Economic and Monetary Developments

Spring 2023

NÁRODNÁ BANKA SLOVENSKA
EUROSYSTÉM

www.nbs.sk

Published by Národná banka Slovenska

Electronic version
https://www.nbs.sk/en/publications-issued-by-the-nbs/economic-and-monetary-developments

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This report was discussed by the Bank Board of Národná banka Slovenska on 28 March 2023.

ISSN 2729-8604 (ONLINE)

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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
ESIFs	European Structural and Investment Funds
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
MFF	multiannual financial framework
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
NSRF	National Strategic Reference Framework
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

1 Summary

Inflation in Slovakia is expected to fall gradually, with its outlook remaining largely unchanged compared with December. This year's double-digit price growth reflects mainly cost factors such as energy, inputs and wages. Inflation will slow in coming years. Energy prices will prevent a faster return to the inflation target and are not projected to reach market levels until the end of the forecast horizon.

High inflation will temporarily dampen households' purchasing power, and the main driver of economic growth in 2023 will be the uptake of EU funds. With households having spent savings accumulated during the pandemic, we do not expect last year's trend of strong household consumption to continue this year. Indeed, household demand should decline for a short period. In subsequent years, once inflation has retreated from its current persisting high levels, private consumption is projected to pick up with support from real income growth.

Compared with the winter forecast, the projections for the external environment have improved. A combination of a more favourable external environment, a decline in commodity input prices and an easing of component shortages should support Slovakia's export performance. However, the global economy will face the challenges associated with still relatively elevated, albeit slowing, inflation and with tighter monetary policy.

Significant downside risks to global developments, and by extension to the domestic economy, include a renewed increase in commodity prices and potential stress in the financial system. As for risks to domestic demand, households may curb their consumption expenditure more than the current forecast envisages. Regarding EU funds, it is assumed that Slovakia will not absorb its full allocation, but there is a risk that the uptake will be even weaker than expected. Risks to the inflation forecast include a more intense and prolonged pass-through of input costs to consumer prices and the further evolution of energy commodity prices.

In the labour market, the pool of workers is shrinking, as reflected in slower employment growth in the second half of last year. A majority of job vacancies are being filled by foreign workers. Employment is expected to stagnate in coming months as consumer demand cools. Labour demand will subsequently pick back up and, amid an adverse demographic situation, will likely be met by incoming foreign workers. The labour market will remain tight and, as lost purchasing power is recouped, this tightness will support nominal wage growth throughout the projection horizon.

The public finance projections envisage a significant deterioration in fiscal performance from 2023. The fiscal deficit is expected to increase gradually over the projection horizon, its deterioration being largely attributable to measures to mitigate the energy crisis and to permanent statutory measures, including a VAT reduction and free school lunches. Fiscal performance is not expected to start improving until 2025 and then only moderately. Public debt is forecast to rise to the 60% of GDP threshold over the projection period.

Financial markets have calmed after their recent turbulence, and the transmission of monetary policy to retail rates is proceeding smoothly and in line with expectations. The European and domestic banking sector is stable, with ample capital and liquidity. It cannot, however, be ruled out that the further tightening of the monetary policy stance will be accompanied by market shocks to a greater or lesser extent and that, besides a weakening of global demand, there could also be a disproportionate increase in borrowing costs for banks, firms, households, and the government. In that case, economic growth would be weaker, but price pressures would also be subdued. For the moment, however, such considerations are at the level of risks to the outlook. Moreover, central banks can adopt measures effective at ensuring, in adverse circumstances, financial sector stability and the smooth conduct of monetary policy aimed at stabilising inflation.

Table 1 Key economic indicators

	Actual data	Spring 2023 forecast (MTF-2023Q1)			Difference vis-à-vis the winter 2022 forecast (MTF-2022Q4)		
	2022	2023	2024	2025	2023	2024	2025
GDP (annual percentage change)	1.7	1.3	3.2	3.0	-0.3	0.3	0.5
HICP (annual percentage change)	12.1	10.5	6.7	4.8	0.5	-2.0	1.2
Average nominal wage (annual percentage change)	7.1	10.2	9.2	6.4	-0.4	-0.6	0.6
Average real wage (annual percentage change)	-5.0	-0.4	2.4	1.5	-0.9	0.6	-0.5
Employment (annual percentage change; ESA 2010)	1.8	0.5	0.5	0.2	0.4	0.2	0.1
Unemployment rate (percentage; Labour Force Survey)	6.1	6.1	5.5	5.1	-0.5	-0.6	-0.6

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

In this edition of the Economic and Monetary Developments (EMD) report, we take a closer look at some important features of the current economic situation:

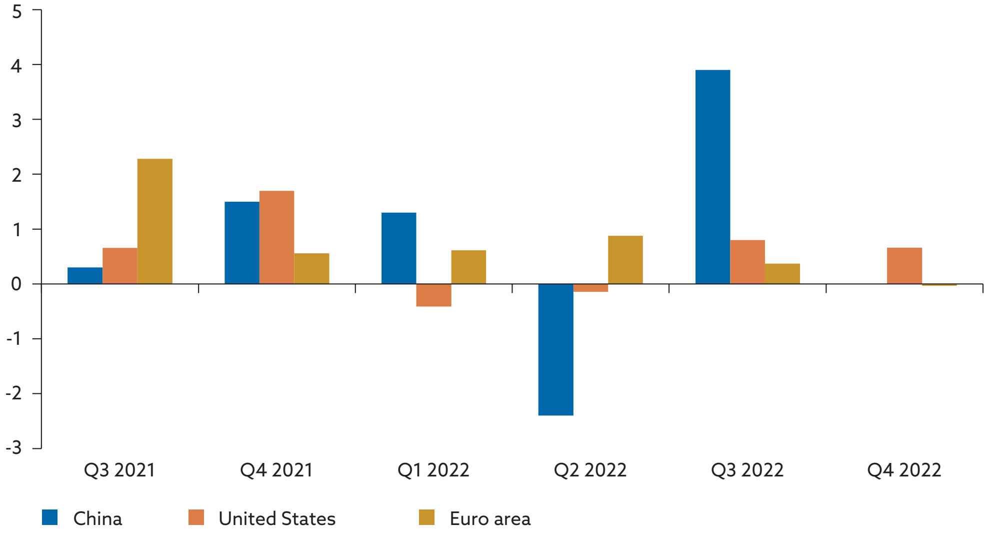
- In Box 1, we show that despite a VAT rate cut on selected types of goods and services (from 20% to 10%), the prices of all the items concerned have increased rather than fallen. This implies that firms have not passed on the VAT cut to final consumer prices.
- Box 2 indicates that inflation is being driven to a gradually increasing extent by domestic factors related to stronger demand in the post-pandemic economy. Although the impact of external price pressures remains strong, it is expected to recede appreciably in all categories of the consumption basket.
- While household mortgage repayments will increase in the near term, they will not have a significant downward impact on consumer spending. In Box 3 we show that even if mortgage interest payments double in absolute terms by 2025, their share of income will increase only moderately. Since larger mortgages are predominantly held by wealthier people, we expect the negative impact on private consumption to be very slight (around a cumulative 0.6% by 2025).
- An important development in 2022 was the strong growth in household consumption. In Box 4 we estimate that but for rising food prices, consumption growth could have been 1.2 percentage points higher over the period from the fourth quarter of 2021 to the fourth quarter of 2022.
- In Box 5 we explain why caution is warranted when making projections for EU-funded public investments. These projects tend to be significantly delayed in their implementation.

2 Current macroeconomic developments in the external environment and Slovakia

2.1 External environment

Growth in selected world economies moderated in the latter part of 2022 (Chart 1). The reversal of the zero-COVID policy in China resulted in the country experiencing a notable rise in infections and economic stagnation in the last months of 2022. In the euro area, the economy continued in 2022 to withstand the energy crisis. Elevated inflation gradually reduced real household incomes, with the result that private consumption declined in a large number of euro area countries in the last quarter of the year. Monetary policy tightening has pushed up the cost of borrowing, the main impact of which has been a drop in residential investment. The euro area economy therefore remained flat in the last quarter of 2022. In the United States, too, residential investment has been curbed by rising interest rates; on the other hand, the country's private consumption has remained relatively strong.

Chart 1
GDP (annual percentage changes)

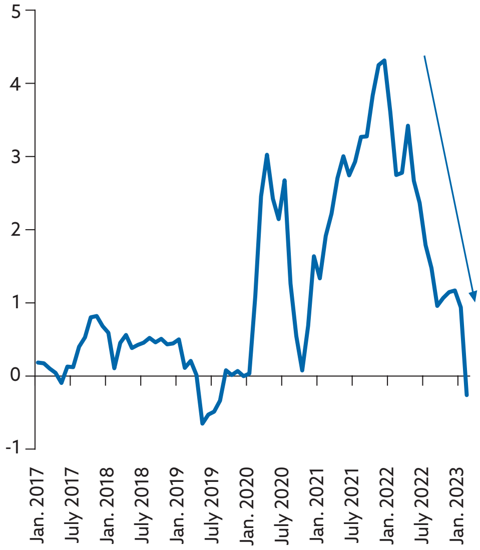


Source: Macrobond.

The pick-up in China's economy in early 2023 supported a marked improvement in the functioning of global supply chains, which moved

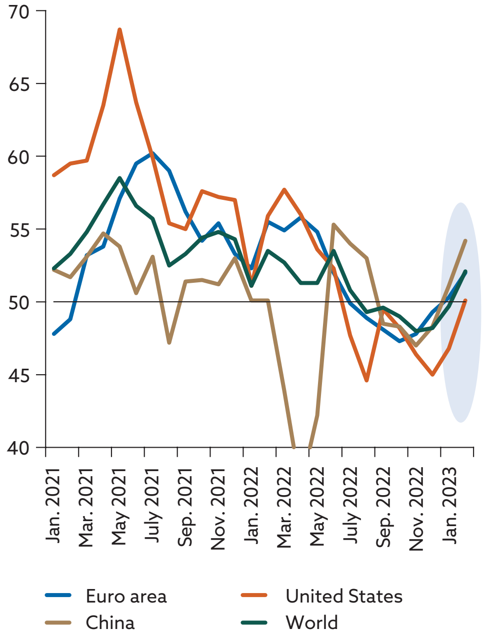
back towards pre-pandemic levels (Chart 2). After exiting from its zero-COVID policy, China was already at the beginning of this year seeing relatively sharp increases in both mobility and economic activity. According to Purchasing Managers' Indices (PMIs) based on surveys of business managers, China's economic growth at this time was driven mainly by services and to a lesser extent by manufacturing, where output had been subdued for several months. The conditions for economic activity have therefore strengthened, as reflected in the global PMI, which after previously indicating a substantial contraction of output, now points to moderate growth (Chart 3). Nevertheless, global demand remains relatively weak.

Chart 2
Global Supply Chain Pressures Index



Source: Macrobond.

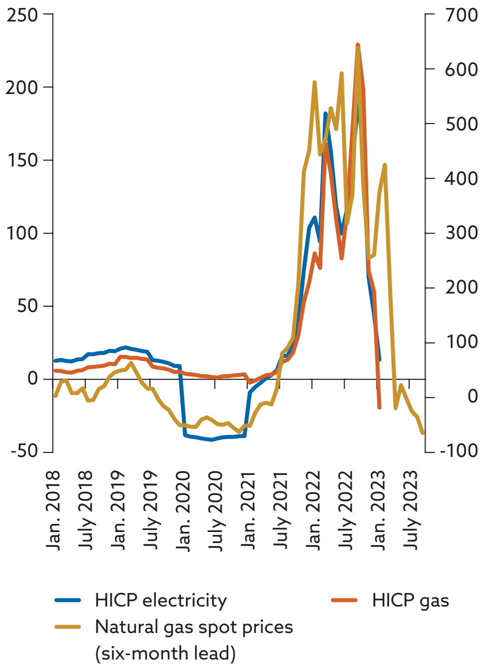
Chart 3
Purchasing Managers' Index



Source: Macrobond.

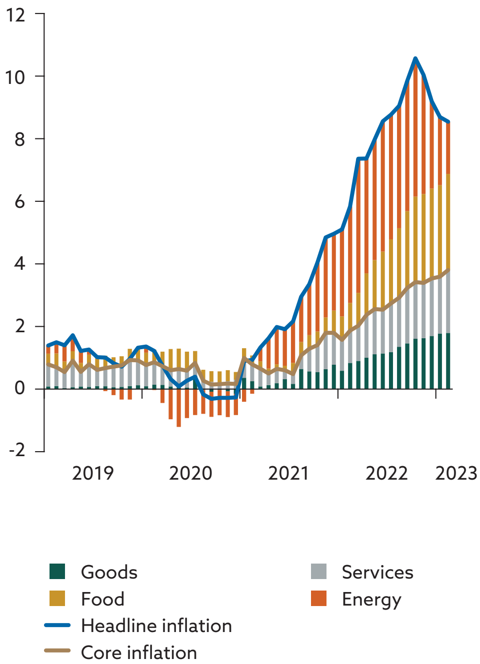
Headline inflation has started to moderate, but remains well above target in both the euro area and the United States. Weaker global demand and improving supply-side conditions have translated into a decrease in commodity prices as well as shipping rates, thus contributing to an easing of cost pressures. Europe has largely managed to offset losses of natural gas imports from Russia with liquid natural gas (LNG) imports, and to build up new LNG terminals. This, together with the mild winter and reduction in consumption, has resulted in a significant drop in the prices of these commodities and consequently in electricity prices, with a gradual downward impact on consumer price inflation (Chart 4). This trend has also, however, been supported by government measures. As for the base effect on inflation, it is starting to be seen in energy prices in particular, following their upsurge a year earlier. This impact is expected to intensify in coming months and dampen the headline rate. However, euro area core inflation (excluding energy and food prices) remains elevated and on a moderately upward path.

Chart 4
Euro area: natural gas spot prices and consumer gas and electricity prices in the HICP (annual percentage changes)



Source: Macrobond.

Chart 5
Euro area: HICP inflation and its components (percentage point contributions; annual percentage changes)



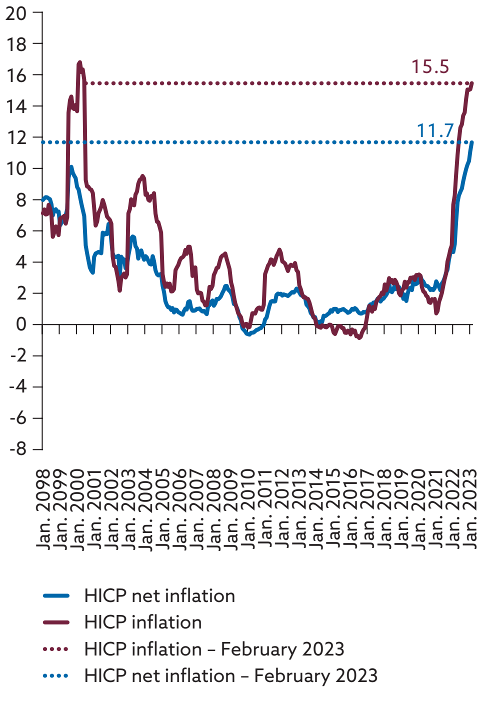
Source: Macrobond.

2.2 Slovakia

2.2.1 Consumer prices

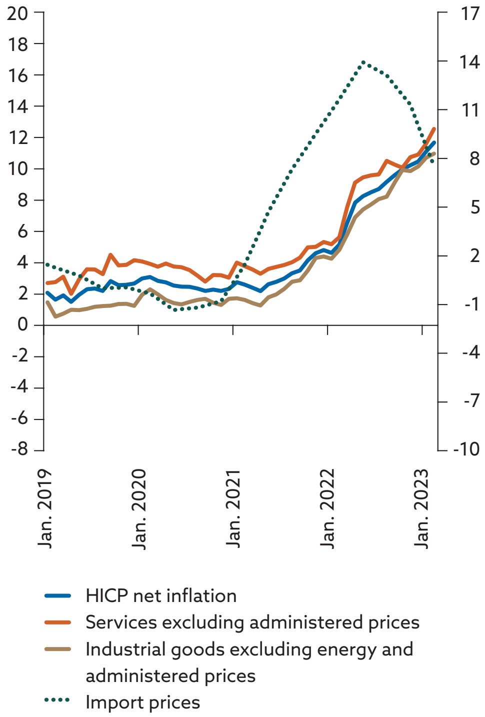
The annual inflation rate in Slovakia rose above 15% in February 2023, reaching its highest level since June 2000. The reading for net inflation was actually the highest since this measure was first calculated (Chart 6). It is thus evident that external factors are having a broad and strong impact on domestic consumer prices. Given that we have not seen the like of this before, it is rather difficult to estimate the duration and intensity of the cost pass-through across the spectrum of consumer prices.

Chart 6
Evolution of headline and net HICP inflation (annual percentage changes)



Sources: SO SR, and NBS.

Chart 7
Import prices and net HICP inflation (annual percentage changes)



Sources: SO SR, and NBS.

Services inflation has accelerated on the back of increases in wage and other input costs (Chart 7). Despite a cut in the VAT rate on selected recreation and food services, all of the items in question have actually increased in price. The VAT reduction helped the sectors concerned to cover cost increases or return to profitability (Box 1). Rising costs of inputs such as wages, food and energy have had a somewhat lagged impact.

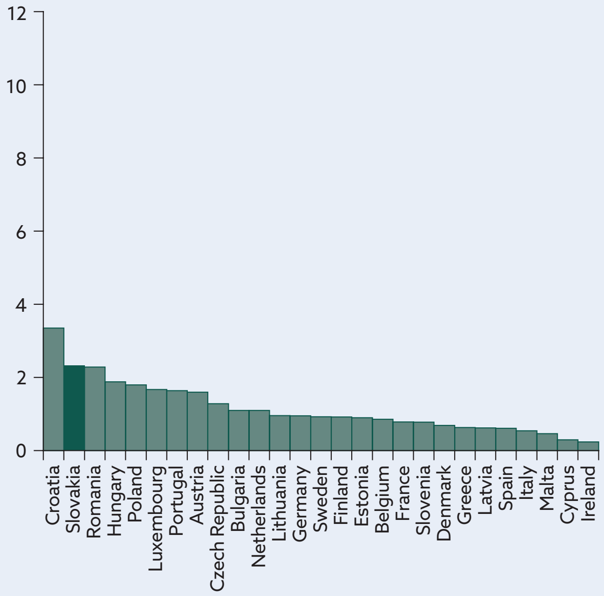
Box 1
How the VAT rate cut has affected consumer prices of selected goods and services

Despite the rate of VAT on selected goods and services having been reduced from 20% to 10%, the prices of some of these items have actually increased rather than fallen. The price growth in this segment of the consumption basket in January 2023 was the second highest in the EU. The increase in these prices net of indirect taxes was in double digits in January (Chart B).

We therefore took a closer look at the explanatory price-forming factors in services, including wages, food prices and energy prices. We can use them to explain price developments by a simple regression. According to this regression, the prices of the items in question, even including the lower VAT rate, are approximately where they should be according to the simple model (Chart C). Sellers and providers of services have not passed on the VAT cut to consumer prices.

Chart A

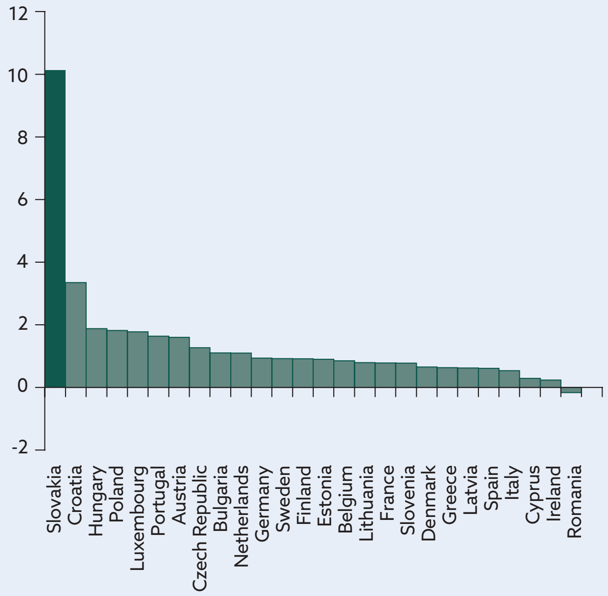
Month-on-month increase in the lower-VAT inflation subcomponent in January 2023 (percentages)



Source: Eurostat.

Chart B

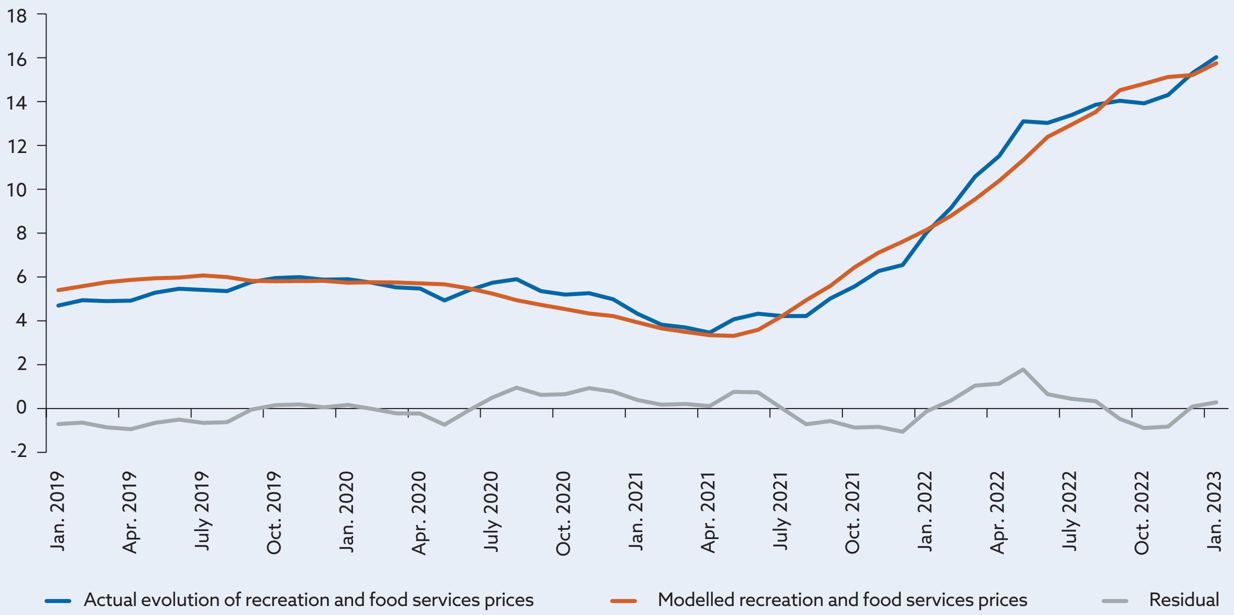
Month-on-month increase in the lower-VAT inflation subcomponent net of indirect taxes in January 2023 (percentages)



Source: Eurostat.

Chart C

Actual and modelled evolution of consumer prices by sector (percentages)



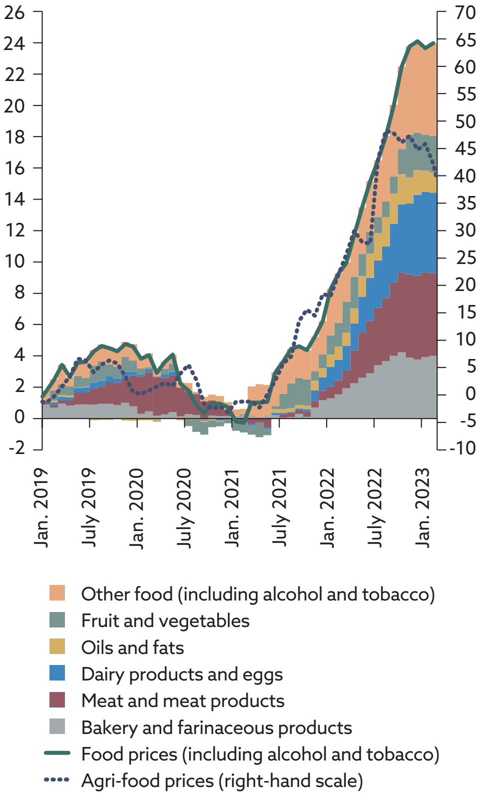
Source: NBS.

Goods price inflation is not expected to continue accelerating. Import price inflation peaked in the second half of 2022. These prices, together with high energy prices, are behind the current record high level of non-energy industrial goods inflation. Because spot prices of electricity and gas are falling from all-time highs and because component supply shortages are easing, domestic industrial producer price inflation is slowing.

Annual food price inflation is likely to be peaking (Chart 8). Inflation rates for basic agri-food commodities and domestic food producer prices have slowed, and wholesale electricity spot prices have decreased notably from their September highs. Nevertheless, food price inflation has been at a record high (24%) for four months.

Chart 8

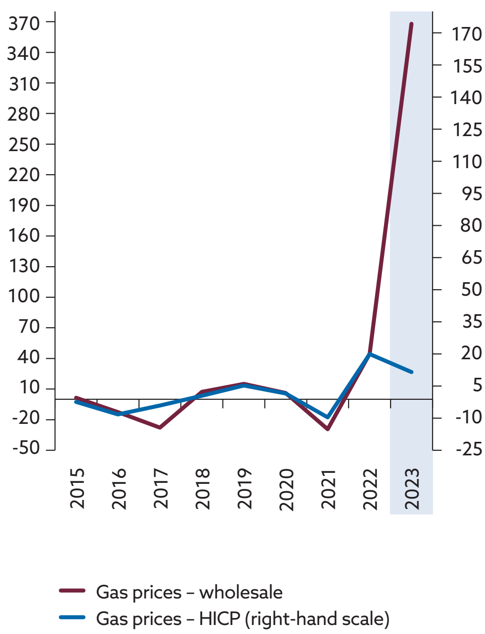
Food and agri-food price inflation rates and their components (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 9

Gas prices – administered and wholesale (annual percentage changes)



Sources: SO SR, and NBS.

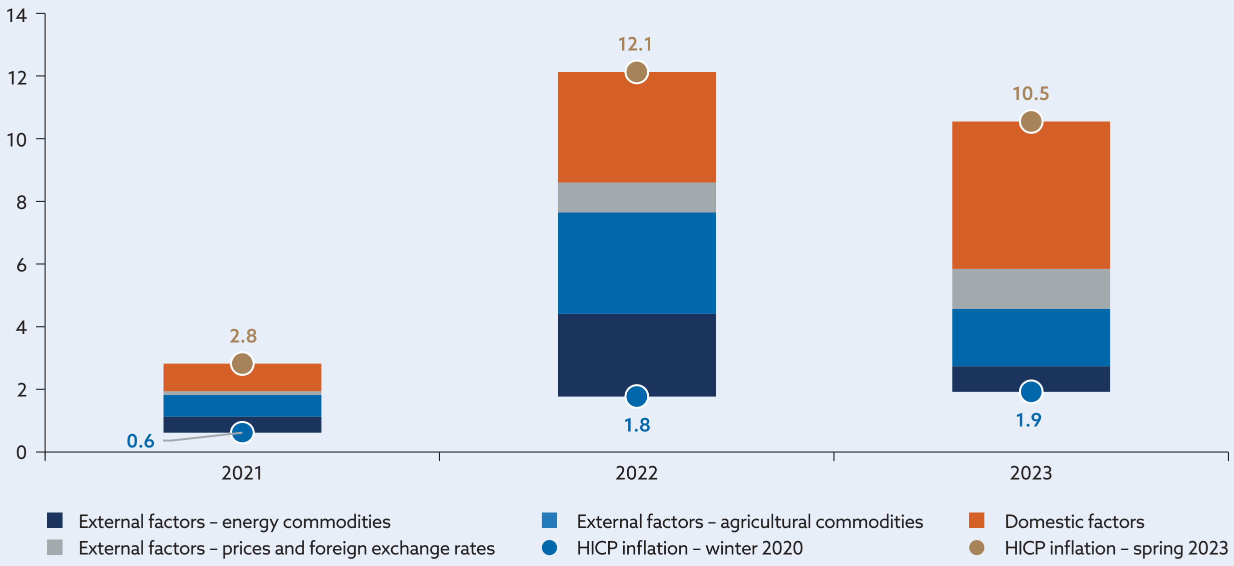
Energy prices have increased more slowly than projected because of fiscal compensation measures (Chart 9). The current decline in market energy prices will be reflected mainly indirectly in the lower pass-through to non-administered consumer prices and in lower energy inflation next year.

Box 2
The nature of inflation is changing

The high inflation that Slovakia experienced in 2022[1] was due largely to external factors, specifically prices of energy and agricultural commodities on foreign markets, the exchange rate, and import prices. In the background, however, the impact of domestic factors has been slowly but surely increasing; indeed, we expect the nature of inflation to change in 2023, with domestic factors such as demand and wages becoming the main driver of price growth.

Chart A shows the decomposition of the change between the winter 2020 and spring 2023 projections for Slovakia's inflation rate in the years 2021 to 2023.[2] In 2022 external factors accounted for 65% of the increase in inflation, while their contribution in 2023 is now projected to be only 45%.

Chart A
Decomposition of the change between the winter 2020 and spring 2023 inflation projections (percentage points)



Source: NBS.

Is higher demand really behind this? The question is important because it is through demand that central bank monetary policy affects the economy. So if we see demand having

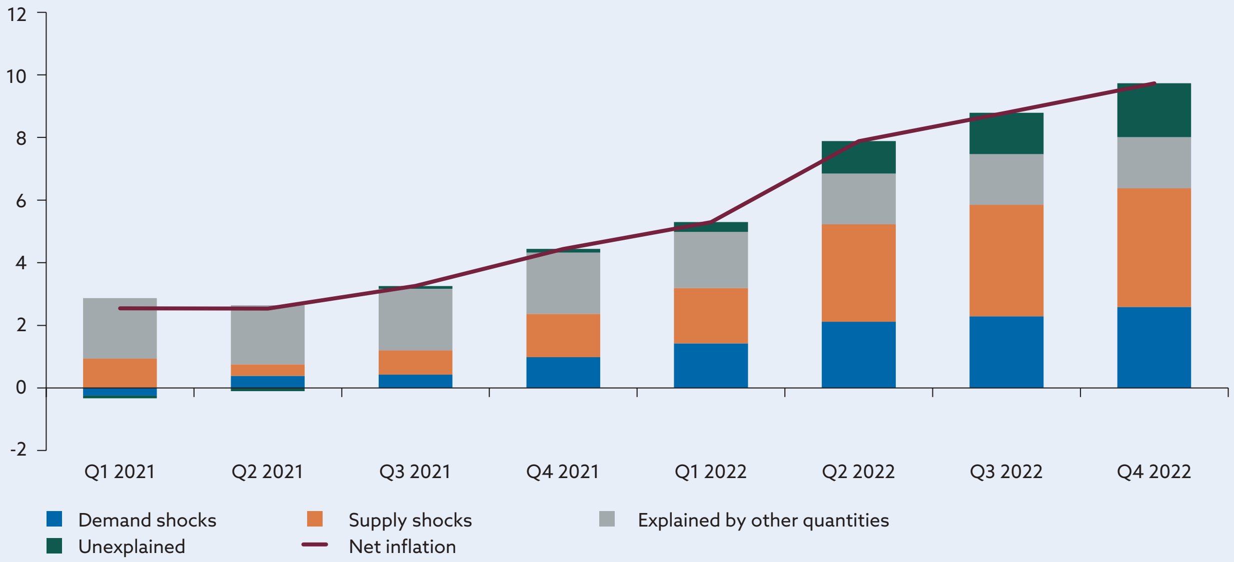
[1] Slovakia's average annual HICP inflation rate in 2022 was 12.1%.

[2] The decomposition is carried out using our main macroeconomic forecasting model, whereby we see to what extent shifts in inflation reflect changes in assumptions about the external environment. We attribute the residual to domestic factors. For more information on the methodology, see the NBS blog post (in Slovak) entitled *Odkiaľ sa na Slovensku berie taká inflácia (alebo slovenský rebríček inflačných faktorov)*, February 2022.

a strong impact, that is a signal for monetary policy. Our econometric analysis[3] indicates that demand (foreign and domestic) was already having an increasing impact on inflation in 2022 (Chart B).

Chart B

What is the current impact of demand on inflation? (percentage point contributions; annual percentage changes)

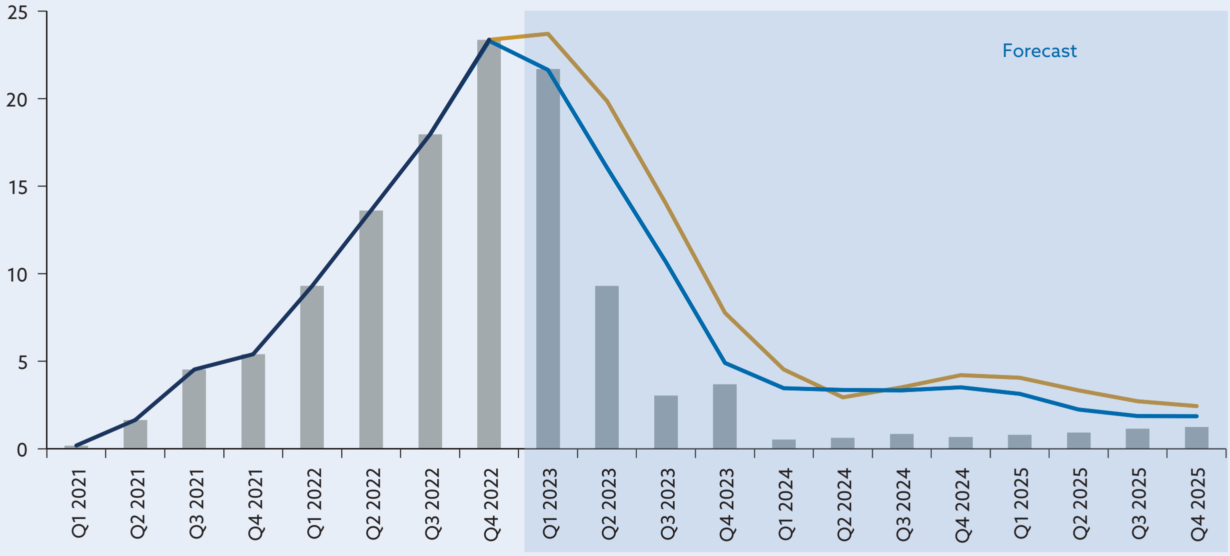


Source: NBS.

External factors in the form of energy and agricultural commodity prices should now also be fading in terms of their pass-through to food prices. Our view is based on an analysis of the impact of energy and agricultural commodity prices on producer prices, and, in a second step, on an analysis of the impact of producer prices on consumer prices of food. As Chart C shows, the increase in producer prices implies a steep decline in food price inflation over 2023 and 2024. In the data, however, we do not yet see the slowdown in food inflation projected by the model. Other factors that are less well captured may be temporarily at play. For this reason, compared with the winter 2022 forecast, we have revised up the food inflation projection for coming months.

3 A Bayesian VAR model is used to identify various types of supply and demand shocks. Using this econometric model, we estimate a given shock's contribution to inflation. For example, positive demand shocks are characterised by a simultaneous increase in economic activity and inflation. In the case of negative supply shocks, inflation also rises, but economic activity decreases.

Chart C
Additional PPI impact on consumer food price inflation (percentage points; percentages)

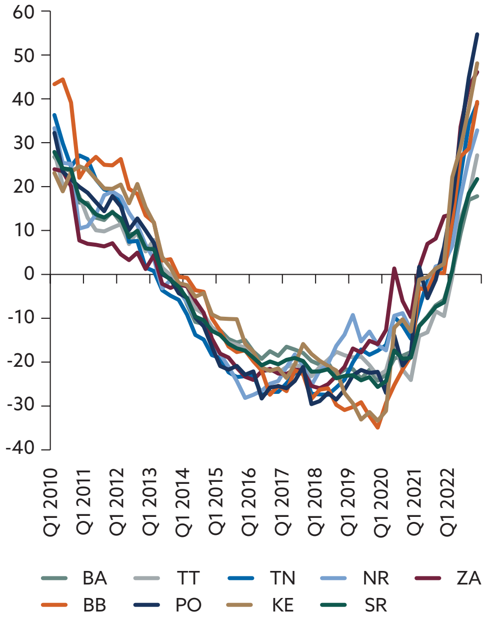


Sources: SO SR, and NBS.

2.2.2 Residential property prices

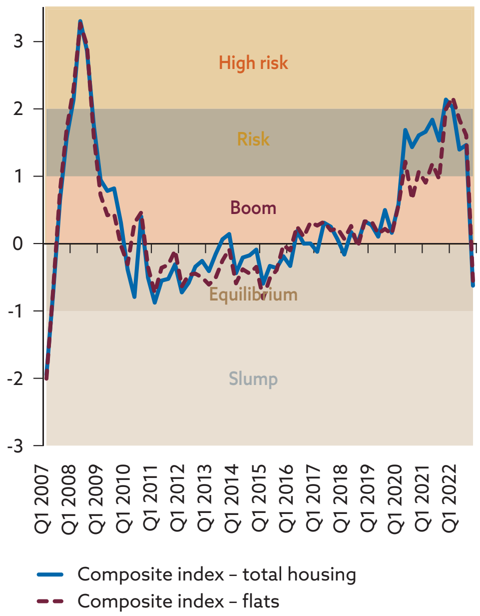
Housing prices in Slovakia fell by 1.94% in the fourth quarter of 2022 compared with the previous quarter. It was the first time since 2019 that housing prices had fallen quarter-on-quarter. Their decline was most pronounced in Bratislava Region and Žilina Region. In year-on-year terms, housing price growth slowed from 22% in the third quarter to 15% in the fourth. Expectations of a housing price turnaround were borne out, as prices reached a peak in July 2022. Monthly data from early 2023 indicate a continuation of their downward trend.

Chart 10
Housing affordability index (HAI) value as a ratio of its historical average (percentages)



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

Chart 11
Composite index to assess housing price developments



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.

Housing is becoming increasingly less affordable owing to rising interest rates (Chart 10). Even in conjunction with rising wages, the fall in housing prices has failed to offset the impact of rising interest rates on housing affordability.[4] The housing affordability index (HAI) deteriorated by around three points in the fourth quarter of 2022. For the HAI index to return to its long-term average, housing prices would have to decrease by more than 17%, factoring in the current wage growth projection and January 2023 interest rate data. The Slovak regions with the least affordable housing are Prešov, Košice and Žilina. Housing is most affordable in Bratislava Region, thanks to the current decline in prices and strong wage growth there.

The current rate of decline in housing prices appears to be in line with broader economic conditions.[5] The drop in housing market activity is also

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[4] 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.

[5] Housing price growth slowed significantly in the third quarter of 2022. The composite index value declined, but remained at a level indicating a high risk of price correction. This therefore presaged the more pronounced decline observed in the fourth quarter. The index responded by falling into the equilibrium band, implying that developments in the fourth quarter were in line with other economic fundamentals.

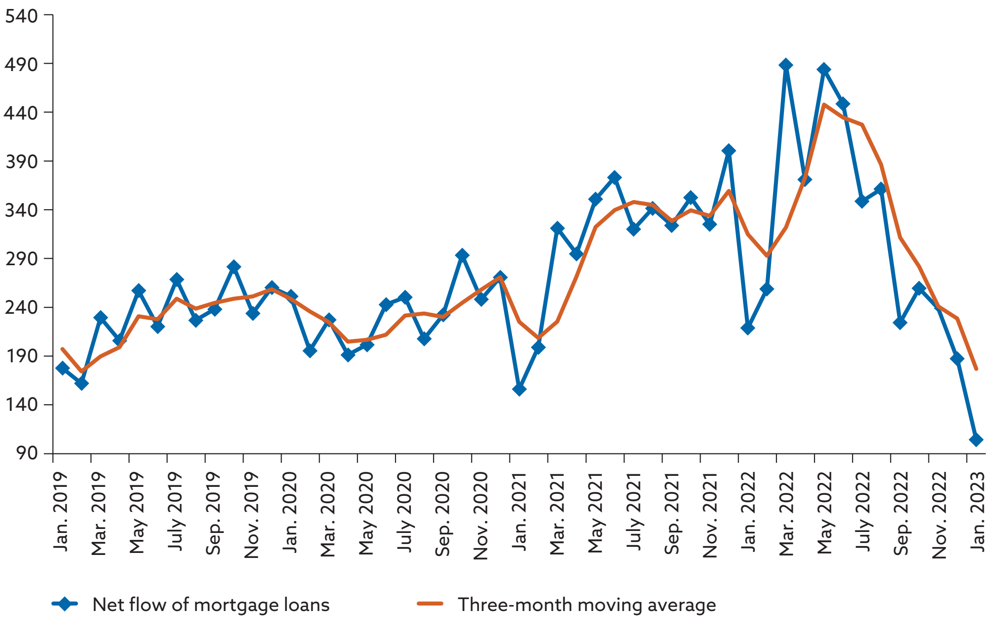
reflected in our composite index[6] for assessing housing price developments (Chart 11). The index values fell into the equilibrium band in the fourth quarter of 2022, as virtually all sub-indicators declined. Although housing prices fell compared to the previous quarter, inflation, rents and income increased – hence declining ratio indicators.

While the number of apartment building completions is increasing, the number of starts is falling. The number of apartment building starts and building permit grants fell by around one-third, year-on-year, in the fourth quarter of 2022. The current number of flats under construction is therefore gradually declining. Residential construction output was 17% higher in the fourth quarter of 2022 than a year earlier. Since it remains at elevated levels, it has a positive, albeit non-significant, impact on the composite index.

The volume of new mortgages is falling sharply (Chart 12). Interest rates on pure new mortgages climbed to 3.74% in January 2023. Because of higher mortgage rates, the net flow of mortgage loans in January 2023 was half of its level in the same month of the previous year. The ratio of new mortgages to disposable income is having a downward impact on the composite index.

Chart 12

Net flow of mortgage loans (EUR millions)



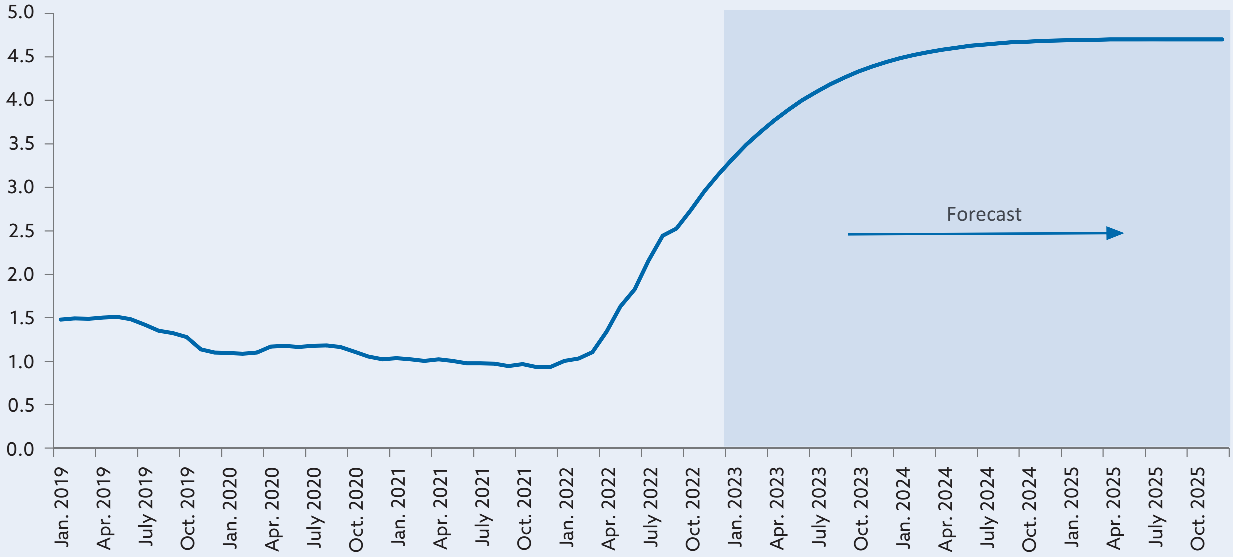
Sources: ECB, and NBS.

[6] 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/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.

Box 3
Estimating the increase in mortgage interest charges

Monetary policy tightening has had a sharp upward impact on market interest rates and has consequently passed through to mortgage rates. Market expectations are pricing in further interest rate increases in the months ahead, and this is taken into account in the projection of interest rates on new mortgages. These rates are, however, relevant not only for new borrowers, but also for existing borrowers, since banks apply current rates at times of rate resetting. This means that borrowers' mortgage repayments will be gradually rising because of the increase in their interest component. In Slovakia, interest rate fixation periods are relatively short (2.6 years on average), so households are exposed to the risk of their repayments rising when rates increase.

Chart A
Mortgage rates (percentages per annum)



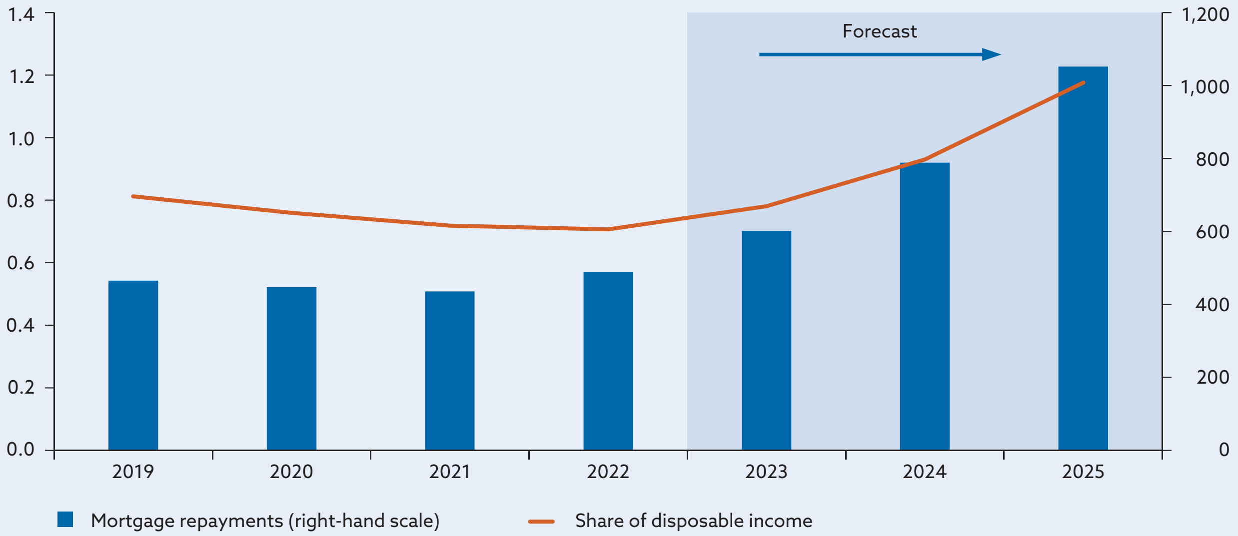
Source: NBS.

Higher interest rates have macroeconomic repercussions. As higher rates make new financing more expensive, they are expected to dampen both investment and private consumption. Existing borrowers may also, however, be affected by rising rates, as they may respond to a significant increase by reining in their consumption. At the aggregate level, we estimated the impact to be around 0.5% of disposable income by 2025 (with loan repayments as a share of disposable income increasing from 0.7% to 1.2%).[7] The maximum impact of an increase in debt servicing on consumption demand (where households reduce their expenditure by precisely the amount of the increase in debt servicing) is estimated to be a cumulative 0.6% by 2025.

[7] For this calculation, we used individual loans for which we knew the amount owed, the maturity period and the rate resetting date. We then applied the assumed interest rate to new mortgages.

Chart B

Mortgage repayments and their share of disposable income (percentages; EUR millions)

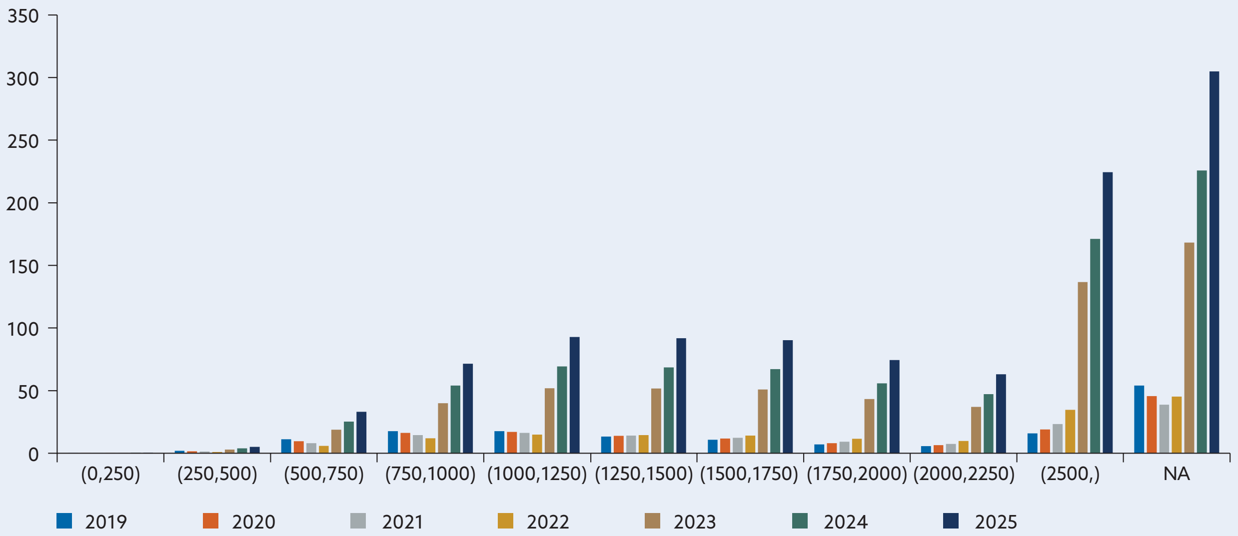


Source: NBS.

Since the most indebted households are in the highest income bracket, the impact on consumption could be lower than the estimated full pass-through. Knowing which household income groups will be most affected is important not only from a financial stability perspective, but especially in terms of the macroeconomic impact. Although higher-income households will experience the highest absolute increase in mortgage repayments, their repayments as a share of income will remain the lowest of any income group.

Chart C

Household interest payments by income (EUR millions)



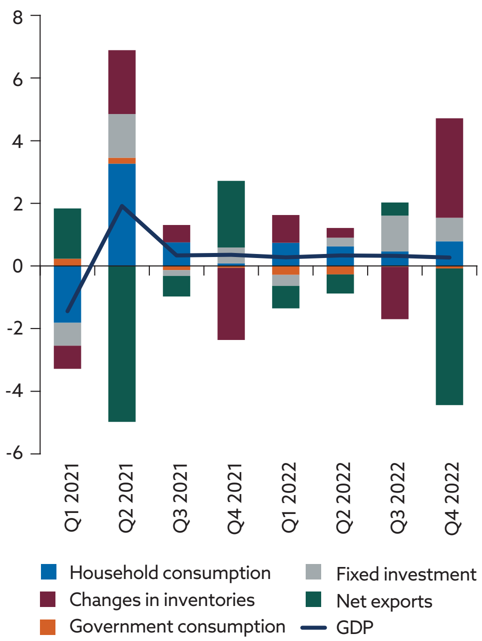
Source: NBS.
Note: 'NA' means the household income data is not available.

2.2.3 Economic growth

Slovakia's economic growth remained moderate in the fourth quarter of 2022, at 0.3% over the previous quarter. The growth was driven mainly by private consumption and to some extent also by investment (Chart 13). Households increased their consumption during the period, even though higher inflation was already reducing their real incomes. In industry, the stabilisation of supply chains after previous disruptions had a positive impact on car exports. On the other hand, the energy-intensive metal industry saw exports dry up owing to the impact of elevated energy input prices. These also caused a deterioration in the trade balance, as energy commodities imported during the colder months were increasingly expensive.

Chart 13

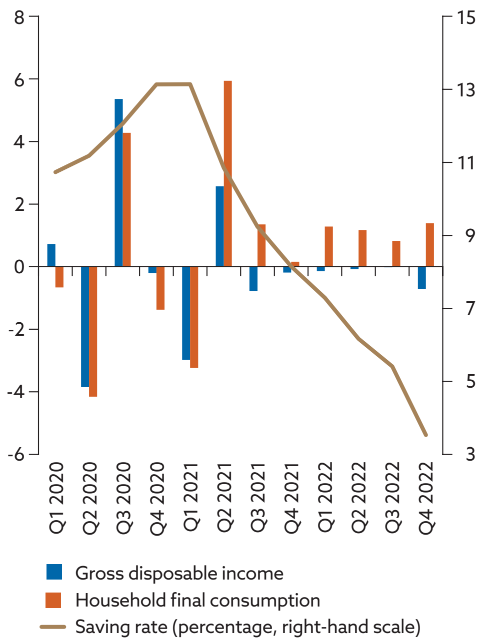
GDP (quarter-on-quarter percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 14

Household income and consumption (quarter-on-quarter percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

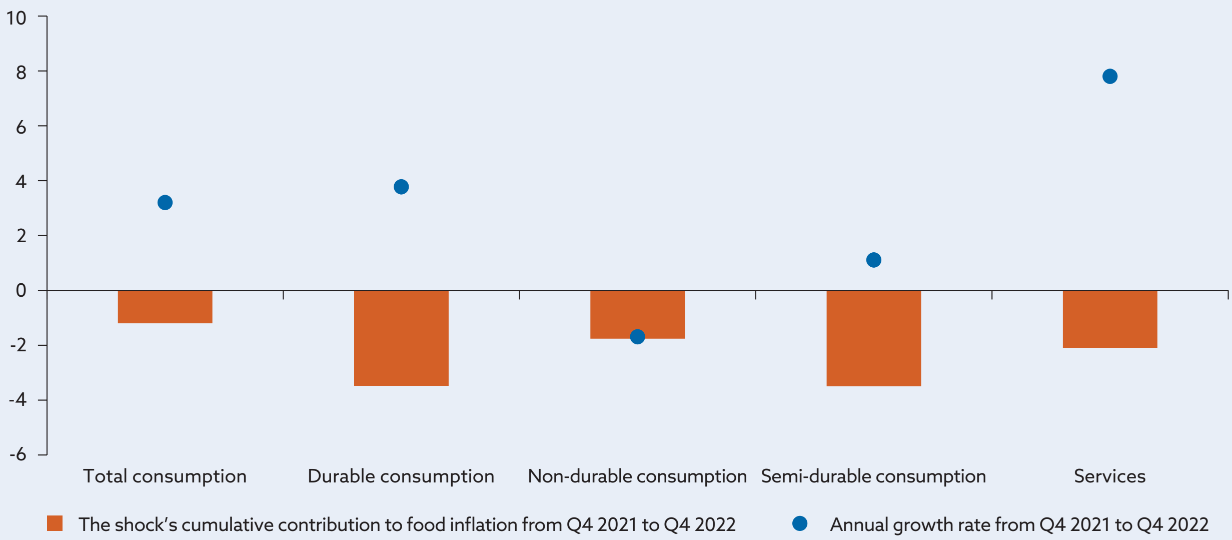
Private consumption was the main driver of growth in the latter part of the year, despite declining real income. Households' use of accommodation, food and recreation services returned to higher levels, after being severely curtailed during the pandemic period. The first consumption component to reflect the impact of rising prices was food expenditure (Box 4). Spending on energy was also reined in to some extent. As survey results show, retail trade firms are seeing lower demand from households in early 2023. Households have had to dip further into their savings to finance their consumption, hence the saving rate has dropped to a historical low (Chart 14).

Box 4
Impact of food price increases on household consumption

Food prices, which increased unexpectedly quickly in 2022, are one of the most important components of the current high inflation and have affected, among other things, household consumption.

Our analysis of the impact of food prices on consumption shows that, absent rising food prices, consumption growth for the period from the fourth quarter of 2021 to the fourth quarter of 2022 could have been higher by 1.2 percentage points (with an annual growth rate of 3.2% in the fourth quarter of 2022). Chart A shows the accumulated impact of the global food shock on consumption and on individual consumption items during 2022. In line with expectations, the most pronounced impact was on durable and semi-durable consumption goods. When prices are rising, it is reasonable to expect that households will defer major purchases. By contrast, the relatively smallest impact we recorded was on non-durable goods – often necessary purchases that households cannot defer.

Chart A
Cumulative impact of rising food prices on consumption growth (percentages)

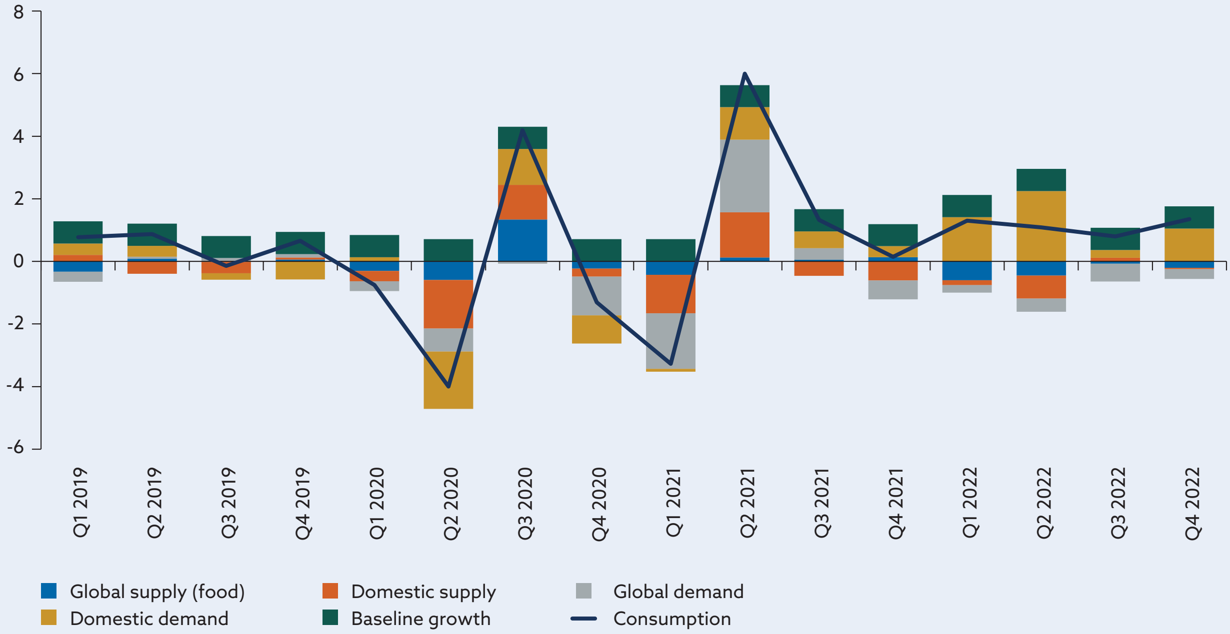


Sources: SO SR, and NBS.

The impact of food price inflation on consumption was most pronounced in the first half of 2022, though it was outweighed by the impact of domestic demand. Chart B shows a more detailed historical decomposition of the impact of individual shocks on total consumption. In the first half of 2022, when food price inflation was at its peak, the food price shock had a significant negative impact. By the second half of the year, its effect was already receding into the background. Foreign demand also had a relatively stable impact. The most important determinant of the evolution of consumption during 2022 was domestic demand. Over the four quarters, significant domestic demand managed to outweigh all negative contributions, including rapidly rising food prices. In the case of services, the strong demand effect stemmed mainly from their renewed availability after two years of lockdown, with demand only returning to pre-pandemic levels towards the end of the year.

Chart B

Historical decomposition of the impact of individual shocks on consumption (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

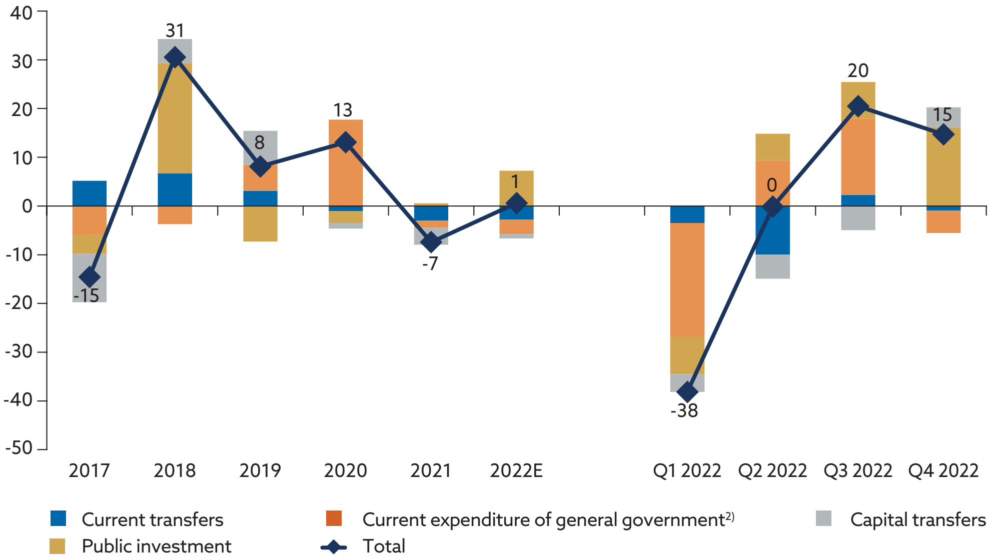
Car industry exports have benefited from the improving situation in auto parts supplies, but more energy-intensive manufacturing exports have dried up. The metal and chemical industries remained adversely affected by high input prices in the fourth quarter of 2022, and the impact of the reduction in their exports was not offset by relatively favourable car export results. Increased imports of components and consumption goods had a dampening effect on economic growth through their upward impact on the trade deficit.

Business investment activity has increased, while monetary policy tightening has started to weigh on households' investment in housing. Firms have increased their investment in intellectual property products such as new software and related hardware. The uptrend in interest rates since the beginning of 2022 has made it more difficult for households to obtain mortgages, so household investment in housing has started to decline. The end of last year saw an upturn in expected government investment.

High investment in the fourth quarter was largely accounted for by local government. The strong year-on-year growth was concentrated in investments funded from own resources (with the uptake of EU funds stagnating), mainly at the level of municipalities and higher territorial units for investments in renovation and modernisation.

Last year's receipts from the EU budget provisionally amounted to 2.0% of GDP. The nominal uptake of EU funds – including funds from the Recovery and Resilience Facility (RRF) through the implementation of Slovakia's recovery and resilience plan (RRP) – remained almost flat in year-on-year terms (Chart 15). The composition of EU funds absorption reflects a recovery in capital expenditure, with the public sector recording an increase in investment in the areas of transport infrastructure and environmental development, including environmental remediation, R&D support, and efforts to make public buildings energy efficient. The RRP made a marginal contribution last year, as RRP-related expenditure, amounting to 0.05% of GDP, was largely allocated to covering government consumption related to the RRP's implementation.

Chart 15
Absorption of EU funds (annual percentage changes)[1)]



Sources: State Treasury, and NBS.
1) Adjusted for spending on financial instruments.
2) Includes spending on temporary short-time work schemes introduced during the COVID-19 pandemic.

General government consumption surged in late 2022, owing mainly to higher energy costs. This trend was partially offset by relatively strong growth in sales revenue.

Box 5
Past experience makes expectations for EU-funded investments more realistic

The uptake of EU funds in Slovakia is proceeding slowly. EU funds have a significant impact on the modernisation of the country's economy. A phenomenon typically associated with these funds is what may be termed EU fund optimism – where estimations of the future uptake of EU funds are higher than the actual uptake.[8] Slovakia's absorption rate for EU funds is among the lowest in the EU (Chart A). The natural response of government is to accelerate the uptake of funds, to formally set out the disbursements in a three-year budget, and, once parliament approves the budget, to raise expectations about how EU funds will support the economy. However, the conflict with reality is evident. EU fund optimism is illustrated by general government budgets since 2014 (Chart B). The overestimation is highest in the third year, standing on average at 1.1 percentage points of GDP and at the same time implying an overestimation of macroeconomic projections. With the multiplier[9] of EU funds averaging 0.59, the overestimation of the GDP forecast in the third year ranges between 0.4% and 0.6%.

For a better estimation of public investment, it is therefore useful to look at previous experiences with absorbing EU funds. EU funding is part of almost all significant investments in Slovakia, especially public investments. The pace of investment implementation depends on which stage the project cycle is at.[10] The implementation phase itself, however, is seen as a significant factor in the uptake of EU funds.

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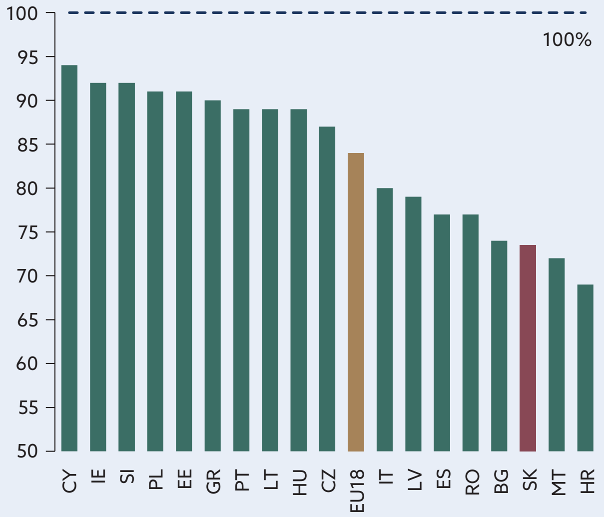
8 Of the more than €14 billion allocated to Slovakia under the EU's 2014–2020 budget, 66% was disbursed for regional development between 2014 and 2022. As for funds allocated under the 2007–2013 budget, the share disbursed for regional development was 90% over the nine-year absorption period (from 2007 to 2015). It should be noted that the absorption period under the 2007-2013 budget was one year shorter and ended in 2015, which accelerated the disbursement of EU funds at the risk of permanently losing part of them.

9 More information is available in an NBS Discussion Note (in Slovak) entitled 'Ako sa eurofondy podieľajú na tvorbe HDP'.

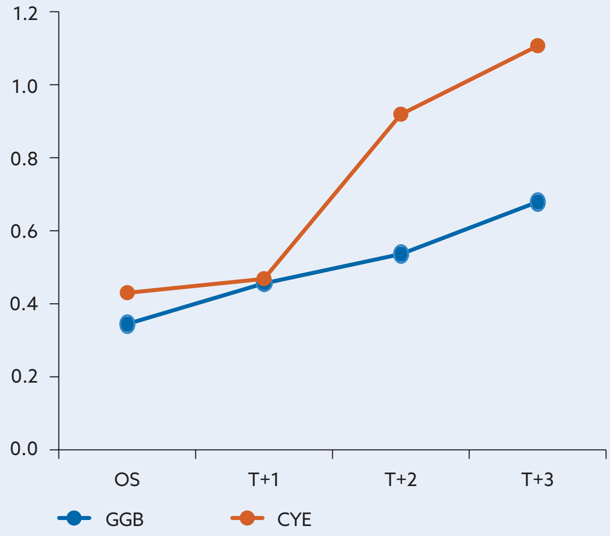
10 The main phases can be classified as follows: the publishing of calls for proposals; project preparation; the approving of applications for contributions; project implementation; evaluation and settlement. The slow uptake is partly due to delays in publishing calls for proposals and consequent delays in concluding contracts (See Annex 7 of the Analysis of the General Government Budget for 2021-2023 (in Slovak only), NBS, 2020.

Chart A
Uptake of EU funds allocated under the 2014–2020 EU budget (percentage of total allocation)



Sources: European Commission, and NBS.
Note: European Commission – ESIF 2014-2020 payments as at 16 March 2023.

Chart B
Errors in projections for the uptake of EU funds made in NBS forecasts and in the General Government Budget (percentage points of GDP)[1)]



Sources: MF SR (General Government Budgets of the Slovak Republic from 2014 to 2022), NBS autumn forecasts from 2013 to 2022, and NBS calculations.
1) Without subsidies.
Notes: GGB – general government budget; CYE – current year estimate at the time of budgeting; T+1 to T+3 is the projection for the next three years.

The aggregate dynamics of projects for the selected investment areas are appropriately characterised by a so-called S-curve, expressing the average evolution of the cumulative uptake of the contracted project amount (y-axis) against its timeline (x-axis).[11]

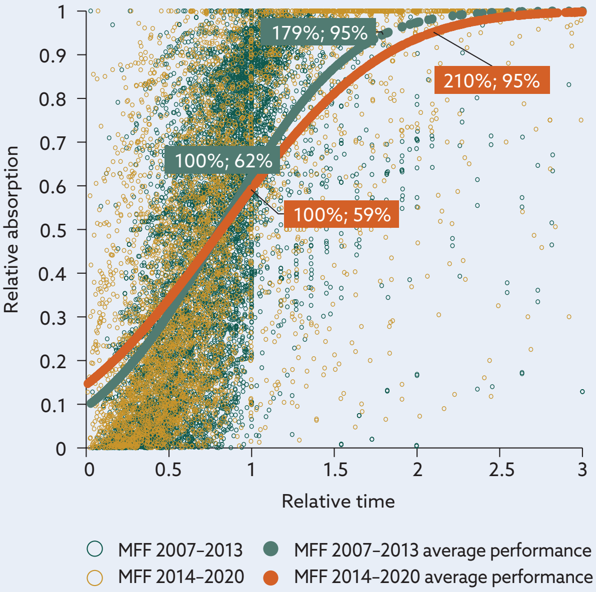
The average absorption rate was faster under the 2007–2013 programming period than under the most recent 2014–2020 programming period. The S-curve for the 2007–2013 period

[11] The 'S' captures the nature of the uptake. In the first, 'run-up' phase, the absorption of funding is relatively slow. In the second phase, funds are taken up at a faster pace owing to the implementation of the main investment components. In the third phase, following project finalisation, the pace of disbursement again slows, affected by the evaluation and settlement process. The S-curves are estimated using a probit regression model. Points on the x-axis represent the relative status of the project timeline, and points on the y-axis, the relative status of the contracted amount's disbursement. For example, point [x=1, y=0,65] denotes that 65% of the contracted amount (y=0,65) was disbursed at the planned time of project completion. The boundary y≤1 denotes the maximum possible (100%) disbursement of the contracted amount. The individual points show the evolution of disbursements for EU-funded projects in Slovakia under the 2007–2013 EU budget and under the 2014–2020 EU budget, i.e. over the same length of period (108 months or nine years). For the 2007–2013 budget, the disbursement period was from January 2007 to December 2015; for the 2014–2020 budget, from January 2014 to December 2022.

shows a steeper curve. The main targets of funding under the 2014–2020 budget are public infrastructure projects in the areas of transport and environment (accounting for 39% of the total uptake). Disbursements for these projects are behind plan, with those for transport projects standing at 60% of the allocated amount, and those for environmental projects at 70%.

Chart C

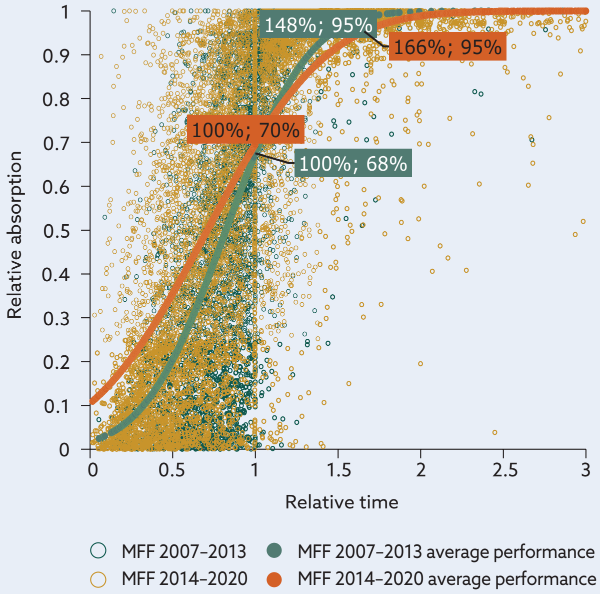
Transport projects (percentages)



Sources: ITMS2014+, NSRF, and NBS.

Chart D

Environmental projects (percentages)



Sources: ITMS 2014+, NSRF, and NBS.

The uptake of infrastructure packages varies, but can range from around 1.6 to 2 times the original length of the implementation plan. Another way to look at the pace of EU funds absorption is in terms of the average period of disbursement of the contracted amount given the planned implementation period. With a disbursement threshold of 95%, at which they can already be considered 'approximately' finalised,[12] transport projects (including new roads and railway lines, and road renovations) took twice as long as projected in the implementation plan. As for environmental infrastructure projects (wastewater treatment plants, sewerage, waste management), they overran by more than 60%.

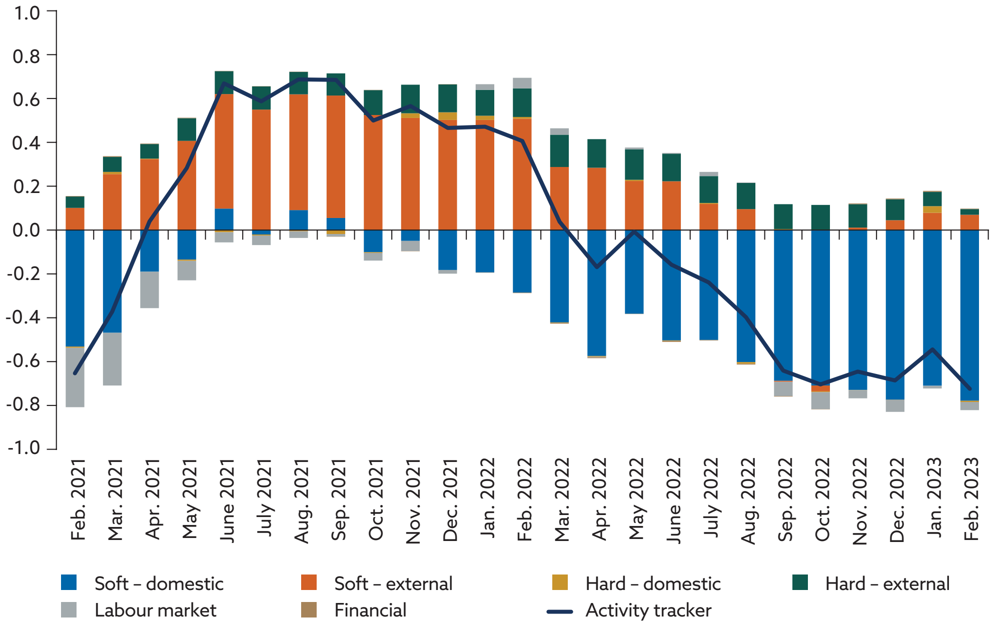
Our projections for the uptake of EU funds and public investment take account of such common delays in project implementation. It would be good if these were also taken into account in the earlier phases of projects. Ideally, the responsible authorities would take steps to eliminate such delays. Through better, timely and efficient disbursement of EU funds, we would be better able to support the convergence of living standards in Slovakia to the level of advanced economies and to strengthen the economy's resilience.

12 The selected threshold was less than 100%, given that the final expenditure on many projects may be less than the contracted amount, for example because of procurement savings.

The economic activity indicator has been stagnating for several months (Chart 16). Economic sentiment both in Slovakia and abroad stopped improving in February. Concerns about future demand are reflected in gloomier business sentiment, and firms continue to struggle with high input prices. Domestic revenues and output fell slightly in the early part of this year.

Chart 16

Economic activity indicator (three-month moving average; month-on-month percentage changes; deviation from mean)



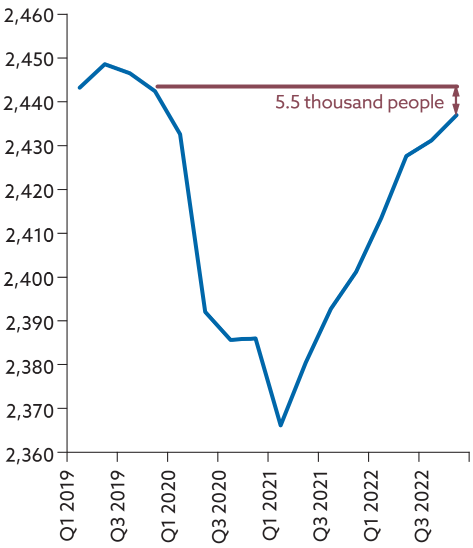
Sources: Macrobond, SO SR, and NBS.
Note: The activity tracker is estimated using the principal components method with a broad range of domestic and external monthly indicators.

The expected decline in economic activity in early 2023 is expected to concern mainly households, as they feel the impact of high inflation. Firms are already dealing with inflationary effects, which have caused a decline in their real purchasing power. This is indicated in their interviews with NBS, with managers reporting that overall revenues are positive largely as a result of rising prices, while the volume or number of units sold or services provided is falling. In industry, the situation remains relatively favourable for the time being, though downside risks are mounting as concerns grow about the evolution of demand.

2.2.4 Labour market

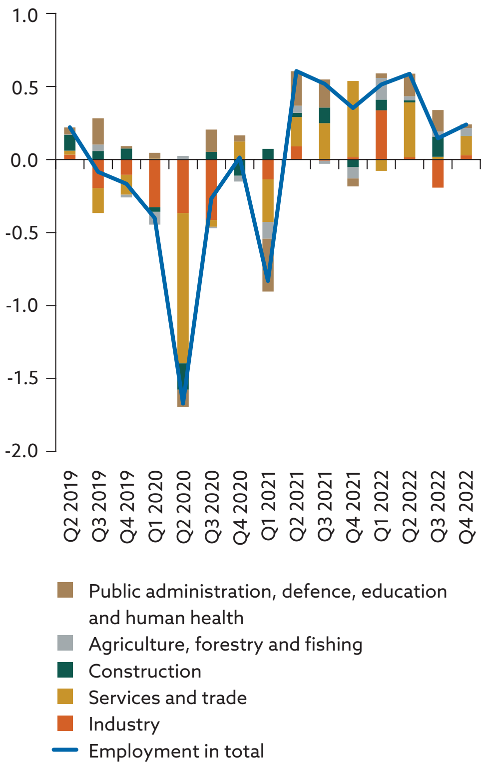
Employment has been boosted by favourable economic developments. Maintaining a moderate rate of growth in the fourth quarter of 2022, employment increased close to its pre-pandemic level (Chart 17). After several quarters of relatively stronger employment growth – with refugees from Ukraine helping to fill job vacancies and therefore ease labour market tightness – the second half of 2022 saw job growth moderate. Strong domestic demand has boosted employment in the services and trade sectors (Chart 18), where the ongoing positive impact of foreign worker participation in the labour market is evident.

Chart 17
Employment (thousands of persons)



Sources: SO SR, and NBS.

Chart 18
Employment by sector (annual percentage changes; percentage point contributions)

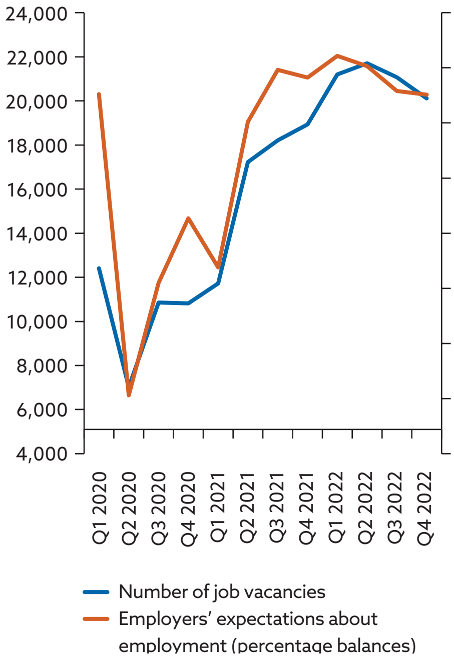


Sources: SO SR, and NBS.

Demand for labour is weakening. Firms are cautious about creating new jobs, since their costs are rising sharply and labour productivity remains below the pre-pandemic level. Their employment expectations are gradually declining, and the number of job vacancies is falling (Chart 19).

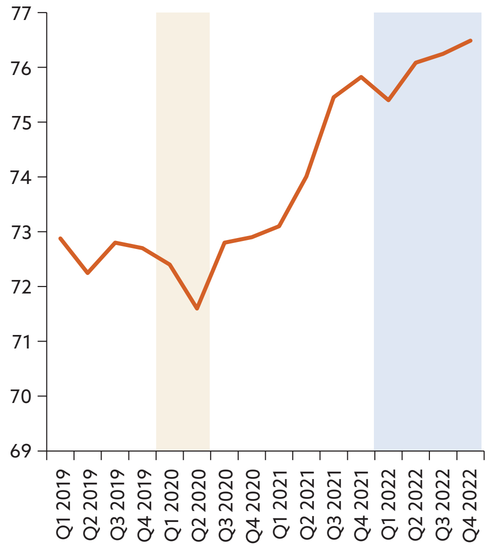
Labour supply increased towards the end of last year. The last quarter of 2022 saw an increasing return to the labour market of people who had left the market to care for a household member or for other family reasons. The number of disability pension beneficiaries outside the labour market is also declining. Labour supply is being further supported by the increasing labour market participation of the working age population (Chart 20).

Chart 19
Number of job vacancies and employment expectations



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

Chart 20
Labour market participation of the working age (15–64) population (percentages)



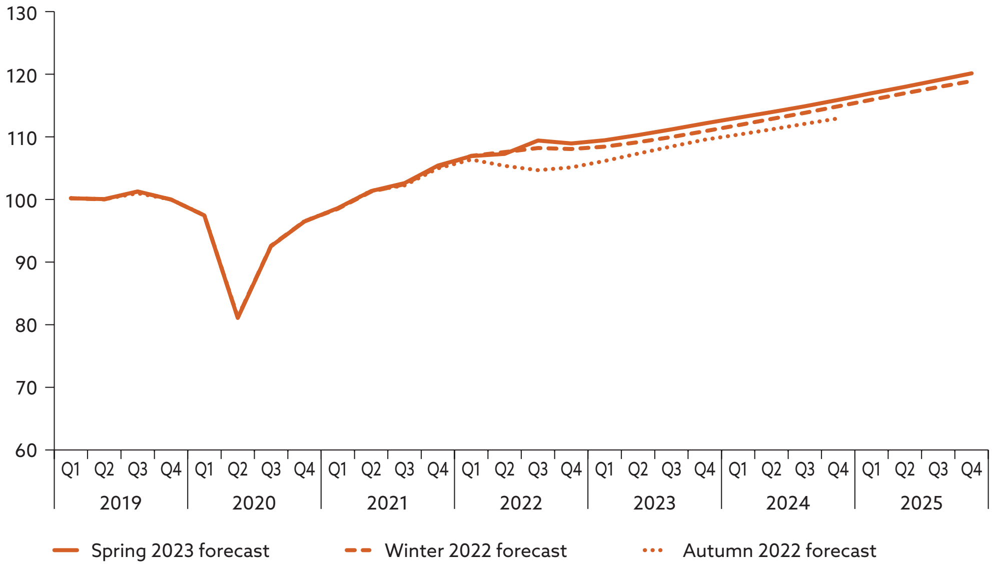
Sources: SO SR, and NBS.

3 Medium-term forecast

3.1 Global outlook and technical assumptions of the forecast[13]

The outlook for foreign demand for Slovak products remains bright (Chart 21). The better than expected developments in 2022 stemmed from the positive evolution of imports in a number of Slovakia's main trading partners. Compared with the winter 2022 forecast, the assumption for the level of foreign demand at the end of 2025 has been revised up by 1%.

Chart 21
Foreign demand (index: Q4 2019 = 100)



Source: NBS.

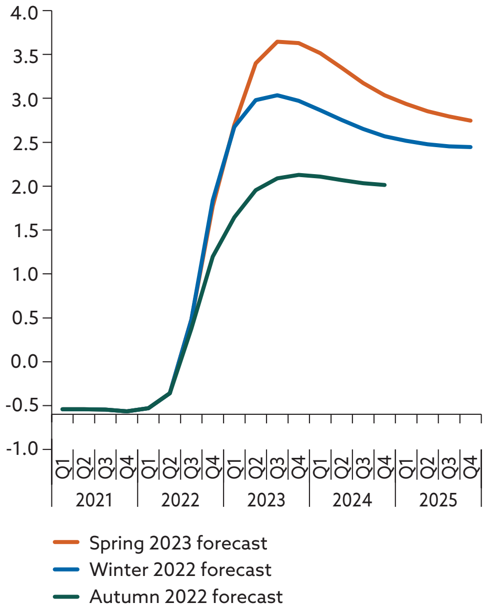
As for the oil price in US dollars, which peaked in the second quarter, the assumption for its level is lower in this forecast than in the winter 2022 forecast, and its downtrend is expected to continue until the end of 2025. Compared with the previous forecast, the euro's average exchange rate against the US dollar over the period from 2023 to 2025 is assumed to be 3% stronger, with the euro remaining above parity with the dollar throughout the projection horizon.

In response to monetary policy tightening amid elevated inflation and to the readjustment of market expectations for interest rates, the assumptions

[13] The technical assumptions of this medium-term forecast are based on the March 2023 ECB staff macroeconomic projections for the euro area.

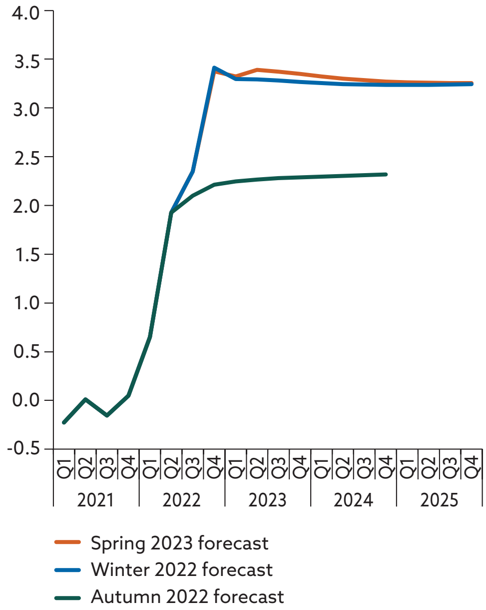
for short- and long-term market interest rates have been further revised up (Chart 22 and 23).

Chart 22
Three-month EURIBOR



Sources: European Commission, and NBS.

Chart 23
Ten-year Slovak government bond yield



Sources: SO SR, and NBS.

Financial market volatility has increased in recent weeks (after the cut-off date for some technical assumptions). In the wake of major central banks' February policy meetings and the publication of high core inflation readings, there were mounting expectations that further interest rate hikes would be necessary. Subsequently, the collapse of certain banks triggered panic in financial markets, and market rate expectations receded significantly. There was also a decline in inflation compensation. Markets therefore appear concerned that financial sector tensions will weigh on the economy. We consider such a scenario to be rather risky. More recent developments have seen a calming of the situation, and attention is expected to return in particular to the inflation indicators that markets have been tracking. Long-term interest rates have barely moved, which in Slovakia is because of an increase in the risk premium applied to risk-free rates.

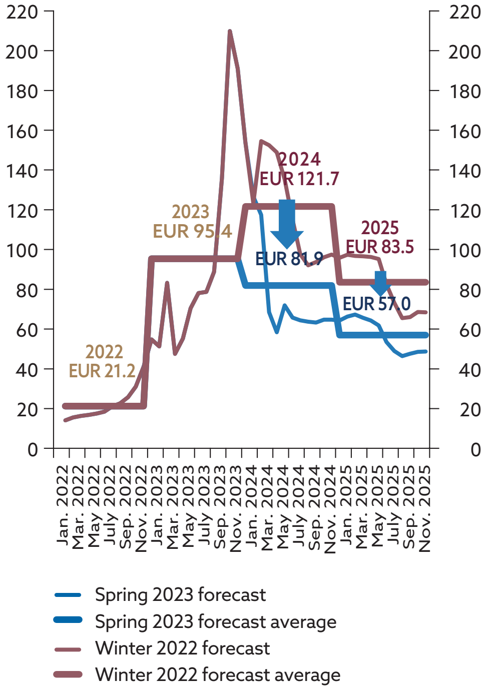
Table 2 External environment and technical assumptions (annual percentage changes, unless otherwise indicated)

	Actual data	Spring 2023 forecast (MTF-2023Q1)			Difference vis-à-vis the winter 2022 forecast (MTF-2022Q4)		
	2022	2023	2024	2025	2023	2024	2025
Slovakia's foreign demand	6.0	2.4	3.3	3.6	0.7	-0.1	0.0
USD/EUR exchange rate [1), 2)] (level)	1.05	1.06	1.06	1.06	3.3	3.1	3.1
Oil price in USD [1), 2)] (level)	103.7	82.7	78.0	74.1	-4.3	-2.2	-2.5
Oil price in USD [1)]	45.8	-20.3	-5.7	-5.0	-2.9	2.0	-0.3
Oil price in EUR [1)]	63.5	-21.1	-5.5	-5.0	-5.4	2.2	-0.3
Non-energy commodity prices	6.6	-6.4	0.3	1.2	4.4	-0.4	-0.2
Three-month EURIBOR (percentage per annum)	0.3	3.3	3.3	2.8	0.4	0.6	0.3
Ten-year Slovak government bond yield (percentage)	2.1	3.4	3.3	3.3	0.1	0.1	0.1

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.

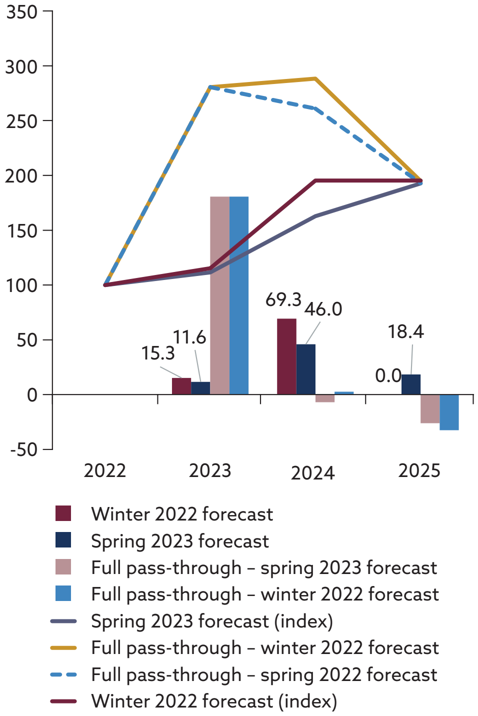
Spot prices of gas and electricity have in recent weeks returned to the levels they were at before the war in Ukraine (Chart 24). This implies, however, only a marginal downward revision of consumer gas and electricity prices, given that they have been set at a low level for this year. Consumer gas prices are expected to increase more sharply in 2024 (Chart 25). At the same time, smaller-scale price compensation measures will need to be maintained. With a further moderate increase in 2025, gas prices will be back at market levels.

Chart 24
Gas spot prices for the calculation of administered prices for households (EUR)



Sources: Macrobond, and NBS.

Chart 25
Gas price growth for households (annual percentage changes)



Sources: Macrobond, and NBS.

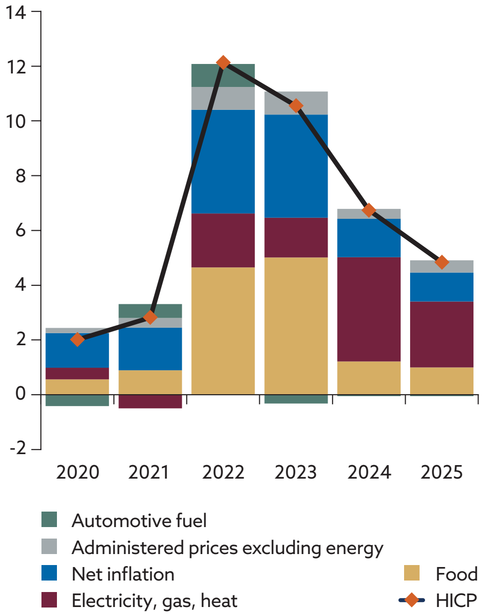
3.2 Macroeconomic forecast for Slovakia

Headline inflation is projected to decline gradually (Chart 26), aided by favourable commodity market developments. Compared with the winter forecast, we have only slightly revised up the inflation projection for this year and, conversely, adjusted down the projection for 2024 (Chart 27).

The pass-through of higher costs to consumer prices is expected to continue for some time. It should be noted that the situation has changed in the first quarter of this year. Consumer demand is projected to cool from the robust level observed last year, hence price developments will be affected by two opposing factors: weaker demand will dampen growth in prices (especially prices of non-essential goods and services, while cost factors will tend to push prices higher.

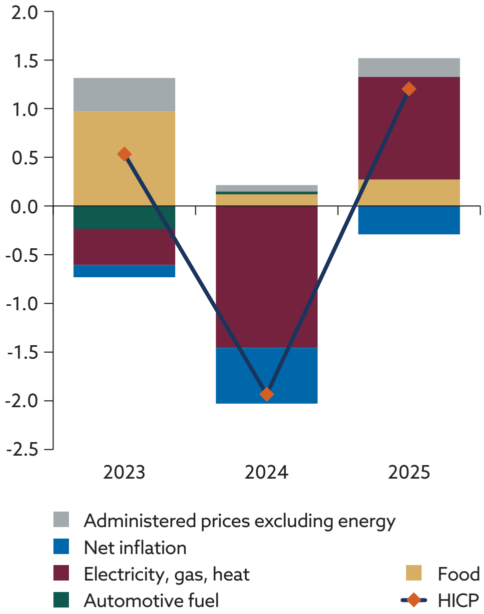
Energy spot prices have decreased appreciably; however, they remain far above the pre-energy crisis level, and consumer prices will have to be brought back to the market level in the medium term. The envisaged return to market prices has been adjusted somewhat, with the increase in administered energy prices expected to be slightly lower in 2024 and moderately higher in 2025. By the end of 2025, consumer gas prices and electricity prices are projected to increase cumulatively by, respectively, 73% and 74%.[14]

Chart 26
HICP inflation and its components (annual percentage changes; percentage point contributions)



Sources: SO SR, and NBS.

Chart 27
Change in projection vis-à-vis the winter 2022 forecast



Sources: SO SR, and NBS.

Headline inflation is expected to be now peaking and then to slow gradually. Nevertheless, its average rate will remain in double digits this year. The main drivers of inflation will be prices of food, goods and services.[15] Recent developments indicate that the pass-through of input cost pressures to consumer prices did not reach completion last year and is doing so at this time. The impact of the current notable declines in prices of food commodities and energy inputs will be somewhat lagged, only appearing in the second half of this year. Thereafter, food price growth should fall back to pre-war levels.

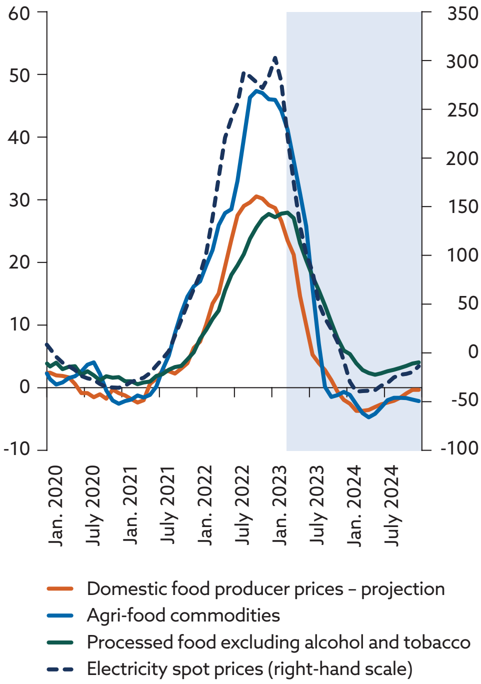
The impact of external cost pressure on goods and services prices is expected to fade in the second half of this year. Compared with what assumptions for input prices and external cost inputs imply, our projection incorporates a certain degree of longer inertia (Chart 28). However, average net inflation is projected to be same this year as it was last year, remaining relatively

14 In 2024 the consumer gas price will be at 40% of the level implied by the projected wholesale price.

15 Our updated outlook for food prices incorporates a number of one-off administrative factors. Tobacco product prices are set to increase in March this year because of an excise duty hike. In April, spirit prices are expected to be pushed up by higher excise duty. Services inflation should be dampened by the reintroduction of free school meals and abolition of the television licence fee.

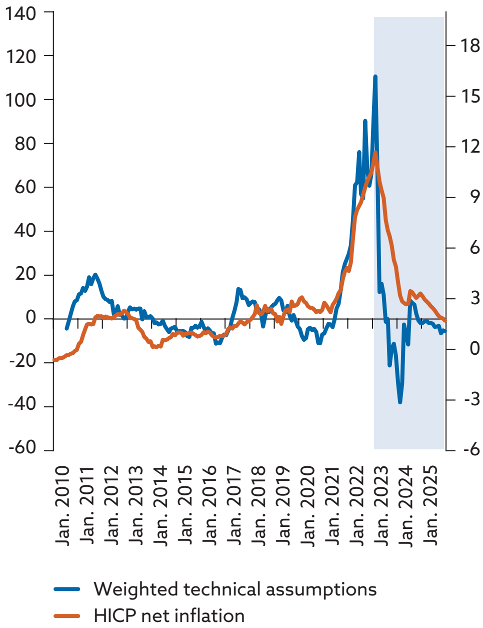
elevated (Chart 29). Goods prices have stabilised, reflecting the improved functioning of global supply chains. The services sector has benefited from a VAT reduction, which may keep further price increases from being too pronounced. Going forward, we expect a gradual return to near equilibrium.

Chart 28
Cost factors and processed food prices (annual percentage changes)



Sources: SO SR, and NBS.

Chart 29
Technical assumptions[16] and net inflation (annual percentage changes)



Sources: SO SR, and NBS.

Table 3 Components of HICP inflation (annual percentage changes)

	Average for 2004–08 (pre-crisis period)	Average for 2010–14 (post-crisis period with euro currency)	2022	2023	2024	2025
HICP	**4.1**	**2.0**	**12.1**	**10.5**	**6.7**	**4.8**
Food	3.6	3.1	16.1	16.0	3.8	3.1
Non-energy industrial goods	0.2	0.3	7.3	8.1	3.4	2.5
Energy	8.3	2.3	18.8	7.6	25.2	15.7
Services	5.3	2.5	9.3	8.5	3.2	3.2
Net inflation	1.8	1.0	8.3	8.1	3.1	2.4

Sources: SO SR, and NBS.

The outlook for the Slovak economy in the medium-term is largely unchanged from the winter 2022 forecast (Chart 30). The slight decline in economic activity amid cooling consumer demand has been shifted out

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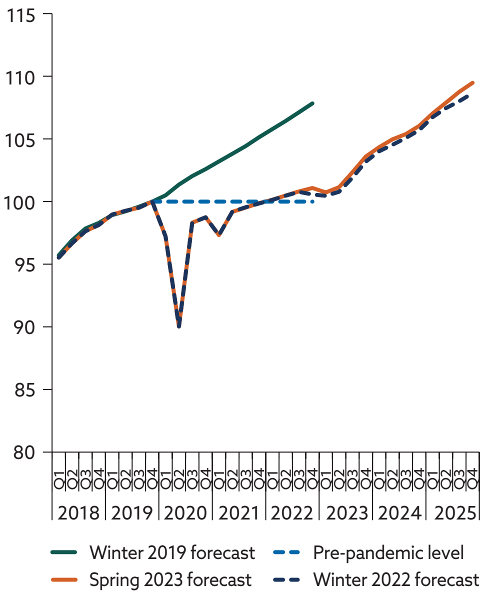
16 The weighted technical assumptions are a mix of import prices and input (especially energy) prices.

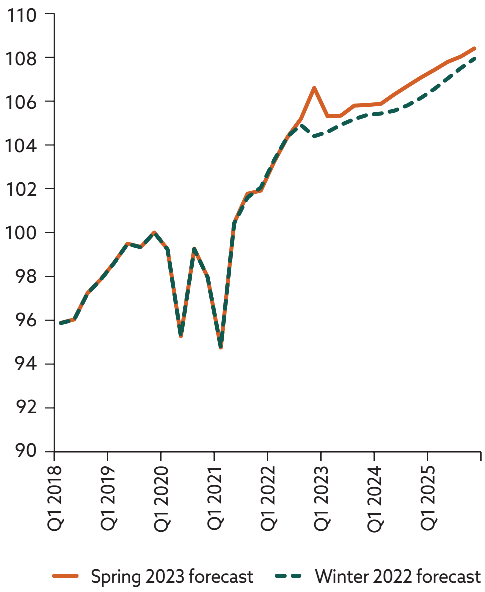
from the end of 2022 to early 2023 (Chart 31). The main drivers of this year's economic growth will be investment activity and export performance.

Chart 30
GDP (index: Q4 2019 = 100)



Source: NBS.

Chart 31
Private consumption (index: Q4 2019 = 100)



Source: NBS.

Consumer price inflation will be a key factor in how the domestic side of the economy evolves. Last year's household spending surprised on the upside, resulting in private consumption increasing by more than 5%. Households were using savings they had accumulated during the pandemic period. In the near term, we expect that the effect of declining real incomes will kick in and that people will curb their spending, especially on non-essential goods and services. Private consumption should moderate temporarily.

As regards foreign demand and the easing of key component shortages in industry, the situation appears more favourable than it did in the winter forecast. The war in Ukraine and energy crisis weighed on global economic performance last year, but expectations have improved. In China, a post-pandemic recovery is underway. The general upturn in global trade is expected to have a positive impact on Slovakia's export performance.

Investment will be the engine of Slovakia's economic growth in 2023. There will be an increased uptake of EU funds from the Recovery and Resilience Facility (through the implementation of Slovakia's recovery and resilience plan).

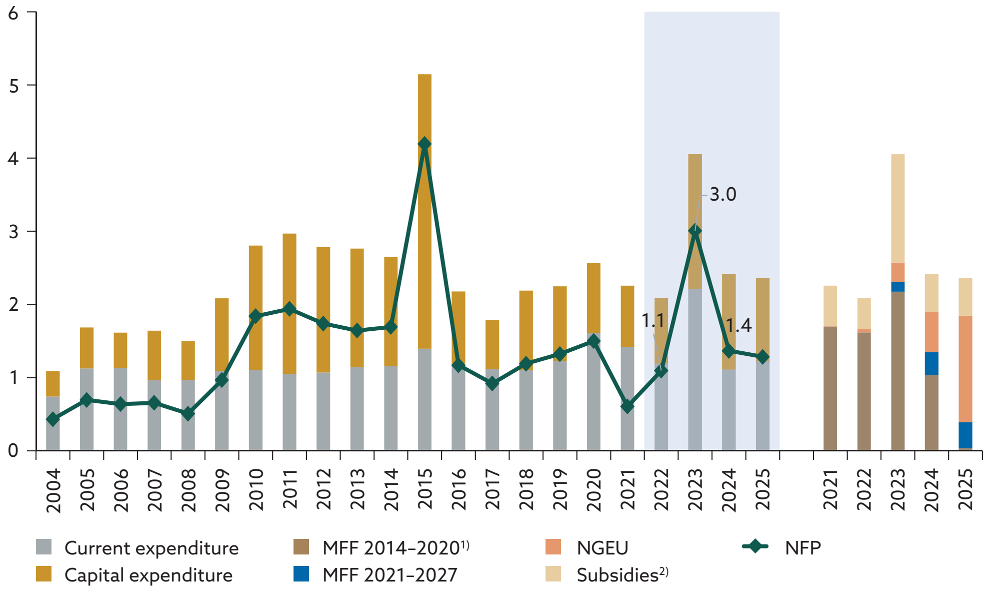
In coming years we envisage continued growth in export performance, supported by output from expanded capacity in the automotive industry.

Government investment should also be robust with an ample inflow of RRP funding. A parallel increase in private investment is also anticipated. In the longer term, we envisage investment activity related to the announced arrival of a new car plant in eastern Slovakia. On the domestic side of the economy, household real income is expected to pick up. But before households' step up their consumption, we expect that, with inflation falling, they will put more money aside and build up their savings.

Receipts from the EU budget are expected to peak this year at 4.1% of GDP. After deducting contributions to the EU budget, the net financial position vis-à-vis the EU budget is projected to be 3% of GDP (Chart 32). The main source of funding for the development of the Slovak economy in 2023 is expected to be funds allocated under the 2014–2020 EU budget, with the end of this year marking the deadline for the disbursement of these funds. The economy should be supported by an additional domestic demand stimulus amounting to 0.9 percentage points of GDP. EU subsidies, including a greater input from energy-related financing, are projected to increase by 1.1 percentage points of GDP. Next year, the impact of the ending of 2014–2020 EU budget funds is expected to be moderated by expected RRF inflows and the start of disbursements in the new EU programming period.

Chart 32

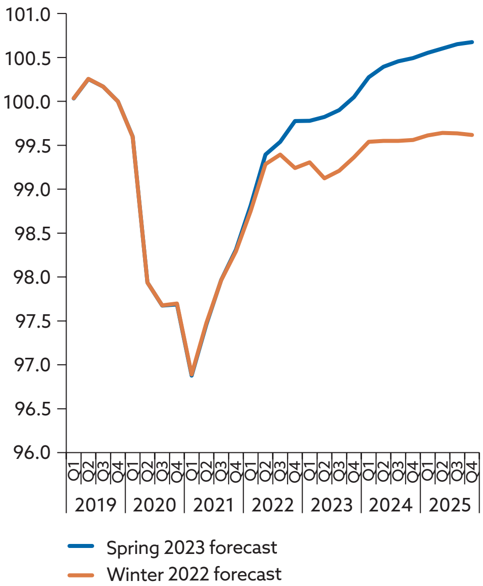
Slovakia's absorption of EU funds and net financial position (percentages of GDP)



Source: NBS.
1) Net of own resources collection costs.
2) The subsidies comprise mainly agricultural funds under the 2014–2020 and 2021–2027 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).

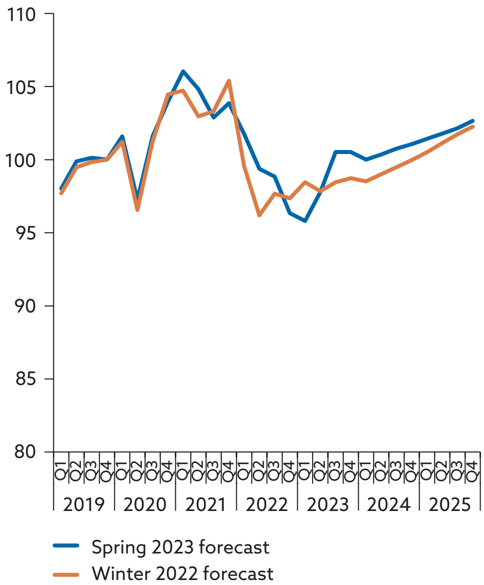
Employment has remained resilient and is expected to start picking up again after a brief stagnation. With the economy outdoing expectations, firms were stepping up recruitment in the latter part of 2022. This uptrend is expected to stall for a short time, with the result that consumer demand should dip in the early part of this year. We expect firms to weather this period mainly by reducing the number of hours worked; firms are not likely to make layoffs given that, in the current environment of persisting labour shortages, they could face even greater difficulty in finding skilled workers during the recovery. In subsequent years, firms will increasingly have to fill vacancies with foreigners or with Slovaks returning from abroad, as the pool of unemployed is depleted.

Chart 33
Employment (index: Q4 2019 = 100)



Source: NBS.

Chart 34
Real compensation per employee (index: Q4 2019 = 100)



Source: NBS.

High inflation and labour shortages will have an upward impact on wage growth throughout the projection horizon (Chart 34). Indexation based on past inflation will result in wage growth of close to 10% in both this year and next year. As inflation eases towards the end of the projection horizon, so will wage demand, even though the labour market will remain tight and wage growth will be outpacing productivity growth.

Table 4 Wages (annual percentage changes)					
	2021	2022	2023	2024	2025
Nominal labour productivity	6.1	7.4	9.9	6.8	5.7
Whole economy – nominal wages	6.1	7.1	10.2	9.2	6.4
Whole economy – real wages	2.8	-5.0	-0.4	2.4	1.5
Private sector – nominal wages	6.4	8.1	10.6	9.9	6.5
Private sector – real wages	3.1	-4.1	0.0	3.0	1.6
Public administration, education and health care – nominal wages	5.3	4.1	8.9	7.0	6.1
Public administration, education and health care – real wages	2.1	-7.7	-1.6	0.3	1.1

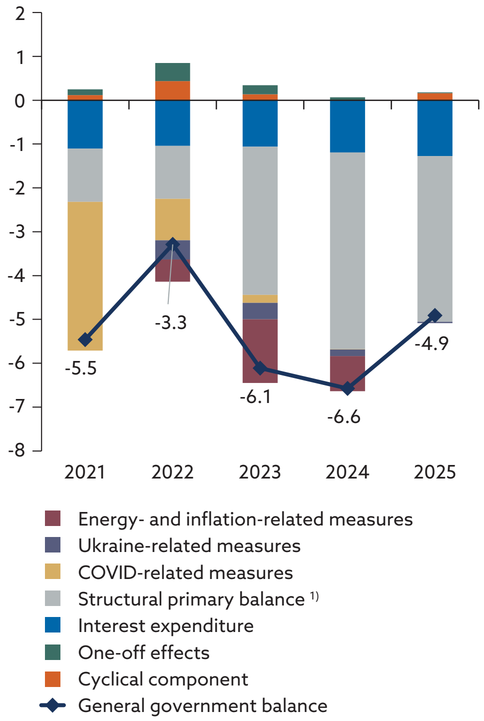
Sources: SO SR, and NBS calculations.
Notes: Deflated by the CPI. Nominal labour productivity – GDP divided by persons in employment (ESA 2010).

3.3 Public finance projections

Slovakia's general government deficit for 2022 is expected to be 3.3% of GDP, representing a year-on-year improvement of 2.2 percentage points of GDP (Chart 35). The upturn in fiscal performance stems from the economy's recovery, higher tax revenues (in particular VAT – owing to higher prices of goods and services – and tax and contribution revenues from the labour market), and expenditure reductions related to the receding of the pandemic crisis. The positive impacts have been dampened by high inflation, measures adopted in response to the war in Ukraine, and, in particular, expenditure on mitigating the impact of energy price increases on government consumption, on energy price compensation measures for firms and on a package of measures to support families.

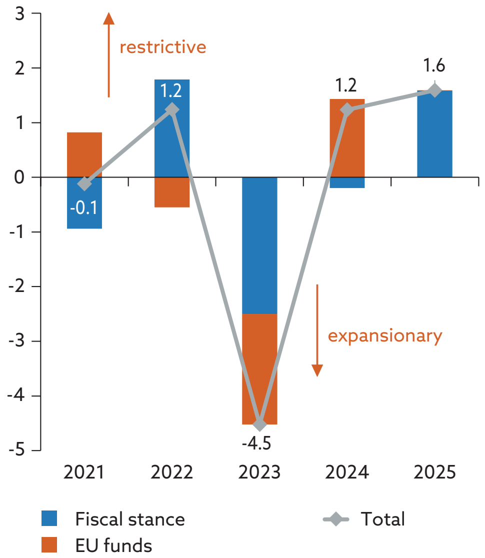
Subsequent years are expected to see a deterioration in fiscal performance, with the deficit widening to more than 6.0% of GDP. The deficit is projected to increase to 6.1% of GDP in 2023 and to 6.6% in 2024. These rises are largely due to energy price compensation for households and firms, the overall amount of which is estimated to be €3 billion, with some €1 billion of that to be covered by EU funds. Expenditure over the projection period will also be pushed up by increases in investment, compensation and interest costs. The fiscal deficit for 2025 is projected to be 4.9% of GDP, with the moderate improvement resulting from higher tax and social contribution revenues, higher revenues, and the unwinding of one-off expenditure related to energy price compensation.

Chart 35
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 36
Fiscal stance (percentage points of GDP)



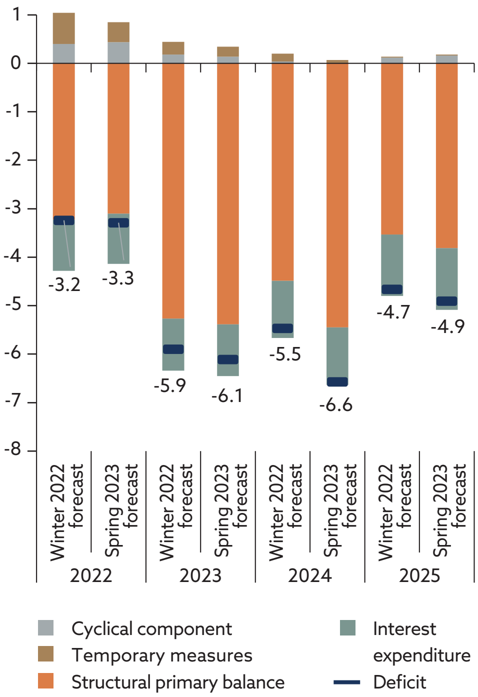
Sources: SO SR, and NBS.
Note: Fiscal stance – annual rate of change in the cyclically adjusted primary balance.

Compared with the winter forecast, the deficit projection for 2022 has worsened slightly. The deterioration was caused mainly by lower tax and social contribution revenues, higher expenditure on intermediate consumption (in particular spending on energy, water, communications), greater support for energy from renewable sources, and an increase in subsidies (especially at the local government level). The impact of these deficit-widening factors was partly offset by higher revenues and in particular by lower expenditure on social benefits and by lower current and capital transfers.

The deficit projection for subsequent years has also deteriorated (Chart 37). The increase in the projected deficit compared with the previous forecast is caused mainly by a lower projection for tax revenues (especially in 2023 and 2024), which reflects weaker revenue collection in late 2022 and new legislative measures. Sanctioning under the debt brake regime is expected to be activated in May 2023 (pursuant to the constitutional Fiscal Responsibility Act), so government expenditure will be capped. Given, however, the high level of budgeted reserves, the sanction activation need not be painful. Moreover, a new government will take office later this year and the approval of its programme will result in the reapplication of the statutory two-year debt brake exemption. Fiscal performance will also be adversely affected by higher intermediate consumption, higher own funding investment, and a drop in revenues due to the introduction of free school lunches. The projected expenditure on energy price compensation in 2023 has been revised down given the assumed decline in energy spot prices and subsequent reduction in the need for assistance.

Chart 37

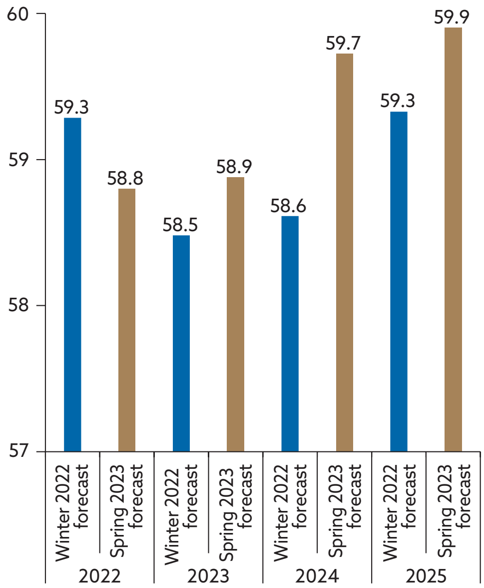
Comparison of projections for the deficit and its decomposition (percentages of GDP; percentage point contributions)



Source: NBS.

Chart 38

Comparison of public debt projections (percentages of GDP)

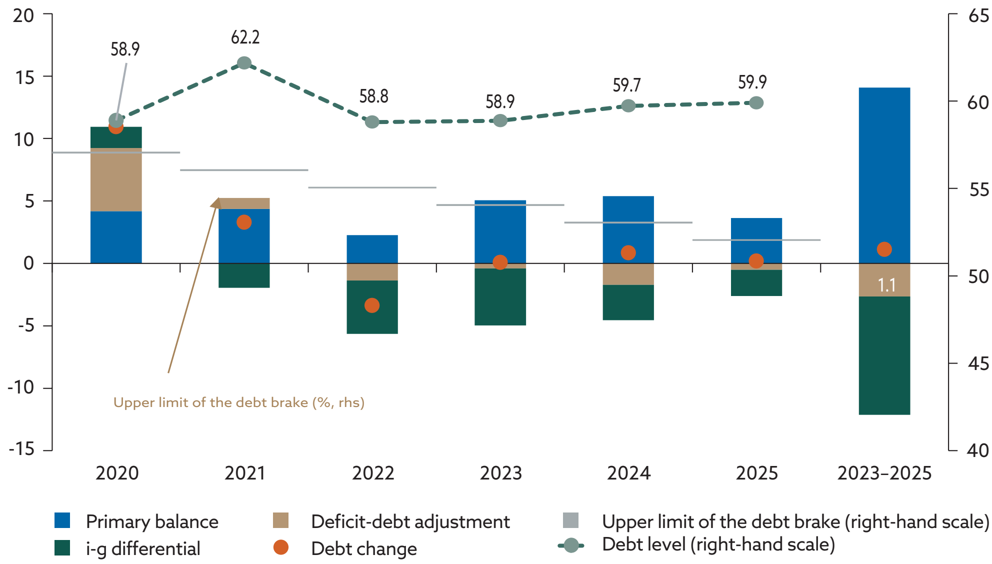


Source: NBS.

Public debt is expected to increase gradually to 60% of GDP (Chart 38). In 2022 the partial financing of the budget deficit from the government's liquid reserve contributed to debt reduction. A decline in deposits held with the State Treasury by non-public sector clients helped reduce the overall volume of government liabilities, adding further downward pressure to public debt. In subsequent years, the debt is expected to increase moderately given the projected path of the general government deficit. The debt in 2025 is projected to be just below the 60% threshold. Given the higher interest costs attached to the issuance of new debt, it is expected that the government will favour partial financing of the deficit with liquid reserves, which should mitigate the rising debt burden (Chart 39).

Chart 39

Public debt and factors of change (percentage points of GDP, percentages of GDP)



Sources: NBS, and SO SR.
Notes: Deficit-debt 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

Risks to the current economic outlook are tilted predominantly to the downside. Significant risks to the global outlook include a renewed increase in commodity prices and potential financial system stress. As for risks to domestic demand, households may curb their consumption expenditure more than the current forecast envisages. Slower implementation of Slovakia's recovery and resilience plan entails the risk of lower government investment.

The greatest risk to the inflation outlook over the projection horizon is a shortage of information about administered prices in the years ahead. If gas prices returned to the market level in 2024, earlier than projected, gas prices for households would be two times higher than forecast in that year and 20% lower in the following year. The future path of these prices is still a major unknown and will depend to a large extent on what measures the new government adopts. In the short-term, we see a risk in that the pass-through of input costs to consumer prices may be stronger and more prolonged than expected, which could keep this year's inflation higher for longer. Despite the decline in wholesale energy prices, we see the availability, and therefore prices, of energy commodities as the largest future risk to price developments.

The European and domestic banking sector is stable, with ample capital and liquidity. It cannot, however, be ruled out that the further tightening of the monetary policy stance will be accompanied by market shocks to a greater or lesser extent and that, besides a weakening of global demand, there could also be a disproportionate increase in borrowing costs for banks, firms, households, and the government. In that case, economic growth would be weaker, but price pressures would also be subdued.

The public finance outlook is subject to risks from energy prices, the war in Ukraine, and pre-election parliamentary bills put forward by members of parliament. There is higher uncertainty surrounding expenditure on energy price compensation measures in 2023 and 2024, particularly in respect of the assistance for households set out in a memorandum concluded with the power utility Slovenské elektrárne, which has not as yet been confirmed by a binding agreement. Higher risk is also associated with price compensation measures for firms, specifically in regard to whether and in what form they will be provided beyond the first quarter of 2023, their current period of application.

Another risk is the additional claims on public expenditure implied by current parliamentary bills put forward by members of parliament.

A persisting risk is the impact of the war in Ukraine, which may entail additional costs related to the provision of material assistance and social spending for people leaving that country.

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Table 5 Spring 2023 medium-term forecast (MTF-2023Q1) for key macroeconomic indicators

Indicator	Unit	Actual data	Spring 2023 forecast (MTF-2023Q1)			Difference vis-à-vis winter 2022 forecast (MTF-2022Q4)		
		2022	2023	2024	2025	2023	2024	2025
Price developments								
HICP inflation	annual percentage change	12.1	10.5	6.7	4.8	0.5	-2.0	1.2
CPI inflation	annual percentage change	12.8	10.6	6.6	4.9	0.5	-2.3	1.1
GDP deflator	annual percentage change	7.6	9.1	4.0	2.9	-0.3	-0.7	0.4
Economic activity								
Gross domestic product	annual percentage change, constant prices	1.7	1.3	3.2	3.0	-0.3	0.3	0.5
Private consumption	annual percentage change, constant prices	5.1	0.7	0.9	1.3	0.0	0.2	-0.1
General government final consumption	annual percentage change, constant prices	-3.2	-0.6	0.6	2.8	0.2	0.1	0.1
Gross fixed capital formation	annual percentage change, constant prices	6.5	9.0	3.8	3.6	2.2	0.4	1.3
Exports of goods and services	annual percentage change, constant prices	1.2	5.0	6.5	3.9	1.6	-1.2	-0.2
Imports of goods and services	annual percentage change, constant prices	3.3	4.9	4.7	3.1	2.5	-1.5	-0.4
Net exports	EUR millions at constant prices	713	779	2,522	3,406	-2,198.1	-2,041.4	-1,900.0
Output gap	percentage of potential output	1.4	0.3	-0.1	0.6	-0.1	-0.2	0.2
Gross domestic product	EUR millions at current prices	107,730	119,121	127,835	135,458	-466.1	-1,017.4	57.5
Labour market								
Employment	thousands of persons, ESA 2010	2,427	2,440	2,452	2,458	15.6	20.9	24.3
Employment	annual percentage change, ESA 2010	1.8	0.5	0.5	0.2	0.4	0.2	0.1
Number of unemployed	thousands of persons, LFS [1)]	170	168	153	142	-15.2	-15.5	-14.9
Unemployment rate	percentage	6.1	6.1	5.5	5.1	-0.5	-0.6	-0.6
NAIRU estimate [2)]	percentage	6.5	6.3	6.2	6.1	-0.1	-0.1	-0.2
Labour productivity [3)]	annual percentage change	-0.1	0.8	2.6	2.7	-0.7	0.0	0.2
Nominal productivity [4)]	annual percentage change	7.4	10.0	6.8	5.7	-1.1	-0.6	0.7
Nominal compensation per employee	annual percentage change, ESA 2010	6.5	10.1	9.4	6.6	-0.6	-0.7	0.6
Nominal wages [5)]	annual percentage change	7.1	10.2	9.2	6.4	-0.4	-0.6	0.6
Real wages [6)]	annual percentage change	-5.0	-0.4	2.4	1.5	-0.9	0.6	-0.5
Households and non-profit institutions serving households								
Disposable income	annual percentage change, constant prices	-0.3	0.9	1.5	1.2	-0.3	0.7	-0.6
Saving ratio [7)]	percentage of disposable income	5.7	5.9	6.6	6.4	-0.2	0.4	-0.1
General government sector [8)]								
Total revenue	percentage of GDP	40.7	40.7	39.6	39.4	-0.3	-0.1	-0.1
Total expenditure	percentage of GDP	44.0	46.8	46.1	44.4	-0.1	1.0	0.2
General government balance [9)]	percentage of GDP	-3.3	-6.1	-6.6	-4.9	-0.2	-1.1	-0.2
Cyclical component	percentage of trend GDP	0.4	0.1	0.0	0.2	0.0	0.0	0.0
Structural balance	percentage of trend GDP	-4.1	-6.5	-6.6	-5.1	-0.1	-1.0	-0.3
Cyclically adjusted primary balance	percentage of trend GDP	-2.7	-5.2	-5.4	-3.8	-0.2	-1.1	-0.3
Fiscal stance [10)]	annual percentage point change	1.8	-2.5	-0.2	1.6	-0.1	-0.9	0.8
General government gross debt	percentage of GDP	58.8	58.9	59.7	59.9	0.4	1.1	0.6

Table 5 Spring 2023 medium-term forecast (MTF-2023Q1) for key macroeconomic indicators (continued)

Indicator	Unit	Actual data	Spring 2023 forecast (MTF-2023Q1)			Difference vis-à-vis winter 2022 forecast (MTF-2022Q4)		
		2022	2023	2024	2025	2023	2024	2025
Balance of payments								
Goods balance	percentage of GDP	-6.2	-2.6	-0.3	1.1	0.8	1.0	1.5
Current account	percentage of GDP	-8.2	-4.2	-2.2	-0.8	0.6	0.9	1.4
External environment and technical assumptions								
Slovakia's foreign demand	annual percentage change	6.0	2.4	3.3	3.6	0.6	-0.1	0.0
USD/EUR exchange [11), 12)]	level	1.05	1.06	1.06	1.06	3.3	3.1	3.1
Oil price in USD [11), 12)]	level	103.7	82.7	78.0	74.1	-4.3	-2.2	-2.5
Oil price in USD [11)]	annual percentage change	45.8	-20.3	-5.7	-5.0	-2.9	2.0	-0.3
Oil price in EUR [11)]	annual percentage change	63.8	-21.0	-5.5	-5.0	-5.3	2.2	-0.3
Non-energy commodity prices in USD	annual percentage change	6.6	-6.4	0.3	1.2	4.4	-0.4	-0.2
Three-month EURIBOR	percentage per annum	0.3	3.3	3.3	2.8	0.4	0.6	0.3
Ten-year Slovak government bond yield	percentage	2.1	3.4	3.3	3.3	0.1	0.1	0.1

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/