The pretend market for money

The text below closely follows that of an article originally appearing in the August 2007 edition of Central Banking, published by Central Banking Publications.

Most of the leading central banks have a committee that decides on monetary policy. Periodically the committee meets, reviews economic developments, makes some form of assessment about what might happen in the future and decides on an appropriate level of interest rates. These decisions attract much comment and interest.

Having made such a decision—that the interest rate shall be *x*%—that decision then needs to be implemented. The central bank must lend or borrow, or do something in financial markets to make that interest rate happen. The system by which each central bank implements monetary policy attracts far less comment, even though it is something that central banks currently do far less well than the (more important) monetary-policy decision itself.

Central banks implement monetary policy using systems of considerable complexity. To justify to the reader that this complexity is not only unnecessary, but also expensive, we start by describing how easily monetary policy could be implemented and then move on to explain some of the features of how it is currently being done.

In most countries the banking sector needs to borrow money from the central bank. Banks withdraw physical cash from the central bank, and—mostly—need to pay for this cash with borrowed money. However, in some countries some money is lent to the government rather than the banks: the government's employees and contractors then deposit the money into the banks. In Britain, for example, the banking system needs to borrow about £26 billion from the central bank—the £39 billion banknote issue less the government's £13 billion overdraft. These numbers vary along with the size of the note issue—larger at weekends and over public holidays—but nonetheless the banks are almost always in the position of borrowing from the Bank of England.

Quite rightly, central banks do not consider themselves to be in the business of taking credit risk. So they do not lend unsecured. Instead a central bank will lend only against high-quality collateral. Typically central-bank lending is done in the form of a repo: the central bank lends money to a bank and takes a government bond as collateral. Should the bank become insolvent, the central bank could recoup its losses by selling the government bond.

This provides the building blocks of an alternative framework for how a central bank could implement a monetary policy. A central bank should be willing to lend money to good counterparties against good collateral, overnight and in good size, at the policy rate of 5%. A central bank should be willing to accept overnight deposits from the banking system at a slightly lower rate, say, 4.9%.

With the central bank having a standing facility to lend huge sums at 5%, the cost of overnight money, for good counterparties with good collateral, cannot go above 5%. And, with a standing facility to accept huge deposits at 4.9%, overnight inter-bank interest rates cannot fall below 4.9%. Because the banking system is a net borrower, typically the price of money will be nearer the cost of borrowing—the policy rate of 5%.

For reasons of prudence the central bank's standing facilities should not be infinite in size. If a counterparty were to become insolvent the collateral would have to be sold, and this might entail a loss. In Britain, where the banking sector needs to borrow a total of about £26 billion, a sensible upper limit for lending to any one

Finding the right spread

How wide should the gap between the central bank's deposit and lending rates be? Since 1999, the world's leading central banks have typically moved policy rates by ±25 basis points to a new level below 5%, otherwise by an amount of about one twentieth of the new level. That suggests a default lending/deposit gap of something like the greater of ten basis points and 0.02 × the lending rate. So a policy rate of 5% would mean a central-bank two-way price of 4.9%/5%.

Why not have a zero gap? If there were a zero gap, the size of trades would typically be constrained by the maximum allowable transaction sizes (which are necessary for credit reasons). In general, it is more efficient if a price rather than a quota constrains volume, and these bid/ask spreads of a few basis points suffice to keep finite the desired transaction sizes.

large bank might be something of the order of £20 billion. As the banks are net borrowers, the limit on a bank's remunerated deposit with the central bank could be smaller: perhaps half the maximum overdraft, so £10 billion per bank. Larger borrowings would be prohibited; larger deposits would not be remunerated.

To summarise, with standing facilities of such size, overnight rates against good collateral would not go above 5%, and would not go below 4.9%, and would usually be at or near the top of the range. It could be that easy.

This approach of having a large "overdraft" facility at the policy rate and accepting deposits slightly below that rate is not the way leading central banks choose to implement their policy decisions. Instead they use reserve averaging, which is more complicated. In effect, banks have two accounts with the central bank. Each bank has a reserve account, and can also deal on a separate account via open market operations (which are, in fact, neither open nor at a market price). This will need more explanation. The Bank of England's Red Book from February 2007 provides the following explanation of its "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 [Monetary Policy Committee] 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.*

The Bank's *Quarterly Bulletin* for the first quarter of 2007 says that aggregate reserves targets are about £16 billion. Since the banks are required to keep this £16 billion on deposit with the Bank, the central bank will have to lend this money to the same banks, as well as lending the £26 billion explained earlier. Again from the Red Book:

> *Open Market Operations (OMOs) are used to provide to the banking system the amount of central bank money needed to enable reserves scheme members, in aggregate, to achieve their reserves targets. OMOs comprise short-term repos at the official Bank Rate, long-term repos at market rates determined in variable-rate tenders, and outright purchases of high-quality bonds.*

But, rightly, the Bank understands that the two features above, between them, would not be sufficient. For example, one private-sector bank might be able to borrow so much money from counterparties that, on the last day of the reserves period, it becomes a de facto monopoly supplier of funds, presumably at an extravagant rate. Accordingly, the Bank maintains "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.*

These standing facilities resemble the proposal above, albeit with some changes. First, these facilities need to be invoked actively, rather than being applied automatically to end-of-day balances. Second, because the Bank endeavours to supply the correct amount of central bank money via the three types of open market operations, these standing facilities are centred on the policy rate. Third, the band is very wide, on most days being ±100 basis points around the policy rate. Even on the last day, when banks can make any adjustments needed to bring the average within the target, it is still ±25 basis points.

If the Bank of England were to misjudge how much money is needed (perhaps because an unexpected value of banknotes are withdrawn, or because money is moved between the private sector and the accounts of the foreign central banks at the Bank), these standing facilities would bridge the gap. But their main purpose is disciplinary: guaranteeing to participants that, on the last day of the reserve period, money will be within 25 basis points of the policy rate.

So the Bank of England, therefore, is implementing monetary policy by agreeing with banks how much money they will have on average, estimating how money is needed to achieve that and

supplying it via short- and long-term repos and purchases of bonds, and finally patching any holes in the system with standing facilities. Why all this complication when it could be so much easier? When central bankers are pressed about this subject, variations on three answers are heard:

First: Financial stability. Excuses that mention "financial stability" are easily dismissed. Yes, the manner in which the Bank of England implemented monetary policy prior to 2005 was much worse. But the current three-part method is less robust than a simpler facility of charging the policy rate on the first £20 billion of overdrafts, and remunerating the first £10 billion of end-of-day balances slightly below the policy rate. Relative to this, the current system requires traders, settlement staff and telephone lines. To be more explicit, there is no possible disaster, including bird flu, transport failures, terrorism, power outages, and multiple banks' insolvency, that would take down the simple system but leave functioning the more complicated system. Financial stability may be a catch-all phrase that politicians never dare to challenge, but cannot be the real reason.

Second: Banks should manage their own liquidity. Commercial bankers, central bankers often suggest, should be able to manage their own liquidity. They should be able to borrow in the market, without relying on the central bank to manage liquidity on their behalf. They should "test themselves" in the market. Perhaps this was good policy two decades ago. Certainly it was barely so a decade ago, but now has lost all validity.

Consider the position of a small bank of modest credit rating that needs to borrow. If it has no collateral, then it has to "test itself" in the market for unsecured debt. It already does so under the current method of implementing policy, and would under the simpler method. But if it has good collateral then it can borrow with great ease: short-term debt is so easily exchangeable for cash that owning the security is effectively equivalent to having the liquidity.

Indeed, a small hedge fund with no rating—a Cayman Islands entity, not a bank, not regulated, no local physical presence—can trivially use ownership of such a government bond to borrow money. Having a trading desk and support staff to do this is not "testing" anything except the central banks' willingness to require the cost of having these staff.

I suspect that this justification is a hangover from Walter Bagehot, who made a strong distinction between an insolvent bank (not worth saving) and a solvent illiquid bank (which should be helped by a central bank). It seems that central bankers still believe that a bank can be solvent enough to own collateral that is good at the central bank, but not sufficiently solvent to borrow in the markets. Not any more, not in a world of RepoClear and delivery-versus-payment.

Third: Promote a market. The last excuse is more interesting, and though related to the second, more subtly flawed. The Bank of England's handbook on monetary operations cautions that "over-reliance on central bank intermediation can hamper the development of active secondary financial markets." The handbook adds:

> *Most central banks are reluctant to operate in both directions (ie to borrow from and lend to the banking system) on the same day, fearing that it could inhibit the development of the commercial money market … [To promote] an active secondary financial market, the rates used on both facilities should be sufficiently penal so as to discourage banks from seeing the facilities as an easy alternative to the interbank market.*

In other words, all the complication is simply to promote a market. Is that worthwhile? That depends on the purpose of a market, a topic on which economic theory has much to say. Under various assumptions, mostly true, a market discovers the price that maximises the sum of the producer and consumer surpluses. That is, the market price is the price that maximises the producer profits plus the consumer profits. Markets, therefore, have the effect of discovering this efficient price.

But markets are not costless. For a bank to be a participant in this market will require two traders, at least two settlement staff, risk management people, auditors, and computers and space for all these people. In principle, this may be a price worth paying if the market discovered a price that maximised a surplus. But, of course, all this market paraphernalia is there to "discover" a price that is actually set by a committee. This is not even a real market: this is a pretend market, a Potemkin market—all appearance and no function.

Leading central banks, if they could be persuaded to stop pretending that there is a proper market in overnight secured money, could implement monetary policy slightly more effectively, slightly more robustly, and could save the economy the substantial cost of all these people employed to do nothing useful.

— Julian D. A. Wiseman
New York, July 2007