

SPEECH



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■ My view of monetary policy 2006-2011

I have now been at the Riksbank for over five years and my appointment as Deputy Governor of the Riksbank expires at the turn of the year. I will have celebrated my 65th birthday by then and I have informed the General Council of the Riksbank that I will not be seeking reappointment. This makes it natural for me to look back at the conduct of monetary policy over the last five years and, in the light of this experience, discuss the direction of monetary policy in the years ahead. The three theses that I will argue for in this speech are:

- Monetary policy was too expansionary before the financial crisis
- Monetary policy worked well during the crisis
- The repo rate needs to be raised at every meeting this year (and perhaps next year too)

Monetary policy was too expansionary in the years before the financial crisis

My first thesis is thus that monetary policy was too expansionary in the years before the full force of the financial crisis hit the world in September 2008. This applies both in Sweden and abroad. I will present arguments to support this thesis in this section.

Abroad

Monetary policy was expansionary in the years before the financial crisis in both the United States and the euro area. The short-term real interest rate, that is the short-term nominal interest rate minus inflation, is commonly used to describe how expansionary monetary policy is. This can be assumed to average approximately 2 per cent in the longer term. In the United States, the real interest rate was negative in the period 2003-2005, while in the euro area it was approximately 0 per cent in the same period (see Figure 1).

■ At the same time, China and other countries had their currencies tied to the US dollar, which resulted in expansionary monetary conditions in these countries too. Large current account surpluses in China and in oil-producing countries led to capital flows to the United States and the euro area and this also kept down long-term interest rates.

The consequences of the expansionary monetary policy became apparent in the development of the economy. Inflation in the United States was over 2 per cent measured using various measures of core inflation, resource utilisation was higher than normal and there was a rapid expansion of credit. From the mid-1990s to 2006, real housing prices increased unusually rapidly, by approximately 80 per cent, after having been relatively stable from the early 1950s to the mid-1990s (see Figure 2).

Housing prices increased dramatically in some parts of Europe too, for example in Ireland and Spain, while they remained largely stable in other countries, for example Germany. However, for the euro area as a whole the increase in prices was not as large as in the United States.

The expansionary monetary policy contributed to the very high level of growth in the world in the period 2004-2007. GDP growth was between 4.5 and 5 per cent per year. Such a long period with such rapid growth around the world had not occurred since the early 1970s (see Figure 3).

The high level of global growth led in turn to a substantial increase in the price of oil between 2004 and 2008 and to rising inflation in many countries towards the end of the period. The similarities to the years preceding the oil-price shocks of the 1970 are striking. In these years too, monetary policy was expansionary, GDP growth was high and oil prices were increasing. The price of crude oil increased rapidly in 1973 and 1979, which led to higher inflation (see Figure 4).

It was, however, not just an expansionary monetary policy that caused the credit expansion and housing price bubble in the United States. There were a number of other causes, for example the new financial products that spread risks from the banks to investors who did not understand the risks. The aim of housing policy in the United States had also long been to increase home ownership by providing support from the semi-nationalised mortgage companies Fannie Mae and Freddie Mac. There were also several other problems, for example the fact that regulation and supervision of the financial markets were too weak.

In Europe, the common currency was introduced in 1999. This meant that interest rates in several countries that had previously had a higher interest rate than Germany were reduced to a common euro level. In these countries, this contributed to a dramatic expansion of credit, rapid growth and a high level of inflation. In addition, regulation and supervision of the financial markets were national processes, despite that fact that the operations concerned were cross-border. However, it did not become apparent that this situation was untenable until the spring of 2010 in connection with the crisis in public finances in Europe.

Each country certainly believed that they had good reasons for conducting their particular choice of monetary policy. But for the world as a whole, which in itself is a closed economy in which overall monetary policy affects growth and inflation, monetary policy became too expansionary. This resulted in

■ strong GDP growth and rapidly increasing prices for crude oil and other commodities, as well as a rapid credit expansion and rising asset prices, above all for housing in certain regions. This ultimately led to the financial crisis when the housing-price bubble burst.

Now, you may say that it is rather pointless to criticise something with hindsight. It is easy to say now what should have been done then. However, my point is not to criticise what was done but to learn from history. Even today, we can see the same pattern: that is an expansionary monetary policy for the world as a whole, strong growth and rising energy and commodity prices.

Sweden

My view, with hindsight, is that monetary policy in Sweden was also too expansionary in the years preceding the financial crisis. The repo rate was gradually reduced to 1.5 per cent in July 2005. I think it was reduced too much and was too low for too long. Both the nominal and the real short-term rates were lower than normal for most of the period leading up to the crisis. In my opinion, a normal level for the nominal short-term rate is around 4 per cent, while a normal level for the real short-term rate is around 2 per cent¹ (see Figure 5).

Swedish economic growth was high in the years before the crisis. Resource utilisation was also higher than normal. The GDP gap was positive, while unemployment was lower than the average for the preceding years. Inflation was nevertheless low in the period 2004 - 2006. Measured in terms of the CPIF² and in terms of the measure used at that time, the CPIX,³ it was well below 2 per cent. In their evaluation of Swedish monetary policy in the period 1995 – 2005, Giavazzi and Mishkin say that this was a sign that monetary policy had been too tight from the beginning of 2002.⁴

I do not agree with them. Looking back after the event, we can perhaps say that a couple of repo rate increases in 2001 and 2002 could have been avoided. The previous Governor of the Riksbank, Lars Heikensten, also admitted this at a hearing in the Riksdag Committee on Finance on 1 April 2004. But my view is that the repo rate was then reduced too much and was too low for too long. I can see four factors that support this.

First, resource utilisation was probably higher than the Riksbank then estimated. The GDP gap is difficult to calculate, particularly at the end of a time series and in connection with severe downturns. According to the two GDP gaps presented in the Monetary Policy Report in February, the GDP gap prior to the crisis was approximately +4 per cent. My own assessment is that the GDP gap was in fact approximately +2 per cent.⁵ However, the fact that resource utilisation was so high was not as apparent before the crisis. This can be seen,

¹ Sveriges Riksbank, "What is a normal repo rate?", article in Monetary Policy Report, February 2010.

² The CPIF is calculated as the CPI with a fixed mortgage rate and is thus not directly affected by changes in mortgage rates.

³ The CPIX excludes households' mortgage interest expenditure and the direct effects of changes in indirect taxes and subsidies from the CPI.

⁴ Giavazzi, Francesco and Mishkin, Frederic: An evaluation of Swedish monetary policy between 1995 and 2005, Riksdag Committee on Finance, November 2006.

⁵ See for example Svante Öberg: Potential GDP, resource utilisation and monetary policy, Sveriges Riksbank, 7 October 2010.

■ for example, by comparing the calculations of the GDP gap in real time, that is at the point in time concerned, and the most recent calculations. The calculations in real time show that the GDP gap was actually assessed as relatively normal before the crisis (see Figure 6).

Second, inflation gradually increased in 2007 and 2008 to over 4 per cent. Inflation increased rapidly even if the effect of rising mortgage rates is discounted. This was largely due to rising energy and food prices. These price rises, as I mentioned earlier, were rooted in the expansionary monetary policy and the high level of growth in the world as a whole. The impact of monetary policy comes after a considerable time lag and the rate of inflation we see in these years is affected by monetary policy in previous years (see Figure 7).

Third, inflation expectations also increased. The fact that inflation expectations one year ahead increased is natural given that the measured inflation rate also increased. However, inflation expectations five years ahead can be interpreted as an indication of whether monetary policy is credible or not. As long as these expectations are close to the inflation target, then this is a sign that the respondents expect the Riksbank to attain its target in the long term. The fact the long-term inflation expectations increased to over 2.5 per cent was therefore more worrying (see Figure 8).

Fourth, there was a rapid expansion of credit and a rapid increase in housing prices. Lending to non-financial companies and to households increased by 10-15 per year in the years preceding the crisis and house prices increased by around 10 per cent per year. The prices of tenant-owned apartments increased even more rapidly. This trend began already in the mid-1990s, but it accelerated in the years preceding the crisis⁶ (see Figure 9).

A comparison with a simple Taylor rule⁷ also indicates that the repo rate should have been significantly higher. A Taylor rule can indicate whether the level of the repo is reasonable. Based on inflation measured in terms of the CPIF or the HICP⁸ and the GDP gaps I presented earlier, the repo rate, according to the Taylor rule, should have been around 7 per cent in the third quarter of 2008. I now believe, as I said earlier, that the presented positive GDP gaps are exaggerated. With my assessment of the GDP gap, the repo rate according to the Taylor rule would instead have been around 6 per cent in the third quarter of 2008, but still considerably higher than the 4.75 per cent it reached before the crisis (see Figure 10).

When I look back on the monetary policy conducted since I joined the Riksbank on 1 January 2006 up to the point when the financial crisis hit Sweden in September 2008, I therefore believe that monetary policy was too expansionary in the years preceding the crisis. Inflation increased and reached

⁶ Giavazzi and Mishkin (op. cit.) said that one reason why inflation had been low in the period 2002-2004 was that the Riksbank, since 2002, had begun to take house prices into account. However, in later papers Mishkin wrote that one lesson from the crisis is that there are stronger reasons for monetary policy to counteract credit-driven asset price bubbles, see for example Mishkin, Frederic: *Monetary Policy Strategy: Lessons from the Crisis*, October 2010.

⁷ Taylor, J.B., (1993). *Discretion versus policy rules in practice*. Carnegie-Rochester Conference Series on Public Policy 39 (1993) 195-214. Amsterdam: North-Holland. The Taylor rule has the following simple form and describes the monetary policy conducted in the United States in the period 1987-1992 well: $r = p + 0.5y + 0.5(p-2) + 2$ where r = the policy rate, p = inflation over the last 12 months in per cent and y = the GDP gap in per cent. In the formula, it is assumed that the inflation target is 2 per cent and that the real policy rate in the long term is 2 per cent.

⁸ The HICP is a harmonized index for consumer prices that, among other things, is used in the EU for comparisons between the member states. Mortgage rates are excluded when calculating the HICP.

■ a level that was tangibly higher than the inflation target, resource utilisation was higher than normal and there was a rapid expansion of credit. Despite this, the repo rate was lower than normal for most of the period leading up to the crisis. A more rapid increase of the repo rate would thus have been better.

There are also two other circumstances that I for my own part believe were unfortunate. The first is that I did not enter a reservation in April 2006 when the Executive Board decided not to increase the repo rate, which I regretted afterwards. This would not have made any difference to the actual development of interest rates, but it would have been a good idea to make my view clear already at that time. I did subsequently enter reservations in favour of an increase in the repo rate several times in 2007 when the majority on the Executive Board decided not to increase it.⁹

The second thing is that I accepted such a low repo-rate path the first time we presented our own path in February 2007. This was just before the completion of wage negotiations for large parts of the labour market and it sent the wrong signal to the social partners; that is that wages could be significantly increased without consequences in the form of too high inflation. Wage expectations had then risen to the highest level since the mid-1990s. But we were too focused on all the work that was required to produce and decide on the repo-rate path for the first time for me to adequately realise the consequences of the decision.

When visiting different venues to speak about monetary policy, I have often been asked why we raised the repo rate from 4.50 to 4.75 per cent in September 2008, just before the financial crisis hit Sweden with full force. The members of the Executive Board were divided on the issue, with three for (including me) and three against and Stefan Ingves had to use his deciding vote to push the decision through. I usually say that with the information we had at the time I would have made the same decision again. I feared that we were facing a period of stagflation; that is high inflation and low growth, similar to the period that followed the oil-price increases of the 1970s. In such a situation we must, under the terms of our mandate, give priority to keeping inflation down close to the inflation target. However, the financial crisis radically changed the preconditions for monetary policy.

Monetary policy worked well during the financial crisis

My second thesis is that monetary policy worked well during the financial crisis. I will explain why. But first I would like to describe very briefly what characterised the crisis.

The characteristics of the financial crisis

I have experienced two crises in the past, one in the late 1970s and early 1980s and one at the beginning of the 1990s, and have seen them both mainly from the perspective of the Ministry of Finance. When I came to the Riksbank I believed that the worst crises were behind us. However, this was not the case. Instead we experienced a third crisis, which in international terms was the most severe crisis since World War II.

⁹ Minutes of the monetary policy meetings held on 29 March 2007, 3 May 2007 and 18 December 2007.

■ The financial crisis hit Sweden and the rest of Europe with full force in September 2008, when the major US investment bank Lehman Brothers filed for bankruptcy. It became much more difficult for the banks to fund their operations as the financial markets were not functioning normally. Some markets were not functioning at all. The central banks took on the role of lenders of last resort and several governments provided guarantees and support programmes for the banking sector. Monetary policy also quickly became more expansionary in the United States, the euro area and other countries. In addition, a number of central banks adopted measures to also push down the longer-term interest rates. There was also a shift towards a more expansionary fiscal policy.

Despite extensive policy stimulus, the financial crisis led to a severe downturn in the United States and Europe and in developed countries in other parts of the world. Experience of previous financial crises shows that they are usually followed by long periods of weaker growth, higher unemployment and seriously weakened public finances.¹⁰ GDP fell in both the United States and the euro area in 2009 and unemployment increased. Inflation fell rapidly, mainly because the earlier increases in the prices of energy and food turned into price decreases. However, there were other parts of the world that were not affected by the crisis to any great extent. Countries such as China and India continued to enjoy high rates of growth. The financial crisis mainly affected Sweden through the fall in the international demand for Swedish exports. GDP fell by 5.9 per cent between 2007 and 2009, but then increased by 5.5 per cent in 2010. Already a year after the downturn had bottomed out, production had returned to more or less the same level as before the crisis. But GDP was still far below the level that a postulated trend increase without the crisis would have led to (see Figure 11).

Unemployment peaked at almost 9 per cent at the turn of the year 2009/2010. The increase in unemployment was much less than predicted in the Riksbank's earlier forecasts and much less than indicated by normal Okun links between GDP growth and unemployment.¹¹ This is probably because the crisis primarily affected the industrial sector with substantial effects on GDP but smaller effects on employment, while activity in other parts of the economy was kept up by expansionary monetary and fiscal policies (see Figure 12).

CPI inflation has fluctuated considerably in recent years, mainly because the repo rate was cut rapidly in connection with the crisis. CPIX inflation, which excludes these effects on inflation, has fluctuated much less and if we also adjust for energy and food then inflation has been close to the long-term target for the CPI of 2 per cent (see Figure 13).

The Riksbank's measures during the crisis

My second thesis is thus that monetary policy worked well during the crisis. But the Riksbank's efforts did not just concern monetary policy, they related to an even greater degree to measures to preserve financial stability. The experience gained from the financial crisis tell us that measures to preserve financial

¹⁰ Reinhart, Carmen and Rogoff, Kenneth: "This Time is Different: A Panoramic View of Eight Centuries of Financial Crises", 2008.

¹¹ Sveriges Riksbank, "The effects of the financial crisis on the labour market – a comparison of Sweden, the euro area and the United States", article in Monetary Policy Report, February 2011.

■ stability and monetary policy measures must cooperate to counteract the negative consequences of the crisis and that it is not always so easy to relate one type of measure to a certain problem and the other type to another. The reasons why I think the Riksbank was able to handle the crisis well are that the measures were taken quickly and were forceful and that they helped to preserve financial stability and keep up domestic demand. They were also implemented during a limited period of time and thus did not become part of a more permanent support system.

The Riksbank thus reacted quickly to the problems that arose. Of course, the Swedish banks were not exposed to the US housing market to any great extent. But they were dependent on the markets functioning in order to get funding. In order to cover the loss of normal funding channels, the Riksbank provided loans of approximately SEK 500 billion during the autumn of 2008.¹² This increased the Riksbank's balance sheet total from approximately 7 per cent to approximately 22 per cent of GDP, that is more than the balance sheets of the Federal Reserve (FED) and the European Central Bank (ECB) in relation to GDP. Around half of this lending was in kronor and half in dollars. In order to be able to lend so much in dollars, the Riksbank borrowed dollars from the FED through a rapidly-concluded swap agreement. The Riksbank's own dollar assets were far too small. In the autumn of 2008, the foreign currency reserve corresponded to SEK 200 billion and was invested in a number of different currencies. In 2009, the reserve was strengthened by borrowing approximately SEK 100 billion via the Swedish National Debt Office (see Figure 14).

Monetary policy also reacted quickly and forcefully. The repo rate was cut rapidly from 4.75 per cent in September 2008 to 0.25 per cent in July 2009. The largest cut came already in December 2008. The repo rate had never been this low before. In July 2009, the Riksbank also assessed that the repo rate would remain at this exceptionally low level for the next 12 months or so. This was expressed in the repo-rate path at the time. In order, to underline the assessment that the repo rate would remain at this low level throughout the following year, and to keep down longer-term interest rates too, the Riksbank, on three different occasions, provided loans totalling almost SEK 300 billion at a fixed interest rate of 0.25 per cent for one year (see Figure 15).

In July 2010, the Riksbank began normalising monetary policy. The repo rate was raised from 0.25 per cent to 0.5 per cent and has subsequently been raised another four times to 1.50 per cent in February 2011. The large loans were repaid by the banks without being replaced by new, similar loans. The Riksbank's balance sheet total thus fell to approximately 10 per cent of GDP. This is in contrast to the balance sheet totals of several other central banks, which have continued to increase. It has been possible to carry out the reduction of the Riksbank's balance sheet without giving rise to any significant problems on the financial markets. This is because the Riksbank only lent money to the banks and did not, like the Fed, the ECB and the Bank of England, purchase bonds and other assets during the crisis.¹³ If the Riksbank had done so, this could have led to more serious problems when the time came to phase out the support measures.

¹² The Riksbank also extended the types of collateral that could be approved for loans and provided liquidity assistance to two small banks, Kaupthing and Carnegie.

¹³ By only lending money, the Riksbank also avoided exposure to a substantial interest rate risk.

It is of course difficult to estimate the effects of the measures taken by the Riksbank in connection with the crisis as so many other things also had an impact on the course of events, not least fiscal policy and the measures taken by other authorities to preserve financial stability. Nevertheless, it can be noted that the Swedish banks came through the crisis well. Total lending to households and non-financial companies continued to increase throughout the crisis. It can also be noted that the fall in production and employment was less than feared. Domestic demand has been kept up by the expansionary fiscal and monetary policies.

Conclusions

With hindsight, I think that we can draw two conclusions about the actions taken by the Riksbank in connection with the financial crisis. First, we did not see the crisis coming. Of course, not many other observers saw the crisis coming either. However, we did draw attention to the problems on the housing and mortgage markets in the United States, and in our Financial Stability Reports we did mention the problems relating to the Swedish banks' credit expansion in the Baltic countries. But the new feature of this financial crisis was that the banks were unable to fund their operations on the market and this was something we were not prepared for.¹⁴

Second, the Riksbank reacted quickly and forcefully once the crisis hit Sweden. The Riksbank's extensive lending to the banks and the rapid reduction of the repo rate to an exceptionally low level softened the impact of the crisis on the Swedish economy. Together with an expansionary fiscal policy this kept up the level of domestic demand and meant that employment decreased less and unemployment increased less than could have been expected, and that inflation was kept at a reasonable level. Underlying inflation was kept close to 2 per cent and inflation expectations five years ahead, which had increased before the crisis, fell back again and stabilised at around 2 per cent.

Monetary policy needs to become less expansionary in the period ahead

My third thesis is that the repo rate needs to be raised at every meeting this year, and perhaps next year too. I will now explain why I make this assessment. I begin with a brief description of international developments over the next few years and then present my view of Swedish monetary policy in the period ahead.

Abroad

There are many similarities between the situation in the autumn of 2008 and the spring of 2011. For the world as a whole we once again expect to see a GDP growth of over 4 per cent per year, although there are considerable differences between different regions. Growth is continuing in the United States and Europe although, due to the financial crisis, at a slower rate than

¹⁴ Report of the Swedish National Audit Office 2011, "Measures taken by the authorities to safeguard financial stability: Lessons in the light of developments in the Baltic countries 2005-2007".

■ after a normal downturn. We expect to see a GDP growth of around 3 per cent per year in the United States and of just below 2 per cent per year in the euro area, with an inflation rate of almost 2 per cent in both areas. But the emerging economies are growing rapidly (see Figure 16).

The strong increase in demand in the emerging economies is pushing up the demand for energy and commodities. There has therefore been a substantial increase in crude oil prices and the prices of other commodities recently. There is a risk that these prices will continue to rise and that inflation will therefore also rise in both the emerging markets and the developed countries. Inflation expectations have also increased in recent months and there has been an upward shift in monetary policy expectations (see Figure 4).

Recent developments in North Africa and the Middle East have pushed up the price of crude oil even further. Uncertainty about the future supply of oil has contributed to the oil price now being higher than it was when the Monetary Policy Report was published in February. This illustrates the fact that price trends become even more sensitive to supply disruptions when demand is high in relation to supply.

The earthquake in Japan is the greatest catastrophe the country has suffered since World War II. The consequences for the Japanese people are devastating and the material damage is huge. It is still too early to determine what the economic consequences of the earthquake will be. In the short term it has already led to production losses, but later this year production may rise in connection with reconstruction work following the disaster. The fact that some nuclear power stations are now out of operation has already led to disruptions in the supply of electricity and in production, but in the longer term a reduction in the capacity to generate electricity using nuclear power in both Japan and other countries may lead to rising prices for other types of energy, including oil. As always, we are monitoring developments carefully and in connection with the Monetary Policy Update in April will make a renewed assessment of the international outlook in which we will also take into account how events in Japan may affect the development of the global economy in the slightly longer term.

Sweden

At the latest monetary policy meeting in February, we decided to raise the repo rate from 1.25 per cent to 1.50 per cent and our assessment was that the repo rate would need to be increased to 3.6 per cent by the end of the forecast period, that is in three years' time. My assessment was that we will need to raise the repo rate by 0.25 per cent at every meeting in 2011 to 2.75 per cent at the end of the year. This entails a somewhat steeper upward path in the second half of 2011 than the repo-rate path presented in the main scenario of the Monetary Policy Report. However, in light of the uncertainty about the development of interest rates, I did not enter a reservation against the repo-rate path but confined myself to commenting on this at the meeting (see Figure 17).

I will now discuss my view of monetary policy in the years ahead in a little more detail and take the picture of the economic outlook presented in the latest

■ Monetary Policy Report as my starting point. The discussion is based on the analytical framework and so-called loss function used at Norges Bank.¹⁵ This includes the deviation of inflation from the inflation target, resource utilisation, the interest rate level in accordance with simple interest-rate rules and changes in the interest rate. Asset prices, the exchange rate and market rates can also be taken into account.

Inflation

The forecasts for inflation are sufficiently close to the inflation target to justify a repo rate increase and the presented repo-rate path. The forecast for CPI inflation is 2.4 per cent per year on average during the forecast period, while the forecast for CPIF inflation is 1.8 per cent. It is estimated that CPIF inflation will be around 2 per cent at the end of the forecast period. However, there is considerable uncertainty concerning forecasts for inflation and in relation to this the deviations from the target may be regarded as small (see Figure 18).

My assessment is, however, that the inflationary risks are primarily on the upside; in other words the risk of a higher rate of inflation than expected is greater than the risk of a lower rate of inflation. If inflation increases more than is expected in the Monetary Policy Report, it is, in my view, likely that the repo rate will need to be raised more quickly than predicted in the repo-rate path. In this case it is quite possible that it will need to be raised by more than 0.25 percentage points at one or more meetings and that it will need to be increased to 4 per cent already next year.

Resource utilisation

In my overall assessment, resource utilisation is more or less normal at present and with the present forecasts it will be higher than normal and rising towards the end of the forecast period. This also indicates the need for a higher repo-rate path than the presented path.

The Riksbank uses several different measures of resource utilisation. According to these measures, the GDP gap, for example, will be approximately -1 per cent in the first quarter of 2011. My own assessment is that it will be a little higher than this, more or less zero. The level indicated by the so-called RU indicator also supports the claim that resource utilisation is largely normal. The RU indicator, which has been developed by the Riksbank and weighs together a large number of indicators to form a summary measure of resource utilisation, reached a normal level already in the fourth quarter of 2010. Several other measures also indicate that resource utilisation is normal (see Figure 19).

Unemployment, on the other hand, is still higher than normal. Unemployment varied between 6 and 8 per cent around an average of 7 per cent during the ten years preceding the financial crisis.¹⁶ If the current rate of fall in

¹⁵ Monetary Policy Report 1, 2011, pages 17-19, Norges Bank.

¹⁶ One difficulty at present is to assess whether the normal rate of unemployment has changed due to the financial crisis and economic policy. In connection with a severe downturn, the sustainable rate of unemployment (NAIRU) usually increases, at least initially. But the NAIRU will probably also be affected by the labour-market reforms implemented in recent years. Some of these reforms will probably reduce the NAIRU while others may increase it. It remains to be seen what the net result of these factors will be.

■ unemployment continues, it will reach a normal level in the autumn of 2011. Although, the assessment in the Monetary Policy Report is that this will not take place so quickly, we should remember that both the Riksbank and others have underestimated the strengthening of the labour market in recent years (see Figure 20).

Monetary policy must also take into account how the development of the economy affects wage formation. Monetary policy must resist the temptation to stimulate production and employment in the short term over and above the level that is compatible with a stable development of wages and inflation. A very rapid improvement of the labour market may lead to problems in the wage negotiations that will begin in the autumn. Wage formation has worked well in the last 15 years and this has helped to keep inflation at a low and stable level. It would be unfortunate if wage negotiations had to be conducted in a situation where there is overheating on the labour market.

In the current situation, the shortage of labour is probably a better measure of how strained the labour market is than unemployment. The shortage of labour in the business sector was back to an almost normal level in the fourth quarter of 2010. In several parts of the business sector, however, the shortage was greater than normal, for example in the manufacturing industry and the construction industry, and for several types of labour, for example technical white-collar workers in the industrial sector and computer consultants (see Figure 21).

The fact that the shortage of labour is already so high even though unemployment is still higher than normal indicates that matching on the labour market has deteriorated. This is also indicated by the Beveridge curve, which shows the relation between unemployment and vacancies. This has shifted outwards, that is a certain level of vacancies is compatible with a higher rate of unemployment. In part, this may be a cyclical phenomenon, but the change is so large that it may also relate to a structural deterioration (see Figure 22).

Repo rate level

I also believe that we should take the level of the repo rate into account when deciding on monetary policy. Particularly strong reasons are required for setting a repo rate over a long period of time that is considerably lower than what can be regarded as a long-term average. Monetary policy can sometimes be used to stimulate the economy and sometimes be used to tighten the economy, but not to permanently stimulate the economy by means of a low interest rate.

Long periods with a very low interest rate can namely lead to financial imbalances. They can, for example, lead to a rapid expansion of credit which in the long term may lead to some households being unable to afford to meet the interest and amortization payments on their mortgages. The households' interest rate expectations are retrospective and long-term expectations are reduced by the low interest rates that have prevailed for a number of years. Problems arise when interest rates then rise. But this is not just about households and mortgages. As I said in the first part of the speech, a too-expansionary monetary policy can also contribute to other kinds of financial imbalances.

I therefore usually also look at what the Taylor rule mentioned above would entail for the repo rate level. The Taylor rule indicates, as I said earlier, that the repo rate should have been higher than it actually was before the crisis, which I think is reasonable. The Taylor rule also indicates that the repo rate should have been reduced more or less as quickly and as much as we actually did when the crisis hit. If instead we, members of the Executive Board, had followed the results of the simulations in the Riksbank's model Ramses when the crisis hit, then the repo rate would have been reduced very slowly. Applied to the current situation in Sweden, the Taylor rule would give a repo rate of 3 to 4 per cent. This indicates that the repo-rate path should be even higher than it is.

Repo rate changes

Even though there are thus factors that with the current forecasts indicate that the repo rate should be increased more rapidly, I believe that there is a value in changing the repo rate at a steady pace in small steps. Unexpected, substantial changes may entail costs for households and companies and could cause instability on the financial markets. This was also my reasoning in 2006 and 2007 when the Riksbank was in a period of repo rate increases. I entered a reservation at every meeting in 2007 when the majority did not want to increase the repo rate by 0.25 percentage points.

The most important thing for me therefore is that the repo rate continues to be raised in small steps meeting by meeting. My assessment at the latest monetary policy meeting was that it will need to be raised by 0.25 percentage points at every meeting this year so that it reaches 2.75 per cent at the end of the year.

However, it is more difficult to assess the situation after the turn of the year. This is partly because uncertainty increases in the longer term, and partly because I myself will no longer be a member of the Executive Board and nor, by the way, will Lars Nyberg. Other members of the Executive Board may make different assessments of the direction of monetary policy.

However, if inflation turns out to be higher than we estimated in the Monetary Policy Report, the Riksbank may need to increase the repo rate faster than indicated in the repo-rate path. It is then quite possible that it will be raised to 4 per cent already next year.

Conclusion

My overall assessment is that monetary policy has worked well during the more than five years I have been a member of the Riksbank's Executive Board. The average for CPI inflation in the period 2006–2011 is 1.8 per cent with the current forecast for inflation this year. It is estimated that the repo rate will on average be somewhat lower in 2011 than it was in 2006, which contributes to reducing the average for CPI inflation somewhat during this period. The average for CPIX inflation during these six years is 2.0 per cent, that is equal to the inflation target. The Riksbank has also helped to keep up the level of production and employment during these years.

On the other hand, it is my view, with hindsight, that monetary policy was too expansionary in the years preceding the financial crisis. Inflation increased to a

■ level that was tangibly higher than the inflation target, resource utilisation was higher than normal and there was a rapid expansion of credit. Despite this, the repo rate was lower than normal for most of the period leading up to the crisis. A more rapid increase of the repo rate would have been better.

We did not foresee the financial crisis, but once it hit the Swedish economy with full force in September 2008 the Riksbank acted quickly and forcefully. This mainly concerned measures to preserve financial stability. However, the expansionary monetary policy conducted by the Riksbank also played an important role in reducing the severity of the downturn that followed in the wake of the financial crisis.

Looking forward, I think that the repo rate should be raised at every meeting this year, considering the economic development we envisaged at the last monetary policy meeting. If inflation becomes higher than we had expected, it may be necessary to raise the repo rate to a normal level of around 4 per cent as soon as next year. The average for the repo rate over the last 10 years cannot be taken as a starting point for what the average repo rate should be in the longer term. However, at the same time, I am, of course, prepared to reassess my view of the direction of monetary policy if the external conditions should change significantly, as they did in September 2008.

There are those who think that monetary policy is too tight. However, with a rate of growth of over 5 per cent and a repo rate of 1.50 per cent, I do not think we can say that monetary policy is tight. It is just gradually becoming slightly less expansionary. There are not four hawks and two doves on the Executive Board at present, only six doves.