Lars E O Svensson: Why a lower repo rate path?

Speech by Prof Lars E O Svensson, Deputy Governor of the Sveriges Riksbank, at Umeå University, Umeå, 24 February 2010.

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The opinions expressed herein are my own and are not necessarily shared by other members of the Riksbank's Executive Board or staff. I would like to thank Hans Dillén, Karolina Ekholm, Per Jansson, Pernilla Meyersson, Staffan Viotti and Svante Öberg for their valuable comments. Hanna Armelius has contributed to this speech.

In this speech, I would like to explain why I entered a reservation the most recent monetary policy meeting and justify why I preferred a lower repo rate. I will also explain why I consider that mean squared gaps should be used, to a greater extent, as a measure of the extent to which monetary policy has succeeded in stabilising inflation around the inflation target and resource utilisation around a normal level. Such measures entail a new step towards a more transparent and systematic monetary policy.

The Sveriges Riksbank Act and the preparatory work for it specify that monetary policy should be directed towards stabilising inflation around the inflation target and resource utilisation around a normal level. The lower repo rate path I advocated at the most recent monetary policy meeting would provide a better outcome for both inflation and resource utilisation, with both higher resource utilisation and CPIF inflation closer to the target. Such an interest rate path would not entail any problems for financial stability or the functionality of the financial markets. Housing prices and mortgages do not comprise stability problems and should not affect monetary policy. Any future problems on the housing markets, or, indeed, any future problems with financial stability whatsoever, can best be managed through regulation and supervision. The repo rate is an altogether too blunt and unsuitable instrument to be used for any other purpose than stabilising inflation around the inflation target and resource utilisation around a normal level.

Monetary policy should be directed towards stabilising both inflation and resource utilisation

According to the Sveriges Riksbank Act, "the objective for monetary policy is to maintain price stability". The objective is thus price stability. The Riksbank has specified this as an inflation target of 2 per cent. This means that monetary policy should stabilise inflation around the inflation target.

Furthermore, in the preparatory work for the Sveriges Riksbank Act (Prop. 1997/98:40), it is stated that "as an authority under the Riksdag, the Riksbank, without prejudice to the price stability market, should furthermore support the goals of general economic policy with a view to maintaining a sustainable level of growth and high rate of employment". How should this be interpreted? What is the best contribution monetary policy can make towards maintaining a sustainable level of growth and high rate of employment? It is to stabilise resource utilisation around a normal level.

Considering the price stability objective stipulated in the Sveriges Riksbank Act and the stance taken in the preparatory work, it can be concluded that monetary policy should be aimed at stabilising inflation around the inflation target and resource utilisation around a normal level. This is called flexible inflation-targeting in the terminology I proposed in a number of papers published in the 1990s (Svensson 1999). This is, incidentally, completely in line with the stance adopted by the parliamentary Committee on Finance in 2007, in its comments on the evaluation of monetary policy in the period 1995–2005 by Francesco Giavazzi and Frederic Mishkin (2006/07:FiU27): "The Committee maintains that Swedish monetary policy should be conducted in a flexible way and should aim to stabilise the development of inflation, employment and production."

This being so, some people may wonder: Wouldn't it be better to have a level of resource utilisation that is higher than normal? Shouldn't monetary policy be aimed at achieving a higher level of resource utilisation than normal? Well, you may think so – but 40 years of practical experience and 30 years of theoretical and empirical research have produced overwhelming evidence that monetary policy alone cannot bring about a higher than normal level of resource utilisation. Making attempts through a more expansionary monetary policy will not lead to success in increasing resource utilisation and employment. The only result to be achieved will be higher inflation than desired – that is to say that, on average, the inflation target will be exceeded. Consequently, for monetary policy, the highest level of resource utilisation that is sustainable over the longer term is the normal level. Other economic policies than monetary policy, such as labour market policy and structural policies improving the workings of the economy and the degree of competition, are needed to raise production and employment above the level that today is normal for these variables.

Consequently, if the inflation target is given priority, a higher than normal level of resource utilisation cannot be sought in monetary policy. Some people may believe that priority to the inflation target may entail ignoring the real economy entirely and only caring about stabilising inflation. This is an altogether too narrow approach and characterises a so-called "inflation nutter", to use Mervyn King's striking expression. It is called strict inflation targeting in the terminology I proposed.[1] Giving priority to the inflation target does *not*, therefore, mean that monetary policy should not stabilise resource utilisation, but, instead, that it should stabilise resource utilisation around a *normal* level, rather than a higher one.

The same concept can be expressed with different words. When it comes to the *average level* of inflation and resource utilisation, there is only one numerical target, namely the inflation target. There is no independent numerical target for resource utilisation. Rather, the average level for production and employment is determined by the workings of the economy, not by monetary policy. When it comes to the *stability* around these levels, there is an objective for both, namely that of stabilising both as much as possible, and of trying to achieve a reasonable balance between stability in inflation and resource utilisation when it is not possible to stabilise both completely.

As far as I am aware, this interpretation of the Sveriges Riksbank Act and its preparatory work is now generally accepted.

A lower repo rate path achieves a better outcome for inflation and resource utilisation

At the most recent monetary policy meeting, I shared the view in the monetary policy report regarding economic developments in Sweden and abroad, but I expressed a reservation in favour of a lower repo rate path than that presented in the main scenario. I argued that a lower interest rate path will lead to a much better outcome for inflation and resource utilisation without causing any problems to the functioning of the financial markets or to financial stability. How did I arrive at this stance?

If a conflict should arise between stabilising inflation and stabilising resource utilisation, then a well-balanced monetary policy involves a reasonable compromise between the stability of inflation and the stability of resource utilisation. If there is no such conflict, things are much simpler. Then it is merely a question of finding the repo rate path that will stabilise both inflation and resource utilisation. In the current situation it can actually be claimed that there is no conflict.

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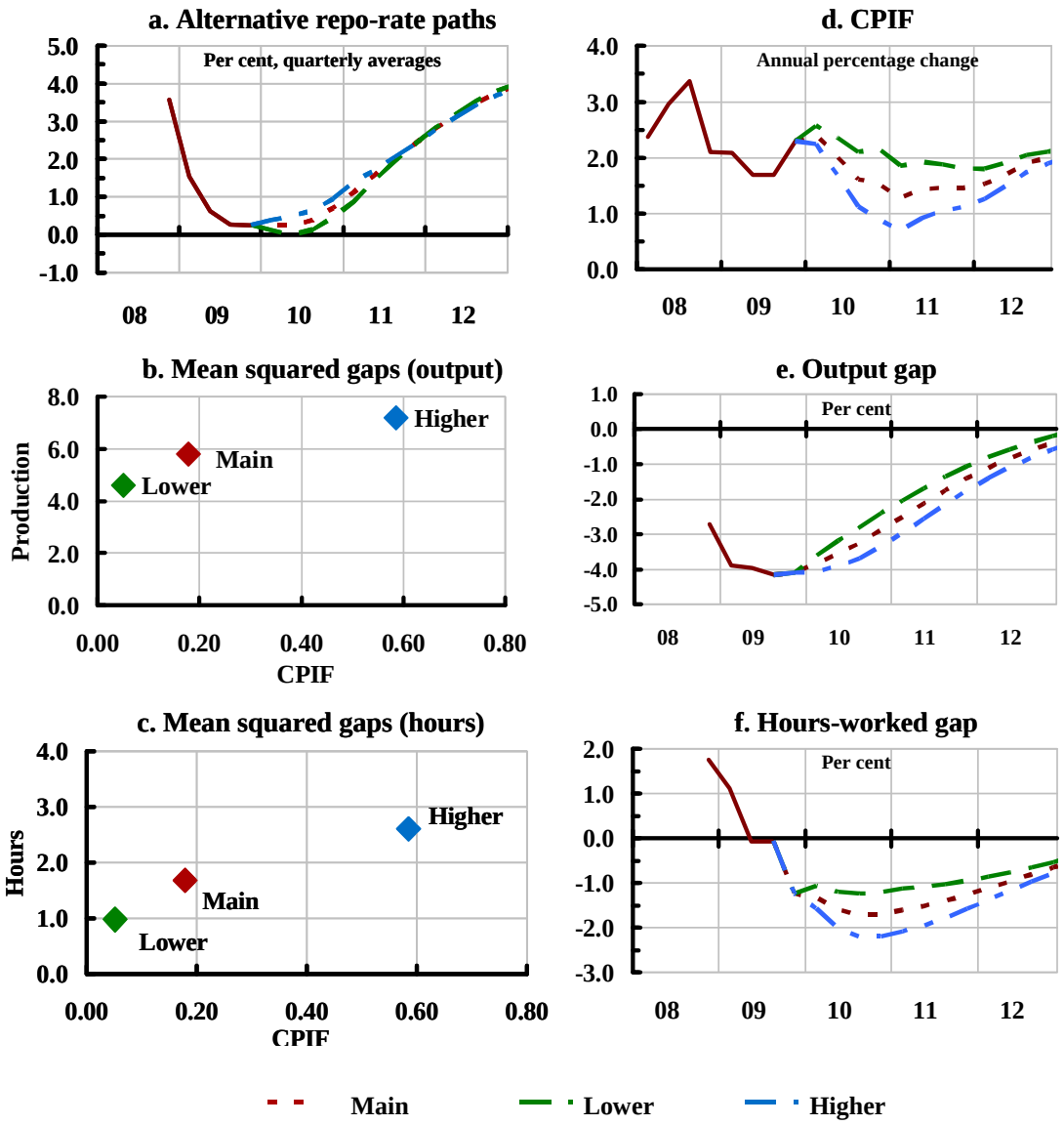
[1] The designation "inflation nutter", describing a central bank only working towards stabilising inflation, was coined in a speech held by Mervyn King at a conference at Gerzensee, Switzerland in 1995, later published as King (1997). The designations strict and flexible inflation targeting were first introduced and defined, as far as I know, in a speech I held at a conference at the Banco de Portugal in 1996, later published as Svensson (1999).

Figure 1

Monetary policy alternatives, February 2010



To determine which repo rate path is most appropriate, a comparison must be made of the forecast for inflation and resource utilisation for alternative repo rate paths. Such a comparison is presented in Figures 2.13–2.15 at the end of Chapter 2 of the Monetary Policy Report. I present a similar comparison here in Figure 1.

Figure 1 shows the consequences of alternative repo rate paths for the forecast for inflation and resource utilisation. The different repo rate paths are shown in panel a. In the middle is the main scenario's repo rate path – the repo rate path that the Executive Board majority chose at the meeting in February. Panel d shows the equivalent forecasts for CPIF inflation.[2] Panels e and f show equivalent forecasts for two measures of resource utilisation, the output gap in panel e and the hours gap in panel f.

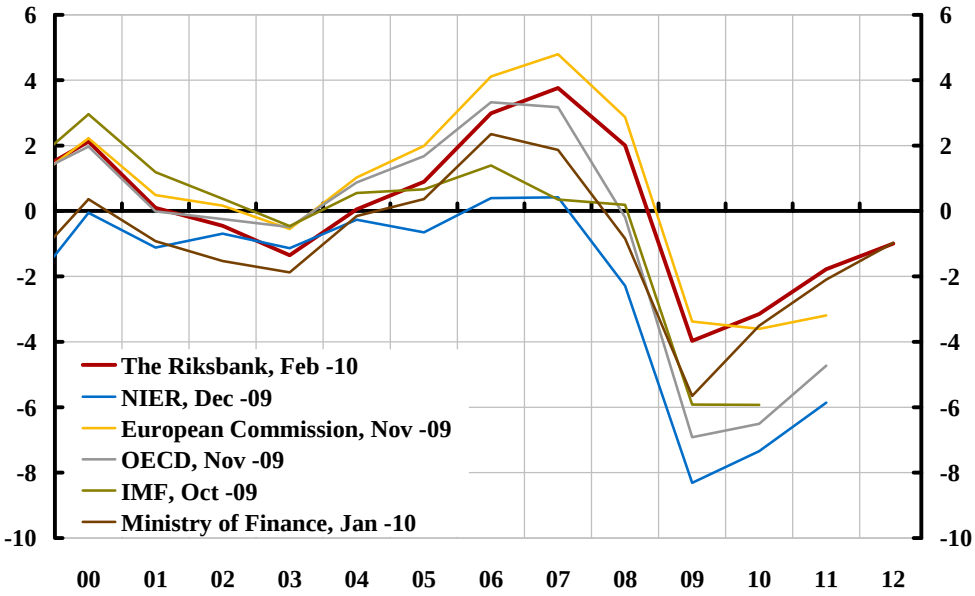
[2] One may ask why CPIF should be focused on and not CPI. In a situation in which extensive repo rate changes have very large direct effects on CPI, I consider it to be more appropriate to focus on stabilising CPIF around the inflation target, instead of CPI.

Panels b and c in Figure 1 also show the mean squared gaps, which were introduced in an article in the Monetary Policy Report in October 2009.[3] The mean squared gap for inflation measures the deviation between the inflation forecast and the inflation target or, more precisely, the mean squared gap between the inflation forecast and the inflation target during the forecast period. A lower mean squared gap for inflation entails a forecast of inflation closer to the inflation target, that is a better stabilisation of inflation around the inflation target. The mean squared gap for resource utilisation, measured as the output gap or the hours gap, measures the deviation between the forecast for resource utilisation and normal resource utilisation – more precisely, as the average squared gap during the forecast period. A lower mean squared gap for resource utilisation thus entails a better stabilisation of resource utilisation around a normal level.

Figure 2

Output gap for a number of forecasters

Per cent



The gaps for output and hours worked are calculated as the difference between actual and "potential" levels. The Riksbank's estimates and forecasts for potential output and hours worked are inadequate and in great need of improvement and development.[4] Such development work is currently underway. These measurements of resource utilisation are thus not particularly reliable. However, according to all available measurements, there is no doubt that resource utilisation is and will remain very low during the forecast period. Other forecasters' output gap forecasts are shown in Figure 2. Several of the forecasts from other forecasters indicate an even lower level of resource utilisation than the Riksbank's estimate.

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[3] See Sveriges Riksbank (2009) and Svensson (2009a) for details. The mean squared gap for the inflation forecast is defined as $\sum_{\tau=0}^{T}\left(\pi_{t+\tau,t}-\pi^{*}\right)^{2}/(T+1)$, where $\pi_{t+\tau,t}$ denotes the forecast in quarter t for inflation in quarter $t+\tau$, π^{*} denotes the inflation target, and T denotes the forecast horizon (normally 12 quarters).

[4] In the Monetary Policy Reports, the following note is also usually attached to the resource utilisation diagram. "These gaps should not necessarily be interpreted as the Riksbank's overall assessment of resource utilisation."

Figure 1 here or Figures 2.13–2.15 in the Monetary Policy Report summarise the essence of the monetary policy decision. What monetary policy alternative shall we choose? Which repo rate path shall we choose: the one in the main scenario, or a higher or lower repo rate path?

My firm opinion is that a large part of the monetary policy decision-making process and discussion should centre on monetary policy alternatives and their advantages and disadvantages. I fear that the decision process will otherwise fix too quickly and too uncritically on one particular alternative instead of carefully and meticulously considering several alternatives, choosing the best one, and very clearly describing why one particular interest rate decision was made and not another. As the Riksdag Committee on Finance states in its report in 2007: "A flexible monetary policy requires, in the Committee's view, a high degree of transparency and that the Riksbank is very clear about why the various repo rate decisions have been made. This is also a prerequisite for the possibility to examine and evaluate monetary policy." In my opinion, this requires a methodical and detailed discussion of the various monetary policy alternatives, together with the reason why one of them should be preferable to the others.

The effects of a changed repo rate path on the forecast for inflation and resource utilisation are calculated with the help of the Riksbank's model Ramses. In particular, they have been calculated using so-called expected deviations from the main scenario's repo rate path. This corresponds to a situation in which the Riksbank clearly and transparently announces an alternative repo rate path that it intends to follow and that affects market expectations and thus inflation and the real economy.[5]

The deviations from the main scenario's repo rate path that are shown in these graphs entail a reduction or an increase in the repo rate by 0.25 percentage points over four quarters. After this, the alternative repo rate paths gradually return to the main scenario's repo rate path in accordance with the Riksbank's historically-estimated reaction function.

Figure 3 shows the consequences, expressed as a percentage or percentage per year, of a reduction of the repo rate path by 0.25 percentage points over four quarters on quarterly inflation, the real repo rate, the real exchange rate, four-quarter inflation, production and hours worked. The solid curves show the effect of an anticipated reduction, while the dashed curves show the effect of an unanticipated reduction.[6] We see that, all else being equal, such an anticipated reduction of the repo rate leads to an increase in inflation of just over 0.4 percentage points, an increase in output and the output gap of just over 0.4 per cent or percentage points, respectively, and an increase of the number of hours worked of approximately 0.35 per cent. If employment varies one-to-one with hours worked, which is realistic in a year or a couple of years' time, employment will then increase by approximately 0.35 per cent.

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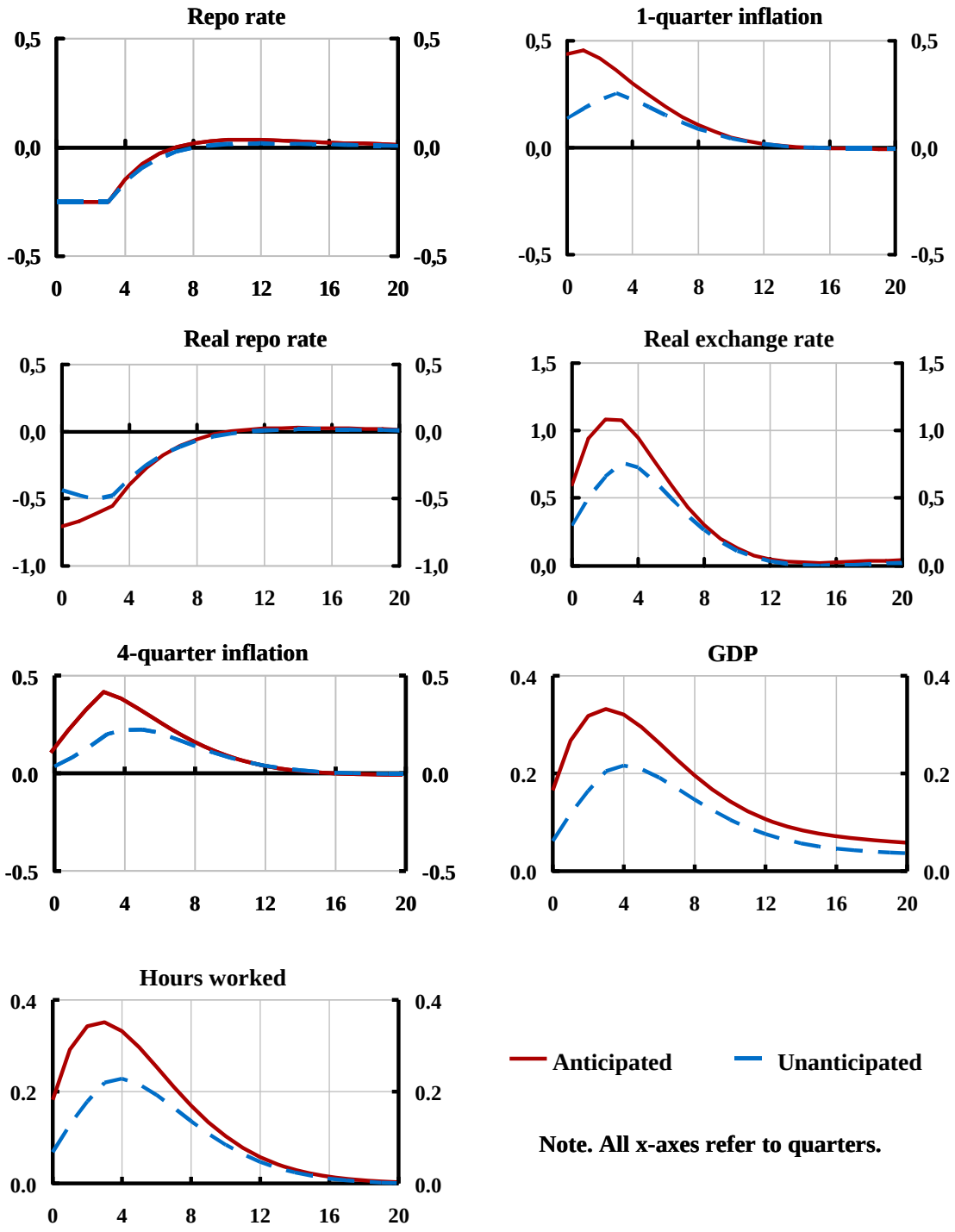
[5] One can also calculate the alternative forecasts for inflation and resource utilisation using so-called unexpected deviations from the main scenario's repo rate path. This corresponds to a remarkable situation in which the Riksbank misleadingly announces the main scenario's repo rate path but plans in a later monetary policy decision to surprise the market and the economic agents by deviating from the announced repo rate path. This would be the opposite of the transparent and clear monetary policy that the Riksbank says that it should conduct and does conduct. It is therefore reasonable to calculate the alternative forecasts for inflation and the real economy on the basis of expected deviations from the main scenario. The effects of expected deviations are somewhat greater than the effects of unexpected deviations. Figures 2.13–2.15 in the Monetary Policy Report are calculated using unexpected deviations.

[6] The effects of anticipated and unanticipated deviations are calculated using the methods presented in Laséen and Svensson (2009) and Leeper and Zha (2003), respectively.

Figure 3

The effects of expected and unexpected deviations from the repo rate path of 0.25 percentage points over four quarters.



0.35 per cent of an estimated potential employment rate of, conservatively, 93 per cent of a labour force of approximately five million is equivalent to over 16 000 jobs. Calculating on the basis of 93 per cent thus entails assuming a rather high figure for long-term unemployment of 7 percent. An increase of over 16 000 jobs is thus not very far from the middle of the preliminary range of 10 000 to 25 000 jobs saved that I mentioned at the Monetary Policy Meeting in October. To sum up, a reduction of the repo rate path by 0.25 percentage points

over four quarters will thus give, all else being equal, an increase in inflation of just over 0.4 percentage points and, if employment varies one-to-one with hours worked, an increase in employment of approximately 0.35 per cent, which is equivalent to an estimated figure of over 16 000 jobs.

We see in Figure 3 that the consequences of an unanticipated reduction of the repo rate are less than those of an anticipated reduction. In such a case, hours worked increase by 0.23 per cent, equivalent to just under 11 000 jobs, when calculated on the same basis.

These estimates are unbiased estimates and forecasts of the effects of a lower repo rate path. The actual effect may be larger or smaller. It is possible that the effects of the repo rate on the economy are smaller than normal when the repo rate is close to zero. It is also possible that a reduction of the repo rate path, in a situation in which the market's repo rate expectations remain higher than the repo rate path, can have a larger than normal downwards effect on repo rate expectations, thus increasing the effects on the economy. In the absence of more detailed information on the effect that may be dominant, it does not seem unreasonable to assume that the effects of a reduction of the repo rate path will be of a normal scale.

These figures and the estimated effects of a repo rate reduction are not the final word. Of course the future will bring further developments of Ramses and other models, more empirical estimates and new experience, which will lead to the revision of these figures. However, I would claim that these figures are the *latest* and *best* word on the basis of the information and knowledge currently available, and therefore provide the best basis for a decision right now.

Similarly, the mean squared gaps are perhaps not the last word when it comes to measuring the Riksbank's target achievement. However, it is fair to claim that is the best way we have found so far of me assuring target achievement, that is, the extent to which the Riksbank has succeeded stabilising both inflation around the inflation target and resource utilisation around a normal level.

I consider Figure 1 very clarifying. To summarise: It clearly shows that the lower repo rate path provides both a higher forecast for inflation measured in terms of the CPIF that is closer to the inflation target (which is shown in panel d) and a higher forecast for resource utilisation measured in terms of the output gap (panel e) or the gap for hours worked (panel f), which even with the lower repo rate is low but not as low as in the main scenario. Thus, a repo rate path which is lower than that in the main scenario stabilises both inflation and resource utilisation better. Panels b and c also show that the mean squared gaps for inflation, output and hours worked are lower under the lower repo rate path.

Is there any reason not to choose the lower repo rate path?

One might think that if one nevertheless does not choose the lower repo rate path one must have strong reasons for this. So what does the Monetary Policy Report, which, of course, represents the view of the majority of the Executive Board, say about the various monetary policy alternatives? After Figures 2.13–2.15 are presented, there is a sentence on page 38 that states "Whether or not the repo rate levels set in these scenarios would lead to a better or worse development of the economy than that portrayed in the main scenario is *not a simple question* to answer" (my italics). Speaking for myself, I actually find it, on the contrary, a very simple question to answer. The lower repo rate path provides a better development, while the higher provides a worse.

The next paragraph mentions different measures of resource utilisation and emphasises the uncertainty of these measures. In this case, however, all measures of resource utilisation give the same answer. The lower repo rate path is better, and the higher is worse. Other forecasters than the Riksbank, such as the National Institute of Economic Research, the Ministry of Finance and the OECD, have even lower estimates of resource utilisation than the

Riksbank, as can be seen in Figure 2. The paragraph on resource utilisation thus provides no argument against choosing the lower repo rate path.

The following paragraph states that it is difficult to know how economic agents will act and how financial markets will function when interest rates are very low. However, I do not know of any information pointing to economic agents acting differently or paradoxically when interest rates are low, or why this should have such drastic consequences that it is allowed to dominate over other considerations. Interest rates have been very low in many countries for more than a year; moreover there have been much lower interest rates in several other countries than in Sweden. In Switzerland they have had policy rates of a couple of basis points. As pointed out in the Economic Commentary "The lower limit of the Riksbank's repo rate" (Beechey and Elmér, 2009), which was published on the Riksbank's website last autumn, one cannot find any problems in the financial markets that can be attributed to low interest rates.

Since then a few more months have passed. Both the Monetary Policy Department and the Financial Stability Department at the Riksbank closely follow developments in the financial markets and have very good information about them. There are still no signs that low interest rates have entailed any problems with regard to financial stability or the functioning of the financial markets. The profitability of the major banks, in the form of the net interest margin, has been stable and their share of deposits from households has not changed noticeably. The redistribution of capital on the fund market has also been moderate. The financial infrastructure has not been affected by any problems during the period of low interest rates and resilience against disruptions of the financial infrastructure is deemed to be high.

The final paragraph on page 28 mentions risks linked to exaggerated lending and rapid increases in house prices. These risks have been closely studied in both the Riksbank's most recent Financial Stability Report and by Finansinspektionen (the Swedish financial supervisory authority) in its report on the Swedish mortgage market and bank lending (Finansinspektionen, 2010). The unequivocal and certain conclusion based on very detailed data, studies and stress tests is that the housing market and credit granting do not at present entail any problem for financial stability. If such problems were to arise at some point in the future, Finansinspektionen has suitable instruments, in the form of regulations regarding leverage, amortisation and housing cost calculations. However, the repo rate is a very blunt and thus less suitable instrument for affecting potential risks of this sort. Consequently, there does not seem to be any reason to allow house prices and credit granting to affect the repo rate decision now.

At the monetary policy meeting, a number of members of the Executive Board stated that a possible future fall in house prices may have a negative impact on consumption in the future. This would lead to a fall in aggregate demand, with negative consequences for future resource utilisation and inflation. However, if one believes this, it should also be considered in the assessment of the influence of alternative repo rate paths on the forecasts for inflation and resource utilisation, and it should only be allowed to affect monetary policy in such a case. These forecasts are mean forecasts, and some probability of a negative outcome has a negative impact on the mean. In this sense, the forecasts are "risk-adjusted". As usual, it is necessary to filter all information through the forecasts to determine whether or not it should affect monetary policy. As usual, it is necessary to consider all information, where, in practice, the assessment of effects not covered by models is of great significance. If something cannot be considered to affect the expected value of future inflation and resource utilisation, then monetary policy does not need to react to it.[7]

Kohn (2006, 2008) mentions three conditions that should be fulfilled before central banks implement "extraordinary measures" to handle possible asset price bubbles, such as the

[7] See Svensson (2003) for a discussion of monetary policy with extreme outcomes with low probability.

unsustainable development of housing prices: “First, policymakers must be able to identify bubbles in a timely fashion with reasonable confidence. Second, a somewhat tighter monetary policy must have a high probability that it will help to check at least some of the speculative activity. And third, the expected improvement in future economic performance that would result from the curtailment of the bubble must be sufficiently great.” As these conditions are very seldom fulfilled in practice, it is very seldom that the issue arises, in practice, of allowing asset prices to influence monetary policy.[8]

It has occasionally been claimed that a central bank should be cautious as regards lowering the interest rate to very low levels, as this would be venturing into unfamiliar waters. I object strongly to “unfamiliar waters” being an argument against cutting the repo rate. It is exactly by daring to move out into unfamiliar waters, with historically low interest rates right down to a few basis points, and with large unconventional measures, that the world’s central banks, including the Riksbank, have succeeded in preventing the major crisis from becoming the Great Depression mark two.

It has also been claimed that the discussion on the lowest level of the repo rate was resolved at the monetary policy meeting in July 2009 and that there is no reason for a reassessment. In July, the majority of the Executive Board stated in a press release and in the Monetary Policy Report that “the Riksbank’s assessment is that, after cutting the repo rate to 0.25 per cent, it will have reached its lowest level in practice”. Firstly, as I expressed at the meeting in July, in my opinion, this statement was a mistake. It goes against the commonly accepted principle that the repo rate path is “a forecast, not a promise”. In practice, the statement is a promise not to lower the repo rate further. Furthermore, the statement implies that the repo rate path cannot normally be a mean forecast, as all risk is upside risk and the mean is then higher than the repo rate path. In this case, the actual monetary policy will be more contractionary, exactly in a situation in which a more expansionary monetary policy is desired.[9] Secondly, in my opinion, it is a mistake to continue to accept this lower limit and not thoroughly reassess it at every monetary policy meeting, in particular as later information and analysis indicates that very low interest rates do not give rise to any problems with financial stability or the financial infrastructure.

It has also been claimed that it would be wrong to lower the repo rate path during an economic upturn, even if a very deep recession is still prevailing. I do not understand this argument. Whether it is right or wrong to lower the repo rate path should, in my opinion, be determined solely by whether the stabilisation of inflation and resource utilisation would be improved or impaired by a lower repo rate. I cannot discern any reason for it to be less important to stabilise inflation and resource utilisation as efficiently as possible now that the economy has touched bottom and the prevailing deep recession has become somewhat less deep.

Transparency and mean squared gaps

Let me finally address the role of the mean squared gaps in improving the transparency of monetary policy. Monetary policy has a major impact on both inflation and the real economy. The Executive Board bears a considerable responsibility for its decisions and their consequences for inflation and the real economy. It is important that the Riksdag, the Committee on Finance and external analysts can examine and evaluate monetary policy and assess whether the Executive Board has made the right decision and whether monetary policy is well balanced. As the Committee on Finance says in the comments mentioned above: “A flexible monetary policy requires, in the Committee’s view, a high degree of

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[8] Issues of the significance of asset prices for monetary policy and of the monetary policy conclusions to be drawn from the financial crisis are discussed further in Svensson (2009b, 2010b). See also Kohn (2009).

[9] These issues are discussed further in Svensson (2010a).

transparency and that the Riksbank is very clear about why the various repo rate decisions have been made. This is also a prerequisite for the possibility to examine and evaluate monetary policy."

In order for the Riksbank to be able to be "very clear" about why the various repo rate decisions have been made, I believe it to be necessary to discuss and assess various possible monetary policy alternatives and their consequences for inflation and the real economy. A specific decision can best be justified by comparing it to the alternatives. It is thus a question of clarifying the reasonable and possible repo rate paths that exist and what consequences these alternatives paths have on the forecast for inflation and resource utilisation.

Being able to measure and quantify target achievement is a major advantage. But how can the degree to which monetary policy has succeeded in stabilising inflation and resource utilisation be measured? The mean squared gap for inflation is a natural measure of the stability of inflation around the inflation target. The mean squared gap for output is a natural measure of the stability of the output gap and thus of the stability of resource utilisation around a normal level.

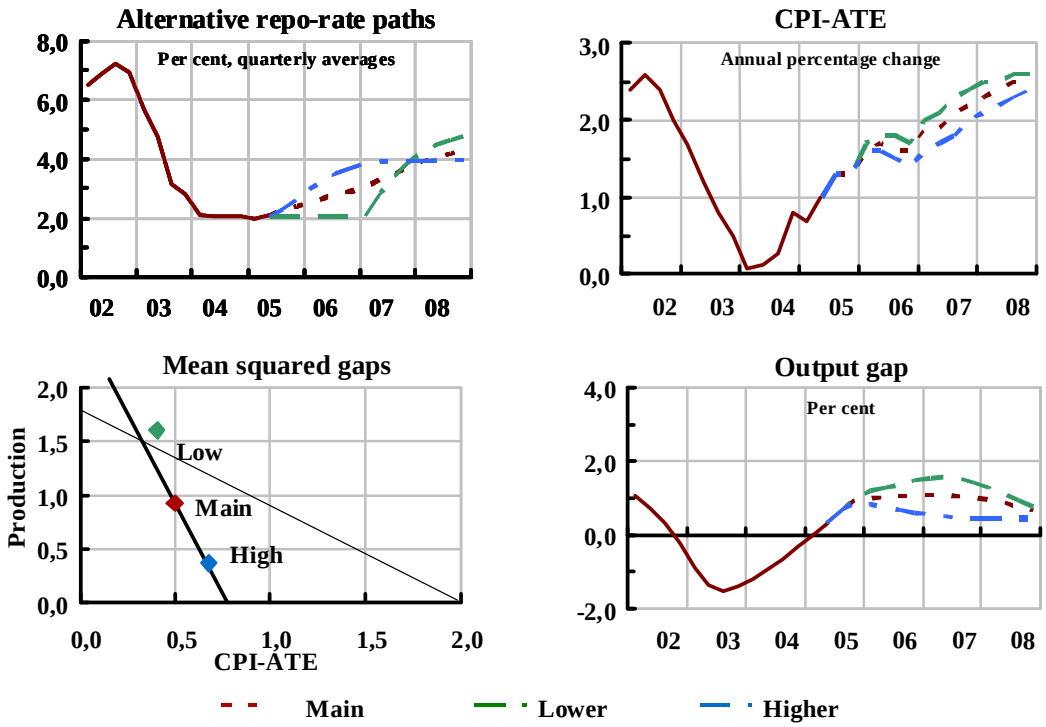
Looking at Figure 1, it could be claimed that the mean squared gaps in panels b and c do not tell us anything of significance, as it is obvious from panels d, e and f that the lower repo rate path leads to a better outcome. However, the situation is unusual in that the main scenario is not efficient – that is, that it is possible to find another repo rate path that better stabilises both inflation and resource utilisation. A more normal situation is one in which a balance must be struck between prioritising the stabilisation of either inflation or resource utilisation. Such a situation prevailed for Norges Bank in March 2005, for example. In Figure 4, I present the mean squared gaps calculated on the basis of the alternative policy rate paths and equivalent forecasts for inflation and resource utilisation presented in Norges Bank's monetary policy report from March 2005. The policy rate path then chosen depends upon the weighting placed by the central bank upon stabilising the output gap, as opposed to stabilising inflation (this weight is usually denoted by λ). For example, in an assessment of monetary policy, this becomes an issue of whether the central bank attaches a reasonable relative weight to the stabilisation of resource utilisation and whether the central bank is reasonably consistent over time.[10]

The numerical inflation target has signified great progress for practical monetary policy and made it possible to measure and evaluate the target achievement of monetary policy in a much more effective 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 achievement in this stability dimension. However, the quantitative measure implied by the mean squared gaps makes it possible to measure and evaluate this target achievement. Using the mean squared gap may entail a progress similar to the earlier introduction of the numerical inflation target. Following the introduction of published policy rate paths, this is another step towards a better and more effective monetary policy and better opportunities to evaluate monetary policy's target achievement.

[10] According to Bergo (2007) and Holmsen, Qvigstad and Røisland (2007), an optimal policy of $\lambda = 0.3$ is compatible with the monetary policy forecasts published by Norges Bank (with a discount factor of 0.99 and a weighting in interest rate smoothing of 0.2). The steeper straight line in Figure 3 corresponds to $\lambda = 0.3$, while the flatter line corresponds to $\lambda = 1$. Without reference to interest rate smoothing, the main scenario is marginally preferable for $\lambda = 0.3$.

Figure 4

Monetary policy alternatives for Norges Bank, March 2005



However, the use of quantitative measures of monetary policy does not signify that these measures will always be the only guiding stars. The Riksbank and other central banks with inflation targets previously used a rule of action according to which the policy rate would be increased or decreased depending upon whether the inflation forecast, calculated for a constant future interest rate, would be above or below the inflation target two years ahead. At the same time, the Riksbank emphasised that deviation from this rule of action could be justifiable in certain situations. However, in such a case, the reason for such deviation should be carefully explained. This rule of action played a significant role in the development of a more efficient and transparent monetary policy at a point in time when the inflation target policy was still relatively young and untested, but it is now obsolete and has been abandoned. However, it is important to retain the principle that deviations from quantitative targets may arise but that such cases should be carefully explained. Deviations from the inflation target may arise but such cases should carefully be explained. In the same manner, it is possible to imagine situations in which it may be justifiable to deviate from the best possible degree of stability in inflation and resource utilisation, but the justification for such deviations should then be carefully explained, so that external analysts can determine whether these deviations are reasonable.

From this perspective, the use of the mean squared gaps forms just one more step towards a 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, after the introduction of numerical inflation targets, published forecasts for inflation and the real economy, published policy-rate paths, detailed and attributed minutes and other important steps taken in the development of a systematic and transparent monetary policy.

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