

‘Threat of deflation’ scenario

Monetary policy: Application

Introduction

In the Mopos simulation, you adopt the role of a member of a central bank’ board. A central bank is no ordinary bank; it is charged with the fulfilment of a specific task, namely to conduct a monetary policy that serves the overall interests of the country. You will learn what this means in this briefing.

This briefing serves as a guide and will take you through all phases of the simulation. It describes the task and preparatory steps, provides an overview of the initial situation, and, after the simulation, helps you to analyse and reflect on your decisions in the debriefing.

Your task

Conduct the monetary policy of a fictional country for the next five years (20 quarters). Ensure that prices remain stable (inflation between 0% and 2%) without the overall economy overheating or cooling significantly (output gap between -1% and 1%).

For particularly delicate or important interest rate decisions, note down the reasons: Why did you, on the board of the central bank, adjust the key interest rate, and why by this amount? You don’t need to note anything else, the simulation records all other data in the background, including the impact of your decisions on inflation and economic activity.

Initial situation

After a recession, the economy is in a cyclical upswing phase and in danger of overheating (the ‘output gap’ indicator reaches 1.13% in the current quarter). By contrast, inflation is at a moderate level (just over 1%). You recognise the lurking danger: If the economy overheats, inflationary pressure will arise, which is why you’re going to want to raise interest rates. But beware: This scenario has some surprises in store! Your main concern might soon be deflation and not inflation.

Please note: In Mopos, a threat of deflation must be combated quickly and decisively so as to prevent the economy from falling into a deflationary spiral. Conversely, monetary policy in Mopos should also not be expansionary for too long, or you will sooner or later be confronted with an inflation problem.

Debriefing

At the end of each scenario, Mopos provides a debriefing of your term in office, with **time series charts** for the nominal interest rate, inflation and output gap, as well as the additional information listed below.

Key figures on fulfilment of mandate

The goal – ‘ensure stable prices without the overall economy overheating or cooling significantly’ – can be expressed in terms of four key figures:

Average inflation	The average rate of inflation achieved across all quarters
Average output gap	The average output gap measured across all quarters.
Standard deviation of inflation rate	This measures whether the inflation target has been steady (low standard deviation) or fluctuating strongly (high standard deviation). A low value means a better result.
Standard deviation of output gap	As above, but for the output gap target.

Table 1: Key figures on fulfilment of mandate

Benchmark values based on Taylor rule

Table 2 provides benchmark values (i.e. reference values) for assessing your monetary policy performance in the ‘Threat of deflation’ scenario. These values were determined via ‘automatic pilot’, which steered monetary policy according to the Taylor rule. This rule defines how a central bank should respond to changes in inflation and economic activity. The text box below explains how it works.

Average inflation	0.21%
Average output gap	1.06%
Standard deviation of inflation rate	0.77%
Standard deviation of output gap	0.35%

Table 2: Benchmark values for ‘Threat of deflation’ scenario after 20 quarters based on Taylor rule

What is the Taylor rule?

The Taylor rule is a simple but widely used rule for the systematic steering of monetary policy. It describes how central banks should adjust key interest rates if inflation or economic activity deviate from the target path.

In Mopos, the rule is implemented as follows: If inflation exceeds the long-term target of 2%, the central bank should raise the key interest rate by 1.5 percentage points for each percentage point of inflation. If actual output is above long-term potential, there is a danger that the economy will overheat and inflationary pressure will emerge. In this case, the rule recommends raising the key interest rate by 0.5 percentage points for each percentage point by which output exceeds potential.

Use of the Taylor rule often leads to a volatile (i.e. fluctuating) interest rate path. It is therefore common practice to smooth the interest rate somewhat. Mopos takes this into account with a smoothing coefficient of 0.2. This means that only 80% of the interest rate increase prescribed by the Taylor rule is implemented in each period.


Emoji feedback

The emoji feedback provides a visual evaluation based on the mandate criteria and benchmark values (cf. section above). Since the monetary policy mandate cannot be fully met in all scenarios, the emoji feedback is based on benchmark values in such cases. This enables an objective and transparent evaluation of your term in office in all circumstances.

 Very good

 Good

 Satisfactory

 Unsatisfactory

Analysis and reflection

Report on your term in office

At the end of your term on the board of the central bank, you must present a report on your term in office to ‘parliament’ (your class). You can refer back to the ‘Review of your term in office’ screen (‘debriefing’ for short), which can either be downloaded or shared by email, as well as your notes and the following key questions:

1. **Decision-making process:** How did you as a team determine the key interest rate? Were there any differences of opinion, and if so, how were they resolved?
2. **Developments in inflation and economic activity:** How did inflation and economic activity develop during your term in office? Analyse this using the debriefing.
3. **Fulfilment of mandate:** How successful were you in fulfilling the monetary policy mandate – price stability and balanced economic development? What went well, what difficulties arose? Base your evaluation on the debriefing.
4. **Key decisions:** Which interest rate decisions were particularly challenging or significant during your term in office? In hindsight, would you decide differently? Why?
5. **Challenges:** What factors made it difficult for you to steer monetary policy in the best possible direction? To what extent did the economic and inflation forecasts help you deal with the uncertainties?
6. **Optional – Correlation with actual monetary policy:** What similarities and differences do you see between the simulation and the real challenges of monetary policy, for example at the Swiss National Bank?

Short presentation

Your presentation should take about 3–5 minutes. Use the five key questions listed above as reference. If you want to, you can include the optional sixth key question as well.

Start with a brief introduction describing your approach or strategy. The main part of your presentation should address the key questions, and the conclusion should summarise your findings.

Use the ‘Review of your term in office’ screen from the simulation as an aid.

Try to present in a clear and understandable way and to focus on the essential points.