

# 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 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<sup>1</sup> of the Monetary Policy Committee (MPC) 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 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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<sup>1</sup> The rate decided by the MPC is the official Bank Rate paid on commercial bank reserves.

## 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 Bank Rate, long-term repos at market rates determined in variable-rate tenders, and outright purchases of high-quality bonds at prices determined by tender.

### III Delivery of the Bank's objectives

**Objective 1: Overnight market interest rates to be in line with 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 bank money 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 Bank Rate, including via a narrow standing facility 'corridor'. On earlier days in the maintenance period, reserves averaging is designed to ensure 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.

8 The standing facility corridor is narrower on the final day than on other days of the maintenance period: +/- 25 basis points around 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 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 Bank Rate. Conversely, if market rates are above 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 Bank Rate. In this way, the standing facilities help to keep market rates toward the centre of the +/-25 basis point corridor and, thus, close to Bank Rate.

9 The reserves scheme is also designed to assist in keeping market rates consistent with Bank Rate on the final day of the maintenance period. Reserves scheme banks can choose between transacting in the market and varying their reserves balances within the range in which the Bank will remunerate that balance at the official Bank Rate. For example, if market rates are higher than 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 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

that day.

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

10 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 Bank Rate. Averaging should therefore keep overnight market interest rates in line with Bank Rate throughout the maintenance period, ensuring a flat money market yield curve out to the next scheduled MPC meeting.

11 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

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<sup>2</sup> If a reserve bank 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.

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 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.

12 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.

13 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

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<sup>3</sup> There is a very small difference due to compounding because interest on reserves is paid monthly whereas interest on short-term OMO repos is charged weekly.

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.

14 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 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 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.**

15 The Bank of England is the sole issuer of 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.

16 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.

17 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.

18 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

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<sup>4</sup> 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.

<sup>5</sup> The Cash Ratio Deposit Scheme is described in footnote 14.

<sup>6</sup> See [www.hm-treasury.gov.uk/media/6/F/crd\\_100807.pdf](http://www.hm-treasury.gov.uk/media/6/F/crd_100807.pdf).

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

<sup>8</sup> 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.

monthly ahead of each reserves maintenance period.

19 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.

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

21 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).

22 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 attack, pandemic, or extreme weather.
- Concerns about banks that were sufficient to interrupt the flow of funds in the sterling money markets.

23 In such circumstances, demand for central bank money might rise if the money markets were no longer

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<sup>9</sup> CREST settlement banks are able to transfer liquidity from their RTGS accounts into CREST via Automatic Liquidity Transfers and intra-day Ordinary Account Transfers.

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<sup>10</sup> Where they have significant activities in currencies other than sterling, they may also need to make plans to raise liquidity via the operational frameworks of the relevant overseas central banks.

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 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 Bank Rate on these larger balances, either by increasing reserves targets *pro rata* or by widening the range around existing targets.

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

24 The Bank’s intention is that the architecture of its framework should be linked directly to achievement of its policy objectives. The framework should operate in practice as it is understood to operate in theory.

25 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.

26 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.

27 Reserves averaging also means that the level of aggregate reserves actually held by the banking system can vary from day to day in order to offset other sterling flows between the Bank and the banking system. In consequence, those other sterling flows do not need to be offset by frequent OMOs.

28 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.**

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

30 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.

31 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

### Central bank money

32 The Bank is the sole issuer of sterling central bank money: banknotes and balances on the reserves accounts of banks and building societies. Given that the Bank implements monetary policy by setting an interest rate, the quantity of central bank money, and equivalently the size and composition of the Bank's sterling liabilities, is largely demand-determined.

33 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).

34 The assets and liabilities of the Bank are allocated to one or other of its two balance sheets: Issue and Banking.<sup>11</sup>

35 Reserves accounts are held on Banking Department. The Bank ensures that its stock of short-term repo lending on Banking Department is in normal circumstances 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 minimises interest rate exposure on Banking

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<sup>11</sup> 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)).

<sup>12</sup> 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.

Department, as the Bank pays the official Bank Rate on targeted reserves and earns 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 those liabilities.

36 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. Adjustment in the size of the Bank's short-term repo lending is used to accommodate such temporary, seasonal increases in 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 supply of central bank money via those OMOs 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 for Issue Department. This is done via long-term repos, and via purchases of bonds. (Purchasing a bond with a residual maturity of five years, 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.)

### Long-term repo OMOs

37 Long-term repo lending is at market rates determined in variable rate tenders. These repos have maturities of 3, 6, 9 and 12 months. The stock outstanding can be varied to accommodate unexpected changes in the growth of banknotes that cannot be absorbed by changes to short-term repo lending.

### Bond-purchase OMOs

38 The bonds purchased and held on Issue Department comprise conventional gilts. In due course, the Bank intends also to purchase high-quality

foreign-currency bonds, with the cash flows swapped into fixed-rate sterling (creating synthetic sterling bonds on the Bank's balance sheet).

39 Five principles guide the Bank's provision of central bank money via the acquisition and management of this bond portfolio:

- i. The process for purchasing the bonds and the structure of the resulting portfolio is designed to be **simple and transparent**.
- ii. The purchases are, and can be seen to be, **non-discretionary**, given that the Bank is acquiring assets whose yields reflect, amongst other things, expectations of the path of Bank Rate set by the MPC.
- iii. The portfolio is designed to expose the Bank to **minimal credit risk**.
- iv. The portfolio is structured broadly to match **the expected behavioural maturity of Issue Department's banknote liabilities**, whilst allowing for the possibility of persistent reductions in demand for banknotes.
- v. The purchases and structure of the portfolio are designed to **avoid disruption to HMG debt management**. In particular, the Bank seeks 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 (DMO) in implementing that policy.

40 Given those principles, the following simple, objective and transparent framework governs the bond-purchase OMOs to ensure that the Bank operates – and is seen to operate – in a non-discretionary manner:

- Over each calendar year as a whole, the maturity profile of the bonds purchased by the Bank is determined by the maturity distribution of UK government sterling fixed-rate debt in issue, taking account of any gilt issues announced by the DMO but not yet undertaken.

- Bonds purchased have a maximum residual maturity of twenty-one years and, initially, a minimum residual maturity of three years.
- Bonds are purchased via open market operations with the Bank's OMO counterparties, conducted on a regular, published timetable; and, as far as possible, of broadly even sizes<sup>13</sup>.
- In normal circumstances the resulting portfolio will be 'buy and hold', and the Bank would not intend to participate directly in any gilt buy-back operation undertaken by the DMO.

41 The Bank may sell particular bonds from time to time for internal risk or balance sheet management reasons. Such sales may be conducted bilaterally.

42 The Bank intends to lend from its gilt portfolio in due course. This will avoid the risk that its purchases of gilts exacerbate any undesirable volatility in secured money market rates due to collateral shortages, or contribute to particular stocks trading at a significant premium in the cash gilt market.

## Draining

43 In the event of large and persistent movements in autonomous factors affecting the amount of central bank money in the system, including a persistent shrinkage in the banknote issue, the Bank may wish to 'drain' reserves from the system. This could in principle be achieved in various ways, including:

- Reducing short-term repos.
- Reducing long-term repos.
- Reducing the programme of bond-purchase OMOs.
- Repoing out for cash part or all of the bond portfolio.
- Selling outright part or all of the bond portfolio.

44 If the Bank were to undertake an open market operation to repo out or sell bonds in order to 'drain' reserves, it would do so via a pre-announced operation open to OMO counterparties.

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<sup>13</sup> The operational framework for these OMOs is set out in Section V.

## **Intraday balance sheet: repo-lending to the banking system**

45 Typically during the day, the Bank's (Banking Department) 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 repo 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 repo lending is interest-free provided that it is 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

46 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 instruments.

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

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

#### *The reserves scheme*

48 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 Accounts and Sterling Ordinary Accounts respectively.

49 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>14</sup>

50 Within any group<sup>15</sup>, only one such eligible entity may become a reserves scheme member. Each

group is therefore required to nominate one eligible entity within the group to join the scheme and hold the group's reserves.

51 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>16</sup>.

52 The Bank publishes a list of reserve scheme members<sup>17</sup>.

#### *Standing facilities*

53 Given that 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.

54 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>18 19</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.

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

56 An eligible entity may access the standing facilities through a branch located either in the United Kingdom or in any other EEA country.<sup>20</sup>

57 The Bank publishes a list of banks and building

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<sup>14</sup> 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 [www.hm-treasury.gov.uk/media/6/F/crd\\_100807.pdf](http://www.hm-treasury.gov.uk/media/6/F/crd_100807.pdf).

<sup>15</sup> 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.

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<sup>16</sup> 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.

<sup>17</sup> [www.bankofengland.co.uk/markets/money/documentat-ion/participants.pdf](http://www.bankofengland.co.uk/markets/money/documentat-ion/participants.pdf).

<sup>18</sup> The Cash Ratio Deposit scheme is described in footnote 14.

<sup>19</sup> The Bank would exclude banks and building societies where an Event of Default (as defined in the Bank's legal Documentation) had occurred.

<sup>20</sup> See footnote 16.

societies that have signed up for access to its standing facilities<sup>21</sup>.

### *Open market operations*

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

- 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<sup>22</sup>.

59 Within any group, only one eligible entity may seek to become a counterparty in the Bank's OMOs; but that entity need not be the same as the reserves scheme member within the group.

60 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>23</sup> If the primary entity is incorporated outside England and Wales, the Bank may require a legal opinion confirming the institution's power and authority to enter into the guarantee, and that the terms and conditions set out in the guarantee constitute valid and legally binding obligations of the primary entity enforceable in accordance with their terms.

61 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 counterparties.

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

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

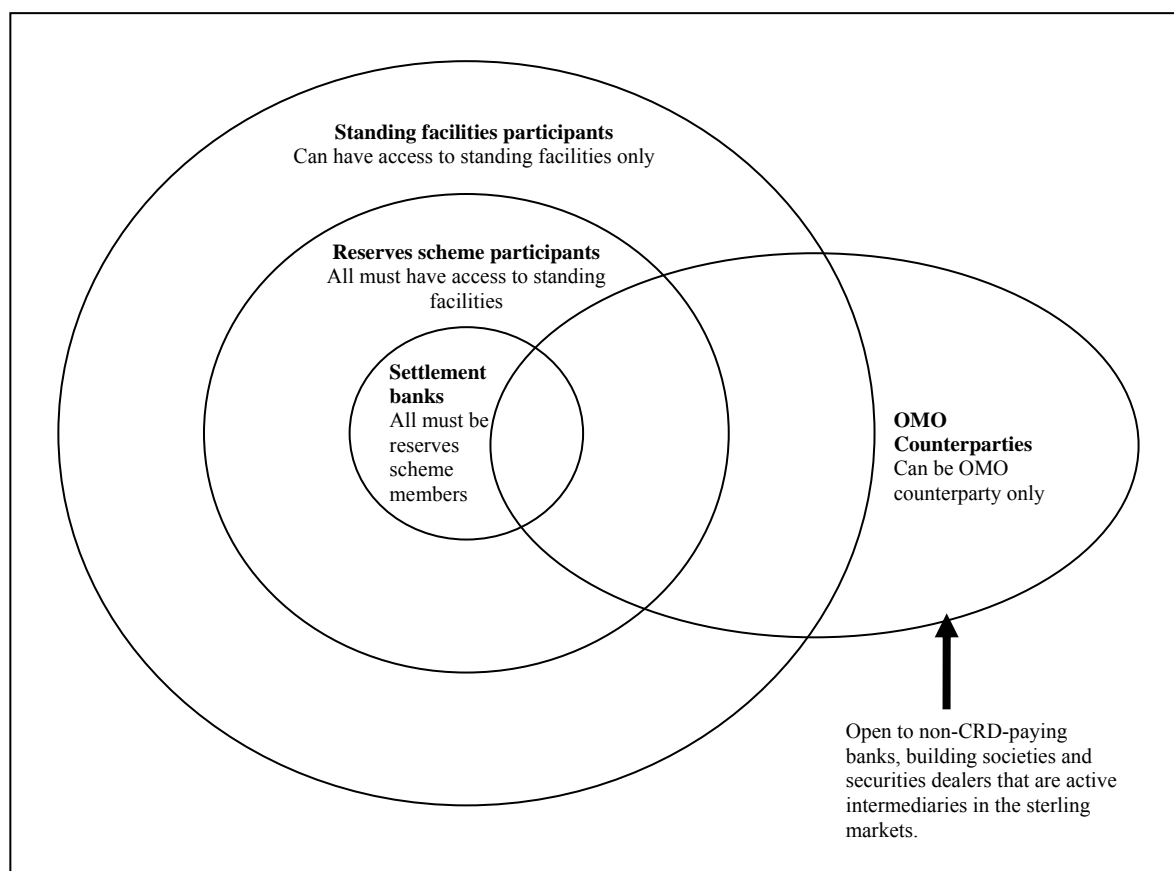
- They must have the operational capability both to participate in the relevant operations and to settle transactions with the Bank efficiently. For OMO counterparties and reserves scheme members, that includes providing details of the business continuity arrangements for these operations. The Bank has 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 a 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.

<sup>21</sup> [www.bankofengland.co.uk/markets/money/documentation/participants.pdf](http://www.bankofengland.co.uk/markets/money/documentation/participants.pdf).

<sup>22</sup> The Bank intends to restrict participation in its planned future OMOs to purchase foreign currency bonds to counterparties that have (or, where relevant, whose parental guarantors have) a credit rating of Aa3/AA- or higher from at least two of Fitch, Moodys and Standard and Poors. This is because the transactions will entail contingent credit exposures extending beyond 12 months.

<sup>23</sup> The *pro forma* guarantee and the *pro forma* legal opinion are available on the Bank's website at [www.bankofengland.co.uk/markets/money/documentation](http://www.bankofengland.co.uk/markets/money/documentation).

## Diagram 1 Access to the Bank's facilities



- 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.

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

### *Legal documentation and applications process*

64 The instruments and facilities comprising the Bank's operational framework (reserves scheme, standing facilities and OMOs) are governed by a set of

legal documentation, published on the Bank of England website and updated from time to time.<sup>24</sup> The documentation includes the eligibility criteria for participants, the Terms and Conditions for the Bank's facilities, and the Bank's Operating Procedures.

65 In addition, OMO counterparties wishing, in due course, to participate in the Bank's OMOs to purchase foreign currency bonds swapped into sterling will be required to sign the Bank's *pro-forma* ISDA Master Agreement, reflecting the Bank's specific requirements for those open market operations.

66 Institutions meeting the relevant eligibility criteria may apply to join the reserves scheme (which requires signing up for standing facilities) and/or to

<sup>24</sup> The Documentation is available at [www.bankofengland.co.uk/markets/money/documentation](http://www.bankofengland.co.uk/markets/money/documentation).

become an OMO counterparty and/or to sign up for standing facilities. Application forms are available from: The Head of Sterling Markets Division, Bank England, Threadneedle Street, London EC2R 8AH.

67 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. In order to establish their operational capacity, applicants to become an OMO counterparty will be asked to complete one or more practice operations using the Bank's electronic tendering system (Btender). Applicants to become an OMO counterparty, or for standing facility access, will be asked to complete one or more practice securities deliveries, using different security types if appropriate. 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 Admission letter. By counter-signing the Admission letter the applicant will agree to the legal terms applying to access to the facilities under the Sterling Monetary Framework. The Bank will then send a Commencement letter stating when the applicant can begin to participate.

### **The reserves scheme**

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

69 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 their reserves target due to holding an average level of reserves outside the specified range. Settlement banks also pay a penalty if their reserves account is

overdrawn at the end of any day.<sup>25</sup>

### ***Treatment of reserves under Financial Services Authority regimes***

70 Under FSA capital adequacy rules, reserves held at the Bank of England attract a zero per cent risk weighting under the Standardised Approach to credit risk.

71 Reserves are included within the category of assets allowable as high-quality liquidity under the FSA's Sterling Stock Liquidity Regime,<sup>26</sup> and also within the list of assets acceptable as eight-day liquidity in its liquidity requirements for building societies.<sup>27</sup> Reserves held with the Bank are classified as sight deposits under the FSA's mismatch regime.<sup>28</sup>

### ***The maintenance period***

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

73 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>29</sup>

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<sup>25</sup> 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.

<sup>26</sup> 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 certain UK retail banks.

<sup>27</sup> 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).

<sup>28</sup> The FSA's mismatch regime applies to all UK authorised banks other than certain UK retail banks.

<sup>29</sup> The timing and maturity of the Bank's short-term OMOs are

## Reserves targets

74 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).

75 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. This range is usually set at +/- 1%.<sup>30</sup> That 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.

76 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

adjusted accordingly.

<sup>30</sup> A percentage range of +/-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 +/- 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).

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 payment system and the CREST securities settlement system.

77 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>31</sup> (rounded up to the nearest £10 million). The Bank keeps these levels under review.

78 As described in paragraph 50 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).

79 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 month periods to April and to October).<sup>32</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.

80 The Bank routinely requires scheme members to set their reserves target for the next maintenance period

<sup>31</sup> A detailed definition of sterling eligible liabilities can be found in Annex A of Statutory Instrument 1998 No. 1130 and The Cash Ratio Deposits (Eligible Liabilities) (Amendment) Order 2005 (Statutory Instrument 2005 No. 3203).

<sup>32</sup> 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.

no later than two working days before the start of that maintenance period. The aggregate reserves target for the banking system is announced by the Bank on the following working day, ie the working day immediately preceding the start of the maintenance period.

81 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 reserves the right to do so.

### *Remuneration*

82 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*

83 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>33</sup>

84 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 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>34</sup>

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<sup>33</sup> 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.

<sup>34</sup> 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.

85 Reserves scheme members should be able to avoid missing their reserves target by participating in OMOs, 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 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 Bank Rate plus 25 basis points via the standing lending facility (subject to the provision of eligible collateral). In effect, using the standing facilities attracts a penalty of 25 basis points rather than the full official Bank Rate penalty charged on reserves target 'misses'.

86 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*

87 The Bank provides an enquiry facility enabling all reserves accounts holders to:

- view, in real time, their current reserves balances;
- 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>35</sup> and
- enter their target reserves balance for the next maintenance period.

88 All reserves accounts are held in the RTGS

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<sup>35</sup> These calculations are based on data to close of business on the previous day.

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>36</sup> The same Enquiry Link Service is used by CHAPS and CREST settlement banks for managing their settlement accounts at the Bank.

89 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 payments 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 have given 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.

90 It is possible to make payments to and from reserves accounts at any time through 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*

91 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.

92 During the maintenance period, the Bank expects reserves scheme members to take advantage of reserves averaging in order to smooth out the effects of unexpected day-to-day variations in end-of-day positions and market interest rates.

93 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 (usually +/- 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*

94 During the maintenance period reserves scheme members are able to take advantage of reserves averaging

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<sup>36</sup> It is not necessary to sign up to the full SWIFT service to operate a reserves account as the Bank operates the Enquiry Link Service via a closed user group.

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, if there are trades that have failed to be processed following *bona fide* technical or systems difficulties earlier in the day, they may be settled via the short settlement bank-only window after the close of the CHAPS payment system, provided that both parties agree.

95 The Bank supports the market-wide compensation guidelines in the event of failed sterling payments maintained by the Association for Payment and Clearing Services (APACS) Liquidity Managers Group and endorsed by the Money Market Liaison Group.<sup>37</sup>

96 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*

97 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>38</sup> Any such changes will be announced as soon as possible.

98 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.

### *Low Bank Rate*

99 Average reserves holdings over a maintenance period are remunerated at the official Bank Rate but penalties are imposed if average reserves fall outside the target range (see paragraphs 82 and 84 above). In normal circumstances this penalty is Bank Rate charged on the excess or shortfall. Excess reserves thus normally earn no interest net, and a shortfall in reserves entails a loss of twice Bank Rate (the loss of remuneration plus the penalty). Relatedly, settlement bank overdrafts on individual days are charged at twice Bank Rate.

100 Reserves scheme members can avoid penalties for reserves target 'misses' and normally have an incentive to do so (see paragraph 85 above). But when Bank Rate is low the normal penalties for 'misses' would also be low, and possibly no higher than the penalties entailed in making use of standing facilities. To avoid that outcome:

- the penalty charged on average excess reserves or shortfalls in a maintenance period as a whole is never less than 2%.
- the charge for settlement bank overdrafts on individual days is never less than Bank Rate plus 2%.

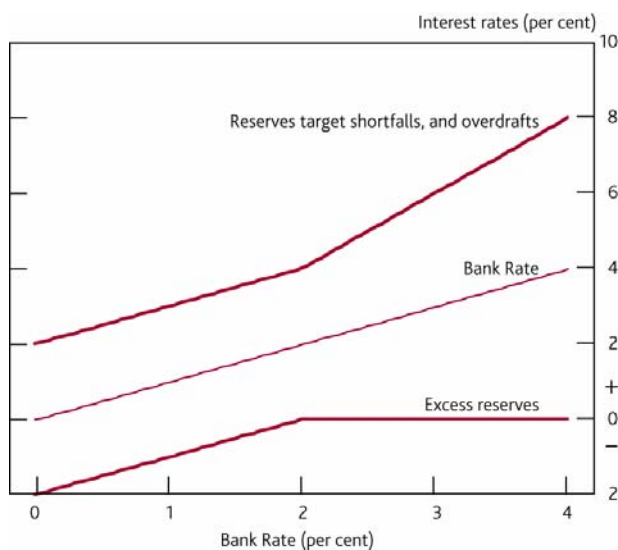
101 The resulting rates for daily overdrafts and average excess reserves are shown in Chart 1. Excess reserves would earn a negative interest rate if Bank Rate were sufficiently low. That is the loss of remuneration at Bank Rate plus the penalty (of Bank Rate or 2%, whichever is the larger).

<sup>37</sup> 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).

<sup>38</sup> The timing and maturity of the Bank's short-term OMOs will also adjust (see below).

**Chart 1**

**Interest rates on deficit\* or excess reserves**



\*Any shortfall in reserves on average over a maintenance period, and settlement bank overdrafts on any day.

**CHAPS extensions**

102 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**

103 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 set reserves targets above the Bank’s ceilings. In such circumstances, the Bank would be able to raise those ceilings.

104 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 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>39</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.

105 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**

106 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.

107 Short-term repo OMOs are held weekly, with an overnight-maturity fine tune on the final day of the maintenance period. They are fixed-rate operations at the official Bank Rate. 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, and through the outright purchase of gilts, at market rates determined in monthly OMOs. It plans in due course to purchase high-quality foreign currency bonds, with the cash

<sup>39</sup> 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.

flows swapped into fixed-rate sterling, also at market rates determined in monthly OMOs.

108 Open market operations are conducted electronically, with counterparties' bids and offers submitted directly to the Bank's electronic tendering system, Btender, via a secure electronic communication system. Access to Btender, which all OMO counterparties are required to use, is provided over SWIFTNet Browse. The Bank does not impose any charges for use of this system by OMO counterparties. Institutions do, however, need to take into account the relevant charges from SWIFT and network providers<sup>40</sup>.

### *Announcements of OMOs and system-liquidity forecasts*

109 A series of regular announcements is made relating to the Bank's OMOs, and to the Bank's forecast of the banking system's need for sterling liquidity in order to meet its reserves target. These are summarised below; a full schedule is available in Annex 2.

110 The Bank publishes annually a calendar of scheduled dates, with maturities, for open market operations.

111 Each week on the morning of a scheduled *short-term repo OMO*, and also on the morning of a *fine-tuning OMO*, the Bank publishes its forecast of the banking system's liquidity need, consisting of aggregate target reserves plus the banking system's net liquidity need due to other flows between the banking system and the Bank. The corresponding size of the short-term OMO is published at the same time. Each day, a range of information is published on aggregate reserves holdings.

112 The Bank announces, one week prior to each scheduled *long-term repo OMO*, the size of the OMO, including the amounts on offer at each maturity.

113 The Bank announces annually the expected aggregate size of its *bond-purchase OMOs* for the forthcoming year. At the start of each (calendar) quarter the sizes of the bond-purchase OMOs to be held in the forthcoming quarter are announced; and the Bank re-confirms, or revises as necessary, the expected aggregate size of its bond purchases for the remainder of the year. One week prior to each bond-purchase OMO, there is a final announcement of the size of the OMO, and of the specific bonds to be purchased.

### *Short-term open market operations*

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

115 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 97 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.

116 The timing and maturities of the Bank's short-term 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.

117 On the days when the MPC makes scheduled interest rate decisions, the Bank undertakes its weekly,

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<sup>40</sup> It is not necessary to sign up to the full SWIFT service as the Bank operates the Btender service via a closed user group.

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.

118 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 deadlines are set out in the Operating Procedures within the Bank's Documentation.<sup>41</sup>

119 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.

120 The maximum total size of an individual OMO counterparty's bid in a short-term OMO repo may not be greater than a fixed percentage of the size of the OMO. The percentage limit is currently 40%.

121 Any over-bidding in short-term repo 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.

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<sup>41</sup> 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.

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

122 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 it provides as precisely as possible 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.<sup>42</sup>

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

124 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>43</sup>

125 Normally, the same limit on the maximum size of a counterparty's bid relative to the size of the OMO applies to fine-tuning OMOs as for short-term repo OMOs (see paragraph 120). If the size of the fine-tuning OMO is smaller than a specific amount set out in the Operating Procedures, the Bank may waive the limit.

126 Any over-bidding in fine-tuning OMOs leads to pro-rating of bids.

### *Open market operations to provide longer-term financing – long-term repos*

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

128 The Bank may lend at three, six, nine and twelve-

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<sup>42</sup> 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.

<sup>43</sup> 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.

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).

129 The long-term repo 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).

130 The maximum total size of an individual OMO counterparty's bids in a long-term OMO repo may not be greater than a fixed percentage of the size of the OMO. The percentage limit is currently 40%. There is no (additional) limit on the size of bids at each maturity.

131 Any over-bidding in long-term repo OMOs leads to pro-rating of bids. In the event of underbidding, any funds not allocated are taken into account in subsequent scheduled short-term OMOs within the maintenance period; the Bank may increase the size of long-term repo OMOs in subsequent quarters.

### *Open market operations to provide longer-term financing – outright purchases of bonds*

132 The Bank also provides long-term financing through regular OMOs to purchase conventional gilts. In due course the Bank intends additionally to purchase high-quality foreign currency-denominated bonds, with the cash flows swapped into fixed-rate sterling.

133 Gilt tenders usually take place on the Monday of the week following the publication of the MPC minutes, at 2.15-2.45pm in the afternoon. If that day is a Bank Holiday, the tender usually takes place on the Monday of the week following that. Tenders will generally take place each calendar month with the exception of December<sup>44</sup>.

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<sup>44</sup> If a tender is postponed, for example due to a Bank Holiday, more than one tender may be scheduled within a calendar month.

134 Over each calendar year as a whole, the maturity profile of the bonds purchased by the Bank in those OMOs is determined by the maturity distribution of UK government sterling fixed-rate debt in issue, taking account of any gilt issues announced by the DMO but not yet undertaken. The Bank intends that the maturity distribution of the resulting portfolio, at the end of each year, and within two- or three-year buckets re-set each year, will broadly reflect that of UK government fixed rate sterling debt in issue, in those parts of the curve in which the Bank purchases bonds.

135 In order to allocate its purchases smoothly across different maturity segments, the Bank purchases in each operation at least one bond from each of three different maturity segments of the yield curve, defined (at the beginning of each year) as 1-7 years, 8-13 years, and 14-21 years. The Bank usually purchases two bonds from each of these three segments. Where possible, the Bank chooses pairs of bonds with similar maturities (ie within the same two- or three-year bucket) within each maturity segment. If there are more than two bonds eligible to be purchased within the same maturity bucket, the Bank chooses which bonds to purchase on the basis of their relative richness or cheapness to a fitted government curve one week before the operation. Subject to achieving the pattern of purchases implied by the maturity distribution of UK government sterling fixed-rate debt in issue, the Bank will rotate in successive tenders the maturity bucket from which it purchases within a segment.

136 The OMOs for outright purchases of gilts are conducted via competitive tenders. Each of the Bank's OMO counterparties is eligible to offer to sell gilts. The tenders are undertaken on a discriminatory (ie competitive offer-price) basis, so each successful counterparty receives the price that it offers. Settlement takes place on a T+1 (next day) basis, on a delivery-versus-payment basis in CREST.

137 In each operation, the Bank offers to purchase a fixed total value of bonds in each maturity segment. It chooses between offers for pairs of bonds within each segment on the basis of fair value, provided that the bonds are of similar maturities (ie within the same two-

or three-year bucket). The application of fair value is subject to the Bank purchasing pre-defined minimum and maximum amounts of each bond. Once the minimum amount has been allocated for each bond, the remaining amount is allocated based on the attractiveness of offers received relative to market prices at the close of the tender. In general, the minimum amount of each bond purchased is 75% of the central amount offered to be purchased, and the maximum is 125%<sup>45</sup>. Offers at the highest accepted price may be scaled down on a pro rata basis.

138 The Bank does not restrict the maximum total value of bonds that may be purchased from a single counterparty in each tender.

139 In the event of underbidding, any funds not allocated are taken into account in subsequent scheduled short-term OMOs within the maintenance period; the Bank may increase the size of bond-purchase OMOs in subsequent quarters.

140 The operational framework for purchases of foreign currency bonds will be set out publicly as an update to this publication ahead of the first such OMO. The Bank intends that the structure of foreign currency bond-purchase tenders will be broadly the same as that for gilt-purchase OMOs.

## *Contingencies*

### *Changes to the MPC meeting schedule*

141 As noted in paragraph 115, 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.

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<sup>45</sup> For example, if the Bank offered to purchase £200mn in a maturity segment, to be split broadly evenly across two bonds, between £75mn and £125mn could be bought of each bond, with purchases of the two bonds totalling £200mn. If, however, the two bonds to be purchased within the maturity segment were not of similar maturities, the Bank would purchase a fixed amount of each bond.

142 In the event of an unscheduled MPC meeting, or in the unlikely event that the announcement of a 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 the announcement of the MPC's decision. If that did not prove possible, any short-term OMOs undertaken before the announcement of the decision would 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.

143 If an emergency MPC meeting were announced to take place on a day scheduled for a long-term repo OMO or a bond-purchase OMO, the operation would be cancelled (see paragraph 146 below).

### *Operational problems with Btender*

144 In the event of operational problems preventing the use of the Bank's Btender system for a short-term or long-term repo OMO at the scheduled time, the Bank may postpone the operation until a later time on the scheduled day. Alternatively, or in addition, the Bank may conduct the operation by telephone.

145 If operational problems prevent the use of Btender for a bond-purchase OMO at the scheduled time, the Bank may postpone the operation until a later time on the scheduled day. If the operation could not be run across Btender on the scheduled day, it would be cancelled.

### *Cancelled long-term OMOs*

146 If, for any reason, a long-term repo OMO or bond purchase OMO were to be cancelled, the Bank does not intend, in general, to re-schedule the operation for another day during that quarter. The size of short-term repo OMOs would therefore ordinarily increase commensurately. The Bank may, however, increase the sizes of long-term repo OMOs or bond purchase OMOs in subsequent quarters.

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

147 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.

### *Large and prolonged Bank note shrinkage*

148 In the event of a reduction in the size of the note issue, in the first instance the size of short-term repo OMOs would fall. If the reduction were to persist, or were too large to be accommodated by short-term repo OMOs, the Bank could repo out bonds for cash; cancel or reduce the size of long-term repo OMOs and bond-purchase OMOs; or sell bonds.

### *Major operational or financial disruption*

149 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 104-5 and 166 respectively.

## **Standing facilities**

150 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.

151 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.

152 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 +/-100 basis points around the official Bank Rate. The Bank expects overnight market interest rates to trade in a much narrower range around Bank Rate in normal circumstances.

153 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>46</sup>

154 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.

155 The standing facilities are available all day. Relevant deadlines are set out in the Operating Procedures within the Bank's Documentation.<sup>47</sup>

156 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).

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<sup>46</sup> 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.

<sup>47</sup> 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.

157 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 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).

158 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>48</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>49</sup> to facilitate timely settlement in the

<sup>48</sup> Under CCBM, the central bank in the country in which the relevant eligible securities were issued acts as the Bank's custodian.

<sup>49</sup> 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.

standing lending facility.<sup>50</sup>

159 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>51</sup>

160 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 final 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 those 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*

161 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

<sup>50</sup> 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. 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.

<sup>51</sup> 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.

facilities after the announcement of the meeting/decision will be based on the official Bank Rate subsequently announced.

### *Very low Bank Rate*

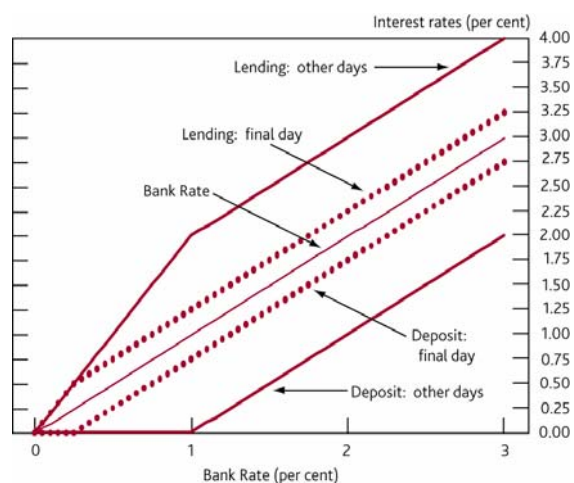
162 The rate paid on the standing deposit facility is normally 25 basis points below Bank Rate on the final day of a reserves maintenance period, and 100 basis points below on other days (see paragraphs 151 and 152 above). If Bank Rate were lower than 25 basis points on the final day of a reserves maintenance period, this formula would lead to a negative rate on the standing deposit facility on that day. And it would lead to a negative rate on the standing facility if Bank Rate were lower than 100 basis points on any other day. To avoid this, the standing deposit facility rate is bounded at zero, as shown in Chart 2.

163 The interest rate charged on the standing lending facility is normally 25 basis points above Bank Rate on the final day of a reserves maintenance period and 100 basis points above it on other days. The rates paid and charged on the standing facilities are thus symmetrical about Bank Rate. This symmetry helps to keep market rates close to Bank Rate (see paragraph 8 above). To preserve the symmetry when Bank Rate is very low:

- when Bank Rate is below 25 basis points, the rate charged on the standing lending facility on the final day of a reserves maintenance period is twice Bank Rate;
- when Bank Rate is below 100 basis points, the rate charged on the standing lending facility on other days in the maintenance period is twice Bank Rate.

164 Rates on both facilities are shown in Chart 2. They remain symmetric around Bank Rate when Bank Rate is very low.

**Chart 2**  
**Rates on Standing Facilities**



### *CHAPS extensions*

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

166 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.

167 A sudden closure of the CHAPS payment system and/or the CREST embedded payment system during the day<sup>52</sup> would leave settlement banks with varying

<sup>52</sup> 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/contingency\\_matrix060317.pdf](http://www.bankofengland.co.uk/markets/money/contingency_matrix060317.pdf).

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 as holdings of reserves.

### *The Stricken Bank Liquidity Scheme*

168 The Stricken Bank Liquidity Scheme<sup>53</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 instruments**

169 The Bank injects central bank money into the banking system by lending against collateral and by buying bonds. Accordingly, it classifies eligible instruments into two groups: those eligible for outright purchase and those eligible as collateral in its OMOs. All instruments eligible for outright purchase are also eligible to be delivered to the Bank as collateral.

### *Instruments eligible to be purchased outright*

170 In its gilt-purchase OMOs, the Bank purchases only those gilts with the following characteristics:

- A maximum residual maturity of less than twenty-one years and, initially, a minimum

residual maturity of three years.

- Conventional issues.
- A minimum outstanding issue size of £4bn. (If the amount outstanding of a bond were to fall below £4bn after the Bank had announced its intention to buy that bond in a specific tender, the bond would not be removed from the tender for that reason.)

171 The Bank excludes from its gilt-purchase OMOs:

- Those gilts that the DMO has announced it intends to re-open at auction, from the date of the DMO’s announcement until the re-opening has been completed.
- Any gilt that is the cheapest to deliver (CTD) in an active futures contract.
- Any gilt that is, immediately prior to a tender, trading at a significant premium in the repo market. For these purposes the Bank currently defines a spread of 100bp or more below the prevailing General Collateral rate to be a significant premium.

172 The criteria governing the foreign currency bonds to be purchased by the Bank will be set out publicly as an update to this publication ahead of the first such OMO.

173 The Bank will arrange its bond-purchase OMOs so that it holds no more than 20% of any individual bond issue at the point of purchase.

### *Instruments eligible as collateral*

174 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>54</sup>

<sup>53</sup> As described on page 137 of the June 2004 *Bank of England Financial Stability Review*, available at [www.bankofengland.co.uk/publications/fsr/2004/fsr16art5.pdf](http://www.bankofengland.co.uk/publications/fsr/2004/fsr16art5.pdf).

<sup>54</sup> Intraday, sterling central bank money is also provided to CHAPS and CREST settlement banks against sterling and euro cash balances held with the Bank.

### *Eligible collateral for repo OMOs*

175 Eligible collateral for repo OMOs comprises<sup>55</sup>:

- Gilts eligible to be purchased outright by the Bank.
- All other gilts (including gilt strips).
- UK government foreign currency debt securities.
- Sterling Treasury bills.
- Bank of England foreign currency debt securities.
- 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/AA- or higher by two of Fitch, Moody's and Standard and Pools.

### *Collateralisation of repo OMOs*

176 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 below 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.

177 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, except on days when the Bank conducts and settles short-term OMOs.

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<sup>55</sup> For more detail see [www.bankofengland.co.uk/markets/money/eligiblesecurities.htm](http://www.bankofengland.co.uk/markets/money/eligiblesecurities.htm).

### *Collateralisation of counterparty credit exposures on swaps*

178 Swap transactions associated with the Bank's planned foreign currency bond-purchase OMOs will give rise to counterparty credit exposures for the Bank. The Bank intends that, under the terms of its ISDA Master Agreement with each relevant counterparty, such exposures<sup>56</sup> will be fully collateralised via the provision of eligible collateral securities each day, based on the Bank's calculation of the mark-to-market exposure. Eligible collateral securities, and the haircuts required, will be the same as for repo OMOs.

### *Collateral concentration limits*

179 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. Once the total collateral provided by a single OMO counterparty or CHAPS sterling settlement bank in OMOs<sup>57</sup> 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.

180 Also, in the case where an OMO Participant and a CHAPS sterling settlement bank are separate legal entities but members of the same group, the £1 billion threshold applies to the total value of all securities provided to the Bank by the two of them, in both OMO transactions (including fine-tuning OMOs and long-term

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<sup>56</sup> Aggregated with exposures arising from any other transactions with the counterparty that are governed by the terms of the ISDA Master agreement. These may include, for example, swaps and forward foreign exchange transactions undertaken by the Bank in the course of managing its balance sheet.

<sup>57</sup> Including, in due course, collateral provided under an ISDA Master Agreement.

repos) and RTGS intraday loans. Where the £1 billion threshold is exceeded, the OMO Participant and the CHAPS sterling settlement bank must each ensure that the total value of the securities of any single issuer (other than HM Government and the Bank of England) comprises no more than 25% of the total value of all securities provided by it alone.

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

## **Contingencies**

### *US Treasury bonds*

182 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 different legal entity within the group provided the OMO counterparty is an authorised bank, building society or securities dealer)	No – although likely to find it useful  (Can be different legal entity within the group provided the OMO counterparty is an authorised bank, building society or securities 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.

*(usually on the first working day in January)*

Planned aggregate size of bond-purchase OMOs for forthcoming year.

### **Quarterly**

*(3pm on the first working day of each calendar quarter)*

Size of each bond purchase OMO for forthcoming quarter.

Update of planned aggregate size of bond-purchase OMOs for remainder of the 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.

*(11.00 am one week before a long-term repo OMO)*

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

*(11.00 am one week before a bond-purchase OMO)*

Size of bond-purchase OMO and details of individual bonds to be purchased.

*(10.40am on day of long-term repo OMO)*

Results of long-term repo OMO.

*(As soon as practicable after 2.45pm on day of bond-purchase OMO)*

Results of bond-purchase OMO.

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

Announcement of MPC interest rate decision.

### **Weekly**

*(9.00 am on the day of short-term repo OMOs, usually Thursday)*

Forecast of the banking system's liquidity need (aggregate target reserves 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).

*(10.10am on the day of OMOs or 12.25 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).

*(10.10am)*

Results of fine-tuning OMO.

**Daily**

*(10.00 am on most days, 9.00 am on OMO repo 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 / early afternoons	Publication of that day's forecast of aggregate holdings of reserves and previous day's actual aggregate reserves (10.00am)	Publication of size of short-term OMOs and daily forecast and previous outturn for aggregate reserves (9.00am)  Weekly one week maturity OMO (12.15pm on MPC days; 10.00am on non-MPC days)  OR  Monthly long-term repo OMO (10.00am)  OR  Monthly bond-purchase OMO (2.15pm)	Publication of size of fine tuning OMO, and daily forecast and previous outturn for aggregate reserves (9.30am)  Overnight fine-tuning OMO (10.00am)  Publication of target aggregate reserves for next maintenance period (11.00am)
16.20	Close of CHAPS for interbank payment  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' reserve 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* (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)
- *Pro forma* ISDA Master Agreement (Schedule and Paragraph 11 will be available on the website in due course)
- Combined application form and questionnaire
- Calendar of operations
- Btender user guide

### 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,  
London EC2R 8AH.