

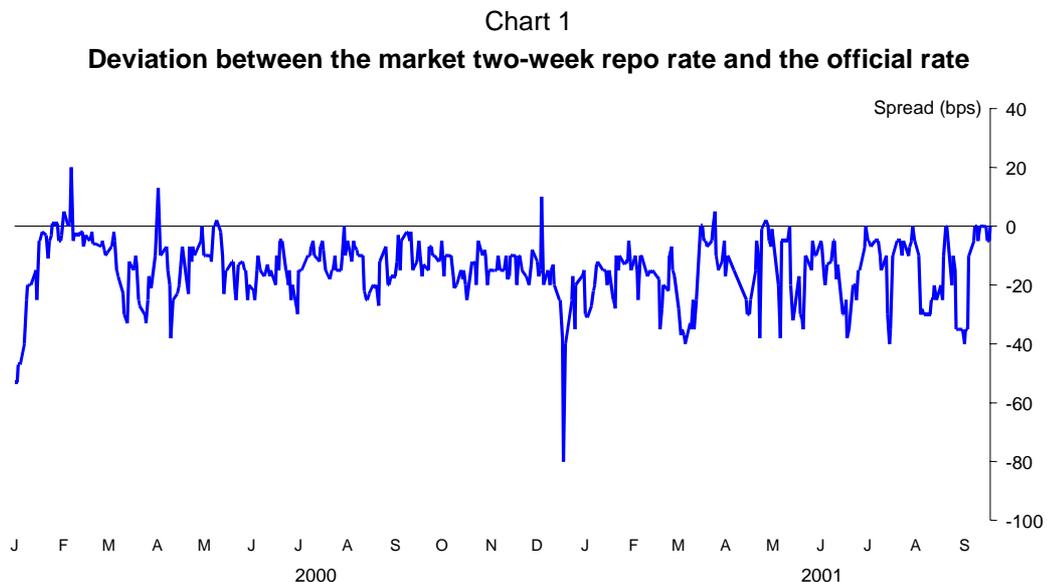
Bank of England open market operations: the introduction of a deposit facility for counterparties

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Introduction

The Bank of England implements monetary policy by lending money for two weeks at the official repo rate determined by the Monetary Policy Committee. The market two-week repo rate is not the same as the official rate. It and other short-term market interest rates fluctuate around the official repo rate in response to market forces. The fact that this is so does not represent a policy problem of any kind. As the phrase “open market operations” suggests, central banks expect to be dealing in an open market with active trading by participants other than themselves.

It is important, however, that market rates, even if they fluctuate, should remain within an acceptable range around the official rate. Over a long period, this has been the case in the United Kingdom, though there have been unusually wide fluctuations in periods of seasonal or special effects, such as year-ends and the century date change. Over the past three years or so (1998-2001), the market two-week repo rate has been on average around 20 basis points below the official rate, but, until late 2000, fluctuations around this norm were usually limited and temporary, with periods of relative softness and tightness broadly offsetting each other (see Chart 1).



In late 2000 and the first half of 2001, however, the deviations of the market two-week repo rate from the official rate seemed to have become larger. At times they were as large as 35-40 basis points. The increased fluctuations in the two-week repo rate were accompanied by increased fluctuations in shorter-term rates, notably overnight rates, which were of larger amplitude than the fluctuations in two-week rates (see Chart 2). The volatility of overnight rates was sufficient to elicit complaints from some market participants. Moreover, at times the fluctuations in rates became large enough to have some apparent impact on rates for maturities as long as a month (see Chart 3), though not for maturities longer than that. Of course deviations between two-week and one-month market rates and the official rate were subject to other influences as well, notably the market expectation about the outcome of the next MPC meeting.

Chart 2
SONIA vs BoE repo rate¹

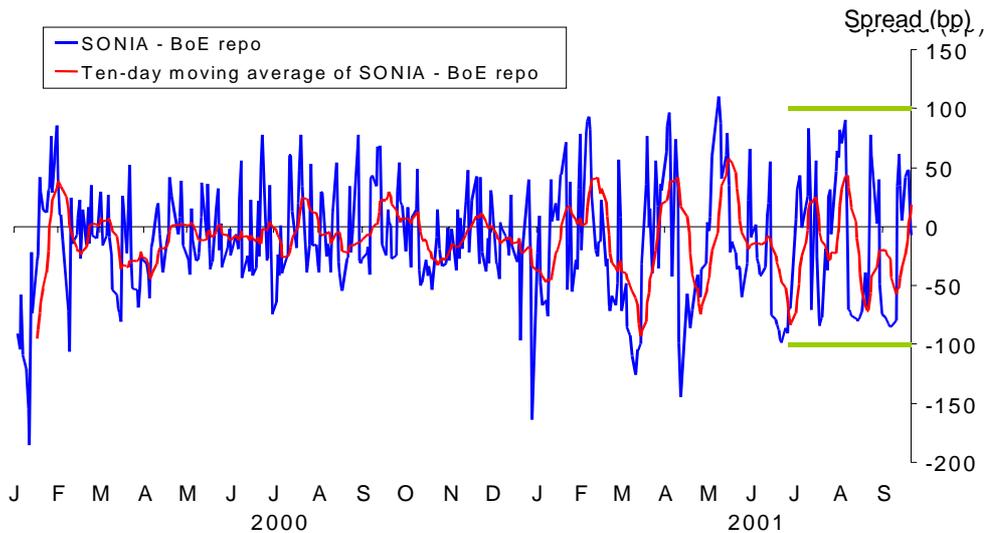
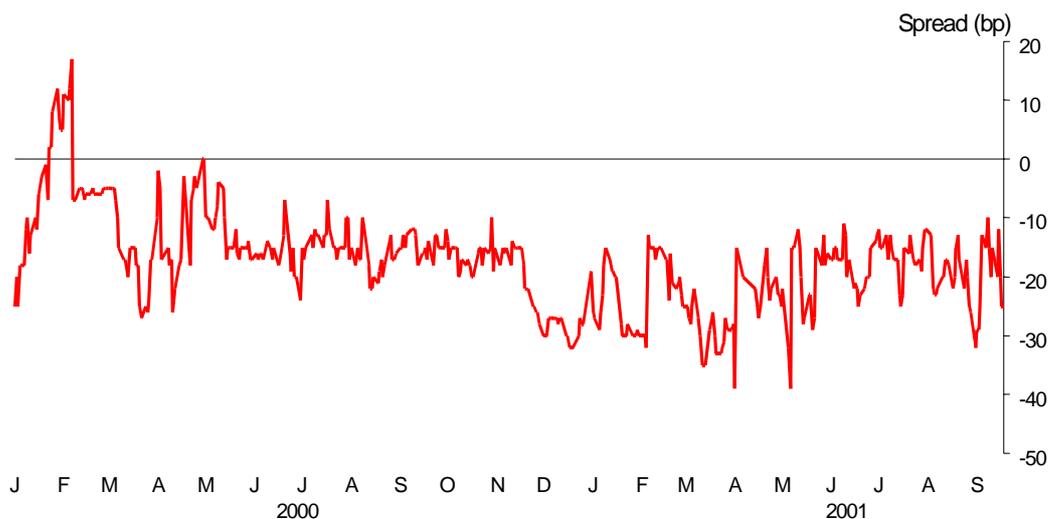


Chart 3
Deviation between the one-month repo rate and the official rate



There was little volatility in the deviation between market rates at maturities of a month and over and the official rate, both in absolute terms and relative to deviations at shorter maturities. Moreover, the one-month-plus deviations in the United Kingdom were of similar amplitude to analogous deviations in the United States and the euro zone. This suggests that the fluctuations in short-dated interest rates did not have a significant impact on the transmission mechanism of monetary policy.

Nevertheless, there were reasons to suspect that the volatility of short-dated interest rates might betray some microeconomic inefficiency in the sterling money market. To help assess whether such inefficiencies existed, and if so what they were, it was necessary to consider the possible causes of the volatility in short-dated rates.

¹ SONIA - the Sterling OverNight Interbank Average rate - which is an average of interest rates at which overnight unsecured funds are traded.

A range of possible causes was suggested to the Bank of England by market participants. Some were more compelling than others, but the suggestions were not mutually exclusive.

One view was that market activity had become more concentrated in the hands of a few large players, who were consequently able to exert more power over the structure of short-term rates. The recent and prospective commercial bank mergers and the withdrawal, late in 2000, of a small but previously active counterparty were tangible examples of this: they illustrated the general trend towards consolidation among money market participants. Participation in open market operations became more concentrated, though this appeared to have been a long-term trend.

A second view was related to the changes in cash management in April 2000, in which the function of managing the Government's cash flow was transferred from the Bank of England to the Treasury's Debt Management Office (DMO). After April 2000, exchequer payments and receipts - previously the most volatile element of the Bank's liquidity forecast - were handled by the DMO. Consequently, the market's daily liquidity need from the Bank became more predictable, thereby reducing one element of uncertainty for market participants attempting to influence the overnight and short-dated interest rate structure (the large expansion of eligible collateral in 1999 could also have been a factor in enabling participants to build greater influence).² Another strand of this argument was that the very large receipt of funds from the sale of 3G telecom licences during 2000 led to a change in the DMO's relationship with the market: it became a regular large *placer* of funds in the market, thereby potentially adding to the softening influences on rates.

The third view was that volatility of short-term interest rates in the first half of 2001 was a function of market conditions and strong expectations of future rate reductions, as bulls' positions had to be funded, possibly forcing down rates at the short end.³ Very strong expectations of interest rate cuts in February, April and May 2001 led to "pivoting" *up* of short-dated interest rates ahead of MPC meetings - reluctance to take funds from the Bank of England at the official repo rate when there was a strong expectation that the rate would be lowered within the two-week repo period. Such pivoting is a normal, temporary phenomenon when rate cuts are expected (the same happens in the euro area) but it *may* have been followed by a similar downward move of market rates after the meeting. A further strand of this argument was that equity weakness/volatility had led to a flight to liquidity at the short end, forcing short-term deposit rates down.

A common feature of all three views was the assumption that it was possible for one or a few large counterparties to exploit their market dominance to force short-dated interest rates down to abnormally low levels. How and why they were able to do so was something of a mystery. The mechanism by which they did so was as follows. They purchased a very large amount of high-quality short-term assets (eg gilt repos, or high-quality certificates of deposit), so that they had a day-to-day financing need that might be a multiple of the daily shortage of funds in the market, which the Bank of England needed to relieve. They would take from the Bank of England all of the funds that were needed to relieve the system shortage, at the official repo rate. That would not be enough to meet their own financing need, so they would bid for funds in the overnight money market (or in other short-dated markets) at a rate far below the official repo rate. They were likely to be the only substantial bidder in this market, and seemed able to use that market to obtain the rest of their financing at low cost.

The mystery in this is the behaviour of the lenders of money in the overnight and short-dated money markets. It would have been open to any substantial lender simply to refuse to accept the rate at which the single borrower was bidding. The borrower had an absolute need for the funds and would have no option but to pay more.

² This, like the other arguments, is contestable. The underlying exchequer flows have not changed since the transfer of cash management, but the financing flows are different.

³ There is an obvious challenge to this argument since it need not have implications at the key two-week horizon.

A deposit facility?

Given the evidence that rates had become more volatile, and more prone to periods of softness, the Bank of England considered what, if anything, should be done about it. We reviewed, and in degree utilised, various options, such as scaling so as to provide a smaller proportion of the funds supplied in open market operations earlier in the day and a correspondingly larger proportion later in the day; and introducing greater variability in the daily pattern of shortages. These devices appeared to have only temporary effects on short-dated interest rates.

We therefore concluded that we should incorporate in our standard daily operating procedures a variation of the “mopping” facility we already use on occasions to absorb excess market liquidity when the market is in surplus, ie a daily deposit facility available at the end of the market operating day at 3.30 pm. The aim would be to put a floor under overnight interest rates to moderate excessive softness (and downward volatility) in the overnight interest rate. Such a facility would match the end-of-day lending facilities that we already operated (see below) to moderate upward spikes in rates, and hence would remove an asymmetry in the existing operational framework.

Our operational techniques normally involve two invitations to our open market counterparties to borrow funds from us on repo for a (roughly) two-week maturity. These invitations are extended at 9.45 am and 2.30 pm. We moderate upward spikes in overnight rates by being ready to supply overnight funds to our counterparties at 3.30 pm (against collateral) if the shortage of funds has not been fully relieved in our main 9.45 am or 2.30 pm rounds. At the end-of-day stage, our operations are concerned not so much with implementing the MPC's repo rate as with the more routine task of squaring off any residual market imbalance in as orderly a manner as possible. The rate charged on 3.30 pm lending is penal - the official repo rate plus 100 basis points (though we can vary this margin) - in order to encourage banks to borrow in the market wherever possible. If, after the market has closed, the system is still out of balance, we will lend off-market to the settlement banks to enable them to square off their end-of-day settlement with each other, at an even more penal rate of the official repo rate plus 150 basis points (again, this margin can be varied). These facilities are designed to eliminate excessive spikes in overnight interest rates at the end of the day, and have been successful in doing so. They are akin to the ceiling in a corridor system of rates, but not exactly so for two reasons. First, they are not standing facilities available at all times to all market participants. Second, funds are normally limited to the amount of the remaining daily shortage (though we reserve the right to supply more). Both these limitations are motivated by our desire to ensure that banks are subjected to the discipline of having to finance themselves in the market to the maximum extent possible.

In the past there were no facilities to limit the extent to which short-dated rates can fall below our official repo rate. Effectively the floor rate has been set at zero, since bankers' operational balances left at the Bank of England at the end of the day are unremunerated. We considered a variety of different options for providing a “floor” for market interest rates. There is a whole family of deposit-type facilities that could attempt to do this. Many of these approaches would have serious drawbacks, or might fail to work in practice because of the structural features of the UK money market. For example, deposit facilities operating towards the end of the day (eg at 4.20 pm or on end-of-day balances) would have the disadvantage of being limited to a small group of counterparties (settlement banks) and consequently might be less likely to influence rates during the trading day. They would also be potentially costly to central bank income. A full-scale (standing) deposit facility, available to all banks, operating earlier in the day, would also be costly to central bank income, and could lead to the central bank becoming much more heavily involved as a dealing counterparty in the money market. Moreover, it would be inconsistent with the practice of conducting open market operations through a group of intermediaries rather than directly with all banks. In any case, regardless of their merits or deficiencies, these solutions would have taken time and imposed costs on the Bank of England and on commercial banks, because it would have been a major logistical exercise to open up deposit accounts for all banks. In any case we did not need to go that far. Instead, we adapted the existing operating facilities slightly, by making a small change that was simple to implement and was unlikely to affect central bank income much.

As indicated above, we were already prepared to supply (collateralised) overnight funds at 3.30 pm if the market shortage was not relieved by our main operations at 9.45 am and 2.30 pm. This was “normally” up to the amount of the shortage - so it was not an unlimited facility. We introduced in addition a parallel (collateralised) overnight deposit facility at 3.30 pm (we called it a “deposit” facility for simplicity, but in practice it is a repo operation, like most of our other operations). Providing

collateral had an advantage over offering unsecured deposits since, though settlement timings are tight, the collateral we supply at 3.30 pm could be used by the placer of funds for other transactions.⁴ The deposit facility is available to all OMO counterparties. We pay a fixed, penal (sub-market), rate, and ultimately retain discretion over whether to accept the funds at all - though would normally expect to do so. In this last respect there is a degree of residual asymmetry in the permissiveness of our deposit and lending facilities at 3.30 pm, in that, in the deposit facility, we will normally take whatever amount our counterparties want to deposit with us, whereas, if we are lending, we will normally only lend the market's remaining shortage.

If we operate at 3.30 pm using this deposit facility, we recycle the funds in the 4.20 pm late facility to settlement banks in order to rebalance the market. That means that we generate a positive operating margin for the Bank. That represents a disincentive to using the facility, but the facility does nevertheless provide an escape route for those long of money should they need one. The attractiveness of the facility depends on the width of the band. Before the facility was introduced, banks that were long of money had no such escape mechanism since rates were not "floored", while those that were short had the advantage of knowing that there was a ceiling. This was an asymmetry that at least some OMO participants seemed able to take advantage of. In introducing the facility, we did not expect much activity in the deposit facility with the Bank, but we expected that overnight rates would generally be constrained within the band and might perhaps gravitate towards the centre of the band - close to the official repo rate. We also thought that we might see a wider range of counterparties participating more actively in our operations, as they were incentivised by a more symmetric market rate structure.

Deciding on the width of the interest rate corridor was difficult. A wide corridor or band would not bind on many days and might not have much effect. A narrower band would have more effect and would have been likely to generate more business with the Bank of England, but it would erode incentives for borrowers and lenders to meet in the commercial market. We did not want our operations to overshadow normal market trading: a key feature of our current money market arrangements is that banks must test their name in commercial credit markets regularly. Related to that, any corridor would need to allow for credit tiering, since widening credit spreads are an important signal of potential financial stress.

We thought that there would be merit in maintaining symmetry, ie having an overnight deposit rate which is the same amount below the repo rate as the overnight lending rate is above it. Our judgment, informed by statistical analysis, was that the deposit rate should be 100 basis points below the official repo rate. On this basis, we did not expect the deposit facility to have an effect on the money market on more than 5-10% of days. We retained the option to change the margin if we think it would be desirable.

Experience with the facility

From 27 June, when the facility was introduced, up to 15 October 2001, eight deposits were placed with the Bank of England on seven days. Of these eight deposits, two or three were for small amounts and were placed for the purposes of testing systems and procedures, rather than for immediate market-related reasons. As would have been expected, the days when substantial deposits were placed with the Bank were days when short-dated interest rates were below the official repo rate by an unusually large margin. On those days, the existence of the facility presumably prevented the margin between the official repo rate and short-dated market rates from being even wider. Even if no deposits were placed, however, the existence of the facility would be expected to affect market behaviour.

A provisional judgment, based on a few months' experience, is that the existence of the new facility has somewhat narrowed the range of fluctuation of short-dated interest rates around the official repo rate. Indeed, the range of fluctuation has been contained within 100 basis points either side of the repo rate, as Chart 2 shows. The fact that five or six deposits have been placed for market-related

⁴ It could not be resupplied to us at our 4.20 pm facility however, because of the relative timings of deliveries-by-value and member-to-member repo transactions.

reasons, mainly fairly early in the life of the facility, suggests that the facility has had some impact on the market, and that the placing of the deposits has been part of a process of learning about the effect of the facility. However, the causes of the fluctuations in short-dated interest rates seemed to be unaffected by the facility and remained in some degree unclear.