Mr Bäckström covers monetary policy in Sweden from 1996 to 1998

Opening remarks by Mr Urban Bäckström, Governor of Sveriges Riksbank, the Swedish central bank, before the Standing Committee on Finance in Stockholm on 18 May 1999.

Introduction

In the period 1996–98 the annual rates of inflation, measured with the CPI, were 0.8, 0.9 and 0.4 per cent, respectively. This means that in each of these years the change in the CPI not only deviated from monetary policy's 2 per cent target for price stability but was also outside the lower tolerance limit of 1 per cent inflation.

The Riksbank has indeed made assessments that subsequently proved to be a bit off the mark. As a result we have also made decisions that, looking back when the outcome was known, could have been somewhat different. But on the whole, the result of monetary policy in this period seems to be acceptable. In my opening remarks I intend to give this appraisal more substance.

One major reason why CPI inflation has been low in the past three years is that the price trend has been affected by some specific price movements that monetary policy neither can nor should aim to counter fully. If the Riksbank attempts to counter such price movements, the result might be unnecessarily costly for the economy, that is, exaggerated fluctuations in economic activity as well as in the financial markets. It was against this background that the new Executive Board of the Riksbank clarified the inflation target earlier this spring. To a large extent, the clarification tallies with how monetary period has actually been conducted in the period that the Standing Committee is now appraising.

I therefore conclude that when inflation is measured with the CPI, deviations from the inflation target, upwards as well as downwards, in certain periods are something to which we unfortunately will have to grow accustomed. As a target variable, however, the CPI has many advantages, including being familiar and covering a large assortment of goods and services. Deviations from the target may sometimes even be desirable and actually benefit real factors, such as production and employment, as well as financial market stability. This conclusion does of course presuppose that people in general expect that in the medium term inflation will be in line with the target.

Inflation in 1996, 1997 and 1998

I now want to look in more detail at the path of inflation in the three years 1996, 1997 and 1998. In the period as a whole, the annual rate of price increases, measured with the CPI, averaged 0.7 per cent. As I just mentioned, however, in each of these years CPI inflation was markedly affected by shocks that are fairly easy to identify and only have transitory direct effects on inflation.

Lower interest rates

In the course of these years the Riksbank lowered the repo rate from 8.91 to 3.4 per cent, or by more than 5.5 percentage points. The five-year T-bond rate moved down from about 8 per cent to just over 3.8 per cent, or by 4.2 percentage points. Falling interest rates can stimulate economic activity and thereby lead in time to higher inflation as the level of resource

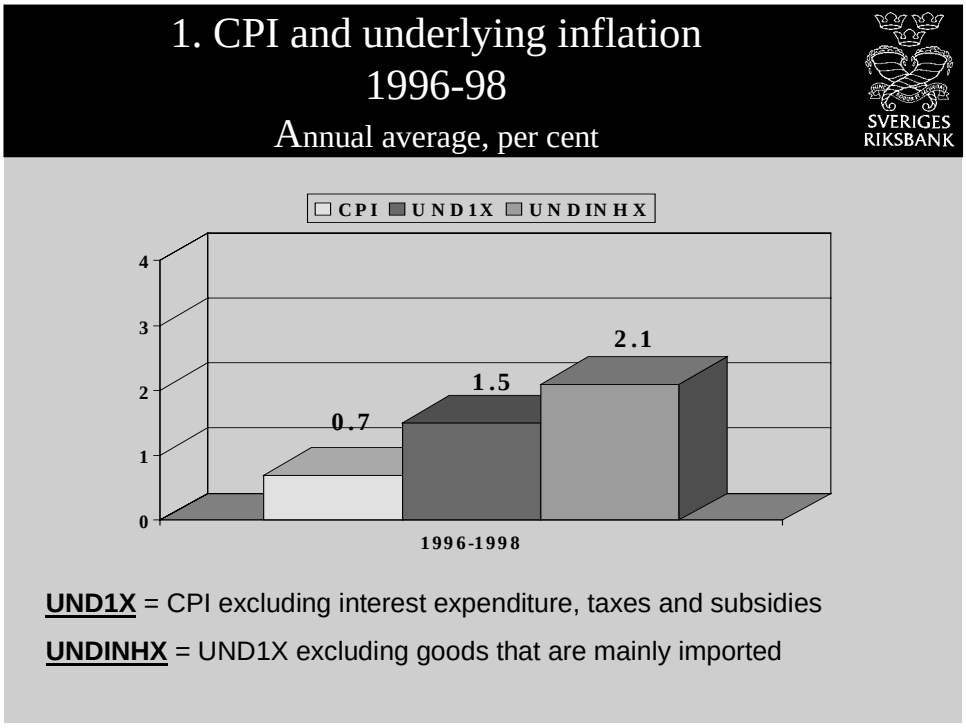
utilisation rises. In the short run, however, the effect on inflation, measured with the CPI, is downwards as a result of lower house mortgage interest payments. So although inflation may ultimately rise as a consequence of lower interest rates, the initial effect is the opposite. In these years, moreover, the effect on interest expenditure was substantial in that inflation expectations dropped from high levels as the low inflation regime gradually gained credibility. The downward effect of the lower interest rates on the CPI actually averaged as much as 0.7 percentage points a year.

Altered indirect taxes and subsidies

In this period there were also fairly large changes in indirect taxes. In the longer run this can influence inflationary pressure via fiscal policy's impact on demand but there are also more direct effects. In 1996 changes in indirect taxes had a downward effect on CPI inflation of 0.6 percentage points, followed in 1997 by an average upward effect of 0.5 percentage points. In 1998 as a whole the impact of altered indirect taxes was marginal; after the summer, however, various measures, including the reduction of tobacco tax, lowered the rate of CPI inflation by 0.5 percentage points.

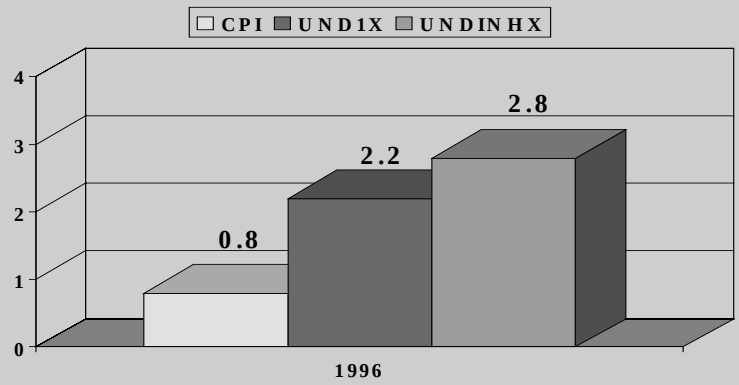
Falling commodity prices

The development of commodity prices has likewise affected the rate of inflation in the past three calendar years. The international economic slowdown meant that in the course of 1998 international commodity prices began to fall relatively sharply. It can be mentioned, for example, that towards the end of 1998 just the lower prices for coffee, petrol and domestic heating oil had a downward effect on Swedish CPI inflation of 0.4 percentage points. As in the case of changes in taxes and interest rates, there are distinct direct effects that may deviate from the more long-term impact on demand.



2. CPI and underlying inflation 1996

Annual average, per cent

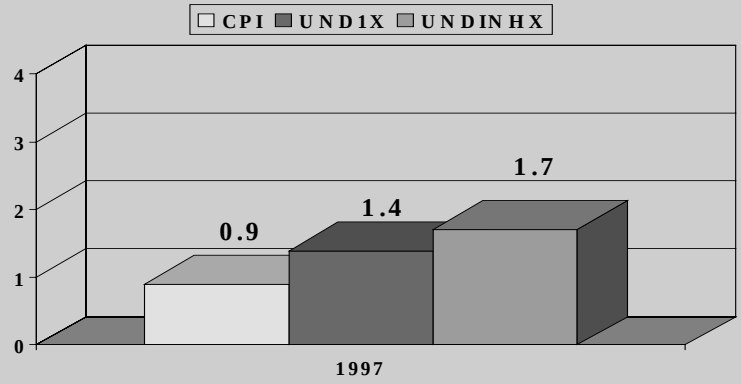


UND1X = CPI excluding interest expenditure, taxes and subsidies

UNDINHX = UND1X excluding goods that are mainly imported

3. CPI and underlying inflation 1997

Annual average, per cent

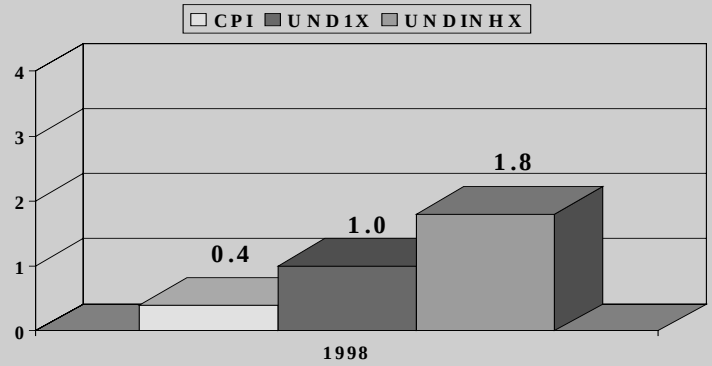


UND1X = CPI excluding interest expenditure, taxes and subsidies

UNDINHX = UND1X excluding goods that are mainly imported

4. CPI and underlying inflation 1998

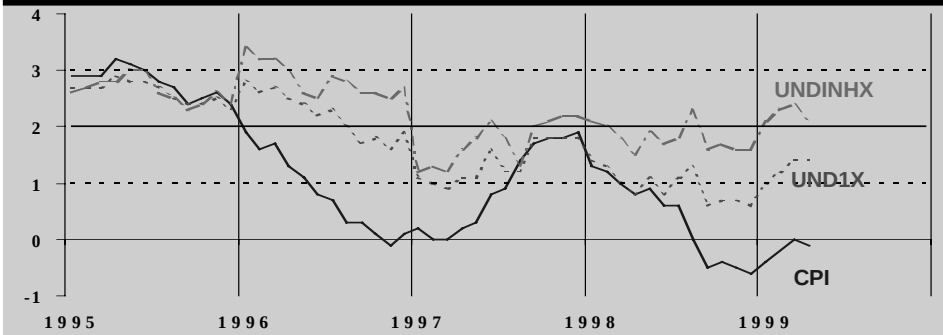
Annual average, per cent



UND1X = CPI excluding interest expenditure, taxes and subsidies

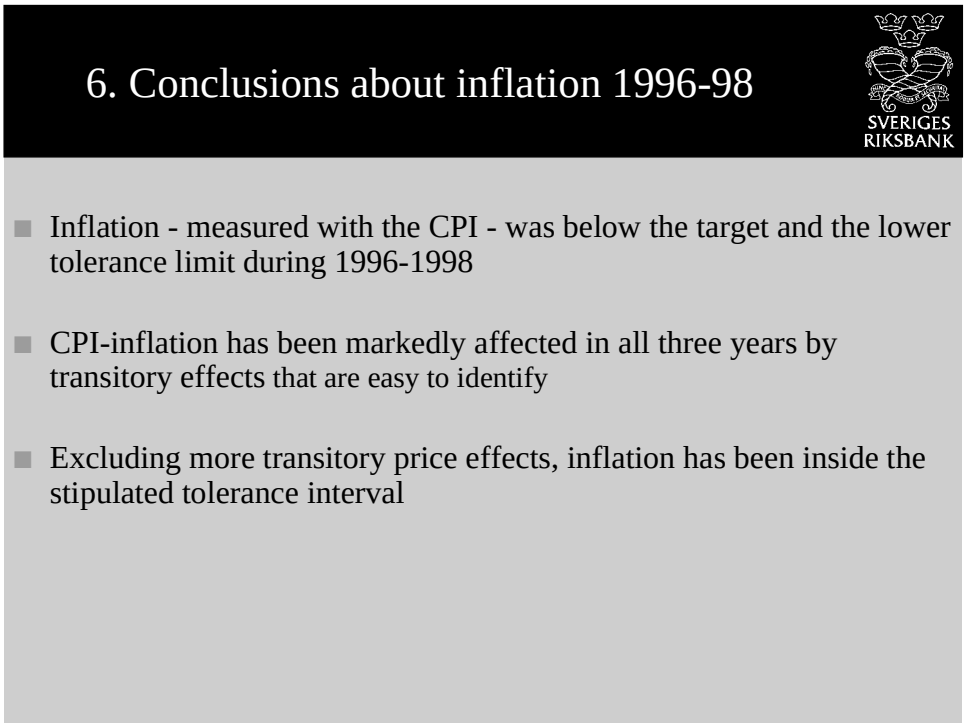
UNDINHX = UND1X excluding goods that are mainly imported

5. CPI and underlying inflation



		1996	1997	1998
Average impact on CPI	⇨	•Interest rate fall -0,6p.p. •Tax changes -0,6p.p.	•Interest rate fall -0,9 p.p. •Tax changes +0,6 pe	•Interest rate fall -0,6p.p. •Tax changes +0,2p.p. •Coffee, petrol -0,1 p.p.
Annual rate for CPI/ UND1X/ UNDINHX	⇨	0,8 / 2,2 / 2,9	0,9 / 1,4 / 1,7	0,4 / 1,0 / 1,8

One approach to a more detailed separation of trend or core inflation from these types of transitory price effects involves looking at the various indicators of underlying inflation that have been developed at the Riksbank. Whereas annual CPI inflation in the period 1996–98 averaged 0.7 per cent, inflation as measured by UND1X, which excludes interest expenditure, taxes and subsidies, averaged 1.5 per cent. As measured by UNDINHX, which also excludes goods that are mainly imported, inflation amounted instead to 2.1 per cent. However, the latter indicator disregards a large proportion of the factors that contribute to a weaker price trend for goods in the longer run.

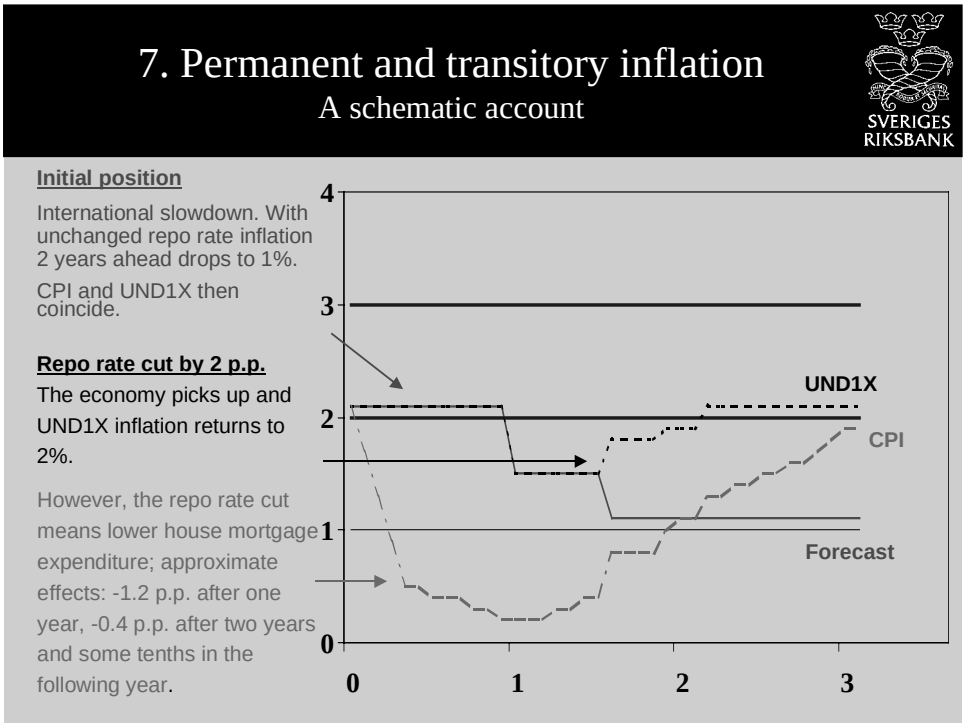


This review shows that in all three years (1996–98) inflation has been below the target expressed in terms of the CPI. However, excluding more transitory price effects that monetary policy neither can nor should try to counter in full, inflation has been inside the stipulated tolerance interval. I shall be returning to the reasons why price effects of this type should be disregarded in an appraisal of the Riksbank's monetary policy.

Permanent and transitory inflation – a schematic account[1]

Let us now use some simplified examples to analyse how different transitory effects on inflation may arise and what they may imply for monetary policy. Note that we are now studying the direct effects on inflation and disregarding, at least in the second and third examples, the indirect influences that act in the longer run.

[1] To illustrate the effects of the various shocks on the picture of inflation as measured with the various indexes, rules of thumb have been used in each example. In practice, a monetary policy situation may also include aspects that prompt the Riksbank to take other effects of its policy measures into account.



Example 1: an economic slowdown

Assume that international economic activity suddenly falters. This will affect the economic situation in Sweden. In this example, given that the repo rate is left unchanged, it is assumed to lead to the inflation rate two years ahead being 1 per cent instead of 2 per cent.

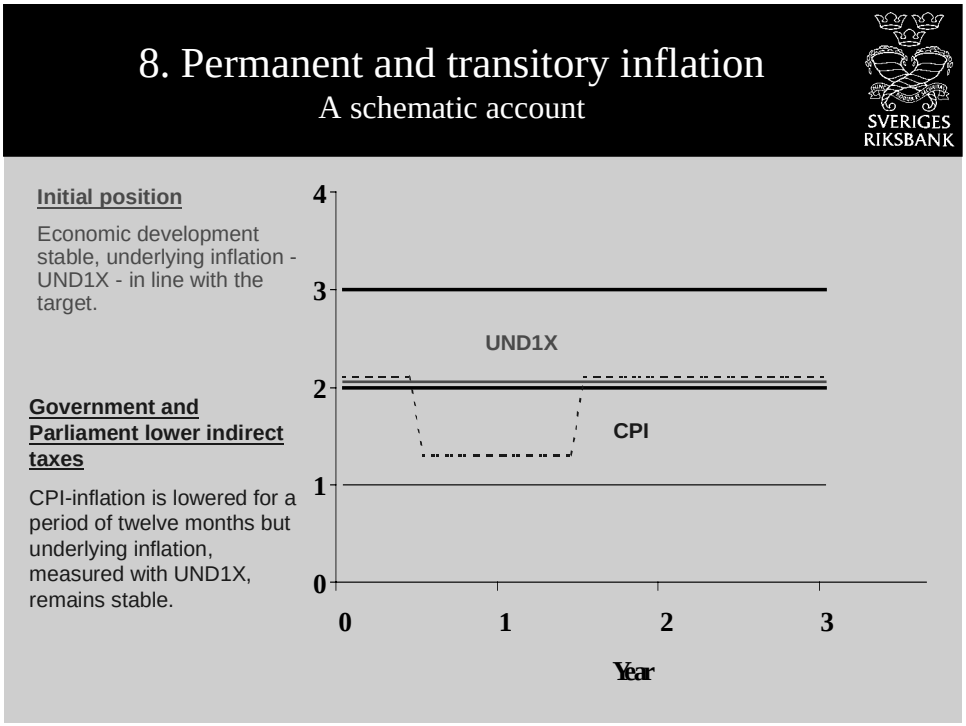
In this example we assume that the repo rate is reduced by 2 percentage points (in practice the Riksbank might prefer to proceed in steps because of uncertainties in the forecast but here a large cut is made immediately). The interest rate reduction counters the economic slowdown and UND1X inflation returns to the target two years ahead.

A repo rate cut, however, lowers house mortgage interest expenditure and this has an immediate and opposite effect on the CPI. The effect is larger and shows up earlier than the impact on inflation from the economic slowdown. In the short run, the effect via interest expenditure accordingly smothers the effect from economic activity and there is therefore a sharp initial fall in CPI inflation. In this example, the falling interest rates are assumed to lower the rate of CPI inflation by 1.2 percentage points in the first year and 0.4 percentage points in the second.[2] It is only after that, in up to three years time, that both CPI and UND1X inflation are back on target.

The example shows that in retrospect, the Riksbank will turn out to be below the target for CPI inflation. This is a consequence of the Riksbank's ambition to counter the shock from the international economic slowdown and thereby prevent inflation from falling further ahead. In

[2] The effects are dependent on, for example, how the long-term interest rate is assumed to move when the repo rate is adjusted. In example 1 the estimates are based on the short- and long-term interest rates moving to the same extent, which has largely been the case in recent years.

such a situation it is therefore reasonable to base policy on an inflation forecast that excludes the direct effects on interest expenditure.

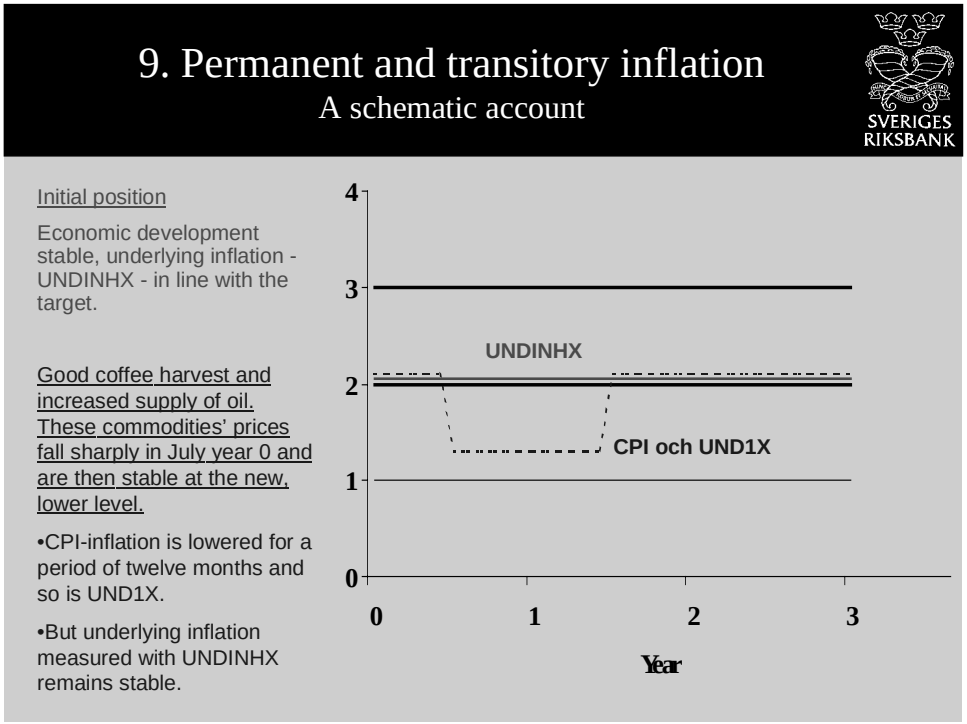


Example 2: altered indirect taxes

In this example economic activity is stable and inflation in line with the target. Suddenly a cut in indirect taxes, for instance the tobacco tax or the property tax on private houses, is announced and approved. The cut is assumed to have a downward effect on CPI inflation of 0.7 percentage points in the current year. This, however, constitutes a one-off shift in the price level, not an effect that alters inflation's trend. All else equal, 12 months later the rate of inflation will shift back up to the earlier level. Note, however, that inflation measured with UND1X is not affected; the rate remains stable around 2 per cent throughout the period.

Neither are any monetary policy measures taken in this example, as long as inflation expectations do not change. The reason is that by the time a repo rate cut would elicit effects, the tax changes would no longer be affecting the inflation rate. This is evident from the absence of any effect on underlying inflation. Initially, moreover, the interest expenditure item in the CPI would move in the 'wrong' direction and lower CPI inflation even more.

If medium-term inflation expectations were to be influenced, on the other hand, monetary policy action might be called for. An adjustment of expectations in the light of the tax change has consequences for underlying inflation, so that inflation may be below the target somewhat further ahead.



Example 3: falling commodity prices

From the earlier examples it might be supposed that UND1X is an index of underlying inflation that would be preferable to the CPI as a basis for the formulation of monetary policy, so that policy ought to be appraised strictly in relation to this indicator. However, even UND1X may be affected by transitory shocks.

Let us assume that the price of oil suddenly falls and then remains stable at the lower level. Underlying inflation measured with UND1X will then fall as much as the CPI. UNDINHX, on the other hand, remains stable around the 2 per cent target. After 12 months, however, the first two measures of inflation return to 2 per cent. This follows from the assumption of a one-off shift in the price of oil.

In this example, too, no monetary policy measures are taken as long as inflation expectations are not adjusted. The reason is the same as in the previous example.

Could the CPI inflation target have been fulfilled?

Would it have been possible, then, for monetary policy to keep the inflation rate at 2 per cent during these three years? The answer is both yes and no.

Briefly, the problem with adhering to the 2 per cent inflation target, measured with the CPI, from 1996 to 1998 is as follows:

In the short run, the downward and direct impact on CPI inflation from lower interest rates – the interest expenditure effect – is appreciably larger than the upward tendency associated with stronger economic activity: the macroeconomic effect.

A situation in which forecast inflation one to two years ahead points to the rate being below the target poses evident difficulties for monetary policy. In order to bring inflation back into line with the target further ahead, the Riksbank responds by reducing the repo rate, which has the effect of lowering inflation still more in the shorter run. The interest expenditure effect disappears after a couple of years and the macroeconomic effect gains the upper hand. The opposite applies if the repo rate is raised.

This accordingly indicates that an appraisal of monetary policy must be based on a thorough analysis of the factors behind the path of inflation, for example by comparing CPI inflation with other inflation indicators that exclude transitory price effects.

There was, in fact, a theoretical possibility of preventing CPI inflation from being so low in 1996, 1997 and 1998. The Riksbank never even considered it, for obvious reasons. Still, I can illustrate how the inflation target could have been fulfilled mechanically by avoiding the direct interest expenditure effect.

If the Riksbank had left the repo rate at 8.91 per cent – its level before the cuts were initiated early in 1996 – then the direct interest expenditure effect could have been avoided.

Economic activity would have gradually weakened, however, and this would have pushed down the CPI excluding the interest expenditure effect. But that would have taken time and to begin with the macroeconomic effect would have been rather small.

Sooner or later, however, the macroeconomic effect would have begun to surpass the interest effect on the CPI. In theory, that could have been prevented by raising the interest rate and thereby increasing the interest expenditure effect.

Such a strategy could have been implemented for a time but in the end the economy would have become so sluggish that the macroeconomic effect would still have gained the upper hand. The situation would probably have caused the exchange rate to collapse. The marked depreciation would have led to rising import prices and perhaps CPI inflation would then have moved back up to the targeted rate.

That is what could have happened, though I want to stress that the scenario is theoretical and hypothetical. The Riksbank would have fulfilled the CPI target but at the cost of marked instability in interest rates and the exchange rate as well as in the real economy. I find it hard to believe that such a strategy would have been supported for any length of time by either the political system or people in general.

In the event of a deviation from the inflation target, the Riksbank has to decide how soon monetary policy should bring inflation back to the targeted rate. If this is done too quickly, it will exact a cost in the form of instability in the real economy and in financial markets. If it takes too long, on the other hand, inflation will fluctuate markedly, with the risk of a rising trend or even genuine deflation.

Against this background, early this year the Executive Board elaborated on the inflation target and stated that, under certain specific circumstances, the Riksbank has reason to be more flexible in its interpretation.[3] When I presented this to the Standing Committee in more detail

[3] See Riksbank memorandum: 'The Riksbank's inflation target – clarification and appraisal', 4 February 1999.

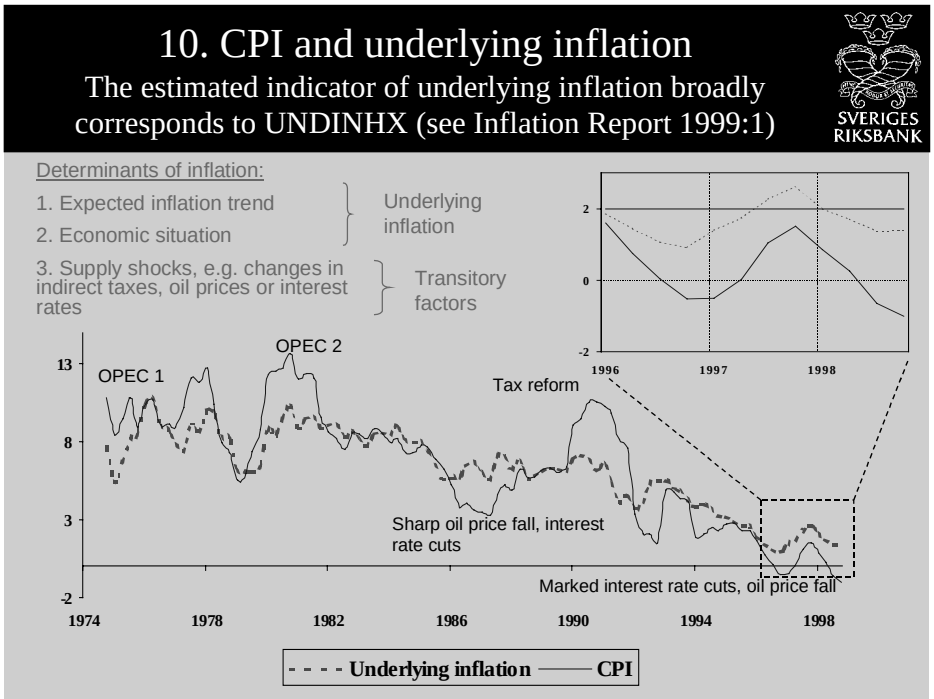
last March, I noted that it amounted essentially to a codification of monetary policy practice in recent years. That is also what I have described today.

There is another matter I want to take up concerning monetary policy and its result. It has to do with the outturn for 1998, when the annual change in the CPI was 0.4 per cent, while UND1X rose only 1 per cent and in some months was also outside the lower band limit. Could not an alternative interest rate policy have succeeded in preventing such a low outcome for underlying inflation?

Monetary policy could obviously have been given a more expansionary turn than was the case at the end of 1996 and during 1997, in which case UND1X inflation might have been higher and more in line with the 2 per cent target, quite apart from the interest expenditure effect on the CPI.

In this context one can, of course, discuss the Riksbank's basic forecasts of inflation excluding the transitory effects from interest expenditure and taxes. The Riksbank made a forecasting error in failing to foresee the economic slowdown inherent in the Asian crisis and the ensuing fall in commodity prices. Unfortunately, you might say, we shared this error with a clear majority of observers. With the long time lag that applies to monetary policy, measures should really have been taken before the end of 1996 or early 1997, which was before the crisis had even arisen. If the commodity price fall does not leave any traces in inflation expectations, it should not affect policy either.

CPI and underlying inflation in a longer perspective[4]



[4] For a more thorough discussion, see *Inflation Report 1999:1*, box on pp 35–37, Transitory factors and other supply shocks: a model approach.

There have been periods in the last three decades when CPI inflation has deviated from the indexes of underlying inflation. This happened, for example, in connection with the oil crises in the 1970s, the fall in oil prices and interest rates in the mid-1980s, the tax reform in the late 1980s and the downward shifts in interest rates in the 1990s.

There is nothing new about this phenomenon, which can thus recur. It has to do with inflation being determined mainly by factors of three types:

- long-term inflation expectations
- the economic situation
- transitory factors and supply shocks such as changes in indirect taxes and subsidies, interest expenditure and commodity prices

For monetary policy it seems reasonable to assert that factors of the first two types are most relevant because it is mainly through them that monetary policy is capable of influencing inflation. Factors such as indirect taxes have effects on consumer prices that are transitory; they normally disappear after a time unless long-term inflation expectations have been affected.

Conclusion

The CPI is the target variable for monetary policy. Measured with the CPI, inflation is to be 2 per cent in a longer, annual perspective. There are grounds, however, for sometimes departing from this target. Short-run deviations from the target should not be attributed automatically to a faulty formulation of monetary policy. This presupposes, however, that clearly identifiable, transitory price movements are involved that monetary policy neither can nor should aim to counter. It is therefore important to look at the factors behind the CPI figures when appraising monetary policy.

The reason for letting deviations occur is that otherwise the economy would be destabilised, leading sooner or later to unnecessary economic costs, that is to say, exaggerated fluctuations in both the real economy and the financial markets.