# ARTICLE - Alternative scenarios in the Monetary Policy Report

One lesson in the Account of Monetary Policy 2022 was that the Riksbank could use scenarios to a greater extent in its monetary policy analysis and communication. In 2023, therefore, the Riksbank regularly published scenarios in the Monetary Policy Reports from April onwards.

The purpose of the scenarios was to illustrate that developments were uncertain, to point to uncertainty factors that the Riksbank had a special focus on and to try to indicate how the monetary policy plan might need to be changed if the uncertainty factors materialise. This article describes the scenarios used by the Riksbank and how they were integrated into monetary policy.

The scenarios were important for monetary policy communication for several reasons. A key message was that if inflation became unexpectedly high, it would be regarded as a bigger problem than if it became unexpectedly low. This meant that monetary policy could quickly be tightened further if inflation was higher than expected, while a slightly more cautious stance would apply in the event of it being lower than expected. The different scenarios at the same time illustrated that inflation could be unexpectedly high or low for a variety of reasons, making it difficult to predict exactly how monetary policy would react.

## More symmetric risk outlook around inflation in 2023

The Riksbank also published scenarios on a couple of occasions in 2022, although they were not part of the ongoing analysis and communication in the same way as in 2023. During 2022, inflation had been consistently higher than expected, which meant that the scenarios then focused on unexpectedly high inflation. In spring 2023, the Riksbank noted that the risk outlook regarding how inflation would develop had recently become more symmetrical, i.e. the probability of unexpectedly low and unexpectedly high inflation had become more similar. Therefore, the Monetary Policy Reports from April onwards showed two scenarios: one with unexpectedly high inflation and one with unexpectedly low inflation.[48] By contrast, the factors driving inflation in the scenarios varied across the Monetary Policy Reports.

[48] The scenarios were based on simulations in the Riksbank's macroeconomic model, MAJA.

Some of the uncertainty factors that the Riksbank identified in 2023 concerning the development of inflation in Sweden were

- inflation expectations among households and firms
- wage formation
- the krona exchange rate and its impact on inflation
- global supply disruptions
- companies' price-setting behaviour
- cyclical risks that indirectly affect inflation

## An overview of the April–November scenarios

**In the April Monetary Policy Report**, the Riksbank noted that actual inflation had begun to fall back and that the new Industrial Agreement had reduced the risk of a wage-price spiral quite substantially. The more balanced risk outlook around inflation warranted discussing the possibility of both unexpectedly high and unexpectedly low inflation.

In the unexpectedly high inflation scenario, the contributing factors were assumed to be the development of inflation expectations and companies' pricing behaviour. While long-term inflation expectations had been anchored around the target during the period of high inflation, short-term expectations remained at high levels. At the same time, surveys, such as the Riksbank's own Business Survey, showed that many companies were planning to raise their prices more than usual. The scenario assumes that the real economy would develop in line with the forecast.

If monetary policy were not to react to the unexpectedly high inflation, it was assumed that confidence in the inflation target would be weakened, thus adversely affecting price and wage formation. Inflation would then persistently overshoot the target in the coming years. If, on the other hand, monetary policy were to be tightened more directly than in the main scenario, there would be a good chance of stabilising inflation around the target. Economic agents would then continue to have confidence that the Riksbank would bring inflation down to the target within a reasonable period of time, and companies' price increases would thus slow down. However, the higher policy rate would also dampen real economic growth. But compared with monetary policy not reacting initially and instead needing to raise the policy rate at a later stage, the real economic costs were assessed as small.

There were increasing indications in April that the large price increases were over. Energy and commodity prices had fallen significantly. Moreover, demand in the Swedish economy had clearly slowed down. A significant part of the previous large cost increases had been passed on to consumers. There was at the same time a possibility that rapidly falling costs going forward could correspondingly have a more dampening effect than normal on consumer prices, making inflation lower than expected. In the alternative scenario with lower inflation, the real economy was also assumed to develop more weakly than forecast, as weaker demand would make it more difficult for firms to raise their prices. The Riksbank had previously communicated that lower-than-expected inflation would be much less of a problem than continued higher-than-expected inflation. It would probably therefore be necessary for inflation to be lower than expected over a slightly longer period of time before monetary policy changes direction.

**In the June Monetary Policy Report**, the higher-than-expected inflation scenario was based on an unexpectedly weak krona, combined with a larger exchange rate pass-through. The scenario with lower inflation than expected was similar to that presented in April.

In the scenario with higher inflation than expected, it was assumed that the weaker krona would continue to weaken in combination with a greater exchange rate impact on import prices and inflation. As in April, the Riksbank assessed that there were strong reasons for monetary policy to react with a higher policy rate if inflation proved to be higher than expected. An important point highlighted by the Riksbank was that the tighter monetary policy that stabilises inflation around the target did not mean that the krona exchange rate returned to the same level as in the forecast. It reflected the fact that monetary policy is aimed at the inflation target and not at attaining a specific level for the krona exchange rate. The higher policy rate would also dampen the real economy. But as in April, the real economic costs were judged to be small if one reacted immediately, compared with waiting and having to raise the policy rate at a later stage.

The scenario of lower inflation was significantly similar to the one in April and related to firms' pricing behaviour: Rapidly falling costs could have a larger than usual dampening effect on consumer prices. The alternative scenario therefore also assumed that the real economy would be weaker than in the forecast. As before, it was assessed that it would probably be necessary for inflation to be lower than expected over a slightly longer period of time before the policy rate was cut.

**In the September Monetary Policy Report**, the scenarios were more clearly linked to risks to the real economy than before. The scenario of unexpectedly high inflation was assumed to be the result of renewed supply shocks in the global economy. It was assumed in this scenario that the real economic development will be weaker than forecast, at the same time as inflation will be higher, that is to say the normal pattern in supply shocks. The scenario of unexpectedly low inflation was instead linked to weaker demand in the economy.

Although in theory, supply shocks represent a trade-off between dealing with a weaker real economy and higher inflation, it was assumed that monetary policy needed to react immediately if inflation became unexpectedly high, thereby reducing the risk that confidence in the inflation target would be weakened. A concrete alternative was shown where the Riksbank initially did not react with tighter monetary policy but instead was eventually forced to do so. Even if the real economy were to develop more strongly in the short term, it would be weaker in the longer term in this alternative. This is connected to the large interest rate increases that would have been needed to restore confidence in the inflation target once inflation expectations had begun to drift upwards.

The scenario with lower than expected inflation was assumed to be related to weaker demand than in the Riksbank's forecast. This could have been caused by both global and domestic factors. When demand falls, the possibility for companies to pass on their cost increases to consumer prices declines. Inflation would therefore become lower. As before, it was assumed that it would take some time for the policy rate to be cut, even though inflation was unexpectedly low.

**In the November Monetary Policy Report**, the scenario of unexpectedly high inflation was again based on firms' pricing behaviour. It was assumed that companies increased their margins to maintain their profitability. As a result, inflation was unexpectedly high. The second scenario was again linked to risks of weaker demand.

In the unexpectedly high inflation scenario, it was assumed that firms did not adjust prices in line with costs but instead increased their margins. By raising the policy rate at an early stage, the Riksbank was trying to both soften demand so that companies could not raise their prices as planned, and avoid the higher inflation giving rise to higher inflation expectations and a rise in wage growth in the economy. As before, it was emphasised that the real economic costs of tightening monetary policy in the short term were less than the benefits in the longer term.

As in September, the reason why inflation was lower than in the main scenario was assumed to be unexpectedly weak demand. The fact that both demand and inflation were lower than expected meant, in theory, that monetary policy would need to be more expansionary. However in the prevailing situation, the trade-off was nevertheless complicated by inflation having been much higher than the target level for a period of time. It was therefore assumed in the scenario that the Riksbank would not start cutting interest rates immediately but would wait for some time.

## The scenarios have been useful for monetary policy analysis and communication

An important message from the various scenarios was that the Riksbank would react with monetary policy in a different way if inflation was unexpectedly high than if it was unexpectedly low. This is due to the difficult period of high above-target inflation. Another important message has been the importance of reacting in time if inflation were to become unexpectedly high. The costs to the economy linked to waiting and having to raise interest rates later can be very high.

The Riksbank's assessment is that the scenarios have been very important in describing to the general public that economic developments are uncertain and that monetary policy may need to react if the outlook turns out to deviate from previous assessments. This allows economic agents to be better prepared for changes in monetary policy. At the same time, the Riksbank has been careful to point out that it is difficult to know exactly how it will act in the future if inflation deviates from the forecast. The different scenarios have clearly illustrated that inflation can be higher or lower than expected for different reasons and with different consequences for the real economy.