DOING THE ROUNDS

EVER WONDERED HOW **THE BANK OF ENGLAND** IMPLEMENTS THE MPC'S OFFICIAL INTEREST RATE? THE BANK OF ENGLAND DESCRIBES THE BASIS OF ITS OPERATIONS AND PROCEDURES IN THE STERLING MONEY MARKETS.

Many people will be familiar with the process by which the Bank of England's Monetary Policy Committee (MPC) sets the official interest rate in the UK. But there is probably less familiarity with how the Bank of England operates in the sterling money markets each day to implement the MPC's decisions.

The main aim of the Bank of England's operations in the sterling money markets is to implement the MPC's interest rate decisions while meeting the liquidity needs, and so contributing to the stability, of the banking system as a whole. Subject to meeting this aim, the Bank also seeks to promote sound practices, to encourage the development of private sector markets in which banks and other market participants can manage their liquidity and to foster efficiency and competition in these markets, given their importance in the wider financial system.

These objectives reflect the Bank of England's three core purposes:

- maintaining the integrity and value of the currency;
- maintaining the stability of the financial system, both domestic and international; and
- seeking to ensure the effectiveness of the UK's financial services.

OFFICIAL REPO RATE. The Bank of England derives its influence over interest rates in the wholesale money markets from its monopoly of the supply of central bank money – that is, money that is a direct liability of the central bank. The Bank of England is able to set the price (interest rate) at which it provides refinancing by lending to its counterparties in the wholesale money markets. The interest (or repo) rate charged on this lending is the Bank of England's 'official rate', set by the MPC, under powers given by the Bank of England Act 1998.

Changes in the official repo rate influence other short-term sterling wholesale lending and deposit rates, as well as commercial banks' base rates, and therefore the structure of rates across the economy as a whole, including rates in the retail market such as those for variable-rate mortgages and savings deposits. However, these market interest rates may not always change by exactly the same amount as the official rate – other factors, including the extent to which the MPC's interest rate decision has been anticipated, and competitive pressures in the mortgage and retail deposit markets, also influence the levels of such rates.[1]

THE LIQUIDITY REQUIREMENTS OF THE STERLING MONEY MARKET. The fulcrum of the system is the underlying demand for Bank of England money as the final settlement asset for sterling payments, principally in the form of Bank of England bank notes and banks' settlement accounts held with the Bank of England.

Settlement banks are obliged to maintain a minimum balance of zero on their Bank of England settlement accounts at the end of each day.[2] Although the Bank of England holds accounts for some other commercial banks, the vast majority of banks in the UK hold accounts with the settlement banks. Settlement of sterling obligations between settlement banks occurs in the UK's Real Time Gross Settlement (RTGS) system, operated by the Bank of England.

Whether payments are between customers of different banks, between settlement and/or non-settlement banks, through whichever payment system (CHAPS Sterling, CREST, BACS, cheque or credit clearings), or whether between the Bank of England and the rest of the system, settlement ultimately occurs over the accounts which settlement banks hold at the Bank of England.

In its money market operations, the Bank of England, by providing the liquidity needed by the banking system, for same-day settlement, enables the settlement banks to achieve positive end-of-day balances on these accounts. In this way, it acts as the marginal supplier of money to the banking system, enabling effective system-wide liquidity management in normal market conditions.

The Bank of England manages its balance sheet in such a way that participants in the wholesale money markets normally seek refinancing (borrow money) from it on a daily basis: this can be illustrated by the structure of its balance sheet, shown in a simplified form in *Figure 1*. Its principal liabilities are the bank notes in circulation and the deposits made by commercial banks and other customers (for example, other central banks). The single largest asset on the Bank of England's balance sheet is the stock of money market refinancing (which consists of the short-term assets acquired by the Bank of England in its open market operations). As *Figure 1* shows, commercial banks and money market participants need to seek refinancing from the Bank of England when the demand for bank notes rises (when banks and the public increase their holdings of bank notes, they buy them from the Bank of England, creating a liquidity shortage in the banking system as the Bank of England debits the banks' settlement accounts with the cost), or if the level of sterling-denominated deposits held at the Bank of England by banks or other customers increases.

The Bank of England chooses to provide the refinancing required by money market participants by lending to its counterparties for a short maturity in the form of repos or by purchasing bills. When these repos or bills mature, or when commercial banks acquire additional bank notes, a payment is made to the Bank of England. This creates a liquidity 'shortage' in the banking system and, as a result, market participants have to seek refinancing from the Bank of England to enable the settlement banks to achieve positive end-of-day balances on their operational accounts.

The short-term nature of the refinancing provided by the Bank ensures that the banking system almost always has a net shortage of funds each day. This refinancing is largely, although not entirely, conducted through repo transactions, which usually have a maturity of two weeks (10 working days), in which the Bank of England provides liquidity to market participants in exchange for eligible collateral. In this way, the Bank turns over the short-term assets acquired in its money market operations and has an opportunity each day to influence the levels of wholesale and retail market interest rates.

FIGURE 1

SIMPLIFIED VERSION OF THE BANK OF ENGLAND'S BALANCE SHEET AS AT 28 FEBRUARY 2001.

LIABILITIES (£bn)		ASSETS (£bn)	
Bank note issue	27	Stock of refinancing	16
Sterling-denominated deposits from banks and other customers and the Bank of England's capital & reserves	5	Ways and Means advance to HM Government	13
		Other sterling-denominated assets	3
Foreign currency-denominated liabilities	7	Foreign currency-denominated assets	7
Total	39	Total	39

OPEN MARKET OPERATIONS. The Bank of England uses open market operations to supply liquidity because it wishes to foster the development of private sector markets in high credit quality assets, thereby giving banks and other market participants an incentive to use these markets to manage their liquidity. The following sections describe how those operations are conducted in more detail.[3]

ELIGIBLE COLLATERAL. In its repo operations to supply funds to market participants, the Bank of England purchases eligible securities from its counterparties and agrees to sell back equivalent securities at a pre-determined future date, about two weeks later. The interest rate charged on these two-week repos is the official repo rate. Alongside this technique, the Bank of England also offers its counterparties the option to sell it bills on an outright basis. The securities bought are required:

- to be of high credit quality;
- actively traded in a continuous, liquid market;
- held widely across the financial system; and
- available in adequate supply.

The choice of obtaining liquidity by repo or outright sale of securities, and the particular eligible instrument provided as collateral, are usually at the counterparty's discretion, subject to settlement constraints.

The total stock of securities eligible for open market operations is about £2.5trn and, typically, some £15bn-£20bn of these will be held by the Bank of England as collateral for open market operations at any one time. The market prices of these eligible securities can change during the life of a repo transaction. To help protect itself against a potential loss, the Bank of England requires its counterparties to provide it with securities with a greater market value than the amount of liquidity provided.

THE 9.45 AM AND 2.30 PM ROUNDS. The main daily open market operations are conducted at 9.45am and 2.30pm.[4] At 9.45am, the Bank of England releases a forecast of the market's liquidity position for the day on its wire services pages, together with some accompanying information about the principal factors contributing to the forecast, including changes in the note issue, the amount of maturing refinancing to be repaid that day, and the deviation from target (on the previous day) of the settlement banks' balances on their accounts at the Bank of England. If, as usually happens, the market is forecast to be short of liquidity, the Bank invites its counterparties to submit offers for repos and/or outright sales of bills. The Bank of England also states the interest rate at which it is prepared to operate (the repo rate) and the maturity date or dates for the repos.

At the 9.45am round, the Bank of England usually does not supply all of the forecast shortage (even if this amount is fully bid for), since it may need to revise slightly its forecast during the course of the day in the light of updated information. If the aggregate bids for funds exceed the amount the Bank wishes to allot, the bids are pro-rated. The Bank of England also reserves the right to scale down its allotment of funds to individual counterparties. Such action may be taken to reduce what the Bank considers to be an undue concentration of its operations in the hands of a few of its counterparties and so help ensure that access to the liquidity it provides is available as smoothly as possible to a wide range of market participants.

A similar process is repeated at the next round of operations, at 2.30pm, after allowing for liquidity supplied at the 9.45am round. The 2.30pm round is timed so as to make use of later and more accurate forecast information on the market's liquidity needs.

The techniques described above are employed when the banking system is forecast to be short of liquidity. Very occasionally, a surplus of liquidity is forecast. On these days, the Bank of England absorbs the market surplus by inviting its counterparties to place money with it in a short-maturity repo transaction.

3.30PM OVERNIGHT REPO FACILITIES. In the event of a residual liquidity shortage remaining after the 2.30pm round of operations, the Bank of England publishes a forecast of the shortage remaining at 3.30pm and invites bids for overnight repos. The rate applied to these overnight repos is usually set at 100 basis points above the official repo rate. This margin is intended to encourage the market to participate fully in the principal rounds of two-week operations at 9.45am and 2.30pm.

Also at 3.30pm, the Bank makes available a daily overnight deposit facility. This provides counterparties with a standing invitation to make (collateralised) overnight deposits with the Bank of England and so helps to moderate undue softness in overnight market interest rates at the end of the day as counterparties have an option to lend surplus liquidity. To ensure this facility does not discourage active trading between market participants, the interest rate paid on overnight deposits is set normally at 100 basis points below the official repo rate.

The 100 basis point upper and lower 'band' is designed to allow active trading in the sterling money markets but to moderate undue volatility in market interest rates, which might complicate banks' liquidity management and deter the use of money markets by non-financial companies.

4.20PM SETTLEMENT BANK LATE REPO FACILITY. If, after the conclusion of the above open market operations, a residual liquidity shortage remains, typically as a result of unexpected late payment flows, the Bank of England makes available an overnight repo facility to the settlement banks at the end of the day, after market trading has finished, to prevent one or more of them ending the day with a negative balance on their operational accounts.

On days when the residual shortage reflects only a late revision to the day's forecast by the Bank of England, funds are normally provided to the settlement banks at the official repo rate. However, on days when there is a remaining shortage, but there has been no late change to the forecast (and therefore the banks should reasonably have been able to take the necessary funds from the Bank of England earlier in the day), funds are provided at a higher rate, normally 150 basis points above the official repo rate.

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This article is based on a longer paper that can be found at www.bankofengland.co.uk/markets/money/stermm3.htm. A regular report on the Bank's operations is contained in the 'Markets and Operations' article published in each Bank of England Quarterly Bulletin. The Bank of England continues to monitor the workings of its open market operations and keeps under review the possible need for further adaptation.

Notes

[1] For further details about the way in which changes in the Bank of England's repo rate affect other interest rates and their collective impact on economic activity, see *The Transmission Mechanism of Monetary Policy*, a report published by the Monetary Policy Committee available at www.bankofengland.co.uk/montrans.pdf.

[2] In practice, the settlement banks prefer their end-of-day balances to be slightly greater than the bare minimum of zero, in order to cover themselves against uncertainties in their daily cash flows. Consequently, the Bank of England targets a small positive level of bankers' operational balances within its overall forecast of the system's liquidity position each day.

[3] Full and definitive technical details of the operations in the sterling money markets are contained in the Bank of England's Operational Notice, available at www.bankofengland.co.uk/markets/money/mmopnot.htm.

[4] On the days of Monetary Policy Committee decisions, the first round is delayed until 12.15pm.