SPEECH

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■ What can monetary policy achieve?

Economic policy can be divided up into two areas: fiscal policy and monetary policy. In Sweden and all other countries with independent central banks, there is as we all know a distinct difference between these two policy areas. The Government is responsible for fiscal policy and the central bank for monetary policy. The central bank is not allowed to receive instructions from any other party when carrying out its monetary policy tasks – it is to conduct its monetary policy in an independent manner. So what is the range of the policy area delegated to an independent central bank; that is, what can we expect a central bank to be able to achieve? This question is the theme of my speech today.

Economic policy ultimately concerns creating the best possible conditions for long-term growth and thereby a high level of welfare for the population. The given limit for growth is set by developments in the labour force and in productivity. To attain long-term growth the policies must be aimed at, for instance, educating the labour force, creating an incentive structure that stimulates people to work, creating a good innovation climate that promotes technological developments and so on. This is all common knowledge, but may be worth saying sometimes. And the reason I am doing so now is that it may be a good starting point for distinguishing what monetary policy may achieve in the short and long run. We can note already that the policy areas I recently mentioned concern politics in a broad sense and not monetary policy. It is thus not monetary policy that can affect these most fundamental conditions for long-term growth.

One illustration of monetary policy's limited potential to affect employment in the long term is the disparate regional developments in one and the same country. In Sweden, for instance, there are large regional differences in employment levels, despite monetary policy being the same for all regions. These differences appear to be lasting, which might indicate that they are due to underlying, structural factors that are beyond the control of monetary policy.

However, monetary policy can affect the conditions for long-term growth on one very essential point, namely by keeping inflation close to the target and inflation expectations anchored around the target. If inflation deviates from the target the Riksbank's aim is normally to bring it back on target within a couple of years. Depending on how large the deviation is and its cause, the time horizon may be extended. This flexibility makes it possible for the Riksbank to take into account developments in the real economy in its monetary policy considerations.

In the short term, monetary policy can contribute to reducing the fluctuations in production and employment that arise during an economic cycle. As I will discuss today, however, the possibility of achieving this type of stabilisation is also dependent on inflation expectations being reasonably stabile. If inflation expectations are stable, a change in the policy rate will have a direct effect on the real interest rate, which corresponds to the nominal interest rate minus expected inflation. As it is the real interest rate that determines aggregate demand, monetary policy may in the short term have an impact on the real economy.

Today I shall take up the question of what monetary policy can affect in the short and long run. I shall use some examples to illustrate the balance that must be attained between the inflation target and developments in the real economy.

Functioning financial markets are of vital significance for the functioning of the whole economy. The Riksbank's other main task, beside monetary policy, is to safeguard financial stability. During the current financial crisis the Riksbank has taken a number of measures to safeguard financial stability. This has been parallel to taking monetary policy measures. Monetary policy and financial stability are closely linked. The possibility to conduct efficient monetary policy depends on the transmission mechanism functioning. I shall return to this question later in my speech. Finally, I shall make some concluding comments.

The influence of monetary policy in the short and long run – research

At the end of the 1950s the economist A. W. Phillips found a negative relationship between unemployment and inflation by studying data from the UK for the period 1861–1957,[1] a relationship that is usually referred to as the Phillips curve. This shows that higher employment can be achieved at the cost of higher inflation. It was thus long believed that one could "buy" long-term lower unemployment by pushing up inflation. However this relationship was empirically proved not to hold in the long run. In the 1970s, for instance, there were periods with both high unemployment and high inflation, what is known as stagflation.

The relationship was also tackled from a theoretical angle. In a famous article from the late 1960s Milton Friedman discussed what monetary policy can and cannot achieve.[2] His view was that in the long run monetary policy is unable to affect real economic variables such as unemployment and GDP. However, it can affect nominal variables such as the exchange rate and price level. In the long run there is a "natural" level of unemployment that is dependent on the functioning of the labour market. If monetary policy tries to push down unemployment below this "natural" level, it will only result in higher inflation. Monetary policy therefore risks becoming a disturbing factor in the economy. According to Friedman, it is therefore best for monetary policy to create the right conditions for a stable price level and to focus on the variables that a central bank can control, such as the money supply.

In the 1970s and 1980s a number of countries applied a monetary policy regime that was based on steering the money supply. However, research has shown that there is no stable relationship between the money supply and inflation. The rapid

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[1] Phillips actually studied the relationship between wages and unemployment, but later studies indicated a similar relationship between inflation and unemployment, Phillips, A. W, (1958) "The relationship between unemployment and the rate of change of money wages in the United Kingdom, 1861–1957", *Economica*, 25, s. 283–299.

[2] Friedman, M, (1968). "The role of monetary policy", *American Economic Review*, p. 58, 1–17.

financial developments and the use of new, alternative methods of payment have contributed to the money supply not functioning well as a target variable for monetary policy in our present society. Nor is the rate of circulation of money constant; it can vary substantially. It is therefore more natural to focus on trying to directly steer inflation and allow the money supply to remain one indicator among many.

The past few decades' research has pointed to the importance of inflation expectations. Although there is a relationship in the short run between unemployment and inflation, the central bank cannot make use of this in the long run, as companies and individuals will realise what policy is being conducted and adapt their expectations accordingly. For example, wage-earners may demand higher wages as compensation for coming inflation. This will in turn have a negative effect on employment. Monetary policy thus cannot have a lasting influence on real economic variables. But it can have a stabilising effect in the short run, particularly if inflation expectations are well-anchored so that temporary changes in inflation are not perceived as permanent.

However, this means that a conflict may arise between the short run and the long run. A central bank prefers inflation expectations to be stable and low, as this is best in the long run. The central bank may then prefer to conduct a policy that is perceived as sufficiently tight for inflation to remain low, as this creates low inflation expectations. But once inflation expectations are low, it may be tempting to allow the market to be "surprised" by a more expansionary policy that leads to lower unemployment, as it takes time before individuals and companies adapt their behaviour. In this way the central bank risks finding itself in a vicious circle of periods where inflation is allowed to soar, followed by periods where inflation expectations have to be brought down again at a large cost to the real economy.

Independent central bank, inflation target and openness

This time inconsistency problem which affects economic policy was first noted by Finn Kydland and Edward Prescott in the late 1970s.[3] One proposal that was put forward to address this problem was to introduce independent central banks which build up credibility by succeeding in maintaining low inflation and having realistic ambitions with regard to stabilising resource utilisation. To do this, the central banks must be able to take quick and sometimes unpopular decisions. If a central bank succeeds in attaining credibility so that inflation expectations are stable, there is some scope for also taking into account developments in the real economy.[4] It is thus also important from a stability perspective to find a means of attaining credibility and stable inflation expectations.

As one of the steps to achieving this many central banks, including the Riksbank, introduced explicit inflation targets in the 1990s. In practice, most central banks now conduct flexible inflation targeting to attain the inflation target and also stabilise resource utilisation. This means that the central bank is not prepared to attain the inflation target in the short run at any cost. The Riksbank's aim is that if inflation deviates from target it shall normally be brought back on target within a couple of years. In the case of large deviations it may take longer before the

[3] Kydland, F. E. and Prescott, E. C. (1977). "Rules rather than discretion: The inconsistency of optimal plans". *Journal of Political Economy*, 85, pp. 473–492.
[4] For a more detailed discussion of this, see Woodford, M, (2007)."The case for forecast targeting as a monetary strategy", *Journal of Economic Perspectives*, 21:4. pp. 3–24.

target is attained so that the effects on the real economy are not excessive. Because monetary policy works with a lag, the decisions must be based on forecasts. It is therefore important to publish forecasts for inflation and the real economy, which the Riksbank does. We will never live in a world where it is possible to fully predict the future. Moreover, our knowledge of how the transmission mechanism works, that is, how an interest rate change works its way through the economy, is far from perfect. But given the available information and with the knowledge available we shall make the best possible forecasts and it shall be possible to evaluate our forecasts. When inflation deviates from the target it shall be possible to understand why this happened and to assess the deliberations that were held.

To publish a forecast for the repo rate on top of all this, which is something few central banks do, makes it easier for us to find the most reasonable balance between attaining the inflation target and stabilising the real economy. It also helps us explain our policy. We also do this by presenting a number of alternative scenarios for the economy and showing what consequences these would have for monetary policy.

Popular and unpopular interest rate decisions

In the long run it is the actual "delivery" of low and stable inflation that creates confidence in long-term stable prices. But the economy can be subjected to unforeseen shocks that affect inflation and monetary policy cannot have the precision required to constantly maintain inflation at the target level. Deviations from the inflation target have happened before and will happen again. The important thing is that they are temporary. The route back to the target must be consistent and credible. This is a necessary condition for inflation expectations remaining stable and in line with the target, which in turn provides us with greater opportunity to also take into account developments in production and employment.

This brings me to the point that we as the central bank must be prepared to make unpopular decisions. We have recently cut the repo rate by an unusually large amount and in an unusually short time. Cutting interest rates is a popular decision that is welcomed by most. But the condition for these decisions has been that they do not clash with the inflation target. On the contrary, we have needed to make these decisions so that inflation would not be too low in relation to the target over a long period of time.

We are counting on the repo rate remaining at a low level over the whole of this year. But sooner or later we will need to begin raising the repo rate again. In this situation it is possible that unemployment will still be high, as changes in employment often occur somewhat later in the economic cycle than changes in other variables, such as growth. This is illustrated in our forecasts for the repo rate and unemployment presented in the February Monetary Policy Report. It is important to remember in such a situation that monetary policy is forward-looking and that its primary task is to create good long-term conditions for the economy by maintaining price stability. Let me illustrate this by means of two monetary policy episodes.

"Too low" versus "too high" inflation

The last time the repo rate was very low, with a lowest point of 1.5 per cent, was in 2005. Inflation was then below target and the Riksbank received criticism from various parties for not cutting the repo rate further. Sweden was on its way into an economic upturn, but the labour market was nevertheless relatively weak. There was a lot of talk about "jobless growth", that is, growth that does not create employment. Some said that the reason more jobs were not created was that monetary policy was too tight. The Riksbank made a different assessment. The view of the Executive Board was that it was underlying factors on the *supply side*, such as productivity, increased competition in the food sector and low-price imports from emerging economies that were decisive for the low inflation and employment. None of these factors would have been affected by a repo rate cut. The Executive Board's assessment was that monetary policy was sufficiently expansionary given the demand situation and they pointed to the fact that credit volumes and house prices were increasing at a rate that was not sustainable in the long run. They therefore began to raise the interest rate in January 2006, a little sooner than if they had merely given consideration to the inflation target. The Riksbank had no target for either credit volumes or house prices. But these were variables that might be expected to affect inflation and the real economy. If the credit volume and house prices had continued to rise rapidly this would have risked triggering larger adjustments further ahead.

One reflection that can be made here is that if the interest rate had been cut even further in 2005, which was suggested by several outside of the Bank, the current situation might have been worse. There would probably have been a larger credit expansion and higher house prices that would have needed to be adjusted later. This could have put our economy in a much more vulnerable position and thereby worsened the current economic downturn.

Another experience is from autumn 2007, when energy and food prices increased considerably, which contributed to pushing up inflation. It is also an example of a supply side shock, as these prices are set in the world market. Swedish monetary policy cannot affect them. But at the same time, domestic cost pressures were relatively high. Productivity growth had slowed down, while wage costs were rising. We had experienced a long period of growth and the labour market had begun to tighten. Growth was still good, but we saw a slowdown coming, although it appeared that it might be fairly mild. We were facing a situation where the risk that high energy and food price increases would spread to other prices must be weighed against the risk of a weak real economy. There was much talk of the risk of stagflation, that is, a combination of an economic slowdown and rising inflation.

We faced a situation in which reaching a decision became ever more difficult. This became clear when we Executive Board members made slightly different assessments in summer and early autumn 2008 of what kind of interest rate policy was required. However, the economic downturn was much quicker and deeper than we had expected, partly as a result of the financial crisis which came to affect us more tangibly in the autumn. This was unfortunate for the economy, but it simplified our decision-making. We could see ahead of us that inflation would be far below the target for a period of time, and we wanted to avoid this period from being a long one. We have been able to cut the repo rate by 3.75 percentage points in less than six months, which means that the repo rate is now at a historically low level. Our forecasts show a substantial fall in demand and the lower interest rate policy is intended to contribute to softening the fall. When the circumstances have suddenly changed, monetary policy has been rapidly adapted to the new situation. The two cases I have taken up show the flexibility inherent in our monetary policy and which we have made good use of.

What is the driving force behind inflation? A fundamental question

As monetary policy's ability to influence inflation and ultimately economic developments depends on the type of shock to which the economy is subjected, we must analyse the driving forces behind inflation[5]. When inflation is governed by supply factors that push up inflation, as in 2007–-2008 when for instance energy prices rose, the initial effect cannot be prevented by monetary policy. When inflation became too low in relation to the target around 2005, this was largely because productivity rose more than expected. This is essentially a positive development that neither should nor can be prevented by monetary policy. However, it provided a possibility to hold the interest rate at a low level and to allow a higher level of demand than would otherwise have been the case. But the effects on employment were limited by the underlying productivity growth. However, the Riksbank might have needed to cut the repo rate further if one had at the same time observed a deterioration in demand or that the more long-term inflation expectations were far below the target. This was not the case; inflation expectations in the slightly longer term were fairly well anchored around 2 per cent. At the same time, the Riksbank's forecasts showed that economic activity would remain strong. This period illustrates how important it is for monetary policy to analyse the driving forces behind inflation and for the policy to be forward-looking.

When inflation rose last year, this was also largely due to supply factors, such as the price of oil and other commodities, which could not be checked even in the short term by monetary policy. However, in the background was a long period of high growth and increased tightness in the labour market. At the same time, productivity growth was declining and wages were rising. This entailed increased cost pressures, which justified a higher interest rate. Monetary policy continued to tighten even when signs of weakening in economic activity began to appear.

When we look ahead we can see that prices measured in terms of the CPI will fall this year and inflation will thus deviate substantially from the target. The primary cause of this is that mortgage rates and energy prices are falling rapidly when calculated as an annual percentage change. If we exclude the effect of our own interest rate cuts and the effects of falling energy prices, prices are not expected to fall.[6] I shall not go further into this, but merely wish to point out once again how important it is to analyse the driving forces behind inflation to be able to explain the monetary policy conducted. This means that we from time to time highlight different measures of inflation. In the current stage it is thus important to distinguish the effects of our own measures which we have implemented to alleviate the effects of the financial crisis on international growth and thus on growth in Sweden.

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[5] For a detailed discussion of this, see "Should monetary policy stabilise resource utilisation?" Economic Commentary No. 1 2008, Sveriges Riksbank.

[6] Inflation measured in terms of the CPIF, which disregards changes in mortgage rates, is around 1.6 per cent on average in 2009. If one also excludes energy costs, the average for 2009 is 2.2 per cent.

Monetary policy is dependent on a functioning transmission mechanism

Inflation is affected by the Riksbank's changes in the repo rate through what is usually known as the transmission mechanism. This influence goes through several different channels, such as short and long real interest rates, the exchange rate and the supply of credit. The impact occurs with different degrees of delay.

The repo rate is the interest rate the banks pay when they borrow from or deposit money in the Riksbank for one week against collateral. Under normal circumstances there is a relatively stable relationship between the level of the repo rate and the level of the rates that companies and households face, as well as between interest rates and access to loans. The financial crisis affected these relationships. When, for example, the Riksbank cut the interest rate at the beginning of October the short market rates did not fall. The risk premiums increased as a result of the uncertainty and turmoil that followed in the wake of the financial crisis, so that the difference between the repo rate and the short market rates expanded. This meant that the interest rate cut did not have a full impact on interest rates paid by households and companies. Market rates thus became higher than would normally have been justified by the level of the repo rate.

Since the financial crisis worsened last autumn, the Riksbank, like many other central banks, has implemented a number of measures to safeguard financial stability. These measures have largely concerned the provision of liquidity to the banking system. This has improved the functioning of the short term markets and risk premiums have fallen. The interest rate channel in the transmission mechanism has thus begun to function more normally. The primary purpose of the Riksbank's measures has been to safeguard financial stability, but they have also lead to monetary policy functioning more efficiently. The Riksbank's two main tasks, managing monetary policy and safeguarding financial stability, are thus closely linked to one another. This has been clearly illustrated by the financial crisis.

There is concern that these measures, which also lead to an expansion in the central banks' balance sheets, entail an increased risk that inflation in future will be too high. The question is thus whether the economy will have a surplus of liquidity when the situation begins to normalise, and whether this could lead to increased inflationary pressures. The answer to that question is no. The measures taken by the central banks now can be regarded as a response to the tightening on the market. One can simplify and say that the central banks are trying to counteract or neutralise the markets' tightening so that the transmission channel can begin functioning more normally.

These measures will only continue as long as the markets cannot function on their own. Once the financial crisis has waned, the Riksbank will not renew the special measures required during the crisis. Our loans are relatively short-term, with maturities of between 3 and 12 months. The loans will therefore mature gradually when the special lending facilities are phased out. When the economy then recovers, monetary policy will be adjusted according to the circumstances prevailing at the time. The policy rate can be raised in large steps if this were to prove necessary. In the most recent Monetary Policy Report you can see that we are expecting a relatively rapid increase in the repo rate towards the end of the forecast period.

Concluding comments

We have a historically low repo rate at the moment. Given the gloomy economic prospects, I and the other Executive Board members considered in February that a substantial repo rate cut was needed. We were expecting a rapid deterioration in the labour market situation, which together with rapidly falling energy prices meant that inflationary pressures had declined. In this situation there was thus nothing to prevent monetary policy being used in a forceful manner to alleviate the effects of the fall in demand that came in the wake of the financial crisis. On the contrary, the interest rate cut was necessary to attain the inflation target in the long run. If the situation were to deteriorate, a first measure would be to cut the interest rate further. If the repo rate were to be cut to zero, or close to zero, and this was still not sufficient, other types of measure would be necessary. We are prepared to implement the measures that are necessary. If inflationary pressures were instead to increase, it may be necessary to raise the repo rate more quickly than we have assumed.

A few years ago the Riksbank was criticised for not giving sufficient consideration to other variables than inflation, such as unemployment, for instance. Economic theory and experiences show, however, that monetary policy has only a very limited ability to lastingly affect real economic variables. On the other hand, the Riksbank tries to achieve a reasonable balance between attaining the inflation target and stabilising the real economy. But as it normally takes a while before an upturn in economic activity has an impact on employment, it is very possible that the Riksbank will need to raise the repo rate in a situation where unemployment is still high. This is also something we are assuming in our most recent forecast. There is then a risk that unreasonable requirements will be made of monetary policy. It will then be important to bear in mind that the primary objective of monetary policy is to create good long-term conditions for all participants in the economy.

It is important that we have an active discussion of the Riksbank's policy. But for the discussion to be fruitful it must be based on realistic expectations of what monetary policy can and cannot achieve. Sweden is a small, export-dependent economy and when economic activity abroad suddenly falls, monetary policy cannot prevent negative effects from this on our economy. But we can alleviate these effects. As the financial markets are integrated, we cannot prevent an international financial crisis having effects here, too. Then we must use other tools, parallel to our interest rate policy, to make the financial system function in the best possible way given the circumstances. This is what we have done throughout the autumn and we will continue to do this as long as is necessary.