BANK OF ENGLAND
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The Rt Hon John McFall MP
House of Commons
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Dear John,

Together with other members of the Monetary Policy Committee, I will be appearing before the Treasury Committee on 20 September. In advance of our regular appearances before the Committee I normally circulate to you the text of a short opening statement which I make before questioning starts.

Since we last met in June the turmoil in financial markets, which continues, has clouded the outlook. Given the importance and complexity of developments in financial markets, a more extensive explanation of the Bank's analysis and judgments would perhaps be helpful to the Committee. Inevitably, such an explanation will be longer than my usual opening statement, and for that reason I believe it would be helpful if that statement were provided in advance of our appearance before the Committee. I am conscious that in sending you this statement I am taking a snapshot of a fast moving situation with a long exposure camera.

I am grateful to you for allowing me to make public today the attached statement.

I look forward to our meeting with the Committee on 20 September.

Yours ever

TURMOIL IN FINANCIAL MARKETS: WHAT CAN CENTRAL BANKS DO?

Paper submitted to the Treasury Committee

Mervyn King, Governor of the Bank of England

The recent turmoil in financial markets has increased uncertainty in the world economy. Problems that surfaced first in the US sub-prime mortgage market are now visible more widely. All those involved, whether banks, other financial institutions, regulators or central banks, need to analyse carefully the causes of the recent turmoil and think through the long-term consequences of any actions if they are to respond appropriately.

So in this note I shall try to answer two questions. First, what are the immediate causes of the recent turmoil and what are its implications? Second, what can and should central banks do to alleviate the problems? In due course we shall all have time for a more detailed examination of this episode and the lessons to be learned from it.

1. **What are the immediate causes of the recent turmoil and what are its implications?**

Since the beginning of August, there have been sharp movements in financial markets: prices of loans, and assets backed by loans, have fallen; prices of government securities have risen; and interest rates on inter-bank lending have risen.

Rising default rates on sub-prime mortgages in the United States were the trigger for the recent financial market turmoil. It is important, though, to put recent events in perspective. The world economy has been strong for the past five years. Our own economy has been growing at a steady rate for a considerable period. There are major problems in the US housing market to which the authorities there are responding with both macro and micro measures. But the losses from defaults so far remain small relative to the capital of the banking system.

None of this is meant to say we should be complacent. But the source of the problems lies not in the state of the world economy, but in a mis-pricing of risk in the financial system. And it is on that set of issues that we need to focus to determine the remedies, both short-term to address the current problems and long-term to prevent a recurrence.

Why have developments in one part of the US mortgage market proved so important for a wide range of financial markets? Sub-prime mortgages are one type of loan that banks have parcelled together into securities backed by the cash flows from those loans – a process known as securitisation. Those securities have been sold by banks to investors. They have also been sold to investment vehicles, many of which have been established by the banks themselves. Many of these vehicles have financed their purchases by issuing short-term commercial paper.

Securitisation of loans has separated the information held by loan originators from those exposed to the risk of default – investors in asset-backed securities or commercial paper. The unexpected losses sustained on assets backed by US sub-prime mortgages have highlighted the potential costs to investors of uncertainty about the types of loans underlying the assets they purchase. So for the time being the markets in these instruments have either closed or become very illiquid. Vehicles financed by short-term commercial paper are holding assets which can no longer be traded in liquid markets. They now find that they have borrowed short to lend long – normally thought of as a function of banks.

As a result of this maturity mismatch, vehicles set up by banks and others are now finding it extremely difficult to obtain funding through asset-backed commercial paper. The markets are now withdrawing short-term funding from such vehicles, a process not unlike a bank run. Many investment vehicles have been forced to shorten the maturity of their commercial paper, making their borrowing even more short-term and their maturity mismatch even greater. Other vehicles have been unable to issue at all. For example, since the beginning of August the value of asset backed commercial paper outstanding in the US has fallen by almost 20%.

Some investment vehicles will need to be wound up. In many cases, however, the sponsoring bank will have written a backup line to the vehicle, guaranteeing its funding. Many of the securitised loans may now be re-priced, restructured or taken back by the banks. A process is starting that will expand the balance sheet of the banking system. But how far that process will go is hard to tell.

The vehicles can be taken back onto banks' balance sheets. Banks as a whole are well capitalised and should be able to do this. Moreover, the funds that were directed to asset-backed securities and commercial paper will now be available elsewhere. In the end, that funding will come back to the banking system, although between banks the distribution will differ. So the adjustment period may be awkward and, during it, banks are placing a premium on holding assets which can quickly be turned into cash.

The increase in demand for liquid assets during the adjustment period is one reason why, in all the major economies, yields on liquid assets like government securities have fallen. It also helps to explain why the compensation needed for banks to lend to other banks over periods longer than overnight has risen and why the volume of inter-bank lending has been increasingly concentrated at shorter maturities. Since the beginning of August, the spread between interest rates for 3-month inter-bank lending and central bank interest rates expected over that period has risen in all the major economies. At present, the average spread is 110 basis points in sterling and 90 basis points in dollars. This is the natural economic result of a change in the preferences of banks over the composition of the assets they wish to hold on their balance sheets.

In addition, banks have raised their demand for reserves at central banks. Banks settle payments with each other using central bank money and they hold reserves at the Bank of England to manage their daily payment needs. Conditions in financial markets have made their payment needs less predictable. As a result, banks have wanted to hold more reserves. They have tried to fund those reserves by borrowing overnight from other banks. Over the past month, interest rates on secured overnight borrowing have averaged 5.91% – 16 basis points above Bank Rate. That spread was wider than usual – since the introduction of the current money market regime, it has averaged 3 basis points.

These changes in the distribution of assets across the financial sector, and banks' preferences over different assets during the adjustment period, are likely to have consequences for the wider economy through the interest rates for borrowing and lending faced by households and companies. It is too soon, however, to quantify the impact on the economy as a whole.

In the short term, some corporate loan rates will rise in line with inter-bank rates. Banks that are unable to sell pools of loans that they had securitised, or who need to support off-balance sheet vehicles, may cut back on new lending. But banks whose potential funding liabilities to vehicles or conduits are small as a proportion of their balance sheet may be able to exploit profitable lending opportunities, which may not be as open to those banks which are now hoarding liquidity. So there may be a redirection of borrowing from within the banking system. This is part of a normal market adjustment.

Funds that had been invested in asset-backed commercial paper issued by vehicles and conduits will find their way back to the financial system, perhaps directly through bank deposits or indirectly via the corporate sector by purchases of corporate debt. It is notable that yields on investment-grade corporate bonds are unchanged since the beginning of August. And companies, including some financial institutions, have been able to issue long-term debt.

Nevertheless, there has since mid-July been a widespread reassessment of the compensation investors seek for bearing risk. Equity prices have fallen in all major economies. Most of that adjustment took place in July – before the turmoil in credit markets. The FTSE All-Share today is 6% below its level at the beginning of July. As this re-pricing of risk passes through to borrowers, the supply of credit faced by households and companies may tighten somewhat.

In summary, the turmoil in financial markets since the beginning of August stems from a reluctance by investors to purchase financial instruments backed by loans. Liquidity in asset-backed markets has dried up and a process of re-intermediation has begun, in which banks move some way back towards their traditional role taking deposits and lending them. That process is likely to be temporary but it may not be smooth. During that process, demand for liquidity by the banking system has increased, leading to a substantial rise in inter-bank rates.

2. **What can and should central banks do to alleviate these problems?**

Three distinct policy instruments can be deployed by central banks: interest rates, money market operations, and other general liquidity support operations.

First, what role should monetary policy play in the present situation? The answer is to protect the public from the consequences of the recent turmoil by continuing to maintain economic stability. That is done by setting interest rates in order to meet the 2% target for inflation. Interest rates are a flexible tool and can be adjusted quickly when necessary. If, in the wake of a shock to the financial system, the terms on which the financial system extends credit to the private sector become less favourable, then borrowing and overall demand would weaken. Other things being equal, that would lower the inflation outlook. Of course, other things are not equal. When the Monetary Policy Committee meets each month it reviews all the evidence on the outlook on inflation before reaching a judgment. The August *Inflation Report* implied that some slowdown from recent strong rates of economic growth was needed to meet the inflation target. The new element introduced by the recent turmoil is that effective borrowing rates facing households and companies will rise somewhat. So, as we said in the August R*eport*, the Committee is monitoring credit conditions intensively. It is too soon to tell how persistent and how large any change in credit conditions for household and corporate borrowers will prove to be. A new Bank of England Credit Conditions Survey will be available to the MPC at its next meeting.

Second, the central bank is responsible for the smooth functioning of the payment system among banks – the short-term money markets and what is known as the high value payment system. Central banks discharge that responsibility by providing reserves that enable banks to settle among themselves. In the reform of our money market operations a year ago, we made very clear, and this is a unique feature of the British system, that the banking system as a whole will get the reserves that it itself requests. Each month, at the beginning of what is known as the maintenance period, running from one MPC meeting to the next, banks set their own reserve targets. They are not imposed. We then supply the reserves that the banking system as a whole requests. The objective is to allow banks to deal with their own day-to-day liquidity needs and, by supplying in aggregate the banks' demand for reserves, to keep the overnight interest rate close to Bank Rate set by the Monetary Policy Committee. If any individual bank has misjudged its reserves target and finds that on any day, due to unusually large payment flows, it needs additional liquidity, then that is supplied against eligible collateral at a penalty rate. There is automatic and guaranteed access to the standing facility in return for eligible collateral and a penalty rate of 1% above Bank Rate. It should be clear that because standing facilities are available at the borrower's discretion and against eligible collateral, they are quite distinct from what is known in other financial centres as "emergency liquidity assistance", and under the UK tripartite framework as lender of last resort arrangements, where the central bank decides that there is a policy objective in lending to one or more institutions. Reflecting these different aims, the collateral required is different.

The interest rate for secured overnight borrowing was, in August, unusually high relative to Bank Rate, indicating that banks' aggregate demand for central bank reserves had risen since they set their reserves targets. For the current maintenance period, which began on 6 September, the reserves banks raised their target levels of reserves by 6%. That larger quantity of reserves was supplied by the Bank of England in its open market operation on 6 September.

As expected, some pressure on interest rates for overnight borrowing was relieved. Last week, we announced that, during the current maintenance period, we will make available to banks additional reserves, up to 25% of the reserves target, if the secured overnight rate remains higher than usual relative to Bank Rate. The reason for this is that there are grounds for suspecting that banks may, at the start of the current maintenance period, have underestimated their demand for reserves, and the additional reserves will help to bring the overnight rate into line with Bank Rate. We will announce the terms of this week's operation on Thursday. Provision of central bank reserves, in exchange for high-quality collateral, cannot be expected to narrow the spreads between anticipated policy rates and the rates at which commercial banks can borrow from each other at longer maturities, and has not done so elsewhere.

So, third, is there a case for the provision of additional central bank liquidity against a wider range of collateral and over longer periods in order to reduce market interest rates at longer maturities? This is the most difficult issue facing central banks at present and requires a balancing act between two different considerations. On the one hand, the provision of greater short-term liquidity against illiquid collateral might ease the process of taking the assets of vehicles back onto bank balance sheets and so reduce term market interest rates. But, on the other hand, the provision of such liquidity support undermines the efficient pricing of risk by providing ex post insurance for risky behaviour. That encourages excessive risk-taking, and sows the seeds of a future financial crisis. So central banks cannot sensibly entertain such operations merely to restore the status quo ante. Rather, there must be strong grounds for believing that the absence of ex post insurance would lead to economic costs on a scale sufficient to ignore the moral hazard in the future. In this event, such operations would seek to ensure that the financial system continues to function effectively.

As we move along a difficult adjustment path there are three reasons for being careful about where to tread. First, the hoarding of liquidity is a finite process. When any transfers of the assets of vehicles back onto banks' balance sheets are complete, the demand for additional liquidity, and the associated rise in LIBOR spreads, will fall back. The fragility of sentiment at present means that the system is vulnerable to further shocks and it is important to monitor financial conditions extremely closely. But the banking system as a whole is strong enough to withstand the impact of taking onto the balance sheet the assets of conduits and other vehicles.

Second, the private sector will gradually re-establish valuations of most asset backed securities, thus allowing liquidity in those markets to build up. Indeed, there are market incentives to speed up the process both of taking assets back onto balance sheets and to re-open markets in securities that have closed. Already there are tentative steps in this direction which will allow the price discovery process to restart. Strong institutions have incentives to reveal their positions to obtain better access to funding. Some are tapping long-term paper. And there are opportunities to make money for those who can assess and value instruments and eventually repackage and reissue them. Difficult and time-consuming though that process may be, it will also slowly reduce that part of the rise in market rates which reflects counterparty risk.

Third, the moral hazard inherent in the provision of ex post insurance to institutions that have engaged in risky or reckless lending is no abstract concept. The risks of the potential maturity transformation undertaken by off-balance sheet vehicles were not fully priced. The increase in maturity transformation implied by a change in the effective liquidity in the markets for asset-backed securities was identified as a risk by a wide range of official publications, including the Bank of England's *Financial Stability Report*, over several years. If central banks underwrite any maturity transformation that threatens to damage the economy as a whole, it encourages the view that as long as a bank takes the same sort of risks that other banks are taking then it is more likely that their liquidity problems will be insured ex post by the central bank. The provision of large liquidity facilities penalises those financial institutions that sat out the dance, encourages herd behaviour and increases the intensity of future crises.

In addition, central banks, in their traditional lender of last resort (LOLR) role, can lend "against good collateral at a penalty rate" to an individual bank facing temporary liquidity problems, but that is otherwise regarded as solvent. The rationale would be that the failure of such a bank would lead to serious economic damage, including to the customers of the bank. The moral hazard of an increase in risk-taking resulting from the provision of LOLR lending is reduced by making liquidity available only at a penalty rate. Such operations in this country are covered by the tripartite arrangements set out in the MOU between the Treasury, Financial Services Authority and the Bank of England. Because they are made to individual institutions, they are flexible with respect to type of collateral and term of the facility. LOLR operations remain in the armoury of all central banks.

Conclusions

The path ahead is uncertain. There are strong private incentives to market players to recognise early and transparently their exposures to off-balance sheet entities and to accelerate the re-pricing of asset-backed securities. Policy actions must be supportive of this process. Injections of liquidity in normal money market operations against high quality collateral are unlikely by themselves to bring down the LIBOR spreads that reflect a need for banks collectively to finance the expansion of their balance sheets. To do that, general injections of liquidity against a wider range of collateral would be necessary. But unless they were made available at an appropriate penalty rate, they would encourage in future the very risk-taking that has led us to where we are. All central banks are aware that there are circumstances in which action might be necessary to prevent a major shock to the system as a whole. Balancing these considerations will pose considerable challenges, and in present circumstances judging that balance is something we do almost daily.

The key objectives remain, first, the continuous pursuit of the inflation target to maintain economic stability and, second, ensuring that the financial system continues to function effectively, including the proper pricing of risk. If risk continues to be under-priced, the next period of turmoil will be on an even bigger scale. The current turmoil, which has at its heart the earlier under-pricing of risk, has disturbed the unusual serenity of recent years, but, managed properly, it should not threaten our long-run economic stability.