Forecast

Alternative scenario: Core inflation could be higher than anticipated in the immediate years ahead

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The alternative scenario of the Bank of Finland's forecast for the Finnish economy examines the forecasting risks involved in its inflation forecasts. Inflation may prove to be higher than in the Bank's June 2023 baseline forecast if the rate of underlying, or core, inflation (measuring price changes in consumer goods and services) begins to rise, after a lag, as a result of both demand and wage increases being higher than anticipated. Stronger aggregate demand would also keep the labour market tighter than in the baseline forecast, and the unemployment rate would decrease to a greater extent. This would cause wages to rise further in the coming years, which would maintain upward pressure on prices.



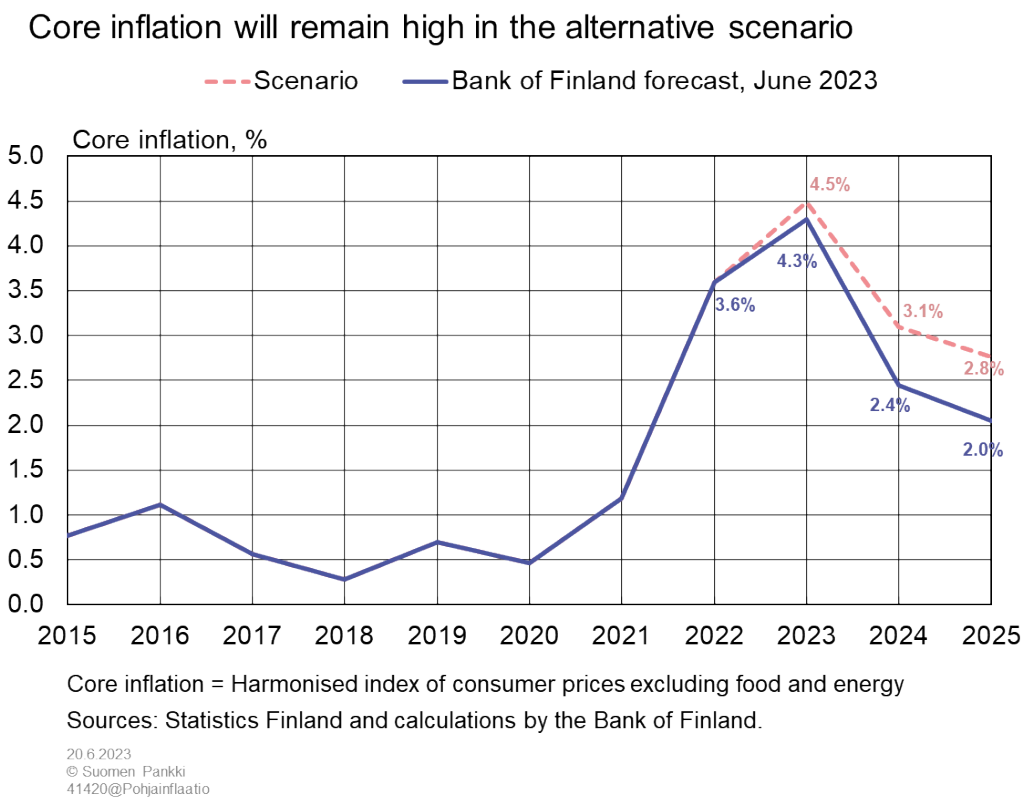
The alternative scenario is a situation in which domestic and international demand growth will remain stronger than in the baseline forecast for a period of 2 years. The scenario also assumes a higher level of imported inflation as a result of prices in Finland's competitor countries rising by more than forecast.

Domestic demand picks up under the scenario, because households are assumed to spend more than expected. This could happen if there is no change in household consumption habits and if households spend more of their accumulated savings than anticipated. The economic situation would then be better than expected, which would also increase the demand for labour, causing the labour market to tighten and the unemployment rate to decrease. As the labour market tightens, wage increases will also gather pace. Average hourly earnings will increase more than under the baseline scenario due to wage earners' pay demands increasing more than estimated.

In the alternative scenario, GDP growth will be just under 0.5 percentage points higher than in the baseline scenario in 2023 and 2024, and inflation will be 0.6–0.7 percentage points higher in 2024 and 2025 (Chart 1). The scenario indicates that the higher demand and significantly greater increase in wages would have an impact on inflation, though with a time lag, and would extend the period of high inflation. Although under the scenario, inflation will slow to around 2% in 2025, core inflation would still remain near 3%. The factors driving inflation would affect the level of core inflation, in particular, as this excludes energy and food prices. Energy prices are assumed to follow the same path as in the baseline forecast.

The alternative scenario was prepared using the Bank of Finland's Aino model.

Chart 1.



Scenario assumes demand will remain strong and the labour market tight

In the alternative scenario, cyclical conditions are assumed to remain stronger this year and in 2024 than in the Bank of Finland's June 2023 forecast. Domestic and international demand will grow more strongly than in the baseline forecast. Imported inflation is assumed to be higher than anticipated as a result of prices in Finland's competitor countries rising by more than forecast. Due to the temporarily stronger economy, the labour market will also remain tight, and wages will increase by more than anticipated.

The assumptions of the scenario are described in Table 1. Finland's external demand is assumed to grow by an additional 0.25 percentage points in each quarter of 2023 and 2024 compared with the baseline forecast. Thus, at the annual level, the growth rate is 1 percentage point higher. This assumption is based on there being higher economic growth in Finland's export markets than expected. For this reason, prices in Finland's competitor countries are also expected to rise by 1 percentage point more than under the baseline forecast in 2023 and 2024. In 2024, competitors' prices will rise by 3%, which is nearly the same as the euro-era average (3.2%). In 2024, Finland's

export markets will grow by about 4%, which is slightly above the euro-era average (3.5%). In 2025, the growth in the export markets and in the export prices of competitors will return to the same path as in the baseline forecast.[1]

Households will not cut down on their consumption but will instead spend more of their accumulated savings than anticipated, due particularly to the demand for services and the improving level of confidence. Households will spend progressively more of their savings in 2023 and 2024, corresponding to an additional spending of 0.5% compared with the baseline forecast.[2] This corresponds to just under EUR 0.7 billion of the value of private consumption in 2022.

Aggregate demand remaining stronger than in the baseline forecast will also increase the demand for labour and keep the labour market tighter than in the baseline forecast, which will lead to a higher increase in wages than anticipated. In addition to the wage increase caused by the increase in demand, the alternative scenario assumes that average hourly earnings will grow this year and in 2024 by 1 additional percentage point annually compared with the baseline scenario.[3] This assumption will help gain a better understanding of the sensitivities concerning core inflation, because it illustrates the impact of an unexpected increase in wages on core inflation, in contrast with the impact of wage increases brought about through demand growth.[4]

In the alternative scenario we assume that energy prices will develop in line with the Bank of Finland's June 2023 forecast. Although energy prices are subject to significant uncertainty, this is excluded from the scenario. Jalasjoki, Mäki-Fränti and Sariola (2023) recently studied the impacts of the change in energy prices on economic growth and inflation in Finland (two articles published, both in Finnish).

All the risks in the Bank of Finland's June 2023 forecast are described elsewhere in this Bank of Finland Bulletin.

Table 1. Alternative scenario's assumptions

		2022	2023[f]	2024[f]	2025[f]
Export markets (annual growth, %)	Baseline forecast	6.0	1.0	3.1	3.1
	Alternative scenario	6.0	1.7	4.1	3.5
Competitors' export prices (annual growth, %)	Baseline forecast	19.0	-1.9	2.4	2.3
	Alternative scenario	19.0	-1.2	3.4	2.7
Crude oil (USD/barrel)	Baseline forecast	103.7	78.0	72.6	70.4
	Alternative scenario	103.7	78.0	72.6	70.4
Euribor, 3-month (%)	Baseline forecast	0.3	3.4	3.4	2.9
	Alternative scenario	0.3	3.4	3.4	2.9

The alternative scenario also assumes that households will spend more of their savings than in the baseline forecast, which corresponds to an additional rise in private consumption of 0.5 percentage points in 2023 and 2024. The alternative scenario assumes a wage shock that corresponds to an increase in average hourly earnings of 1 percentage point in 2023 and 2024 in relation to the baseline scenario.

Baseline forecast: Bank of Finland's June 2023 forecast trajectory.

f = forecast.

Sources: European Central Bank and Bank of Finland.

Table 2. Alternative scenario results

		2022	2023[f]	2024[f]	2025[f]
Gross domestic product,	Baseline	2.1	-0.4	0.9	1.5

Baseline forecast: Bank of Finland June 2023 forecast trajectory.

** = Harmonised index of consumer prices.*

*** = Harmonised index of consumer prices excluding energy and food.*

[f] = forecast.

Sources: Statistics Finland and Bank of Finland.

		2022	2023[f]	2024[f]	2025[f]
annual growth (%)	forecast				
	Alternative scenario	2.1	-0.1	1.4	1.5
Private consumption, annual growth (%)	Baseline forecast	2.0	-0.4	0.8	1.1
	Alternative scenario	2.0	-0.1	1.3	1.3
Inflation* (%)	Baseline forecast	7.2	4.5	1.3	1.6
	Alternative scenario	7.2	4.7	1.9	2.2
Core inflation** (%)	Baseline forecast	3.6	4.3	2.4	2.0
	Alternative scenario	3.6	4.5	3.1	2.8
Average hourly earnings, annual growth (%)	Baseline forecast	5.7	4.8	3.2	2.6
	Alternative scenario	5.7	5.5	4.4	3.1
Unemployment rate (%)	Baseline forecast	6.8	7.2	7.1	7.0
	Alternative scenario	6.8	7.1	6.8	6.6

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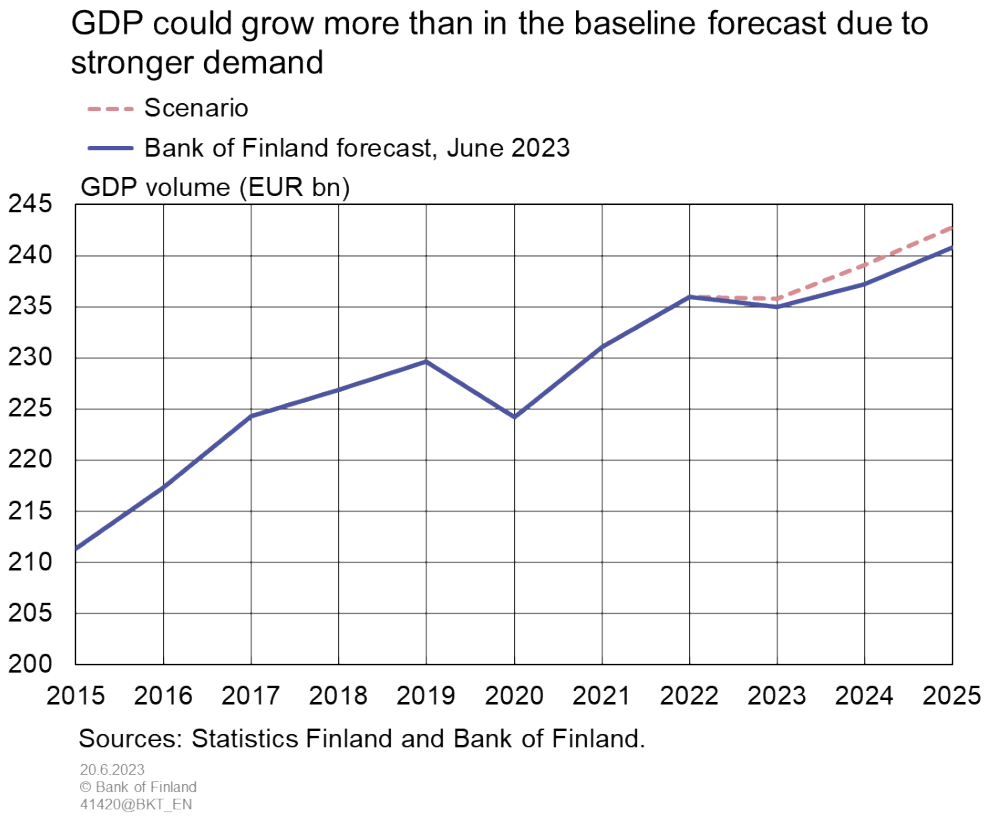
Core inflation driven by demand growth and rise in earnings

Owing to more rapid growth in domestic and international demand, economic growth will be

higher than in the baseline forecast (Chart 2 and Table 2). GDP growth will be slightly negative (-0.1%) in 2023 and will accelerate to 1.4% in 2024. Due to the growth in export markets and in competitors' export prices, Finland's exports will grow more rapidly than in the baseline forecast in 2023 and 2024.

Private consumption will also grow in the alternative scenario throughout the forecast period by more than in the baseline forecast, as a result of spending accumulated savings However, since the tightness of the labour market and the rise in prices are curbing GDP growth, and the impact of the additional demand shock will fade away, the level of GDP growth will be 1.5%, on a par with the baseline forecast. Aggregate demand and the resulting increase in labour demand will cause the unemployment rate to decrease to 6.6%, which is below the structural unemployment rate.

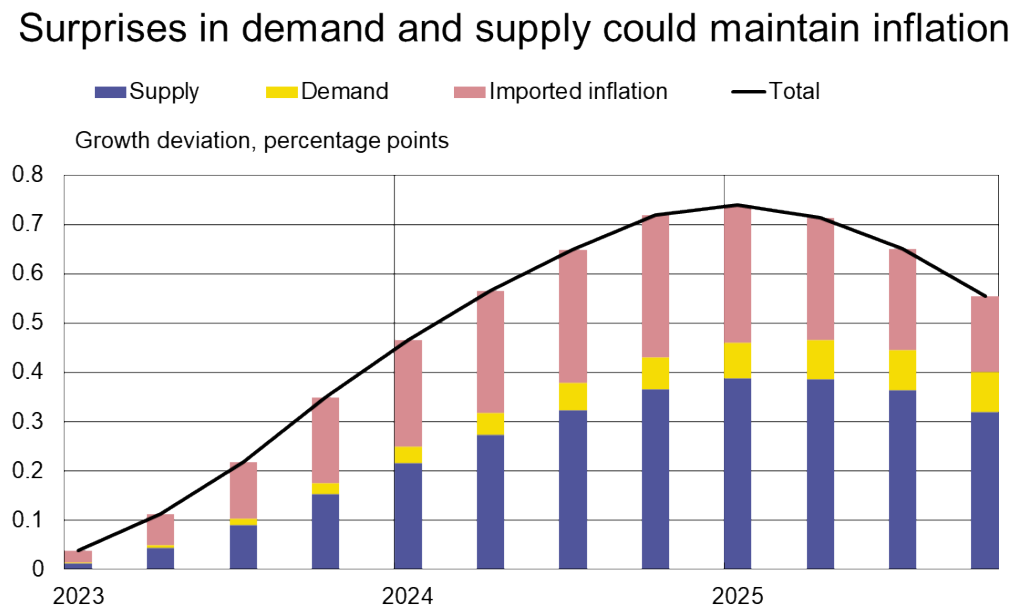
Chart 2.



Inflation will be higher than in the baseline scenario due to both supply and demand factors (Chart 3). The tightness of the labour market will cause average hourly earnings to grow more than in the baseline forecast, maintaining the high inflation level. Earnings growth will affect the prices of labour-intensive services, in particular. The higher level of demand growth than in the baseline forecast will fuel inflation after a time lag, but will have a significantly lesser impact than supply factors.[5] The higher than expected price increases in competitor countries will also raise the

prices of imported goods and accelerate inflation in Finland, as a significant proportion of goods purchased in Finland are imported.

Chart 3.



The chart describes which factors lead to a prolonging of inflation based on a calculation carried out with the Bank of Finland's Aino model. The result is presented as a growth deviation (percentage points) from the Bank of Finland's June 2023 forecast. In the chart, demand includes the impacts of the external demand shock and the consumer preference shock on inflation. Supply includes the impact of the wage shock, and imported inflation includes the impact of competitors' export price shock.

Source: Bank of Finland

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In this alternative scenario, consumer prices will rise more quickly than in the baseline forecast, especially due to factors influencing core inflation. Core inflation will be higher than under the baseline scenario in 2023, and will amount to 4.5% (Chart 1 and Table 2). The inflationary effects of shocks take time to build up, and in 2024 and 2025 inflation will be 0.6 and 0.7 percentage points faster, respectively, than under the baseline scenario. Core inflation will still be at 2.8% in 2025.

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If the economy in Finland and abroad is stronger than forecast, and if this is combined with tight employment markets, it could take longer for inflation to come down. In the scenario, the increase in nominal earnings will not lead to an increase in real hourly earnings over the medium term,

because inflation is rising and remaining persistent. However, a wage-price spiral may occur in which prices rise and ultimately GDP growth slows down, if companies and employees try to compensate for their losses in real income. If inflationary pressures were also to grow elsewhere in the euro area, interest rates could rise more than in the baseline scenario, thus slowing economic growth and inflation in Finland as well.

Notes

1. Quarterly growth in the export markets and in the export prices of competitors will be the same as in the baseline forecast in 2025. However, the growth rate in Table 1 for the whole of 2025 diverges from the baseline forecast due to the carry-over effect from 2024. ↑
2. In 2025, consumers will no longer use their savings at an increasing rate, but will instead use them at the 2024 level. ↑
3. The scenario was prepared using the Aino 2.0 model. The model simulation is based on a modelled economy in which 'everything affects everything'. Therefore, in this scenario, preference shocks in consumption that are more substantial than in the baseline scenario affect wages through an increase in aggregate demand. At the same time, consumption in this scenario is also affected by pay shocks that are more substantial than in the baseline scenario. Employees' wage setting shocks are scaled such that in 2023–2024, average hourly earnings would rise at an annualised quarterly growth rate that is around 1 percentage point faster than in the baseline scenario, after which they would continue along the quarterly growth path of the baseline scenario. ↑
4. Obstbaum et al. (2023) examined the impacts of supply and demand shocks on inflation with a general equilibrium model that takes account of labour market frictions and wage rigidity. Based on the results of the paper, the structure and details of the labour market, including the negotiating position of employees, have an impact on the transmission of wage pressures. The results of the paper suggest that the reduction in working hours per employee may have recently tightened the labour market, which in turn may contribute to wage pressures. See Obstbaum, M., Oinonen, S., Pönkä, H., Vanhala, J. and Vilmi, L. (2023), 'Transmission of recent shocks in a labour-DSGE model with wage rigidity', BoF Economics Review, 1/2023. (https://publications.bof.fi/handle/10024/52726). ↑
5. Demand growth affects prices at several stages in the model. It will increase the demand for labour, which will be transmitted to wages on a gradual basis, due to wage rigidities. Pay increases will also raise companies' marginal costs, and changes in marginal costs will finally feed through to prices, though this will happen slowly due to price rigidities. ↑

Keywords

Aino model, alternative scenario, GDP, general equilibrium model, inflation