is, and remains at all times, fully valid and robust in all relevant jurisdictions, the Bank believes that all such eligible banks and building societies should sign up to have access to them. That is because wide participation in the Bank's standing facilities makes the UK banking system more robust in stressed conditions.

49 Within any group, only one entity is permitted access to the standing facilities.

50 An eligible entity may access the standing facilities through a branch located either in the United Kingdom or in any other EEA country.<sup>(18)</sup>

51 The Bank publishes a list of banks and building societies that have signed up for access to its standing facilities.

#### *Open market operations*

52 The Bank accepts as counterparties in its open market operations (OMOs):

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(13) Under the Cash Ratio Deposit (CRD) scheme, certain institutions authorised to accept deposits under the Financial Services and Markets Act 2000 (banks and building societies) are obliged under Schedule 2 to the Bank of England Act 1998 to place non-interest bearing deposits (CRDs) with the Bank of England. Not all banks and building societies are required to place CRDs with the Bank: in particular, if an institution's average sterling eligible liabilities are below a minimum threshold (currently £500 million), no CRD is required. Sterling eligible liabilities broadly comprise sterling deposits (deducting deposits placed with other banks and building societies) and are intended to measure the size of a bank's sterling balance sheet after netting out interbank deposits. Further detail on the CRD scheme can be found at [http://www.hm-treasury.gov.uk/media/9914A/crd\\_279.pdf#page=3](http://www.hm-treasury.gov.uk/media/9914A/crd_279.pdf#page=3) and [http://www.hm-treasury.gov.uk/newsroom\\_and\\_speeches/press/1998/press\\_54\\_98.cfm](http://www.hm-treasury.gov.uk/newsroom_and_speeches/press/1998/press_54_98.cfm).

(14) For these purposes, a group is defined in s421 of the Financial Services and Markets Act 2000. In this context, a 'group' includes any company that is the holding company of the bank, a subsidiary of the bank, a fellow subsidiary of the bank and any other company that would be part of the bank's group.

(15) The physical location of the people and infrastructure need not be within the EEA provided that the legal entity is located in the United Kingdom or another EEA country.

(16) The Cash Ratio Deposit scheme is described in footnote 13.

(17) The Bank would exclude banks and building societies where an Event of Default (as defined in the Bank's legal Documentation) had occurred.

(18) See footnote 15.

- banks and building societies eligible to participate in the reserves scheme; and
- other banks, building societies and securities dealers (including passported firms) authorised under the Financial Services and Markets Act 2000 that are active intermediaries in the sterling markets,

subject to standards of prudence and risk.

53 Within any group, only one eligible entity may seek to become a counterparty in the Bank's OMOs. When not dealing with the primary entity within a group, the Bank reserves the right to require a guarantee from the primary entity using a standard *pro forma* drawn up by the Bank.<sup>(19)</sup> Within a group, different eligible entities may be OMO counterparties and reserves scheme members respectively.

54 The Bank does not impose minimum participation requirements for counterparties in its OMOs, except that counterparties that are not members of the reserves scheme and do not participate meaningfully over a reasonable period of time may be dropped as a counterparty.

*Requirements applying to all reserves scheme members, institutions with access to standing facilities, and OMO counterparties*

55 All participants in the Bank's facilities are required to meet the following criteria:

- They must have the operational capability to both participate in the relevant operations and settle transactions with the Bank efficiently. For OMO counterparties and reserves scheme members, that includes providing details of the business continuity arrangements for these operations. The Bank has a 'zero fails' policy for its official operations and settlement must be given the highest priority.
- They must act in a way that is consistent with the Bank's objective of competitive and fair sterling money markets. In particular,

participants should not seek to substitute themselves as a price setter or otherwise try to influence prices or conditions in the money markets, including related derivatives markets. Participation in the Bank's operations is confidential and participants should not discuss or coordinate with any other party over their participation in the Bank's official operations.

- They should contribute to the Bank's market intelligence work. This seeks to gather information relevant not only to the Bank's operations in the sterling money markets, but also, importantly, in support of its wider monetary and financial stability work. For reserves scheme members and OMO counterparties, there is frequent contact. In addition, for all participants, there is contact with senior management at least annually to discuss the operations, relevant business developments and market issues more generally.
- They need to satisfy the Bank that the legal documentation underpinning its operations with them is, and remains at all times, fully valid and robust in all relevant jurisdictions.
- None of the Events of Default (as defined in the Bank's legal Documentation) have occurred.

56 The relationships between each of the Bank's facilities are illustrated in Diagram 1 and Annex 1.

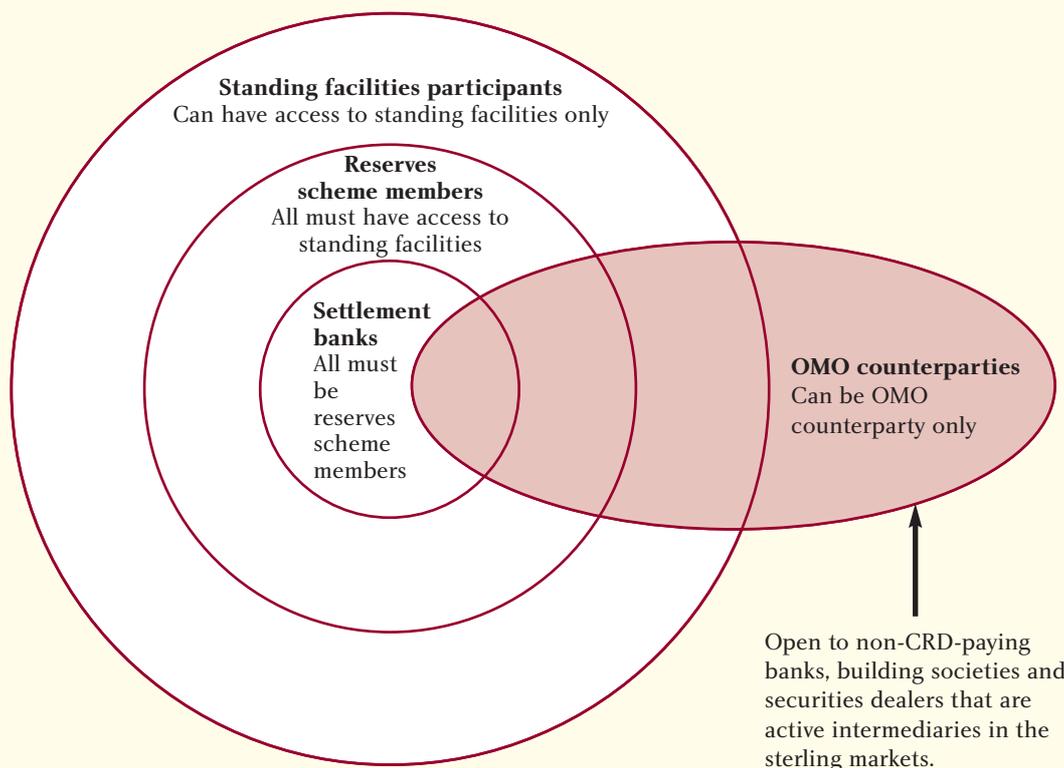
*Legal documentation and applications process*

57 The instruments and facilities comprising the Banks' operational framework (reserves scheme, standing facilities and OMOs) are governed by a single set of legal documentation, published on the Bank of England website and updated from time to time.<sup>(20)</sup> The documentation includes the eligibility criteria for participants, the Terms and Conditions for the Bank's facilities, and the Bank's Operating Procedures.

(19) The *pro forma* guarantee is available on the Bank's website at [www.bankofengland.co.uk/markets/money/documentation](http://www.bankofengland.co.uk/markets/money/documentation).

(20) The Documentation is available at [www.bankofengland.co.uk/markets/money/documentation](http://www.bankofengland.co.uk/markets/money/documentation).

**Diagram 1**  
**Access to the Bank's facilities**



58 Institutions meeting the relevant eligibility criteria may apply to join the reserves scheme (which requires signing up for standing facilities) and/or to become an OMO counterparty and/or to sign up for standing facilities. Application forms are available from: The Head of Sterling Markets Division, Bank of England, Threadneedle Street, London EC2R 8AH.

59 Applicants for the reserves scheme will be asked to complete a period of familiarisation with the operation of a reserves account over a number of simulated maintenance periods using a test system and to demonstrate their ability to move funds on and off their 'live' reserves account. Applicants to become an OMO counterparty or for standing facility access will be asked to complete one or more practice transactions, possibly using different collateral types, to establish their operational capability. Applicants incorporated outside the United Kingdom will be asked for a legal opinion on their capacity to enter into transactions with the Bank. Once the Bank has approved an application, it will send the applicant an

Admissions letter. By counter-signing the letter and returning it to the Bank, the applicant will agree to the Terms and Conditions in the Documentation. The Bank will then send a Commencement letter stating when the applicant can begin to participate.

### The reserves scheme

60 Each maintenance period runs between the monthly scheduled MPC meetings. Reserves scheme members undertake to maintain a level of reserves within a +/- 1% range around a target that they choose, averaging across reserves balances at the end of each calendar day over the maintenance period as a whole.

61 Reserves are remunerated at the official Bank Rate. Interest penalties are applied if, at the end of the maintenance period, scheme members fail to achieve the reserves target by holding an average level of reserves higher or lower than the specified range. Settlement banks also pay a penalty if their reserves account is overdrawn at the end of any day.<sup>(21)</sup>

(21) It is impossible for non-settlement banks' reserves accounts to be overdrawn. For settlement banks, any such overdrafts arise only where a settlement bank is unable to repay intraday credit from the Bank and are collateralised under repo terms using eligible collateral.

### *Treatment of reserves under Financial Services Authority (FSA) regimes*

62 Under the FSA's current rules, reserves held at the Bank of England attract a zero risk weighting for capital adequacy purposes. The FSA expects that once it has implemented the proposed recasting of the Banking Consolidation Directive in the United Kingdom, reserves will continue to attract a zero risk weighting under the Standardised Approach to credit risk.

63 Reserves are included within the category of assets allowable as high-quality liquidity under the FSA's Sterling Stock Liquidity Regime,<sup>(22)</sup> and also within the list of assets acceptable as eight-day liquidity in its liquidity requirements for building societies.<sup>(23)</sup> Reserves held with the Bank are classified as sight deposits under the FSA's mismatch regime.<sup>(24)</sup>

### *The maintenance period*

64 Reserves maintenance periods run from one scheduled MPC decision date until the day before the next.

65 The Bank publishes a schedule of maintenance periods and dates of routine OMOs for each calendar year around the same time as the announcement of the schedule of MPC meetings (usually in September of the preceding year). When it is known in advance of that publication that the MPC will be making its decision on a day of the week other than Thursday, that is reflected in the operational timetable so that the relevant maintenance period nevertheless ends on the day before the Committee's decision is announced, and the next maintenance period starts on the day of the announcement.<sup>(25)</sup>

### *Reserves targets*

66 Scheme members are free to choose their target level of reserves ahead of each maintenance period subject to the following constraints:

- a minimum threshold for reserves targets of £nil;
- reserves targets set in multiples of £10 million; and
- ceilings for reserves targets (as described below).

67 Scheme members are subject to interest penalties if, at the end of a maintenance period, their average reserves balance over the period falls outside a range around their point targets. The Bank has currently set this range at +/- 1%.<sup>(26)</sup> This should be sufficiently large to absorb likely errors in the Bank's liquidity forecast on the final day of the maintenance period. The Bank keeps the size of the range under review.

68 Given the possibility of high demand for reserves,<sup>(27)</sup> the Bank sets ceilings on individual institutions' reserves targets with the following objectives:

- ensuring that there are sufficient aggregate reserves for the Bank's objectives to be achieved;
- avoiding an excessive level of aggregate reserves, which might require a very large stock of refinancing via short-term OMOs, potentially putting pressure on collateral markets;
- ensuring that a broad range of eligible banks and building societies are able to hold a meaningful level of reserves if they so choose, thereby encouraging a wide distribution of reserves across the banking system; and
- giving settlement banks the opportunity to use reserves as a source of intra-day liquidity in the Bank's RTGS system supporting the CHAPS

(22) See Interim Prudential Sourcebook for Banks (Amendment no 8) Instrument 2005, available at [http://fsahandbook.info/FSA/handbook/LI/2005/2005\\_51.pdf](http://fsahandbook.info/FSA/handbook/LI/2005/2005_51.pdf). The Sterling Stock Liquidity Regime applies to large UK retail banks.

(23) See Interim Prudential Sourcebook for Building Societies (Amendment no 10) Instrument 2005, available at [http://fsahandbook.info/FSA/handbook/LI/2005/2005\\_52.pdf](http://fsahandbook.info/FSA/handbook/LI/2005/2005_52.pdf).

(24) The FSA's mismatch regime applies to all UK authorised banks other than large UK retail banks.

(25) The timing and maturity of the Bank's short-term OMOs are adjusted accordingly.

(26) A percentage range of  $\pm 1\%$  around the reserves average targets declared by scheme members can allow them significant flexibility on the final day of the maintenance period. For example, if, on average, a bank had held its target balance on the first 27 days of a 28-day maintenance period, it would be able to hold reserves within a range of  $\pm 28\%$  around the target on the final day and still be within its target range for the maintenance period as a whole (subject to not being in overdraft on that final day).

(27) Reserves are remunerated at the official Bank Rate and the interest cost of obtaining them via the Bank's short-term OMOs is also the official Bank Rate. In consequence, there is no direct interest cost to holding reserves for the banking system in aggregate.

payment system and the CREST securities settlement system.

69 Balancing these considerations, the Bank has set reserves target ceilings for each scheme member as the higher of £1 billion and 2% of its sterling eligible liabilities as calculated for CRD purposes<sup>(28)</sup> (rounded up to the nearest £10 million). The Bank keeps these levels under review.

70 As described in paragraph 44 above, within any group, only one entity may become a reserves scheme member. But ceilings for bank or building society groups are calculated at a group level (ie based on the sum of the sterling eligible liabilities of all UK entities within the group).

71 Eligibility to access reserves and standing facilities and the calculation of reserves ceilings is assessed routinely twice each year around the same time as sterling eligible liabilities are recalculated for CRD purposes (currently, calculations are made in May and November for CRD amendments on 1 June and 1 December and are based on average eligible liabilities over the six months to April and October).<sup>(29)</sup> In the event of an unusually large shift in its sterling eligible liabilities, a bank or building society group can ask for its ceiling to be recalculated sooner. The Bank reserves the right to make such a recalculation without a request from the institution.

72 The Bank routinely requires scheme members to set their reserves target for the next maintenance period no later than two working days before the start of the next maintenance period. The aggregate reserves target for the banking system is announced by the Bank on the next working day, ie the working day immediately preceding the start of the maintenance period.

73 The Bank does not currently impose constraints on the size of changes in reserves targets that scheme members can make from one maintenance period to the next. But the Bank reserves the right to

introduce such a limit in the event of large fluctuations in aggregate target reserves.

### *Remuneration*

74 Target reserves are remunerated at the official Bank Rate. Since, as described above, maintenance periods run from one scheduled MPC decision date to the next, in normal circumstances a single official rate applies. Interest is credited to reserves accounts on the first business day after the end of the maintenance period (and so does not count towards meeting reserves targets in that maintenance period).

### *Penalties on missing the target*

75 Average reserves holdings are calculated as the average of the end-of-calendar-day balances on an institution's reserves account during the maintenance period.<sup>(30)</sup>

76 Reserves scheme members face interest penalties if they hold a balance outside (either above or below) the target range. Actual reserves balances are remunerated at the official Bank Rate but any excess reserves above the top of the range or shortfall of reserves below the bottom of the range are charged at the official Bank Rate and deducted from the interest paid. Settlement bank overdrafts on individual days during the maintenance period are charged at twice the official Bank Rate.<sup>(31)</sup>

77 Reserves scheme members should be able to avoid missing their reserves target by trading in the market and by using the Bank's standing facilities. As explained below, standing facilities are available all day, and for a period after the general close of the payments system to enable the transfer of funds to or from scheme members' reserves accounts. Thus, any excess reserves on the final day of the maintenance period may be deposited with the Bank at the official Bank Rate less 25 basis points via the standing deposit facility. Similarly, any shortfall in reserves on the final day of the maintenance period may be borrowed from the Bank at the official Bank Rate plus 25 basis points via the standing lending facility (subject to the provision of eligible collateral). In

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(28) A detailed definition of sterling eligible liabilities can be found in Annex A of [http://www.hm.treasury.gov.uk/media/9914A/crd\\_279.pdf#page=5](http://www.hm.treasury.gov.uk/media/9914A/crd_279.pdf#page=5).

(29) If, following such a recalculation, an institution's eligible liabilities fall below the threshold at which it is required to place CRDs, then the institution becomes ineligible to hold reserves, and access to the standing facilities is withdrawn, with effect from the start of the next maintenance period.

(30) Average reserves balances are calculated on the basis of calendar (rather than working) days to ensure consistency of remuneration between reserves holdings and transactions in the sterling money markets.

(31) Given that there is an interest rate penalty on overdrafts, settlement banks with overdrafts on any day are considered to have held a zero balance on that day for the purposes of calculating period-average reserves balances.

effect, using the standing facilities attracts a penalty of 25 basis points rather than the full official Bank Rate penalty charged on reserves 'misses'.

78 The Bank keeps scheme members' performance in meeting their targets under review and would wish to receive explanations from management in the event of persistent or unusually large shortfalls or excesses.

#### *Terms of access of scheme members to their reserves accounts*

79 The Bank provides an enquiry facility enabling all reserves account holders to:

- view, in real time, their current reserves balance;
- transfer funds to the Bank (for payments relating to standing facilities and OMO transactions) or to a single, designated account at a bank or building society;
- monitor their average balance during the maintenance period and the average balance they need to hold over the remainder of the period to meet their reserves target;<sup>(32)</sup> and
- enter their target reserves balance for the next maintenance period.

80 All reserves accounts are held in the RTGS processor, with information on scheme members' reserves accounts provided via the Enquiry Link Service. The Enquiry Link Service, which all reserves scheme members need to use, is provided over the SWIFT network. The Bank does not impose any charges for the Enquiry Link Service for reserves scheme members. Institutions do, however, need to take into account the relevant charges from SWIFT and network providers.<sup>(33)</sup> The same Enquiry Link Service is used by CHAPS and CREST settlement banks for managing their settlement accounts at the Bank.

81 As described above, eligible banks and building societies are able to join the reserves scheme without

becoming CHAPS or CREST sterling settlement banks. Such scheme members are able to:

- credit their reserves account by instructing their settlement bank to make a standard CHAPS payment to the Bank's 'RT' CHAPS membership for the credit of their reserves account;
- credit their reserves account, either by participating in OMOs (if they are an OMO counterparty and give the Bank instructions to pay funds to their reserves account); or by using the standing lending facility;
- debit their reserves account by using the Enquiry Link to instruct the Bank to transfer funds away to a single, predefined account at another bank/building society, typically a settlement account at their sterling settlement bank. The scheme member can then instruct its settlement bank to make payments from that account to other accounts as normal; and
- debit their reserves account by using the Enquiry Link to transfer funds to the Bank of England in order to settle maturing OMOs or to repay use of the standing lending facility; or to place funds in the standing deposit facility.

82 It is possible to make payments to and from reserves accounts at any time throughout the day until the CHAPS close (normally 16.20 under current arrangements), subject (where relevant) to any additional deadlines imposed by the scheme member's settlement bank.

#### *Ensuring an efficient distribution of reserves*

83 To ensure an efficient distribution of reserves across the banking system and to encourage effective liquidity management, the Bank expects scheme members to manage their liquidity actively, and to square off expected imbalances in the market during the trading day.

84 During the maintenance period, the Bank expects reserves scheme members to take advantage of reserves averaging in order to smooth out the

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(32) These calculations are based on data to close of business on the previous day.

(33) It is not necessary to sign up to the full SWIFT service as the Bank operates the Enquiry Link Service via a closed user group.

effects of unexpected day-to-day variations in end-of-day positions and market interest rates.

85 On the final day of the maintenance period, scheme members' ability to absorb unexpected liquidity shocks at the end of the day is limited to the width of the  $\pm 1\%$  range around reserves targets. There is therefore a short period on the final day of the maintenance period, after the close of the CHAPS payment system for interbank payments generally, during which settlement banks are able to distribute reserves amongst themselves. The Bank's standing deposit and lending facilities are available to all reserves scheme members for a further ten minute period after that window. If the Bank suspected that the period of settlement bank-only access to the payments system was being used inappropriately — for example, as a substitute for trading in the market earlier in the day — then the facility could be discontinued.

#### *Failed trades*

86 During the maintenance period reserves scheme members are able to take advantage of reserves averaging in order to smooth out unexpected day-to-day variations in end-of-day positions arising from failed trades. On the final day of the maintenance period, it is possible to settle trades that have failed to be processed following *bona fide* technical or systems difficulties earlier in the day via the short settlement bank-only window after the close of the CHAPS payment system, provided that both parties agree.

87 The Bank welcomes the market-wide compensation guidelines in the event of failed sterling payments developed by the Association for Payment and Clearing Services (APACS) Liquidity Managers Group and endorsed by the Money Market Liaison Group.<sup>(34)</sup>

88 Annex 3 sets out a summary daily timetable for the operations described in this paper, including the end-of-day arrangements.

#### *Contingencies*

##### *Changes to the MPC meeting schedule*

89 If it becomes known after the publication of the annual maintenance-period schedule but before the

start of the relevant maintenance period that dates of MPC decisions have been changed, then the operational timetable will be adjusted so that the relevant maintenance period nevertheless ends on the day before the Committee's decision is announced, and the next maintenance period starts on the day of that announcement.<sup>(35)</sup> Any such changes will be announced as soon as possible.

90 Once a maintenance period has started, however, no changes to it will be made, even if the dates of MPC decisions change unexpectedly at short notice so that a decision is, in the event, announced during a maintenance period. In such circumstances, reserves balances would be remunerated at the official Bank Rate prevailing at the end of the day (ie the CHAPS close) on which they were held. The penalty for excesses or shortfalls of reserves would be charged at the official Bank Rate prevailing on the final day of the maintenance period.

##### *CHAPS extensions*

91 If the CHAPS close is delayed on a particular day as a result of a CHAPS extension (for example following system difficulties) then, consistent with the objective of the extension to ensure that the day's business can be completed, the Bank will ensure that payments can be made to and from reserves accounts until the actual CHAPS close.

##### *Major operational or financial disruption*

92 Ahead of a monthly maintenance period, subject to the ceilings on reserves targets set by the Bank, reserves scheme members are able routinely to raise their reserves targets if their demand for central bank money increases. The Bank would increase the supply of central bank money through its regular weekly short-term OMOs accordingly. Following major operational or financial disruption to the money markets or their supporting infrastructure, many scheme members might wish to hold reserves targets above the Bank's ceilings. In such circumstances, the Bank would be able to raise these ceilings.

93 In the event of any major disruption during a maintenance period, the Bank would, if necessary, be able to increase the supply of central bank money to

(34) See minutes of the September 2004 Money Markets Liaison Group meeting, available at [www.bankofengland.co.uk/markets/money/mmlgsep04.pdf](http://www.bankofengland.co.uk/markets/money/mmlgsep04.pdf).

(35) The timing and maturity of the Bank's short-term OMOs will also adjust (see below).

the market through regular or exceptional OMOs (as described below). In such circumstances, the Bank could also raise reserves targets, and/or widen the range around them<sup>(36)</sup> so that scheme members would not be obliged to use the standing deposit facility in order for the Bank to absorb the additional reserves. In this way, the Bank would aim to maintain market interest rates in line with the official Bank Rate.

94 If a disruption meant that the money markets were no longer functioning effectively to distribute reserves amongst reserves scheme banks, leaving some unexpectedly long and some short relative to their targets, the Bank would also be able to widen the range around reserves targets even if it had not supplied additional central bank money via OMOs.

### **Open market operations**

95 The Bank uses open market operations (OMOs) to provide sufficient central bank money to the market to enable reserves scheme members in aggregate to meet their targets. OMOs comprise short-term repos, long-term repos, and outright purchases of bonds.

96 Short-term repo OMOs are held weekly, with an overnight-maturity fine tune on the final day of the maintenance period. The size of the weekly OMO is varied to offset expected weekly changes in banknotes in circulation and other sterling flows across the Bank's balance sheet (so-called autonomous factors). Day to day, reserves averaging absorbs the short-term fluctuations that occur across the Bank's balance sheet. The Bank provides long-term financing to the banking system through long-term repos at market rates determined in monthly OMOs. It plans in due course to purchase bonds outright through regular OMOs.

### *Short-term open market operations*

97 In normal circumstances, the Bank's weekly OMOs take place on Thursdays and have a maturity of one week. They are conducted at the official Bank Rate.

98 If the MPC was known in advance to be meeting on a day of the week other than a Thursday, and the

timing of reserves maintenance periods had been changed in accordance with paragraph 89 above, the timing and maturity of the Bank's short-term operations would shift accordingly. Thus, if the MPC met over a Tuesday-Wednesday rather than a Wednesday-Thursday as normal, with the maintenance period therefore ending on the Tuesday, the weekly OMO immediately prior to the end of the maintenance period would be undertaken, as usual, on the previous Thursday but for a maturity of six days; and the first weekly OMO in the subsequent maintenance period would be undertaken on the Wednesday of the MPC announcement for a maturity of eight days. In addition, the end-of-maintenance-period fine-tuning overnight OMO would be undertaken on the Tuesday. Such planned adjustments to the usual timetable are covered in the schedule of maintenance periods and routine OMOs published each year.

99 The timing and maturities of the Bank's operations are also adjusted in the light of bank and public holidays that fall on Thursdays. Again, when known sufficiently in advance, such details are reflected in the calendar of maintenance periods and routine OMOs published each year.

100 On the days when the MPC makes scheduled interest rate decisions, the Bank undertakes its weekly, short-term OMO at 12.15 pm, in order to follow the MPC's noon announcement. On days when there are no scheduled interest rate announcements, the Bank undertakes its weekly, short-term OMO at 10 am.

101 Short-term OMOs are settled same day. Counterparties are able to pre-position securities ahead of the weekly OMO; to re-use (net) collateral due to be returned against maturing repos; and, in the case of settlement banks, to transfer securities held as collateral for intraday liquidity in RTGS. The Bank makes payments to counterparties only following delivery of sufficient collateral and returns collateral only following repayment (including on a delivery-versus-payment basis in CREST). Relevant

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(36) For example, assume that initial aggregate reserves had been £20 billion, with 20 banks having reserves targets of £1 billion, and the Bank had provided an additional £10 billion (ie £30 billion total) via OMOs. The Bank could either direct each bank to raise its reserves target by 50% to £1.5 billion; or it could raise the top of each banks' reserves range to £2.01 billion, leaving the bottom of each range unchanged at £0.99 billion, so that each range was centred on £1.5 billion but no single bank was obliged to hold more than the target level of reserves it had chosen before the maintenance period began.

deadlines are set out in the Operating Procedures within the Bank's Documentation.<sup>(37)</sup>

102 The Bank seeks to provide sufficient reserves via its OMOs to enable reserves scheme members in aggregate to accumulate reserves evenly from week to week over the maintenance period. If the Bank over or under-provides reserves because of an error in its liquidity forecast, it makes an adjustment in the subsequent scheduled short-term OMO within the maintenance period, including if necessary the routine fine-tuning OMO on the final day of the maintenance period.

103 Any over-bidding in OMOs leads to pro-rating of bids. In the event of underbidding, any funds not allocated are taken into account in subsequent scheduled OMOs within the maintenance period.

#### *Fine-tuning OMOs at the end of the maintenance period*

104 The Bank conducts, as a matter of routine, an overnight-maturity fine-tuning OMO at the end of each reserves maintenance period (ordinarily the Wednesday preceding the Thursday MPC decision) to ensure that the banking system's net need for central bank money, taking into account the amount required for reserves scheme banks to achieve their aggregate reserves targets, is provided as precisely as possible.<sup>(38)</sup>

105 These operations take place at 10 am. They are for same-day settlement.

106 The Bank is prepared either to provide or drain central bank money at the official Bank Rate in this operation, and both are equally likely on the assumption that errors in the Bank's liquidity forecast are unbiased. If providing, the Bank does so via reverse repo of eligible collateral. If draining, the Bank usually does so via gilt DBV repo.<sup>(39)</sup>

#### *Open market operations to provide longer-term financing*

107 The Bank conducts long-term repo OMOs monthly, usually at 10 am on a Tuesday mid-month.

The dates of long-term repo OMOs are included in the schedule for OMOs and reserves maintenance periods published annually. The Bank may lend at three, six, nine and twelve-month maturities.

Maturity dates are, as far as possible, aligned with the settlement dates of future long-term repo OMOs and with the last trading dates for Short Sterling futures contracts on Euronext.LIFFE (IMM settlement dates). The OMOs are variable-rate tenders open to the Bank's OMO counterparties. The Bank is therefore a price-taker and allocates the funds offered to successful bidders at the rate(s) that they tender. Settlement of long-term repo operations takes place on the day following the OMO (T+1).

108 The Bank plans in due course to provide long-term financing through regular OMOs to purchase conventional gilts and high-quality foreign currency-denominated bonds, with the cash flows swapped into sterling. Purchases will be conducted transparently, with the Bank's OMO counterparties. The operational framework for the purchases will be set out publicly as an update to this publication, after further consultation with the DMO and discussion with OMO counterparties.

#### *Liquidity forecasting*

109 The Bank publishes a range of information about the banking system's aggregate target reserves and net liquidity need (ie aggregate target reserves plus autonomous factors) and about the Bank's operations, as set out in Annex 2.

#### *Contingencies*

##### *Changes to the MPC meeting schedule*

110 As noted in paragraph 98, if it becomes known after the publication of the annual schedule of maintenance periods and routine OMOs but before the start of the relevant maintenance period that the dates of MPC decisions have been changed, then the timing and maturity of the Bank's short-term OMOs will be adjusted accordingly. Any such changes will be announced as soon as possible.

111 In the event of an unscheduled MPC meeting, or in the unlikely event that the announcement of a

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(37) It is essential that counterparties provide the Bank's settlements area with full and accurate details of trades as quickly as possible. The Bank cannot guarantee settlement where trade details are incorrect or received late. Repeatedly missing deadlines or provision of incomplete or erroneous trade details would be raised with a counterparty's management and may lead to suspension from participation in the Bank's operations.

(38) The Bank aims to supply sufficient funds via its OMOs to enable scheme members in aggregate to hit their targets in the middle of the range rather than at the top or the bottom of the range. The minimum size of fine-tuning operations is £50 million.

(39) Such transactions use CREST's 'Delivery-By-Value' facility whereby the particular securities to be delivered to the counterparty are selected and delivered by the CREST system in accordance with CREST's rules and procedures.

decision following a scheduled meeting were delayed for some reason, the Bank will, where possible, seek to delay any regular short-term OMO on that day until after announcement of the MPC's decision. If that did not prove possible, any short-term OMOs undertaken before the announcement of the decision will be subject to the official Bank Rate prevailing at the time the transactions were conducted. In those circumstances, the Bank may decide to shorten the maturity of the OMO to overnight and conduct another short-term OMO on the following day after the MPC has announced its decision.

#### *Exceptional fine-tuning open market operations*

112 The Bank reserves the right exceptionally to carry out fine-tuning OMOs on days other than the final day of the maintenance period if circumstances are such that this is needed to ensure a smooth pattern of reserves supply and so to achieve its rate-setting objective.

#### *Major operational or financial disruption*

113 Following major operational or financial disruption to the money markets or their supporting infrastructure during a maintenance period but where markets and infrastructure were still functioning, the Bank would be able, if necessary, to meet any increased demand for central bank money by providing additional reserves through either regular weekly or exceptional OMOs. The OMOs may be for a fixed amount determined by the Bank or an offer of funds on demand. The Bank would aim to keep market interest rates in line with the official Bank Rate, while providing the additional funds to the market, by varying reserves targets/ranges or the rates applied to the standing facilities, as set out in paragraphs 92–94 and 128–129 respectively.

### **Standing facilities**

114 Together with the remuneration of reserves, reserves averaging and the range around reserves targets, the terms of the Bank's overnight standing facilities on the final day of the maintenance period form the core of the rate-setting part of the Bank's operational framework.

115 On the final day of a maintenance period, the rate on the standing deposit facility is

25 basis points below the official Bank Rate and the rate on the standing lending facility is 25 basis points above it.

116 Interest rates on standing facilities during the rest of a maintenance period are not performing a rate-setting function in the same way. Instead they set limits to any residual market interest rate volatility and offer liquidity insurance to the banking system, including against payment shocks and idiosyncratic stresses. They are consequently set at a spread of  $\pm 100$  basis points around the official Bank Rate. The Bank expects overnight market interest rates to trade in a much narrower range around the official Bank Rate in normal circumstances.

117 The rates on standing facilities are reset on the day of MPC decisions and so ordinarily apply from the first day of the maintenance period.<sup>(40)</sup>

118 The standing deposit facility is uncollateralised. The standing lending facility is for overnight reverse repo against eligible collateral. On those terms, both standing facilities are available in unlimited size.

119 The standing facilities are available all day. Relevant deadlines are set out in the Operating Procedures within the Bank's Documentation.<sup>(41)</sup>

120 The Bank accepts deposits in the standing deposit facility:

- for receipt from accounts other than scheme members' reserves accounts, until the CHAPS cut-off time for interbank payments (usually 16.20); and
- for transfers from scheme members' reserves accounts, until 10 minutes after that time (usually 16.30).

121 Similarly, the standing lending facility is available, provided collateral has been received

- for payments to accounts other than scheme members' reserves accounts, until the CHAPS

(40) Although the standing facilities are available on the morning of an MPC decision day, in practice the rates applying to any use of those facilities are not set until the MPC has announced its interest rate decision at noon.

(41) If a bank that was not a reserves scheme participant ceased to be eligible for access to standing facilities because it no longer paid Cash Ratio Deposits, access would be withdrawn immediately. Reserves scheme participants would continue to have access until the first day of the next reserves maintenance period.

cut-off time for interbank payments (usually 16.20); and

- for transfers to scheme members' reserves accounts, until 10 minutes after that time (usually 16.30).

122 For the standing lending facility, the relevant settlement deadlines are broadly as follows:

- Settlement in CREST should have been made by 14.30 for member-to-member deliveries versus payment; by 15.45 for Delivery-By-Value transactions; and by 16.15 (or until 16.30 for transfers to reserves accounts) for settlements in the free-of-payment window.
- Settlement of collateral via the Correspondent Central Banking Model (CCBM)<sup>(42)</sup> should have been made by 15.00.
- Settlement of collateral via Euroclear/  
Clearstream should have been made by 15.00.
- Where settlement banks have already transferred collateral to the Bank in support of RTGS payments and CREST securities settlement activity, they are permitted to move it for use in the standing lending facility at any time up to 16.15, or until 16.30 if the proceeds are to be transferred to their reserves account.
- All those institutions signed up to standing facilities are able to pre-position collateral with the Bank<sup>(43)</sup> to facilitate timely settlement in the standing lending facility.<sup>(44)</sup>

123 The Bank takes account of any use of standing facilities during the maintenance period when assessing the amount of central bank money required by the system in subsequent short-term OMOs, including the routine fine-tuning operation on the final day of the reserves maintenance period.<sup>(45)</sup>

124 But no adjustments are made through OMOs on the final day of the maintenance period after

the morning fine-tuning operation. So, for example, if £100 million was deposited by a reserves scheme member in the Bank's standing deposit facility in the afternoon of the last day of the maintenance period, and assuming no other sterling flows between the Bank and the banking system, this would leave the banking system as a whole short of its aggregate reserves target by £100 million. Other scheme members would therefore need either to hold lower reserves balances, potentially remaining within their reserves ranges, or to obtain these funds by using the standing lending facility. This process should encourage market rates to trade near the centre of the standing facility corridor (ie the official Bank Rate) on the final day of the maintenance period.

### *Contingencies*

#### *Changes to the MPC meeting schedule*

125 The rates on standing facilities will change on the day of MPC decisions. In the event of an unscheduled MPC meeting, any use of the standing facilities before the announcement of the meeting (or before the announcement of the decision itself, if no notice of the meeting were given) will be subject to the rates prevailing at the time at which the transactions were conducted. The rate applied to use of the standing facilities after the announcement of the meeting/decision will be based on the official rate of interest subsequently announced.

#### *Very low official Bank Rate*

126 If the official Bank Rate were reduced to below 1%, the standing deposit rate would be bounded at 0%. To preserve the symmetry of the corridor at these low levels of the official Bank Rate, the rate on the standing lending facility would be the lower of, as normal, the official Bank Rate plus 100 basis points (plus 25 basis points on the final day of the maintenance period) or twice the official Bank Rate.

#### *CHAPS extensions*

127 If the CHAPS cut-off time for interbank payments is delayed because of a CHAPS extension

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(42) Under CCBM, the central bank in the country in which the relevant eligible securities were issued acts as the Bank's custodian.

(43) This includes the possibility of pre-positioning collateral held in the Bank's accounts in CREST, Euroclear and Clearstream or under CCBM arrangements, where the collateral is held on the Bank's accounts at other European central banks.

(44) Such securities are held by the Bank as agent until, as the case may be, they are returned to the participant or transferred to the Bank. The Bank reserves the right to levy its own charges, and to seek reimbursement of any charges incurred by the Bank, prior to or following the use of such securities in a transaction with the Bank. As described in the Bank's Documentation, the participant agrees to indemnify the Bank against all expenses arising from the Bank holding such securities as agent, and agrees that the Bank shall have no liability for any expenses which the participant may incur as the result of such securities being held by the Bank.

(45) Thus, if £100 million were deposited in the Bank's standing deposit facility on one day during the maintenance period, the Bank's subsequent forecast of the banking system's liquidity need would be increased by the equivalent of £100 million for one day.

on a particular day (for example following system difficulties) then, consistent with the objective of the extension to ensure that the day's business can be completed, the Bank will extend the availability of the standing facilities accordingly.

#### *Major operational or financial disruption*

128 Following major operational or financial disruption to the sterling money markets or their supporting infrastructure, the money markets may effectively be closed. In those circumstances, the Bank would be able to narrow the spread between the standing lending and deposit facility around the official Bank Rate, including to zero: ie it would offer to lend (against eligible collateral) and to take deposits at the official Bank Rate overnight in unlimited amounts.

129 A sudden closure of the CHAPS payment system and/or the CREST embedded payment system during the day<sup>(46)</sup> would leave settlement banks with varying unintended balances on their reserves accounts. Some settlement banks might be unable to unwind intraday repos with the Bank. In such circumstances, the Bank could intermediate these flows over its standing facilities, in effect rolling overnight the intraday liquidity provided against eligible collateral and treating that as use of the standing lending facility. It would also be able to narrow the interest rate corridor on its standing facilities in such circumstances, allowing 'long' banks to treat some of their balance as use of the standing deposit facility rather than holdings of reserves.

#### *The Stricken Bank Liquidity Scheme*

130 The Stricken Bank Liquidity Scheme<sup>(47)</sup> provides an agreed mechanism by which a CHAPS settlement bank experiencing systems problems that leave it able to receive but not make payments can make unsecured bilateral loans to other members of the system, free of interest, shortly before the close of the payment system. The Stricken Bank Liquidity Scheme complements the Bank's standing facilities by permitting liquidity to be redistributed between banks on an unsecured basis during the day, thereby facilitating completion of that day's payments business.

## **Eligible collateral**

131 The Bank provides central bank money in its short-term and long-term repo OMOs and standing lending facility (and intraday to CHAPS and CREST settlement banks) via reverse repo of eligible collateral securities.<sup>(48)</sup>

132 Eligible collateral comprises gilts (including gilt strips), UK government foreign currency debt securities, sterling Treasury bills, Bank of England foreign currency debt securities, and certain sterling and euro-denominated securities issued by EEA (European Economic Area) central governments, central banks and major international institutions where the issuing entity is rated Aa3 or higher by two of the three major ratings agencies. For more detail see [www.bankofengland.co.uk/markets/money/eligiblesecurities.htm](http://www.bankofengland.co.uk/markets/money/eligiblesecurities.htm).

133 The Bank applies haircuts to repo collateral which vary by maturity. It also applies a margin for the exchange rate risk on foreign currency-denominated collateral. Collateral securities are revalued daily at market prices, and counterparties must deliver additional margin securities to the Bank if the value of the collateral already provided falls beyond a defined threshold. The Bank's haircuts and the level of the threshold are set to ensure that the value of collateral held by the Bank should almost always exceed its exposure to a counterparty. Counterparties can ask the Bank to return margin securities if collateral values rise above another threshold determined by the Bank.

134 Provided that the overall value of eligible collateral that a counterparty has provided remains sufficient at all times, counterparties may substitute eligible securities during the term of a repo, although the Bank does not accept substitutions on days when it conducts and settles short-term OMOs.

135 The Bank applies a concentration limit to the collateral provided by OMO counterparties and settlement banks in order to ensure some diversification of the bonds that it would hold following a counterparty/settlement bank failure.

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(46) The Money Market Liaison Group maintains a table showing likely responses and decision-taking responsibilities in the event of various contingencies affecting the infrastructure for the sterling money markets, available at [www.bankofengland.co.uk/markets/money/smmlg.htm](http://www.bankofengland.co.uk/markets/money/smmlg.htm).

(47) As described on page 137 of the June 2004 *Bank of England Financial Stability Review*, available at <http://www.bankofengland.co.uk/publications/fsr/2004/fsr16art5.pdf>.

(48) Intraday, sterling central bank money is also provided to CHAPS and CREST settlement banks against sterling and euro cash balances held with the Bank.

Once the total collateral provided by a single OMO counterparty or CHAPS sterling settlement bank in OMOs and RTGS exceeds £1 billion, the institution must ensure that the securities of any single issuer (other than the UK government and the Bank of England) comprise no more than 25% of the total collateral it has repoed to the Bank. For settlement banks that are also OMO counterparties, two tests apply: first to outstanding eligible securities repoed to the Bank in OMOs, and second to the sum of securities repoed to the Bank in OMOs and securities repoed to raise intraday liquidity in RTGS.

136 The Bank does not apply a concentration limit on collateral used in the standing lending facility.

### *Contingencies*

#### *US Treasury bonds*

137 The Bank may extend its list of eligible collateral to include US Treasury bonds in exceptional circumstances, including major operational or financial disruption. The front and back office arrangements that would apply are set out in the Operating Procedures in the Bank's Documentation.

## ANNEX 1: Access to the Bank's facilities

If wanting access to → Required also to have access to ↓	Standing facilities	OMO counterparty	Reserves scheme member	Settlement bank
Standing facilities	n/a	No	Yes (Same legal entity)	Yes (Same legal entity)
OMO counterparty	No	n/a	No — although likely to find it useful.  (Can be a different legal entity within the group provided the OMO counterparty is an authorised bank, building society or dealer.)	No — although likely to find it useful.  (Can be a different legal entity within the group provided the OMO counterparty is an authorised bank building society or dealer.)
Reserves scheme member	No	No	n/a	Yes (Same legal entity)
Settlement bank	No	No	Not a requirement (although the Bank would welcome membership)	n/a

## ANNEX 2: Scheduled announcements

The Bank makes the following scheduled announcements:

**Annually** (*usually in September following the publication of the schedule of MPC meetings*)

Dates of maintenance periods

Scheduled open market operations (dates and maturities) for following year

**Monthly** (*11.00 am on the day before the start of a new maintenance period*)

Aggregate reserves target and range for the forthcoming maintenance period

**Monthly** (*11.00 am on Tuesday in the week before the long-term repo OMO*)

Size of long-term repo OMO (overall and at each maturity)

**Monthly** (*11.00 am on the day of the long-term repo OMO*)

Results of long-term repo OMO

**Monthly** (*12 noon on the day of the scheduled MPC decision*)

Announcement of MPC interest rate decision.

**Weekly** (*9.00 am on the day of OMOs, usually Thursday*)

Forecast of the banking system's liquidity need (aggregate target reserves for that week plus the banking system's net liquidity need due to other flows between the banking system and the Bank)

Size of short-term OMO (forecast liquidity need plus error in previous forecast)

**Weekly** (*10.15 am on the day of OMOs or 12.30 pm on scheduled MPC decision days, usually Thursday*)

Results of short-term OMO.

**On the final day of the maintenance period** (*9.30 am*)

Size of fine-tuning OMO (error in previous forecast)

**On the final day of the maintenance period** (*10.15 am*)

Results of fine-tuning OMO

**Daily** (*10.00 am on most days, 9.00 am on OMO days except for 9.30 am on the day of a scheduled fine-tuning OMO*)

That day's forecast holdings of aggregate reserves

The previous day's aggregate actual holdings of reserves

The previous day's error in the Bank's forecast of aggregate reserves

Average of reserves held thus far in maintenance period

Residual average reserves requirement

The previous day's use of standing lending facility, in aggregate

The previous day's use of standing deposit facility, in aggregate

In the final week of a maintenance period, the expected size of the end-of-maintenance-period fine tune

Current interest rates on standing facilities

## ANNEX 3: Summary daily timetable

	<i>Normal day during Maintenance Period without OMO</i>	<i>Normal day during Maintenance Period with OMO</i>	<i>Final day of Maintenance Period</i>
Mornings	Publication of that day's forecast of aggregate holdings of reserves and previous day's actual aggregate reserves (10.00 am).	Publication of size of OMO, and daily forecast and previous outturn for aggregate reserves (9.00 am)  Weekly one week maturity OMO (12.15 pm on MPC days; 10.00 am on non-MPC days)  OR  Monthly long-term repo OMO (10.00 am).	Publication of size of fine tuning OMO, and daily forecast and previous outturn for aggregate reserves (9.30 am)  Overnight fine-tuning OMO (10.00 am)  Publication of target aggregate reserves for next maintenance period (11.00 am).
16.20	Close of CHAPS for interbank payments  Close of the Bank's standing facilities (except for transfers to/from scheme members' reserves accounts)  Close for funding/defunding of scheme members' reserves accounts (except for use of the Bank's standing facilities)		
16.30	Close of standing facilities for transfers to/from scheme members' reserves accounts		Close of RTGS for payments between settlement banks only
16.40			Close of standing facilities for transfers to/from scheme members' reserves accounts

## ANNEX 4: List of Bank of England publications and documentation

All the documents listed below can be found on the Bank's website at [www.bankofengland.co.uk](http://www.bankofengland.co.uk).

### Policy framework

- *The Framework for the Bank of England's Operations in the Sterling Money Markets*, May 2006 (the 'Red Book')

### Legal/operational documentation

- Full documentation, incorporating Eligibility Criteria, Terms and Conditions, and Operating Procedures
- *Pro forma* Admission Letter
- *Pro forma* legal opinions (capacity and home country law)
- *Pro forma* guarantee (and *pro forma* legal opinion on guarantee)
- Combined application form and questionnaire
- *Pro forma* confirmation letter of readiness for participation
- Calendar of operations

### Reserves

- Reserves quick reference guide
- RTGS Account Mandate for non-CHAPS reserves account holders
- RTGS Reference Manual
- RTGS Enquiry Link user guide
- Reserves accounts user guide
- List of reserves scheme members

### Standing Facilities

- Standing Facilities quick reference guide
- List of banks and building societies with access to standing facilities

### Eligible collateral

- Eligible collateral list

### Statistics

- The Bank of England's *Monetary and Financial Statistics (Bankstats)* includes tables describing official operations in the sterling money markets; series included in these tables are also available via the interactive database which, like *Bankstats*, is to be found on the Bank of England website.

Application forms to participate in the Bank's facilities are available from:  
The Head of Sterling Markets Division,  
Bank of England,  
Threadneedle Street,  
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