SPEECH

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Monetary policy and wage formation – a mutual dependence

At the monetary policy meeting just over a week ago, we Executive Board members had reason once again to emphasise the importance of monetary policy now focussing on bringing inflation up towards the target. We decided at the meeting to cut the repo rate to zero. The reason for this decision is that inflation has been far below the target level for several years now. Moreover, recently we have repeatedly revised down the forecast for future inflationary pressures. There are many indications that inflation will remain below the target for some time to come, although we are now conducting a very expansionary monetary policy.

Inflation being below the target for a long period of time is worrying for several reasons. Many of these reasons can be linked in one way or another to wage formation, which is not particularly surprising. Wage formation has considerable significance for how inflation will develop, which makes it an important factor for monetary policy. At the same time, monetary policy plays a central role in wage formation by anchoring inflation expectations. There is thus an interdependence between monetary policy and wage setting. Today I intend to describe how we at the Riksbank view our role in this interplay and talk about the importance of bringing inflation back to the target now.[1]

Wage developments influence inflation prospects…

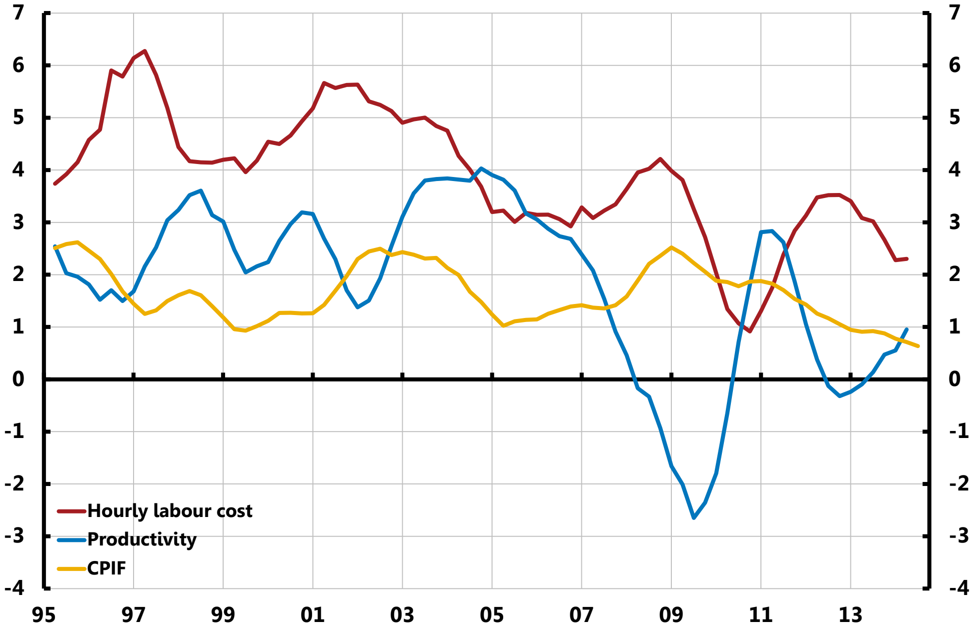
An initial question to consider is how wage developments affect inflation. Wages and other costs linked to labour have considerable significance when companies set their prices as they account for a large share of production costs. According to economic theory, the marginal cost, that is the cost of producing a further unit of a product or service, is particularly important in pricing. Wages comprise a large share of the marginal cost, but other factors also play a role, such as costs of premises, machinery and intermediate goods. The ultimate cost of producing a further unit of a product or service moreover depends on the company's productivity. If productivity is high, fewer resources are needed in the form of hours worked, machine hours and so on, and thus the production cost will be lower.

[1] See also the article "The interplay between wage formation, monetary policy and inflation" in *Monetary Policy Report*, July 2014.

The fact that there is a link between wages, productivity and inflation is also visible in data (see Figure 1).[2] Of course, one cannot expect that they will co-vary clearly from one quarter to the next. In the short run, productivity, inflation and hourly wages are affected by more temporary effects that make them vary quite substantially. But in the slightly longer run, it is clear that the periods when nominal wages have increased rapidly in relation to productivity have also been periods when inflation has risen.

Figure 1. Wages, productivity and inflation

Annual percentage change



Note. All series are calculated as six-quarter moving averages. The CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank

...and thereby monetary policy

This is of course one of the reasons why the Riksbank constantly monitors developments in wages and the discussions on wage bargaining. As monetary policy is guided by forecasts for inflation and resource utilisation, it is important to create an idea of how wages will develop in the future. It may be worth emphasizing that the Riksbank does not draw up any recommendations in this work – we do not take a stance on whether one particular development in wages is more or less desirable than another. The starting point for our forecasts is initially the agreed wage increases. In addition, we assume in our forecasts that wages will increase in line with economic activity in a "normal" way. The forecasts are then based on historical correlations between nominal wages, economic activity, productivity and inflation expectations.

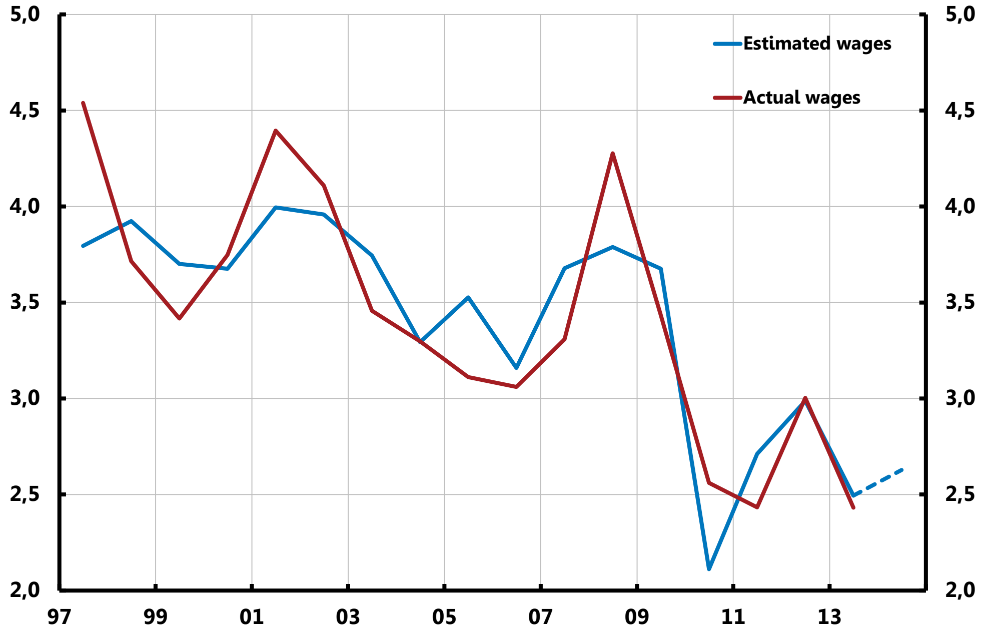
The fact that wages have developed slowly in recent years is explained fairly well be such historical correlations (see Figure 2). Productivity has grown slow-

[2] The figure does not show whether it is (expected) wage increases that cause inflation or whether it is (expected) inflation that causes wage increases. As a result of the mutual dependence between monetary policy and wage formation, one can suspect that the causal links go in both directions.

ly, short-term inflation expectations have been low and so have companies' profit shares. However, our assessment in the most recent Monetary Policy Report is that the rate of wage increase in the economy as a whole will rise somewhat in the coming period, as economic activity improves and productivity growth increases.

Figure 2. Actual and estimated nominal wages

Annual percentage change



Note. In the equation for estimated wages, developments in wages are explained by companies' inflation expectations, profit shares and long-run growth in productivity. The dashed line shows the predicted value for 2014 from this equation and should not be mistaken for the forecast in MPR, October 2014, which is based on more information. Data are based on statistics before the latest revision of the national accounts.

Sources: Statistics Sweden and the Riksbank

But how would monetary policy be formulated if wages developed in a way that did not follow the historical patterns on which our forecasts are based? Say, for instance, that wages increase at a slower rate than is normal in relation to economic activity and productivity growth. This would mean that companies' cost pressures were lower and thus that inflationary pressures were subdued. To counteract inflation becoming too low, monetary policy would need to become more expansionary.[3] In a more normal situation, when the repo rate is not zero, this may mean that the Riksbank cuts the repo rate. At present, it is more likely to mean that we wait even longer before beginning to raise the repo rate.

Anchored wage formation facilitates inflation targeting…

Apart from the more or less direct effect on inflation prospects, wage formation also has considerable significance for monetary policy for other rea-

[3] Chapter 2 of the *Monetary Policy Report* published in July 2014 describes in greater detail how monetary policy can be formulated in alternative scenarios where wages develop differently from the Riksbank's forecast.

sons. If the inflation target is credible, expectations among households, companies, employees and employers will be anchored around 2 per cent inflation. This will be a natural starting point for wage formation, and the wage agreements signed will be anchored around the inflation target. This of course makes the Riksbank's work on actually attaining the target easier.

But it also gives the Riksbank greater opportunity to conduct a flexible inflation-targeting policy, that is, to also take into account developments in production and the labour market, in addition to focussing on stabilising inflation around the target. Monetary policy can allow longer time for inflation to attain the target out of consideration for the development of the real economy, for instance, employment, if expectations are anchored and there is confidence that inflation will in the long run return to the target.

...at the same time as inflation-targeting is important to wage formation

So far I have talked about the significance of wage formation for monetary policy. What significance does monetary policy in its turn have for wage formation? When the Riksbank abandoned the fixed exchange rate and switched to a floating exchange rate with an inflation target, the conditions for wage formation changed. Previously, the fixed exchange rate and the link to inflation in our competitor countries comprised the nominal anchor to hold domestic wage and price increases in check. As of 1993, the inflation target has held this role.

Essentially, the idea is that wage developments in the long run will be governed by production capacity in the labour force. I have previously talked about the link between wages, prices and productivity. It is not sustainable in the long term to have a wage development that entails companies' labour costs increasing more than the value of the goods and services this labour produces. Therefore, real wages need to rise in line with productivity to attain a sustainable development. Together with long-run productivity growth, inflation and the inflation target thus set the guidelines for how much nominal wages can increase.

As I pointed out, this is something that needs to characterise wage formation in the long run. In a shorter perspective, of course, wage negotiations are influenced by a number of other and more temporary factors, which reflect the economic situation, for instance. But to nevertheless ensure that wage negotiations conclude in sustainable results, one allows different norms to play an important role in wage formation. The "inflation-targeting norm" that I have just described is of course an important one, although there are others.[4] However, a common assumption behind the norms is that the inflation-targeting policy is credible and that the Riksbank "is doing its job", as it is sometimes expressed. With this common starting point, wage negotiations also become simpler as it brings some concordance regarding future developments in inflation, both among and between the social partners.

[4] For instance, the so-called European norm is also used, mainly with the same motivation as under the fixed exchange rate regime, namely that Swedish industry should retain its competitiveness in relation to our competitor countries.

Monetary policy aims at an inflation rate in line with the inflation target

So what does the Riksbank "doing its job" actually entail? The objective of monetary policy is to ensure that CPI inflation stays close to 2 per cent. This is how the Riksbank has chosen to specify the wording in the Sveriges Riksbank Act on maintaining price stability.

It does not mean that the Riksbank can guarantee that inflation will always be 2 per cent. To begin with, monetary policy does not have such precision. It is impossible to avoid inflation deviating from 2 per cent during certain periods, as the economy is constantly exposed to unexpected shocks and as it takes time for changes in the repo rate to have a full impact on the economy. However, the Riksbank's ambition, "our job", is to formulate monetary policy so that inflation eventually returns to the target level.

But why eventually? Why not the next quarter One reason is that it takes time for monetary policy to make a full impact in the economy. But as I mentioned earlier, we also conduct a flexible inflation-targeting policy. Apart from stabilising inflation around the inflation target, we also strive to stabilise production and employment around long-run sustainable levels. Depending on what shocks occur, a rapid return to the inflation target may sometimes have effects on the economic situation that are not desirable and the Riksbank may therefore aim to bring inflation back to the target level at a somewhat slower pace.

In recent years, however, such deliberations have played a minor role in the Riksbank's work as the far too low inflation and weak economic activity both have both indicated that monetary policy needs to be expansionary. The deliberations have instead concerned these factors on the one hand and high household indebtedness on the other hand. There, the concern has been that an overly expansionary monetary policy would mean that household indebtedness increased at an unsustainable pace, which could lead to undesirable developments in inflation and economic activity in the longer run.

There have been differing opinions as to how great the risk of this undesirable development is and perhaps especially as to whether the Riksbank should try to use monetary policy to manage this risk. I do not intend to try to sort out all of the arguments in that debate today, but I would like to make it clear that it is of course important that inflation is brought back to the target reasonably quickly. The return should not take so long that it weakens the credibility of the inflation target.

Too low inflation over a long period of time worsens wage formation conditions

This brings me to the current situation and the low rate of inflation. We now have an inflation rate that has been below the target for a long period of time. Our forecasts have anticipated low inflation. But the turning point for this development envisaged by us and other analysts has been postponed time and time again.

In a previous speech, I described in greater detail in what way this is a cause for concern.[5] One reason is that if inflation deviates from the target for too long, there is greater risk that the inflation target and monetary policy lose credibility. A credible inflation target, with inflation expectations firmly anchored around 2 per cent, makes it easier for monetary policy to attain the target and also makes it possible to give greater consideration to the development of the economy. This creates better conditions for stabilising inflation close to the target and employment at a long-run sustainable level.

As I have tried to describe today, firmly-anchored inflation expectations are particularly important for wage formation to function smoothly. And smoothly-functioning wage formation in its turn lays the foundation for both a stable development in prices and a smoothly-functioning labour market with high employment.

However, when inflation deviates from the target, the conditions for wage formation may deteriorate, even if the inflation target is still credible. Historically, it has often been high inflation and expectations that inflation would continue to rise that have caused problems for wage formation, but too low inflation can also entail problems.

If inflation is *unexpectedly* low, it means that real wages will be too high in relation to what was assumed when the agreements on nominal wage increases were signed. When this happens, companies are usually less inclined to recruit staff, which may lead to higher unemployment. These problems can be particularly tangible if inflation expectations are firmly-anchored around the target at the same time as inflation is below the target for a long period of time.[6]

A further argument that low inflation, whether or not it is unexpected, makes wage formation more difficult concerns what is often called nominal wage rigidities. Normally, the adjustment of real wages between different sectors or between individuals in a company occurs by the nominal wages increasing at different rates. One condition for this adjustment to function as intended is that inflation remains at a reasonable level. If inflation is very low, an adjustment in the real wages may require that nominal wages are *cut*, which very rarely happens. Hence, with a low inflation rate the adjustment is made more difficult, which can mean that unemployment rises.

All focus is now on getting inflation to rise towards the target

A credible inflation target and firmly-anchored inflation expectations make it easier for households and companies to make good decisions, wage formation being perhaps the most obvious example of this. Without a nominal anchor, we can thus expect the economy to function less smoothly.

As the period with low inflation has become more prolonged than expected, it has become increasingly important to quickly bring inflation back to higher

[5] See Flodén, Martin (2014), The low rate of inflation – should we be worried and can we do anything about it? Speech, 14 May 2014, Sveriges Riksbank.

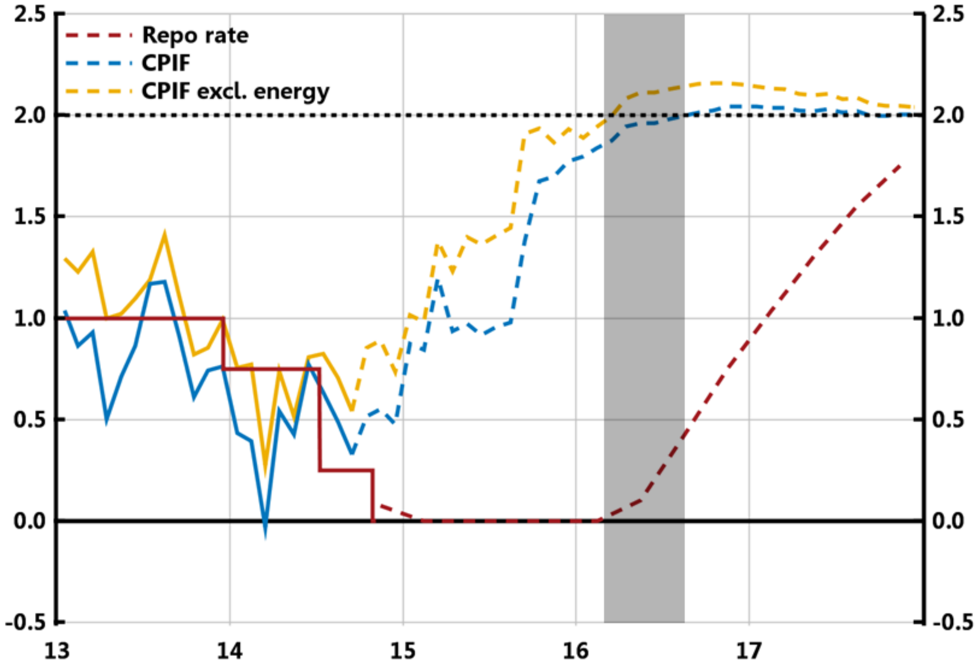
[6] The fact that inflation expectations have been anchored at two per cent is a central element of Svensson's (2014) calculations as to how the low inflation in Sweden has led to higher unemployment. My criticism of Svensson's calculations (Flodén, 2012) is mainly based on inflation expectations in some surveys having fallen in line with actual inflation. See Svensson Lars E. O. (2014), The Possible Unemployment Cost of Average Inflation below a Credible Target, *American Economic Journal: Macroeconomics*, under publication, and Flodén, Martin (2012), A Note on Swedish Inflation and Inflation Expectations, www.martinfloden.net.

levels. There is otherwise a risk that the credibility of the inflation target will be undermined and that we can no longer count on well-anchored inflation expectations.

But at the same time, there are many indications that inflationary pressures in the coming period will remain low. We therefore decided at the monetary policy meeting just over a week ago to cut the repo rate to zero. The even more expansionary monetary policy will lead to an increase in demand in the whole economy, which will contribute to higher inflation. The very expansionary monetary policy can also contribute more directly to inflation expectations becoming anchored at two per cent, in that we are sending a clear signal that monetary policy is focusing on bringing up inflation. Our assessment is that it will not be appropriate to begin raising the repo rate until the middle of 2016, and that we will then raise the rate slowly. According to our forecast, inflation will then be close to the target level (see Figure 3). We are also expecting the repo rate to be clearly below the long-run normal level for a long time after inflation has attained the inflation target and resource utilisation has normalised.

Figure 3. Repo rate and inflation

Annual percentage change



Note. The outcome for the repo rate is daily data and the forecast refers to quarterly data. The CPIF is shown in monthly data where the CPIF is the CPI with a fixed mortgage rate.

Sources: Statistics Sweden and the Riksbank