Economic and Monetary Developments

Winter 2022

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

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Abbreviations

bp	basis point(s)
CPI	Consumer Price Index
EA	euro area
ECB	European Central Bank
EC	European Commission
ESA 2010	European System of Accounts 2010
ESI	(the European Commission's) Economic Sentiment Indicator
EU	European Union
EUR	euro
EURIBOR	euro interbank offered rate
Eurostat	statistical office of the European Union GDP gross domestic product
HFCS	Household Finance and Consumption Survey
HICP	Harmonised Index of Consumer Prices
IMF	International Monetary Fund
MF SR	Ministry of Finance of the Slovak Republic
NACE	Statistical Classification of Economic Activities in the European Community (Rev. 2)
NARKS	Slovak National Association of Real Estate Agencies / Národná asociácia realitných kancelárií Slovenska
NBS	Národná banka Slovenska NEER nominal effective exchange rate
OECD	Organisation for Economic Co-operation and Development
pp	percentage point(s)
PMI	Purchasing Managers' Index
PPI	producer price index
RRF	Recovery and Resilience Facility (of the European Union)
RRP	recovery and resilience plan (of the Slovak Republic)
SO SR	Statistical Office of the Slovak Republic
ÚPSVaR SR	Office of Labour, Social Affairs and Family of the Slovak Republic / Ústredie práce, sociálnych vecí a rodiny Slovenskej republiky
USD	US dollar
VAT	value-added tax

Symbols used in the tables
. – Data are not yet available.
- – Data do not exist / data are not applicable.
(p) – Preliminary data

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1 Summary

Government measures on energy prices will be effective in preventing a decline in citizens' living standards in 2023. The government action is stopping what would otherwise be a significant increase in living costs for households, hence they are likely to avert a contraction of the economy and of households' real incomes and purchasing power next year. Annual inflation in 2023 is estimated to be 10%, significantly lower than projected in the summer 2022 forecast.

On the other hand, government interventions come at the cost of their burden on public finances and increased uncertainty about how the situation will evolve in coming years. If energy spot prices remain at high levels, households can expect their energy bills to rise significantly by 2025. Inflation may therefore remain elevated for an extended period and become anchored in the expectations of people and firms. At the same time, the public finances are in a state that precludes the government from subsidising the large differences between spot and consumer energy prices over the long term.

Even without additional measures, public debt is expected to remain close to the 60% of GDP threshold in coming years. Going forward, we expect a deterioration in fiscal performance. The budget deficit is projected to be 5.9% of GDP in 2023 and 5.5% of GDP in 2024, reflecting the impact of measures to cushion the impacts of the energy crisis and high inflation, as well as the extensive scope of permanent government measures. Public debt will still decrease slightly next year, before increasing again on the back of the large expected deficit. In 2023, however, the debt brake may be reapplied, mandating a reduction of the debt.

Next year is expected to see an increased uptake of EU funds. This will be a major boost to investment activity. Slovakia is expected to absorb a large residual amount of the funds allocated to it under the EU's previous programming period (2014–20). On the other hand, the funding of a proportion of government aid measures at the expense of the uptake of EU structural funds represents a missed opportunity to make productive use of these resources, for example by financing a faster transition to a carbon-neutral economy. In fact, the aid will be allocated to consumption financing, without any effort to target it or to incentivise people to reduce energy consumption.

After evolving better than expected this year, the global economy is expected to cool in late 2022 and early 2023. Gloomy consumers and pur-

chasing managers have indicated a high likelihood of a more marked slowdown in economic activity, especially in Europe. This will temporarily act as a drag on Slovakia's export performance, which, together with a decline in private consumption, may lead to a shallow economic downturn in the months ahead. This will also translate into a slight temporary decline in employment.

The global recovery is expected to add impetus to the Slovak economy in coming years. In contrast to the domestic side of the economy, which is shrouded in a high degree of uncertainty, global economic activity is expected to rebound quite strongly after its temporary slowdown. Slovakia's export-oriented firms should ride this positive wave. Domestic employment will thus return to a growth path, though it may be partly hampered by shortages of skilled labour. The economic recovery will also create room for real wage growth.

The economic outlook remains surrounded by much uncertainty beyond government policies. The impact of the war in Ukraine poses the greatest risk to the economy. A related issue is how Europe will deal with the energy crisis.

Table 1 Key economic indicators

	Actual data	Baseline scenario				Difference vis-à-vis the autumn 2022 forecast		
	2021	2022	2023	2024	2025	2022	2023	2024
GDP (annual percentage change)	3.0	1.5	1.6	2.9	2.5	-0.3	2.6	-0.6
HICP (annual percentage change)	2.8	12.2	10.0	8.7	3.6	0.5	-8.3	3.7
Average nominal wage (annual percentage change)	6.1	8.8	10.6	9.9	5.8	0.5	-0.9	0.8
Average real wage (annual percentage change)	2.9	-3.8	0.5	1.8	2.0	0.0	4.4	-2.5
Employment (annual percentage change; ESA 2010)	-0.6	1.5	0.1	0.3	0.1	-0.3	0.2	0.7
Unemployment rate (percentage; Labour Force Survey)	6.8	6.2	6.6	6.1	5.7	0.0	-0.1	-0.7

Source: NBS.
Note: Real wages deflated by CPI inflation.

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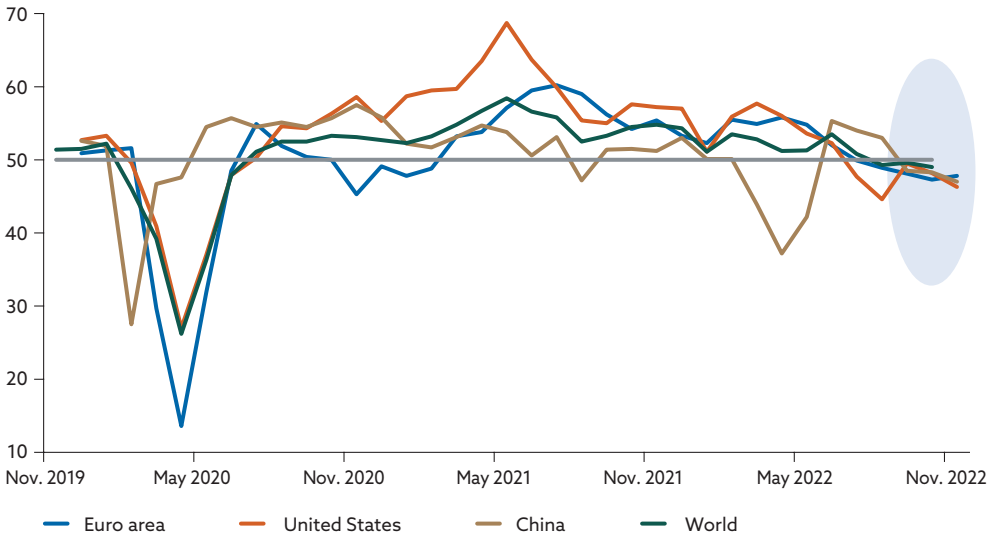
2 Current macroeconomic developments in the external environment and Slovakia

2.1 External environment

Leading indicators are pointing to a weakening of the world economy. Global economic activity in the third quarter was stronger than expected. driven by growth in China and the United States. However. Purchasing Managers' Indices (PMI) for the most significant economies have fallen to sub-50 levels. indicating economic contraction (Chart 1). A majority of advanced and emerging market economies are adversely affected by the current energy crisis. At the same time. global monetary conditions have tightened. and US dollar strengthening is making imports more expensive in many countries.

Chart 1
Purchasing Managers' Indices

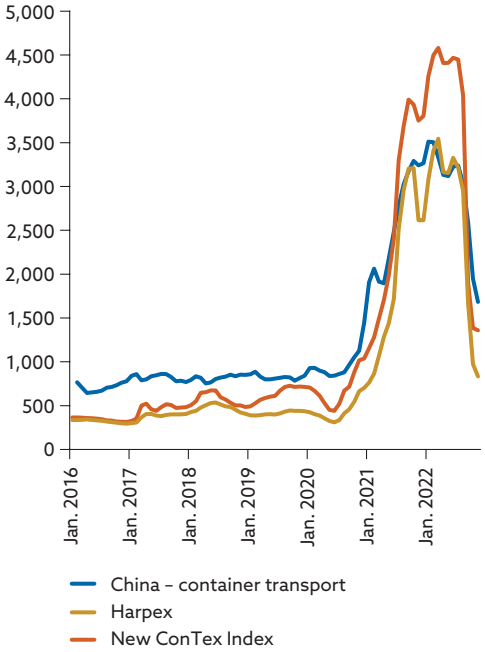


Source: Macrobond.

Supply chain pressures are moderating as demand weakens and supply strengthens. With demand softening, shipping rates have fallen (Chart 2) and cost pressures have eased, especially in goods prices. There continues to be uncertainty related to the war in Ukraine. On the other hand, the recently announced easing of zero-COVID restrictions in China provides scope for improving the functioning of global supply chains. In the euro

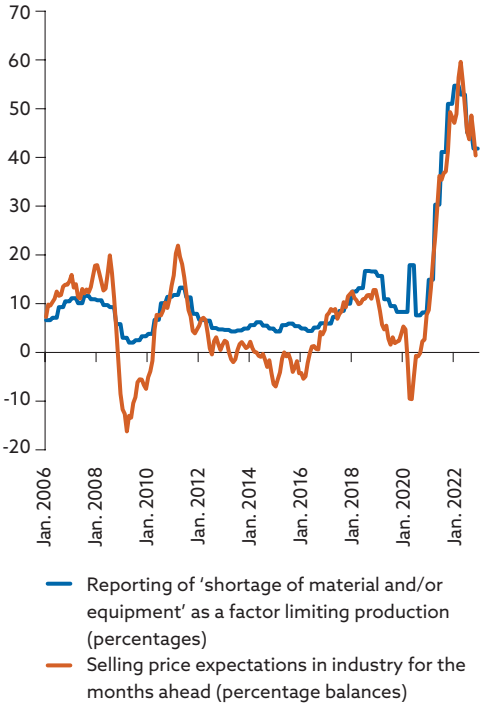
area, too, industrial firms are starting to indicate a lessening of supply chain disruptions and related input shortages. This, together with decreases in certain commodity prices, is reflected in slightly falling selling price expectations in the industry sector (Chart 3).

Chart 2
Shipping freight rates (index)



Source: Macrobond.

Chart 3
Input shortages and selling price expectations in industry (percentage balances; percentages)

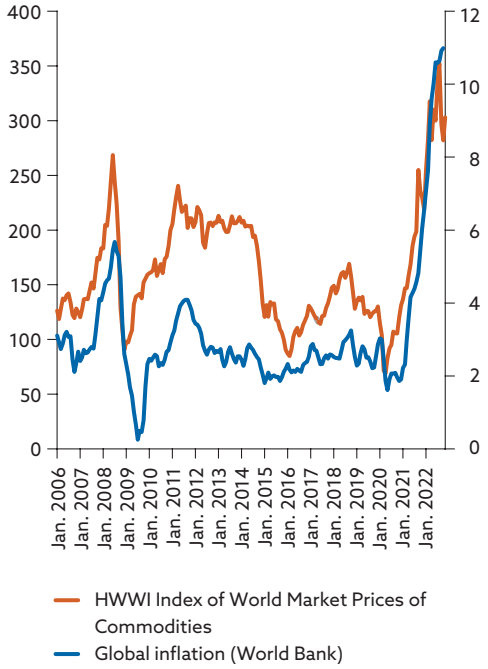


Source: Macrobond.

It is the improvement in supply chain functioning and the drop in commodity spot prices that are underlying the easing of global price pressures (Chart 4). In a large number of countries, this has been reflected in a weakening of producer price inflation (Chart 5). In some countries, for example the United States, consumer price inflation is gradually showing signs of slowing.

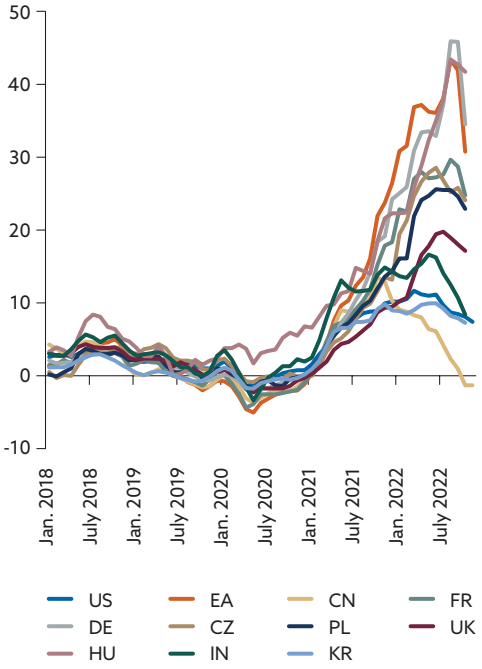
Despite showing signs of easing, inflation remains elevated. Central banks have therefore stuck to what has so far been a vigorous cycle of monetary policy tightening, with rate increases ranging between 50 and 100 basis points in most countries, but with increases of 100 basis points or more not being exceptional (Chart 6). Among the major central banks, the Federal Reserve, the ECB, and the Bank of England have continued to raise monetary policy rates.

Chart 4
Global inflation and commodity prices (percentages; index)



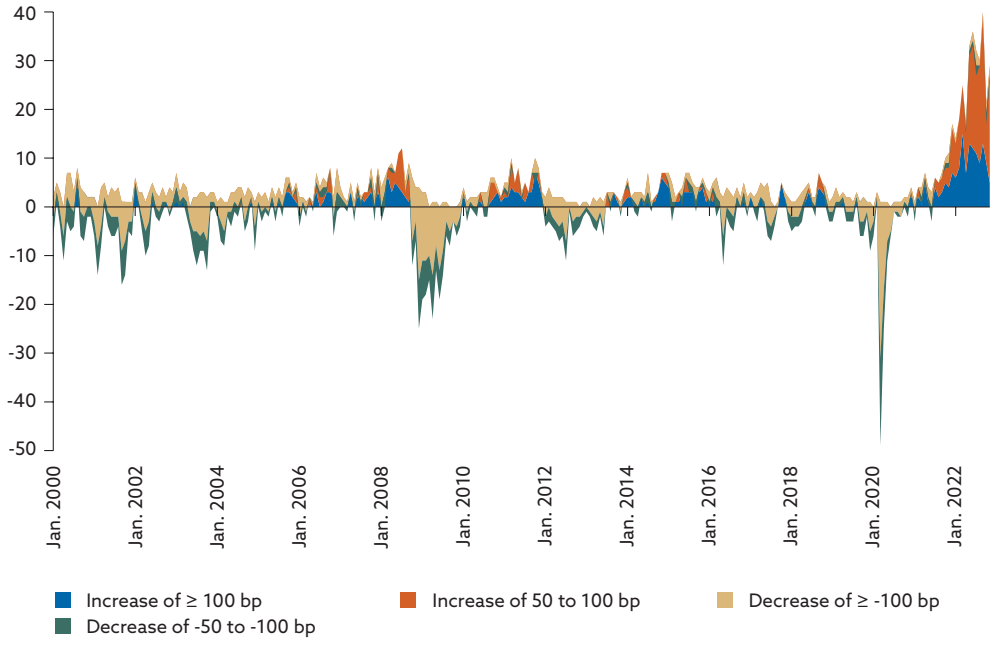
Source: Macrobond.

Chart 5
Producer prices in selected countries (annual percentage changes)



Source: Macrobond.

Chart 6
Central banks' decisions on key interest rates (number)



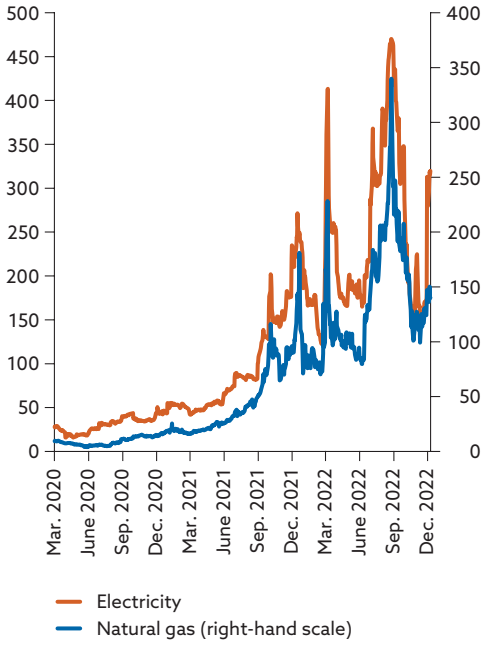
Source: Macrobond.
Note: The chart covers 114 central banks.

Global economic developments remain uncertain, with the most likely outlook still being a worsening economic performance coupled with high inflation. The uncertainty stems largely from the following: the

hard-to-estimate impacts that monetary policy tightening will have on the performance of advanced economies; the evolution of the pandemic situation and pandemic containment measures in China; and how the war in Ukraine and related energy market strains will evolve. Although recent weeks have seen a significant drop in prices on European markets for electricity and gas, the situation remains uncertain (Chart 7).

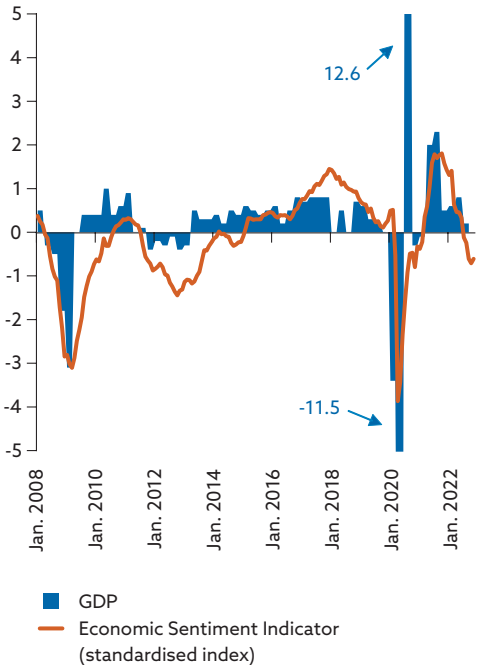
The euro area economy is likely to be at a turning point and may contract slightly in the last quarter of 2022. The economy showed resilience during the first half of 2022, maintaining a relatively brisk recovery despite adverse shocks related to energy prices and input shortages. Growth was largely driven by the services sector, which benefited from the unwinding of pandemic containment measures and the release of pent-up consumption. In the third quarter, however, economic growth was already slowing notably. The post-pandemic expansion is gradually losing impetus, and adverse effects related to the war in Ukraine and to a softening of foreign demand are starting to predominate. This is weighing on economic sentiment, with the composite PMI recording in November its fifth straight month in the sub-50 territory indicating economic contraction. At the same time, the Economic Sentiment Indicator has fallen below its long-term average (Chart 8).

Chart 7
Germany: gas and electricity price futures (1st position; EUR/MWh)



Source: Macrobond.

Chart 8
Economic Sentiment Indicator and GDP (index; quarter-on-quarter percentage changes)



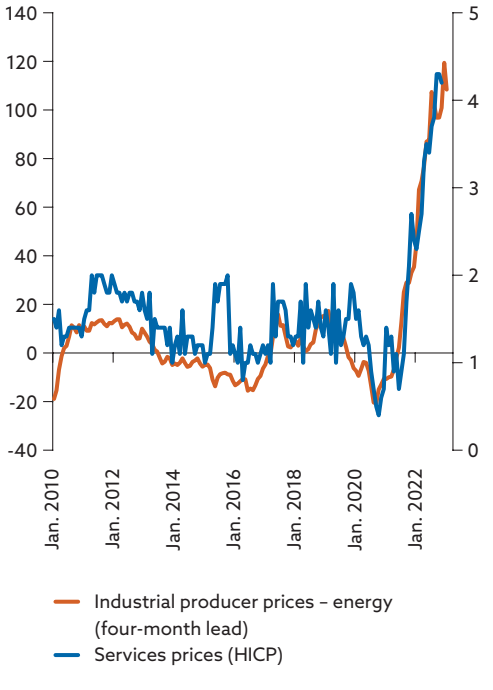
Source: Macrobond.

Consumer price growth in the euro area has been gradually accelerating. Not only have prices of energy and food been rising, so too has core infla-

tion. Post-pandemic demand in the summer months was concentrated on services. At the same time, consumer prices in this sector have started to reflect cost increases related to high energy prices (Chart 9). Rising import prices and weakening of the euro contributed to a further acceleration of non-energy industrial goods inflation.

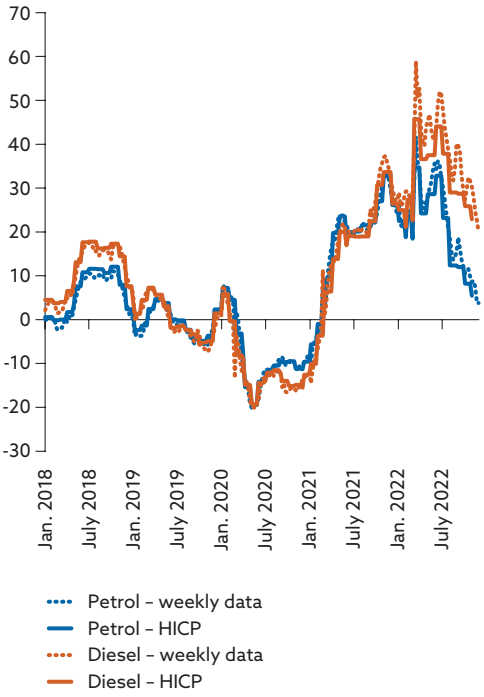
The inflation rate's moderation in November was entirely due to energy prices.[1] Consumer price inflation slowed for the first time in seventeen months (to 10%). Fuel prices fell slightly, while the slowdown in their year-on-year growth (Chart 10) was also affected by a base effect, i.e. the price level of fuel a year earlier. That level was rising throughout 2021 and peaked in 2022 after the outbreak of the war in Ukraine. The base effect's dampening effect on the annual increase in fuel prices is therefore expected to continue, even to intensify. The inflation uptrend is also being temporarily curbed by various measures adopted across the euro area to cushion the impact of global energy price fluctuations on firms and households. For the time being, therefore, it would be premature to speak about a clear turnaround in the inflation environment.

Chart 9
Energy producer prices and consumer prices of services (annual percentages change)



Source: Macrobond.

Chart 10
Fuel prices (annual percentage changes)



Source: Macrobond.

[1] This was largely related to energy prices in the Netherlands, with their annual rate of increase slowing sharply from 100% in October to just over 40% in November. Energy alone accounted for more than 5 percentage points of the decrease in Dutch headline inflation, which naturally had an impact on aggregate inflation in the euro area.

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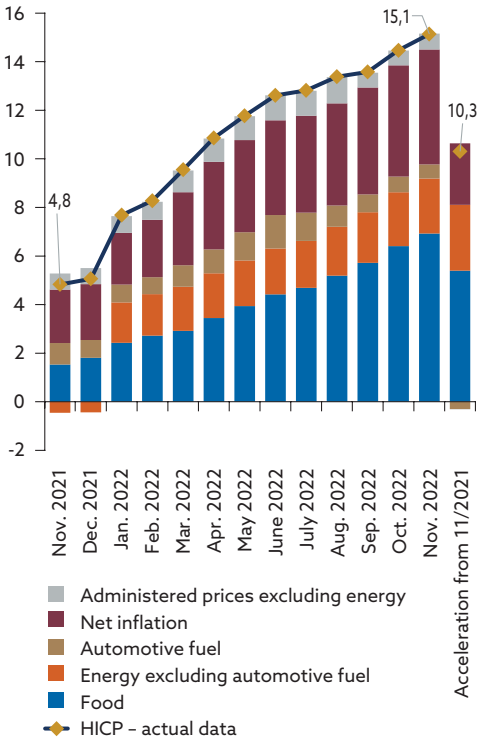
2.2 Slovakia

2.2.1 Consumer prices

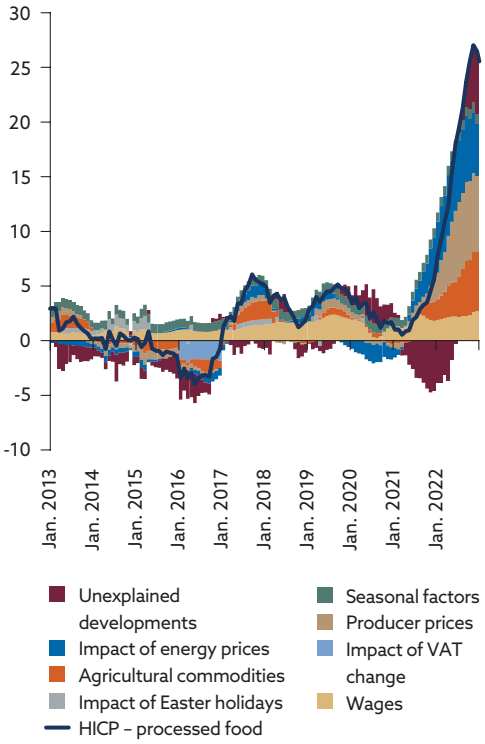
Inflation in Slovakia continues to accelerate, mainly owing to ongoing pressure from elevated levels of energy and food commodity prices, producer prices and import prices. Their pass through is most apparent in still higher food price inflation and net inflation. Annual inflation reached 15.1% in November (Chart 11). The current inflation path reflects mainly the impact of the external environment and, to some extent, high consumer demand.

Chart 11
Evolution of inflation over the past 12 months (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 12
Factors pushing up prices of processed food excluding alcohol and tobacco (percentage point contributions; annual percentage changes)



Sources: SO SR, ECB, and NBS.

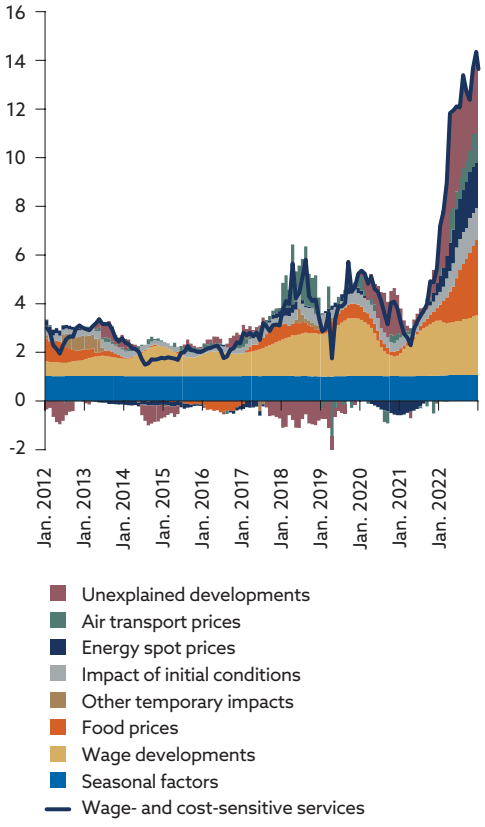
Food prices accounted for one-half of the overall (10.3 pp) acceleration in inflation in Slovakia over the past twelve months. They are rising faster than other core components of inflation. Their record high rate of increase is a result of extremely high energy prices, agricultural commodity prices on the European market, and producer prices of food for the domestic market (Chart 12).

Energy commodity prices have been a common and crucial factor behind price level growth in 2022. Elevated spot prices for energy are pushing up

costs for producers, chain stores, and retailers. They are therefore also having an upward impact on net inflation. Factors other than energy that are contributing to the rise in services inflation (Chart 13) include continuing labour market tightness together with diminishing incentives to work in this sector. Rising prices of agricultural commodities and processed food are translating into significant increases in catering, hotel, cafe and restaurant prices. Besides energy prices, import prices are also pushing up industrial goods prices (Chart 14).

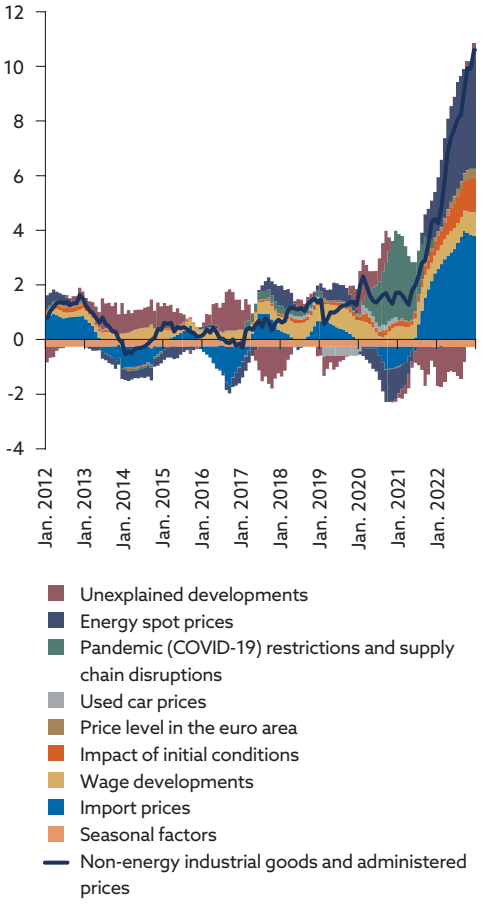
Durable goods inflation has been slowing moderately since mid-2022. This may indicate a gradual shift in consumer purchasing preferences under pressure from accelerating prices of consumption basket 'necessities' (food, non-durable industrial goods). Services inflation continues to rise quite rapidly, although the first signs of softening consumer demand can be seen and imply a slowdown in services revenue growth.

Chart 13
Factors in the price growth of wage- and cost-sensitive services (percentage point contributions)



Sources: SO SR, and NBS.

Chart 14
Factors in the price growth of non-energy industrial goods and administered prices (percentage point contributions)



Sources: SO SR, ECB, and NBS.

Strong price growth is causing a drop in living standards, affecting in particular low-income and less well-off households (Box 1). The impact on different household groups varies according to their income and consumption habits. Low-consumption households are being harder hit, given that necessities make up a relatively larger share of their consumption basket and, moreover, that the prices of necessities (food and utilities) are rising fastest.

Box 1
Food and utility inflation is hitting low-consumption households

The sharp price growth in Slovakia during 2022 has had a greater impact on low-income and low-consumption households. They have been affected in particular by rising prices of food, a major item in their budgets.[2] Whereas one-quarter of high-consumption households spend on average 20% of their budget on food, the share of low-income households that do so is almost twice as high (38%). Utility costs are also an important factor and are even more heavily skewed against low-income households (Table A).

Table A Household consumption baskets in Slovakia

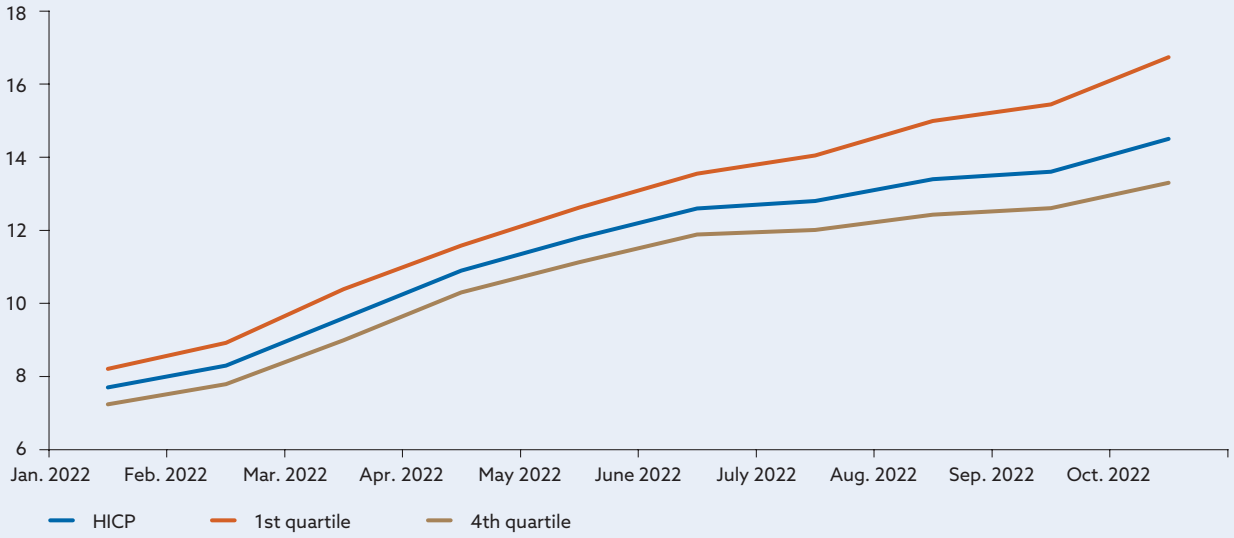
	Food	Restaurants	Utilities	Recreation	Other
1st quartile	38	6	33	3	19
2nd quartile	33	6	24	5	32
3rd quartile	27	6	18	4	45
4th quartile	20	5	12	4	59

Source: NBS.
Notes: The table shows the average household consumption baskets by consumption quartile (each quartile represents around 450,000 households) from the 2017 wave of the Household Finance and Consumption Survey (HFCS). The first quartile includes households with the lowest consumption, i.e. households with a median net income of €500 and mostly only one source of income. The item 'food' includes food and beverages consumed at home; the item 'utilities', mainly water and energy costs (it does not include, for example, rent).

Rising prices of food and utilities are having a disproportionate impact on low-income households with lower levels of consumption. In October 2022 the price of the consumption basket of these households increased by approximately 16.7% year-on-year (Chart A, top line). Most of that growth was due to food and utilities, with food contributing 9.1 pp to the increase and utilities contributing 4.7 pp. For households in the top quartile, recording price growth of 13.3% (Chart A, bottom line), it was, by contrast, 'other products' that made the largest contribution (5.7 pp).

[2] Low-consumption households and low-income households overlap to a large extent – the difference is due mainly to mortgage repayments. The data in this review are for 2017, but experience from countries where similar studies are conducted more frequently shows a stable trend in consumption basket differences over recent years.

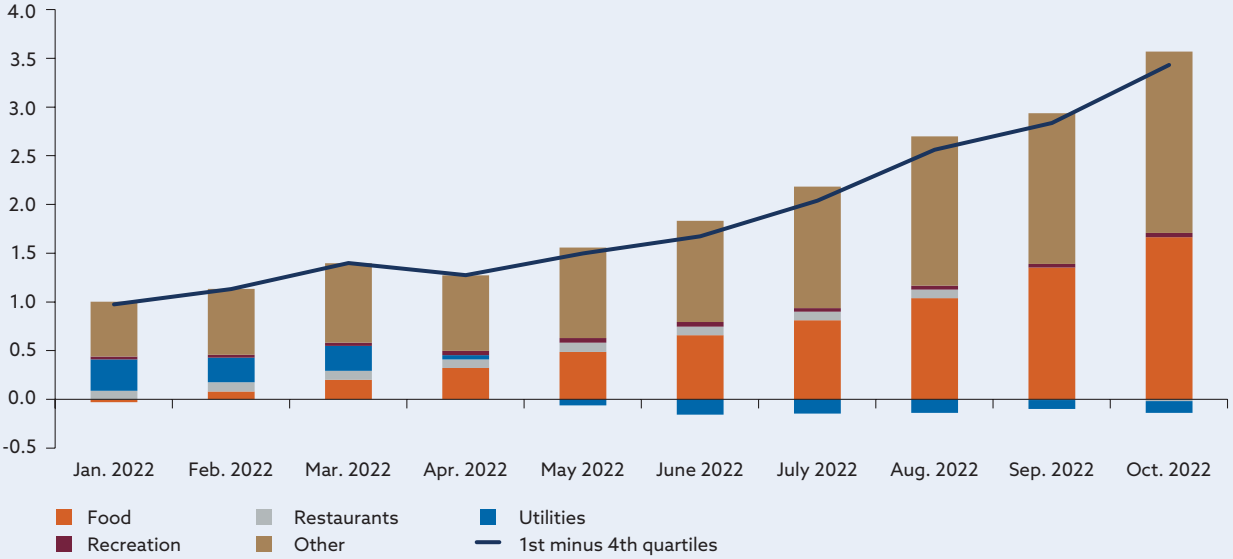
Chart A
Inflation in Slovakia by quartile (percentage points)



Source: NBS.
Note: Inflation based on the consumption baskets shown in Table A for the quartiles shown in Table A.

In numerical terms, the price growth differential across households amounted to almost 3.5 pp. Chart B decomposes this differential according to whether individual items have increased faster or slower than headline inflation. The decomposition shows that primarily the higher rate of increase in food prices and less pronounced increase across the rest of the consumption basket accounted for the price differential between households. Eating out (the item 'restaurants') and recreation have a relatively small weight in the overall consumption basket and hence a small impact on the inflation differential. Utility costs are a special case – their impact on the inflation differential was low because their rate of price increase was similar to that of headline inflation. Going forward, however, they pose a significant risk owing to the above-mentioned differences in consumption baskets.

Chart B
Contributions to the inflation differential between the first and fourth quartiles (percentage points)



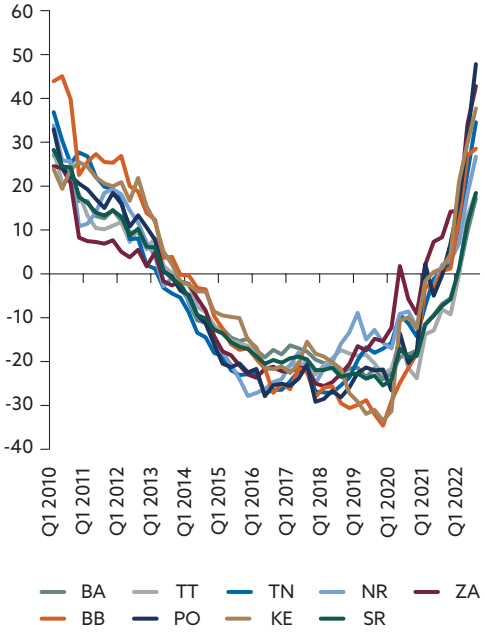
Source: NBS.
Notes: The item contributions denote the differential in expenditure on the given item multiplied by the difference between the item's price growth and the headline inflation rate. Hence items whose price growth is in line with inflation do not contribute to the differential.

Food and utilities are by nature necessities, so households may be limited in their ability to adjust consumption in response to increases in their prices. Changes in consumption, for example of energy, often require investment and are therefore of a more medium- or long-term character. Also relevant to the differential impact on individual households is whether households differ in their ability to adjust their own consumption to price growth. It may, for example, be more difficult for low-income households than for wealthier households to switch to consumption of cheaper food products – this would make the differences between food inflation impacts on households more pronounced.

2.2.2 Residential property prices

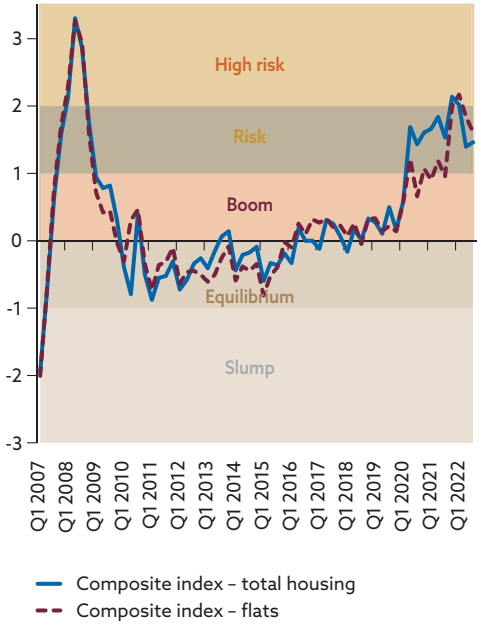
Housing price growth slowed sharply in the third quarter of 2022. Asking prices for residential property increased by 1.6% compared with the second quarter (by 21.9% year-on-year), a rate close to their historical average. Unlike consumer prices, housing prices appear to be at a turning point.

Chart 15
Housing affordability index (HAI) value as a ratio of its historical average (percentages)



Sources: NBS, NARKS, SO SR, and United Classifieds.
Note: BA – Bratislava Region; TT – Trnava Region; TN – Trenčín Region; NR – Nitra Region; ZA – Žilina Region; BB – Banská Bystrica Region; PO – Prešov Region; KE – Košice Region.

Chart 16
Composite index to assess housing price developments



Sources: NBS, NARKS, SO SR, and United Classifieds

Rising interest rates are further reducing housing affordability as measured by the housing affordability index (HAI)[3] (Chart 15). Despite only moderate housing price growth and favourable wage developments, the HAI deteriorated by almost seven points in the third quarter of 2022. For housing affordability to have remained the same as in the previous quarter, housing prices would have had to decrease by more than 4%. Housing is least affordable in regions with more pronounced tourism activity – Žilina and Prešov. In the Liptov and Tatra Mountains areas, where housing demand is the highest in Slovakia, high housing prices are distorting housing affordability at the level of the respective administrative regions.

Our composite index[4] indicates that housing prices can be expected to decline in the period ahead (Chart 16). The upward pressure on the composite

[3] The HAI calculation is based on a so-called adequate income derived from the current average cost of mortgage loan servicing (taking into account current housing prices and interest rates). The adequate income is compared with the wage level on a region-by-region basis. The final ratio is then interpreted in relation to the long-run average.

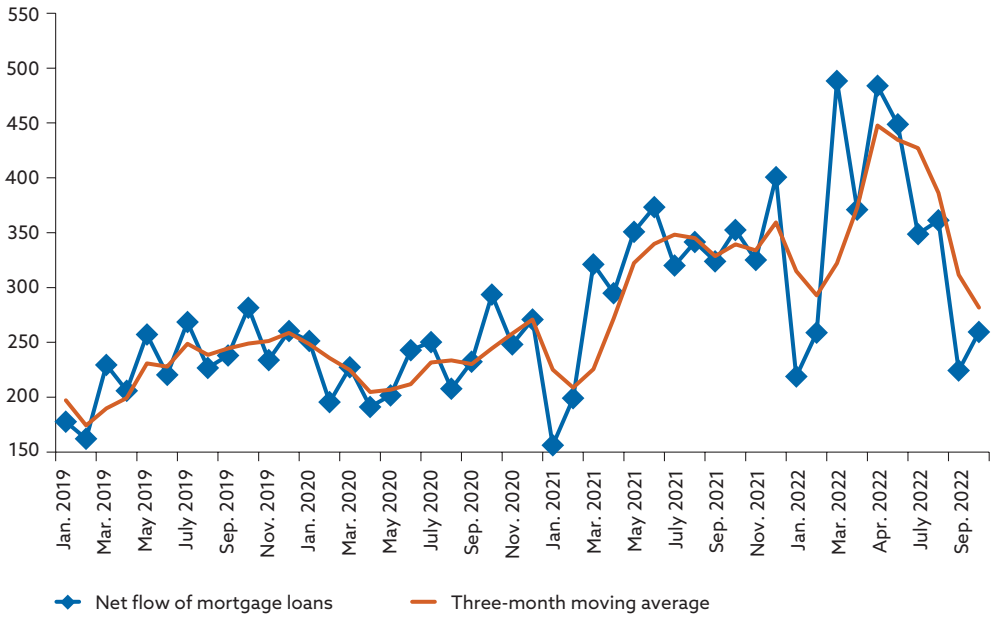
[4] In order to assess the impact of housing prices on financial and economic stability, we compare their evolution with the evolution of their underlying theoretical fundamentals. We do so using a composite index based on ratio indicators (the real housing price; price/

index in the third quarter was largely due to disposable income developments. The price-to-rent ratio had a downward impact on the index, with renting being the main alternative to owner-occupancy. Compared with the previous quarter, rents increased almost twice as much as housing prices.

Residential construction data may point to an additional downward impetus to housing prices in the medium term. Residential construction increased in the third quarter by 18% year-on-year. On the one hand, the number of dwelling construction starts declined, as did the number of building permits granted, possibly owing to cooling of the property market and uncertainty about future developments. On the other hand, the number of dwellings completed in the period increased sharply. The number of flats under construction remains at almost 82,000.

Mortgage loan trends further confirm the cooling of the property market (Chart 17). Interest rates on loans originated in October rose to 3.2% on average. Demand for mortgage loans was higher in the first half of the year as prospective homebuyers sought to finalise deals ahead of an expected uptrend in interest rates. Demand has consequently sagged in the second half of the year with the result that housing prices are likely to fall slightly, quarter-on-quarter, in the fourth quarter.

Chart 17
Net flow of mortgage loans (EUR millions)



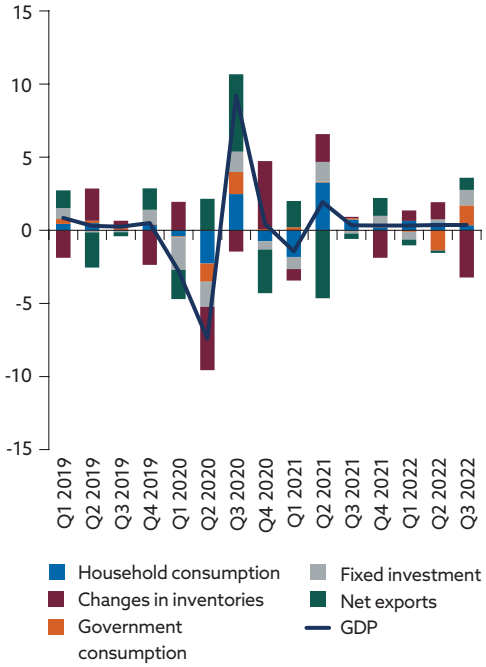
Sources: ECB, and NBS.

income; price/rent; mortgage loans/households' gross disposable income; amount of residential construction/GDP). Further information on the composite index's compilation is provided in Cár, M. and Vrbovský, R., 'Composite index to assess housing price development in Slovakia', *Biatec,* Vol. 27, No 3, Národná banka Slovenska, Bratislava, 2019.

2.2.3 Economic growth

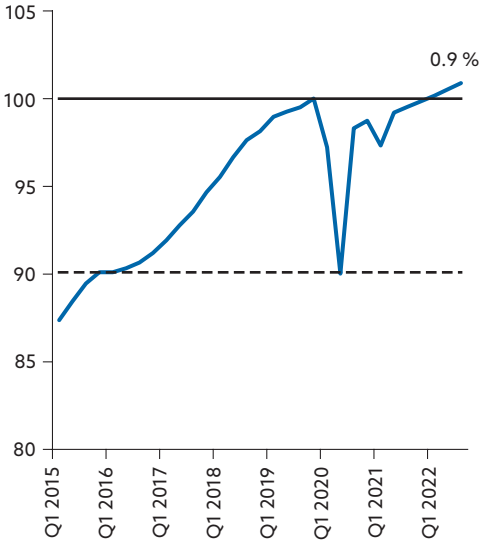
According to revised data, Slovakia's GDP currently exceeds its pre-pandemic level by 0.9 pp (Chart 18), with fixed investment now the only component still to fully rebound.[5] Third-quarter economic growth was driven by net exports and, to a lesser extent, private consumption and investment. Quarter-on-quarter GDP growth remained at 0.4%. Supply chain disruptions eased during the summer, resulting in a better than expected export outturn. As for domestic demand's positive contribution to GDP growth (Chart 19), it was supported by households allocating more of their funds to, among other things, tourism and investment in housing.

Chart 18
GDP (quarter-on-quarter percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 19
GDP (index: Q4 2019 = 100)



Sources: SO SR, and NBS.

The summer months saw export performance boosted by an improved situation in component supplies for the automotive industry. Besides benefiting car producers, the easing of supply chain pressures also supported machinery and electronic producers. By contrast, there was a deteriorating situation in energy-intensive industries such as metal manufacturing and the chemical industry. Firms in these industries were compelled to cut production because of surging energy prices.

[5] The Statistical Office has increased the level of GDP from 2020 as part of its regular revision policy.

Households have been using savings to cover consumption expenditure. Rising prices have not so far led to a reduction in consumer spending. A proportion of households appear to have opted to dissave out of concern about their savings depreciating amid elevated inflation. Moreover, an increasing number of Slovaks are holidaying abroad after travel restrictions during the pandemic period. Current consumption may, however, be distorted by an increased inflow of refugees from Ukraine (Box 2).

Box 2
The impact of increased migration from Ukraine on household consumption

The positive evolution of household consumption in 2022 partly reflects the impact of migration from Ukraine since the outbreak of the war in that country. Its contribution to the projected 4.6% growth in private consumption in 2022 is estimated to range between 0.2 and 0.8 pp.

We used two approaches to estimate the impact of increased migration on private consumption.

The first approach, resulting in a lower value, is based on the number of Ukrainian refugees employed in Slovakia, and assumes that they earn the minimum wage. This wage represents the only income which they can spend and with which they can increase household consumption. No account is taken of past savings or any benefits that they would spend in addition to their current income in Slovakia.

The second approach is based on average per capita consumption in 2021 and on the projected number of applicants for temporary refugee status. We assume that the refugees' expenditure is approximately 60% of the average household consumption in Slovakia and that it is largely allocated to necessary goods and services. We assume that the refugees' consumption basket does not include items such as restaurants and hotels, recreation, and culture, and we also assume that they use certain services to a lesser extent. Compared with the previous approach, the volume of consumption is higher and would appear to require recourse to previous savings, i.e. 'dissaving'. The estimation may be to some extent skewed upwards by the compositional difference between Slovak households and Ukrainian refugees (the latter containing more women, children and pensioners). This result therefore represents an upper bound on consumption expenditure.

Besides having an upward impact on household consumption, migration from Ukraine may be putting short-term downward pressure on the saving ratio. The income side comprises only current labour income and social benefits paid in Slovakia. It is, however, very likely that the refugees cover part of their expenditure with previous savings and therefore increase household consumption in Slovakia more than they increase income. We assume, however, that recourse to savings for consumption purposes can only be short term and therefore that the impact on the saving ratio is temporary.

Government consumption continued to grow strongly in the third quarter of 2022. Its growth was largely driven by healthcare expenditure as well as by compensation of employees – given the payment of one-off bonuses and indexing of salaries. Taking into account, however, a negotiated increase in public sector wages and an uptrend in public spending on energy, government expenditure in the above-mentioned areas is envisaged to continue rising sharply for the rest of the year.

Firms have been gradually increasing their business activity, and the government, too, has started to step up investment after a long downtrend. Firms continued to modernise production and invested mainly in machinery and equipment. Some firms started to upgrade their vehicle fleets, while households invested mainly in housing.

Public investment disbursements have shown a positive trend this year, increasing in the first three quarters by almost 10% year-on-year. Local elections added much impetus to this trend, with municipal and local authorities accounting for most of the investment growth. Investment in the state-owned railway infrastructure operator (ŽSR) has also increased, as has the uptake of EU funds.

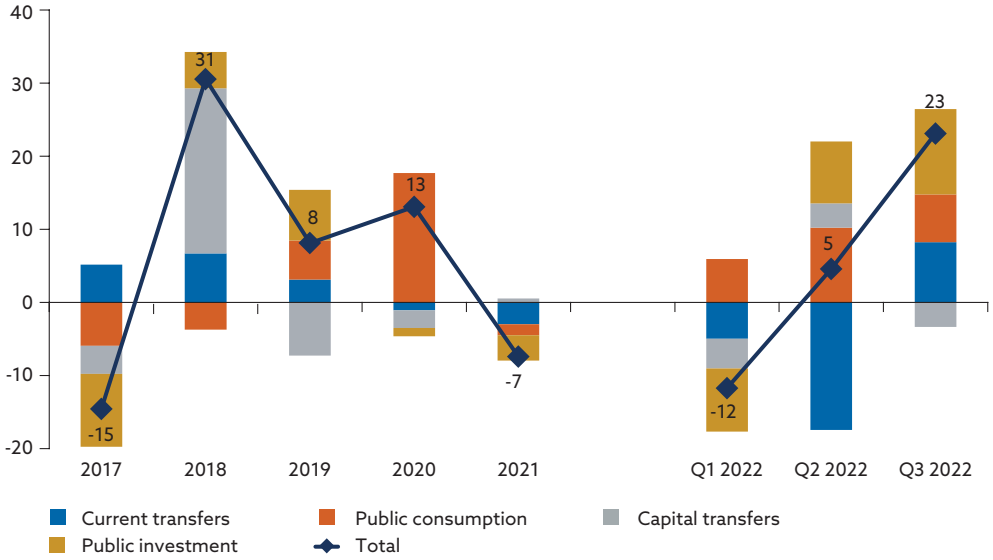
The nominal uptake of funds from the EU in the third quarter of 2022 was 23% higher year-on-year (Chart. 20). The increase was driven by government investment and consumption, as well as by current transfers to the private sector. Government consumption has since early 2022 been making a relatively stable contribution to the increase, through projects supporting primary education and social inclusion and through labour market policy measures, including assistance from the EU's Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) initiative. More recently, public investment projects have also supported the recovery. In addition to public capital spending in traditional areas such as road and rail infrastructure and the renewal of mobile assets (especially in rail transport), investment in the third quarter was also boosted by research centres (in particular university research), by projects to reduce the energy intensity of public buildings and by the development of public sector information systems. Transfers provided outside the public sector were largely allocated to projects aimed at improving business competitiveness through support for research and innovation.

At the same time, however, ambitious budget assumptions have not been met in regard to the uptake of funds from the EU's Recovery and Resilience Facility (RRF) through the implementation of Slovakia's recovery and

resilience plan (RRP). The absorption of these funds was relatively low over the first three quarters of 2022, being used mainly for RRP administrative expenses under government consumption.

Chart 20

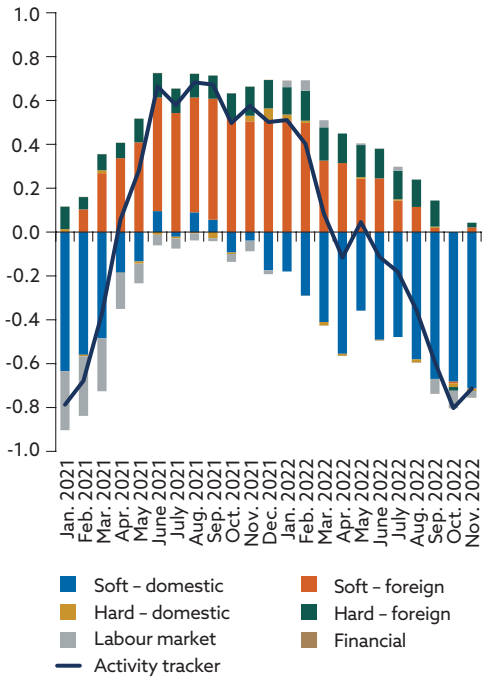
EU-funded expenditure[1] in Slovakia (current prices, annual percentage changes)



Sources: State Treasury of the Slovak Republic, and NBS.
1) Adjusted for transfers to financial instruments.

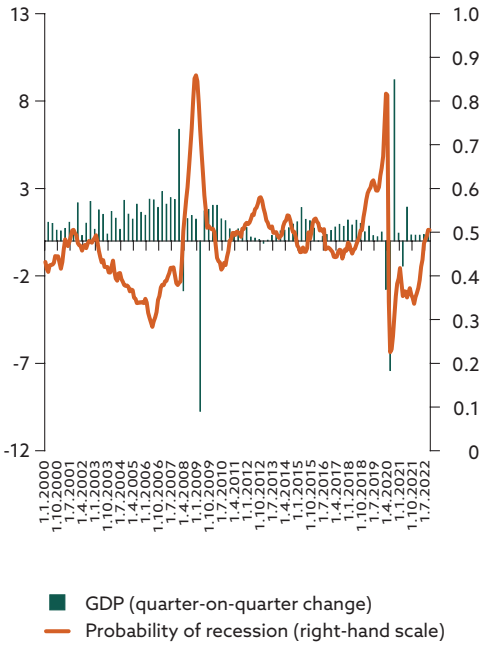
Economic activity is slowing (Chart 21). The probability of the Slovak economy falling into recession is gradually increasing in the light of incoming information (Chart 22). Persisting uncertainty and record-high input processes are undermining sentiment, while the labour market is showing increasing signs of cooling. Growth rates for revenues, industrial production and wages do not yet appear to be deteriorating significantly, but they are gradually decelerating.

Chart 21
Activity tracker (three-month moving average; month-on-month percentage changes; deviation from the mean)



Sources: Macrobond, SO SR, and NBS.
Note: The activity tracker is estimated using the principal components method with a broad range of domestic and foreign monthly indicators.

Chart 22
Probability of recession



Source: NBS.
Note: Model based on the approach presented in Tóth, P., "Are we in a √-shaped or a W-shaped recession?", *Discussion Note*, No 98, Národná banka Slovenska, 21 January 2021.

We expect, however, that any economic contraction in late 2022/early 2023 will be only moderate. The EU's adoption of various measures to cushion the impact of higher energy prices has helped push input prices back down to lower levels. Following this news, sentiment abroad has improved and the better than expected evolution of real indicators has also helped. The Slovak government is planning to implement measures to mitigate the effects of high prices on both households and firms, which should help the economy avoid a more significant slump.

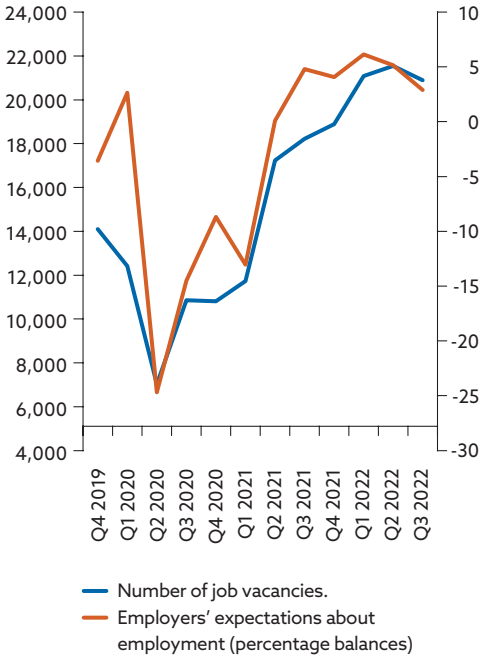
2.2.4 Labour market

Although people were still finding work in the summer months, the labour market was showing signs of cooling. In September 2022 employment increased for a sixth successive month and the unemployment rate dropped below 6%, to approach historical lows. Despite these favourable trends, however, labour market dynamics have moderated and employment growth has come almost to a halt. With their costs rising significantly, firms are cautious about creating new jobs.

Demand for labour is weakening. As measured by the number of job vacancies, labour demand has declined. The number of job vacancies has fallen, and economic sentiment surveys show deteriorating expectations about employment (Chart 23).

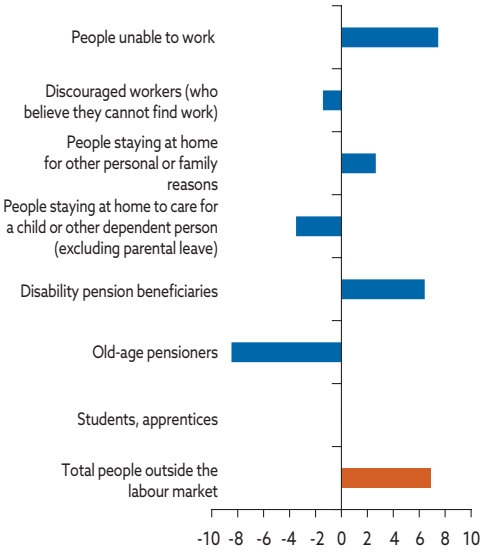
At the same time, however, labour supply is being reduced by falling unemployment and by people dropping out of the labour market. On the supply side, the number of unemployed decreased in the third quarter and so too, for the first time in several quarters, did the economically active population. On the other hand, the number of people outside the labour market increased (Chart 24). Within the economically inactive population, the main increases were in the number of people unable to work and the number in receipt of disability pensions as well as in the number of people who remained at home for personal or family reasons. These changes were not offset by an increase in the number of pensioners in work (pensioners' participation in the labour market is now at record levels).

Chart 23
Number of job vacancies and employment expectations



Sources: SO SR, Profesia online job portal (www.profesia.sk), and NBS.

Chart 24
People outside the labour market (quarter-on-quarter changes in thousands of persons)

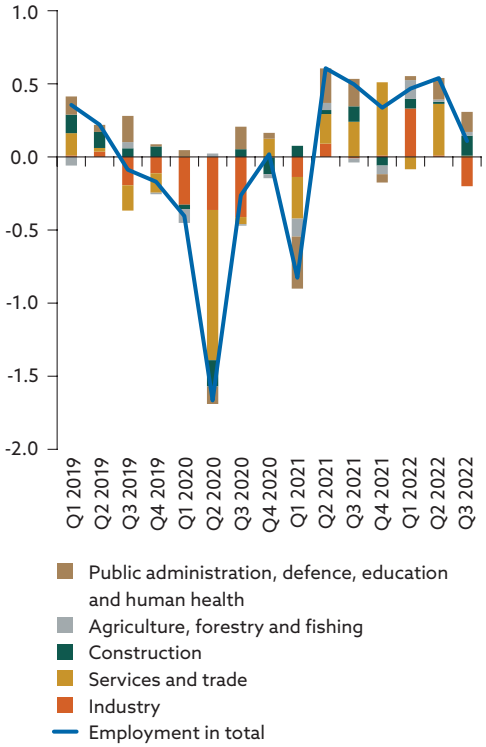


Sources: SO SR, and NBS.

The number of people in employment increased only slightly in the third quarter (by around 3.7 thousand). The sectors contributing most to that increase were services, construction, and public administration (Chart 25). Firms in the services sector benefited from a post-pandemic recovery and sought to rehire staff let go during the crisis. By contrast, the trade and in-

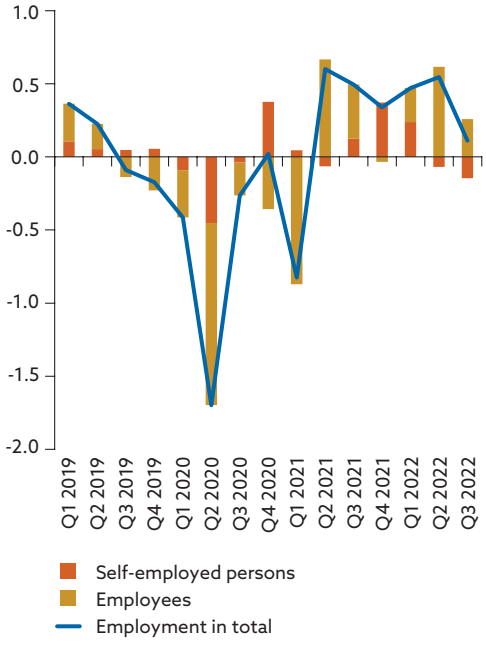
dustry sectors made negative contributions to employment growth. With firms and individuals showing an increasing preference for direct employment, the number of self-employed persons declined slightly. (Chart 26).

Chart 25
Employment by sector (quarter-on-quarter percentage changes; percentage point contributions)



Sources: ÚPSVaR, and NBS.

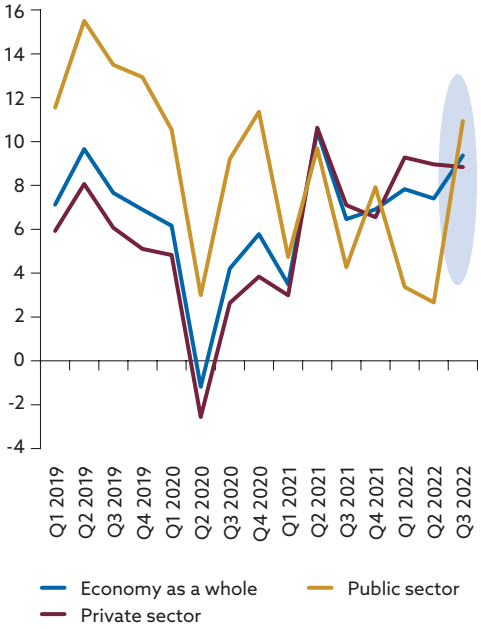
Chart 26
Employment (quarter-on-quarter percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

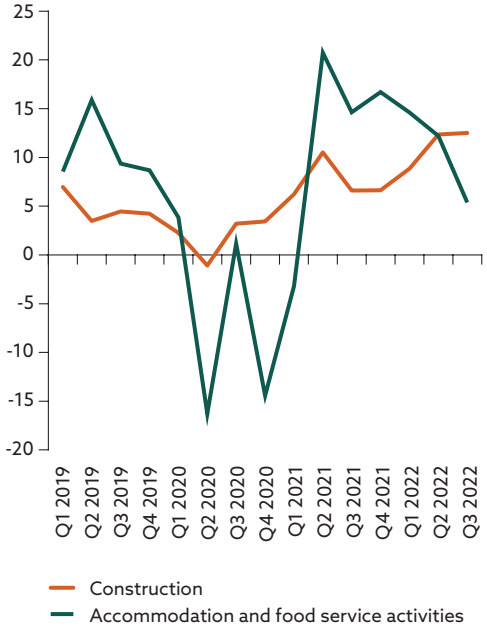
Annual wage growth accelerated markedly in the third quarter, but not sufficiently to keep pace with rising living costs. The main driver of headline wage growth has been rising public sector wages. The public sector wage increases originally negotiated for 2022 were very low and the sector's wage growth in the first half of the year was modest. As part of the wage bargaining for 2023, the government agreed to pay public sector workers a one-off bonus in September 2022. This translated into a surge in public sector wage growth in the third quarter (Chart 27). Private sector wage growth was largely the same in the third quarter as in the previous quarter. In construction, where labour demand remains elevated, wage growth was in double digits. In the trade and food services sectors, by contrast, wage growth moderated appreciably (Chart 28). At the same time, wage growth has not kept pace with high consumer price inflation and rising living costs, so real wages have continued to fall, albeit their decline was slightly more moderate in the third quarter than in the previous quarter.

Chart 27
Nominal wages (annual percentage changes)



Sources: SO SR, and NBS.
Note: 'Public sector' corresponds to the sections O, P and Q sections of NACE Rev. 2 (Statistical classification of economic activities in the European Community).

Chart 28
Nominal wages in construction and in accommodation and food service activities (annual percentage changes)



Source: SO SR.

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3 Medium-term forecast

3.1 Global outlook and technical assumptions of the forecast[6]

Compared with the September forecast, the largest change in assumptions is the taking into account of media-reported information about next year's administered energy prices for households. With spot prices implying a severalfold increase in administered prices of gas, heat and electricity (leaving aside a memorandum concluded with the domestic power utility Slovenské elektrárne), the Slovak government on 1 December approved measures to curb the increase in administered prices. For next year, it is assumed that the power component of the consumer electricity price will be close to zero and that gas and heat prices will increase by 15%.

The setting of administered energy prices for 2023 has provided clarity for the short term, but the situation in subsequent years remains uncertain.[7] There are several ways in which the regulator and government may have to deal with energy prices. One option is to gradually increase administered prices so that they reach the market-based level in 2025. This will require the government to provide repeated price subsidies to energy suppliers. Another option is to bring prices in line with the market level as early as 2024, though that would imply double-digit inflation for a third year in a row.

Our baseline scenario assumes that household gas prices will increase more sharply in 2024, to an extent that limits the increased price volatility (with prices declining in 2025). In other words, public subsidies provided to firms in 2024 will be set in such a way that consumer gas prices do not have to be increased in 2025. Heat price increases will be commensurate with gas prices, as just over 50% of heating plants use gas for heat production. As for electricity, prices are assumed to rise in both 2024 and 2025. A memorandum concluded with the power utility Slovenské elektrárne fixes the power component of the final consumer price of electricity, but even if it remains in effect in 2024, the other components are expected to increase.

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6 The technical assumptions of this medium-term forecast are based on the December 2022 Eurosystem staff macroeconomic projections for the euro area.

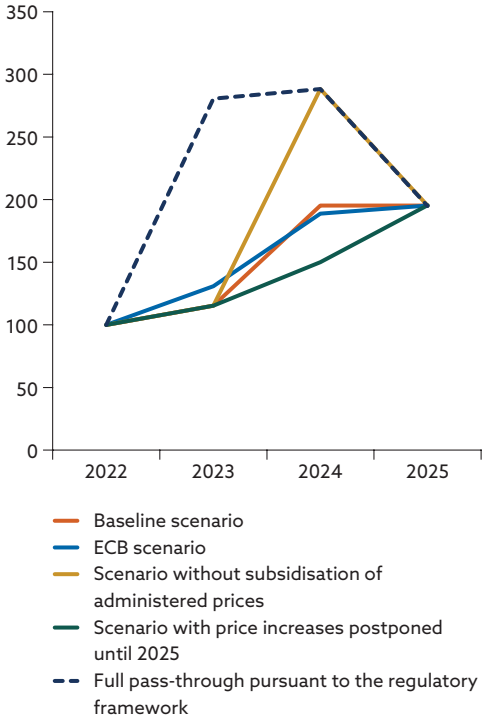
7 In view of the uncertainty, we also present illustrative scenarios of the potential evolution of administered energy prices in 2024 and 2025.

Table 2 Household gas prices[8]

	Index				Annual percentage change		
	2022	2023	2024	2025	2023	2024	2025
Baseline scenario	100.0	115.3	195.3	195.3	15.3	69.3	0.0
ECB scenario	100.0	130.8	188.7	195.2	30.8	44.3	3.4
Scenario without subsidisation of administered prices	100.0	115.3	288.3	195.2	15.3	150.0	-32.3
Scenario with price increases postponed until 2025	100.0	115.3	150.1	195.5	15.3	30.2	30.2

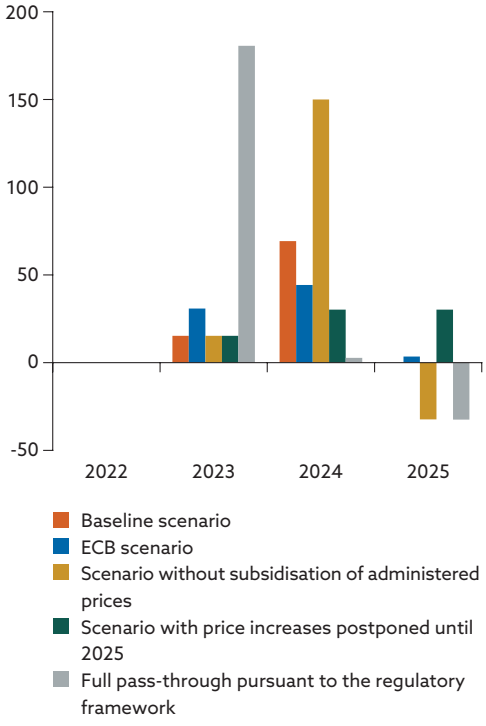
Source: NBS.

Chart 29
Gas prices (index: 2022 = 100)



Source: NBS.

Chart 30
Gas prices (annual percentage changes)



Source: NBS.

Table 3 Household electricity prices

	Index				Annual percentage change		
	2022	2023	2024	2025	2023	2024	2025
Baseline scenario	100.0	108.7	145.9	195.8	8.7	34.2	34.2
ECB scenario	100.0	129.2	167.6	207.4	29.2	29.8	23.7
Scenario without subsidisation of administered prices	100.0	108.9	146.0	195.8	8.9	34.1	34.1
Scenario with price increases postponed until 2025	100.0	108.9	127.3	195.8	8.9	16.9	53.8

Source: NBS.

[8] The ECB scenario was calculated before the publication of the Slovak government's package of measures to cushion the impact of rising energy prices. The December projections for the euro area published by the ECB are fully consistent with this scenario. Given, however, Slovakia's weight in the euro area economy, the baseline scenario can also be considered sufficiently consistent with the figures for the euro area as a whole.

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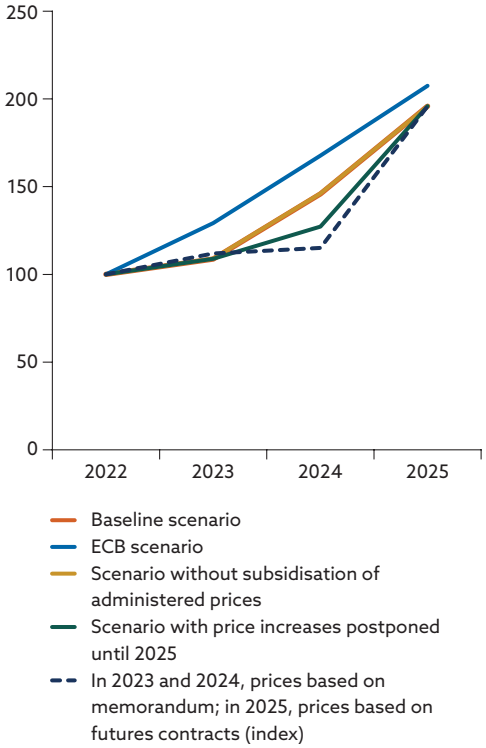
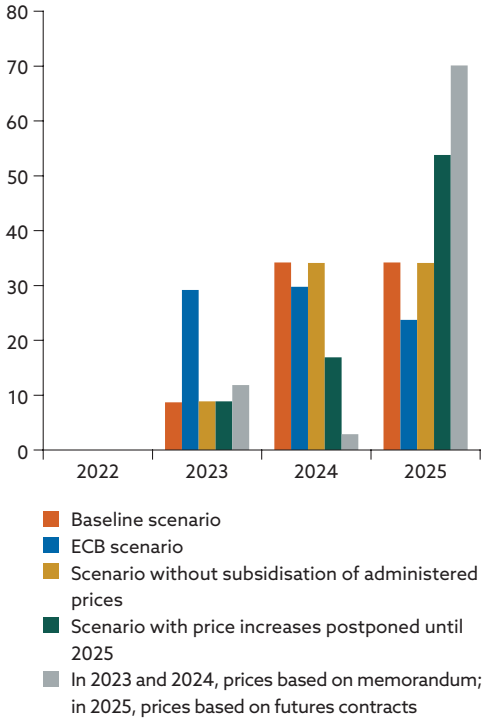
Chart 31
Electricity prices (index: 2022 = 100)



Source: NBS.

Chart 32
Electricity prices (annual percentage changes)

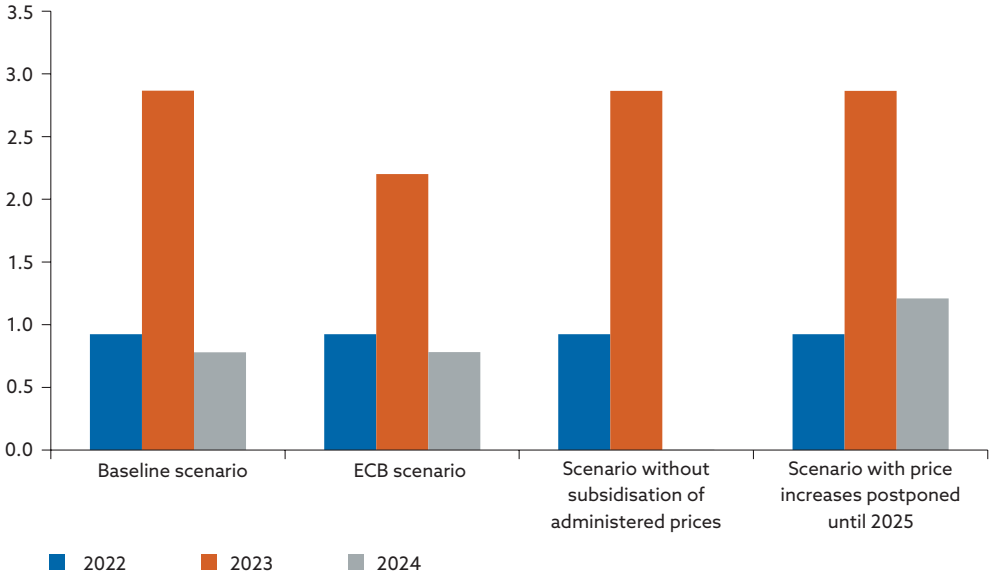


Source: NBS.

The increase in household energy prices in the baseline scenario is assumed to be conditional on the payment of price subsidies to energy suppliers, amounting to 1.2% of GDP in 2023 and 0.8% of GDP in 2024.[9] For 2025, a reversion to the standard regulatory mechanism with no need for government subsidy measures is assumed. If, in the absence of government intervention, market prices were fully passed on to household energy prices as early as 2024, the cost would be fully borne by households (as envisaged in the 'scenario without subsidisation of administered prices'). If, alternatively, the increase in administered prices is lower in 2024 and the transition to market prices does not occur until 2025 (as envisaged in the 'scenario with price increases postponed until 2025'), subsidy costs in 2024 would be higher than assumed in the baseline scenario, reaching 1.2% of GDP. In the following year there would be no further government price subsidies.

[9] Our calculations do not incorporate any reduction in the amount of household energy consumption in 2023, since there is minimal incentive for a change in behaviour in this area. If there were a change in behaviour, the overall government subsidy could be reduced commensurately.

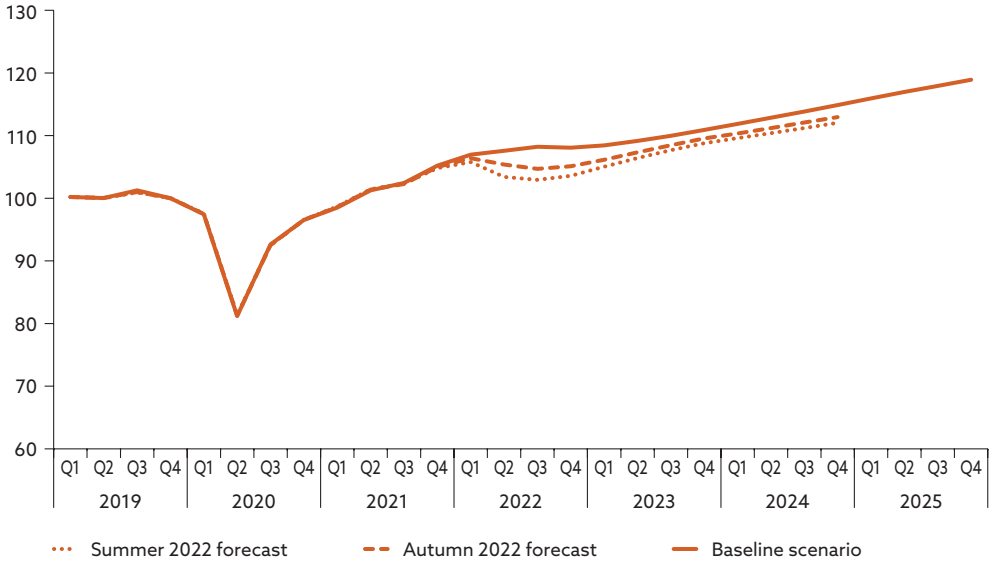
Chart 33
Government measures to mitigate the impact of high energy prices (percentages of GDP)



Source: NBS.

The outlook for foreign demand for Slovak products is steadily improving (Chart 34). In the light of the better than projected evolution of this demand in 2022, the assumption for its level has been revised up. It is assumed to be stable in late 2022 and early 2022, before embarking on a growth trajectory in subsequent months. The foreign demand level at the end of 2024 is assumed to be 1.8% higher than was projected in the autumn 2022 forecast.

Chart 34
Foreign demand (index: Q4 2019 = 100)

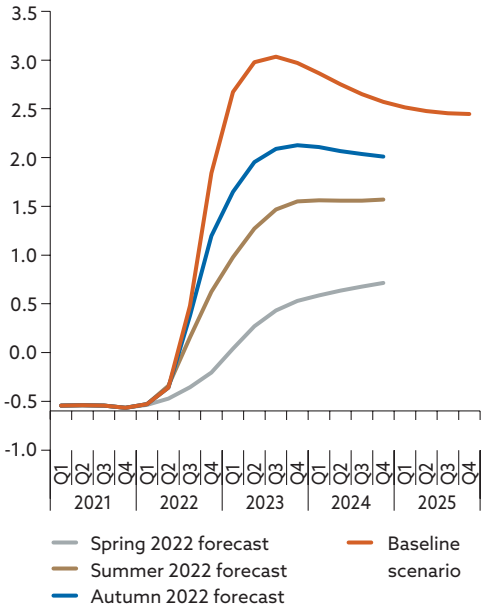


Source: NBS.

Compared with the autumn forecast, the assumption for the oil price in US dollars, which peaked in the second quarter of 2022, has been revised down, with its declining trend envisaged to continue until the end of 2025. Under our revised assumption for the bilateral EUR/USD exchange rate, the euro is stronger than was assumed in the previous forecast, remaining above parity with the dollar throughout the projection horizon.

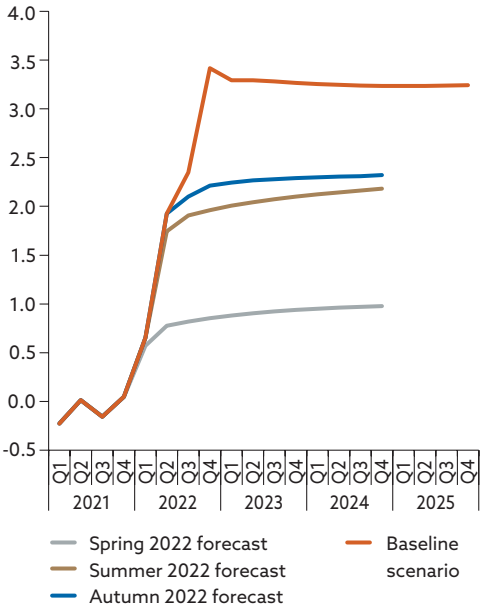
Monetary policy tightening amid rising inflation and the readjustment of market expectations for interest rates have translated into a further upward revision of short- and long-term market interest rates (Charts 35 and 36).

Chart 35
Three-month EURIBOR



Sources: European Commission, and NBS.

Chart 36
Ten-year Slovak government bond yield



Sources: SO SR, and NBS.

Table 4 External environment and technical assumptions (annual percentage changes, unless otherwise indicated)

	Actual data	Baseline scenario				Difference vis-à-vis the autumn 2022 forecast		
	2021	2022	2023	2024	2025	2022	2023	2024
Slovakia's foreign demand	10.8	5.7	1.8	3.4	3.6	2.2	-0.6	-0.1
USD/EUR exchange rate [1), 2)] (level)	1.18	1.05	1.03	1.03	1.03	0.4	3.8	3.8
Oil price in USD [1), 2)] (level)	71.1	104.6	86.4	79.7	76.0	-0.9	-4.6	-3.8
Oil price in USD [1)]	71.3	47.1	-17.4	-7.7	-4.7	-1.4	-3.2	0.7
Oil price in EUR [1)]	65.4	65.6	-15.7	-7.7	-4.7	-2.0	-6.1	0.7
Non-energy commodity prices	42.1	6.4	-10.8	0.7	1.4	-0.7	-1.0	1.9
Three-month EURIBOR (percentage per annum)	-0.5	0.4	2.9	2.7	2.5	0.2	1.0	0.7
Ten-year Slovak government bond yield (percentage)	-0.1	2.1	3.3	3.2	3.2	0.4	1.0	0.9

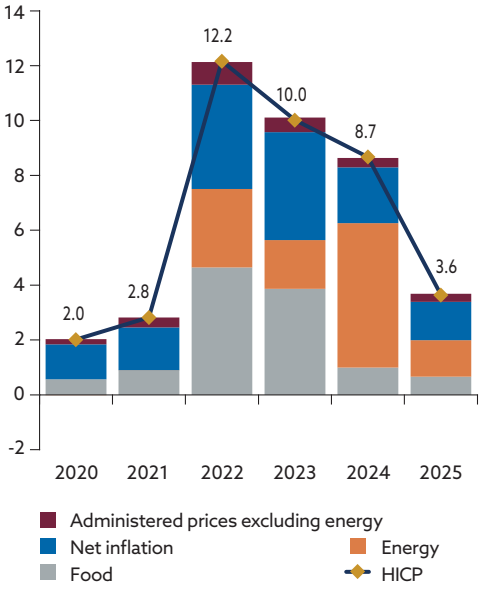
Sources: ECB, SO SR, and NBS.
Notes:
1) Annual percentage changes and changes vis-à-vis the previous forecast are calculated from unrounded figures.
2) Differences vis-à-vis the previous forecast are in percentages.

3.2 Macroeconomic forecast for Slovakia[10]

Forecast for 2023

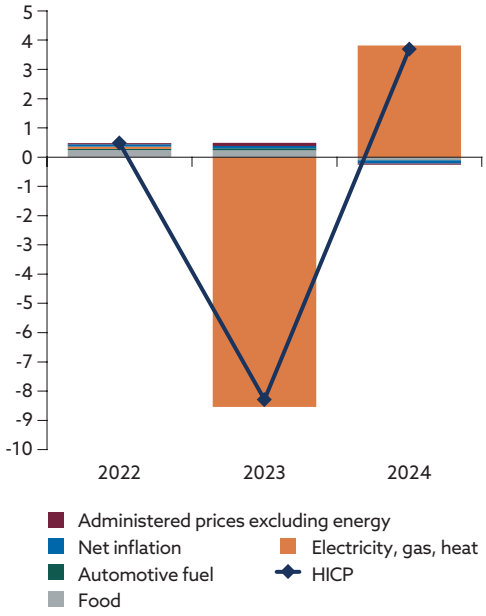
Headline inflation will be lower in 2023 than was projected in the September 2022 forecast (Chart 38). The increase in administered energy prices (Chart 37) will not be as large as would be expected under the regulatory framework.

Chart 37
HICP inflation and its components (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 38
Revision compared with the September forecast (percentage point contributions)



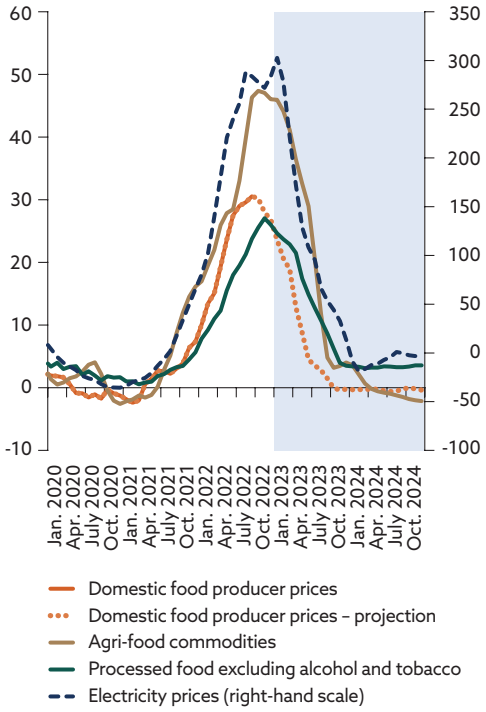
Sources: SO SR, and NBS.

The impact of cost factors is expected to start moderating in the second half of 2023. At the same time, there will be a softening of consumer demand. The impact of commodity prices, producer prices and import prices on goods and services inflation is expected to peak in late 2022/early 2023 (Charts 39 and 40). In subsequent quarters, cost factors should already be having a dampening effect on inflation. We envisage slowing growth rates for prices of food, services and non-energy industrial goods. Even so, their rates of increase will remain high in historical terms. There is a risk that fiscal stimuli will continue to stoke consumer demand. Therefore, both

[10] As a member of the Eurosystem, Národná banka Slovenska is required to publish a forecast that contributes to the Eurosystem's aggregate macroeconomic projections. We therefore present it in charts and a table.

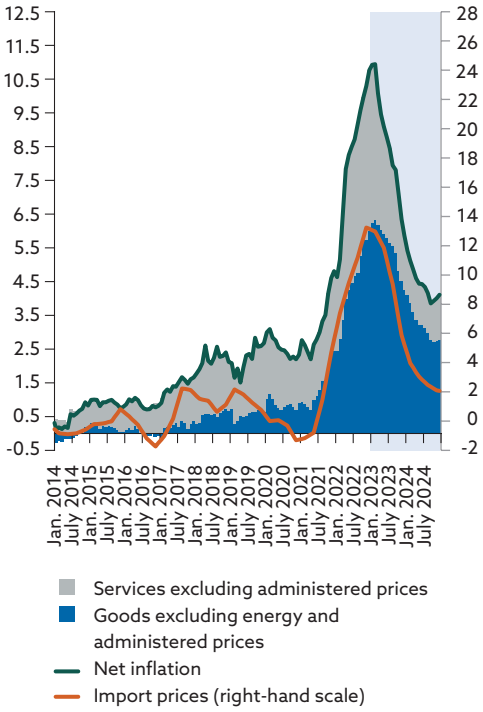
demand-pull and headline inflation are expected to remain high in 2023, decelerating more slowly than previously projected.

Chart 39
Cost factors and processed food prices (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.
Note: The shaded area represents NBS projections.

Chart 40
Import prices and net inflation (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Table 5 Components of HICP inflation (annual percentage changes)

	Average for 2004–08 (pre-crisis period)	Average for 2010–14 (post-crisis period with euro currency)	2021	2022	2023	2024	2025
HICP	**4.1**	**2.0**	**2.8**	**12.2**	**10.0**	**8.7**	**3.6**
Food	3.6	3.1	2.9	16.1	13.0	3.4	2.3
Non-energy industrial goods	0.2	0.3	2.4	7.3	9.0	5.3	3.6
Energy	8.3	2.3	0.1	19.0	11.8	34.9	8.8
Services	5.3	2.5	4.3	9.3	6.7	3.1	2.3
Net inflation	1.8	1.0	3.2	8.3	8.5	4.4	3.0

Sources: SO SR, and NBS.

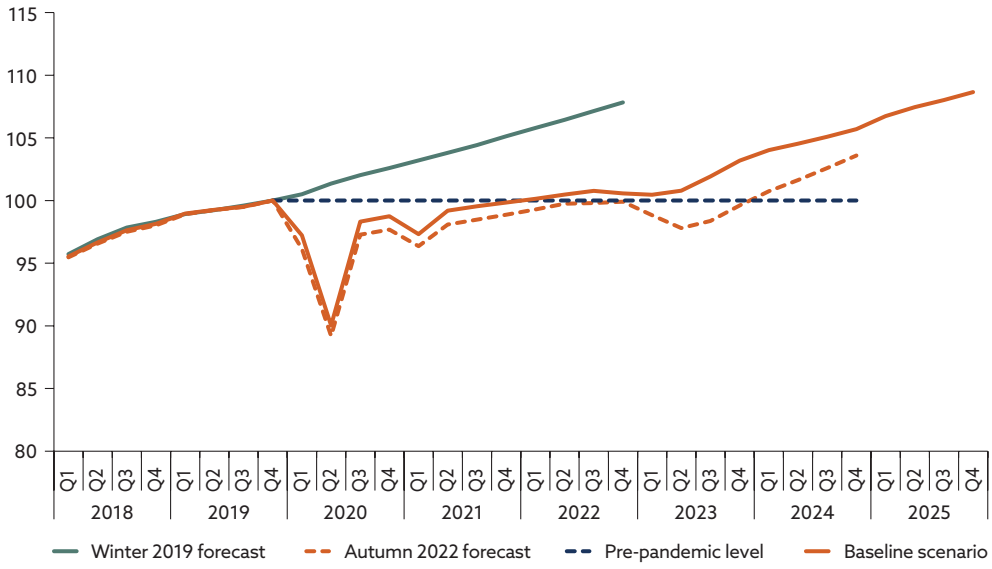
The estimation of the Slovak economy's performance next year has also been revised up significantly from what was projected in September (Chart 41). The economy is forecast to grow by 1.6% in 2023. However, downside risks to the medium-term economic outlook are increasing. In the September forecast, we assumed that government action to cushion

the increase in administered energy prices would be only modest. We did note, however, that the adoption of more robust measures could to a large extent limit the impact of the energy crisis on households. The recently adopted government measures will help households, but they represent a relatively large burden on the government. At the same time, households can expect more difficult times in the medium term. It remains to be seen when and how administered prices for households will return to market levels, and the related uncertainty may affect consumer behaviour in 2023.

If government measures are partly financed by EU funds, it will represent a missed opportunity to make productive use of these resources. Instead of increasing the economy's potential output or speeding up the transition to a carbon-neutral economy, a proportion of the EU funds will be spent on consumption, without any effort to target the aid or to incentivise people to reduce energy consumption.

While energy price subsidies for households will avert a deeper recession, the economy is expected to undergo a short-term contraction in late 2022 and early 2023. The shallow downturn will result from the global economic slowdown and weakening of consumer demand. In addition, Slovakia's export performance is expected to remain hampered by component shortages, though the situation on that front has gradually improved this year. Component supply disruptions are envisaged to persist for some time to come, with the situation not likely to ease until the end of 2023.

Chart 41
GDP projections (index: Q4 2019 = 100)



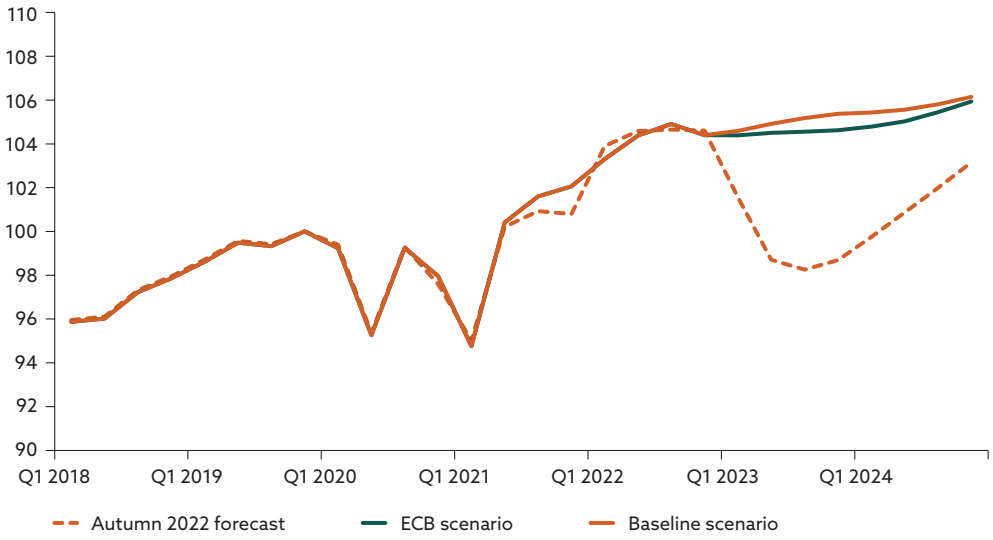
Source: NBS.

We expect that elevated inflation and falling real incomes will translate into a decline in consumer spending in late 2022/early 2023 (Chart 42).

Households have for some time been facing a decline in real wages. To meet rising costs, they are increasingly dipping into savings. The sharp drop in consumer confidence has had a downward impact on private consumption, as evidenced, for example, by high-frequency and monthly retail trade data. Households are expected to remain cautious during the first half of 2023, when inflation peaks. Households will get some relief from fiscal policy, which next year, besides bringing energy price subsidies, will stabilise disposable income with the largest ever volume of permanent measures.

Chart 42

Private consumption (index: Q4 2019 = 100)

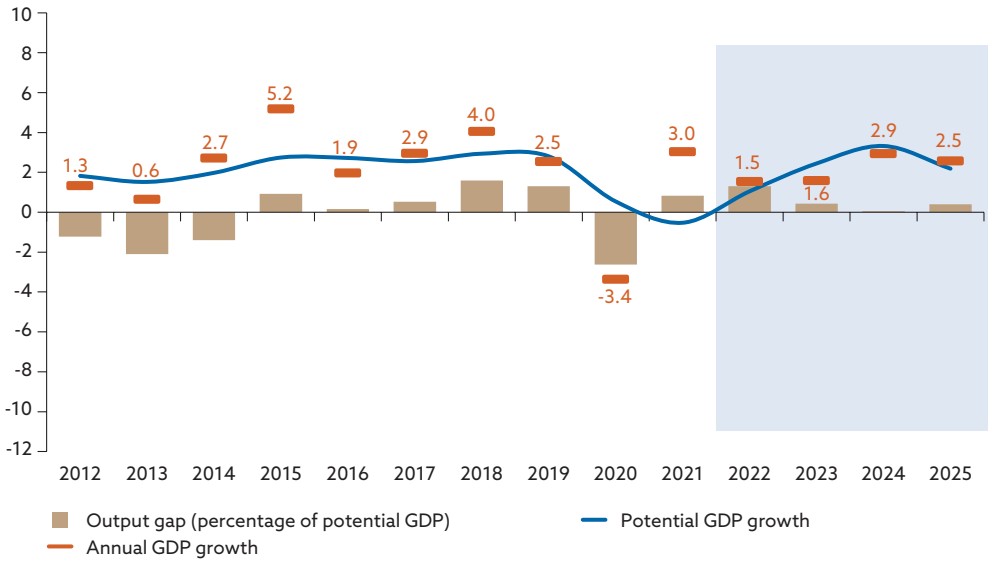


Source: NBS.

Government measures are expected to prevent the economy from falling below potential. The domestic economy has been picking up since the pandemic and is operating above potential (Chart 43). Consumer demand is maintaining relatively solid growth, despite the inflationary environment. We see the economy as operating at 1–2% above potential over the 2021–22 period. In the long-term, however, higher inflation is expected to weigh on consumer demand in 2023 and consequently reduce the economy's overheating. Recently adopted government measures in this area should, however, prevent a deeper downturn and thereby help keep economic activity at potential.

Chart 43

The economy's cyclical position and growth (percentages)



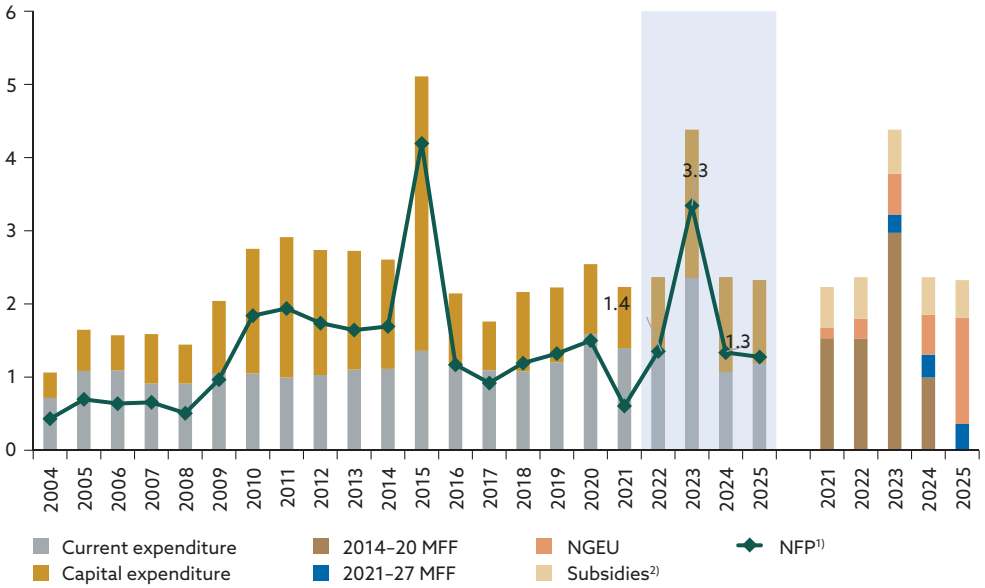
Sources: SO SR, and NBS.

A pick-up in the absorption of EU funds is expected to boost investment in 2023. EU fund disbursements to Slovakia are projected to accelerate, so government investment should add impetus to the economy. Slovakia's net financial position vis-à-vis the EU budget is expected to peak in 2023 at 3.3% of GDP (Chart 44), with the final disbursements from Slovakia's allocation under the 2014–20 EU budget. The economy, weakened by the price shock, should benefit from revived demand-side spending (2.9% of GDP) and from support for firms with high energy costs (0.8% of GDP).[11] After the impact of the 2014–20 EU funding has faded, the next period should gradually see the stimulus effect of RRP investments (financed by the EU's Recovery and Resilience Facility) and the gradual implementation of cohesion policy projects under the 2021–27 EU budget.

Firms will be forced to invest in more energy-efficient production in order to reduce fossil fuel consumption and prepare for the transition to a green economy. They may be helped to some extent by EU funds. On the other hand, private investment to expand the economy's productive capacity is expected to remain subdued. Persisting uncertainty and elevated interest rates will undermine business investment, particularly in the area of residential real estate.

[11] Total receipts from the EU budget, not net of contributions to that budget, are expected to amount to 4.4% of GDP in 2023. The differential in respect of demand-side expenditure (2.9%) and price subsidies for firms with high energy costs (0.8%) is accounted for by other subsidies, notably standard direct payments to farmers. As for the amount of EU-funded energy price subsidies for firms, an assumption is made about government-provided information on support from 2014–20 EU fund allocations.

Chart 44
Slovakia's absorption of EU funds and net financial position (percentages of GDP)



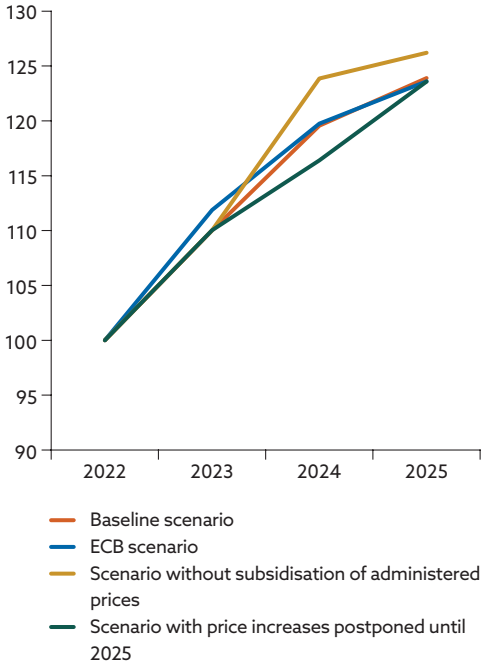
Source: NBS.
1) Net of own resources collection costs.
2) The subsidies comprise mainly agricultural funds under the 2014–20 and 2021–27 budgets.
Note: NFP – net financial position; MFF – Multiannual Financial Framework; NGEU – Next Generation EU instrument (the forecast envisages funding under the NGEU's Recovery and Resilience Facility, Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU) initiative, and Just Transition Fund).

The slowdown in economic activity will temporarily translate into a moderate decline in employment. An estimated five thousand people could lose their jobs in the months ahead. The fact that the economy will not fall into a deeper recession means the labour market outlook is brighter in this forecast than in the September forecast.

Forecast for 2024 and 2025

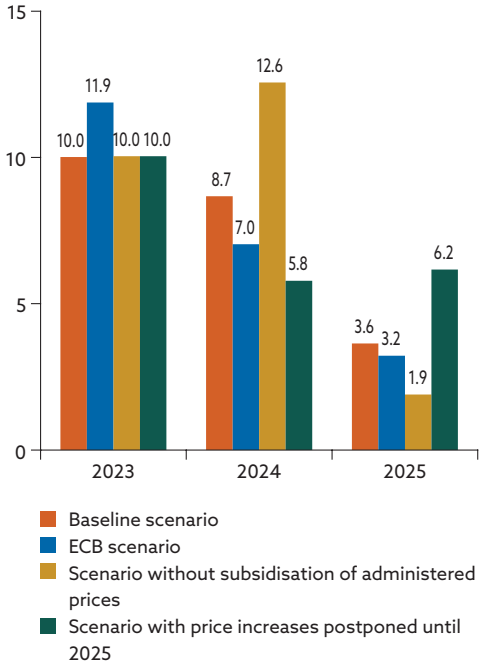
The economic outlook for 2024 and 2025 will depend to a large extent on how energy prices evolve and on whether the government makes further interventions in the formation of energy consumer prices. The cumulative increase in the price level over 2024 and 2025 is projected to be around 14% (Chart 45). Its distribution over time will affect how quickly the economy progresses. The inflation level will have a significant impact on households' purchasing power and on overall domestic demand.

Chart 45
HICP price level (index: 2022 = 100)



Source: NBS.

Chart 46
HICP inflation (annual percentage changes)



Source: NBS.

The baseline scenario assumes a gradual slowdown in headline inflation (Chart 46). In 2024 administered prices will increase more sharply and account for a large part of the 8.7% price level increase. Even so, energy prices will remain below market levels, so additional government price subsidies will be necessary. The economy, however, will not be significantly impaired. Household incomes will stabilise, private consumption will slowly pick up, and, as foreign demand gradually recovers, the economy is expected to operate at equilibrium. Economic growth is projected to reach average pre-pandemic levels.

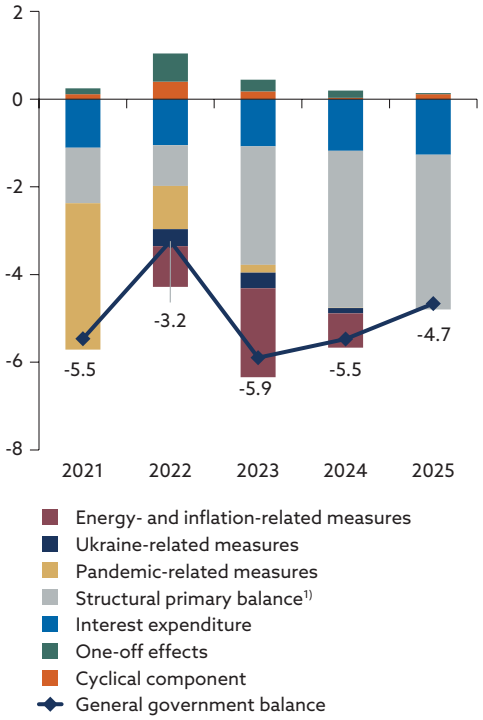
Economic stabilisation will strengthen the labour market situation. Although we envisage unfavourable trends resulting from the baby boomer generation's ageing and massive outflow from the labour market, firms are expected to increase recruitment. The labour market will tighten again, hence a resurgence in wage growth may be expected. As a result of indexation based on past inflation, wages will record a cumulative increase of 16%, so they will keep pace with price growth.

3.3 Public finance projections

In our baseline scenario, Slovakia's general government deficit for 2022 is expected to be 3.2% of GDP, representing a year-on-year improvement of

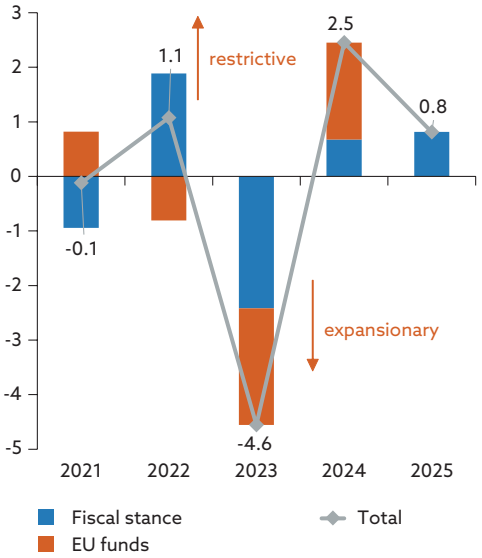
2.3 percentage points of GDP (Chart 47). The upturn in fiscal performance stems from the economy's ongoing cyclical recovery and the favourable evolution of tax revenues (in particular tax and social contribution revenues from the labour market, corporate tax revenues and VAT revenues), as well as from an exceptional one-time solidarity contribution. Moreover, pandemic-related expenditure decreased in 2022, and there will be a lag in the full pass-through of currently high inflation to social expenditure. While these factors are fiscally positive, their impact is curbed by the following: spending measures to support families (in particular higher child allowances and a tax bonus); expenditure on aid to Ukraine; increased spending on energy, goods and services; and one-off assistance to certain population groups and to certain firms to help them cope with, respectively, rising inflation and rising energy prices.

Chart 47
Decomposition of the general government balance (percentages of GDP)



Sources: SO SR, and NBS.
1) Excluding pandemic-, Ukraine- and energy-related measures.
Note: One-off factors include non-cyclical effects that have a temporary impact on the general government balance and are supposed to be eliminated in the future.

Chart 48
Fiscal stance (percentage points of GDP)



Sources: SO SR, and NBS.
Note: Fiscal stance – annual rate of change in the cyclically adjusted primary balance.

The deficit in future years will widen as a result of expansionary fiscal measures. In the baseline scenario, the deficit increases to 5.9% of GDP in 2023 (Chart 47). The announced package of energy price subsidies for

households and firms is taken into account in this forecast at the level of €3.4 billion[12] in 2023. For prices to evolve in line with the baseline scenario, additional price subsidy measures will be required in the following year. Our forecast envisages that the government will adopt additional such measures in 2024 that will provide households with direct assistance amounting to €1 billion. Expenditure from 2023 will also reflect the impact of record large permanent measures, including the so-called family package, pension system adjustments, and salary indexations for doctors and other public sector employees. Subsequent years are expected to see also an increase in healthcare expenditure and the continuation of existing and planned investment projects. These additional fiscal costs, partly offset by tax revenue growth, will result in the deficit improving slightly in 2024, to 5.5% of GDP.

Compared with the autumn forecast, the deficit projection for 2022 has improved slightly. This mostly reflects an upward revision of tax revenue, including a one-time solidarity contribution. The impact of that revision is partly offset by an increase in expenditure to cushion the effects of rising inflation and energy prices. Other downward impacts come from the payment of a one-off benefit to pensioners in November (at the level of 70% of the annual benefit known as the '13th pension payment'), and higher spending on public sector wages. The deficit projection also takes into account a capital transfer to ensure the financial stability of the domestic gas utility Slovenský plynárenský priemysel (SPP).

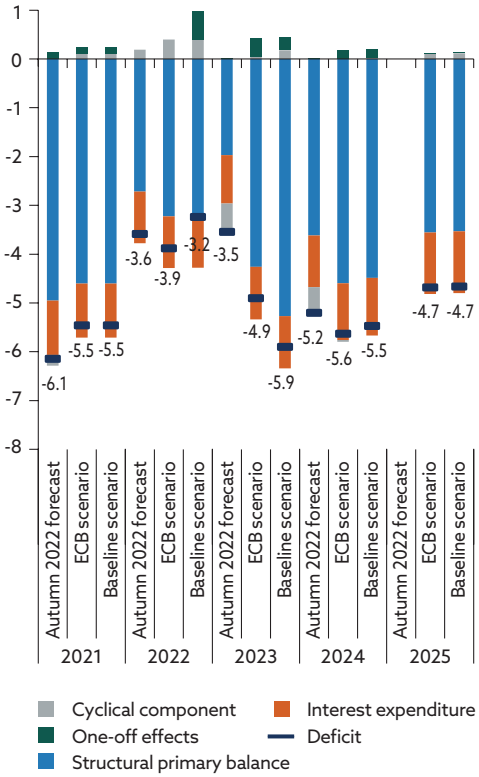
The deficit's deterioration in subsequent years is due mainly to an increase in the current expenditure estimate. The higher inflation projected for 2022 results in a greater need for the inflation-related social expenditure in 2023, and the deficit is further widened by increasing expenditure on energy price subsidies and on aid to Ukraine. These impacts are only partly offset by additional revenue from a special levy on water-management construction and from income tax increases.

Compared with the scenario we sent to the ECB, our baseline scenario assumes a lower fiscal deficit in 2022 and a higher deficit 2023. This also has implications for public debt. Moderately higher revenues in 2022 (boosted by a solidarity contribution) resulted in the baseline projected deficit for 2022 being lower than the ECB scenario by 0.6 pp of GDP. For next year, the baseline scenario includes an increase in energy price subsidies, with the result that the deficit is 1 pp higher compared with the ECB scenario. In 2024 the baseline scenario envisages a slight improvement in the deficit,

[12] Of which, however, we assume around €1 billion will be covered by EU funds; hence the impact on public finances will be approximately €2.4 billion.

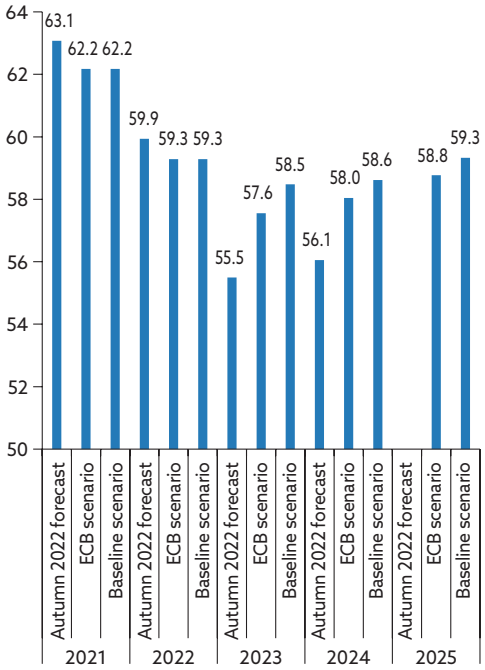
while in 2025 the scenarios are very similar in terms of their deficit projections (Chart 49).

Chart 49
The fiscal deficit and its decomposition (percentages of GDP; percentage point contributions)



Source: NBS.

Chart 50
Public debt (percentages of GDP)



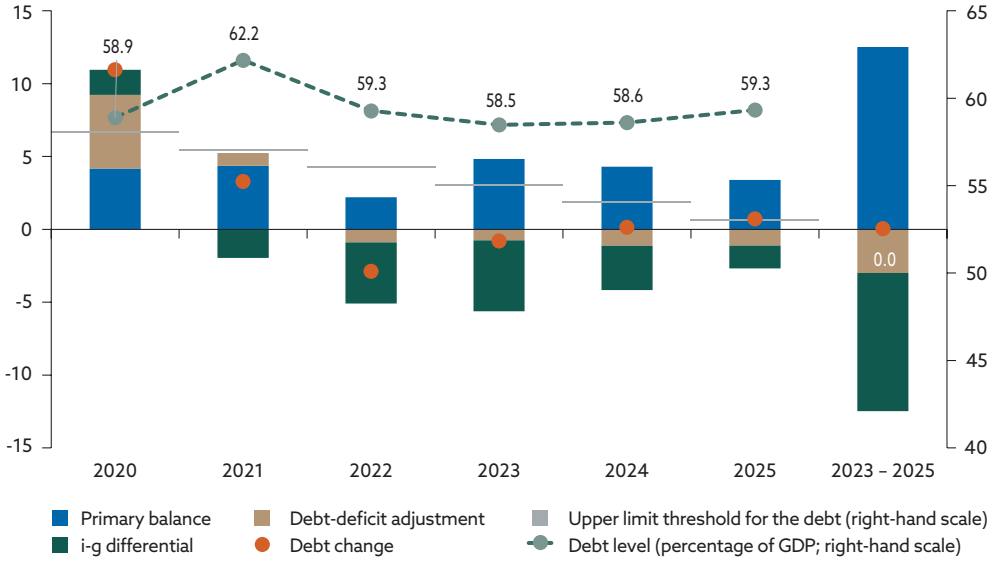
Source: NBS.

Public debt is expected to fall and to remain below the 60% of GDP threshold in the medium term (Chart 50). In the baseline scenario, the deficit is projected to be 59.3% of GDP in 2025 (at the end of the projection horizon), which is 2.8 pp lower than the 2021 public debt. The decline in public debt should be confined to 2022 and 2023, after which the debt is expected to start rising again. The debt in 2022 is projected to exceed 55% of GDP, the upper limit of sanction bands under the debt brake regime.[13]

[13] The debt brake is expected to be reactivated in May 2023 after a 24-month exemption since the most recent approval of the Slovak government 's programme and the vote of confidence in the new government. In that event, the government should, among other things, ask parliament for a vote of confidence, cap expenditure, and submit a balanced budget for the following year. Even assuming the activation of the strictest sanctions and a balanced budget for 2024, this would not be enough to bring the debt below the upper limit. It would be necessary to reapply the strictest sanctions. Only in 2025, with a balanced budget in place, would the debt fall below that limit.

The fiscal deficit will continue providing grounds for new borrowing, which will also reflect the impact of funding needs for energy price measures, family support measures, and reforms of the first pillar of the pension system. The relative debt burden should, however, be mitigated by the impact of higher nominal GDP growth and by price developments **(Chart 51).**

Chart 51
Public debt and factors of change (percentage points of GDP; percentages of GDP)



Sources: SO SR, and NBS calculations.
Notes: Debt-deficit adjustment – a factor of consistency between the fiscal deficit and the debt change; i-g differential – a factor taking into account the impact of interest costs and economic growth on the debt change.

3.4 Risks to the forecast

The largest risks stem from a shortage of information about administered prices in 2024 and 2025. If even in 2024 administered prices are not adjusted to a level closer to what market prices would imply, inflation can be expected to remain relatively high in 2025. In the real economy, a number of risks are building up. Fiscal policy may have an expansionary or restrictive impact in individual years. If fiscal policy stimulates the economy in 2024 to a similar extent as it did in 2023, it will likely need to be far more restrictive in 2025.

The repercussions of the war in Ukraine remain a major risk to the macroeconomic forecast. This is also related to the energy crisis, and a relatively large unknown is whether Europe can in the short term adjust to the reduced availability of fossil fuels. In the event of gas shortages, there is a high risk of weaker economic growth. On the other hand, an improve-

ment in the availability of components for the automotive industry could drive car production to higher levels.

The deficit outlook is subject to a downward risk related to the activation of the debt brake in May 2023. Current borrowing levels would trigger the strictest sanctions, including the capping of expenditure and the requirement to present a balanced budget to parliament.

A downside risk to public expenditure on projects co-financed by the EU is that the uptake of EU structural and investment funds in 2023 will be lower than projected and that RRP investments will be implemented more slowly than expected.

There is a large degree of uncertainty about how much government assistance will be provided to cushion the impact of surging energy prices in 2023 and about the risk that additional assistance will be needed also in the following year.

Table 6 Winter 2022 medium-term forecast for key macroeconomic indicators

Indicator	Unit	Actual data	Baseline scenario				Difference vis-à-vis autumn 2022 forecast		
		2021	2022	2023	2024	2025	2022	2023	2024
Price developments									
HICP inflation	annual percentage change	2.8	12.2	10.0	8.7	3.6	0.5	-8.3	3.7
CPI inflation	annual percentage change	3.2	12.8	10.1	7.9	3.8	0.5	-6.0	3.3
GDP deflator	annual percentage change	2.4	7.6	9.4	4.7	2.5	-0.1	-4.9	0.9
Economic activity									
Gross domestic product	annual percentage change, constant prices	3.0	1.5	1.6	2.9	2.5	-0.3	2.6	-0.6
Private consumption	annual percentage change, constant prices	1.8	4.6	0.7	0.7	1.4	-0.6	5.6	-1.4
General government final consumption	annual percentage change, constant prices	4.2	-1.2	-0.8	0.5	2.7	0.7	3.6	-1.1
Gross fixed capital formation	annual percentage change, constant prices	0.2	4.5	6.8	3.4	2.3	0.0	4.3	-2.1
Exports of goods and services	annual percentage change, constant prices	10.6	-0.8	3.4	7.7	4.1	0.3	-0.1	1.0
Imports of goods and services	annual percentage change, constant prices	12.0	-0.3	2.4	6.2	3.5	0.0	1.5	0.1
Net exports	EUR millions at constant prices	2,526	2,068	2,977	4,563	5,306	596.6	-686.5	110.2
Output gap	percentage of potential output	0.8	1.3	0.4	0.1	0.4	0.6	2.6	1.7
Gross domestic product	EUR millions at current prices	98,523	107,580	119,587	128,852	135,400	1,139.7	-837.9	-531.0
Labour market									
Employment	thousands of persons, ESA 2010	2,385	2,422	2,424	2,431	2,433	-6.0	-1.3	15.1
Employment	annual percentage change, ESA 2010	-0.6	1.5	0.1	0.3	0.1	-0.3	0.2	0.7
Number of unemployed	thousands of persons, LFS [1]	188	174	183	169	157	-0.2	-3.5	-20.4
Unemployment rate	percentage	6.8	6.2	6.6	6.1	5.7	0.0	-0.1	-0.7
NAIRU estimate [2]	percentage	6.8	6.5	6.4	6.3	6.3	0.0	0.0	-0.1
Labour productivity [3]	annual percentage change	3.6	0.0	1.5	2.6	2.5	0.0	2.4	-1.3
Nominal productivity [4]	annual percentage change	6.1	7.5	11.1	7.4	5.0	-0.2	-2.2	-0.4
Nominal compensation per employee	annual percentage change, ESA 2010	6.5	8.0	10.7	10.1	6.0	0.4	-0.8	0.9
Nominal wages [5]	annual percentage change	6.1	8.8	10.6	9.9	5.8	0.5	-0.9	0.8
Real wages [6]	annual percentage change	2.9	-3.8	0.5	1.8	2.0	0.0	4.4	-2.5
Households and non-profit institutions serving households									
Disposable income	annual percentage change, constant prices	0.0	-0.7	1.2	0.8	1.8	-2.0	6.5	-2.5
Saving ratio [7]	percentage of disposable income	10.3	5.7	6.1	6.2	6.5	0.0	0.8	-0.2
General government sector [8]									
Total revenue	percentage of GDP	40.9	41.4	41.0	39.7	39.5	0.7	0.9	0.8
Total expenditure	percentage of GDP	46.3	44.6	46.9	45.1	44.2	0.3	3.2	1.0
General government balance [9]	percentage of GDP	-5.5	-3.2	-5.9	-5.5	-4.7	0.3	-2.4	-0.3
Cyclical component	percentage of trend GDP	0.1	0.4	0.2	0.0	0.1	0.2	0.8	0.6
Structural balance	percentage of trend GDP	-5.7	-4.3	-6.3	-5.7	-4.8	-0.5	-3.4	-1.0
Cyclically adjusted primary balance	percentage of trend GDP	-4.5	-2.6	-5.0	-4.3	-3.5	0.1	-3.0	-0.7
Fiscal stance [10]	annual percentage point change	-0.9	1.9	-2.4	0.7	0.8	-0.2	-3.2	2.3
General government gross debt	percentage of GDP	62.2	59.3	58.5	58.6	59.3	-0.6	3.0	2.6

Table 6 Winter 2022 medium-term forecast for key macroeconomic indicators (continued)

Indicator	Unit	Actual data	Baseline scenario				Difference vis-à-vis autumn 2022 forecast		
		2021	2022	2023	2024	2025	2022	2023	2024
Balance of payments									
Goods balance	percentage of GDP	-0.5	-5.2	-3.4	-1.3	-0.4	1.1	-1.3	-0.1
Current account	percentage of GDP	-2.5	-6.9	-4.8	-3.1	-2.1	1.0	-1.4	-0.6
External environment and technical assumptions									
Slovakia's foreign demand	annual percentage change	10.8	5.7	1.8	3.4	3.6	2.2	-0.6	-0.1
USD/EUR exchange [11), 12)]	level	1.18	1.05	1.03	1.03	1.03	0.4	3.8	3.8
Oil price in USD [11), 12)]	level	71.1	104.6	86.4	79.7	76.0	-0.9	-4.6	-3.8
Oil price in USD [11)]	annual percentage change	71.3	47.1	-17.4	-7.7	-4.7	-1.4	-3.2	0.7
Oil price in EUR [11)]	annual percentage change	65.2	65.6	-15.7	-7.7	-4.7	-2.2	-6.1	0.7
Non-energy commodity prices in USD	annual percentage change	42.1	6.4	-10.8	0.7	1.4	-0.7	-1.0	1.9
Three-month EURIBOR	percentage per annum	-0.5	0.4	2.9	2.7	2.5	0.2	0.9	0.6
Ten-year Slovak government bond yield	percentage	-0.1	2.1	3.3	3.2	3.2	0.4	1.0	0.9

Sources: NBS, ECB, and SO SR.

Notes:

1) Labour Force Survey.
2) Non-accelerating inflation rate of unemployment
3) GDP at constant prices / employment (ESA 2010).
4) Nominal GDP divided by persons in employment (according to SO SR quarterly statistical reporting).
5) Average monthly wages (ESA 2010).
6) Wages (ESA 2010) deflated by CPI inflation.
7) Saving ratio = gross savings / (gross disposable income + adjustments for any pension entitlement change) *100.
   Gross savings = gross disposable income + adjustments for any pension entitlement change – private consumption.
8) Sector S.13.
9) B9n – Net lending (+) / net borrowing (-).
10) Year-on-year change in cyclically adjusted primary balance; a positive value denotes a restrictive stance.
11) Year-on-year percentage changes and changes vis-à-vis the previous forecast are calculated from unrounded figures.
12) Changes vis-à-vis the previous forecast (percentages).

More detailed time series of selected macroeconomic indicators can be found on the NBS website at:
https://nbs.sk/en/publications/economic-and-monetary-developments/

Table 7 Medium-term forecast – the ECB's scenario

Indicator	Unit	Actual data	ECB scenario				Difference vis-à-vis autumn 2022 forecast		
		2021	2022	2023	2024	2025	2022	2023	2024
Price developments									
HICP inflation	annual percentage change	2.8	12.2	11.9	7.0	3.2	0.5	-6.4	2.0
CPI inflation	annual percentage change	3.2	12.8	11.5	6.6	3.3	0.5	-4.6	2.0
GDP deflator	annual percentage change	2.4	7.6	10.0	4.2	2.4	-0.1	-4.3	0.4
Economic activity									
Gross domestic product	annual percentage change, constant prices	3.0	1.5	1.1	3.2	2.7	-0.3	2.1	-0.3
Private consumption	annual percentage change, constant prices	1.8	4.6	0.3	0.7	1.8	-0.6	5.2	-1.4
General government final consumption	annual percentage change, constant prices	4.2	-1.2	-1.5	1.0	2.9	0.7	2.9	-0.6
Gross fixed capital formation	annual percentage change, constant prices	0.2	4.5	6.1	3.8	2.6	0.0	3.6	-1.7
Exports of goods and services	annual percentage change, constant prices	10.6	-0.8	3.3	7.7	4.1	0.3	-0.2	1.0
Imports of goods and services	annual percentage change, constant prices	12.0	-0.3	2.3	6.1	3.6	0.0	1.4	0.0
Net exports	EUR millions at constant prices	2,526	2,068	3,035	4,681	5,305	596.6	-629.2	227.9
Output gap	percentage of potential output	0.8	1.3	0.0	-0.1	0.4	0.6	2.2	1.5
Gross domestic product	EUR millions at current prices	98,523	107,580	119,674	128,661	135,349	1,139.7	-750.3	-722.0
Labour market									
Employment	thousands of persons, ESA 2010	2,385	2,422	2,425	2,432	2,433	-6.0	-0.7	15.3
Employment	annual percentage change, ESA 2010	-0.6	1.5	0.1	0.3	0.1	-0.3	0.2	0.7
Number of unemployed	thousands of persons, LFS [1]	188	174	182	169	157	-0.2	-4.1	-20.7
Unemployment rate	percentage	6.8	6.2	6.5	6.1	5.7	0.0	-0.2	-0.7
NAIRU estimate [2]	percentage	6.8	6.5	6.4	6.3	6.3	0.0	0.0	-0.1
Labour productivity [3]	annual percentage change	3.6	0.0	1.0	2.9	2.7	0.0	1.9	-1.0
Nominal productivity [4]	annual percentage change	6.1	7.5	11.1	7.2	5.1	-0.2	-2.2	-0.6
Nominal compensation per employee	annual percentage change, ESA 2010	6.5	8.0	11.7	9.1	5.9	0.4	0.2	-0.1
Nominal wages [5]	annual percentage change	6.1	8.8	11.7	8.9	5.7	0.5	0.2	-0.1
Real wages [6]	annual percentage change	2.9	-3.8	0.3	1.8	1.9	0.0	4.2	-2.5
Households and non-profit institutions serving households									
Disposable income	annual percentage change, constant prices	0.0	-0.7	0.4	1.2	2.1	-2.0	5.7	-2.1
Saving ratio [7]	percentage of disposable income	10.3	5.7	5.8	6.2	6.5	0.0	0.5	-0.2
General government sector [8]									
Total revenue	percentage of GDP	40.9	40.7	41.4	39.7	39.5	0.0	1.2	0.8
Total expenditure	percentage of GDP	46.3	44.6	46.3	45.3	44.2	0.3	2.6	1.2
General government balance [9]	percentage of GDP	-5.5	-3.9	-4.9	-5.6	-4.7	-0.3	-1.4	-0.4
Cyclical component	percentage of trend GDP	0.1	0.4	0.1	0.0	0.1	0.2	0.6	0.5
Structural balance	percentage of trend GDP	-5.7	-4.3	-5.3	-5.8	-4.8	-0.5	-2.4	-1.1
Cyclically adjusted primary balance	percentage of trend GDP	-4.5	-3.2	-3.9	-4.4	-3.5	-0.5	-1.9	-0.8
Fiscal stance [10]	annual percentage point change	-0.9	1.2	-0.7	-0.5	0.9	-0.9	-1.4	1.1
General government gross debt	percentage of GDP	62.2	59.3	57.6	58.0	58.8	-0.6	2.1	2.0

Table 7 Medium-term forecast – the ECB's scenario (continued)

Indicator	Unit	Actual data	ECB scenario				Difference vis-à-vis autumn 2022 forecast		
		2021	2022	2023	2024	2025	2022	2023	2024
Balance of payments									
Goods balance	percentage of GDP	-0.5	-5.2	-3.2	-1.2	-0.4	1.1	-1.1	-0.1
Current account	percentage of GDP	-2.5	-6.9	-4.5	-3.0	-2.2	1.0	-1.2	-0.6
External environment and technical assumptions									
Slovakia's foreign demand	annual percentage change	10.8	5.7	1.8	3.4	3.6	2.2	-0.6	-0.1
USD/EUR exchange [11), 12)]	level	1.18	1.05	1.03	1.03	1.03	0.4	3.8	3.8
Oil price in USD [11), 12)]	level	71.1	104.6	86.4	79.7	76.0	-0.9	-4.6	-3.8
Oil price in USD [11)]	annual percentage change	71.3	47.1	-17.4	-7.7	-4.7	-1.4	-3.2	0.7
Oil price in EUR [11)]	annual percentage change	65.2	65.6	-15.7	-7.7	-4.7	-2.2	-6.1	0.7
Non-energy commodity prices in USD	annual percentage change	42.1	6.4	-10.8	0.7	1.4	-0.7	-1.0	1.9
Three-month EURIBOR	percentage per annum	-0.5	0.4	2.9	2.7	2.5	0.2	0.9	0.6
Ten-year Slovak government bond yield	percentage	-0.1	2.1	3.3	3.2	3.2	0.4	1.0	0.9

Sources: NBS, ECB, and SO SR.
Notes:
1) Labour Force Survey.
2) Non-accelerating inflation rate of unemployment
3) GDP at constant prices / employment (ESA 2010).
4) Nominal GDP divided by persons in employment (according to SO SR quarterly statistical reporting).
5) Average monthly wages (ESA 2010).
6) Wages (ESA 2010) deflated by CPI inflation.
7) Saving ratio = gross savings / (gross disposable income + adjustments for any pension entitlement change) *100.
Gross savings = gross disposable income + adjustments for any pension entitlement change – private consumption.
8) Sector S.13.
9) B9n – Net lending (+) / net borrowing (-).
10) Year-on-year change in cyclically adjusted primary balance; a positive value denotes a restrictive stance.
11) Year-on-year percentage changes and changes vis-à-vis the previous forecast are calculated from unrounded figures.
12) Changes vis-à-vis the previous forecast (percentages).

More detailed time series of selected macroeconomic indicators can be found on the NBS website at:
https://nbs.sk/en/publications/economic-and-monetary-developments/