



Presentation by Governor Stefan Ingves  
ECB colloquium: "Monetary policy in unconventional times"  
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## ■ Panel discussion: "Non-standard measures and monetary policy: What have we learned from recent experience?"

### What the Riksbank did

After the international financial turmoil had escalated into a global crisis in September 2008 all central banks had to dig considerably deeper than usual into their policy toolboxes, including the Riksbank. We used a number of new tools: offering loans to counterparties at longer maturities than usual, offering loans in US dollars, approving a wider range of securities as collateral, increasing the number of counterparties and so on.

The new tools had several overall purposes: to safeguard the supply of liquidity in the financial system, to get financial markets to function better and to enable monetary policy to have a stronger impact on the economy. Of course, in a crisis like the one we experienced 2008-2009 there is no fine line between measures to restore financial stability and monetary policy measures – if there is no transmission channel, there is no monetary policy.

However, one of our unconventional measures was primarily implemented for monetary policy purposes; to reduce the large difference that existed between the repo rate and the market rates offered to households and companies. So, let me give you a bit more details about what we hoped to achieve with that particular measure, what the effects were and the exit.

First, a quick word about our conventional monetary policy tools: our policy rate and our policy rate forecast. Over the period October 2008 to July 2009 we lowered our policy rate with 4.5 percentage points down to 0.25 percent. There was some debate whether we could lower it further, but in effect this became the lower bound for the repo rate. In addition, the Riksbank made it clear that the repo rate would remain at a low level over a long period of time to support the economy in general.

In July 2009 we made the assessment that supplementary measures were needed to complement this monetary-policy stance and to ensure that the monetary policy could have the intended effect. The Riksbank therefore decided to offer one-year fixed-interest rate loans to the banks at a very low interest rate compatible with the Riksbank's forecast at that time of a low and unchanged policy rate over at least one year.

■ The loan volume was 100 billion kronor each time and we offered it through an auction where the banks presented bids in which they stated both interest rates and the loan volume. So the fixed rate was technically not set by the Riksbank but we stipulated a minimum bid rate at 0.40 per cent. The interest rate on the loans ended up very close to this rate due to the large loan volume. We made this offer three times from July through October 2009. At their greatest, the outstanding loans amounted to 9 percent of GDP.

### **What the fixed-rate loans were expected to achieve**

There are several transmission channels through which the fixed-rate long-term loans were expected to complement the monetary policy stance and help bring market interest rates down. By increasing the supply of liquidity for the banking system you would get a direct effect by making financing less expensive and reducing the banks' risk of not being able to refinance. This should raise the banks' margins and, in the end, contribute to lower interest rates for households and companies. Since the fixed-rate loans provided financing for the banks, there was also less pressure on bond and certificates markets which had just started functioning again after they basically shut down at the end of 2008 when the crisis hit.

There were also some potential indirect effects from increasing the supply of liquidity through fixed-rate long-term loans. The banks could take advantage of arbitrage opportunities by taking loans to a very low fixed rate and placing those in securities with the corresponding maturity but earning a higher interest rate. When the first of the fixed-rate loans was announced such opportunities did exist for short-term government bonds and mortgage bonds, partly as a result of the policy rate expectations being higher than what was implied by the Riksbank's policy rate forecast. These types of arbitrage transactions would push up the price of the securities and push down the interest rate.

The fixed-rate loans were not the only measures we took to increase liquidity in the banking system. Other extraordinary measures involved offering the banks long-term loans at variable rates. So the fixed-rate loans would basically add to the net excess supply of liquidity that already existed. But through their long duration they would guarantee that the excess supply would remain for at least a year. That would create a liquidity buffer for the banking system which should contribute to lower interest rates.

I can also add that as a way of facilitating trade in the interbank market we gave the banks the opportunity to place this surplus liquidity in Riksbank certificates; a security with a maturity of a week and with a fixed interest rate equal to our policy rate. But the interest in these certificates was modest. The banks preferred to keep a large part of their surplus liquidity until the end of the day, placing the money in our daily fine-tuning operations instead.

### **The effects of the fixed-rate loans**

Of course, with everything that was going on during the crisis it is difficult to isolate the effects of the Riksbank's fixed-rate lending. For example, the announcement of the fixed-rate loans were all made in conjunction with policy-rate announcements and news about our policy-rate forecast. Also, during the same period the large purchases of covered bonds by the ECB likely contributed to lower rates on some Swedish securities.

Nevertheless, we have made some efforts to estimate the effects of the fixed-rate lending quantitatively through an event study.<sup>1</sup> This figure summarizes some of the results of this study. It shows the total impact of the announcements of the three fixed-rate loans on interest rates on government bonds and covered-mortgage bonds with different maturities. Interest rates on government bonds and covered-mortgage bonds declined, most notably for maturities of up to two years where the drop in the interest rate was about 40 basis points.

Furthermore following the announcement of the fixed-rate loans, interbank borrowing rates and rates on bank and corporate paper declined. This in turn made short-term financing cheaper for both financial and non-financial firms. Also, the spreads of short-term market rates against comparable risk-free rates narrowed.

Our conclusion is that the fixed-rate loans improved financial conditions for financial and non-financial firms in Sweden and likely delayed the pass-through of higher financing costs onto the interest rates households and companies were facing. The fixed-rate loans enabled the Riksbank to implement a more expansionary monetary policy despite the fact that the policy rate had reached its effective lower bound.

### **The exit from the fixed-rate long-term loans**

The exit from the fixed-rate loans was communicated well in advance. In principle, the exit was simply achieved by letting the loans mature in 2010. In a technical sense then, the exit from the Riksbank's unconventional measures was straightforward and the sums involved were small compared to those some other central banks are facing ahead.

Nonetheless, the repayment of the loans and subsequent reduction in liquidity in the banking system did induce higher volatility in short-term money-market rates. It has taken some time for market participants to adjust to the new environment. Short-term money markets continue to exhibit more volatility and higher rates than before the crisis. Most likely, this is due to heightened awareness of risks in the banking system combined with the banks' desire to hold larger reserves of cash as part of their liquidity management.

### **Lessons – what we have learned**

So, what have we learned from our experience of non-standard measures during the financial crisis? One lesson to be drawn is the importance of being prepared, to make sure you have sharp tools available in the policy toolbox the day you reach for them. The Riksbank did not engage in programs to purchase securities during the crisis as many other central banks did. It would have been possible and the alternative was discussed. We decided however that these measures were not necessary and that the fixed-rate loans and our other measures were sufficient.

Still, it cannot be precluded that the need to use these types of measures in a future crisis might arise. So the Riksbank has decided to expand the policy tool kit and to acquire a limited portfolio of securities in Swedish kronor. By doing this, the Riksbank can ensure that the necessary systems, legal contracts, routines and knowledge are in place in the event of a future crisis where quantitative measures may be required.

Another lesson I think you can draw from the Riksbank's experience is that exit from unconventional measures will probably always bring about turbulence. Even with

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<sup>1</sup> Under publication in Sveriges Riksbank Economic Review.

- conditions for the exit as favorable as they were in our case, volatility in money-market rates still increased when the fixed-rate loans were repaid.

Finally, and connected to the previous point, banks must be OK for an exit to take place. This might seem obvious, but I think it is still an important point to make. Uncertainty over banks' resilience will affect the confidence on financial markets. And when confidence is undermined, the banks' funding will be problematic. Like I said, even when the conditions for an exit were as favorable as they were in our case, the sailing was still not entirely smooth.