

■ Unconventional measures and the risk of inflation

The unconventional measures taken by the Riksbank have led to a substantial increase in the monetary base, which according to the textbook models could lead to a considerable increase in the money supply with significant risks of inflation in the period ahead. However, the increase in the monetary base reflects the increased demand for reserves at the Riksbank that has arisen as a result of the funding problems on the interbank and securities markets, a factor that should counter this development. Without the Riksbank's measures, market rates would be higher and inflation and resource utilisation would be far too low.

Central banks normally conduct monetary policy by using the policy rate to influence the interest rates charged to households and companies. However, during the financial crisis it has been necessary to complement the monetary policy toolbox with more unconventional methods in order to get the financial markets to function more effectively, ease the supply of credit and reduce various risk premiums that have counteracted monetary policy.¹⁷

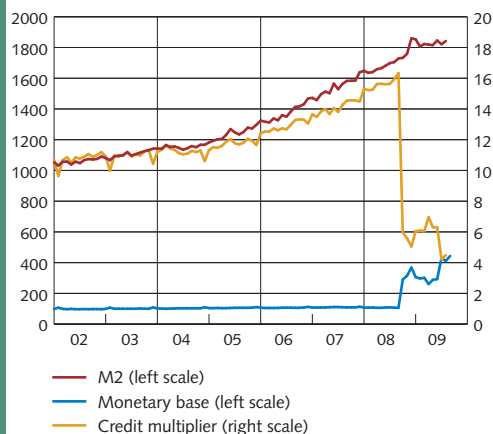
The Riksbank's lending has facilitated the banks' funding

The unconventional measures that the Riksbank and many other central banks have implemented include providing loans to their counterparties at longer maturities than usual, providing loans in US dollars, approving a wider range of securities as collateral and increasing the circle of counterparties. During the course of the crisis, the Riksbank has provided loans to the banking system at maturities of three, six and twelve months so that the banks can manage their short- and medium term funding more easily and efficiently. The Riksbank has thus acted as an intermediary in the banking system. These measures have led to substantial increases in the balance sheets of the central banks. The Riksbank's assets and liabilities have, for example, increased from almost SEK 200 billion in September 2008 to over SEK 650 billion in mid-October 2009.

Does this expansion of the balance sheet entail an increase in the money supply which in turn may lay the foundations for higher inflation in the future? In simple terms, the mechanism at work here is that increased lending to the banking system encourages the banks to increase their lending. When the public's access to credit increases, the level of demand in the economy increases, which fuels inflation. However, as can be seen in the latest statistics on the money supply, an expansion of the central bank's balance sheet does not automatically entail a dramatic increase in the supply of money in society (see Figure 3:11 in Chapter 3). Without the Riksbank's measures, however, both lending and the money supply would be lower.

¹⁷ See, for instance, the articles "The financial crisis and the effects of monetary policy", Monetary Policy Report, February, 2009 and "The Riksbank's new measures" in Financial Stability Report 2009:1.

Figure B2. Money supply (M2), monetary base and credit multiplier
SEK billion and ratio respectively



Sources: Statistics Sweden and the Riksbank

The Riksbank's lending has increased the monetary base

We normally distinguish between the money held by the public – which here means non-financial companies and households – and the central bank's supply of money. The volume of liquid funds held by the public can be calculated in different ways depending on how liquid these funds are. The Riksbank's supply of money consists of several items on the liabilities' side of its balance sheet: the banknotes and coins in circulation and the banks' deposits with the Riksbank. In textbook models the latter is also usually referred to as reserves. There are three items on the Riksbank's balance sheet that together form the equivalent of the textbooks' reserves: fine-tuning transaction, outstanding Riksbank certificates and funds in the deposit facility. These three items, together with banknotes and coins, constitute the so-called monetary base and it is this monetary base that has increased dramatically in connection with the increase in the Riksbank's lending to the banks (see Figure B2).

Here it may be worth pointing out that an increase in the Riksbank's lending to the banks, which entails an increase on the balance sheet's asset side, automatically leads to an increase on the liabilities side, either in the form of an increase in the number of banknotes in circulation or an increase in the banks' reserves. In the short term, the public demand for banknotes and coins will not change, so all the lending will, in one way or another, return to the Riksbank in the form of increased reserves. This does not mean, however, that the lending will have had no effect; it simply reflects the fact that the system is closed. By a closed system we mean, for example, that if the Riksbank lends money to a bank which in turn uses the money to increase its lending to a company, which in turn uses it to fund investments or pay wages, then these funds will be deposited in a bank which in turn will deposit them in an account at the Riksbank.

Is it possible that the banks' increased access to funds has indirectly affected the public's money supply and thus threatens to become a factor that will fuel inflation? To gain a clearer understanding of this, it may be a good idea to first look at the standard textbook model for how the supply of, and demand for, reserves is affected by the central bank's measures and then discuss the measures taken by the Riksbank during the financial crisis against this background.

In the textbook model, it is often assumed that the central bank influences interest rates and credit volumes in the economy by influencing the banks' reserves at the central bank, which in turn influences the money supply.¹⁸ In the model, the banks keep a liquidity buffer in a deposit account at the central bank (a reserve) that yields little or no return. No bank therefore wants its reserves to be higher than the amount needed to cover temporary fluctuations in incoming and outgoing payments.

According to the textbook model, when the central bank increases the reserves interest rates will fall and the banks will increase their lending to the public, thus increasing the money supply. The mechanism that

¹⁸ See for example M. Marquis, "Monetary Theory and Policy", Saint Paul: West Publishing Company, 1996.

creates a balance between the supply of and the demand for reserves is that the banks that have surplus liquidity choose to lend this in order to earn a higher return on their assets. The bank must then reduce its interest rates in order to increase its lending. Increased lending in turn leads to increased deposits and this process continues until the deposits become so substantial that the banks are willing to keep the reserves offered by the central bank.

The Riksbank's steering interest rate system does not normally use the mechanisms based on the central bank influencing the banks' reserves, and thus the interest rate, through open market operations. The system can be described instead as the Riksbank deciding the level of the policy rate, that is the repo rate, and then adapting market operations so that the demand for banknotes is met.¹⁹ Usually, the banks' demand for reserves at the Riksbank is zero. The Swedish banks even out any temporary deficits or surpluses in their accounts at the Riksbank by lending to each other overnight on the so-called interbank market. The Riksbank assists this process by conducting so-called fine-tuning operations so that there is no need to use the Riksbank's deposit and lending facilities.²⁰

The increase in the monetary base reflects an increased demand for reserves

One way of reconciling the textbook description with what has happened in Sweden is to say that the financial crisis has led to an increase in the demand for reserves and a decrease in the credit multiplier²¹ (see Figure B2). It has been possible to manage the increased demand for reserves within the framework of the existing steering interest rate system. The major difference compared to the period before the crisis is the magnitude of the Riksbank's market operations. The banking system's demand for reserves, and thus also the demand for Riksbank loans, has also varied over the course of the past year. This indicates that the Riksbank's balance sheet should be able to return to normal without any real drama.

The Riksbank's measures aimed to provide lower market rates and a higher level of inflation than would otherwise have been the case, and they have probably succeeded in this. In addition, the lowering of the repo rate has also helped to keep up the demand for credit and countered the level of inflation becoming too low. However, given the low level of demand and the low cost pressures expected in the period ahead, we do not believe that the measures constitute a threat to the inflation target. They have rather been necessary measures to avoid far too low levels of inflation and resource utilisation.

19 K. Mitlid and M. Vesterlund, "Steering interest rates in monetary policy – how does it work?" Sveriges Riksbank Economic Review no. 1, 2001 and "The Riksbank's management of interest rates – monetary policy in practice" – Riksbank publication.

20 It is possible for the Riksbank's counterparties to borrow Swedish kronor overnight at the repo rate plus an addition of 0.50 percentage points and against certain types of previously-approved collateral in the Riksbank's payment system RIX. It is also possible to deposit money overnight in an account in RIX at the repo rate minus 0.50 percentage points. With a current repo rate of 0.25 per cent, this means that a bank that deposits money overnight in RIX will now do so at a negative interest rate.

21 According to the textbooks, there is a ratio, a so-called credit multiplier, between the money supply/deposits and the size of the reserves. A credit multiplier of 10, for example, means that deposits, and thereby the money supply, will increase by 1 000 if the reserves increase by 100.