Lars E O Svensson: Where do central banks go from here?

Speech by Mr Lars E O Svensson, Deputy Governor of the Sveriges Riksbank, at a panel discussion, Norges Bank Symposium, Oslo, 18 November 2010.

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The opinions expressed here are my own and are not necessarily shared by other members of the Riksbank's Executive Board or staff. Gabriela Guibourg has contributed to this speech.

It is a great privilege to participate in this symposium and to celebrate the achievements of Governor Svein Gjedrem. I have had the benefit of having very good contacts with Norges Bank since the mid 1990s. Under the leadership of Svein and his colleagues and co-workers, I have seen Norges Bank set up its monetary policy in a way that has made it a model for the rest of the world. Norges Bank truly deserves the admiration that it receives from central bankers and academics all over the world. In particular, Svein deserves credit for the novel interpretation – immediately upon his appointment in 1999 – of the instruction from the Ministry of Finance to stabilize the exchange rate, namely that the best way to do this in the longer run was to orient the Bank's monetary policy towards an inflation target. This would enable the Bank to make the best contribution to economic stability and a stable krone exchange rate.

As a background to my comments on the topic of this panel, "Where do central banks go from here?", let me note that, as the world economy recovers from the recent financial crisis and the Great Recession that followed, a debate is underway regarding the causes of the crisis and how to reduce the risk of future crises. The role of monetary policy and its relation to financial stability are also under debate. Some blame the Federal Reserve, saying that its monetary policy was too expansionary after 2001 and that this laid the foundations for the crisis. The lesson to be drawn, they argue is that there is a need to modify the framework of flexible inflation targeting and give a greater role to financial-stability considerations.

In my view, the crisis was largely caused by factors that had very little to do with monetary policy. Instead, it was mainly caused by regulatory and supervisory failures in combination with some special circumstances, such as low real interest rates around the world and housing policy in the United States. Neither do I share the view that there is a need to fundamentally modify the framework of flexible inflation targeting. Ultimately, my main conclusion for monetary policy is that flexible inflation targeting – applied in the right way and in particular using all the information about financial conditions that is relevant for the forecast of inflation and resource utilisation at any horizon – remains the best-practice monetary policy before, during, and after the financial crisis.

A conclusion that should be drawn from the crisis is that neither price stability nor interest-rate policy is sufficient to achieve financial stability. Instead, a separate financial-stability policy is needed. In particular, monetary policy and financial-stability policy need to be conceptually distinguished, since they have different objectives and different appropriate instruments, even in cases where the central bank has responsibility for both.[1] Financial stability as an objective of *monetary policy* makes little sense, but it does makes sense as an objective of the central bank, if the *central bank* has the instruments required to fulfil this responsibility.

Let me elaborate on these issues.

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[1] For a more detailed discussion of these issues, see Svensson (2010, section 5.2).

Monetary policy after the crisis

Is there any reason to fundamentally modify the framework of flexible inflation targeting given the experience of the financial crisis? I think not. Flexible inflation targeting has worked and continues to work well – before, during and after the crisis. Flexible inflation targeting implies that the central bank aims at stabilizing both inflation around an inflation target and resource utilization around a normal level. This implies choosing a policy-rate path such that the corresponding *forecasts* of inflation and resource utilisation best stabilise inflation and resource utilisation. If the central bank uses all relevant information in constructing these forecasts , including the impact of changes in financial conditions on inflation and resource utilisation at any horizon, monetary policy will automatically respond in the best possible way to changing financial conditions (Woodford 2007, 2010a).

One lesson from the financial crisis is that financial conditions may in times of crisis have a strong and deteriorating effect on the transmission mechanism, making standard interest-rate policy less effective. This motivates more research on how to incorporate financial conditions and financial intermediation into the standard models of the transmission mechanism used by central banks. Much progress has already been made in understanding these effects (see Adrian and Shin 2010a, Gertler and Kiyotaki 2010 and Woodford 2010a).

The relation between monetary policy and financial-stability policy

As mentioned, an important conclusion from the financial crisis is that neither price stability nor interest-rate policy are enough to achieve financial stability (Carney 2009, White 2006). Good flexible inflation targeting by itself does not achieve financial stability. Furthermore, the policy rate is an ineffective instrument for influencing financial stability, and policy rates high enough to have a noticeable effect on credit growth and house prices will have a strong negative effect on inflation and resource utilisation, even in sectors that are not experiencing any speculative activity. Specific policies and instruments are needed to ensure financial stability. A good financial-stability policy framework is necessary to ensure financial stability. Monetary policy cannot serve as a substitute.

In general, it is helpful to conceptually distinguish financial-stability policy from monetary policy. Different economic policies, such as fiscal policy, monetary policy and labour market policy can be distinguished according to their objectives, the policy instruments that are suitable for achieving the relevant objectives, and the authority or authorities who control the instruments and are responsible for achieving the objectives. From this point of view, it is clear that monetary policy and financial-stability policy are very different, and understanding this distinction is important.

Monetary policy, in the form of flexible inflation targeting, has the objective of stabilising inflation around the inflation target as well as resource utilisation around a normal level. Under normal circumstances, the suitable instruments are the policy rate and communication. In times of crisis, as we have seen during the current crisis, other more unconventional methods can be used, such as lending at a fixed interest rate at longer maturities, quantitative easing, and so on.

Financial-stability policy has the objective of maintaining and promoting financial stability. Financial stability can be defined as a situation in which the financial system can fulfil its main functions of submitting payments, channelling saving into investment, and providing risk sharing without disruptions that have significant social costs. The available instruments are, under normal circumstances, supervision, regulation, and financial-stability reports with analyses and leading indicators that may provide early warnings of stability threats. In times of crisis, authorities may use instruments such as lending of last resort, variable-rate lending at longer maturities (credit policy, credit easing), special resolution regimes for financial firms in trouble, government lending guarantees, government capital injections, and so forth.

My point here is that this has to be taken into account when considering the lessons of the financial crisis for monetary policy. The interest rate is a blunt and unsuitable instrument for achieving financial stability and it thus makes little sense to assign the objective of financial stability to *monetary policy*. However, it may make sense to assign the objective of financial stability to the *central bank*, if the central bank is given control of the appropriate supervisory and regulatory instruments.

The fact that financial-stability policy and monetary policy are different does not mean that there is no interaction between them. This interaction need to be considered. Monetary policy affects asset prices and balance sheets and can thereby affect financial stability. Financial-stability policy directly affects financial conditions, which affect the transmission mechanism of monetary policy. This means that monetary policy should normally be conducted taking financial-stability policy into account, and financial-stability policy should be conducted taking monetary policy into account. This is similar to how fiscal policy is conducted taking monetary policy into account, and monetary policy is conducted taking fiscal policy into account. Importantly, under normal conditions, financial stability is handled by financial-stability policy, not by monetary policy.

However, let us suppose that the appropriate and effective instruments for ensuring financial stability are not available, for instance because of serious problems with the regulatory and supervisory framework that cannot be remedied in the short run. In such a second-best situation, if there is a threat to financial stability, one may argue that, to the extent that policy rates do have an impact on financial stability, this impact should be taken into consideration when choosing the policy-rate path to best stabilise inflation and resource utilisation. Such considerations could result in a lower or higher policy-rate path than otherwise, in order to trade off less effective stabilisation of inflation and resource utilisation for more financial stability.[2] To the best of my knowledge, the evidence so far indicates that in normal times such a trade-off is very unfavourable, in the sense that the impact of policy rates on financial stability is quite small and the impact on inflation and resource utilisation is significantly greater. Then, in normal times an optimal trade-off would still result in policy rates directed towards stabilizing inflation and resource utilization with little impact on financial stability.

In particular, it seems clear that monetary policy should not be used to target housing prices. A considerable amount of research has concluded that policy rates have a modest impact on housing prices but a substantial impact on output, implying high real costs for using the policy rate for this purpose (Assenmacher-Wesche and Gerlach 2010). If housing prices are considered a problem, instruments such as loan-to-value restrictions, amortization requirements, a property tax, or restrictions on the tax deductibility of mortgage rates are examples of instruments that have much lower real costs and hence a considerable comparative advantage compared to the policy rate in affecting housing prices (Svensson 2010b).

Flexible inflation targeting with mean square gaps (MSGs) – another step towards increased transparency

The adoption of numerical inflation targets has entailed great progress for practical monetary policy and made it possible to measure and evaluate the target fulfilment of monetary policy

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[2] Such considerations could include evidence of the "risk-taking channel" as in Borio and Zhu (2008). Adrian and Shin (2010a, b) argue, in a model with such a risk-taking channel, that short interest-rate movements may have considerable effects on the leverage of securities broker-dealers in the market-based financial sector outside the commercial-banking sector. If we assume that the risk of a financial crisis increases as this leverage increases, and that policy rates affect leverage, then policy rates would affect the risk of a financial crisis (Woodford 2010b). However, new regulation is likely to limit excess leverage and limit the magnitude of these affects. The size of the market-based financial sector may end up being smaller after the crisis. In Europe, Canada and the Nordic countries, commercial banks dominate the financial sector.

in a much more efficient manner than before. However, the fact that monetary policy is not just directed towards stabilising inflation, but also towards stabilising resource utilisation has, in the absence of quantitative measures of stability in these variables, made it difficult to measure and evaluate target fulfilment in this stability dimension. This makes it difficult to decide which policy-rate path best stabilizes both inflation and resource utilization.

My suggestion is to use mean squared gaps for the inflation forecast and for the resource-utilization forecast as measures of the stability of inflation and resource utilization.[3] Figure 1 provides an example, using graphs from Norges Bank's *Inflation Report* of June 2005.

Figure 1

Monetary policy with mean squared gaps (Norges Bank, June 2005)
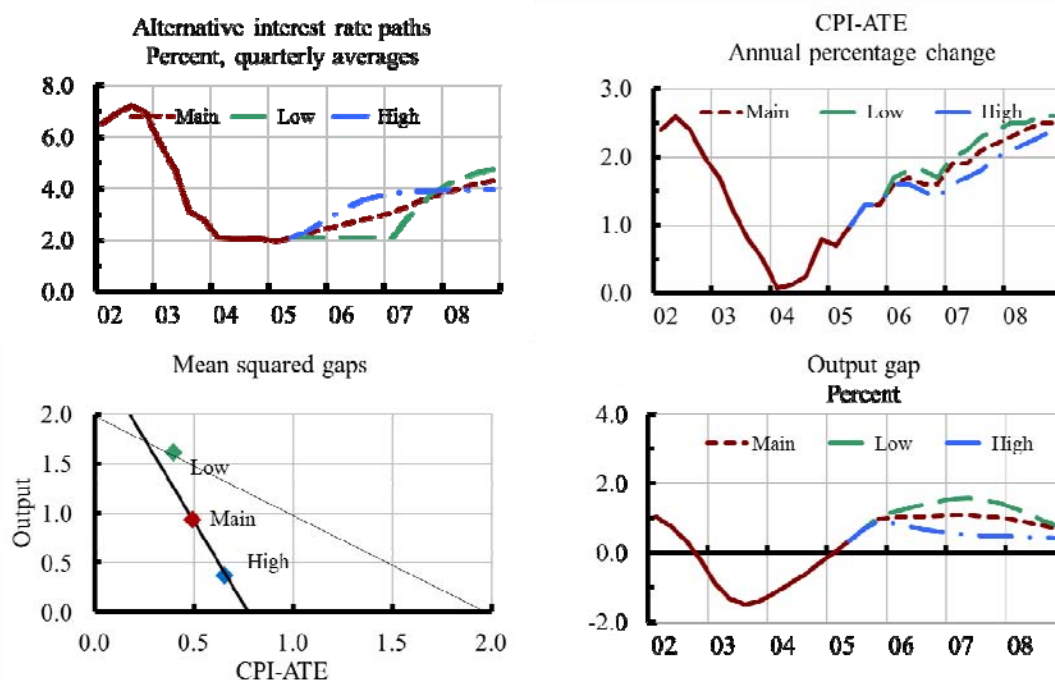
In figure 1, the top left panel shows three alternative policy-rate paths, the main path chosen by Norges Bank at the time and two alternative paths, a lower and a higher path. The top right panel shows the corresponding forecast of inflation according to the index CPI-ATE, the consumer price index adjusted for tax changes and excluding energy products. The bottom right panel shows the corresponding forecasts of the output gap, the gap between output and potential output. These three panels are shown in the June 2005 *Inflation Report*. We see that there is a tradeoff between stabilizing inflation and resource utilization, measured as the output gap. The lower (higher) policy-rate path stabilizes inflation better (worse) around the

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[3] See Svensson (2010a, c) for details. The mean squared gap for inflation is calculated as $\sum_{\tau=0}^{T}[\pi(t+\tau,t)-\pi^*]^2/(T+1)$, where $\pi(t{+}\tau,t)$ denotes the forecast in quarter t of inflation in quarter $t+\tau$ and π^* denotes the inflation target. The mean squared gap for output is calculated as $\sum_{\tau=0}^{T}[y(t+\tau,t)-y^*(t+\tau,t)]^2/(T+1)$, where $y(t{+}\tau,t)$ denotes the forecast in quarter t of output in quarter $t+\tau$ and $y^*(t{+}\tau,t)$ denotes the forecast in quarter t of potential output in quarter $t+\tau$, and T is the forecast horizon (normally 12 quarters).

inflation target of 2.5 percent but resource utilization worse (better). The Qvigstad (2005) necessary (but not sufficient) condition for optimal policy is satisfied, namely that the inflation gap and the output gap should be of opposite signs.

The bottom left panel, with the mean squared gap for inflation plotted along the horizontal axis and the mean squared gap for output plotted along the vertical axis, has been added by me. The closer the mean squared gap for inflation and output is to zero, the better inflation or the output gap is stabilized. The less sloped straight line is an iso-loss line that corresponds to equal weight on inflation and output-gap stabilization, that is to a "lambda" equal to one.[4] With such equal weight, the high policy-rate path is preferred. The steeper straight line corresponds to lambda equal to 0.3, that is, with a weight on output-gap stabilization equal to 0.3 relative to the weight on inflation stabilization. With such a weight, the main policy-rate path is about as good as the higher and clearly better than the lower policy-rate path. At the time, Norges Bank had announced that its decisions were consistent with a relative weight on output-gap stabilization equal to 0.3 and a relative weight on interest-rate smoothing of 0.2 (Bergo 2007 and Holmsen, Qvigstad, and Røisland 2007). With some weight also on interest-rate smoothing, the main policy rate is best.

The use of the mean squared gaps is one more step towards more systematic and transparent inflation targeting, in which central banks can be evaluated and held responsible for their decisions with even greater accuracy than before, following the introduction of numerical inflation targets, published forecasts of inflation and the real economy, published policy-rate paths and other important steps taken in the development of a systematic and transparent monetary policy.

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[4] An iso-loss line shows combinations of mean squared gaps for inflation and output that are equally good. Combinations on an iso-loss line closer to the origin are better in terms of stabilizing inflation and the output gap. See Svensson (2010a) for details.

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