

Karolina Ekholm: Why Swedish monetary policy needs to be more expansionary

Speech by Ms Karolina Ekholm, Deputy Governor of the Sveriges Riksbank, at Almega (employer and trade organisation for the Swedish service sector), Stockholm, 15 November 2013.

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The views expressed in this speech are my own and are not necessarily shared by the other members of the Executive Board of the Riksbank. I would like to thank Björn Andersson who has helped in writing the speech.

Accompanying charts can be found at the end of the speech.

Interest in central banks and monetary policy has been greater than normal since the financial crisis. Here in Sweden, much of this interest has concerned the disagreement among the Executive Board on the level of the interest rate, where I have been one of those who has consistently voted for a more expansionary monetary policy. I have mostly voted for a repo rate that is 0.25 percentage points lower and a repo-rate path that rises more slowly. One might of course think that the difference between this and the repo rate and repo-rate path decided on is so slight that it would not have any effect on the outcome. However, behind this apparently marginal difference in the view of what the repo rate should be is a fundamental difference in the view of the role of the central bank and the route monetary policy should take in the new economic landscape emerging in the wake of the financial crisis. It is this fundamental difference that I intend to talk about today.

On a general level one can say that the difference concerns the view of the risks linked to financial imbalances and to what extent monetary policy should be used to counteract such risks. It is primarily the latter that has come to be a recurring theme in the discussions on Swedish monetary policy.

Here in Sweden, monetary policy has deliberately not accelerated more, despite the low inflation and low resource utilisation, with reference to the claim that a more expansionary monetary policy increases the risks linked to high household indebtedness. One justification for this deliberation is that the financial crisis has shown how high costs can be if these risks are allowed to increase and that it is therefore worth deviating from the inflation target and allowing a somewhat poorer development of the real economy to avoid indebtedness soaring too high and creating problems further ahead.

I can very well understand the wish to prevent new crises and I am not categorically against conducting monetary in this way; leaning against the wind as it is usually called. But if one weighs the advantages of conducting this policy against the disadvantages, I reach the conclusion that there is no justification for it in Sweden today. As I see it, the advantages are small. We do not have a general credit boom in the Swedish economy that needs dampening. However, we do have problems with high housing prices that lead to high household indebtedness and risks associated with this. But it is difficult to use monetary policy to influence household indebtedness without this having very negative consequences in the form of poorer target attainment for inflation and poorer stability in the real economy in the coming years. Poorer target attainment over a long period of time also entails costs and risks in itself which must be taken into account.

The framework in which monetary policy is conducted in Sweden and in many other countries is based on the mandate of maintaining price stability, often specified as a target for inflation, as we have in Sweden. And it is this mandate that is the reason why central banks in general have been allocated a greater degree of independence than other public

authorities. Over the past two decades, the clear objectives for monetary policy and the independent work by central banks to attain them, have proved effective in anchoring inflation expectations and creating stability in the economy.

However, the framework is based on the central bank actually delivering. If inflation is allowed to deviate from an established target over a long period of time it can affect the general public's understanding of the policy conducted and their confidence in the inflation target. The more the central bank stretches its task of delivering the set objective, the more difficult it will be to understand and evaluate the policy conducted. And then the greater the risk will be that the general public's attitude to the framework deteriorates.

I intend to try to describe my opinion on these questions today and on how they tie in with my view of the role of the central bank and how monetary policy should be conducted within the current framework. It may be useful to start by describing the framework we have lived with for a good twenty years now. Why do we have an inflation target and an independent central bank?

Why an inflation target and independence?

From credibility problems for the fixed exchange rate...

When the international monetary system of fixed exchange rates – what was known as the Bretton Woods system – collapsed at the beginning of the 1970s, Sweden needed to find a new nominal anchor for its economy. The predominant view was that a fixed exchange rate was the best means for a small, open economy to attain stable prices and set a framework for the stabilisation policy. This was one of the reasons why Sweden chose to continue with a system where the krona was pegged to other currencies.

But when the economy suffered problems in the 1970s and 1980s it became clear that the target for the fixed exchange rate was not regarded as credible. The target often came into conflict with the aim of bringing down unemployment, which became an increasingly important element of the stabilisation policy. This was resolved by means of recurring krona devaluations. The result was a negative spiral, where expectations of continued high inflation and new devaluations affected price-setting and wage formation. Wage increases in Sweden therefore showed a higher trend increase than other countries. This in turn led to cost crises in the manufacturing industry, which were resolved through devaluations of the krona. This fulfilled the expectations of devaluations and thus sowed the seeds for the next round.¹

In the middle of the 1980s, the Swedish credit market was deregulated, which was the starting point for a rapid credit boom and sharply rising prices for financial assets and property. The economic policy conducted could not withstand the pressure and the result was a property market bubble and a very overheated economy. When the bubble burst in the early 1990s, it triggered a financial crisis and a deep recession. Many were assuming that the old pattern would be repeated and that the krona would be devalued. But the political stance on this occasion was instead to once and for all disperse expectations of devaluations and show that they were serious about the fixed exchange rate. As you all know, this proved unsuccessful, despite a policy rate of 500 per cent and explicit support for the defence of the krona. In November 1992 the Riksbank had to give up the fight and let the krona float freely, which meant that it weakened significantly.²

¹ See, for instance, Jakobsson (1997) and Jonung (1999) for descriptions of the economic policy problems during this period.

² In just a couple of days, the exchange rate weakened according to the TCW index by just over 10 per cent, which increased to around 20 per cent after a few months.

... to a floating exchange rate, inflation target and independent Riksbank

When the krona fell, there were probably not many people who believed that Sweden would change its monetary policy regime entirely. Most people probably expected that we would eventually return to a fixed exchange rate. However, it was clear that such a return would take time and during a transition period a new strategy would be necessary. At the end of the 1980s, the Reserve Bank of New Zealand had begun to aim its monetary policy at trying to directly govern inflation and in 1990 they introduced an official inflation target as a means of creating a nominal anchor in the economy. Canada and the United Kingdom soon followed suit and Sweden joined the group in 1993. On 15 January, the Riksbank announced that its monetary policy objective would be to hold inflation around a quantified target: 2 per cent, measured as the change in the consumer price index. This target would begin to apply from 1995.

Twenty years have now passed. With hindsight, we know that it actually took a very short time for the inflation target to become credible and for inflation expectations to become anchored around 2 per cent. But in the beginning, it was not entirely clear that the inflation target would be a success. Monetary policy was therefore mainly focused on creating confidence in the target initially. The repo rate was kept at a high level to bring down inflation, despite relatively high unemployment, which led to criticism from several areas.³ As inflation expectations became anchored, however, there was scope to include developments in the real economy in monetary policy. One could deliberately allow inflation to deviate from the target for a period of time if this would give a better long-run development in employment and unemployment. The inflation-targeting policy was thus flexible.

The framework for the inflation-targeting policy has of course developed considerably over the past twenty years, much due to academic research. Research has also contributed insights into the economic policy problems faced by Sweden and several other countries in the 1970s and 1980s. It was difficult for decision-makers to inspire confidence in the long-run aim to hold inflation low, as participants in the economy understood that there were incentives to deviate from the target in the short run, for example, to reduce unemployment. It could therefore be beneficial if monetary policy were conducted with a focus on a clearly-formulated, long-run target for price stability and an arm's length away from the current party politics. This was the starting point for the reforms implemented in many countries during the 1990s and which meant that monetary policy, in slightly different ways and to varying degrees, was delegated to central banks along with a more independent status and with a clear mandate to hold prices stable.

In practice, the Riksbank conducted its monetary policy independently from the mid-1990s, but formally it was not given an independent status until 1999.⁴ The Instrument of Government and the Sveriges Riksbank Act were then amended as part of the adjustment to the requirements in the EU treaty, requirements that were of course affected by the insights gained and by developments in the field of monetary policy. The changes in the regulatory framework meant, for instance, that an Executive Board was appointed at the Riksbank, consisting of six members and with the task of independently conducting monetary policy. At the same time it was confirmed by law that the objective of the Riksbank's operations would be to maintain price stability. The independence thus concerned which interest rate decisions would attain the price stability target in the best way, not what objective the central bank would have for its operations.

³ Bäckström (2003).

⁴ See Bäckström (1998).

Better development with an anchor in place

As I mentioned earlier, the inflation target gained credibility relatively quickly and inflation expectations were soon anchored around 2 per cent. The severe weakening of the krona when it was allowed to float also stimulated exports, which made the consolidation of public finances easier in the mid-1990s and helped the Swedish economy to climb out of the deep recession. The new framework for both monetary policy and fiscal policy and more efficient wage-bargaining rounds contributed to the rate of inflation declining and moreover fluctuating much less from year to year in relation to the 1970s and 1980s.

The much calmer development of inflation was also supported by more stable inflation abroad. It is important to remember that developments with lower inflation and reduced volatility were not an isolated event in Sweden, but an international trend. From the mid-1980s there was a period when the fluctuations in many industrial nations' economies were considerably dampened in relation to earlier decades. The reasons for this development, "the Great Moderation" as it came to be called, have been the object of considerable analysis and debate. It was probably the result of a number of interacting factors. But there are many indications that the changes in the monetary policy field that took place on a broad front during this period were an important reason why inflation began to fluctuate much less.⁵

Inflation-targeting policy after the crisis

As in the early 1990s, the most recent financial crisis has for natural reasons triggered a discussion of to what extent and in what way the current framework for monetary policy needs to be changed. Attitudes to change have varied, partly depending on what role one believes monetary policy played in the crisis. Was inflation targeting one of the perpetrators, contributing to interest rates being too low prior to the crisis; was it the bystander who could only look on in horror, or was it the saviour who ensured that inflation expectations nevertheless remained firmly anchored?⁶

Personally, I do not believe that the argument that the financial crisis stems from an overly expansionary monetary policy is particularly convincing. As I see it, it was primarily a combination of a lack of supervision and regulation of the financial markets.⁷ Two obvious lessons are that there was over-confidence in the ability of these markets to regulate themselves and that the distortions in incentives on the financial markets had been underestimated.⁸

Given the enormous socio-economic costs the financial crisis entailed, there is of course a strong will to correct what one perceived went wrong to ensure it cannot happen again – this applies in particular to the central banks, who had to deal with quite a few of the problems. There is thus an instinct to take on the task of ensuring that financial crises do not arise – not merely through advocating better supervision and regulation of the financial markets, but also through monetary policy. But there are a number of problems with this.

Risks linked to household debt have held back monetary policy

This leads me on to the situation in Sweden and how monetary policy has been conducted recently. We have had low inflation and a low level of resource utilisation in the Swedish economy for a long period of time. During my first year as a member of the Executive Board from spring 2009 until some point in the middle of 2010, CPIF inflation was close to 2 per

⁵ See, for instance, Summers (2005) and Giannone, Reichlin and Lenza (2008).

⁶ This classification comes from Reichlin and Baldwin (2013).

⁷ See also Ekholm (2009).

⁸ See for example Bean (2009) and Bernanke (2010).

cent.⁹ But then it began to gradually fall to its current level of around 1 per cent (see Figure 1). The Riksbank's forecasts have shown, and still show, that it will take a couple of years until underlying inflation begins to approach 2 per cent and resource utilisation normalises. This means that for several years inflation has undershot the target, at the same time as resource utilisation has been low.

In this type of situation, a more expansionary monetary policy could have been used to reduce unemployment without creating a risk of inflation being too high (see Figure 2). Today there is quite simply no conflict of interests between inflation and unemployment of the type that was so common in the 1970s and 1980s, when the ambition to hold back unemployment was what ultimately pushed up inflation to levels that were unsustainable for the fixed exchange rate. On the contrary, inflation has now been so low for so long that I am concerned that it risks becoming a problem in itself, as inflation expectations are adjusted to a lower level.

For these reasons, I have considered a further cut in the repo rate to be justified. But a majority of Executive Board members have assessed that this is not justified, because an even lower repo rate is thought to increase household debt, which is in turn assumed to increase their vulnerability and thus the risk of shocks leading to a deep recession.

It is, of course, important to consider how concerned one should be over household indebtedness, not just the Executive Board of the Riksbank, but the Government and the Riksdag (the Swedish parliament), as well as the banks that lend money to Swedish households and Finansinspektionen (the Swedish Financial Supervisory Authority), which supervises these banks. My own opinion is that the high housing prices probably mainly reflect a shortage of housing and are thus not to be regarded as a price bubble. However, if the supply and demand situation changes, this could very well lead to falls in house prices in some situations. And even if such price falls are justified, they can entail problems for macroeconomic developments. I believe that the high level of debt, combined with an unwillingness to have higher debts than assets, could in such a situation have negative effects on growth in consumption.¹⁰ I would therefore feel more secure if the level of debt was lower, or at least was not increasing.

But if I would feel more secure with a lower level of debt, why not use monetary policy to try to slow it down? The answer is simply that the disadvantages with using monetary policy in this way outweigh the advantages.

A trade-off between target attainment at different horizons

One fundamental problem here is how to make the trade-offs clear to economic agents, which is necessary if one wishes to convince them of the need to lean against the wind. The policy the Riksbank has conducted for some time means that one deliberately allows longer time for both inflation and the real economy to return to normal levels. At the same time, this is justified by the Riksbank's mandate to stabilise inflation around the inflation target and production and employment around long-run sustainable levels. It is probably not clear to everyone how the actual aim of the policy is connected to the justification for it. The trade-offs therefore need to be made concrete and clear – partly so that the Riksbank's principal can assess its monetary policy, and partly so the general public can understand the basis for the policy the Riksbank conducts. What does one gain by conducting a policy that

⁹ As the CPI is to a great extent affected by repo-rate cuts in connection with the financial crisis, it has been natural to focus more on underlying inflation measured in terms of the CPIF.

¹⁰ Households' total assets are much higher than their debts. A large part of this concerns housing. But there is also a considerable part that consists of more liquid assets, the value of which need not fall if housing prices were to fall.

deliberately allows it to take longer for inflation to return to the target and for resource utilisation to return to a normal level? Is it worth the cost in terms of poorer target attainment?

This is not easily illustrated. It is a question of a “new” type of trade-off being included in the material on which the analysis and decisions are based and it takes time to find good forms for this. It also involves illustrating risks and uncertainty and making them more concrete, and this is always a challenge. The Riksbank has been carrying out work on developing this for some time, and an outline as to how financial imbalances can be included in the monetary policy assessments has begun to take form. The July Monetary Policy Report included such an outline that shows how one can approach this question.¹¹

The reasoning concludes that one can regard recent monetary policy as a trade-off between target attainment in the coming years, that is the period for which the Riksbank normally makes forecasts, and target attainment in the long run, beyond the forecast horizon.¹² The idea is that a monetary policy that solely focuses on target attainment a couple of years ahead could miss the fact that financial imbalances are building up that risk leading to very poor macroeconomic outcomes in the longer run.

According to this outline, decision-makers need to balance target attainment in the short and medium term against target attainment in the long term. Thus, there are two questions one needs to take a stance on: How does indebtedness affect the risk that shocks will lead to a really severe depression? And to what extent can monetary policy affect indebtedness and thus the risk of this type of scenario? The latter question, in particular, is important in this type of trade-off.

Unclear benefits but clear costs

Monetary policy is the most effective tool we have for influencing general price developments. It has an impact through, for instance, credit growth in the economy. Monetary policy can therefore be used to dampen credit growth when it appears alarmingly high, even if this does not appear justified on the basis of the prospects for inflation. However, it is not alarmingly high credit growth that is visible in the Swedish economy now, but a high level of debt in the household sector that is primarily a consequence of high credit growth prior to the financial crisis (see Figure 3). At present, growth in household credit is only slightly higher than growth in disposable incomes. Growth in corporate credit is at the same time low.¹³ The increase in lending by the major banks over the past five years has consisted almost entirely of Swedish mortgages (see Figure 4).

My assessment is that it does not have any major impact on household debt to hold the repo rate slightly higher for a limited period of time (see Figure 2).¹⁴ To have an effect that is more than marginal, one would probably need to hold the repo rate so high that the costs in terms of poorer macroeconomic growth would be very high. So what one gains by monetary policy leaning against the wind in terms of dampening debt, reducing vulnerability in the economy

¹¹ Sveriges Riksbank (2013).

¹² This is, of course, a simplification. Actually, an unfavourable scenario could also occur within the normal forecast period, that is, within the next three years. See also Sveriges Riksbank (2013).

¹³ Companies' market borrowing has increased in recent years, which to some extent compensates for the downturn in growth in bank loans. However, even if one takes this market borrowing into account, credit growth in the corporate sector appears relatively low.

¹⁴ Model estimates of the short-term relation between the repo rate and household indebtedness indicate that the average effects may be relatively small: a 1 per cent lower repo rate over a period of one year, and which gradually reverts, will give rise to an approximately 4 percentage points higher level of indebtedness as a percentage of disposable income. Similar estimates of the relation between housing prices and the repo rate also show small effects – see Sveriges Riksbank (2011) Chapter 2.1. However, estimates of short-term relations might underestimate the total effects of the repo rate on household indebtedness.

and having a potentially better target attainment in the long run is thus very unclear. On the other hand, the costs in terms of poorer target attainment a couple of years ahead are very clear.

Other tools than the repo rate could moreover influence household debt more effectively. Various types of tax tools are probably particularly potent, such as tax deduction regulations and property taxation, but at the same time these are the most politically sensitive. So-called macroprudential policy tools are probably more effective than monetary policy in influencing debt in the household sector. Finansinspektionen, which has been given the main responsibility for these tools, has already used several of them and has signalled that it will remain vigilant with regard to risks linked to household indebtedness. This should reasonably have an effect on the monetary policy trade-offs. Once macroprudential policy is in place, monetary policy can focus on attaining the inflation target and stabilising resource utilisation a couple of years ahead.

An analysis of the target versus the means thus does not advocate the repo rate as a tool for dampening household debt. It would be costly to society as a whole to use monetary policy for something it is not particularly well-adapted to influence.

The trade-offs must also include the risks of deviating from the inflation target

My final objection to the monetary policy conducted recently is that the trade-offs have not sufficiently taken into account the costs and risks linked to deviating from the inflation target over a long period of time. Flexible inflation-targeting means that the central bank can deliberately allow inflation to deviate from the target out of consideration for developments in the real economy. This is possible as long as the deviation is assessed as temporary, and households and companies perceive that the central bank aims to bring inflation back to the target level. However, a situation where monetary policy leans against the wind does not really fit into this description. Here the central bank allows target attainment for *both* inflation and the real economy a couple of years ahead to stand back, out of consideration for the *risk* of a really poor target attainment, probably far ahead in the future.

Such a trade-off needs to take into account possible costs linked to households and companies having made decisions over a long period of time on the basis of what turn out to be incorrect inflation expectations.¹⁵ Moreover, one must assess the risks that a low inflation rate in itself entails. I consider it important to keep a respectful distance when prices are not increasing at all, so that one avoids deflation, which could lead to major problems for the economy. In addition, one must take a stance on how long inflation can be allowed to deviate from the target, given the other trade-offs, without having consequences for inflation expectations, for the credibility of monetary policy as a whole and ultimately for target attainment in the long run.

As I said, the inflation target has been an anchor in many countries for a long period of time – for twenty years in the Swedish economy – and we almost take for granted that long-run inflation expectations will be around the target. They also still appear to be well-anchored around the target of 2 per cent in Sweden, although expectations in the shorter run are lower (see Figure 5). However, a monetary policy that explicitly leans against the wind is in many ways untested as a strategy and it is not clear how the participants in the economy will interpret inflation deviations in this context. One must therefore be careful. I see a risk in allowing monetary policy to continue to lean against the wind until one sees tendencies for

¹⁵ In a long-run perspective, inflation below the target could lead to unnecessarily high unemployment if inflation expectations are firmly anchored around the target (see Svensson, 2013). In the same way that unexpectedly high inflation benefits those who borrow and is a disadvantage to those who lend as the real value of the debt becomes lower than anticipated, unexpectedly low inflation can benefit those who lend at the cost of the borrowers.

inflation expectations in the long run to begin to adjust downwards. That is a situation that might be hard to turn around.

Target attainment is important for credibility

One argument that is sometimes put forward is that the differences between what the majority of Executive Board members and the minority advocate are so small and that in practice it is not very important whether or not one cuts the repo rate a little more. And in a strictly “mechanical” sense, it is perhaps true that a policy rate that was 0.25 percentage points lower for a period of time would have a limited effect on the economy. But for the sake of credibility and target attainment in the long run, it is also important how households and companies perceive monetary policy. How seriously does the central bank view the inflation target? The longer inflation is deliberately allowed to deviate from 2 per cent, the greater the risk that one begins to question what target the bank really has. We have seen elements of this in the recent debate on monetary policy in Sweden.

This could also have significance for how the central banks’ principals perceive the way monetary policy is conducted, which can ultimately affect the banks’ mandate and position. The Riksbank has a mandate to work independently to maintain price stability and, without prejudice to this, to support the goals of general economic policy. On the one hand, this means that it is up to the Riksbank to determine which risks are relevant for its decisions. But on the other hand, the Riksbank is accountable to the Riksdag, which determines the Riksbank’s mandate. The Riksbank therefore needs to be able to show in a convincing manner that the trade-offs it makes are anchored in its mandate. And given the current mandate, it may be a problem if one accepts deviations from the inflation target over a long period of time. If the trade-offs in monetary policy are not clear and concrete, it will be difficult to assess whether it has been conducted in a reasonable manner and within the mandate. The costs are clear, but what have we gained?

Of course, it may be the case that the principal understands the difficulty in making these trade-offs concrete and considers it desirable that the central bank nevertheless takes the risks into account in a way that reduces the degree of target attainment a couple of years ahead. But in this case, it is desirable that the principal should make clear that the mandate is worded too narrowly and therefore needs to be broadened. And one question that also arises is to what extent such a broader mandate fits into the degree of independence granted to many central banks. There is some tension between the breadth of the mandate and the degree of independence. A high degree of independence assumes that it is fairly simple to assess whether the mandate is fulfilled, which could be difficult if the mandate is worded so broadly that it encompasses most potential outcomes.

“Let the cobbler stick to his last!”

Let me conclude by summarising my message today and perhaps unexpectedly I shall begin in ancient Greece. It was said that the famous artist Apelles from Kos one day heard a shoemaker pointing out a mistake the painter had made in his depiction of a sandal. Apelles corrected the mistake, which encouraged the shoemaker, who then continued his criticism of the way the leg of the person in the picture had been drawn. An indignant Apelles then reminded him that a shoemaker should not criticise above the sandal.¹⁶ The expression we use today in Sweden – Let the cobbler stick to his last! – may sound outdated and rather negative as an attitude.¹⁷ But if one rewords it, and at the same time removes the critical tone, it could be: “The best thing is for everyone to stick to what they do best.” I think the interpretation of the old expression summarises my point fairly well.

¹⁶ Pliny the elder, *Naturalis Historia*, book 35, chapter 36.

¹⁷ A perhaps more commonly used English idiom with the same implication is “Every man to his own trade!”.

For around two decades we have had a framework for monetary policy that has proved effective in anchoring inflation expectations and creating stability in the economy. This framework has quite naturally developed and been refined over the years, but essentially it means that the central bank has a clear task of maintaining stable prices in the economy and the mandate to make decisions to attain this independently. Stable prices are something that benefits everyone in the long run, but are difficult to attain because there can be such great temptation to deviate from the target in the short run to attain other targets – such as lower unemployment. This is why many countries have chosen to put monetary policy – which is the most effective tool for influencing inflation – in the hands of independent central banks and at the same time to give them clear mandates to hold prices stable. Well-anchored inflation expectations also create scope for the central bank to stabilise the real economy.

For understandable reasons, focus following the financial crisis has honed in on risks linked to financial imbalances and to preventing these imbalances. There is thus an instinct to also include these trade-offs in monetary policy. As I have tried to explain, I believe there are a number of problems with this. It is difficult to manage the new trade-offs, which in the case of Sweden concern high household indebtedness, both strategically and in terms of communication. And tensions may also arise between these trade-offs and the original framework regarding price stability and the mandate the central banks currently have.

One solution to this would of course be to change the framework and give the central banks an extended mandate. But then one would need to have a political discussion on what it should actually include and on the possibility to assess the central banks and hold them to account.

I understand and sympathise with the instinct to act to ensure that crises like the one we recently experienced never arise again. But using monetary policy for this purpose creates problems. Given the Riksbank's current mandate, it is difficult to accept large deviations from the inflation target over a long period of time. The more the inflation target is stretched, the more important the question of the general public's confidence in the target will be and our principal's attitude to the framework. This worries me, as the framework with a focus on price stability and an independent central bank has been successful as a nominal anchor in the economy. I therefore consider it important that we "stick to our last" and safeguard the inflation target. This does not mean that I oppose a further development of the framework that could lead to better attainment of the inflation target. However, this is a discussion to which I will have to return at a later point.

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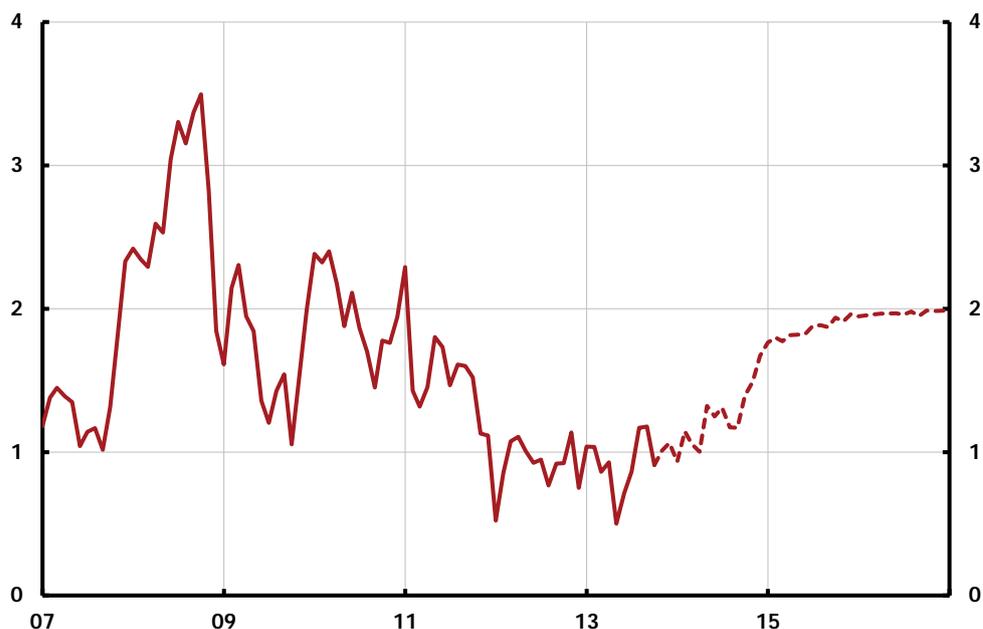
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Figure 1. The CPIF

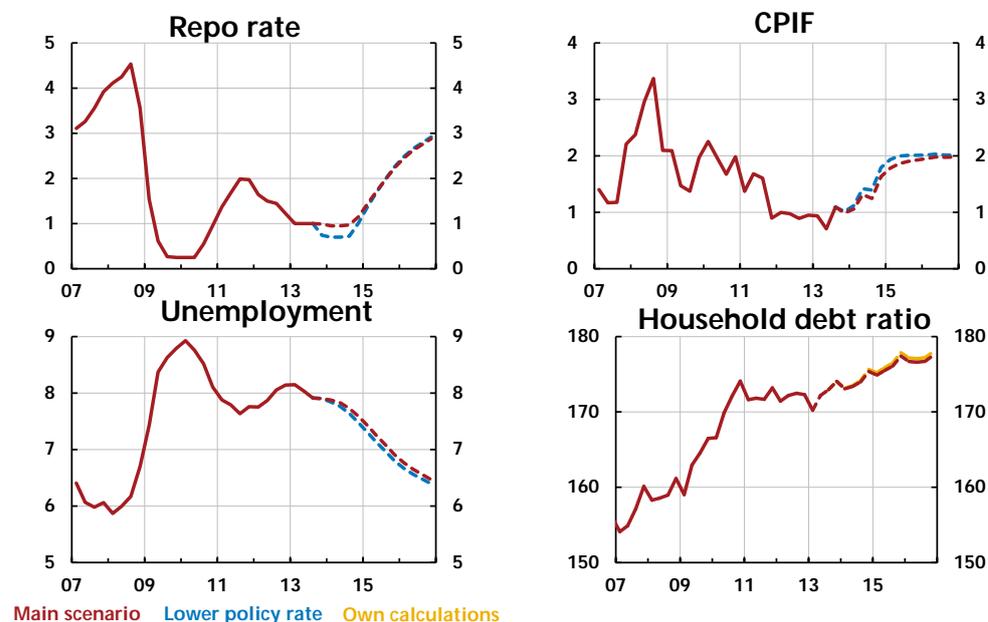
Annual percentage change



Note. The broken line is the Riksbank's forecast from the Monetary Policy Report in October 2013.

Sources: Statistics Sweden and the Riksbank.

Figure 2. More expansionary monetary policy

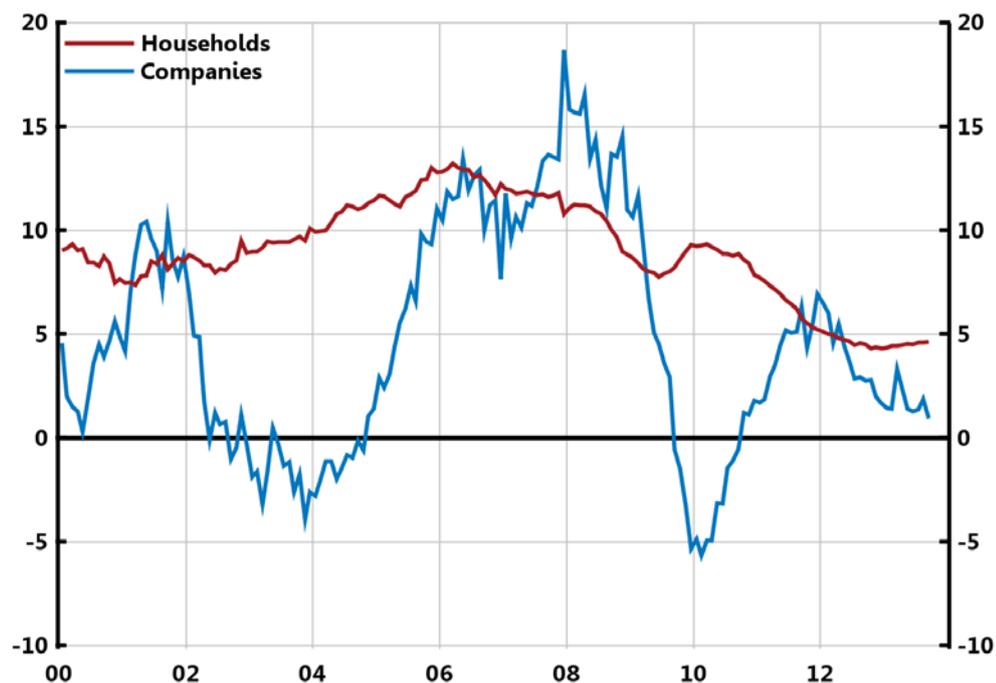


Note. Forecasts from the Monetary Policy Report, October 2013. Repo rate, per cent, quarterly averages. The CPIF, annual percentage change, quarterly averages. Unemployment, percentage of labour force, 15–74 years, seasonally-adjusted data. Real interest rate, 1 year, per cent, quarterly averages. Debt ratio, per cent of disposable income. Effects on CPIF and unemployment according to the Riksbank's macro model, Ramses. Effects on debt ratio according to own calculations – see footnote 14.

Sources: Statistics Sweden, Riksbank and own calculations.

Figure 3. Lending to households and companies

Annual percentage change

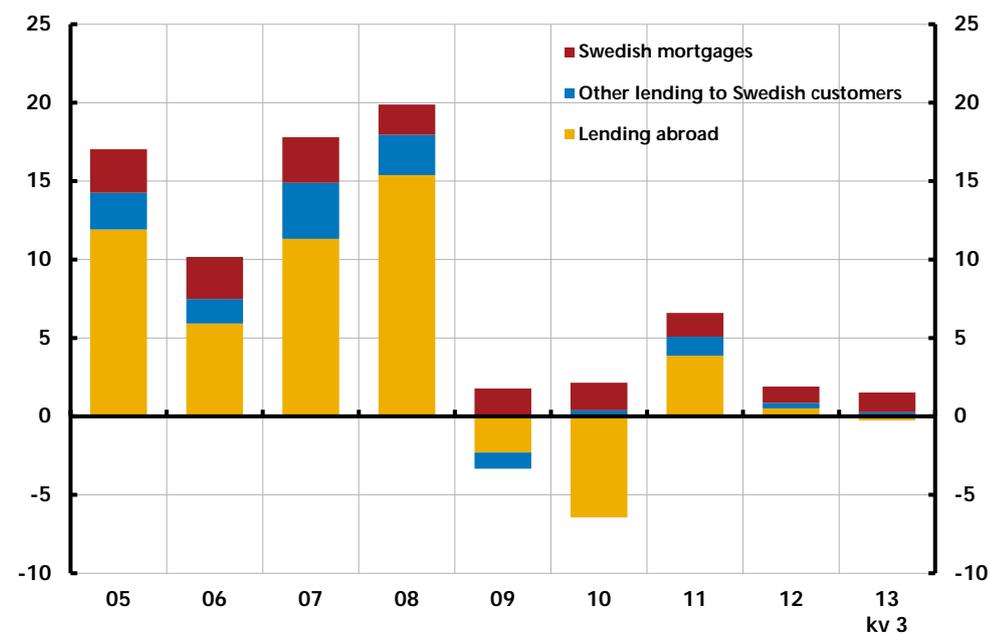


Note. Lending to households and companies according to financial market statistics.

Source: Statistics Sweden.

Figure 4. Annual change in the major banks' lending

Per cent and contributions in percentage points

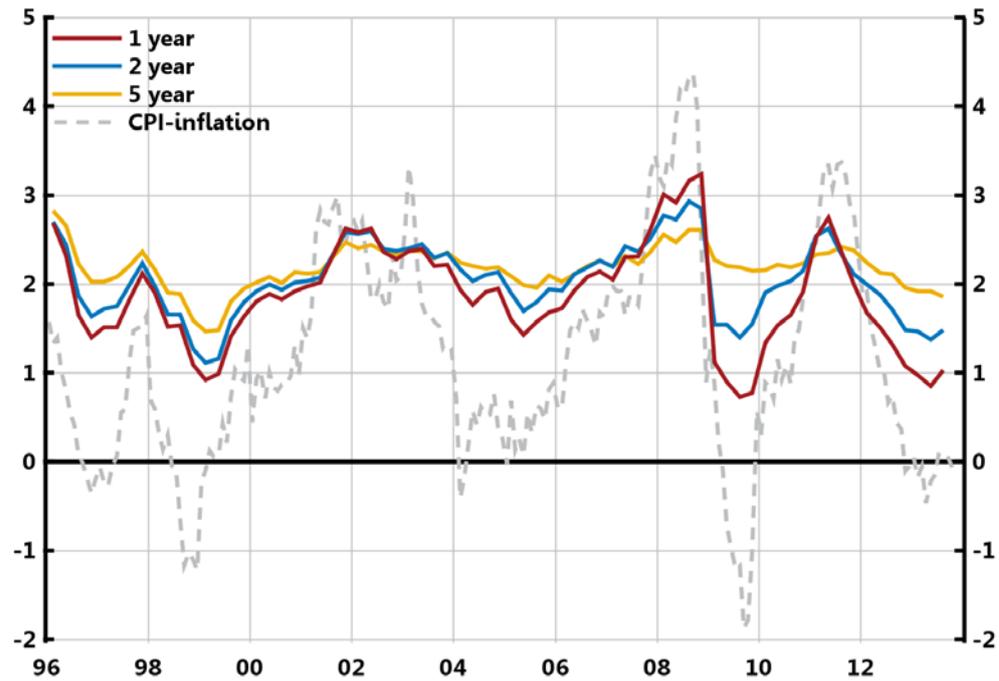


Note. The coloured fields show how the different types of lending have changed in relation to the major banks' total lending to the general public. No consideration is given to change in exchange rates.

Sources: Bank reports, Statistics Sweden and the Riksbank.

Figure 5. Inflation expectations one, two and five years ahead, all participants

Per cent



Sources: TNS SIFO Prospera and Statistics Sweden.