

■ Monetary policy alternatives in times of financial crisis and concern over deflation

There are other ways for a central bank to influence the economy than through the policy rate. The central bank can use tools that affect long-term interest rates, risk premiums and inflation expectations. If a central bank finds itself in a position where it must set the policy rate at zero, there are therefore other means at its disposal. Academic studies in this field contain a number of suggestions of measures that can be taken. Some of these have actually been tried out in practice, for instance in Japan and the United States.

The Riksbank conducts a policy of flexible inflation targeting, which aims to stabilise inflation around the inflation target, and also to stabilise the real economy. The repo rate and the expectations of future repo rates that arise from the Riksbank's intentions (as expressed in terms of, for instance, the repo rate path) affect market rates, which in turn affect aggregate demand and inflation.

During the financial crisis the functioning of the financial markets has deteriorated, which has affected both the transmission mechanism from the repo rate to inflation and the real economy as well as the risks of the overall financial stability. In order to improve the functioning of the financial markets the Riksbank has, like many other central banks, taken a number of special measures.¹²

The Riksbank has also, like many other central banks around the world, cut its policy rate relatively quickly. The policy rate is now almost zero in several countries. In the United States the policy rate was cut in December to an interval between 0 and 0.25 per cent, in Switzerland the policy rate is 0.5 per cent and in Japan it is 0.1 per cent.

There are a number of tools a central bank can use to stimulate the economy in a situation where the policy rate is close to zero and cannot be cut much more, or where monetary policy's transmission mechanism is not working as normal.

What is the problem when the policy rate is close to zero and what can be done?

Demand in the economy is affected by the real interest rate, that is, the nominal interest rate minus expected inflation. When the Riksbank cuts the repo rate, the real repo rate normally falls as inflation expectations are in the normal case sluggish. In a situation with a very weak real economy and low inflation, a low and perhaps even negative real interest rate may be needed to stimulate the real economy. Even if the policy rate is set at zero, the real interest rate may be too high to have the desired stimulation effect on the real economy. In such a situation, monetary policy faces a zero interest rate bound and other tools are needed.

¹² For a list of the Riksbank's measures see the Riksbank's website, www.riksbank.se, under the heading Financial stability/Financial turbulence – the Riksbank's response.

The situation may be more problematic if the weak real economy coincides with a financial crisis. This is because the spread, the difference between the market rates faced by households and companies and the policy rate, will then be particularly large.¹³ It occurs because the market rate is pushed up by spreads consisting of various risk premiums. The market rates then remain positive, even if the policy rate is zero, and the real interest rate becomes even higher in relation to what is desirable to stimulate the real economy.

To put it simply, one can define the market rate as:

Real market rate = policy rate + spread – expected inflation. (1)

Even if the policy rate has been cut to zero or close to zero, the real market rate can become too high. Positive spreads can, for example, contribute to the real interest rate being too high. The real interest rate can also be too high if inflation expectations are too low. The situation is particularly adverse if expectations of deflation, that is, negative inflation, arise. The measures that a central bank can take to reduce the real interest rate when the policy rate is already zero can thus in principle be divided into two categories: those that affect the inflation expectations and those that affect the spreads. The latter largely coincide with measures that are taken to improve the functioning of the financial markets.

The Riksbank's monetary policy framework and inflation expectations

The central bank's target and communication affect expectations regarding inflation and interest rates and therefore always play an important role.

A credible numerical inflation target contributes to ensuring that inflation expectations do not become too low. By publishing well-founded forecasts for inflation and the policy rate, the central bank can affect expectations of inflation and future policy rates. This means that the central bank can also show which real policy rate will lead to the inflation target being attained and to the real economy stabilising. The central bank's forecasts are thus important tools for affecting inflation expectations. Central banks that, like the Riksbank, have a well-established numerical inflation target may therefore find it easier to create credibility for their policies. The Riksbank is thus well-equipped, with its current monetary policy system, when it comes to the possibility to counteract excessively high real interest rates and too low inflation.

Other ways of affecting inflation expectations

Alternative ways of influencing inflation expectations are discussed in the academic literature, for example the possibility to introduce a price level target, that is a targeted path for the future level of prices. If the price level target is credible, the long-term inflation expectations will be stable, even if low inflation or deflation is expected in the short term. A price-level target can be regarded as an average inflation target for a longer period of time, for instance a few years.

¹³ For more information on spreads and risk premiums, see the article "The financial crisis and the effects of monetary policy" in this Report.

Another way of holding up inflation expectations that is also discussed in the literature could be to keep the exchange rate fixed at a low level until a price level target or inflation target is met and then let it float again.¹⁴ If several countries at the same time have a binding zero interest rate constraint they cannot, however, all hold a low exchange rate in relation to one another at the same time. In such a situation, a joint discussion of the countries' monetary and foreign exchange policies is thus needed.

A central bank can affect long-term interest rates and spreads

A central bank normally controls the shortest interest rates in the economy. However, there are many different interest rates and a central bank in principle has the possibility to affect all of them. This can be done by buying or selling government securities or other securities with longer maturities. In a situation where the policy rate is set at zero, the central bank can therefore when necessary affect long-term interest rates in a downward direction. One can also try to affect expectations of the future policy rate and thereby also the longer nominal interest rates. This can be done, for example, by the central bank declaring in its communication that it intends to keep the short-term interest rate low over a relatively long period of time.

In times of financial crisis there may be a substantial difference between the policy rate set by the central bank and the interest rates individuals and companies meet as a result of an increase in the risk premiums (or spreads). As it is the market rates that companies and households meet that are important for investment and consumption, all of the measures taken to bring down the spreads or interest rates on specific markets will also have a stimulating effect on aggregate demand. They can therefore be regarded as a complement to traditional monetary policy, even when they are mainly implemented with the intention of promoting financial stability. The central bank can act directly on various markets that are not functioning by, for example offering loans against collateral and buy purchasing different types of securities. It can also extend the number of counterparties that may borrow directly from the central bank.

Such measures may also be considered when the policy rate is not zero. Since the autumn, a number of central banks, including the Riksbank, have implemented a number of measures to ease credit supply and the general situation on the financial markets. The Riksbank has, for example, increased its lending to banks against collateral in, among other things, mortgage bonds, and extended the type of collateral that banks can provide (for instance to include commercial papers). Another example is the US central bank, the Federal Reserve. The Fed has, for instance, established a programme to buy securities with mortgages as collateral from the government agencies with the aim of bringing down mortgage rates. Another programme, which is a collaboration with the US Treasury Department, entails the Federal Reserve offering loans with assets such

¹⁴ This is part of a proposal called "The Foolproof Way" and has been presented, for instance, in Svensson, L. E. O. (2003), "Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others. *Journal of Economic Perspectives* 17.

as car loans, student loans and loans guaranteed by the Small Business Administration as collateral. The Fed has also increased the time to maturity for loans and the number of institutions allowed to borrow directly from the central bank, as well as acting directly on, for instance, the commercial paper market.

The measures affect the central banks' balance sheets

When a central bank lends money to the banks or purchases different types of financial assets, the bank's access to funding (liquidity) increases. This in turn increases the monetary base, that is the total of the quantity of outstanding notes and coins and the banks' deposits (reserves) in the central bank. This may contribute to an increase in access to credit in the economy. An increase in the monetary base is normally a consequence of the type of measures described above. However, it may also be an explicit strategy when the policy rate is zero. This was, for example, something that was tested in Japan at the beginning of the 2000s. The economic climate there during the late 1990s was marked by relatively weak growth, inflation close to zero or even deflation and problems in the financial sector. In 1999 the Japanese central bank cut its policy rate to zero. In 2001, the central bank began a programme in which it tried to stimulate the economy by increasing the monetary base. The measures continued until 2006 and contributed to a large increase in the Japanese central bank's balance sheet.

An increase in the monetary base may be a way of achieving what has been discussed in the academic literature (price level target and a weak exchange rate). However, despite the large increase in the monetary base in Japan, it is difficult to assess whether the programme really had any significant stimulating effect on the Japanese economy. If an increase in the monetary base is to have any effect on inflation expectations it should be regarded as permanent, but the expansion implemented by the Bank of Japan was apparently perceived to be temporary, which was in fact the case. The monetary base was later reduced considerably before the policy rate was raised above zero.

The Federal Reserve's measures in the current crisis have also contributed to a considerable increase in the size of the bank's balance sheet. The aim, however, has not been to achieve any quantitative target for the banks' reserves but to improve credit supply.¹⁵ The same applies to the ECB, Bank of England and the Riksbank, whose balance sheets have also increased (see Figures B1 and B2). The exact reasons for this, and the design of the measures, varies however from country to country and depends, among other things, on the state of the banks and the financial structure in the respective countries. At the same time, the measures taken by the central banks, and their effects, show that there are other ways of affecting market rates, inflation and the real economy than changing the policy rate.

Figure B1. International comparison between central banks' balance sheet totals
Index, January 2007 = 100

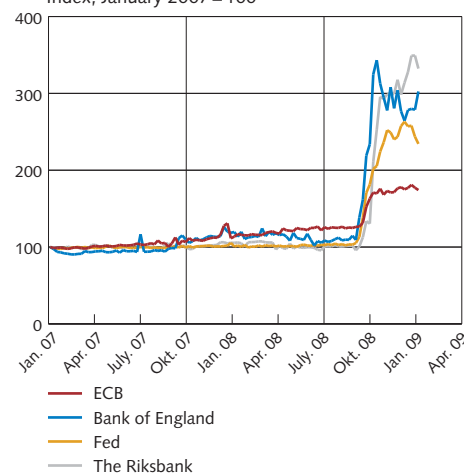
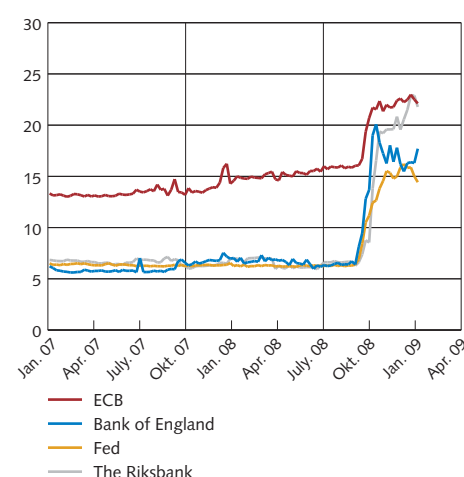


Figure B2. Central banks' balance sheet totals as per cent of GDP
Per cent



¹⁵ In the literature, the Bank of Japan's measures have been termed "quantitative easing". The Federal Reserve instead describes its measures as "credit easing". See "The crisis and the policy response", a speech given by B. Bernanke, the Stamp Lecture, London School of Economics, 13 January 2009, www.federalreserve.gov/newsevents/speech/bernanke20090113a.htm.