Paul Fisher: Managing liquidity in the system – the Bank's liquidity insurance operations

Speech by Mr Paul Fisher, Executive Director, Markets, and Member of the Monetary Policy Committee of the Bank of England, at the Loan Market Association Syndicated Loans Conference, London, 30 September 2010.

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The Bank of England uses its balance sheet to support its core objectives of both monetary and financial stability. The financial crisis over the past three years has clearly placed more emphasis on the latter. So, this morning, I want to set out how the Bank has developed its "Sterling Monetary Framework" in order to support financial stability: in particular what we refer to as the "liquidity insurance" operations. Since the liquidity of the banking system is crucial to the functioning of financial markets, this should be of direct interest to the LMA's members. I intend to briefly describe the main facilities as they now stand, including changes made during the past three years. I then want to address some topical issues that have arisen.

Central bank money and monetary policy

The balance sheet of a Central Bank plays a crucial role in the implementation of its policy objectives. In a Quarterly Bulletin article earlier this year, we set out an analysis of how the Bank of England's balance sheet evolved during the financial crisis.[1] Let me briefly spell out the main elements. The main entry on the *liability* side of the balance sheet is "central bank money", comprising banknotes, which are supplied on demand, and the reserve accounts of commercial banks and building societies.[2] These are effectively sterling current accounts for the commercial banks – they are among the safest assets a bank can hold and are the ultimate means of payment between banks. In normal circumstances, the main entry on the *asset* side of the balance sheet is the Bank's lending to those same commercial banks.[3] In setting monetary policy, our normal objective would be to lend exactly the amount of central bank money demanded, consistent with the MPC's choice of Bank Rate. Crucially, although the targets for reserves accounts may react to the state of financial stability in the system, the Bank's choices here are dictated by the stance of monetary policy.

In normal times, we ask the banks to choose their own targets for reserve accounts and then lend just enough cash to the ***system*** as a whole so that the banks can collectively meet the aggregate of their targets. The commercial banks will then lend to, or borrow from each other in the inter-bank market, to distribute the total amount of cash around the system so that each individual institution can meet its target. Each bank is incentivised to meet its reserves target by the application of penalty rates to those who are – on average over a monthly maintenance period – either excessively short or long. If an institution cannot meet its target through the inter-bank market, it can use the Bank's standing deposit and lending facilities. Under these facilities, reserve account holders can deposit with, or borrow from the Bank overnight for unlimited amounts at a fixed penalty to Bank Rate. So in practice, these facilities impose a narrow corridor on either side of the Bank Rate. For example, if it becomes cheaper for a commercial bank to borrow under the standing facilities than to borrow in the

[1] Cross, Fisher and Weeken (2010), *Quarterly Bulletin*, 50, 1, pages 34–42.

[2] For the rest of this speech I will take references to "banks" to include building societies.

[3] Exceptionally at the current moment, the main asset is a loan to the Bank of England Asset Purchase Facility Fund.

market, then it will do so, providing a natural ceiling to short-term market interest rates. That in turn ensures that overnight interest rates[4] remain close to Bank Rate set by the MPC.

Exceptionally, to fund the programme of asset purchases in 2009/10, the Bank unilaterally increased the size of commercial bank reserves on a massive scale – from around £36bn at the start to a peak of around £164bn. Since that level was far in excess of the commercial banks' own targets we suspended the reserves averaging system and agreed to pay Bank Rate on all reserves held with us. And, in place of lending to the banks, we supplied the extra cash to the system by the direct purchases of assets. I want to stress that the banks had no choice but to accept that their collective holdings of reserves would go up. Of course, individual banks could have tried to pass the money in these accounts on to each other, but unless it was withdrawn in the form of banknotes, then it would just go round the system and end up, each day, back in an account with the Bank of England. And by paying Bank Rate on all reserves, we retained close control over market rates, even though the quantity of central bank money was swollen.

Using the balance sheet to support financial stability

Given that these mechanisms are used to implement monetary policy set by the MPC, then what else can a central bank do with its balance sheet to support financial stability, independently of those monetary policy decisions? That's the question that I want to focus on in the rest of this talk.

The nature of a commercial bank's business fundamentally involves maturity transformation. Customer deposits may be available for instant withdrawal while bank lending to corporate and households tends to be committed, potentially for many years. As a result, banks typically run significant liquidity risks. The provision of a central bank reserves account helps commercial banks to manage their liquidity risk, by allowing them meet their ordinary payments needs, including normal intra-day variations. But at times, even a well-run bank can suffer an unexpected shortage of liquidity. To mitigate that risk, the central bank provides back-stop liquidity insurance to both individual institutions and to the system as a whole under stress (as in the aftermath of Lehman's collapse, reflecting a system-wide increase in both credit and liquidity risk). The objective is to reduce the cost of liquidity disruptions for solvent and viable institutions and so maintain the flow of payments services of the UK financial system. But in meeting that objective, the Bank must ensure that it guards against moral hazard, by setting the incentives in such a way that discourages anything but exceptional use of our facilities, and that it adequately protects its own balance sheet from risk of loss.[5]

Operational Standing Facilities

The process of reserves averaging should deal with small unexpected liquidity shortages or long positions. For larger shocks, the most immediate short-term form of liquidity insurance is the Bank's Operational Standing Facilities which, as well as helping keep short-term interest rates close to Bank Rate, can help individual firms cope with frictional stress such as operational disruptions and short-term volatility in market interest rates. Under these

[4] Since lending to the Bank is free from credit risk, it is the secured overnight rate – up to the next MPC decision date – that should be broadly in line with Bank Rate.

[5] The intention is to avoid a firm drawing on publicly-provided liquidity support mechanisms if they actually have a fundamental problem of solvency or viability. But liquidity risk can never be completely distinguished from solvency risk at a point of stress.

facilities, reserve account holders can deposit with, or borrow from the Bank overnight for unlimited amounts at a penalty to Bank Rate.[6]

Open Market Operations

The Bank's Open Market Operations (OMOs) take the form of reverse repo operations – economically equivalent to secured lending – at different maturities. Normally we would lend (cash) short-term for one week and longer-term for multiples of three months. Short-term repos have not been needed regularly since we started to inject cash directly via the asset purchase programme. But normally short-term lending operations would take place weekly at a size designed to be consistent with the commercial banks' aggregate reserve targets for that maintenance period. This short-term lending takes place against a relatively narrow set of high quality collateral – mainly government bonds. The price has usually been Bank Rate[7] and bids pro-rated.

Short-term repos are not intended to provide any back-stop liquidity support. They are limited, competitive and take a narrow range of high quality collateral. They are designed to help implement the monetary policy stance. If there is excess central bank money in the system relative to reserve targets, the Bank can also drain cash out. We can do this either by repo of bonds held on the Bank's balance sheet or by offering to supply one-week Bank of England bills at Bank Rate.[8]

Longer-term repos have a monetary objective in part. It is not necessarily efficient to lend very large amounts of cash every week in short-term repos. It would imply that the market was consistently short of cash in large size on a week-by-week basis, perhaps putting unnecessary strain on the inter-bank lending market and on the Bank's operations. That strain could, perhaps, cause unwanted volatility in overnight rates. By lending a proportion of the cash for longer term – three months or more – the Bank can ensure that the size of short-term repo operations are set at an appropriate level.

Using longer-term repos to meet financial stability objectives has grown in importance during the financial market crisis. They can provide liquidity support in at least three dimensions: maturity, size and collateral type. The inter-bank market has been quite disrupted at times during the past three years. Counterparty credit concerns have limited unsecured lending, and liquidity was sometimes hoarded. A range of asset managers increased their holdings of cash at increasingly short maturity – ultimately in overnight accounts – concentrated in what they assessed to be the safest banks. In consequence, other banks struggled to get the liquidity they needed via market mechanisms, particularly term borrowing, even when there was more than sufficient cash in the system as a whole and even if the firms had good quality collateral. The amounts being rolled in overnight markets became a risk in itself. The Bank responded by massively increasing its lending at three months maturity from £12bn before the crisis to a peak of around £180bn in early 2009. Essentially we chose to lend so that any bank which needed to could bid for and obtain liquidity at three months. The significant increase in term liquidity that ensued meant that there would have been downwards pressure on short-term interest rates. So in order to keep market interest rates close to Bank Rate, the Bank drained the excess liquidity via issuing Bank of England bills. At its peak, the Bank issued around £100bn of one-week bills.

[6] Currently, the deposit rate is zero and the borrowing rate 75bps. In more normal conditions, these spreads can be expected to be symmetric around Bank Rate.

[7] The Bank can choose to lend in variable rate repos. This happened for a brief period in mid-2009.

[8] Again, variable rate bills could be used. This happened during the first few months of the asset purchase programme.

This process of lending on one side of the Bank's balance sheet and borrowing on the other – both in large scale – effectively dis-intermediated the malfunctioning sterling inter-bank market, ensuring that central bank money got to all those counterparties which needed it.

In addition to the greater size and longer maturity of lending, the Bank also widened the pool of collateral eligible in the three-month lending operations to accept high-quality private sector securities.[9] These included AAA RMBS and covered bonds, neither of which had previously been taken as collateral by the Bank in OMOs.[10] This provided further support to the banking system, at a time when both primary and secondary markets for these private sector securities had closed.

The temporary expansion of long-term repos during the crisis raised a number of important policy questions for the Bank. Firstly, it was very difficult to decide exactly how large the operations should be. This had to be assessed by reading market conditions. Secondly, the Bank also had to set an appropriate price to charge for lending against wider collateral, to mitigate adverse selection and the moral hazard risk. A minimum 50 basis point spread was applied. Thirdly, since the increase in the Bank's liabilities (commercial bank reserves) was being funded at Bank Rate, and the assets were earning rates linked to 3-month market rates, there was a significant interest-rate mis-match. When Bank Rate was cut rapidly and by more than was anticipated by the market during Autumn 2008, the Bank recorded a large, unintentional surplus.[11] In the permanent regime, it is important that the Bank not be exposed to the risk of a large loss if Bank Rate were to be increased above market expectations.

In June 2010, those operations were replaced with a new permanent framework designed in part to reflect these concerns. The operations, pioneered with the invaluable help of Paul Klemperer from Nuffield College, Oxford, are known as "Indexed Long-Term Repos". The most innovative aspect is that banks can bid to borrow cash against either the normal, "narrow" collateral set – as standard in short-term repos – or a "wider" set of collateral, including private sector securities. Counterparties can submit bids using one or both types of collateral. They can even make a "paired bid", quoting spreads at which they would be indifferent between the two collateral sets. The Bank of England then allocates a proportion of the operation against wider collateral, where that proportion depends on the spreads offered. The idea is that as the market becomes more stressed, counterparties are willing to pay more to borrow against wider collateral. As the clearing spread rises the Bank, automatically within the auction, lends a greater proportion against wider collateral. The clearing price is the intersection of the revealed demand schedule of the firms bidding and the private supply schedule of the Bank of England. After each ILTR operation, the Bank can use the pattern of bids to help assess whether the total amount on offer needs to be changed for the next monthly operation. In addition, we decided to index the clearing spreads to the subsequent out-turn for Bank Rate, with a minimum spread of zero so that there is no interest-rate risk to the Bank of England.

Finally, the Bank is also able to respond to strains in short-term foreign currency funding markets, utilising swap lines with other central banks to conduct foreign currency OMOS. For example, in September 2008, the Bank, in concert with a number of other central banks, announced coordinated measures designed to address continued elevated pressures in US dollar short-term funding markets.

[9] Initially the collateral list was expanded in the Autumn of 2007 and then again in Autumn 2008.

[10] Our approach to risk managing these securities has been set out in the Quarterly Bulletin. See Breeden and Whisker (2010), *Quarterly Bulletin*, 50, 2, pages 94–103.

[11] See Bank of England (2009), *Annual Report and Accounts 2009*.

The Special Liquidity Scheme

During early 2008, following the collapse of Bear Stearns, and with the continued closure of the securitisation markets making mortgage-backed securities and hence mortgages substantially illiquid, it became clear that additional and exceptional liquidity support would be needed for the UK banking system. The Special Liquidity Scheme was designed to provide that support on a one-off basis, in large size and for a long maturity. The form of the Scheme was an asset swap (effectively a collateral upgrade). For a fee, the commercial banks were lent nine-month Treasury bills against a broad set of eligible collateral. In practice the collateral received in the Scheme was dominated by own-name residential mortgage backed securities (RMBS and covered bonds). The banks could use the Treasury bills to raise liquidity in the market, at a time when the primary, secondary and repo markets for RMBS were all closed. These bills were also eligible in the Bank's repo operations.

The Scheme was limited to lending against collateral that was held on balance sheet at the end of 2007. The principle was that the Bank shouldn't support the banks in issuing new securities for which there might not be a private market or to subsidise new lending.[12] The fact that the Special Liquidity Scheme was a form of asset swap meant that it had no impact on the supply of central bank money and thus no direct implications for monetary policy. Following standard accounting practice, it was not on the Bank's balance sheet.[13]

The Scheme will expire at the end of January 2012. It will not be extended or replaced. After three years of large-scale liquidity support the Bank expects each institution to be in a position to fund itself through normal market mechanisms. In order to prevent a refinancing "cliff" at the end of 2011, the Bank has had bilateral discussions with the main users of the Scheme to ensure that there are credible funding plans in place to reduce their use of it in a smooth fashion. Of the £185bn of Treasury bills initially advanced, some £57bn has already been repaid.

The Discount Window Facility

Alongside the Operational Standing Facilities to cope with short-term frictional shocks, and Long-Term Repos to cope with system-wide liquidity shocks, the Bank's Discount Window Facility offers large-scale liquidity support for idiosyncratic as well as system-wide shocks. The Discount Window was launched during the heart of the crisis in October 2008. It allows banks and building societies to borrow gilts against a wide range of collateral, at fees reflecting the type of that collateral and the size of the drawing relative to the size of the firm. Although similar in principle, the Discount Window is ***not*** intended to be a direct replacement for the Special Liquidity Scheme. It is both shorter-term and more expensive in steady-state, in line with the underlying principles for all the Bank of England's permanent liquidity insurance operations: that commercial banks should be incentivised to manage their liquidity risk prudently in the market. The terms were also designed to protect the Bank against risk to its own balance sheet.

Transactions under the Discount Window facility are intended to be for a maximum 30 days, although they can be rolled. In recognition of continuing stresses in financial markets, the Bank announced in January 2009 that, for an additional fee of 25 basis points, it would temporarily permit drawings from the Discount Window with a maximum term of 364 days.

[12] Because covered bonds and master trust RMBS are based on revolving pools of mortgages, an exception was made to accommodate them, but with a strictly declining limit over the three year life of the Scheme.

[13] But it did require Treasury agreement for the Debt Management Office to create and lend the additional Treasury bills, and for the Treasury to underwrite the Scheme should there be any losses.

Access to the Discount Window is only permitted for firms that are considered by the Bank to be solvent and viable. Nevertheless, large scale borrowing from the central bank can generate credit risk concerns in the minds of market counterparties. To avoid this "stigma", the Bank releases information on the use of the Facility averaged over counterparties and over a three-month period, released with a further quarter's lag.

Following a market consultation, the Bank has recently announced that, as of early next year, it will extend the range of collateral it is willing to take in the Discount Window to include diverse portfolios of "raw" loans.[14] This extension has a number of advantages. Securitising loans into asset backed securities – such RMBS – is expensive and only available to firms large enough to have a securitisation programme. Allowing portfolios of loans to be used directly as collateral means that a smaller firm, without a securitisation platform, can also access the Window. Since financial instability can start with smaller banks just as easily as larger ones, expanding the universe of possible Discount Window counterparties has a significant financial stability benefit. By eliminating the need for securitisation, it also reduces somewhat the costs for all firms in maintaining a portfolio of collateral pre-positioned at the Bank of England. We encourage counterparties to lodge collateral with the Bank and to use it to test the system. This ensures that they are able to draw on the Facility immediately in a time of need so that the system is prepared for and protected against further bouts of instability.

We were very grateful for the LMA's thoughtful response to the Bank's consultation on DWF collateral and, in particular, for their very positive support of our proposal to take portfolios of loans. We did not agree on everything that the LMA wanted! We feel it would be inappropriate to take leveraged loans as collateral for example, given the higher risk associated with them. But we look forward to working together in the future. Amongst other things, sorting out the documentation of loan portfolios will be an important priority for both us and for the LMA going forward.

Related issues

Having described the Bank's liquidity insurance operations, I want to address a few Related issues which are sometimes raised with me. The first concerns the state of the securitisation markets and that for covered bonds in particular. In Europe, the ECB routinely takes covered bonds and other private sector securities as collateral in all of its operations. And there is a perception of state support for the covered bond market, perhaps because covered bonds have often been issued by quasi-state banks. The Bank is occasionally lobbied by industry representatives to offer more support to the covered bond market. I want to make three points in response.

First, that RMBS and covered bonds are already eligible collateral in both the Indexed Long-Term Repo operations and in the Discount Window Facility alongside a range of other private sector securities.[15] It is only short-term OMOs, which are conducted for monetary policy purposes, where such assets are not eligible. In order to help manage the risks arising from securitised assets, and to help improve market functioning by establishing higher standards, the Bank will be demanding detailed disclosures – to the Bank and publicly – on the underlying assets and structures. This transparency initiative has generally been welcomed by investors and we hope it will encourage the establishment of viable securitisation markets in future.

[14] Further details are available on the Bank's website at http://www.bankofengland.co.uk/markets/marketnotice100719.pdf.

[15] A bank may not submit its own covered bonds in Long Term Repos, only those of other issuers. But it may submit either in the DWF.

Second, the Bank's permanent operations are intended to offer liquidity support for the banking system, not for the market in any one particular type of security. Intervening in a partial way could create unfortunate market distortions. If there is a genuine market for a private sector security, it should be able to support itself in the medium-term without special forms of liquidity support from the authorities.

Third, the asset purchase programme, although focussed on buying gilts, was intended to support the liquidity of all private sector securities by forcing would-be gilt holders to purchase more risky assets (rather than by direct central bank purchases of those assets). There is plenty of evidence to suggest that was indeed the outcome and most private sector markets have recovered to some degree. The covered bond market has also been supported by the introduction of FSA regulations, to provide additional comfort for investors.[16]

A second topical issue is bank funding more generally. It is often asserted that the Special Liquidity Scheme provides a funding source for banks and that, given continuing pressures on them to raise funds to support lending, we should extend the lifetime of the Scheme. The first point to note is that the Scheme ***facilitates*** funding but does not provide it directly. Rather, as I have outlined today, the SLS provides a collateral upgrade and the private sector remains the ultimate source of funding as the Treasury Bills lent under the Scheme are turned into cash in the market. A similar point can be made about debt issued under the Government's Credit Guarantee Scheme – the Government provides a guarantee but it is still the market which buys the bonds and provides the cash. As these schemes come to an end, the challenge for the banks is not so much the sourcing of an additional quantity of funding. It is to roll over that existing market funding into different funding instruments.

More generally, a central bank should not allow its liquidity operations to become, or even to be perceived as a source of sustained funding for banks or for any other form of medium-term lending. The only medium-term source of commercial bank funding, and hence for their lending, is private sector savings, whether channelled through retail or wholesale markets. A central bank does not have access to those private sector savings.

The grey area is that short-term liquidity support, in size and continually rolled over, looks and acts a lot like funding. That is why the Special Liquidity Scheme was designed to lend against legacy assets only and one of the reasons why the Bank has been so determined that it will end as scheduled. Suppose the scheme were to be rolled on indefinitely. What was intended and designed as system-wide central bank liquidity support would become instead a fiscal operation. We would be using government debt – and hence public money – to subsidise a group of private sector firms, with the public purse being at risk. There are serious political choices here, and they are not for the central bank to make.

I have set out in this talk many of the things that a central bank can do with its balance sheet. It can create central bank money, and does so in implementing monetary policy. It can also support financial stability. The Bank can use its operations to distribute money around the banking system when the inter-bank market is not operating properly. And it can provide emergency short-term liquidity support for the system or individual banks under operational and market stress by changing the size, the maturity and the type of collateral taken in its operations. And can even supply foreign currency in extremis. But, being without access to private sector savings, the Bank can not provide sustained, medium-term funding for banks, nor lend directly in size to the non-financial sector on a sustained basis.

[16] More information is available at http://www.fsa.gov.uk/pubs/international/uk_rcb.pdf.

Credit supply and syndicated loans

Finally, and especially given the nature of this conference, I want to touch on the supply of credit more generally. Despite various forms of support from the Bank of England and from Government, it is clear that the lending capacity of the banking system, in the UK and elsewhere, is impaired and will take some years yet to recover. Some banks need to continue de-risking and de-leveraging. Others, including new banks, are likely to grow. But the supply of bank lending to businesses during the recovery is likely to be more expensive than it was pre-crisis and possibly constrained in quantity. In 2009 we saw one of the consequences, with a record year for sterling corporate bond and equity issuance as investment grade corporates by-passed the banking sector.

The loans market is a particularly important part of the system of credit provision. Syndicated loans allow firms to borrow in larger size and for longer periods, and facilitate the lenders in diversifying their risk. Given the highly concentrated origination of business lending in this country, it is useful that the syndicated loans market and the secondary loans market allow a wider group of firms to contribute to lending to UK businesses, including non-bank participation.

Over the next few years there are a lot of corporate loans, made during the boom years of credit supply, which fall due for repayment or rollover. That is a particular challenge for subinvestment grade borrowers, including most SMEs. It is clear that the high-yield debt markets are very much more developed in the United States than in Europe and so a greater burden here falls on bank finance. But non-banks may also have a key role to play. The Bank has been engaging with market participants over policies or market developments in the loans market which would support lending by non-bank institutions. Some of that analysis was reflected in a discussion paper on non-bank lending, published by HM Treasury earlier this year. Whatever the ultimate source of finance, we sincerely hope that the UK loans market will be able to play its part in the necessary provision of credit to viable small and medium-sized businesses which will be, in large part, the future source of UK economic growth.