FORECAST

Alternative scenario: Supply-side disruptions slow growth also in Finland

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Supply-side bottlenecks have weakened the momentum of global growth. Finnish manufacturing companies are also suffering from shipping disruptions and input shortages. Under a scenario prepared by the Bank of Finland, supply disruptions reduce GDP growth in Finland by around 0.5 percentage points in 2021.

Supply chain problems coupled with the rapid rise in demand for consumer goods have led to

global supply disruptions. Many of the reasons for supply-side bottlenecks are related to the COVID-19 pandemic, such as the concentration of consumption demand on goods during the crisis and disturbances caused by coronavirus outbreaks in factories and ports. In addition, rising raw material and energy prices have increased production costs.[1] Bottlenecks in supply weaken the momentum of global growth, and, if the pandemic continues, there is also a risk of prolonged supply disruptions.

Supply problems have affected the production of semiconductors, in particular. The shortage of electronic components had a particularly strong impact on the automobile industry, where the need for components is high. This is why supply disruptions have had a relatively strong impact on, for example, the German economy. The ECB estimates that bottlenecks in supply have weakened annual growth in German goods exports by almost 3 percentage points per month. In the euro area as a whole, bottlenecks are estimated to hold back goods export growth by just under 2 percentage points.

The OECD, in turn, estimates that supply disruptions in the automobile industry alone may have weakened GDP growth in Germany by around 1.5 percentage points in 2021, whereas in France the impact has been very small. Differences in countries' production structures have a significant impact on the gravity of the supply disruptions affecting economic growth. As a small open economy, Finland is vulnerable to a deterioration in the global economy – and especially a deterioration in the economy of its trading partners, such as Germany.

In this alternative scenario, we use the Aino 2.0 model to assess the impact of supply-side bottlenecks on developments in the Finnish economy. While supply disruptions are estimated to have an impact also on the Finnish economy, the production structure and the focus of exports on intermediate and capital goods, in particular, mitigate the negative effects of supply bottlenecks on the economy.

In Finland, too, shipping disruptions and input shortages limit output the most in the automobile industry, followed by the production of electrical equipment. These industries account for a very moderate share of Finland's gross value added, only 1.3%, and for 12.4% of Finland's goods exports.[2] Supply disruptions can therefore be expected to have a lesser impact on the Finnish economy than, for example, the German economy, for which the automobile industry is of clearly greater significance.

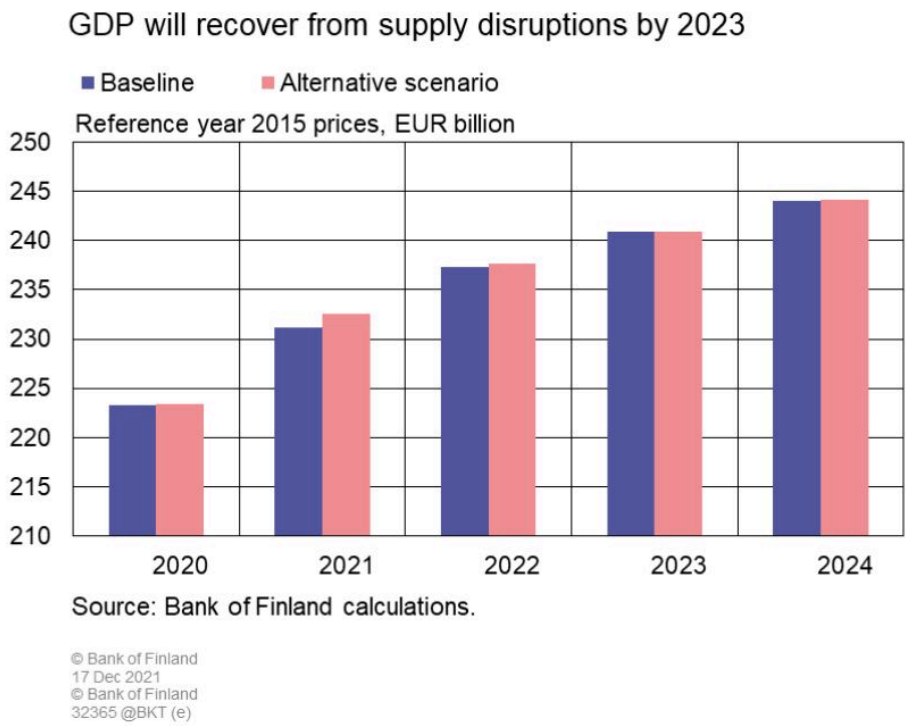
Finnish economy also affected by supply disruptions

The model utilises decreased exports and increasing inflation to describe the impact of supply-side bottlenecks on the economy. Disruptions in international shipping and reduced availability of

components disrupt export sector output and foreign goods trade. At the same time, increasing production costs in the open sector pass on to end product prices and push up consumer prices in Finland, too. The scenario assumes that supply disruptions slow annual growth in goods exports by 1.5 percentage points in 2021, which is in line with the decrease of exports estimated by the ECB[3] for the euro area. At the same time, supply bottlenecks are assumed to increase inflation by 0.4 percentage points in 2021.

These supply disruptions have a fairly limited impact on the economy and GDP in Finland. Without the impact of supply disruptions on exports, Finland's GDP growth would be around 0.5 percentage points higher in 2021 than in the Bank of Finland December 2021 forecast (Table 1). In euro terms, this is equivalent to approximately EUR 1.3 billion in lost output in 2021.

Chart 1.



By 2024, the economy is expected to have fully recovered from the supply disruptions, and at the end of the forecast period, GDP is unaffected by them (Chart 1). However, the economic losses during 2020–2024 amount to around EUR 1.8 billion.

Supply disruptions also cause a decrease in imports and cause delays, for example due to bottlenecks in shipping capacity and component shortages. However, growth in imports slows less than in exports, by 0.7 percentage points in 2021, due to the domestic value added of exports. The

slowed growth of imports and exports means a dampening of growth in domestic output.

The rising prices erode the purchasing power of consumers, thus slowing growth in private consumption. Growth in private consumption is also held back by issues relating to end product availability. This contributes to weakened economic growth. Without supply disruptions, the annual growth rate of private consumption would be 0.5 percentage points higher in 2021.

On the other hand, supply bottlenecks are only marginally reflected in domestic investment, as the good future outlook for businesses and strong growth in demand in the global economy sustains investment demand. The impact on investment remains limited also because the supply disruptions are assessed to be a temporary phenomenon.

As the temporary supply disruptions are rooted in international circumstances and demand growth is strong, the labour market is not expected to react much. This is consistent with actual developments on the labour market. Employment is growing well, and many sectors are suffering labour shortages, even though supply disruptions are causing frictions in output. Growth in export markets is also expected to remain unchanged from the forecast baseline.

It should be noted that the assumptions in this scenario are associated with a great deal of uncertainty. A resurgence of the COVID-19 pandemic would prolong and possibly exacerbate supply bottlenecks, for example by maintaining the imbalance between supply and the demand for goods and by closing down ports or factories, for example in Asia. Prolonged supply disruptions would also be reflected in Finland's foreign trade and consequently in output.

The price developments of raw materials, shipping costs and intermediate goods needed for production also affect the production costs of businesses, which may be reflected as a faster-than-anticipated slowdown in output growth. There is also uncertainty as to what extent the decrease in imports could be substituted by domestic output. Realistically it is safe to assume that it will not be easy to substitute high technology products through domestic production.

Impact of supply disruptions on the Finnish economy						
Supply and demand in 2019–2024*	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
% change on previous year, difference in percentage points						

** Demand components (reference year 2015) in EUR million and harmonised consumer price index (HICP, 2015 = 100).*
Sources: Statistics Finland and Bank of Finland.

Impact of supply disruptions on the Finnish economy							
GDP	Bank of Finland forecast	1.3	-2.9	3.5	2.6	1.5	1.3
	Alternative scenario	1.3	-2.8	4.1	2.2	1.4	1.3
	Difference	**0.0**	**0.1**	**0.5**	**-0.4**	**-0.2**	**0.0**
Imports	Bank of Finland forecast	2.3	-6.5	3.5	5.3	4.2	3.5
	Alternative scenario	2.3	-6.5	4.1	4.9	3.9	3.5
	Difference	**0.0**	**0.1**	**0.7**	**-0.4**	**-0.3**	**0.0**
Exports	Bank of Finland forecast	6.8	-6.8	4.0	5.5	4.5	3.6
	Alternative scenario	6.8	-6.5	5.6	4.4	4.0	3.6
	Difference	**0.0**	**0.2**	**1.6**	**-1.1**	**-0.5**	**0.0**
Private consumption	Bank of Finland forecast	0.7	-4.7	2.9	3.3	1.7	1.2
	Alternative scenario	0.7	-4.6	3.4	3.0	1.5	1.2
	Difference	**0.0**	**0.0**	**0.5**	**-0.3**	**-0.2**	**0.0**
Private investment	Bank of Finland forecast	-2.4	-3.4	2.8	4.6	2.6	1.7
	Alternative scenario	-2.4	-3.3	3.1	4.4	2.4	1.6

** Demand components (reference year 2015) in EUR million and harmonised consumer price index (HICP, 2015 = 100).*

Sources: Statistics Finland and Bank of Finland.

Impact of supply disruptions on the Finnish economy							
	Difference	**0.0**	**0.0**	**0.3**	**-0.2**	**-0.1**	**0.0**
HICP inflation	Bank of Finland forecast	1.1	0.4	2.1	2.0	1.6	1.8
	Alternative scenario	1.1	0.2	1.7	2.1	1.6	1.8
	Difference	**0.0**	**-0.2**	**-0.4**	**0.2**	**0.0**	**0.0**

** Demand components (reference year 2015) in EUR million and harmonised consumer price index (HICP, 2015 = 100).*
Sources: Statistics Finland and Bank of Finland.

Footnotes

1. See 'Supply bottlenecks are having wide-spread impacts on the economy' for a more detailed analysis of the causes of the supply bottlenecks. ↑
2. See 'Supply bottlenecks are having wide-spread impacts on the economy' for a broader analysis of the relationship between supply bottlenecks and the structure of Finnish manufacturing and industry-specific confidence indicators. ↑
3. The impact of supply bottlenecks on trade, ECB Economic Bulletin, Issue 6/2021. ↑

Key words

COVID-19, COVID-19 pandemic, economic growth, economic outlook, supply, supply disruption