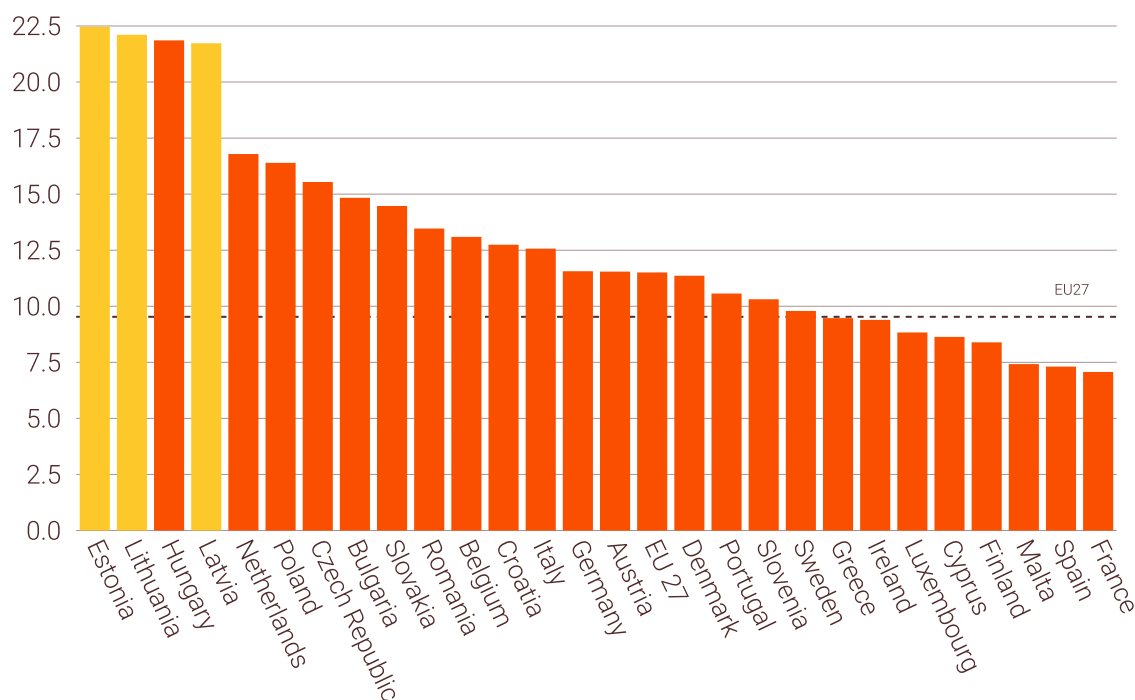


Inflation in the Baltics – unexpected, excessive, but temporary

Record-high inflation to test the resilience of individuals and government support effectiveness

Inflation rate

y/y %, HICP, Oct 2022



Sources: Swedbank Research & Macrobond

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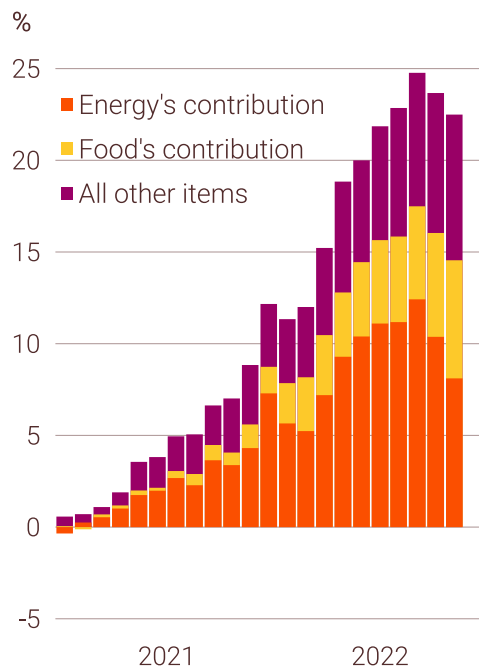
Inflation in the Baltics has been two times faster than the EU average. There are many supply- and demand-side factors at play. Pandemic-related supply-side bottlenecks were exacerbated by the war in Ukraine, which cut trade ties with Russia that were historically larger than elsewhere in Europe. Small, open economies tend to be more sensitive to volatile commodity prices. Small markets also lack competition in some market segments and domestic economies of scale. Demand-side factors are also increasingly important, as price pressures have strengthened and spread in the economy. The Baltics have experienced strong post-COVID recovery and rapid wage growth, lifting production costs for companies, but also increasing the purchasing power of households. The inflow of refugees has increased the demand for housing and everyday consumer goods.

Inflation has been lifted mainly by two product groups, energy and food, whose prices have increased more in the Baltics than in the EU; the share of these two groups in consumer baskets is also larger in the Baltics, so they have a larger impact on the overall price index. The Baltic energy mix is unfavourable in the current circumstances, where ties with Russia have been cut and CO2 quota prices have been elevated. Also, different energy subsidies and price methodologies across Europe make cross-country comparison difficult.

Energy prices are the main cause of higher inflation

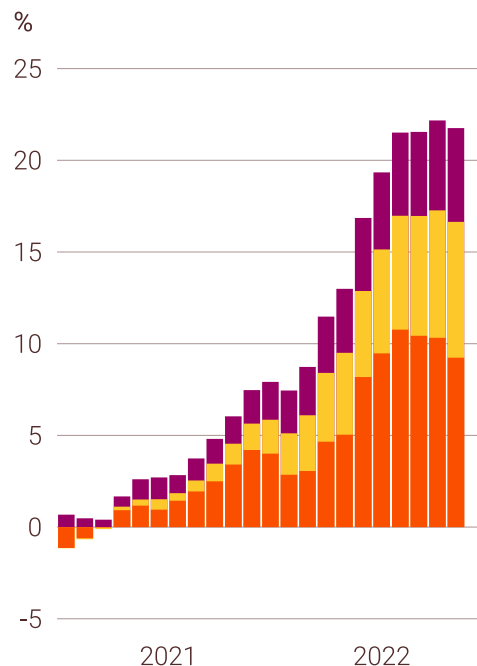
Energy contributes to 40-50% of the total change in consumer prices in the Baltics

Inflation in Estonia



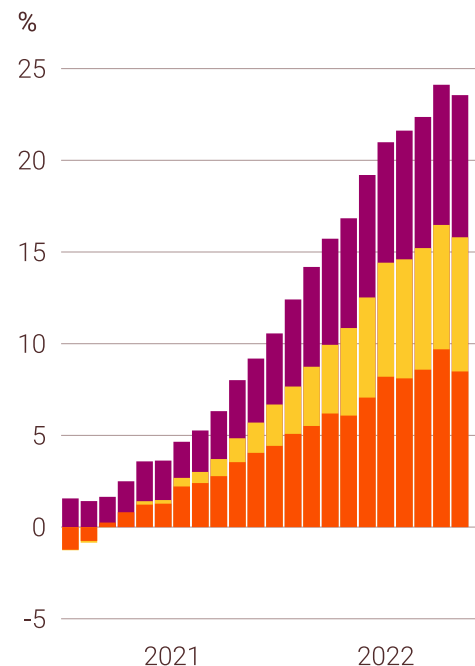
Sources: Swedbank Research & Macrobond

Inflation in Latvia



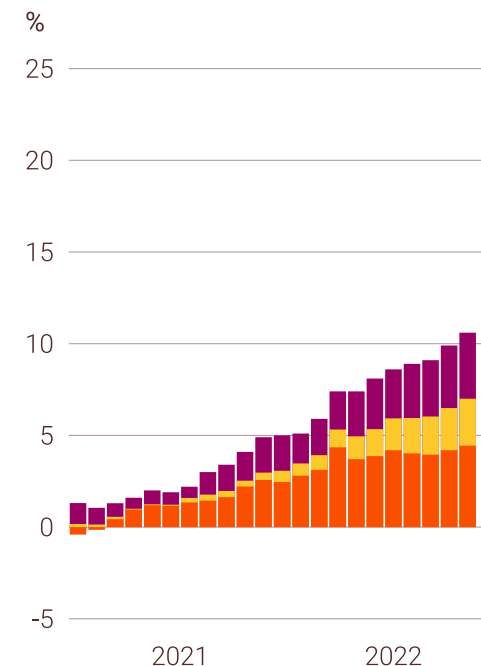
Sources: Swedbank Research & Macrobond

Inflation in Lithuania



Sources: Swedbank Research & Macrobond

Inflation in the euro area



Sources: Swedbank Research & Macrobond

Inflation in the Baltics is mostly driven by higher energy and food prices. Prices of food and energy have increased more than in other EU countries; the share of energy and food (amounting to 36% of the total consumer basket in the Baltics versus 26% in the euro area in 2022) is larger in the Baltics, lifting the total consumer price index more than elsewhere in Europe. Calculations show, however, that the weight-induced differences account for only a minor share in price growth.

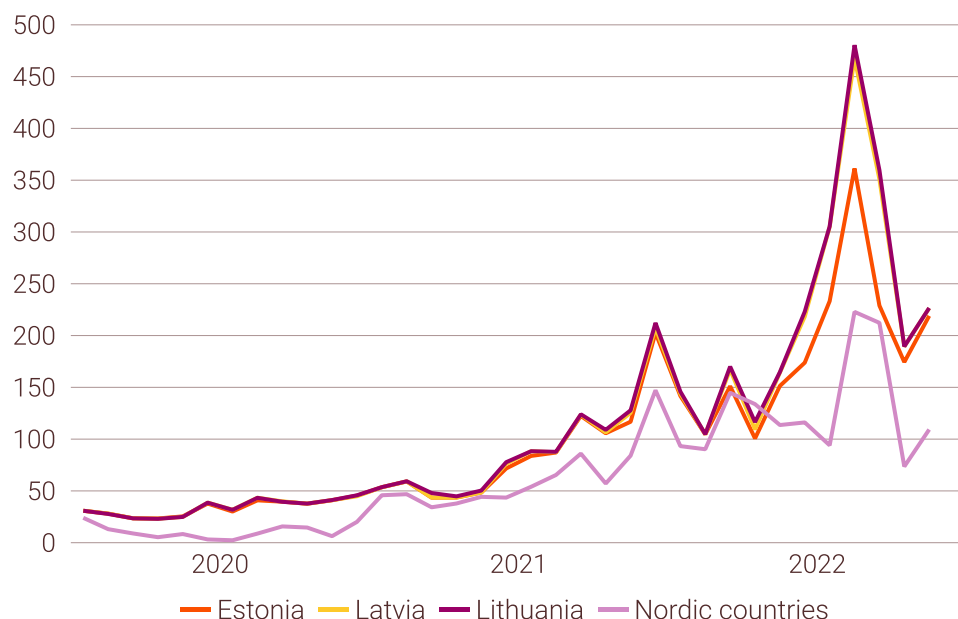
Even though governments stepped in to help households with energy costs, the pass-through of market prices to households was faster in the Baltics compared to other EU countries. The different design of household support and subsequent reflection of support measures in HICP make cross-country comparisons difficult. On the other hand, a faster pass-through of energy prices can lead to stronger demand destruction, which is important for the energy-dependent Baltic economies.

Energy dependence exacerbates the price shock

Lack of electricity market connectivity puts an additional strain on Baltic prices

Electricity market price

EUR/MWh, monthly average

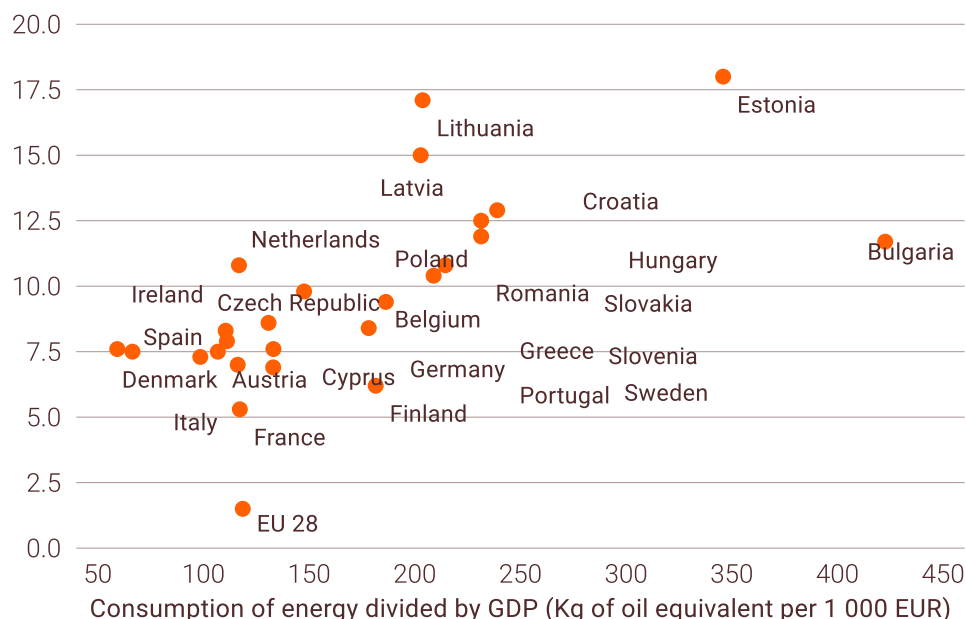


Sources: Swedbank Research & Macrobond

Energy prices have been elevated due to the post-pandemic burst of demand, on the one hand, and supply-side bottlenecks exacerbated by the war in Ukraine, on the other. The Baltics used to rely heavily on imports of Russian energy. The alternatives to Russia's energy have been scarce and/or expensive. The Baltics have relatively low share of solar, wind, or nuclear energy, which are relatively cheap energy sources. Replacing Russian pipeline gas with LNG or other energy sources has been expensive as well.

Disruptions in energy supply hit some countries harder

12m ma y/y CPI, %



Sources: Swedbank Research & Macrobond

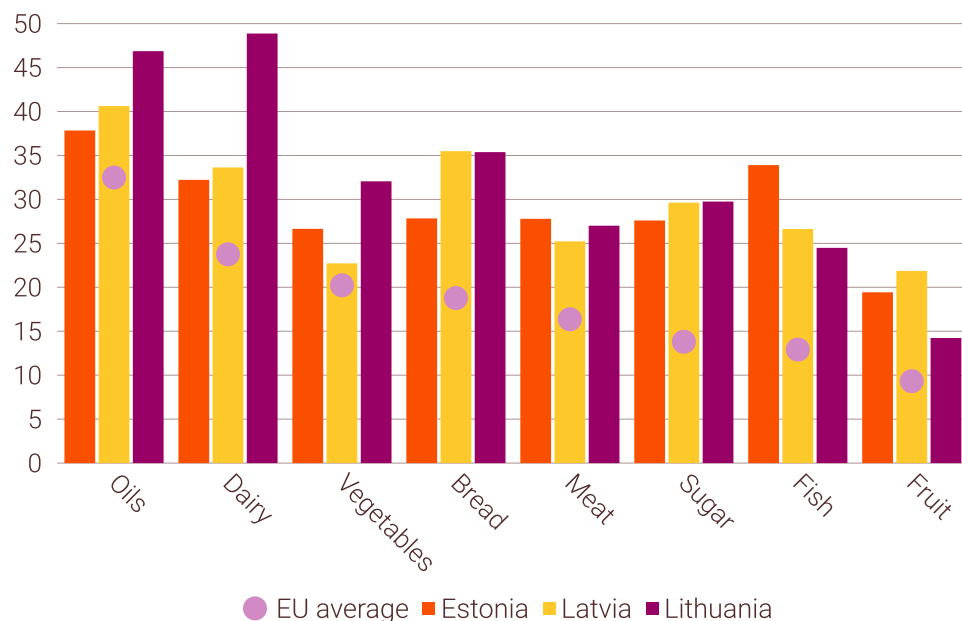
The electricity market in the region is not fully integrated – the connection capacity is insufficient for cheaper electricity imports from Scandinavia. Grid balancing is achieved by running costly gas and oil shale powerplants, resulting in a higher price. A large part of Baltic households has market-price-based contracts, in which price transmission to final consumers is very rapid. Differences in price index methodologies are partly to blame – in Estonia, e.g., the statistical office does not include many fixed-term electricity contracts, thereby overestimating inflation by a few percentage points.

Food inflation in the Baltics surpasses the majority of other EU member countries

Food contributes to 20-30% of the total change in consumer prices in the Baltics

Food inflation

y/y, %, HICP, Oct 2022

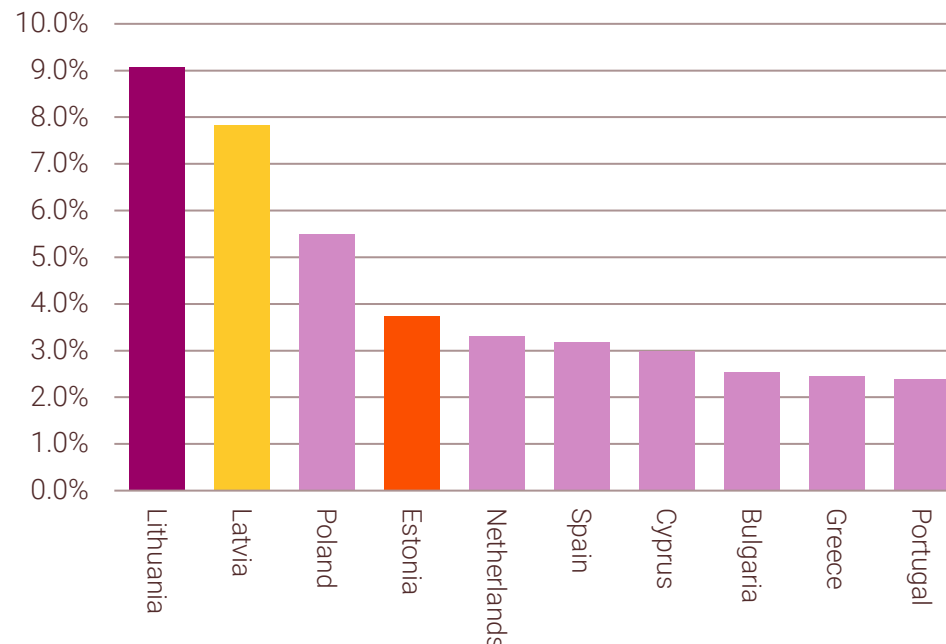


Sources: Swedbank Research & Macrobond

When it comes to food inflation, the Baltic states rank in the top five in the EU in 2022. The Baltic markets are relatively small, meaning less competition and smaller economies of scale. Small, open economies are also more exposed to fluctuations in global commodities markets, many of which peaked in the spring. Also, as energy and personnel costs have increased more than in other European countries, production cost pressures are stronger. However, it seems that cost pressures do not fully account for the increase in final prices, and profit margins could be expanding at least in some parts of the food supply chain.

Import share of agriculture, fisheries and foodstuffs

Top10 highest share of imports from RU, BY and UA in 2021



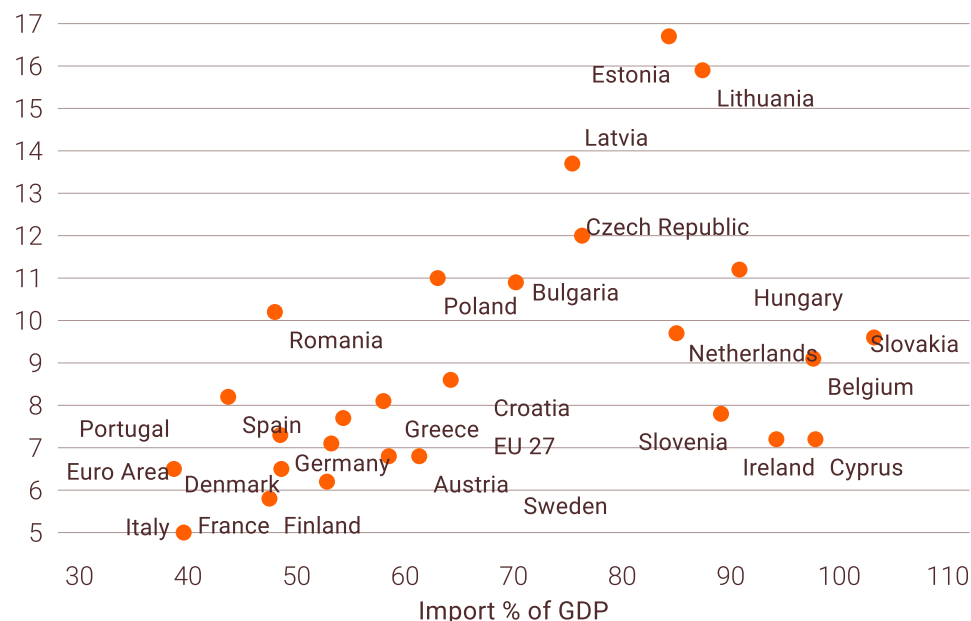
The Baltics were also more dependent on agriculture, food, and fertiliser imports from Russia, Belarus, and Ukraine, which were halted after the war in Ukraine broke out. The Baltics ranked in the top five in the EU for agricultural, food, and fisheries imports from these three countries and were especially dependant on fertiliser imports. The latter accounted for more than 50% of all fertiliser imports in Estonia, Latvia, and Lithuania.

Large part of inflation has been imported

Baltics import energy, food, and many other commodities

Trade openness is not a boon

12m ma y/y CPI, %

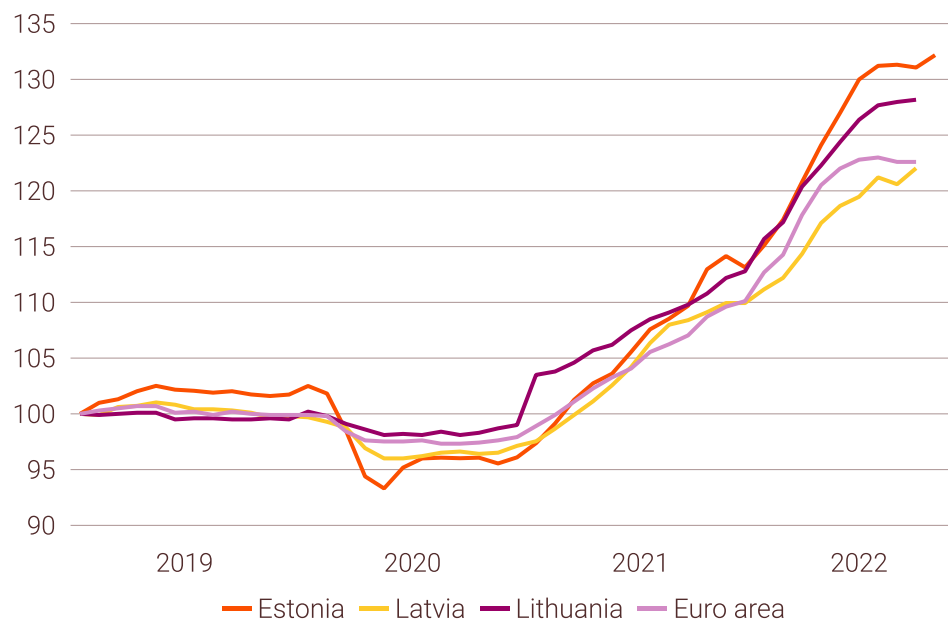


Sources: Swedbank Research & Macrobond

The pandemic, and later the war in Ukraine, created many supply-chain bottlenecks around the world. These increased the prices of various imported commodities, which were then transmitted to the prices of final goods and services sold locally or exported. Such a transfer of import prices is especially rapid in small, open economies like the Baltics, which need more imports for their production and consumption.

Import prices have surged

Index, manufacturing, 01.2019=100



Sources: Swedbank Research & Macrobond

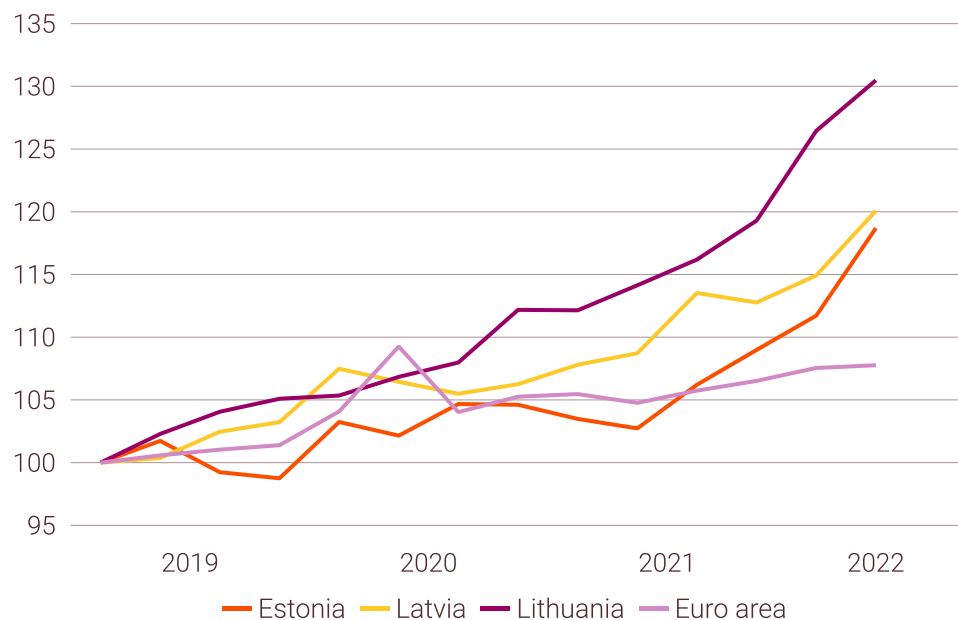
The prices of imported intermediate and consumption goods have risen substantially, including fuels, wood, food, metals, and chemicals, lifting price pressures in many sectors. Import prices have seen some stabilisation, a global growth slowdown could even mean a moderate drop in import prices next year.

Rapid wage growth has lifted costs and contributed to stronger demand

Labour costs amount to one-fifth of production costs in the Baltic economies

Personnel costs have increased

Unit labour cost index, 01.2019 = 100

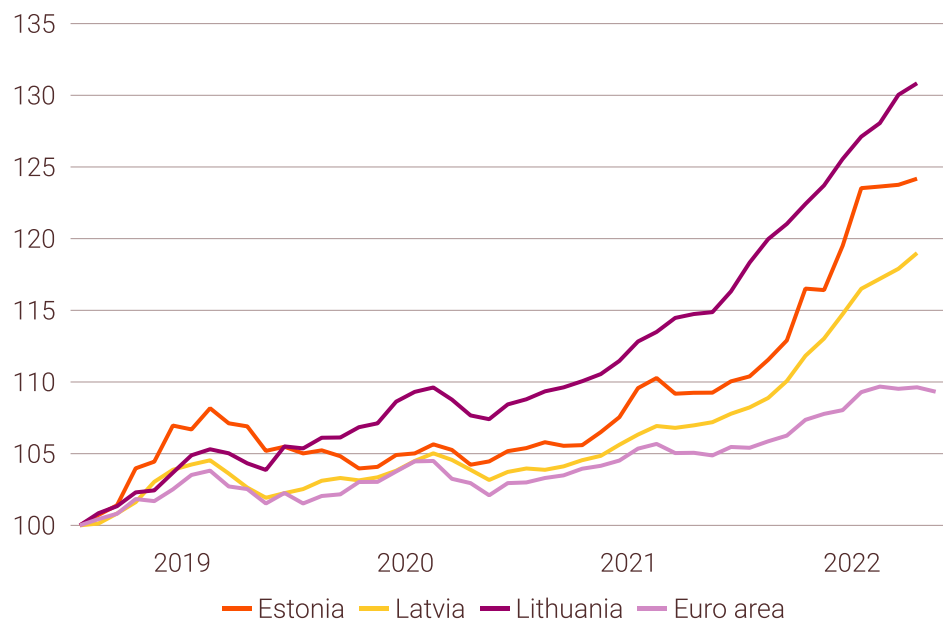


Sources: Swedbank Research & Macrobond

Although inflation has been mostly lifted by food and energy prices, the prices of other goods and services have also grown substantially. The Baltic economies recovered quickly from the pandemic, and the scarcity of labour was strong before and during the pandemic years. Wage growth has been rapid and lifted production costs. It likely contributed to strong demand until inflation outpaced wage growth. Strong demand conditions possibly created an environment where businesses could raise price beyond the increase in costs.

Prices of services recovered rapidly in the Baltics

Index, 01.2019=100



Sources: Swedbank Research & Macrobond

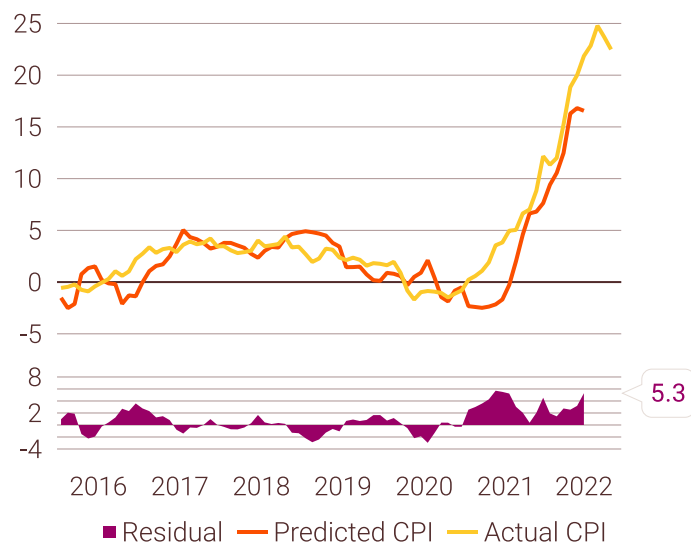
Demand for services was especially strong after the pandemic-related restrictions were lifted. The number of tourists has increased (but remains well below pre-pandemic levels). The inflow of Ukrainian refugees has raised the population in the Baltics 2 to 5%. This unexpected increase in population was a positive demand shock, especially for housing and necessities. The effect was immediately obvious in the rental market, where prices surged in the spring and only now are normalising.

Rising labour and import costs cannot fully explain inflation

Strong demand may have created environment where margins can rise easily

Estonia

Actual inflation and model prediction, y/y %

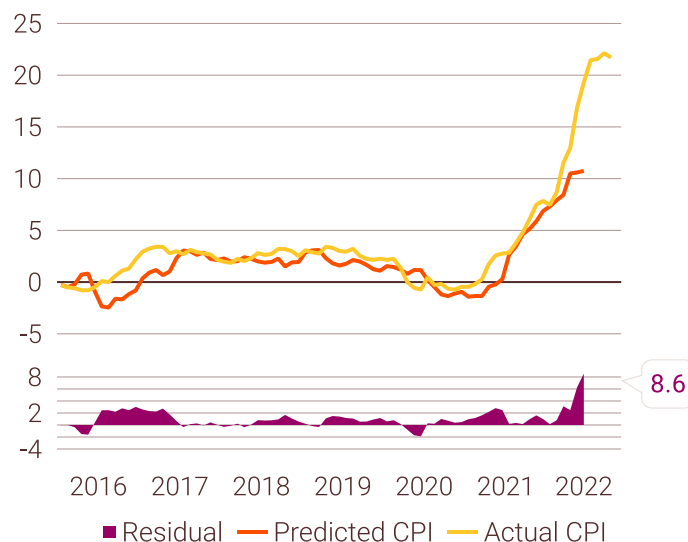


Sources: Swedbank Research & Macrobond

The analysis above tries to predict inflation growth based on annual changes in import prices, productivity, and unit labour costs. The relationship between these factors and consumer prices was stable prior to the pandemic but seems to have broken down. The analysis indicates that cost factors fail to explain a significant portion of inflation in the Baltics in recent months. A large part of inflation is indeed imported through surging commodity prices or explained by high wage growth. But there must be some other factors, too, as the difference between actual and

Latvia

Actual inflation and model prediction, y/y %



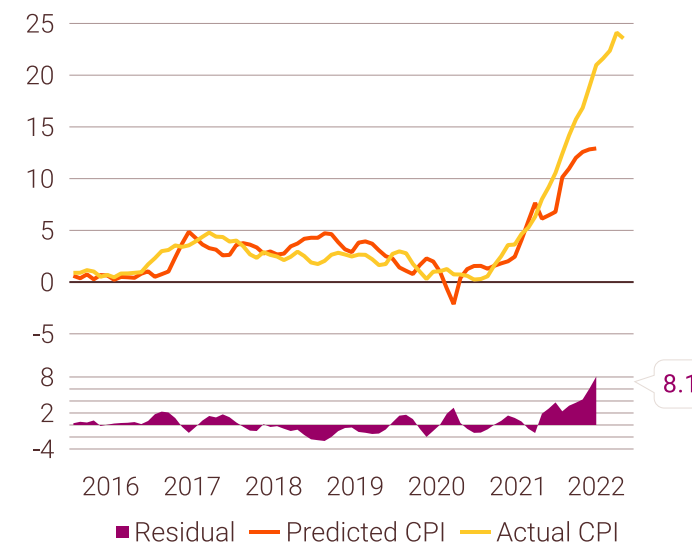
Sources: Swedbank Research & Macrobond

predicted inflation has increased. Some of these factors have been discussed in the previous sections of this report.

The large residual could be an indication of expanding profit margins. The rapid recovery of consumer demand after the pandemic resulted in some excess demand. This created an environment where it was easier to raise prices beyond the increase in input cost. Fiscal support, release of pension funds (in Estonia), strong credit

Lithuania

Actual inflation and model prediction, y/y %



Sources: Swedbank Research & Macrobond

growth, and the influx of EU money contributed to a surge in nominal spending that pushed inflation higher than observed in other EU countries.

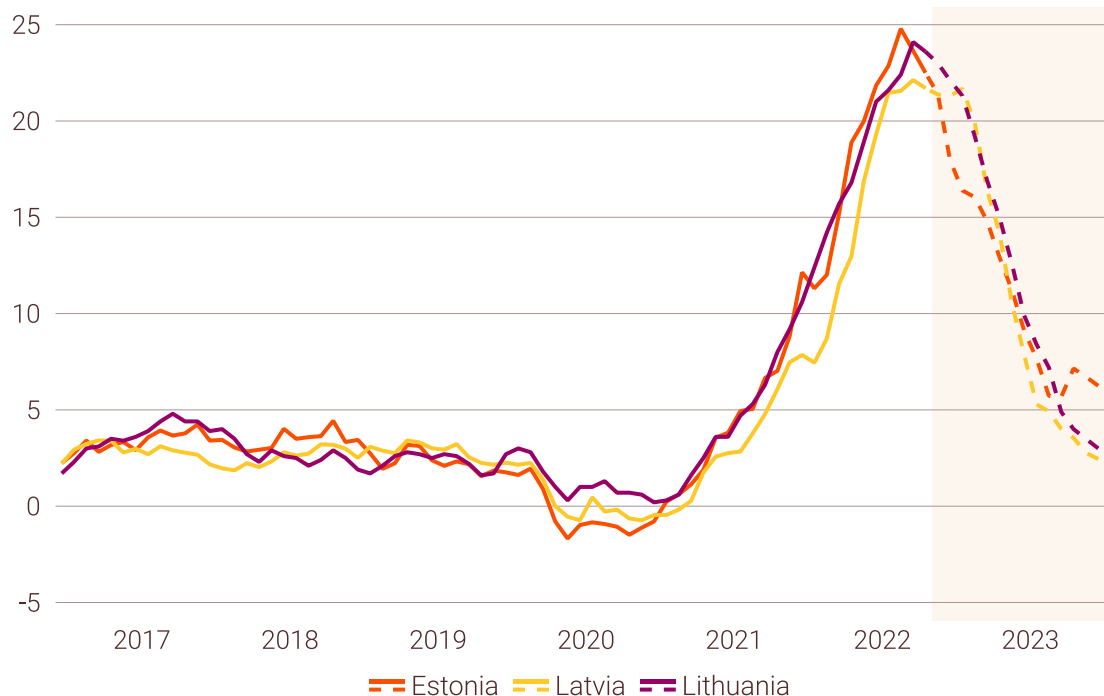
The gap between predicted and realised inflation should close over the next year. Weaker purchasing power will dampen real consumer spending; later on, even nominal consumption growth will slow. We expect historical correlations between input costs and consumer price to be re-established.

Inflation is set to climb down from stratospheric heights

Domestic price pressure might be more persistent due to stronger wage growth

Inflation forecasts

y/y %



Sources: Swedbank Research & Macrobond

- The inflationary run is coming to an end, it seems. Inflation has probably peaked in all Baltic countries, and annual price growth is expected to gradually climb down to more normal levels by the end of next year. In Estonia, price growth accelerates at the end of 2023 due to the base effect from energy subsidies in 2022.
- The extraordinary inflation in the Baltics was a result of global price shock and excess demand, but both forces have mostly spent themselves.
- Energy prices have normalised recently but are expected to remain volatile. There is less room for energy costs to push inflation higher, although there is potential for energy deflation over the next couple of years.
- Core inflation¹ will likely be more sticky. Wage growth in the Baltics will stay rapid, pushing up the cost of domestic services.
- Inflation should become self-defeating. A massive fall in real wages should dampen demand significantly. This should mark a return of stronger domestic price competition.
- Global supply-chain problems are easing, and shipping costs are returning to pre-pandemic levels. Monetary policy tightening is weighing on global commodity prices. A goods price deflation is a risk towards the end of 2023.

¹ Inflation excluding more volatile food and energy prices.

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