BANK OF ENGLAND

Speech

Lessons on unconventional monetary policy from the United Kingdom

Speech given by

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Dealing with the consequences of the Great Financial Crisis of 2008 has led central banks on both sides of the Atlantic into uncharted waters. Although the variety of special facilities introduced by the Bank of England pales by comparison with the Federal Reserve, reflecting the greater diversity of non-bank financial intermediaries on this side of the pond, we too have needed to innovate. Those innovations fall into three broad buckets: enhanced liquidity support; actions to address dysfunctional markets; and large-scale asset purchases to lower longer-term yields on a range of assets, so boosting nominal spending. As a by-product, there was a marked expansion in the size of the Bank's balance sheet (see Chart 1).

Pre-crisis, UK banks were expected to choose their own average level of central bank reserve holdings, and then manage their liquidity needs either through the interbank market or through the use of overnight standing facilities. We then provided the desired level of reserves, bearing interest at our policy rate (Bank Rate), through regular repo operations of up to one-year tenor against high-quality collateral, mainly UK government and other highly-rated official securities. In addition, we stood ready to offer emergency liquidity assistance to solvent institutions suffering a shortage of liquidity by lending at a penalty rate against a wider range of collateral.

As the crisis unfolded and the need for liquidity increased, so these arrangements required adaptation[1]. In April 2008, we introduced a £185 billion Special Liquidity Scheme allowing banks to exchange illiquid mortgage-backed securities for Treasury Bills for up to three years. We increased the volume of longer-term funding and expanded the range of collateral accepted in our open market operations, particularly in the wake of the collapse of Lehman Brothers. Around that time, we also introduced a Discount Window Facility to provide short-term liquidity to stressed institutions against a wide range of collateral. Finally, after starting large-scale asset purchases, we temporarily suspended reserves averaging as the amount of reserves in the system increased well beyond the level the banks would otherwise have chosen.

Some of these changes will eventually be reversed. For instance, we expect to return in due course to a regime in which the banks determine the level of reserves in the system. But we have learnt that a somewhat more flexible sterling monetary framework is desirable, and accordingly will permit banks to continue to borrow against a wider range of collateral, though at a higher cost and with larger haircuts than for narrow collateral. Specifically, we have introduced long-term repos that allow banks to bid for funds simultaneously against both narrow and wider collateral, with the auction design facilitating a greater allocation against wider collateral as stress increases[2]. And, although the Special Liquidity Scheme ends in 2012, the Discount Window Facility will remain in place as a permanent feature.

[1] For more details on the Bank's liquidity support during the crisis, see Paul Fisher, "Managing Liquidity in the System: The Bank's Liquidity Insurance Operations", speech to the Loan Market Association Syndicated Loans Conference, London, 30 September 2010.
[2] This builds on the work of Paul Klemperer (2010). "The Product-Mix Auction: a New Auction Design for Differentiated Goods", *Journal of the European Economic Association*, forthcoming.

Turning to the second bucket, the Bank undertook a range of actions to improve the operation of temporarily dysfunctional markets. We started purchasing high-quality commercial paper, with the aim of reducing the liquidity premium which had become embedded in abnormally wide spreads. As the corporate bond market had also become less liquid, with a sharp widening in spreads, we also made purchases, and subsequently sales, of sterling investment-grade corporate bonds, with a view to improving the liquidity of that market (which is, though, less important in the United Kingdom than in the United States). Finally, more recently we have begun purchases of secured commercial paper (a form of asset-backed commercial paper secured against short-term loans to a variety of borrowers), the aim being to improve the availability of finance for a broader range of businesses.

The peak stock of our holdings of corporate assets reached £3 billion in May 2009. That is a relatively modest sum compared to our purchases of government bonds. But it is measures of market liquidity, rather than the amount bought, that are the appropriate indicators of effectiveness. And by these metrics, the purchases seem to have been reasonably successful. Indeed, it is worth noting that a credible statement that the central bank is willing to act as a backstop purchaser/seller may be enough to restore normal market functioning, without requiring any purchases at all.

These purchases were undertaken using a specially created Asset Purchase Facility. To begin with, they were financed by issuing Treasury Bills, though later purchases, including our large-scale acquisition of UK government bonds, were financed by the issuance of reserves. This Asset Purchase Facility is necessarily exposed to credit risk, although the restriction of purchases to high-quality assets makes that risk slight. Even so, the Facility is indemnified against losses by the Treasury, so as to protect the Bank's balance sheet.

The third bucket of unconventional measures relates to our large-scale purchases of long-term assets – primarily UK government bonds – financed by the issuance of reserves, or so-called quantitative easing. Before the crisis, and with policy rates averaging around 5%, we believed we had plenty of room to offset all but the most severe adverse demand shocks. But the sharp rise in credit spreads during the crisis meant Bank Rate had to fall sharply merely to maintain the pre-existing levels of effective interest rates facing borrowers and lenders, let alone lowering them to stimulate aggregate demand. As a result, the Monetary Policy Committee soon found itself with Bank Rate at 0.5%, close to its effective zero lower bound.

There are two main options at the zero lower bound if a central bank wants to inject further monetary stimulus: committing to keep future policy rates low; and reducing the spreads of longer-term interest rates over expected policy rates through asset purchases financed by the issuance of reserves. While a number of central banks, including the Federal Reserve, the Bank of Canada and the Riksbank have provided some explicit guidance on the likely path of future policy rates during the crisis, we have preferred to leave it to market participants to draw their own judgements on the likely future distribution of Bank Rate from our public communications, including especially our quarterly *Inflation Report*.

But we have undertaken outright purchases of longer-dated assets, particularly medium and long-dated government bonds, financed by the issuance of reserves. Between March 2009 and February 2010, through the Asset Purchase Facility, the Bank acquired nearly £200 billion of such assets – that is, roughly 14% of GDP or nearly a quarter of the outstanding stock of government debt.

The objective of this policy is to raise the prices not only of the purchased assets, but those of a whole range of substitute assets, such as corporate equities and bonds, as sellers subsequently re-balance their portfolios. That in turn boosts nominal spending through the usual wealth and cost of capital channels. In principle, the associated expansion in commercial bank deposits, and in the banks' increased holdings of reserves, could, by virtue of the increased liquidity, also foster an improvement in the availability of bank credit. But with the banks seeking to de-leverage and to build up their liquidity buffers, we expected this channel to be weak. And that is borne out in the behaviour of the ratio of the monetary liabilities of the banking system (broad money) to the monetary base, which fell sharply (see Chart 2).

Given the difficulty in identifying the counterfactual, the most persuasive evidence that large-scale asset purchases have been effective comes from event studies looking at movements in asset prices around the time of announcements of asset purchases. A recent study[3] for the United Kingdom carried out at the Bank found that the total impact on gilt yields was to lower them by an average of about 100 basis points (see Chart 3). As some of the purchase announcements may have been anticipated, that should provide a lower bound on their impact. Corporate bond yields also fell, with investment-grade bonds declining 70 basis points and non-investment grade bonds falling 150 basis points. Similar studies for the United States find broadly similar responses once allowance is made for the different sizes of the asset-purchase programmes and economies.

Of course, these studies do not tell us about the ultimate impact on spending, activity and inflation. Annual nominal GDP growth averaged a little over 5% before the crisis, consistent with real growth at trend and inflation at target. Nominal GDP fell sharply during the recession, but has since returned to pre-crisis growth rates (Chart 4). By that standard, it looks like policy has been effective, though of course other factors besides monetary policy have certainly also been at work. And while the overall rate of nominal demand growth has been satisfactory, the split between inflation and activity has certainly not been everything we would wish, with our target measure of consumer price inflation reaching 4% in January. As explained in our latest *Inflation Report*, we believe this primarily reflects the transitory impact of the pass-through from the depreciation of sterling during 2007-8, the rapid increase in energy and other commodity prices associated with strong growth in the emerging economies, and an increase in the rate of value added tax.

[3] Michael Joyce, Ana Lasaosa, Ibrahim Stevens and Matthew Tong (2010). "The Financial Market Impact of Quantitative Easing," *Bank of England Working Paper* No.393.

Should asset purchases also be part of the toolkit in normal times? While I think the evidence from both sides of the Atlantic supports the view that they are an effective monetary policy tool, there are three practical reasons why it may be preferable to rely on a short interest rate as the primary instrument once normality returns.

First, while the evidence that asset purchases have an effect on asset prices is compelling, there is a wealth of evidence regarding the monetary transmission mechanism from movements in short-term policy rates. Moreover, central banks have considerable experience in operating policy through short interest rates. Given that the impact of changes in a short-term policy rate is both more certain and better understood, it makes more sense to put the most weight on that instrument rather than asset purchases.

Second, the efficacy of a given quantum of asset purchases may well be lower in normal times. During a financial crisis, when credit is hard to come by, arbitrageurs may find it difficult to find the wherewithal to correct any excessive compression of the spread between government bond yields and expected policy rates or else they may be reluctant to do so. During normal times, though, such credit will be easier to get and arbitrage may attenuate the effectiveness of asset purchases.

Third, while purchases of government debt may be a necessary resort at the zero lower bound, regular purchases during normal times may give rise to the suspicion that the central bank is doing so at the behest of government in order to lower the cost of budgetary finance, rather than for monetary policy purposes. Aside from giving rise to doubts about the central bank's independence, it could also lead to higher inflation expectations and long-term nominal interest rates.

For these three reasons, then, I think central banks should continue to rely on a short-term interest rate as their main policy instrument once normality returns. Asset purchases aimed at flattening the yield curve are, in my view, best kept in a locker marked For Emergency Use Only.