INSTITUTE OF ECONOMIC RESEARCH
SLOVAK ACADEMY OF SCIENCES

Economic Development of Slovakia in 2023

Focused on:

After the Storm, Moving Toward Stability (?)

Karol Morvay et al.

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INTRODUCTION

The team of the Institute of Economics of the Slovak Academy of Sciences has been preparing annual assessments of the economic development of the Slovak Republic since its emergence in 1993. The current edition thus begins the fourth ten of these analyses. Each of them looks at the transformations of the Slovak economy in different situations. It assesses the changes in the economy in a given year, but also places them in a broader time context.

After the mix of shocks that hit the economy in the previous years (2020 – 2022), the factors affecting economic developments in the recent period have been less dramatic. The situation in 2023 was somewhat reminiscent of the stabilisation after the storm in the previous period. However, this is so far only a relative, uncertain and fragile stabilisation – as the subtitle of the book expresses. Figuratively speaking, it is not yet certain whether this is more of a clearing after the storm or more of the eye of the hurricane (with the risk of a later sequel).

In the swirl of the turbulence of the previous years, a longer-term problem of strategic importance persisted: the economy's entrapment in a state resembling a middle-income trap. For about a decade now, there has been an absence of significant progress in catching up with the advanced economies. This agenda has received considerable media and social attention in the past year – and therefore with considerable delay. This is not just a current phenomenon and was recognised in the pages of 'Economic Development of Slovakia' in its infancy a decade ago. Being stuck in this kind of trap for a long time is a manifestation of a failure to meet the strategic goal of the economy.

In the context of both relative stabilisation and lack of catching up, the publication notes a number of problems in the internal stability of the economy, in its socio-economic development or in external economic relations. Since the previous edition, the publication has been expanded to include an additional "bonus" chapter, which focuses on a selected specific problem not treated in the other, regular chapters. In this edition, it is the problem of human capital formation.

Traditionally, the line of analysis in this publication progresses from an initial summary view, through a series of more detailed views on sub-issues, to an outlook on future developments.

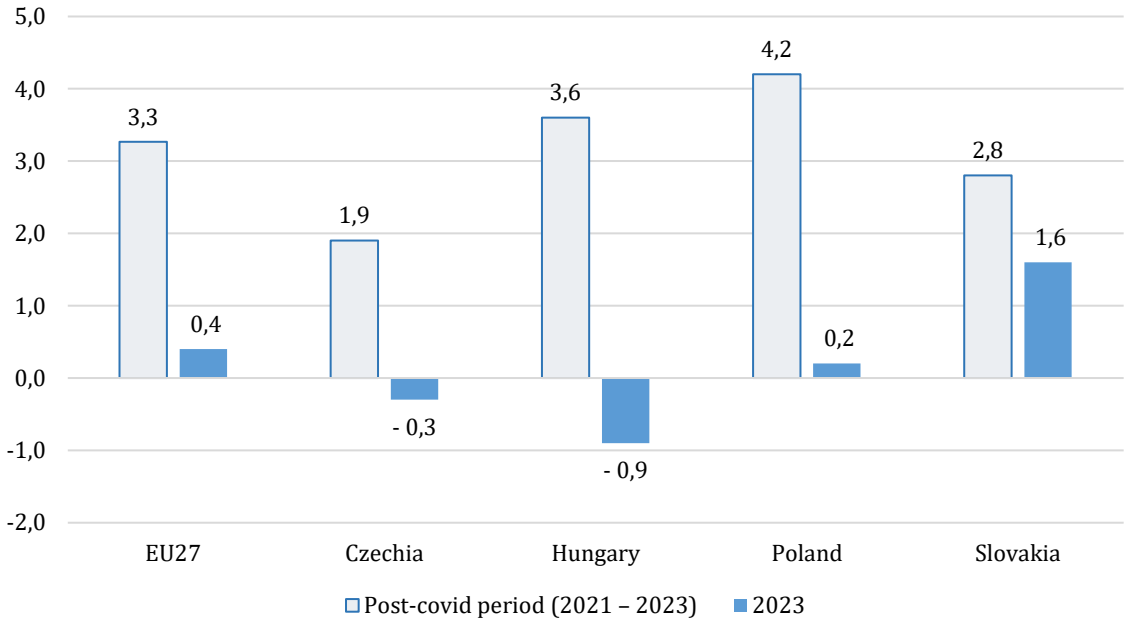
1. AN OVERALL VIEW OF THE ECONOMIC DEVELOPMENT

The introductory chapter provides a concentrated look at a selection of notable tendencies, without going into detail (more detailed insights are offered in the following chapters). Most attention is given here to the problems of economic growth and catching up with the eco-nomic levels of more advanced economies. Growth and catching-up have been underperforming for a long time and have become a weakness of the economy (while in the past they were its strength). In addition, the chapter also discusses the tensions in the labour market and the related change in incomes, or the swing effect in some macroeconomic variables (backward movement after an extraordinary deviation in the previous period). It shows how, after the shocks of the previous years, the economy has moved back towards its "normal corridor".

Economic Growth – Relatively Weak and Yet the Strongest in the Region

The relatively weak growth of the Slovak economy in 2023 (Figure 1.1) was at the same time the strongest in the V4 countries. Due to the near-stagnation situation in the V4 countries (but also in the EU27), the sluggish growth in the Slovak Republic is an attractive result. The composition of the growth is unusual: When domestic demand fell, it was driven by net exports (exports of goods and services minus imports. Figure 1.2b).

F i g u r e 1.1
Real GDP Changes (last year and post-covid period; y/y change in %)



Source: Eurostat; own calculations.

But, somewhat paradoxically, the "drag" on the economy by net exports in this case does not imply a strengthening of exports – they have fallen. The improved outcome is

due to a deep fall in imports.[1] The sharp fall in imports has thus played the unusual role of a short-term drag on GDP, through an improved net export outcome. This demonstrates that the economic growth in 2023 had relatively weak fundamentals; this could strengthen during 2024 – more on this in the chapter focused on the outlook.

Extending the focus slightly to the post-pandemic years 2021 – 2023, the growth of the Slovak economy does not stand out any more.

There was a swing effect in the evolution of some macroeconomic aggregates: after a strong skew in the previous period, there was a significant counter-movement in 2023. This phenomenon is well observed in the case of household final consumption. This has undergone a period of strong growth, which accelerated further in 2022. The strong growth in consumption has been driven by favourable developments in household labour income (discussed below), but also by more generous – economic and social policies towards the household sector. Public policies have been strongly targeted at supporting household incomes. Thus, in the Slovak Republic, as the only V4 country, the share of household consumption in GDP has been growing over the last decade (in other countries it has been declining, Figure 1.2a). Consumption growth was so resilient that it did not slow down even when the inflationary wave hit in 2021 – 2022 (on the contrary, real consumption growth still accelerated to extraordinarily high levels – we covered this unexpected phenomenon in last year's edition of this series). The inflation shock only belatedly changed the behaviour of households. In 2023, there was a backward movement: after an extraordinary upward swing in 2022, consumption dynamics swung sharply downwards. Consumption fell in real terms, and with it the share of consumption in GDP. The drop in consumption in 2023 does not appear to be an anomaly, rather its strong growth before then.

A similar case of sharp fluctuations is present in the net exports data (Figure 1.2b). However, this is not a specific phenomenon in the Slovak economy; a very similar pattern has been observed across the V4. These fluctuations demonstrate the impact of price shocks on fluctuations in macroeconomic aggregates. A significant role was played by the very significant increase in the price of imported commodities in 2022 (imports to Slovakia became more expensive by about 19%). This contributed to a significant deterioration in the balance between exports and imports. And the easing of this inflation shock in 2023 (when the price of imports rose by "only" about 4%) helped the export-import balance to swing back.[2]

For similar "pendulum" swings, there was an extraordinary trigger behind them before 2023 (the onset of the inflation shock played an extraordinary role among them); in 2023, it is more a case of observing a pullback after the strength of the trigger has diminished.

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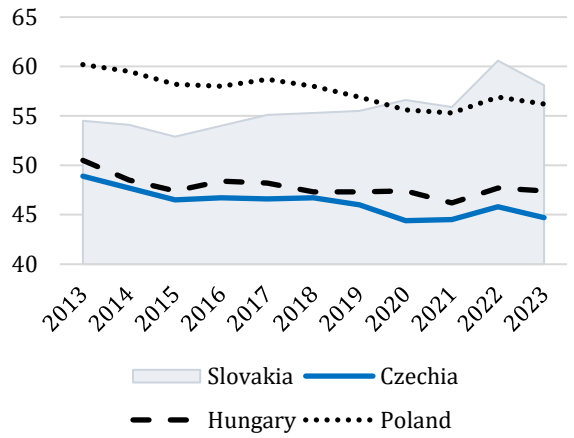
[1] Here we only briefly note trends in exports and imports; more detailed information is provided in the chapter on foreign trade.

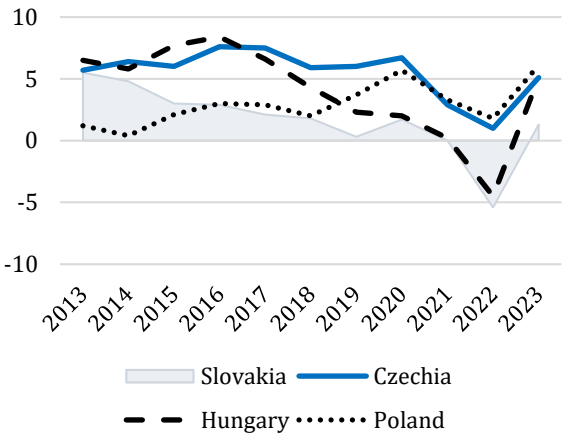
[2] For completeness: real changes in exports and imports also played a role in this, not just price movements (see the chapter on foreign trade). Both weak external demand and domestic demand have weakened exports and imports respectively. In this case, the assessment of the evolution of exports, imports and their balance varies considerably according to the use of current or constant prices. This is an illustration of how a wave of inflation and subsequent disinflation not only destabilises and makes the evolution of macroeconomic aggregates less transparent, but also complicates the interpretation of development trends.

Figure 1.2
Examples of a Pullback in 2023: As a Mirror of Processes in an Earlier Year

a) Household consumption as a share of GDP



b) Net exports as a share of HDP



Note: Expressed from data at current prices.
Source: Eurostat; own calculations.

Real Convergence Still without Significant Drag

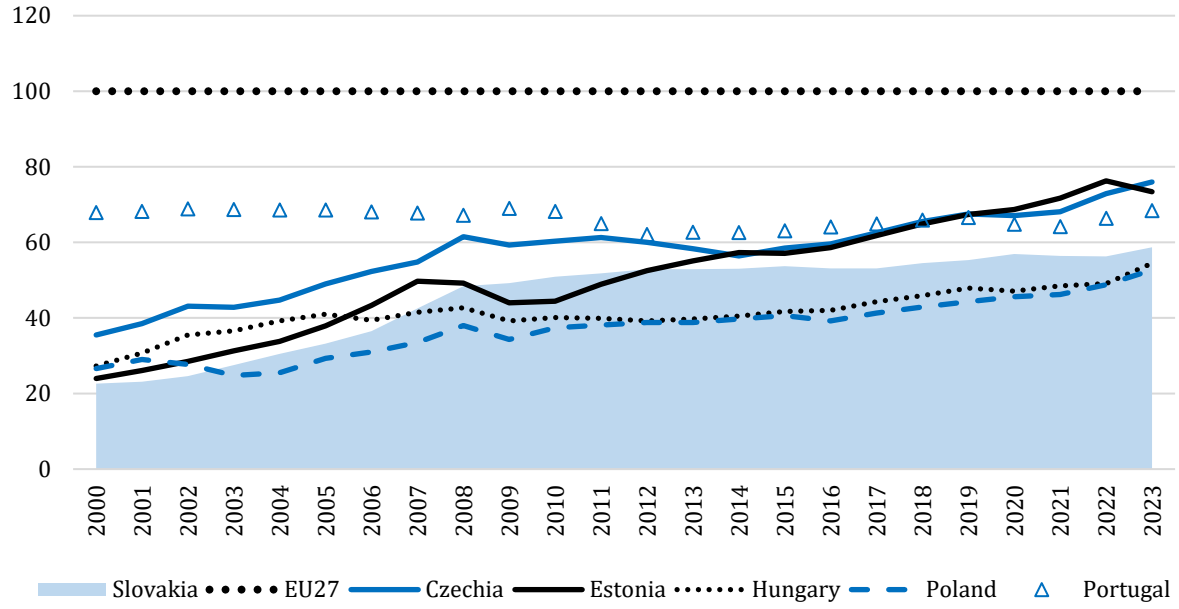
The problem of slowing catch-up has been present for more than a decade; it is a long-standing problem. Earlier symptoms were pointed out e.g., by Žuk et al. (2018) or analytical reports by the EC (2019) and OECD (2022). What they have in common is that they pointed to the evaporation of the momentum of the previous growth model, based on technology adoption, massive foreign investment, involvement in global production chains and the exploitation of low labour costs.

Catching up is presented here through GDP per capita indicators (both in euros and in purchasing power standards) and the productivity gap indicator (explained below).

The relative position of Slovakia in the comparison of economic levels in 2023 was not significantly different from the situation in the period 2010 – 2013. More precisely, when expressed in current euros, there is a small increase. When expressed in purchasing power parity, there is even a decrease. Even taking into account possible imperfections in the reporting of purchasing power parity,[3] such a development cannot be considered satisfactory. The economy is failing to meet its natural strategic objective of converging towards the performance of advanced European economies. Figures 1.3a,b also include data for Portugal, the country with the lowest economic level in the group of advanced European economies of the former EU15. Slovakia did not even reach the level of this lowest-performing member of the group of advanced European economies of the EU15. More precisely, it briefly caught up (in purchasing power parity terms, in 2011 – 2015), but the gap has since recovered.

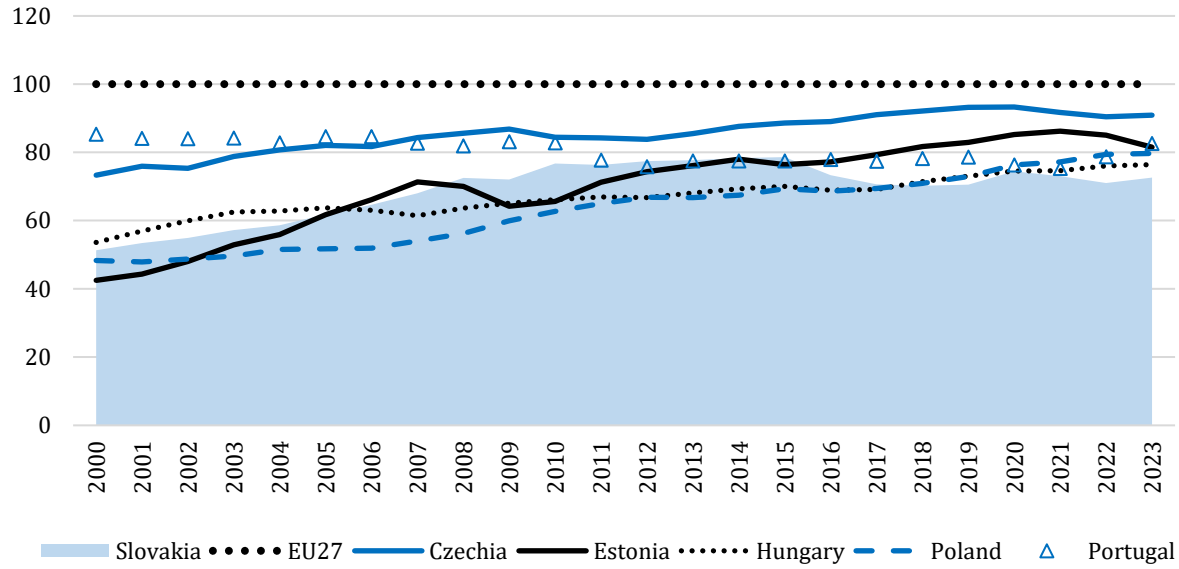
[3]In the course of 2022 and 2023, several analyses have appeared calling for a correction of the parity data (Dujava and Žúdel, 2023 or Hlaváč, 2023). They demonstrated that the use of inaccurate data underestimates the parity data from 2016 onwards. However, their experimental corrections do not bring a fundamental reversal to the assessment of the development trend: the pace of convergence to the level of advanced economies is still muted.

F i g u r e 1.3a
A Picture of Failure to Catch Up: GDP per capita
(ratio to EU27, EU27 level = 100, calculated from data in euro)



Source: own calculations based on Eurostat data.

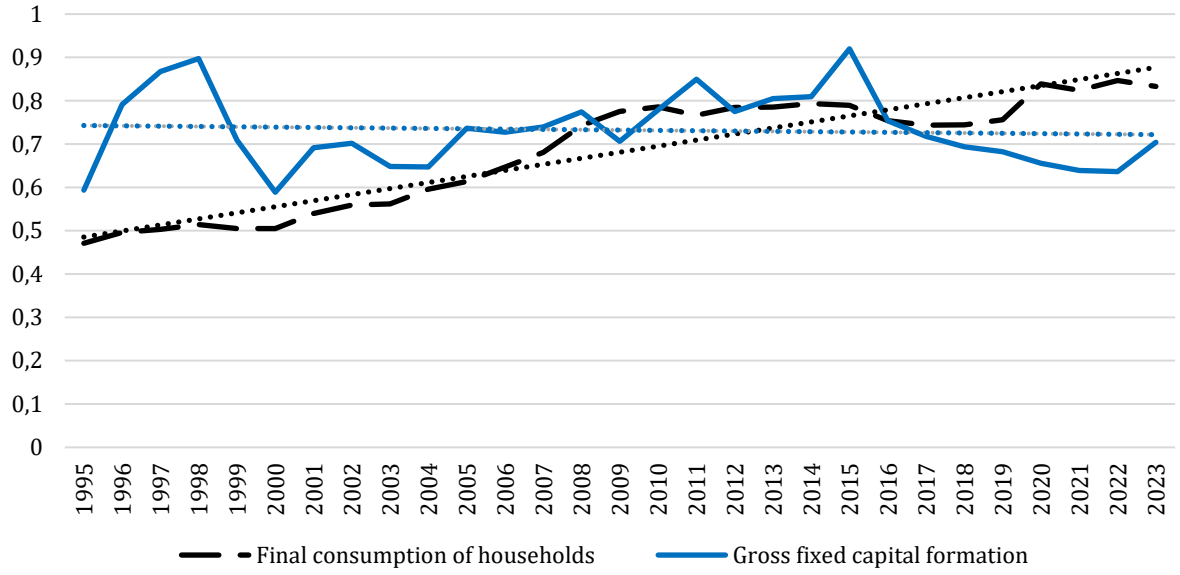
F i g u r e 1.3b
A Picture of Failure to Catch Up: GDP per capita
(ratio to EU27, EU27 level = 100, calculated from data in purchasing power standards)



Source: own calculations based on Eurostat data.

Within the structure of GDP use, catching-up of the level of household consumption is more pronounced than catching-up of the level of gross fixed capital formation (all on a per capita basis). This is related to income restructuring in favour of the household sector (both through higher labour scarcity and through economic and social policy support to household income and consumption-presented below).

Figure 1.4
Convergence of Demand Components: Consumption (per capita) **Converges More Strongly than Fixed Capital Formation** (per capita)
(ratio to EU27 levels of these variables; EU27 level = 1)



Notes:
1) Final household consumption (per capita) in Slovakia / Final household consumption (per capita) in the EU27. The dotted line indicates the trend line.
2) Gross fixed capital formation in Slovakia / Gross fixed capital formation in the EU27.
Source: own calculations based on Eurostat data.

Productivity Gap Closed in Half

The closing of the productivity gap[4] has only (almost exactly) reached the halfway point. The size of the productivity gap that existed after the creation of the Slovak Republic (and thus after the beginning of the economic transformation) has been reduced to only half by 2022. And a substantial part of this closing of the gap took place even before 2008.

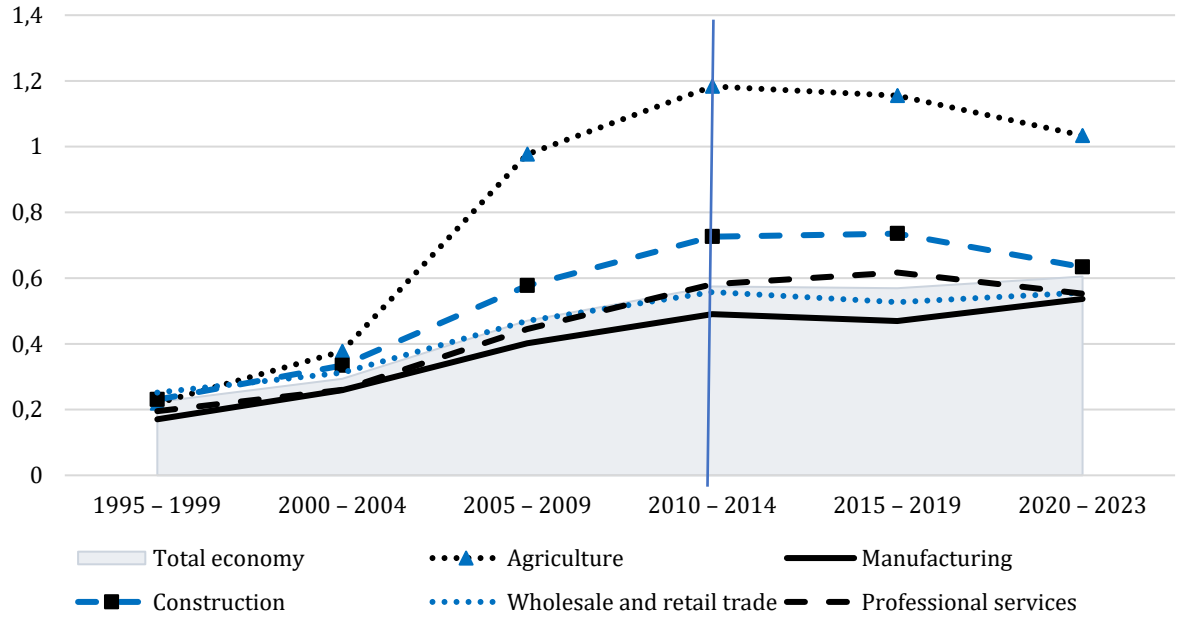
Cross-sectoral differences in catching-up in productivity levels are significant (Figures 1.5 and 1.6). The arable sector is (perhaps surprisingly) the sector that has a higher level of labour productivity in the Slovak Republic than the same sector on average in the EU27. Such an apparent anomaly may be the result of a poorly diversified agricultural sector (orientation towards a small number of crop commodities, grown on large areas). A relatively monoculture-based agriculture benefits from the possibility of focusing on a few types of commodities grown on a massive scale, using mechanisation and automation. Extraordinary productivity in this case is a controversial result, a manifestation of a lack of diversification.

Sectors with a favourable relative position within the economy (position on the right of the horizontal axis in Figure 1.6) have an unfavourable relative position in catching up with the productivity levels of the EU27 (manufacturing, financial and insurance services

[4] The productivity gap is the difference between labour productivity in the Slovak Republic and in advanced economies. Labour productivity is expressed here as gross value added per employed person.

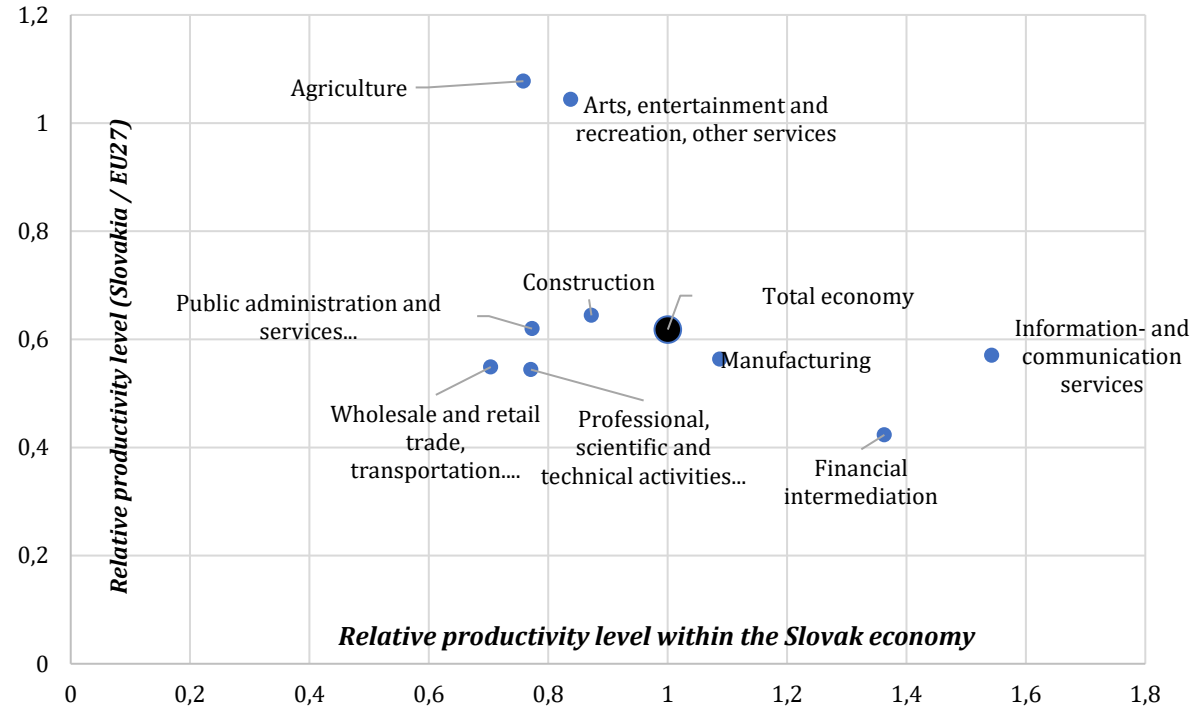
or information and communication services). Manufacturing, whose productivity is particularly monitored for competitiveness reasons, has a significantly unfavourable position in international comparison.

Figure 1.5
Catching Up with the EU27 in Labour Productivity (in selected sectors of the Slovak economy) (ratio; level in the relevant sector in the EU27 = 1)



Source: own calculations based on Eurostat data.

Figure 1.6
Relative Productivity Combinations: Position within the Economy and Internationally



Source: own calculations based on Eurostat data.

There are a number of factors behind the slowdown in the catch-up process. Figure 1.7 provides an insight into them. It is a sample of factors of different nature. They demonstrate that:

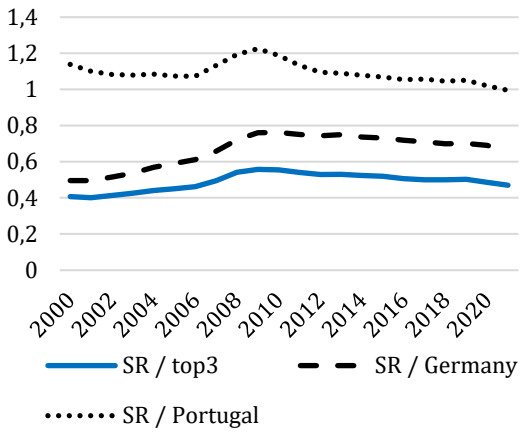
- Workers' fixed capital endowment (so-called capital deepening, which is a well-known determinant of changes in labour productivity, calculated here as the stock of fixed assets per worker) has not caught up with the levels of advanced economies. This is true both vis-à-vis the group with the highest capital endowment (the group labelled top 3 = Denmark, Finland and Austria), vis-à-vis Germany, and vis-à-vis Portugal (this is the economy with the lowest level of capital deepening among the advanced economies of the former EU15). Signs of catching up with their level of capital deepening were present until around the 2009 global recession; thereafter, the process stagnated, even reversed (Figure 1.7a).
- The structure of fixed capital accumulation is not conducive to productivity dynamics. In the Slovak Republic, the structure of fixed asset accumulation over the last decade has been characterised by an exceptionally high share of residential buildings and an exceptionally low share of intellectual property products (Figure 1.7b). It can be assumed that residential buildings have a weak relationship with labour productivity; intellectual property assets should have a strong productivity-enhancing effect. The weak accumulation of intellectual property assets is consistent with the unsatisfactory shift in the shaping of the factors of competitiveness presented in Chapter 4.
- Incomes in the economy have been restructured in favour of the household sector and to the disadvantage of the corporate sector. This is a different trend than in the other V4 countries. Among the reasons for this tendency are the increase in the scarcity of labour (and thus the strengthening of the wage volume in the economy, see elsewhere in this chapter), but also economic and social policies supporting the growth of total disposable incomes of the household sector (more generous social programmes, compensation of household incomes in the event of shocks, etc.) and wage increases in the public sector. Such restructuring puts the corporate sector at a relative disadvantage, and hence capital formation in the corporate sector and opportunities for increasing labour productivity.
- The quality of the economy's regulatory framework has tended to deteriorate (Figure 1.7d). Here is an alternative view of the scope for productivity growth-through the quality of the institutional framework.

To the previous critical view of labour productivity, it should be added that the view of productivity dynamics would be somewhat different if it were expressed in terms of so-called hourly productivity (calculated not per person, but per hour worked). When converted into hours, the rate of change in productivity is more favourable (in Table 1.1). This is explained by the different evolution of the number of persons employed (which has been growing) and the volume of hours worked (which has rather stagnated). A rising number of persons working while the total volume of hours worked is stagnating inevitably implies a fall in the average number of hours worked per worker.[5]

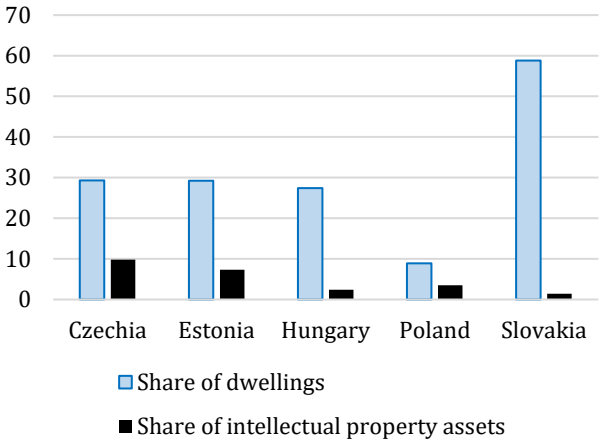
[5] Whereas in 1995 a worker worked an average of 1,853 hours per year, in 2022 it was only 1,622. To illustrate, this loss of 231 hours is equivalent to 1.5 months. This decline in hours is continuous and long-term; it is not just the result of limiting working hours in response to the pandemic (2020). But the pandemic has boosted this process.

Figure 1.7
A Survey of the Various Factors Behind the Insufficient Closure of the Productivity Gap

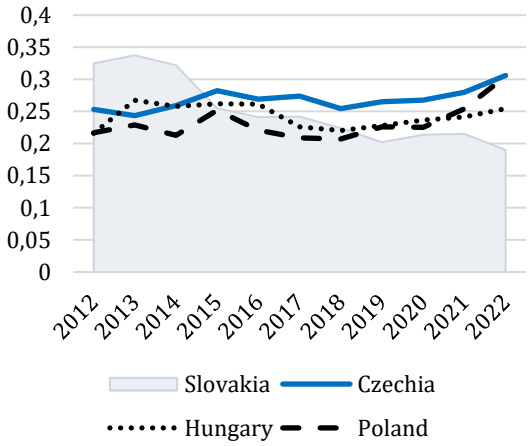
a) Catching up with capital deepening level



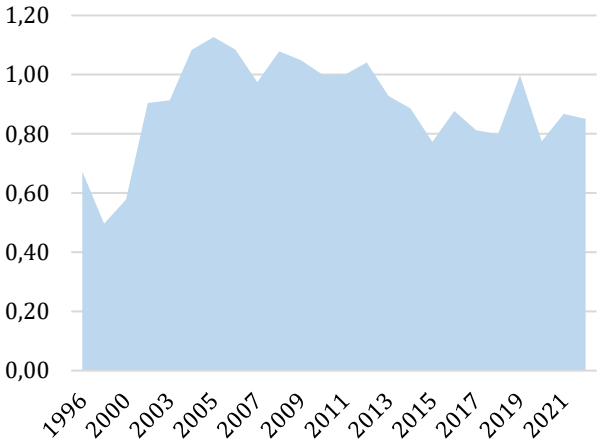
b) Accumulation of selected fixed assets



c) GDI of corporate sector / GDI of households



d) Indicator of regulatory quality



Notes:

- Figure 1.7a shows the ratios of the level of capital deepening in the Slovak Republic to selected groups or countries. Top3 is the average level of the three economies with the highest capital deepening level in the EU (Denmark, Finland and Austria). Capital endowment (capital deepening) is expressed here as the value of fixed assets (gross) per worker.
- Figure 1.7b shows the shares of two fundamentally different, selected types of assets (residential buildings and intellectual property products) in total fixed asset increases. The period is 2012 – 2022. Intellectual property products consist of databases, software, research and development results, and similar intangible assets.
- Figure 1.7c shows the ratios of gross disposable income (GDI) in the corporate sector to GDI in the household sector. (GDI is the amount of all types of income, already after redistribution.)
- Figure 1.7d presents the Regulatory Quality Indicator, one of the components of the World Governance Index. It measures the quality of public policies, the quality of the regulatory framework of the economy.

Source: own calculations based on Eurostat and World Bank data.

Relatively high numbers of hours worked per worker compensate for low hourly productivity in less developed economies.[6] Gradually, also in the V4 countries, the number of hours worked per worker is decreasing, and thus the dynamics of labour inputs is strongly differentiated according to the way they are measured (Figure 1.8). While the

[6] For example, in Denmark or Germany, the average number of hours worked by a worker will not even reach 1 400 per year in 2022. In Central and Eastern European countries (which are members of the EU), or for example in Malta or Greece, it was 1600 – 2000. *Source*: Eurostat.

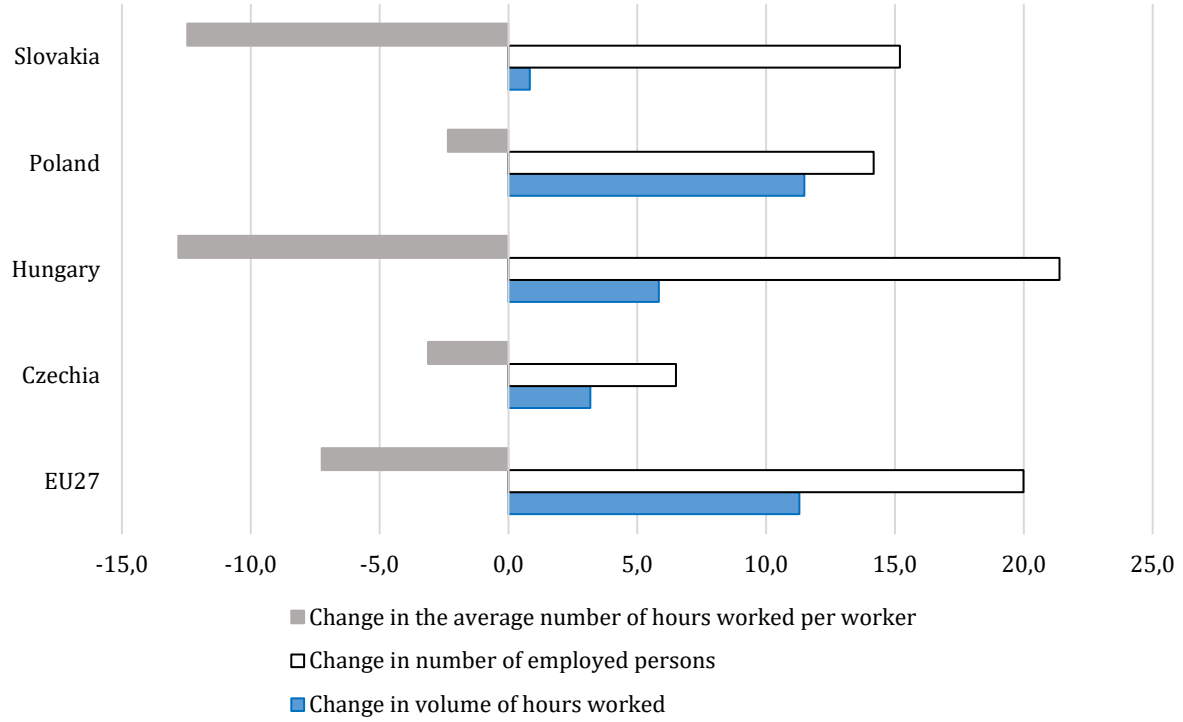
number of workers has been growing, the number of hours worked per worker has been declining. This resulted in relatively weaker growth in the volume of labour inputs in terms of hours than in terms of persons employed. In the Slovak Republic, this difference is particularly pronounced: the relatively high rate of growth in the number of persons employed contrasted with very weak growth in the volume of hours worked.

Table 1.1
Comparison of Productivity Dynamics in the Long Run: When Converted into Hours, the Result is More Favourable (all changes in %)

	Period 1995 – 2022	Period 2012 – 2022
Change in labour productivity calculated per person employed	121.7	11.3
Change in labour productivity calculated per hours worked	153.3	22.8
Change in the number of persons employed	15.2	9.9
Change in the number of hours worked by one worker	–12.5	–9.3
Change in total volume of hours worked	0.8	–0.3

Source: own calculations based on Eurostat data.

Figure 1.8
Labour Inputs to the V4 Economies in the Long Run
(total changes over the period 1995 – 2022, %)



Source: own calculations based on Eurostat data.

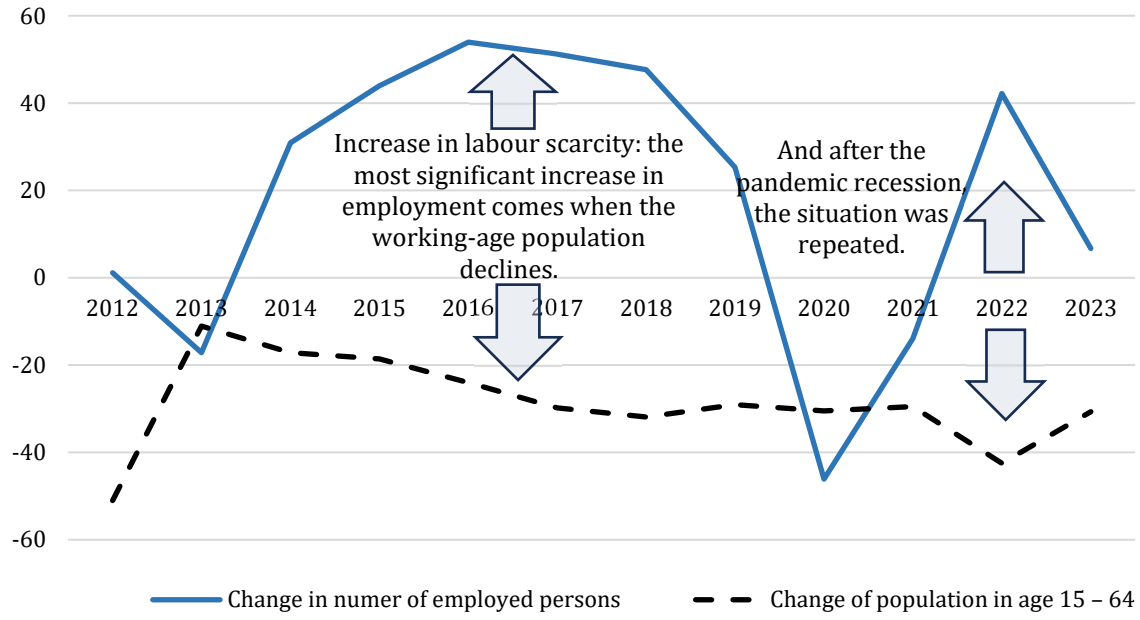
Even if more favourable productivity growth rates (calculated per hour) are taken into account, the essence of the problem does not change: labour productivity in both measurement methods reaches only around 60% of the EU27 level (hourly productivity has a stronger growth, but the same is also true for the other economies with which Slovakia is compared).

Scarce Labour Force is Changing the Income Structure

The labour market has been experiencing a mismatch between rising labour demand and declining labour force supply for some time now (since around 2014). In Figure 1.9, the evolution of labour demand is represented – albeit imperfectly – by changes in employment, and labour supply is represented by the number of population of working age. During the pandemic recession, this trend was briefly interrupted. However, it has subsequently resumed. Even with relatively weaker economic growth and subdued employment growth in 2023, labour market tightness persisted as the working-age population continued to decline. Thus, the weakening of employment growth in 2023 did not fundamentally change the longer-term problem of a shortage of suitable and employable labour (but with significant regional differentiation).

Years of labour market tensions have pushed for a change in the structure of incomes, creating a pattern of wage-led growth. Indeed, the scarcity of labour has allowed wages to grow faster (in national accounts terminology, it is the growth of compensation of employees) compared to the growth of profits (net operating surpluses[7]).

Figure 1.9
Changes in Labour Market Supply and Demand
(y/y differences in the number of employed and working-age population, in thousands)



Source: own calculations based on Eurostat data.

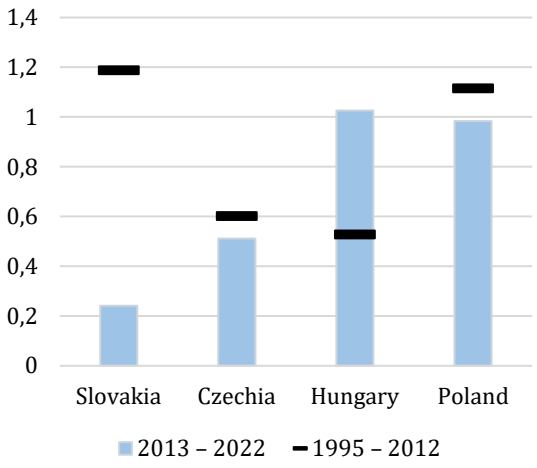
The ratio of profits to wages has skewed in a unique way (when compared within the V4 group, in Figure 1.10). In the decade 2012 – 2022, there were only EUR 0.24 of additional profits per euro of additional wages, which is sovereignly the lowest value in this

[7] National accounts indicators are used here in the aim of good international comparability of variables. Compensations of employees are wages and salaries plus social contributions paid by the employer (i.e. in total it is a labour cost). The net operating surplus is a parameter close to the economic profit indicator. With simplification, these parameters can be used to present the ratio of profits to wages.

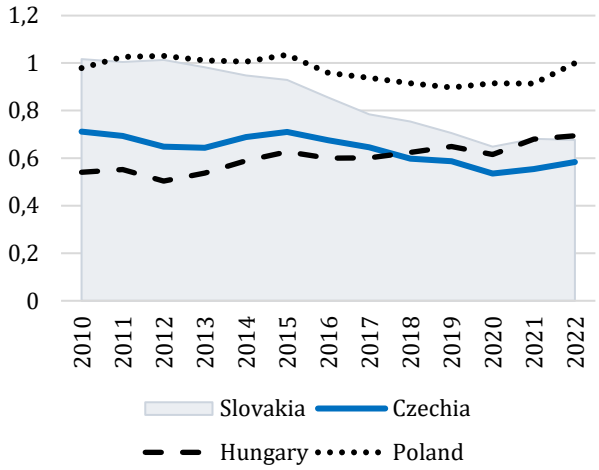
grouping of economies. Slovakia has thus moved from one extreme position to the opposite one: in the period up to 2012, income creation in the Slovak Republic was most skewed in favour of profits, and later again most skewed – but already in favour of wages. The corporate sector in Slovakia was thus exposed to a crowding out of profits by wages (this phenomenon was more explicit in Slovakia than in the other V4 economies). However, the crowding out of profits by wages has not taken on such a dimension as to seriously jeopardise the profitability of output. Although the output profitability indicator has been declining in Slovakia (Figure 1.11), by 2022 it had not reached levels that were clearly more unfavourable than in neighbouring economies. However, the trend deserves attention. And it creates challenges for the corporate sector to keep productivity growth adequate to labour cost growth.

Figure 1.10
Income Formation Ratio Indicators

a) Increase of profits/increase of wages

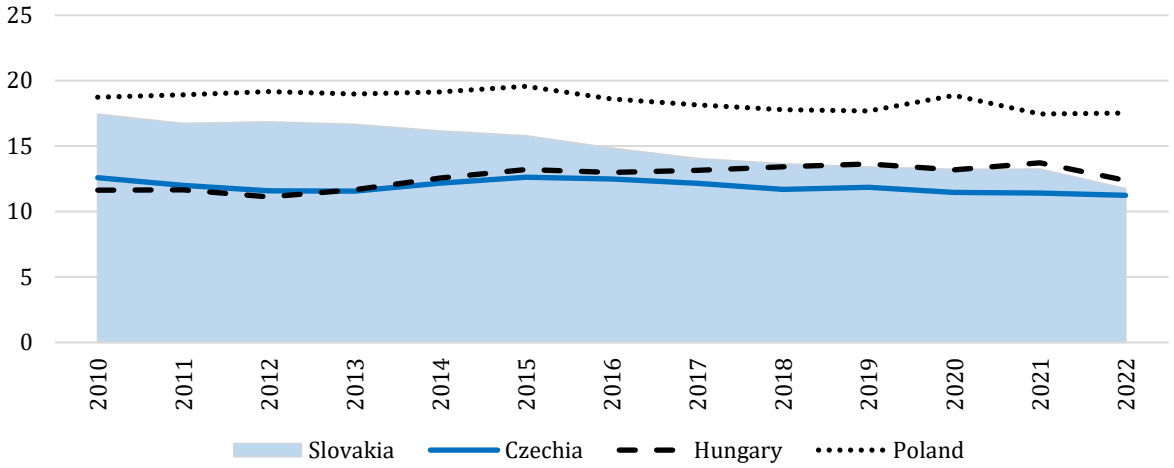


b) Profits to wages ratio



Source: own calculations based on Eurostat data.

Figure 1.11
Profitability of Production: Net Operating Surplus / Output (in %)



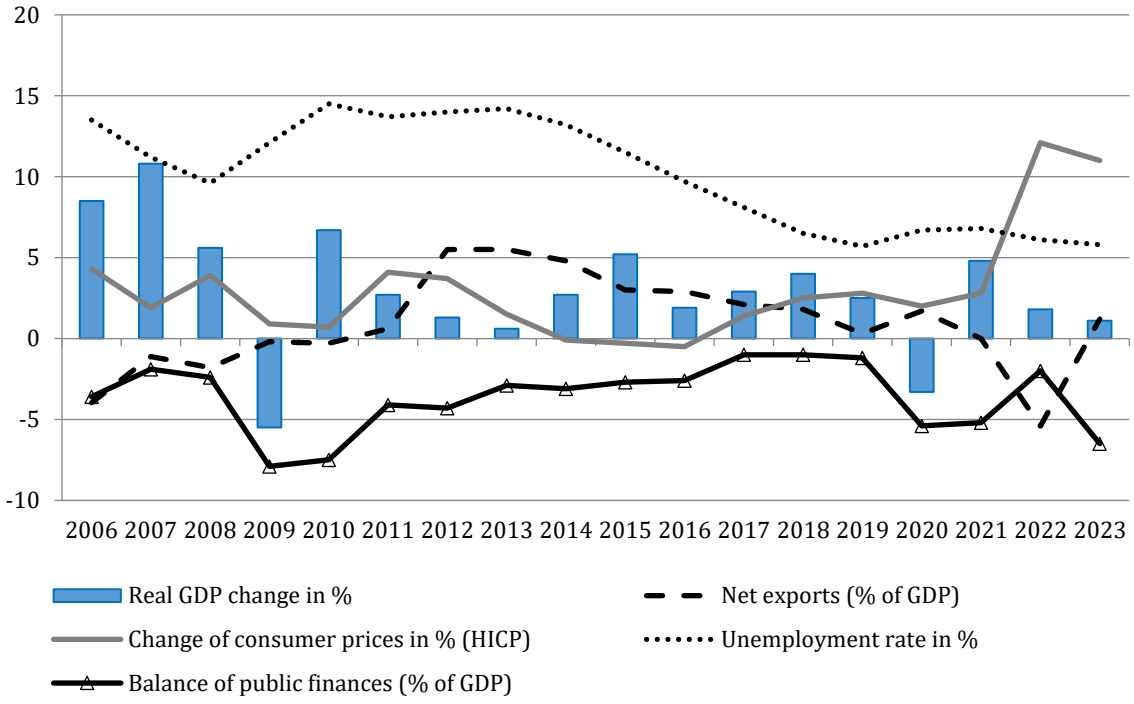
Source: own calculations based on Eurostat data.

Overall Macroeconomic Stability – Start of Disinflation, Pre-Preparation of Fiscal Consolidation

In both 2022 and 2023, it was the sharp rise in the price level that played the role of the main destabiliser of the economy. Gradually, however, the focus has shifted to public finances. The inflation rate entered a phase of continuous decline, while the need to consolidate public finances gained urgency and attention.

Figure 1.12 shows the changes in the main stability indicators and depicts the changes in two periods of significant destabilisation: one due to the 2009 global recession, the other due to the 2020 pandemic crisis. The deterioration in stability during (or shortly after) these events takes a different form. In contrast to the previous recession, the pandemic crisis was not followed by a significant rise in the unemployment rate; the destabilisation manifested itself through a rise in the price level.

Figure 1.12
Developments in the Main Parameters of Performance and Macroeconomic Stability



Notes: Unemployment rate according to the Labour Force Survey.
Net exports (exports minus imports of goods and services/GDP) calculated from data at current prices.
Source: Eurostat; ŠÚ SR and own calculations based on these data.

The destabilisation of public finances in the last two recessions gives a differentiated picture. The course of the public finance balance in the period 2007 – 2011 is almost a photocopy of the course in the period 2018 – 2022 (this is the period two years before, during and two years after the recession). However, a complication emerges in 2023: instead of deficits continuing to decline (as they did at a similar point after the previous recession), deficits widen again. The explanation can be seen in the fact that the loss of stability of public finances is not only due to the pandemic crisis that has now passed, but

that there are also other factors of imbalance. These include, for example, unfavourable demographic factors or more generous social policies. Corrective measures have been postponed over time (in the post-pandemic three years there have been three successive governments, one of them a bureaucratic one with partial competences), with additional steps complicating the sustainability of public finances (such as additional pensions). Recovery consolidation policies are only partially known and their formulation is delayed.

* * *

Two main challenges for economic policy are breaking through after the simultaneous shocks of the 2020 – 2022 period: to consolidate public finances and to resume the process of catching up with advanced economies. Both of these challenges respond to longer-term issues (which have been accentuated, but not initiated, by the turbulence of the recent period). Neither the failure to catch up nor the public deficit are the result of the pandemic crisis, the geopolitical crisis or the domestic political turmoil of the last three or four years. However, these factors have contributed to the new urgency with which these long-standing problems have manifested themselves.

In 2023, the previous shocks have moderated, the fluctuation of the parameters has moderated, or there has been a backward movement. With a considerable degree of caution, some stabilisation can be assumed (hence the question mark in brackets in the subtitle of this book). To remove the question mark, the process needs to be sustained, prolonged and supported by a credible fiscal consolidation programme.

2. PRICE DEVELOPMENT

In 2023, the issue of price level development once again took centre stage in public discourse, as inflation remained exceptionally high, reaching double digits for the second consecutive year. According to the national CPI methodology, the average year-on-year inflation rate stood at 10.5%, the second highest since 2000 (surpassed only by the previous year, 2022). However, the inflation trend differed significantly between the two years. While 2022 saw a continuous upward trajectory, 2023 was marked by a gradual decline.

When measured using the HICP methodology (harmonised consumer basket), the average inflation rate was even higher, reaching 11.0%. The discrepancy between the inflation rates calculated by the two methodologies lies in the differences in their calculation approaches, a topic we explored in greater detail in our 2021 publication. It can therefore be concluded that high inflation remained one of the most significant challenges the Slovak economy had to contend with in 2023.

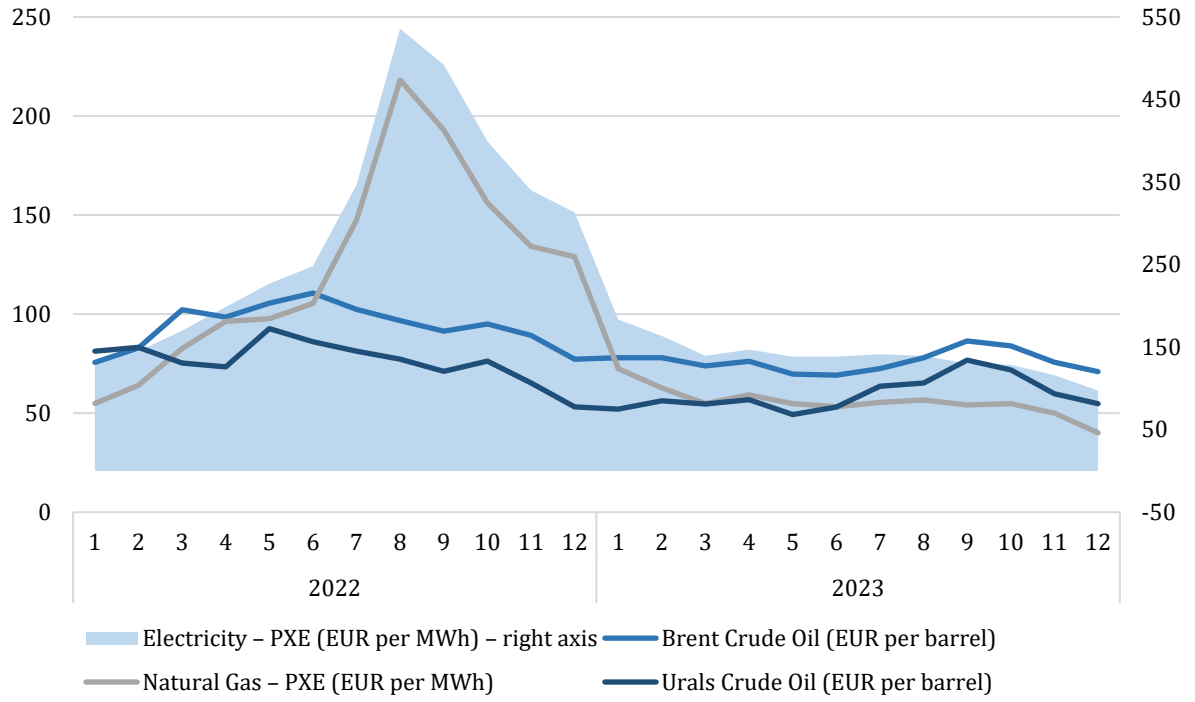
What Goes Up Must Come Down

After last year's uniform positive contribution from all consumer basket categories to overall inflation, a similar trend was observed this year, with the sole exception of the *Transport* category, where average prices even decreased year-on-year over several months. On a positive note, none of the categories in the consumer basket made a double-digit contribution to inflation.

- *Reversal of the trend in food price growth* – when looking at the year-on-year development of food prices on a monthly basis, we can identify that food inflation peaked in March 2023 at 28%. However, from April onwards, the pace of price growth gradually slowed, and by December, the year-on-year growth rate was down to "just" 6.5%. This is largely due to the fading base effect, as the month-on-month growth in prices stopped in March, with average food prices remaining unchanged until the end of the year. Furthermore, this trend was supported by the fading shock of global food prices, as the global food price index returned to 2021 levels during the same period.
- *End of the energy crisis* – The highly turbulent development of energy commodity prices in 2023 was replaced by price stabilisation. Both Brent and Urals oil maintained a similar dynamic, although the "discount" on Russian heavy oil narrowed over the course of the year. While the price difference between these two types of oil averaged around EUR 22 per barrel in 2022, following the outbreak of the war in Ukraine, in 2023 the gap narrowed to approximately EUR 16 per barrel (by July 2023, the difference had dropped to below EUR 10 per barrel). Overall oil prices at the end of the year were 9% lower compared to the beginning of the year. A dramatic drop was also observed in natural gas and electricity prices, which had reached extreme levels in 2022. Both commodities experienced an average year-on-year decline, with natural gas down 55% and electricity

down 53%. As a result, the cost pressures stemming from the energy crisis eased throughout 2023.

Figure 2.1
Development of Oil, Natural Gas and Electricity Prices
(monthly averages, in EUR per barrel and MWh)



Source: kurzy.cz (2024).

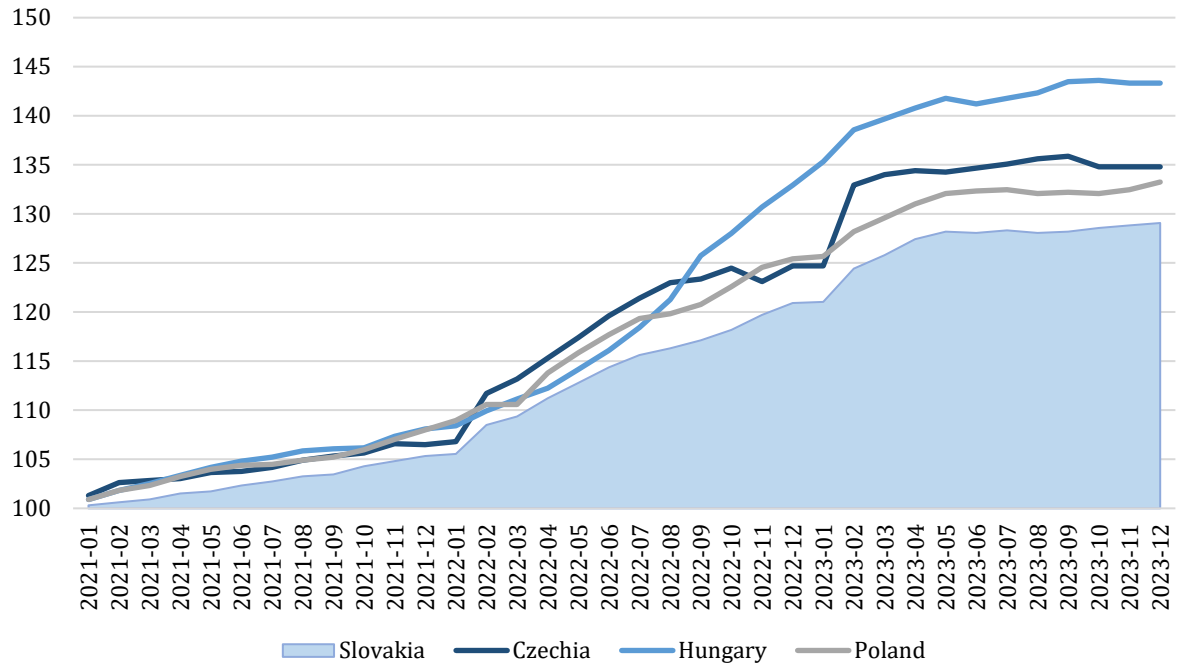
- *Administrative intervention in regulated energy prices for households* – The energy crisis in 2022 generated a significant inflationary impulse, which gradually subsided in 2023. However, due to the way regulated prices for households were set, this would have still had a substantial impact on inflation in 2023. In response, policymakers decided at the end of 2022 to protect households administratively by capping electricity prices and allowing only a slight increase in gas prices. This decision had a significant effect on the overall inflation rate, albeit at the cost of increased public spending on energy compensation. The quantification of the price cap is discussed in more detail in the second part of this chapter.
- *Milder price growth in construction* – The impact of this factor on inflation reporting is indirect, mainly through the imputed rent category. The imputed rent for owner-occupied housing slowed its dynamic growth and, by the end of the year, even saw a year-on-year decline. This can be attributed to the slowdown in the price growth of construction materials for housing repairs and maintenance, as well as a more moderate (though still significant) rise in the cost of maintenance and repair services. Actual rental prices, however, did not experience a comparable slowdown in price growth.

The Decline in Inflation Is Slower in Our Region

A similar development to that in Slovakia occurred in the neighbouring V4 countries. After a year of rapid price growth, the dynamics slowed, although prices continued to rise. Despite more aggressive increases in the central banks' base interest rates in all remaining V4 countries that do not use the euro – where the interest rate reached 6.75% in Poland, 7% in the Czech Republic, and even 13% in Hungary – their average year-on-year and cumulative inflation rates surpassed those of Slovakia (see Figure 2.2).

Slovakia owes this to a large extent to the method of energy price regulation for households on an annual basis, which prevented a faster transmission of inflationary pressures to household budgets, and to the aforementioned capping of household energy prices in 2023.

Figure 2.2
Index of Cumulative Inflation Development in the V4 (2021 – 2023, December 2020 = 100)

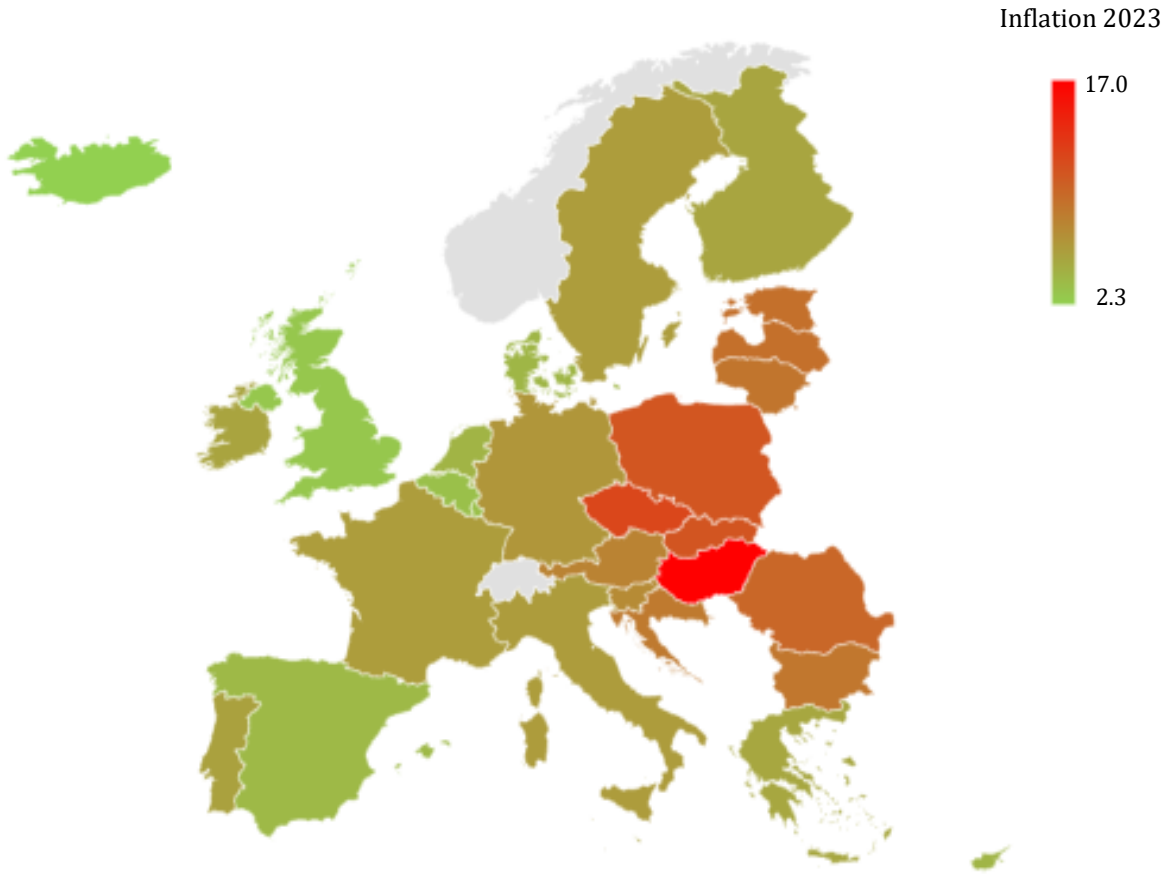


Source: Eurostat (2024); own calculations and processing.

If we return to the level of overall inflation in the EU, Belgium recorded the lowest rate in 2023 (2.3%), followed by Luxembourg (2.9%) and Spain (3.4%). This highlights the highly varied inflationary developments within the eurozone and the difficult position of the European Central Bank (ECB), whose decisions affect both countries with high inflation rates (such as Slovakia and the Baltic states) and those that were close to reaching their inflation targets (Benelux countries and Spain).

Image 2.1

TOP 5 EU Countries with the Highest (red) **and Lowest** (green) **Inflation Rates in 2023 (HICP)**



Source: Eurostat (2024); own processing.

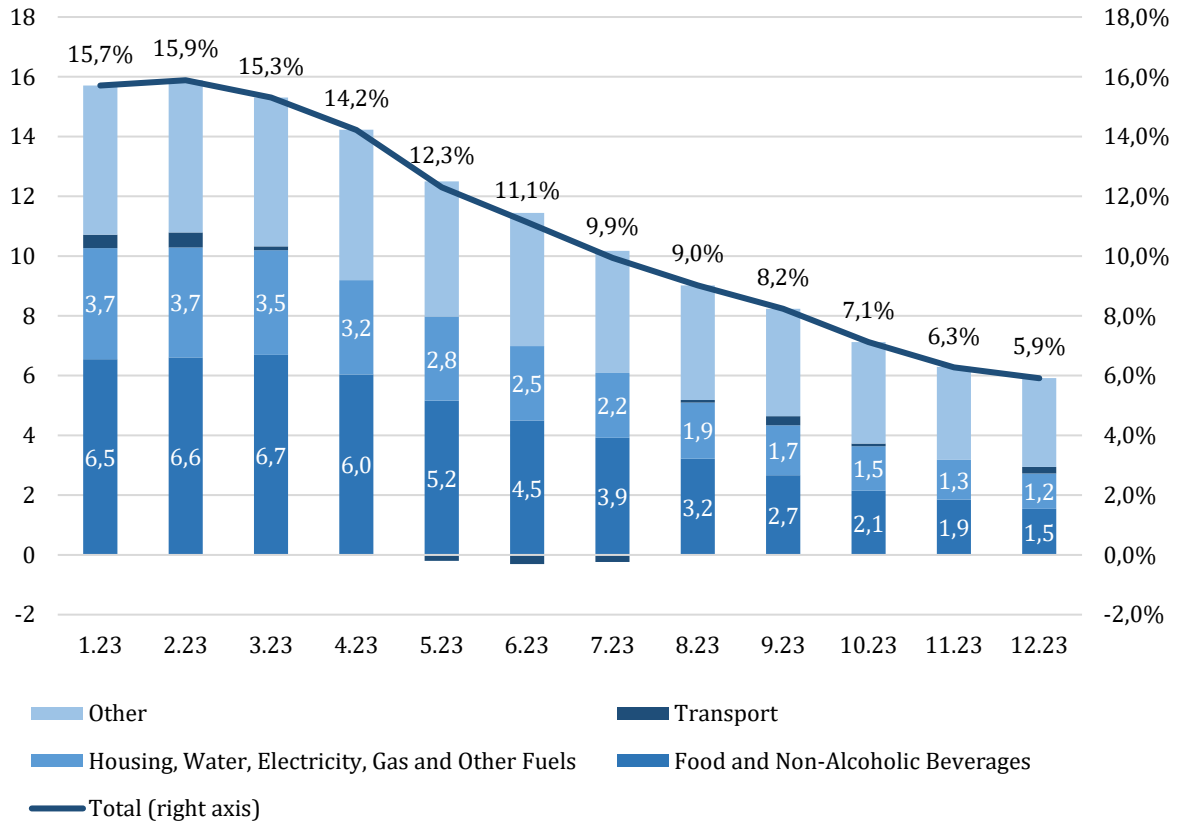
Despite the slowdown in price growth across the entire consumer basket, no category ended the year at a lower level than it had started. The only exception was the *Transport* category, which recorded a marginal but negative contribution to overall inflation in a few months, driven by the decline in oil prices in the first half of the year (see Figure 2.3). The main drivers of overall inflation, similar to the previous year, were the categories of *Food and Non-Alcoholic Beverages* and *Housing, Water, Electricity, Gas, and Other Fuels*. However, even in these categories, the driving force in the consumer basket diminished as price growth gradually slowed.

Together, these two categories accounted for nearly two-thirds (65%) of the total inflation contribution at the beginning of the year, but by the end of the year, this share had fallen to less than half (46%). The inflationary impulse from food inflation gradually faded, and the global slowdown in food price growth[8] finally translated into overall inflation in our country, albeit with a significant delay.

[8] The Food Price Index, published by the Food and Agriculture Organization (FAO) of the United Nations, began to decline in March 2022 after a dramatic increase.

Figure 2.3

Year-on-Year Inflation Development by Month and the Contribution of Selected Consumer Basket Categories to Overall Inflation (in percentage points and %, 2022)



Source: NBS Macroeconomic Database (2024); own calculations and processing.

The year 2023 marked a gradual easing of both the energy and food crises, even in terms of consumer inflation. However, while the record-high prices for energy and food have subsided, at least in the case of energy, we cannot yet speak of a return to pre-crisis levels. Even at the lower levels seen in 2023, average prices were still 3.4 times higher than the long-term average electricity prices, and 2.4 times higher than gas prices prior to the recent crises (2013 – 2019). A return to these original price levels is no longer expected. Therefore, the way the government handles energy price regulation will have a significant impact on future consumer inflation levels.

The inflation rate significantly influenced the pace of wage growth. In nominal terms, wages grew at the fastest rate in the last 20 years, reaching 9.6% year-on-year. However, when adjusted for the effects of inflation, real wages did not return to positive year-on-year growth, even after the dramatic decline in 2022 (by –4.5%). Real wages fell by 1.2% in 2023.[9]

[9] A more detailed description of wage developments in the economy can be found in the chapter on the labour market.

T a b l e 2.1

Overview of Key Price Development Indices in Slovakia (in %)

	2020	2021	2022	2023
Inflation rate (HICP):				
Euro area	0.3	2.6	8.4	5.4
Slovakia	2.0	2.8	12.1	11.0
Czech Republic	3.3	3.3	14.8	12.0
Hungary	3.4	8.2	15.3	17.0
Poland	3.7	5.2	13.2	10.9
Industrial prices:				
Industrial producers' prices – total	–0.4	6.8	29.3	6.9
Industrial producers' prices – domestic	0.8	5.5	43.3	13.9
- of which: Manufacturing	–1.9	5.8	18.1	2.4
Industrial producers' prices – export	–1.1	7.6	20.5	3.4
Construction work prices	2.9	3.8	18.3	11.5
Construction material prices	–0.8	11.6	22.9	3.4
Agricultural products prices	0.5	12.3	36.5	–11.4
- of which: Crop production	0.2	20.6	44.9	–23.3
- of which: Livestock production	0.8	–0.6	21.1	15.1
Deflators:[10]				
GDP deflator	2.4	2.4	7.5	10.1
Government consumption deflator	6.5	3.9	11.5	10.2
Private consumption deflator	2.2	3.3	12.2	10.3
Fixed investments deflator	0.7	2.2	9.5	9.1
Export deflator of goods and services	–2.2	5.1	14.6	4.5
Import deflator of goods and services	–1.9	6.0	19.3	4.2
Terms of trade	–0.4	–0.9	–4.7	0.3

Source: Eurostat (2024); NBS Macroeconomic Database (March 2024); ŠÚ SR (2024).

Producer Prices in Industrial Production Have Stabilised

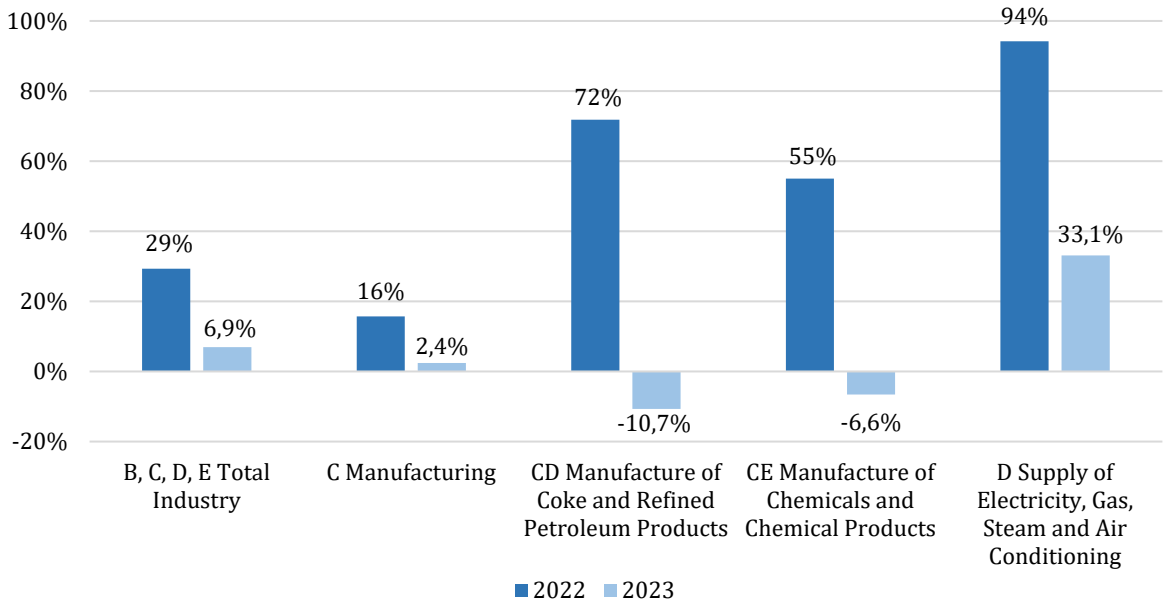
The year 2022 was exceptional in many ways, but its uniqueness was most evident in the price developments on the supply side of the economy. Producer price growth in some sectors often far outpaced the rise in consumer prices. However, even on the supply side, the tense situation has slightly stabilised, and in some areas, producer prices have even seen a downward correction.

In 2023, the base effect played a significant role in the year-on-year development of industrial producer prices. Although prices continued to rise, industrial production saw only a marginal increase of 2.4%. After an unexpectedly high surge in 2022 in sectors such as *Coke and Refined Products Manufacturing* and *Chemicals and Chemical Products Manufacturing*, a downward price correction occurred. However, this correction represented only a fraction of the original price increase (with refined products down by 10.7% and chemicals by –6.6% (see Figure 2.4)). The main driver of further producer price growth remained the *Electricity, Gas, Steam, and Air Conditioning Supply* sector, where producer prices rose by one-third in 2023.

[10] The data for 2022 and 2023 are still considered preliminary and will be subject to further revision in the future.

The initial concerns about the burden of rising costs being passed on to consumers, which was discussed as a key determinant of future consumer inflation, only partially materialised. This was primarily due to the introduction of a compensation scheme by the government, which capped energy prices at EUR 199/MWh for electricity and EUR 99/MWh for gas for businesses, with 80% of the price difference between the purchase price and the cap being refunded. As a result, the overall price shock was reflected in producer prices, but the state absorbed part of the increased energy costs instead of consumers. Additionally, during the year, a subsidy for regulated distribution fees for businesses was implemented (from May 2023), bringing these fees back to 2022 levels, which reduced the charges by 44% to 63%.

Figure 2.4
Year-on-Year Price Development of Industrial Producers in Selected Manufacturing Sectors (in %, 2022 – 2023)



Source: ŠÚ SR (2024); own processing.

Even though the real estate market experienced a significant cooling, the prices of construction work continued to rise substantially. While the prices of construction materials also increased, the growth was much more moderate, which was reflected in imputed rent and, consequently, in consumer inflation within the *Housing, Water, Electricity, Gas, and Other Fuels category*.

The decline in prices on the global market also affected producer prices in agriculture, which fell by more than 11% year-on-year. However, the structure of this price development differed between crop and livestock production. Crop production, which dominates Slovak agriculture, saw a significant price drop, with prices falling by nearly a quarter (–23.3%). In contrast, such a trend was not observed in livestock production. In 2023, livestock production prices continued to rise dynamically, increasing by 15.1%, primarily due to the rising input costs (from crop production) carried over from the previous year.

The situation in 2023 shifted in the development of deflators as well. While in the previous year, export and import deflators reached at least two to three times the growth rate of prices measured by the GDP deflator, in 2023 these deflators were less than half the value of the GDP deflator's growth. This was mainly due to the lag in domestic price developments compared to foreign prices. The inflationary impulse that flowed into the domestic economy through import prices slowed and no longer contributed significantly to overall inflation. It is also confirmed that higher inflation spread across the entire economy, as all GDP components showed similar price developments. The terms of trade saw a slight improvement (a relatively rare occurrence in Slovakia's environment), but it was not nearly as significant as the previous decline. As a result, Slovak export prices grew slightly faster than import prices.

While the first part of the chapter focused more on the descriptive aspects of inflation components, in the second part, we will delve deeper into the analysis of how energy price developments have impacted household inflation.

How Much Does One Percentage Point of Consumer Inflation Cost?[11]

The subtitle of this section of the chapter may initially seem nonsensical. After all, inflation cannot be bought, and the inflation rate is used to measure how prices evolve in the economy. However, in 2023 (or even by the end of 2022), unique economic conditions arose with the regulation of electricity and gas prices for households, allowing us to estimate how much the state had to pay to keep inflation at lower levels than it would have been without government intervention.

We do not take into account the regulation of heating prices for households, as data for compensation of all heat suppliers were not available, and this sector is significantly more fragmented compared to gas or electricity. Likewise, the effects of protection for vulnerable consumers or small businesses, as well as the compensation scheme for reimbursing costs to all companies, are not discussed here. This analysis focuses solely on the direct effects of price regulation for households, without considering indirect or induced effects on their behaviour or the prices of products influenced by regulation or compensation.

The method of regulating electricity and gas prices in Slovakia, even before 2021, was one of the last in the EU that did not abandon the practice of setting maximum prices across the board, with adjustments made only once a year. This effectively prevented the transmission of volatile fluctuations in energy markets into household expenses at the onset of the energy crisis.

The Regulatory Office for Network Industries (ÚRSO) sets electricity prices based on the purchase prices paid by electricity and gas suppliers in the previous year. For electricity, supplier purchases from the first two quarters are considered, while for gas, it is based on a 12-month period starting in October of the previous year (t-2).

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[11] We would like to thank Mr. Radovan Potočár from the portal energie-portal.sk for providing access to articles and expert consultations on this topic.

Electricity

Problems with regulation arose when the increased energy prices that began in 2021 did not decrease in 2022. In response, the government opted for an unconventional regulatory approach by announcing a Memorandum with Slovenské elektrárne. In exchange for the government not imposing the proposed windfall tax on excessive profits, Slovenské elektrárne committed to providing households with electricity at the same price as in 2022, amounting to 6.15 TWh. However, after the memorandum was announced, confusion ensued among suppliers, as they were unsure how to proceed with procuring electricity for the following year. As a result, they hesitated to purchase "expensive" electricity, and ÚRSO (the Regulatory Office for Network Industries) repeatedly extended the reference period in its regulations, hoping that either the implementation agreement to the memorandum would be finalized, guaranteeing household electricity prices, or that market prices would fall. However, the implementation agreement was not signed in 2022, and ÚRSO's delays had the opposite effect, ultimately setting the reference period for electricity suppliers to just two months (August and September), when electricity prices peaked on the market.[12;13]

The application of the adjusted reference period in the calculation would lead to an extreme increase in electricity supply prices for households. However, the price of electricity is not determined solely by the supply cost; it also includes fees and tariffs. These were also set to increase with new price decisions, affecting distribution and transmission, distribution losses, system services, and system operation. The combined increase for all categories would amount to 41.7% year-on-year. However, the rise in electricity supply prices would be even higher.

In total, after accounting for changes in the reference period and the increase in tariffs and distribution fees, this would have contributed up to 12.0 percentage points to overall inflation through higher final prices for households. To avoid extreme increases in household electricity prices, the government was ultimately forced to declare a General Economic Interest (GEI) for electricity supply, setting a maximum final price for the product at the 2022 price levels.

Natural Gas

However, a similar development to electricity could not occur with gas. This is due to the fact that the country lacks domestic sources of the commodity and is entirely dependent on its import. While the government was able to regulate domestic electricity producers,[14] it has no influence over global commodity market prices. Therefore, ÚRSO had to

[12] We addressed this topic in last year's edition of this publication.

[13] In the meantime, the reference period for calculating the regulated electricity price for households has changed again, and the wording of the valid regulation for 2024 specifies a 12-month period (from October t-2 to September t-1).

[14] In the end, the government approved a so-called levy on excess revenues for electricity producers. However, due to the way the rates were set, this did not effectively apply to Slovenské elektrárne, as they had reached an agreement under the Memorandum.

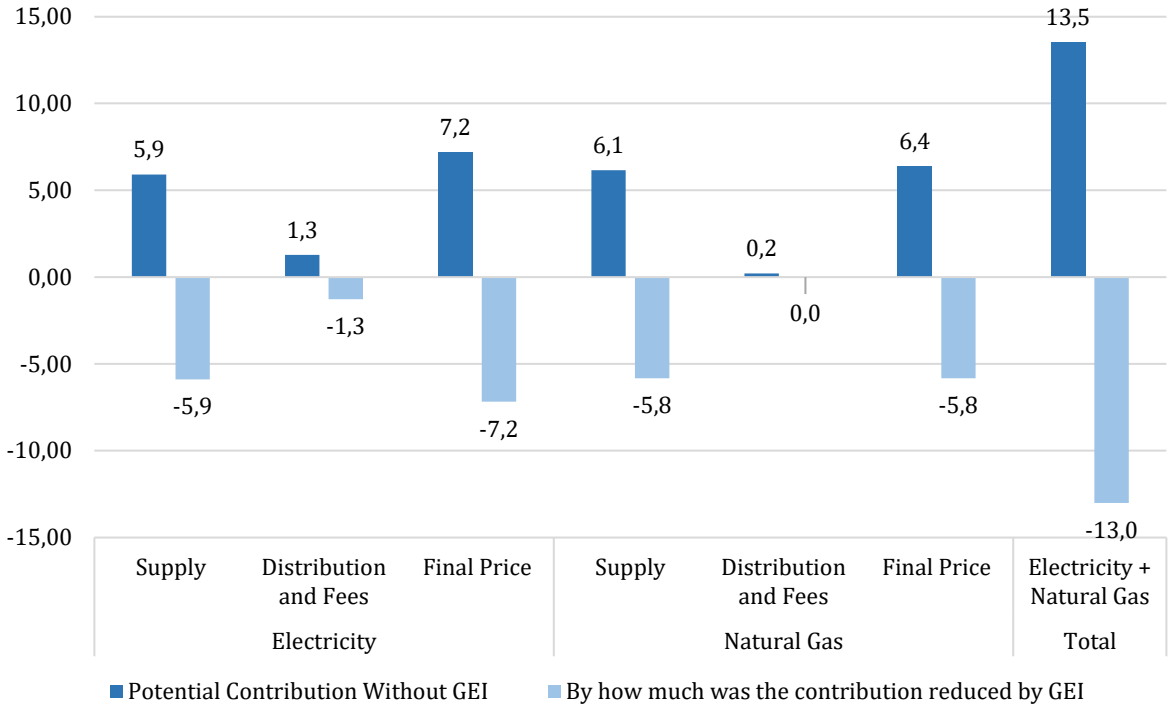
issue pricing decisions for gas suppliers for 2023 based on market purchase prices. These decisions set the average price for gas supply in 2023 at EUR 107.56/MWh, compared to EUR 26.01/MWh in 2022, representing more than a fourfold increase (4.13 times).

Similarly, gas distribution fees for households were also increased, with a year-on-year rise of 16%. The 2.96-fold increase in the final gas price for an average household, according to the approved ÚRSO decisions, became both politically and socially unacceptable for the government. As a result, the government was also forced to declare a General Economic Interest in the area of gas prices, setting a maximum final gas price, which increased by 15.9% for the average household. However, unlike with electricity, where both parts of the final product price (supply + distribution and fees) were regulated, the General Economic Interest for gas applied only to the gas supply. Distribution fees, as issued in ÚRSO's decisions, increased by 16.1% year-on-year.

As a result of the application of the GEI (General Economic Interest) to electricity and gas supplies, the potential contribution to inflation was not realised at the expected level. Instead, the price increase was only observed in the gas categories, where the supply and distribution saw the previously mentioned 16% increase. The GEI kept final electricity prices for households unchanged (even in the absence of an implementation agreement related to the memorandum), thus the contribution from electricity price changes was absent. Overall, the declaration of GEI "saved" 13 percentage points of consumer inflation.

Figure 2.5

Potential Contribution of Changes in Final Electricity and Gas Prices without Government Intervention to Overall Inflation and the Savings in Contribution Due to the Declaration of General Economic Interest (GEI) in 2023 (in percentage points)



Source: ÚRSO (2023); ŠÚ SR (2024); own calculations and processing.

In 2023, when the implementation agreement for the electricity supply to households was signed, the state-owned company SPP was appointed by the government to act as an agent, mediating electricity between the producer (Slovenské elektrárne) and household suppliers. SPP acted as an intermediary, purchasing electricity from Slovenské elektrárne at pre-agreed, non-market prices and then selling it to suppliers at a slightly increased amount (still far below market prices). Under the GEI (General Economic Interest), the government assumed the role of compensating the price difference between ÚRSO's price decisions and the prices set under the GEI. This mainly involved compensating for the cost of gas supply for households and the price difference between tariffs and fees for the distribution and transmission of electricity. These are the explicit costs that the government took on. However, there are also implicit costs associated with the memorandum between the Ministry of Economy (MH SR) and Slovenské elektrárne. The initial version of the memorandum (which was later revised) stipulated that electricity for households would be supplied at a fixed 2022 price for 2023 and 2024. Slovenské elektrárne thus did not sell 6.15 TWh of electricity on the market, which at the time of the memorandum's announcement was valued at an estimated EUR 850 million. Including these implicit costs is essential for estimating the total cost of capping electricity and gas prices for households.

The following table is based on the total compensation paid by the Ministry of Economy (MH SR) to various entities operating in the energy sector in 2023, related to gas and electricity prices for households.

T a b l e 2.2
Explicit and Implicit Costs of Capping Final Electricity and Gas Prices for Households in 2023 (in EUR)

Compensation for Gas Prices for Households	Compensation for Selected Electricity Tariffs for Households	Lost Profit from Withholding 6.15 TWh of Electricity from the Market (per Memorandum)	Total Cost of Capping Final Electricity and Gas Prices for Households in 2023
1 236 732 931	375 683 175	425 000 000	**2 037 416 106**

Source: NKÚ SR (2024); own processing.

Since we know, on the one hand, the potential and actual contribution to consumer inflation, and on the other hand, the amount of resources spent on minimizing the impact of rising electricity and gas prices on households, we can calculate how much each percentage point of consumer inflation "saved" cost.

With a hypothetical contribution of 13.01 percentage points from the partially realised gas price increase and unchanged electricity prices for households, the cost of regulated reduction in overall inflation amounted to EUR 156,560,934 per percentage point.

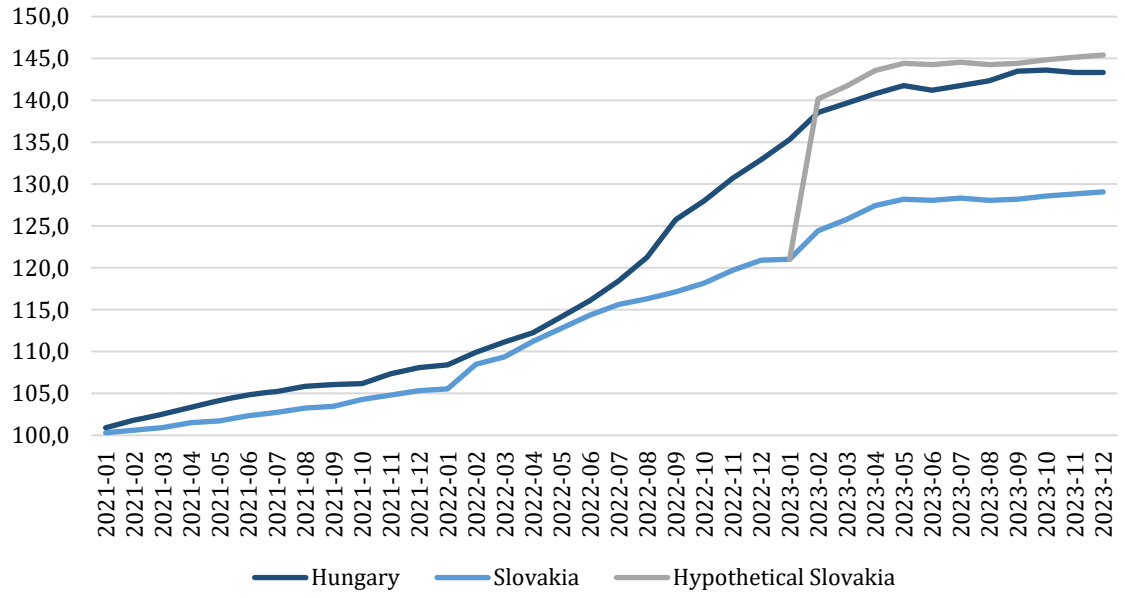
At the same time, if the price cap had not been implemented, Slovakia would have become the country with the highest cumulative increase in the price level among EU countries, surpassing Hungary, which had the highest inflation rate in the EU in 2023 as well as the highest cumulative increase since 2021. This scenario assumes that Hungary would have continued to apply its extraordinary regulation of electricity and gas prices, while

Slovakia would have maintained its original price calculation method without additional interventions (see Figure 2.6).

Although we calculated the value of one percentage point of inflation using both implicit costs (lost profit for electricity producers) and explicit costs (compensation for gas prices and capped tariffs and fees for electricity), only the explicit expenses impact the state's budget. It is therefore appropriate to assess the effect this "generous" measure had on the state budget.

Figure 2.6

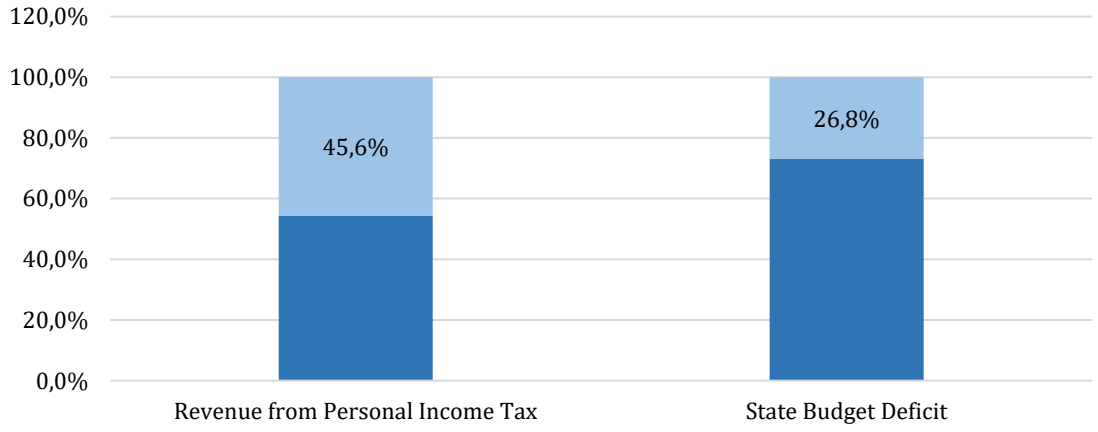
Cumulative Price Level Development in Slovakia and Hungary, Including Hypothetical Scenario without Additional Regulation of Electricity and Gas Prices in Slovakia
(100 = December 2020)



Source: Eurostat (2024); own calculations and processing.

Figure 2.7

Size of Explicit Costs for Capping Electricity and Gas Prices for Households in 2023 (%)



Source: MF SR (2024); own calculations and processing.

The total amount of compensation exceeded the revenue collected by the state from the excise tax on mineral oils (fuels) or amounted to nearly half of what the state collected from workers in the form of personal income tax. One of the defining features of the Slovak economy in 2023 was the poor state of public finances, with the state budget running a significant deficit. If we were to identify one of the key causes of this situation, it would be the capping of energy prices for households at the unchanged 2022 levels. Compensation alone accounted for more than a quarter of the high state budget deficit.

What's Next for Regulating Energy Prices for Households?

As mentioned at the beginning of this subsection, Slovakia is one of the few EU countries that still fully regulates energy prices for households. Plans for deregulation have been set aside for now, with efforts focused on returning to the standard regulation that existed before the dramatic price increases in 2022. In 2024, household energy prices remain capped, which will shape inflation trends for the upcoming year. However, capping prices for all households has been a costly measure that public finances cannot sustain in the long term. For 2025, there are no plans for broad-based compensation of gas prices. If compensation is provided, it will likely be targeted assistance. For electricity, the memorandum and the implementation agreement signed in 2023 guarantee household electricity supply prices until 2027 (with a gradual increase to EUR 79/MWh). However, there is no expectation of support for rising distribution fees.

* * *

After a Turbulent Period, Inflation Is Set to Take a Brief Pause

As we anticipated in the previous edition, inflation indeed slowed in 2023 and is gradually returning to more standard levels. It is not expected to rise to double-digit figures again in the coming years. The decline in inflation will lead to the long-awaited growth in real wages in 2024, likely encouraging household consumption, which had decreased in the previous year.

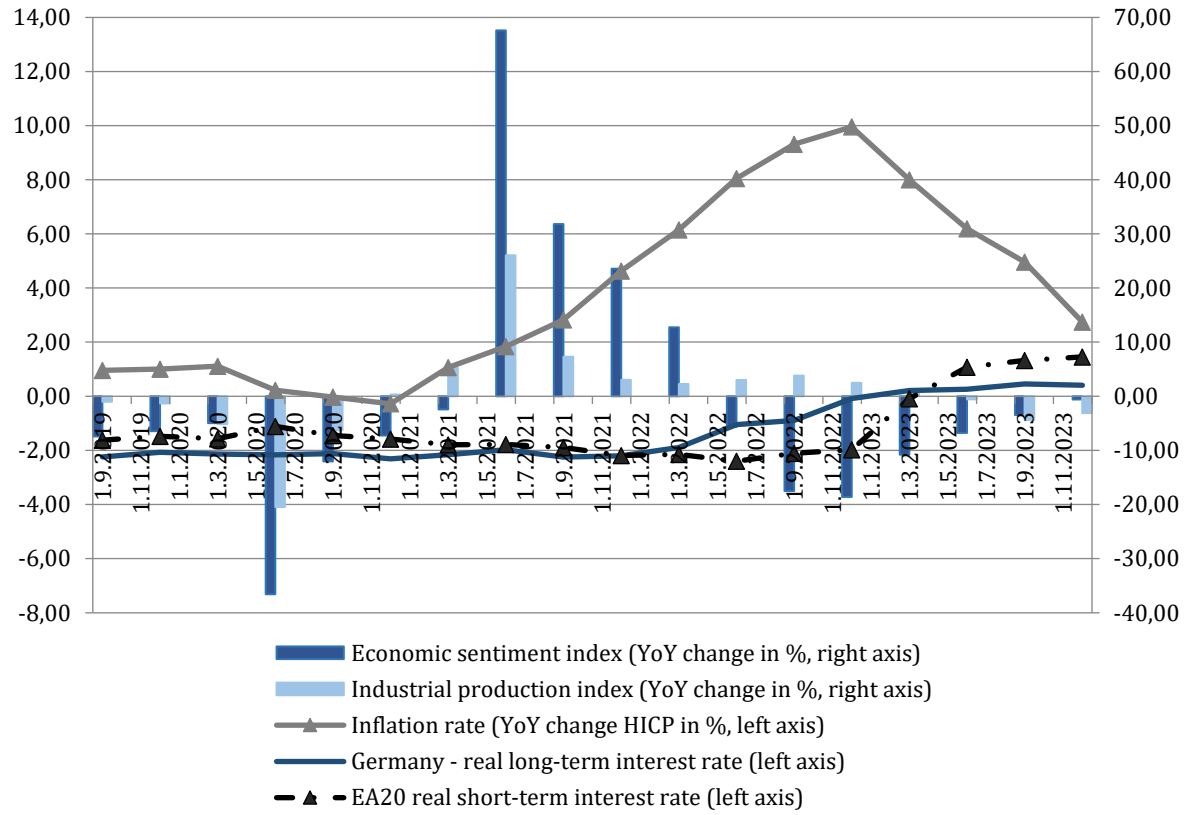
However, households may be cautious about increasing spending, opting to do so only after rebuilding their depleted savings. The continued protection of consumers through regulated energy prices for households will likely help keep overall inflation close to the target in 2024. This will be a temporary relief, though, as the phasing out of extraordinary compensations could reignite inflationary pressures in the following year. These loosened aspects of price regulation will likely contribute to a rise in energy prices for households, with the market price of gas being the key factor. Although gas prices are currently stable, they remain at least twice as high as before the energy crisis. The situation can be likened to a flood after a storm: while the storm that caused the flood has passed, the high water has not yet receded. And it is uncertain whether it will recede at all or whether this will settle in as the new normal.

3. MONETARY POLICY OF THE ECB AND SLOVAK BANKING SECTOR

The year 2023 marks exactly 15 years since the outbreak of the financial crisis, and the ECB's monetary policy has celebrated this anniversary as it should – with the first uninterrupted period of restrictive monetary policy since 2008. Despite some specific features of post-COVID inflation discussed in the previous edition of Economic Development (Morvay et al., 2023), the euro area economies in general have responded to tighter monetary policy almost exactly according to the textbook example. Thus, by the end of 2023, the main discussion could already have focused on the issue of the so-called soft landing, and thus on the precise timing of the end of the already more than year-long period of monetary tightening.

From the perspective of the real economy, 2023 was characterized by a dominant effect of the nominal interest rate (both long-term and short-term, see Figure 3.1) – located in positive territory for the first time in 12 years. The negative expectations of economic agents, as well as the decline in real economic output itself lasting from mid-2022, resulted in a significant slowdown in the growth of the price level. Perhaps pre-surprisingly, its downward trend has been as sharp as was the case for its sudden onset in COVID's 2021.

Figure 3.1
Basic Economic Indicators Relevant for Monetary Policy



Note: Real long-term interest rates are calculated as the difference between the yield on 10-year German government bonds and 5-year inflation expectations of professional forecasters. EA20 real short-term interest rates are calculated as the difference between 12-month money market rates and 1-year inflation expectations of professional forecasters.

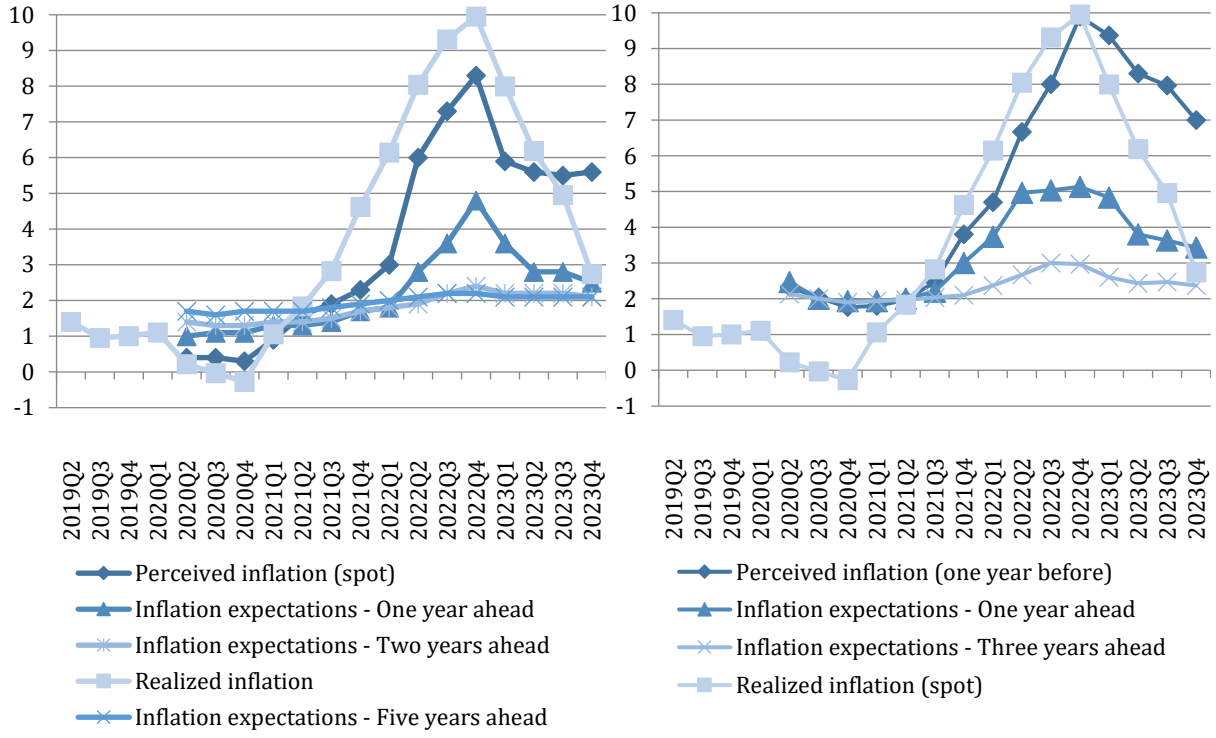
Source: ECB; Eurostat.

The relative underestimation of the actual inflation rate by economic agents (professionals) from 2022 persisted until the second half of 2023, when a paradoxical situation occurred – perceived inflation began to exceed actual realized inflation (Figure 3.2, left Figure). This cognitive mismatch in inflation perceptions was also reflected by short-term (1-year) inflation expectations stagnating around 2.8%.

In contrast to the values reported by professionals, the evolution of consumer inflation expectations shows some specific features (Figure 3.2, right Figure). The anchoring of inflation expectations, as well as the mismatch in the rate of perceived inflation versus actual realized inflation, were stable at 2% (the ECB's inflation target values) until 2021. However, consumers were able to estimate the significant dynamics of the increase in post-COVID inflation with a respectable accuracy, in contrast to the group of professionals.[15]

F i g u r e 3.2

Professional Forecasters (left figure) **a Consumer** (right figure) **Inflation Expectations and Inflation Rates** (%)



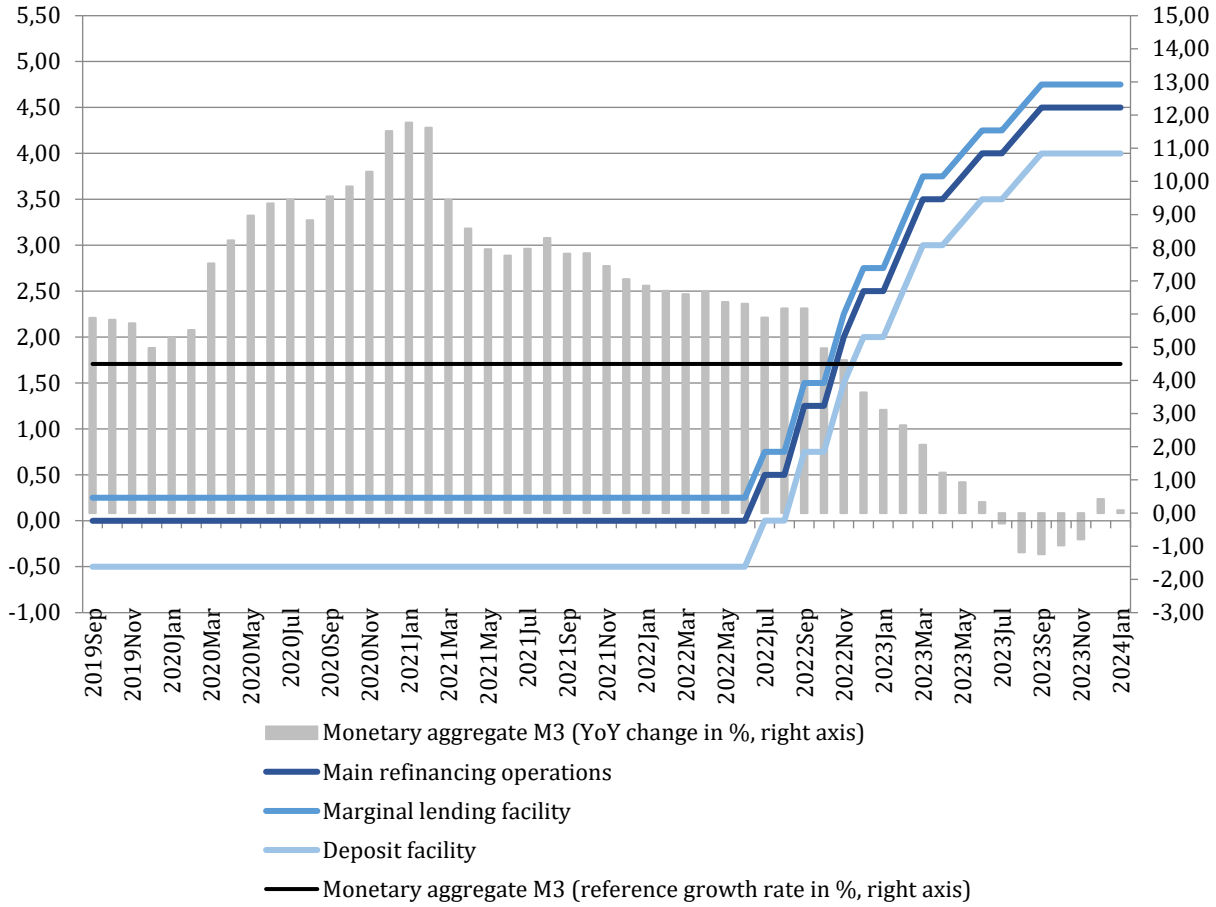
Source: ECB; Eurostat.

However, what unites the two groups is the significant overestimation of the value of realised inflation at the end of 2023. This phenomenon probably partly reflects the tendency of a certain segment of economic agents to base inflation expectations on the

[15] The reasons for this discrepancy will be left for the reader's consideration for the time being. However, the nature of the post-COVID inflation suggests that the price level increase was primarily contributed to food, energy and fuel price items in consumption basket. At the same time, these items have a significant share in the consumption basket of mainly low- and middle-income households. The imprecision of the professionals' estimate may thus also be indicative of their bias in estimating inflation, which is primarily made up of items in the consumption basket that are under-represented among them, as representatives of the upper income class. Alternatively, this may be a reflection of decrease in the predictive ability of modelling approaches relying on a strong higher-order autoregressive component.

past and to give less weight to possible future developments (see the discussion in Tura-Gawron et al., 2018). At the same time, however, there is clearly a different (non-linear) way of cognitively perceiving price changes in times that are characterized by significant inflationary pressures. In other words, when inflation rates are low, subjects tend to ignore inflation and report as their best estimate the rate of 'anchored' inflation, i.e. inflation targeted by the central bank. However, as soon as the costs of ignoring inflation become significant (high rates of realized inflation), subjects start to adjust their perception of inflation to real inflation. A certain degree of inertia in the formation of inflation expectations will consequently cause there to be a more pronounced mismatch between reality and perceptions of inflation, as practically observed throughout entire 2023. This phenomenon is more pronounced in the group of consumers (Figure 3.2, right figure).

F i g u r e 3.3
Key ECB Policy Rates (left axis) **a M3 Monetary Aggregate Growth Rate** (%, right axis)



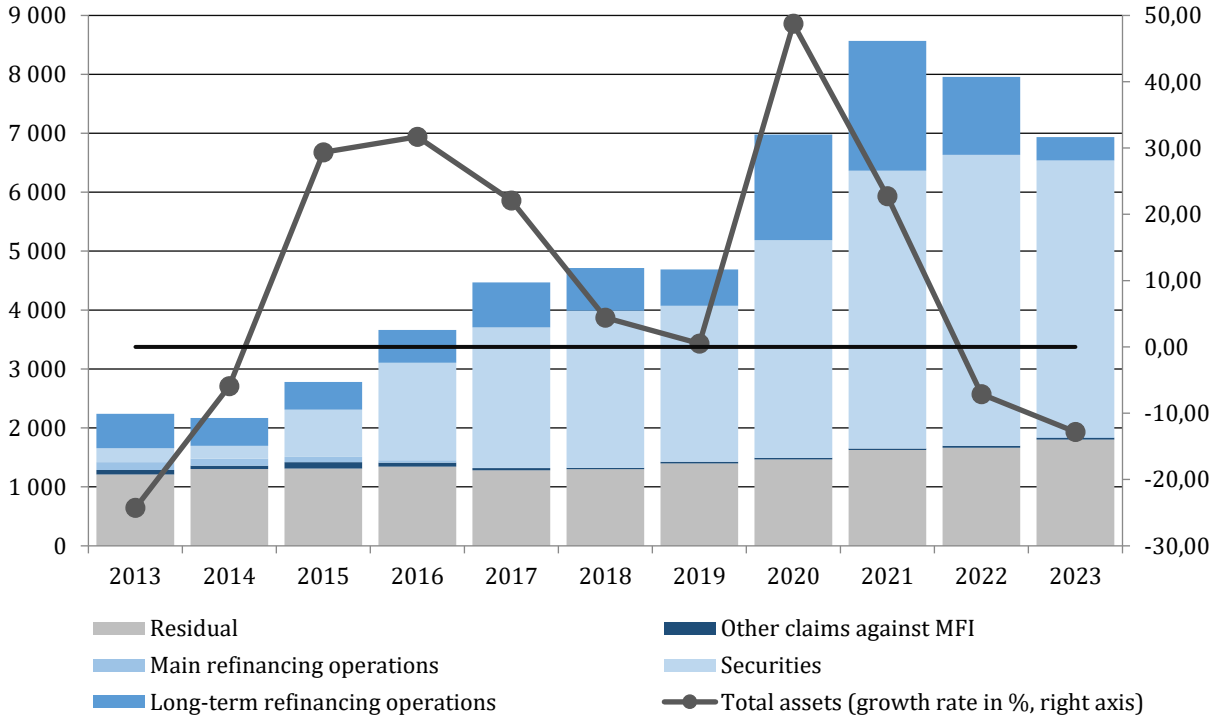
Source: ECB.

In the context of this discussion, it is also necessary to understand the statements of euro area central bankers who, although they perceived a significant decline in inflation at the end of 2023, approaching almost the targeted 2%, considered this development too fragile to motivate them to start easing monetary policy. Key interest rates therefore peaked in September 2023 (Figure 3.3) and have remained unchanged since then, with

a view to consider their first decline only at the ECB's June 2024 meeting. The tight monetary policy conducted through the standard instrument – the key interest rate – has been complemented by a significant reduction in the ECB's balance sheet (Figure 3.4). The gradual reduction in the ECB's exposure to the banking sector was primarily achieved by the maturing of long-term refinancing operations, followed by a (small) reduction in the holdings of securities accumulated through quantitative easing programs. These securities will slowly disappear from the ECB's balance sheet, as this will be a natural decline due to the maturity of the bonds in question. At the same time, there will also be a second-round effect of monetary tightening through a reduction in the amount of collateral available for use in standard REPO tenders. As the inflation outlook for 2024 is relatively positive (close to the 2% target), there is no reason to expect more pressure for a faster sell-off of securities in the ECB's portfolio in the coming years.

F i g u r e 3.4

Structure of the Eurosystem Balance Sheet (mld. eur, %)



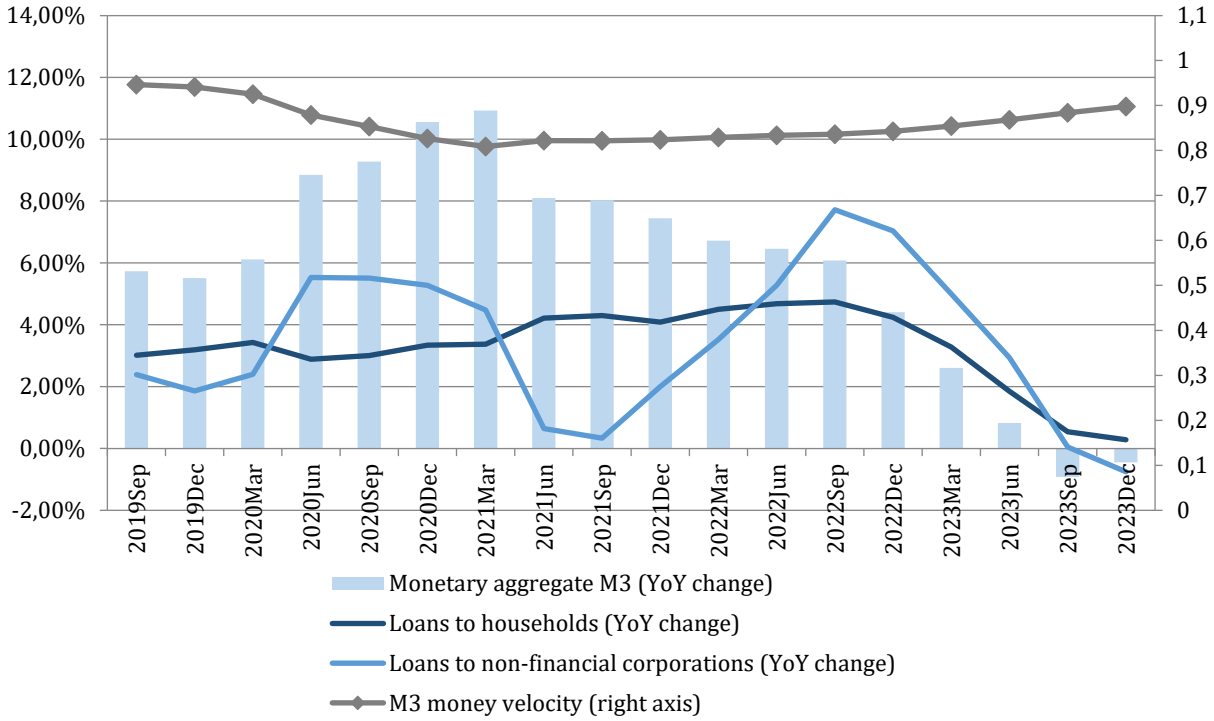
Source: ECB.

The ECB's highly restrictive monetary policy has had an almost immediate impact on the credit market, with a decline in the growth rate of credit aggregates already noticeable in the last quarter of 2022. If we count as reaching a minimum the complete cessation of credit aggregate growth observed towards the end of 2023, the overall lag of 1.5 years is something equivalent to the standard, empirically observable, lag length of the economy's response to a monetary policy shock (Figure 3.5). Unsurprisingly, the monetary aggregate M3 also exhibited almost mirror behaviour, with even a reduction in the broader money supply at the time of the minimum (September 2023). Meanwhile, reaching the peak of

the response 1.5 years after the start of monetary tightening is equally observable in the case of the inflation rate (Figure 3.2).

At this point, therefore, we recall the main conclusions from the latest edition of the Economic Development (Morvay et al., 2023), where we summarized a list of positive messages for monetary policy. These were a return to standard monetary policy (anchoring of long-term inflation expectations, reactivation of the key interest rate, continued reduction of the Eurosystem's balance sheet through a moderation in the use of quantitative unconventional monetary instruments) at a moment of positive developments on the monetary and credit side of the economy (strengthening of corporate sector financing, natural evolution of the creation of endogenous money in the system). It can be concluded that the return to standard monetary policy conditions was relatively quick and, as it appears from information from the real economy, relatively little economically painful. The main question is thus whether even short-term inflation expectations (and subjective perceptions of inflation) are now permanently anchored at 2% inflation. Also considering the redefinition of the inflation target, the ECB may still be inclined to hold key interest rates unchanged in the short term at least until inflation below 2% is reached.

Figure 3.5
Credit Aggregates, M3 Monetary Aggregate and Money Velocity (bill. EUR, %)



Source: ECB.

The period of increasingly restrictive monetary policy of the ECB was also reflected in the Slovak banking sector. The relatively standard reaction (slowing to a halt in lending growth, repricing of lending and deposit rates) was overshadowed by a broader discussion on two issues that have partly become political topics. The first was the impact of

restrictive monetary policy on mortgage prices, and the second was the question of the renewal of the bank levy. While we refer the reader to the analytical report of the National Bank of Slovakia for the first issue,[16] we will deal with the second issue at greater length, also in view of the question of the profitability of the Slovak banking sector – a topic that we have already touched upon in part in previous editions of the Economic Development.

Amendment of 'Bank Levy'

The end of 2023 was marked by discussions on the renewal of the special levy on financial institutions as one of the sources of increasing the revenue side of the deteriorating public finances. This fiscal instrument[17] was proposed to become part of the special levy on business in regulated sectors and specifically identified the banking sector (institutions operating under a banking license from the National Bank of Slovakia or another regulator in the EU and EEC)[18] as being subject to an extraordinary increased rate of 0.025 of the total pre-tax profit.

The official reasons for the introduction of the bank levy can be summarised in a rationale based on the additional taxation of alleged extra profits in the sector resulting from the ECB's key interest rate hike due in July 2022. Extraordinary profits made from activities not directly related to regulated activities were also cited as one of the additional arguments. Simply put, the levy was intended to reflect the excess (one-off and cyclical) profitability resulting from the increase in the value of financial assets falling in the period 2023 and expected in 2024.[19]

The bank levy originally introduced in 2012 differed from its 'amended sibling' of 2023 in one important characteristic.[20] The proceeds of the special levy introduced in 2012 were intended to be used to accumulate capital to be used in the event of a future financial (banking) crisis. This special levy was thus adopted, among other things, as a reflection of the high level of fiscal expenditure that had to be incurred during the 2008/2009 financial crisis to keep the banking system functioning in the various EU countries. The levy was

[16] NBS press release of 16. 8. 2023 and related analytical commentary, available at: <https://nbs.sk/aktuality/narast-splatok-hypotek-pocitia-vsetky-dotknute-domacnosti-no-zvladnu-to/>.

[17] Amendment to the Act on the special levy on business in regulated sectors approved on 19. 12. 2023. The amended bank levy is determined from the gross profit adjusted by the share of income from regulated activities in the total income. From this point of view, it is a fiscal instrument that can be safely defined as a tax, since it is both deducted from the revenue side of the entity's management (gross profit) and its proceeds directly represent the revenue side of the fiscal budget.

[18] The bank levy also affects other areas of the financial sector, such as insurance, financial intermediation and leasing services. However, these sectors have a significantly reduced value of the special levy at 0.00363 of the levy base. The insurance sector has been subject to the special levy virtually continuously since 2012, when the levy was first adopted.

[19] According to the memorandum (p. 7), "Profits in the banking sector can be described as excessive on the grounds that they are not the result of the banks' entrepreneurial activity in the sector of their business, but are the result of developments in the financial markets which could not have been foreseen and which have enabled the banks to earn substantial returns compared to other financial market entities, as well as compared to other business entities." *Source*: Dôvodová správa osobitná, available at: <https://rokovania.gov.sk/RVL/Material/29068/1>.

[20] The nature and conditions of the special levy introduced in 2012 differed from the 'amended' levy in other respects, notably in the method of determination (calculation on the volume of foreign capital rather than on the profit or loss), the amount (at 0.00363) as well as the definition of the entity (exclusion of persons carrying on business on the basis of a license granted by a supervising institution in another Member State).

also created at a time when the rules of the newly emerging macro-prudential policy at EU level, which can be dated back to the beginning of 2014, were not yet clear.[21] Also on the basis of the logic of the original purpose of the bank levy, it can be accepted that the creation of the original bank levy was based on the volume of foreign funds, i.e. it was a cushion creation with regard to the amount of exposure (indebtedness) of a commercial bank, and not on the bank's profit itself.

The single resolution mechanism for dealing with bankruptcies of individual banking entities, the form of banking supervision of systematically important institutions, and a single deposit guarantee mechanism have all become part of the Banking Union concept. The creation of sufficient capital cushions, financed primarily through profit-making in commercial banks, has also become an issue for the new macro-prudential policy. The original 2012 special levy has thus become practically redundant for the banking sector. The bank levy was suspended in 2020 and the amount of accumulated funds was to be used to finance the country's economic development, based on an agreement between representatives of the banking sector and the then government. According to the Slovak Banking Association, as part of the agreement the commercial banks also increased their financing of the household and corporate sectors, as well as public projects.[22]

Given the standard functioning of monetary policy, the argument of excess gains from a key interest rate increase may be considered less convincing. This reasoning points to the possibility of unequal treatment in the treatment of institutions operating in the financial system, since the prolonged period of zero interest rates negatively affecting bank profitability did not provoke an oppositional response on the fiscal policy side. Academic research has pointed to the negative effects of prolonged low (negative) key interest rates on the profitability of commercial banks, especially in the case of the horizontal yield curve (Borio et al., 2017) – a situation that has persisted in the Eurozone and EU countries practically since 2014.[23]

At the same time, the ability to generate sufficient profits in the presence of rapidly rising key interest rates is a more complicated issue, as the recent failure of some US banks (e.g., Sillicon Valley Bank) in March 2023, which triggered a subsequent increase in uncertainty in the US and European banking system, could testify.[24]

The rapid increase in the key interest rate will be reflected in the performance of a commercial bank through several channels. From an interest flow perspective, banks can generate profits if interest rate increases are fully passed through to the cost of credit, but the amount of profit generation is limited by how the cost of additional funding through

[21] For a more detailed discussion of the role of macroprudential policy and its application in the conditions of the Slovak Republic, see last year's issue of the Economic Development (Morvay et al., 2023).

[22] For more information on the volumes of financial resources invested in this way, see the Slovak Banking Association's commentary (SBA, 2023). Available at:
<https://www.sbaonline.sk/novinka/so-zvysovanim-zdanenia-bank-nesuhlasi-vacsina-slovenskej-populacie/>.

[23] In June 2014, the ECB's overnight deposit rate fell to negative territory for the first time. The flattening of the yield curve was also achieved through a combination of quantitative easing and forward guidance policies.

[24] Troublesome interest rate risk management at selected banks is discussed in a report by the Basel Committee on Banking Supervision (BCBS, 2023).

deposit and market interest rates increases on the liability side. In the case of full pass-through on both sides (interest cost and interest income), the effect on profitability is minimised and the profit generation must be at the level of the structure of loan and deposit volumes and their maturity. At the same time, a secondary effect of an increase in interest rates is the need to revalue selected assets to a new market value. An increase in the market interest rate is associated with a higher decline in the market value of mainly long-term assets. If the increased uncertainty in the market results in the need to dispose of such assets, these losses are reflected in decreasing profit of the commercial bank. Without the ability to hedge against such interest rate risk, a bank may run into significant problems that could potentially lead to its insolvency.

The swift response of the US FED (and other internationally important central banks) and the reaffirmation of the deposit guarantee scheme commitment prevented the March 2023 negative shock from deepening into a full-blown international banking crisis. The conceptual framework of capital protection built up over the last decade has so far proved to be sufficient in terms of confidence in the banking system. Thus, having averted the threat of a new banking and financial crisis in the first half of 2023, several countries have moved to discuss additional taxation of commercial banks in the course of 2023, partly as a result of the observed increase in the sector's profitability. It is questionable what the reaction of commercial banks may be if the success of their business of generating profits while maintaining their stability may imply a similar fiscal policy response in the future.[25]

The ECB responded to the activation of the bank levy in the Slovak banking system by sending its (unsolicited) opinion.[26] In particular, it points to the need for a contextual reading of the simultaneous increase in profitability over the entire economic (policy) cycle, which will fall significantly if the secondary effects of interest rate increases causing lower lending rates, higher risk and default rates, and slowing to a halt in economic growth are taken into account. The cumulative effect on the profitability of the banking sector may thus pose a risk to sufficient capital formation which serves as a defence against future crisis events. At the same time, given that the application of the special bank levy affects only some Member States (fiscal instrument), such heterogeneity may contribute to further fragmentation of the single banking market. In the event of continued pressure on the profitability of banks in only one Member State, the activities of some banking houses may be stifled, and their activities relocated to other Member States, thus potentially worsening access to finance and making the bank funding more expensive for domestic entities.

[25] One of the ways of achieving the desired profit is to transfer part of the activities of standard banking to the area of so-called shadow banking. Shadow banking is currently the focus of academic research and banking supervision itself, precisely because of its lower level of regulation and supervision and the opportunity for above-average profitability. Academic research points to some degree of (positive) causality between monetary and macroprudential policy and the degree of exposure to shadow banking (Hodula and Libich, 2023; Hodula and Ngo, 2024). Although the effects of fiscal policy on the growth of shadow banking have not yet been explored, it is plausible to assume that the incentive to seek alternative sources of profitability (and exemption from taxation through cost growth) will be more pronounced in the presence of such a fiscal intervention.

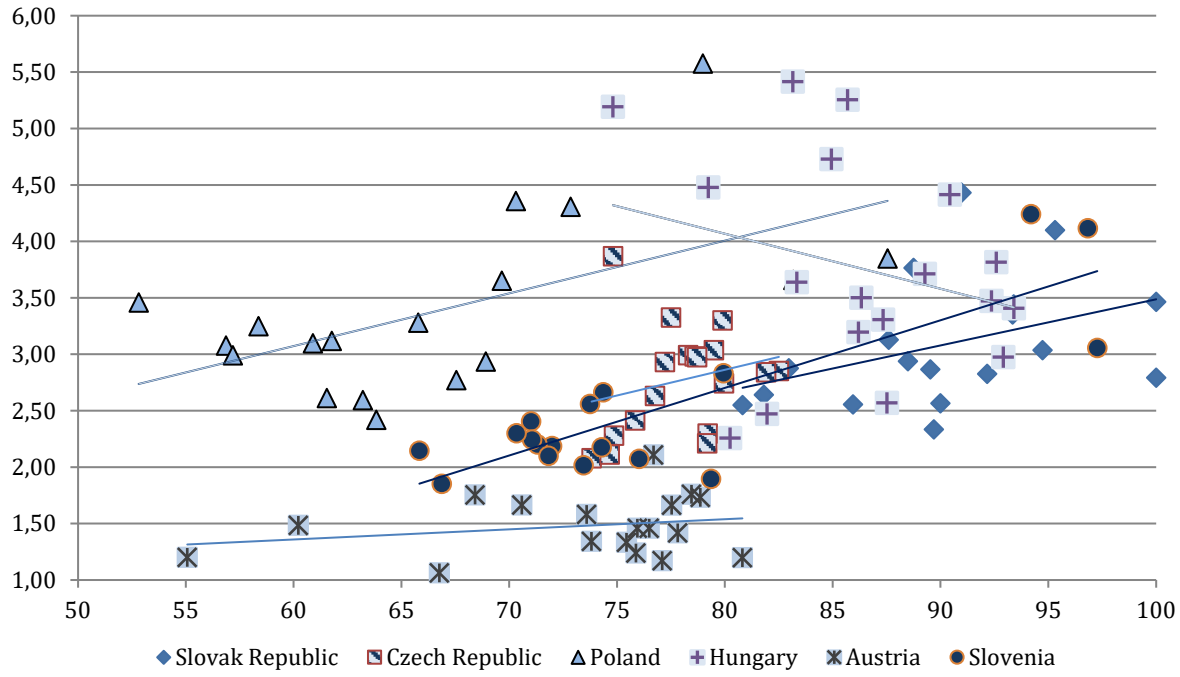
[26] <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024AB0004&qid=1712149081767>.

Given that the two main objections to the amendment of the special levy touched on the issue of international comparison of the profitability of the banking sector (Slovak Banking Association) and the need for a deeper analysis of the effects on financial stability (European Central Bank), in the following we will contribute to the ongoing debate by analysing selected aspects of the profitability, concentration and stability of the Slovak banking sector.

Profitability of the Slovak Banking Sector

Standard economic theory postulates that when concentration increases, the ability of a firm to charge a price above its marginal cost increases. In the case of a commercial bank, this is the ability to demand a higher interest rate on loans or to provide a lower interest rate on deposits compared to the theoretical situation of perfect competition. In Figure 3.6, we illustrate the relationship between the net interest margin and the degree of concentration in the banking sector of selected countries in the broader region of Central Europe. Except for Hungary, this relationship is confirmed empirically, although in the case of Austria the sensitivity of the change in the net interest margin is significantly limited.

Figure 3.6
Net Interest Margin (%, y axis) **and Concentration Level** (%, x axis)



Note: Data for 2002 – 2019. Net interest margin calculated as net interest income divided by interest-earning assets. Concentration ratio in the banking sector measured as the share of assets of the largest 5 banks in total banking sector assets.

Source: Global Financial Development Database (World Bank).

In international comparison, Slovakia is characterised as a country with a highly concentrated banking system (on average the highest), which is reflected in relatively high

net interest margin values (on average the third highest). If the concentration of banks were reduced to the level of Slovenia, a simple extrapolation would imply a reduction in the interest margin to around two per cent, from the original three per cent.[27]

T a b l e 3.1

Slovak Banking Sector Balance Sheet Indicators

	2018	2019	2020	2021	2022	2023	2024*
Panel A: Loans to nonfinancial corporations							
Growth rate of loans (YoY, %)	5.06	4.29	3.56	0.22	10.75	6.94	–0.28
Interest rates – term deposits (%)	0.17	0.15	0.07	0.00	0.33	2.96	3.77
Interest rates – sight deposits (%)	0.01	0.00	0.00	–0.01	0.00	0.23	0.44
Interest rates – loans (%)	2.40	2.39	2.31	2.29	2.56	4.91	5.51
Loans-deposit margin (%)	2.37	2.38	2.30	2.30	2.54	4.09	4.16
Sight deposits / Term deposits	7.41	10.91	10.81	14.13	11.17	3.63	2.68
Sight deposits / Term loans	1.19	1.15	1.10	1.04	1.08	1.07	1.05
Deposits / Loans (coverage)	0.69	0.69	0.72	0.74	0.73	0.78	0.83
Term loans / term deposits	5.55	8.05	7.87	10.01	8.02	2.85	2.16
Panel B: Loans to households and NPISH							
Growth rate of loans (YoY, %)	12.21	8.65	7.41	6.80	10.76	6.40	2.06
Interest rates – term deposits (%)	0.86	0.78	0.71	0.61	0.61	1.35	1.90
Interest rates – sight deposits (%)	0.03	0.03	0.02	0.01	0.01	0.03	0.06
Interest rates – loans (%)	3.56	3.13	2.71	2.35	2.20	2.66	2.98
Loans-deposit margin (%)	3.21	2.83	2.48	2.18	2.05	2.30	2.42
Sight deposits / Term deposits	1.55	1.76	2.37	2.89	3.33	2.93	2.71
Sight deposits / Term loans	0.07	0.06	0.05	0.04	0.04	0.04	0.03
Deposits / Loans (coverage)	1.03	1.02	1.02	1.03	0.95	0.89	0.90
Term loans / term deposits	2.30	2.55	3.15	3.61	4.40	4.28	3.97

Note: To calculate the credit-deposit margin, interest on deposits is calculated as a weighted average of the interest rates sight and term deposits, where the weights are determined as the ratio of sight and term deposits to the total volume of deposits in each market segment.

Source: NBS; ECB; own computation. *state as of February 2024.

In this context, it is interesting to observe the evolution of the average (aggregate) credit-deposit margin in the household and corporate credit sector (Table 3.1). Until the onset of restrictive monetary policy, there has been a gradual reduction to a level of 2.05% (2022) in the household sector and a level of 2.30% (2021) in the corporate sector. The increase in the ECB's key interest rate was most quickly priced into commercial banks' pricing policy in the corporate sector, with a sharp increase in margins already occurring towards the end of 2022 and this trend continuing throughout 2023. In contrast, the household sector is experiencing a significantly slower transmission of the monetary policy impulse into product pricing, also due to longer interest rate fixation periods on loans. Meanwhile, these changes in the credit-deposit margin need to be put in the context of the distribution of deposits between sight and term deposits. Commercial banks have significantly increased interest rates on term deposits, which has caused the ratio of long-term deposits in the corporate sector (the ratio of short to long term deposits) to rise to around 27% of the total; comparable to that in the household sector. However, as the share of short-term funds is significantly dominated in both sectors, their still low interest rates

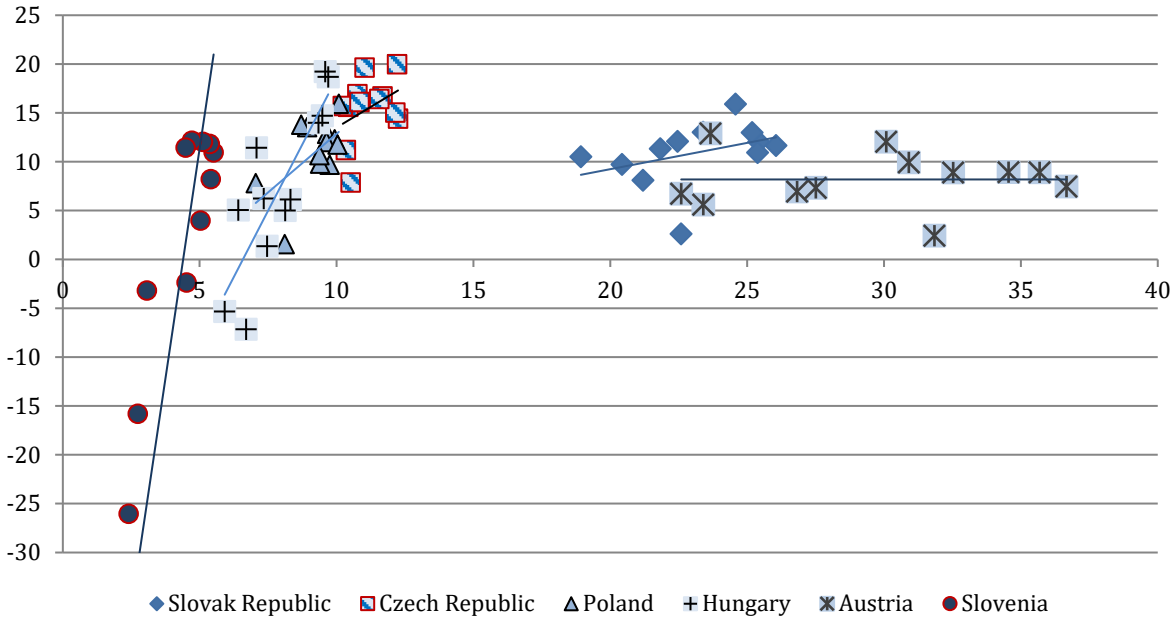
[27] Such a simple extrapolation is justified since the long-term trend lines of the two countries are almost identical.

have resulted in an aggregate increase in the interest-deposit margin. At the same time, Slovak households earn significantly less on sight deposits than, for example, the average for euro area countries (0.89% in February 2024).

This situation is also interesting from a historical or cross-sectional perspective (Figure 3.6), as this increase in margin has occurred while maintaining a stable level of concentration. The long-term level implied by a concentration rate above 90 per cent puts the value of the net margin in the range 2.50 – 4.00 per cent. Given that the overall (weighted) interest margin rate was at 2.87 percent (pre-pandemic level) at end-2023, there is still room for net margin expansion, especially in the household sector. Thus, the expected reduction in ECB interest rates in 2024 may have a lower impact on the cost of credit in Slovakia than in other countries if the impact of the bank levy is covered through the maintenance or increase in the net interest margin.

Net interest income is one of the sources of income for the bank, and thus in case of low profitability from the core business of a commercial bank (deposit-taking and lending), banks can generate additional income from non-interest net income. The ROE captures the total return generated for the investor on a unit of equity and is therefore often used in assessing the efficiency of a commercial bank's operations. Comparing the data for the V4 countries, Austria and Slovenia (Figure 3.7), it can be concluded that the profitability of the Slovak banking sector does not stand out on average compared to its competitors in the Central European area.

F i g u r e 3.7
ROE (%, y axis) **a Banking Sector Stability** (score, x axis)



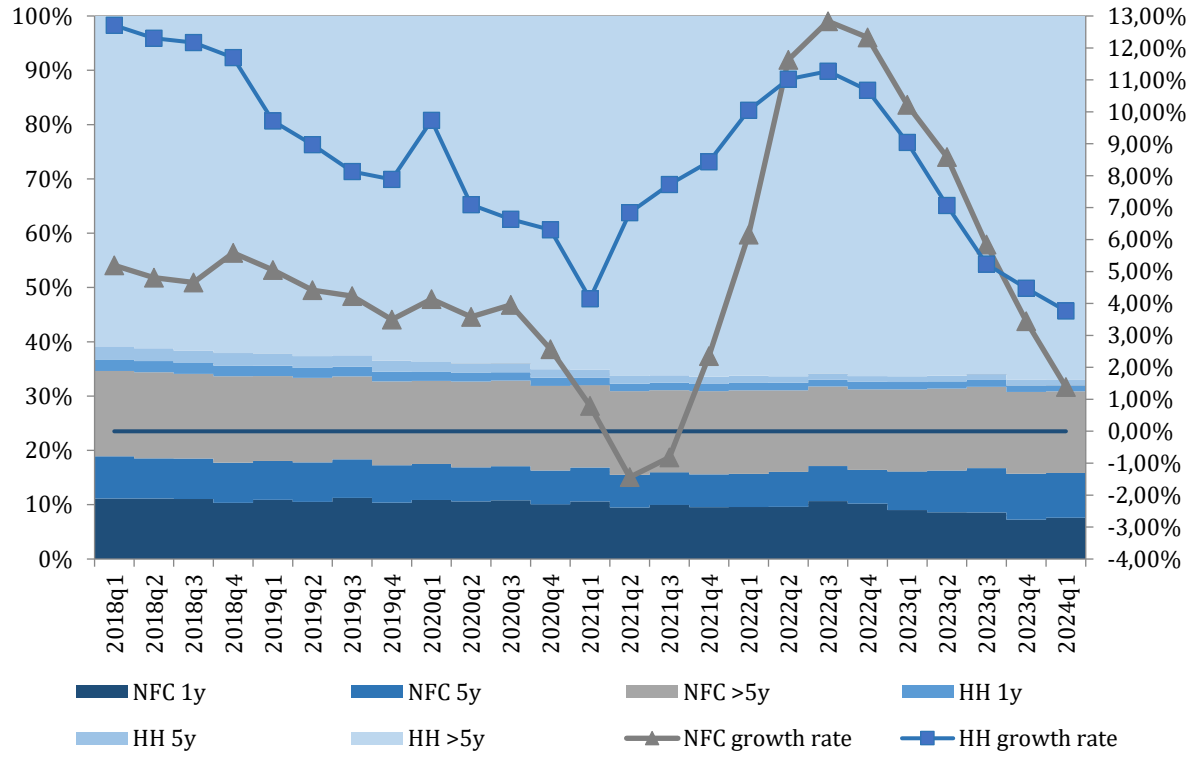
Note: Data for the years 2010 – 2019. ROE determined as a ratio of pre-tax net income to equity. Stability of the banking sector is measured by a z-score indicating the probability of default of the banking system expressed as (ROA + (Equity/ Assets))/stdev(ROA). Higher values, and hence lower risk of default, indicate a higher capacity of the banking sector (reserves generated from profit and equity) to absorb unexpected shocks by generated profit.

Source: Global Financial Development Database (World Bank).

However, the main difference lies in the level of potential risk measured by the z-score, where Slovakia is among the top performers together with Austria, thanks to its significantly higher equity ratios and lower volatility of achieved profitability. In other words, on a per-unit-of-risk basis, Slovakia has a qualitatively significant advantage. In view of the significant stock of high-quality capital in the Slovak banking sector, the introduction of a bank levy should thus not significantly affect the stability of the sector.

Slovakia registered significant increases in lending during the short post-pandemic period of 2022, both in the corporate and household sectors (Figure 3.8). At the same time, the growth rates of credit aggregates were significantly higher than the average credit growth in euro area countries (Figure 3.5).[28]

F i g u r e 3.8
Structure (% share, left axis) **and Growth of Credit Aggregates** (YoY %, right axis)



Note: NFC – nonfinancial corporations sector, HH – households sector. 1y – loans with maturity up to 1 year, 5y – loans with maturity over 1 year and up to 5 years, >5 – loans with maturity over 5 years. 2024q1 is calculated based on data from January and February.

Source: National Bank of Slovakia.

It is more difficult to estimate how much of this increase can be attributed to the agreement between banking sector and government officials to maintain and increase lending as one of the means of overcoming the negative effects of the pandemic situation.[29] In terms of the structure of lending, loans to households with a maturity of more than five

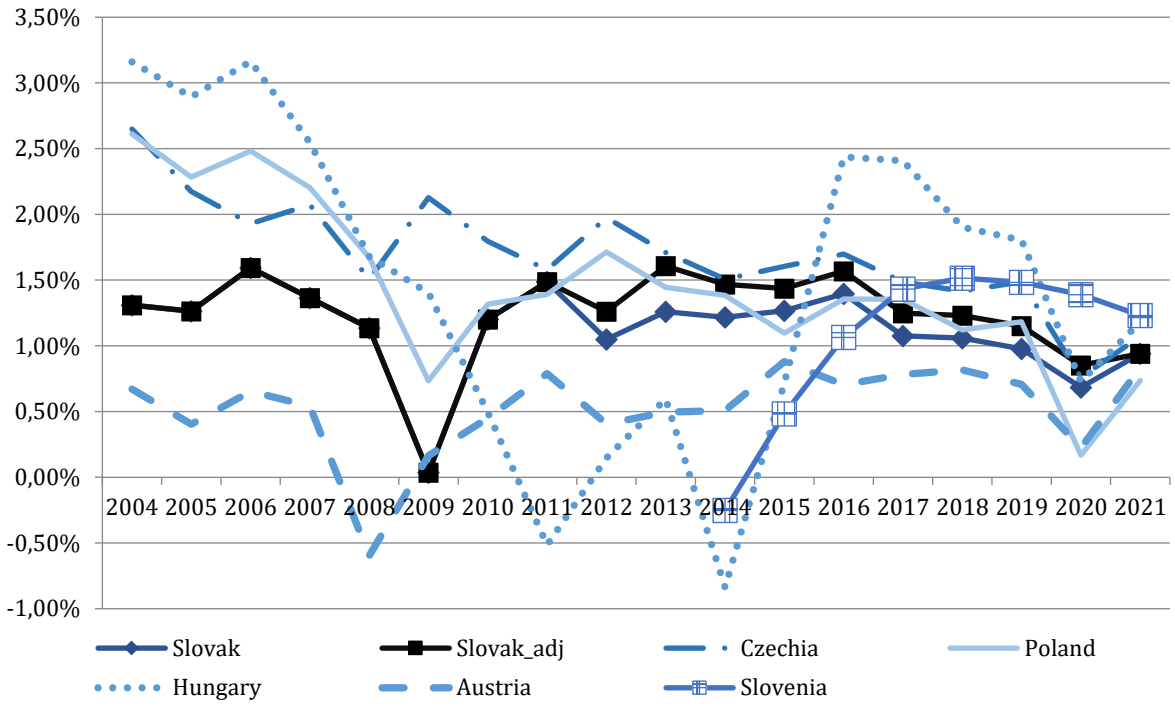
[28] In September 2022, the year-on-year growth rate of credit to households was almost 11% (euro area 4.5%), the growth rate of credit to the corporate sector was almost 13% (euro area 8%).

[29] See the Slovak Banking Association's commentary (SBA, 2023), available at: <https://www.sbaonline.sk/novinka/so-zvysovanim-zdanenia-bank-nesuhlasi-vacsina-slovenskej-populacie/>.

years were particularly dominant, the vast majority of which were mortgage loans. These have managed to increase their share of total lending by six percentage points in a relatively short period of six years, from 60.6 to 66.6 per cent at the end of 2023.

The ECB's restrictive monetary policy has worked in Slovakia in a similar way as it did in the euro area, where the beginning of 2024 saw the highest slowdown in credit aggregate growth since the pandemic year of 2021. In combination with the ECB's expected stabilization of key interest rates at 4.5% until at least the summer of 2024, the introduction of the bank levy may thus be reflected in a cooling of the credit market. If, even in the event of monetary easing, commercial banks in Slovakia will try to maintain profitability levels at least at the average of the V4 countries, the transmission of loose monetary policy can be expected to be primarily on the deposit side, and thus in a more pronounced decline in interest rates on deposits of households and firms in the time deposit sector. Conversely, the pass-through to interest rates on loans is likely to be only gradual, also in view of the high degree of concentration in the Slovak banking sector.

Figure 3.9
International Comparison of Pre-Tax ROA (%, left axis) **and Pre-Tax ROA Adjusted for Bank Levy (Slovakia)**



Note: The data for Slovenia are limited to the period after 2014, when the banking sector returned to normal functioning after the crisis years 2010 – 2014 characterised by negative ROA values (maximum –9.98% for 2013). Slovak_adj – pre-tax ROA indicator adjusted for the impact of the bank levy in force in 2012 – 2020. The adjusted ROA indicator is calculated as the ratio of gross profit, which is increased by the estimated amount of the bank levy for the entire banking sector (MFSR press release, 2020), to the value of total assets of the banking sector. Total banking sector assets are increased by an estimate of net profit (equity on the liability side), which is calculated using the effective tax rate applied to the amount of the bank levy. The calculation of ROA and adjusted ROA for Slovakia is based on aggregate data for the whole banking sector, while the GFDD data are calculated on an unconsolidated basis for commercial banks reporting to the Bankscope and Orbis databases. This methodological difference needs to be considered when interpreting the international comparison – however, except for the period 2008 – 2011, our calculation using aggregate data is comparable to the World Bank's calculation.

Source: Global Financial Development Database (World Bank); National Bank of Slovakia; own computation.

The rate of return is an important signaling factor for foreign owners of Slovak banks. For example, a study by Feldkircher and Sigmund (2017) on a sample of Austrian commercial banks and their subsidiaries in the CESEE region showed significant (positive) differences in the margins achieved. The importance of the profitability of Austrian banks' subsidiaries in the CESEE region was reflected in a negative relationship between mother-daughter profitability – if a mother achieves lower margins in her home country, she is more likely to try to compensate for this phenomenon through higher margins in her daughter located in the host country of the CESEE region. Thus, the effect of the introduction of the bank levy may have the potential to open the issue of ownership relations between Slovak banks and their foreign owners.

Figure 3.9 illustrates the historical evolution of the pre-tax ROA indicator for the V4 countries, Slovenia and Austria. As can be observed, the banks of the selected CESEE countries have indeed historically achieved significantly higher values of this indicator than has been the case for the Austrian banking sector. The financial crisis and the decade that followed did not change this situation, except for Hungary, although there has been a gradual reduction of this differential. While part of these differences can also be attributed to the additional profitability generated from foreign exchange transactions, the example of Slovenia over the last five years under review (2017 – 2021) shows that even in a small and open euro area economy, the banking sector can achieve profitability comparable to that of countries with their own currency. Thus, the pre-pandemic period, as well as 2020 and 2021, may already be characterised by minimal differences between the profitability of the banking sector of different countries. Slovakia has managed to comparatively improve its profitability in the post-crisis period, but the bank levy applied to the period 2012 – 2020 has tended to affect this in a negative direction. Thus, the re-establishment of the bank levy in a situation of minimal differences between CESEE countries may raise the question of where the sources of additional profit still lie in the Slovak banking environment, a question that foreign owners of Slovak banks may start to ask.

* * *

The ECB's successful restrictive monetary policy, which lasted continuously throughout 2023, resulted in the desired decline in inflation rates, a cooling in the Slovak banking market and an increase in commercial banks' interest margins. The delay in anchoring household inflation expectations back to the targeted 2 per cent suggests that the European Central Bank is likely to hold off on its key interest rate cut decision until positive inflation signals are confirmed in the medium term.

The discussion regarding the excessive profit making in the banking sector due to the weaker pass-through of the key interest rate increase to current deposit rates and, conversely, the stronger pass-through to corporate lending rates was reflected in the adoption of the bank levy, which should, among other things, bring additional resources to the fiscal budget. In view of the adoption of this economic instrument, as well as the structure

of the Slovak banking market characterised by a high degree of concentration and less sensitivity of short-term deposit interest rates of households, it can be expected that in 2024 Slovak households will benefit less from a possible easing of monetary policy than is the case in euro area countries. The issue of the long-term profitability of Slovak commercial banks is still an open issue, considering the significant level of capital reflected in the high degree of stability of the system.

4. LABOUR MARKET

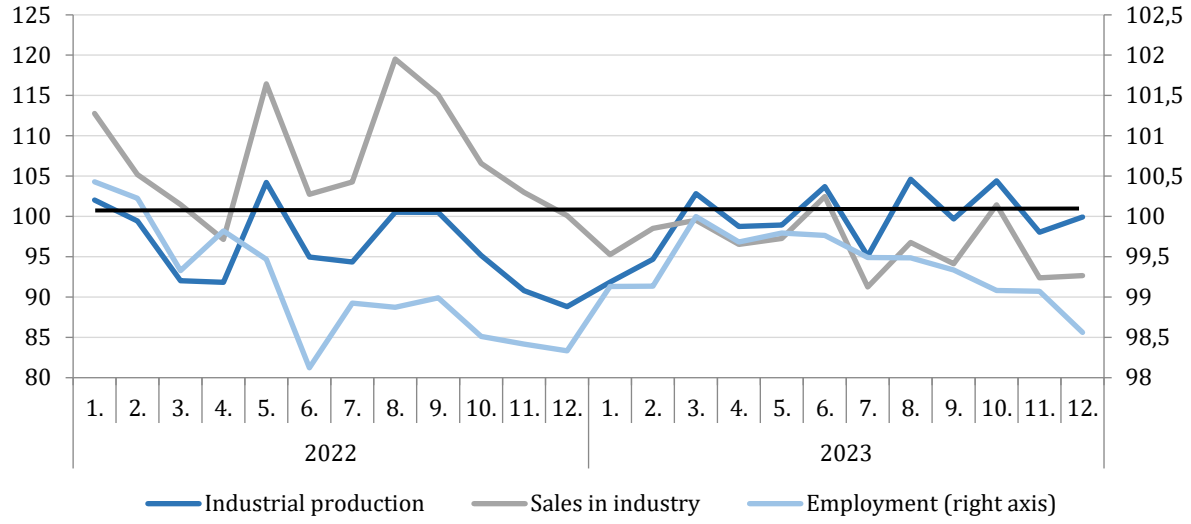
Statistical indicators characterizing the development of the Slovak labour market confirmed the expected stagnation in employment development, signs of which were already emerging before the end of 2022 (see the previous edition of this publication for more details). A slowdown was anticipated due to the ongoing decline in industrial production (which had already begun in 2022), which has even been compounded by a decline in industrial sales in 2023. Employment losses in industrial production had already been noticeable a year ago and were offset by favourable employment developments in other production sectors, but primarily in services. However, in 2023, not only did industry record negative employment figures, but agriculture followed suit, and the effect of post-pandemic employment recovery in those service sectors that had significantly reduced operations due to pandemic measures and had lost part of their workforce was gradually fading. In addition, a significant part of the increase in employment in 2022 could be attributed to the inflow of foreign workers into the Slovak labour market, largely as a result of the conflict in Ukraine, as we demonstrated in the previous edition of this publication. The cooling of demand for labour even before the start of 2023 was also indicated by labour office statistics, including a declining number of job vacancies and fewer job seekers being removed from the register due to gaining employment. The rate of unemployment decline had also begun to slow down in the last quarter of 2022, providing yet another ongoing sign of the labour market cooling down in 2023.

Divergent Employment Developments across Economic Sectors

In the previous edition of this publication, we pointed out that the employment growth rate of 1.7% (according to the Labour Force Survey) in 2022 was primarily secured by favourable developments in certain service sectors, which more than compensated for the employment losses in industrial sectors. Industrial production, in fact, experienced year-on-year declines for most months of the year starting from February 2022, and at the end of that year, the decline intensified (in the last two months, the drop in industrial production reached about 10%). A similarly deep decline continued in January 2023, and later during 2023, its development compared to the previous year was rather volatile – the noticeable drop in industrial production from the turn of the year did not continue, but neither was there any clear or lasting improvement. This was reflected in the trend of sales in the industry, where the growth rate slowed down, lagging behind production developments, and since September 2022, there were declines in sales almost every month (including throughout the year 2023). This had evident implications for employment trends in the industry. The situation in the industrial sector, set against the backdrop of the energy and geopolitical crisis (with its impact on foreign trade), is well illustrated by Figure 4.1, which depicts the deteriorating trend since February 2022 using year-on-year

indices. The figure clearly shows the nearly two-year decline in employment in the industrial sector as measured by statistical reporting (number of employed persons).[30]

Figure 4.1
Deterioration of the Situation in Industry from 2022 to 2023 (year-on-year change in %)



Notes: Indexes, same period of the previous year = 100.
Employment = average number of employed persons in industry from monthly sectoral statistical reporting (employees and entrepreneurs).
Sales = Revenue from own production and goods.

Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 (ŠÚ SR, 2024a).

This trend was also confirmed by the statistics from the sample survey: the deterioration in industrial production and the related slowdown in sales growth translated into a decline in the number of employees (LFS) in industrial production, first occurring in the third quarter of 2022. In the last quarter of 2022, the outflow from the sector intensified, with nearly 60,000 fewer workers in the sector compared to the same period of the previous year. The result of the fluctuating situation in industry during the following year, 2023, was another decrease in the number of employees in industrial production (more than 21,000 workers were lost by the end of the year). Thus, over the course of two years, there were 80,000 fewer workers in industrial production compared to the last quarter of 2021, representing nearly 14% of total employment in the sector. The most significant year-on-year outflow of workers from the sector occurred at the turn of 2022/2023, while the quarter-on-quarter comparison indicates a certain stabilization of the number of workers in industrial production during 2023, albeit at a lower level.

Unlike in 2022, industry was no longer the only manufacturing sector experiencing a decline in employment in 2023. Agriculture joined industry last year, with a decrease in employment occurring even at a faster pace than in industry (though this sector accounts

[30] In fact, this trend has been ongoing even longer; at the turn of 2021/2022, there was a slight recovery in employment, but it was short-lived and did not reflect in the average annual figures. The number of employed persons in industry has been declining since 2019 according to annual values. The same time comparison according to LFS is not suitable due to methodological changes during this time span.

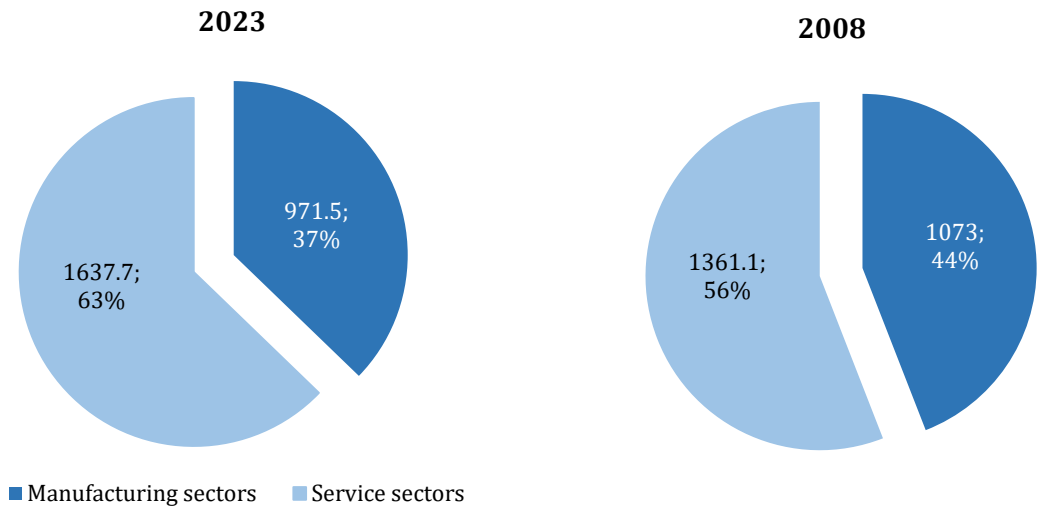
for a disproportionately smaller share of total employment). Only construction managed to maintain employment growth (from the manufacturing sectors), as construction production grew throughout 2023, except for two spring months and December. There was also a revival in sales growth in construction (which had already been rising for most of the year, unlike in 2022). This sector benefited from the faster absorption of EU funds due to the concluding programming period, leading to unsatisfied demand for employees in construction and, consequently, to dynamic growth in nominal wages in an effort to attract more labour. Thus, construction slightly compensated for the job losses in the two aforementioned sectors. As a result, employment in manufacturing sectors (LFS) declined by 2.8% in 2023.

The fall in employment in the national economy was prevented thanks to the service sectors, where employment rose by 2.1%. This is a continuation of last year's trend, and the weight of the service sector in total employment has further increased. In the past, we have pointed to the risk of excessive reliance on industry as the main driver of employment in Slovakia, which, in the context of production automation, positioned the Slovak Republic as one of the countries most at risk of employment change due to automation and robotization (e.g., OECD, 2016; Martinák, 2017). Increasing the share of service industries in total employment was a desirable phenomenon. A longer-term view (since the global financial crisis) of this shift is provided by Figure 4.2.

Currently, this change is primarily driven by rising input prices (the ongoing energy and inflation crisis) and the ongoing escalation in tense geopolitical relations (restrictions in foreign trade due to the war in Ukraine), which limits the profitability of production in certain industrial sectors not only in the domestic economy but especially in the most important export partners.

Figure 4.2

Share of Manufacturing Sectors and Service Sectors in Employment in the SR (in %)

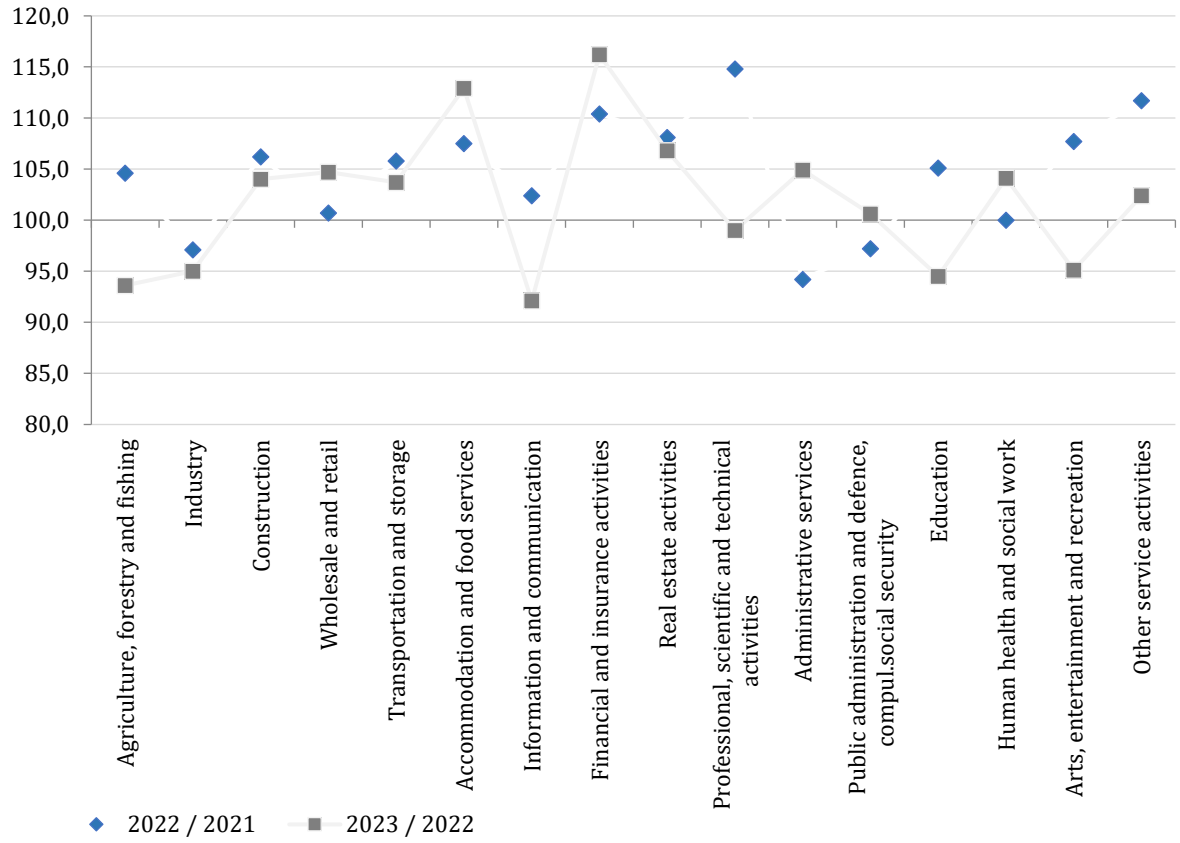


Note: Values in thousands of persons; employed persons according to LFS.

Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 (ŠÚ SR, 2024a) and according to data from the Datacube database (ŠÚ SR, 2024b).

Here again is an opportunity to highlight the specific nature of the economic crisis triggered by the global pandemic, which we pointed out in the previous two editions of this publication. Whereas in typical economic crises, employment in industry is the one more likely to respond to an external shocks, the result of the anti-pandemic measures implemented was the restriction of economic activity in affected service sectors, with implications for employment in these sectors, that require social contact. Thus, while the initial decline in industrial activity was followed by a relatively quick recovery after the introduction of employee testing and later during the availability of vaccines, the recovery of activity and subsequently employment in the service sectors most affected by the pandemic continued even into 2023. We are talking about sectors where the nature of work did not allow for the reduction of activity to be reflected in the number of hours worked (that enabled a significant part of employment to be maintained in some other sectors).

Figure 4.3
Employment Dynamics in Sectors in 2022 and 2023 (in %)



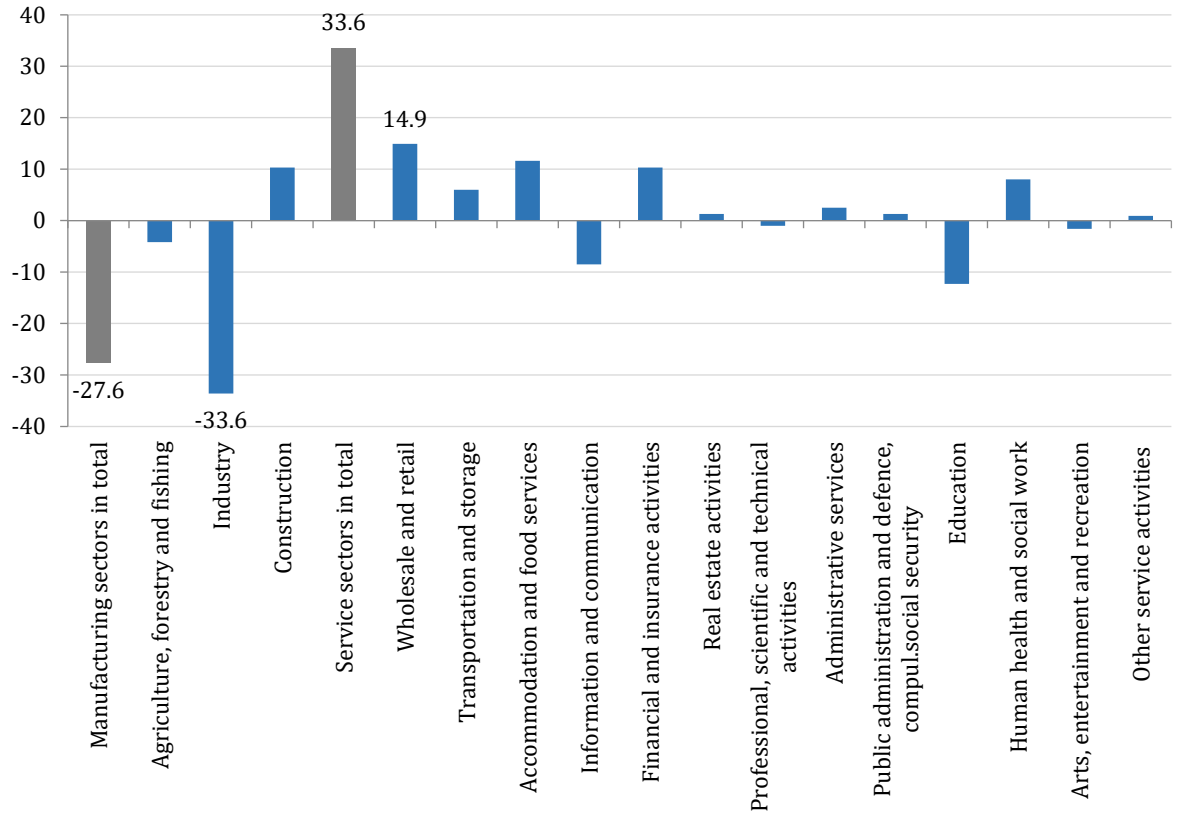
Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 – Working persons in the Slovak Republic according to LFS (ŠÚ SR, 2024a).

Sustained high employment growth rates can mainly be observed in two sectors: accommodation and food services, and financial and insurance activities (see Figure 4.3). The largest employment in services comes from the trade, public administration, and education sectors (in this order). Therefore, it is important to highlight the solid 4.7% growth rate in employment in trade, the branch which was also affected by the pandemic

and accounts for more than half of the employment compared to the industry.[31] Since we are comparing different-sized sectors above, Figure 4.4 more appropriately illustrates where employment was created and where it decreased in 2023.

Figure 4.4

Year-on-Year Changes in Employment by Sector, 2023 (in thousands of persons)



Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 – Working persons in the Slovak Republic according to LFS (ŠÚ SR, 2024a).

From Figure 4.4, it is clearly visible how the increase in employment (LFS) in services (33.6 thousand workers) fully compensated for the mentioned decrease in employment in industry (–33.6 thousand workers). The largest contributions came from the trade sectors and accommodation and food services, where recovery from the pandemic decline continued.

Thanks to favourable employment trends in certain service sectors, particularly in trade, accommodation and food service activities, financial and insurance activities, and healthcare, as well as positive employment growth in construction from the manufacturing sectors, total employment in the economy did not decrease despite the significant negative contribution from industry; instead, it stagnated (slight growth of 0.2%). For the second year, employment remains just above the threshold of 2.6 million working persons.

[31] The statistical reporting provides a different picture of employment trends in trade, indicating a negative development in the number of employed persons in this sector. However, this methodology confirms the trend observed in the LFS regarding the decline in employment in industry, as well as the trend of a two-year recovery in employment in construction and in accommodation and food services.

Year-on-year decline in job vacancies (from statistical reporting) in all the mentioned sectors except for healthcare indicates that even in these "drivers of employment" from 2023, there is already a cooling of demand for labour. This is most pronounced in accommodation and food services, where the number of job vacancies decreased by 30%, suggesting that the recovery demand for workers who left during the pandemic-related restrictions in accommodation and food services for other sectors or abroad is becoming saturated. The closing process of "returning to normal" in these sectors also played a role, which can be observed in the development of sales. While in 2022 we saw a year-on-year increase in monthly sales in accommodation services of over 300% during the winter tourist season (from January to April) and over 200% at the end of the year (in December), in 2023, sales in accommodation rose practically only in the first half of the year. A similar trend was observed in restaurant activities (except for the summer season) and also in transportation (throughout 2022), although the growth rates of sales were not as high multiples, they still reached unusually high values during 2022. The development of sales corresponded to the resumption of activities and increased outputs compared to the pandemic period, when for instance, the transportation of persons or performance in personal transport rose by up to 100% in spring 2022. Conversely, in 2023, revenues in transportation decreased for most of the year, while in restaurants and catering they continued to grow, albeit at standard rates after February 2023. Therefore, a continuation of a more massive "post-pandemic" recovery of employment in these sectors cannot be expected. In 2023, this was also reflected in the growth of nominal wages, which did not deviate from the trend in other parts of the service sector.

It is also necessary to note that the process of workforce aging continues to progress; by the end of 2023, the number of working persons aged 50 and over increased year-on-year, while in all younger age groups, there were fewer workers in the labour market than in the same period in 2022 (according to the basic gross classification of working persons by age groups).[32]

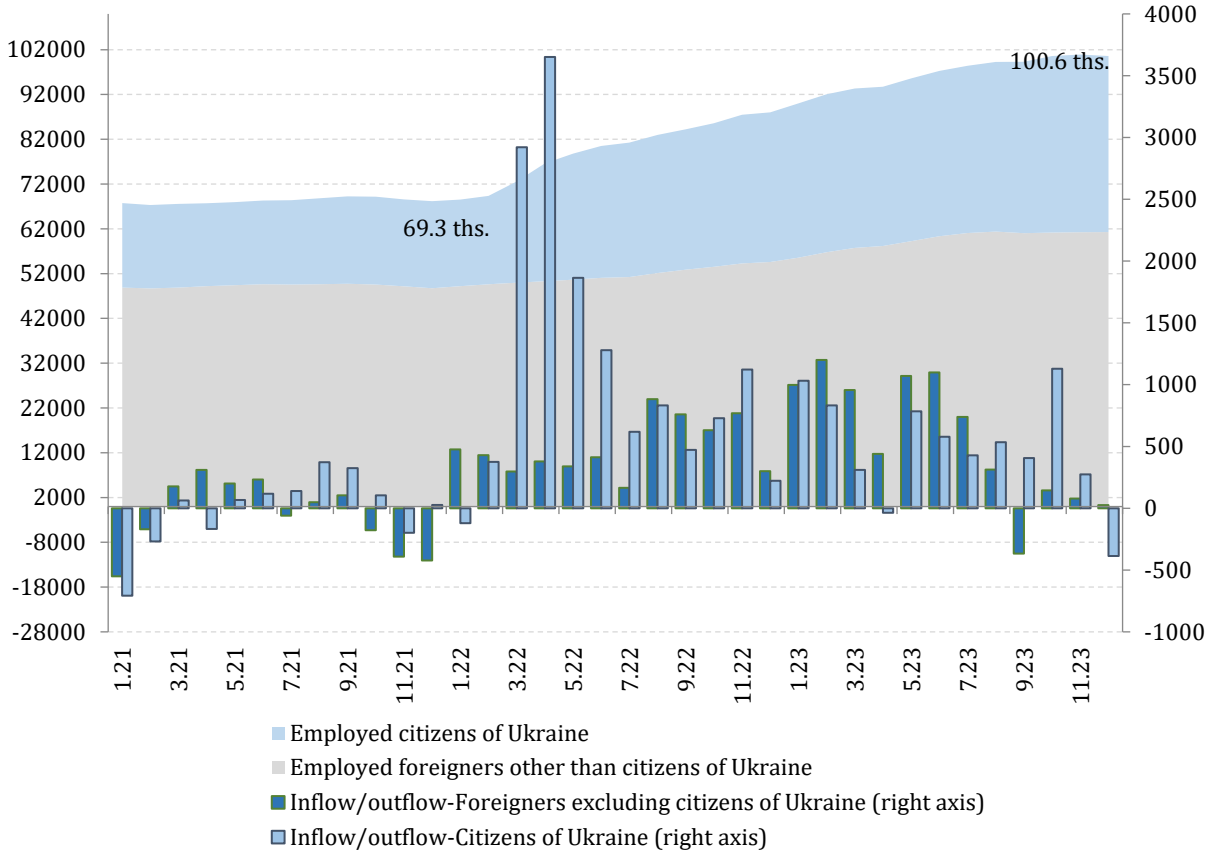
Employment Growth in the Context of Employing Foreigners

In last year's edition, we highlighted the unusually significant contribution of labour immigration to the overall increase in employment – specifically, the rise in the number of foreigners employed in Slovakia from the beginning to the end of 2022 accounted for nearly half of the total year-on-year employment growth in the economy. The increase in the number of Ukrainian citizens employed in Slovakia alone approached one-third of the overall increase in employment. (We examined the impact of the outbreak of the war in Ukraine on the Slovak labour market in more detail; Morvay et al., 2023.) Therefore, it is important not to overlook the extent to which the employment of foreigners contributed to employment growth also in 2023.

[32] According to the classification of the Statistical Office of the Slovak Republic.

Figure 4.5 shows the development of employment of foreigners in Slovakia over the past three years on a monthly basis. Such a detailed temporal perspective allows for the identification of the immediate impact of the outbreak of the conflict in February 2022, which was manifested in unprecedented month-on-month increases in the number of Ukrainian citizens employed in the SR (as shown by the bar chart; in last year's edition, we demonstrated that this primarily involved women employed under a special work permit "information card", with the simplification of employment for citizens with refugee status supported by legislative changes informally known as Lex Ukraine). The Figure illustrates that the employment of Ukrainian citizens (in this case, primarily women) peaked in the first four months following the outbreak of the war and continued at a lesser intensity in the following months. In just the first 12 months since the beginning of the conflict, Ukrainian citizens increased their share of the total number of foreigners employed in Slovakia by 10 percentage points (from 28% to 38%; as shown in the area chart).

Figure 4.5
Month-on-Month Flows and Total Numbers of Foreigners Employed in the Slovak Republic
(in persons)



Source: processed based on data from the Central Labour Office regarding the employment of foreigners (ÚPSVAR, 2024b).

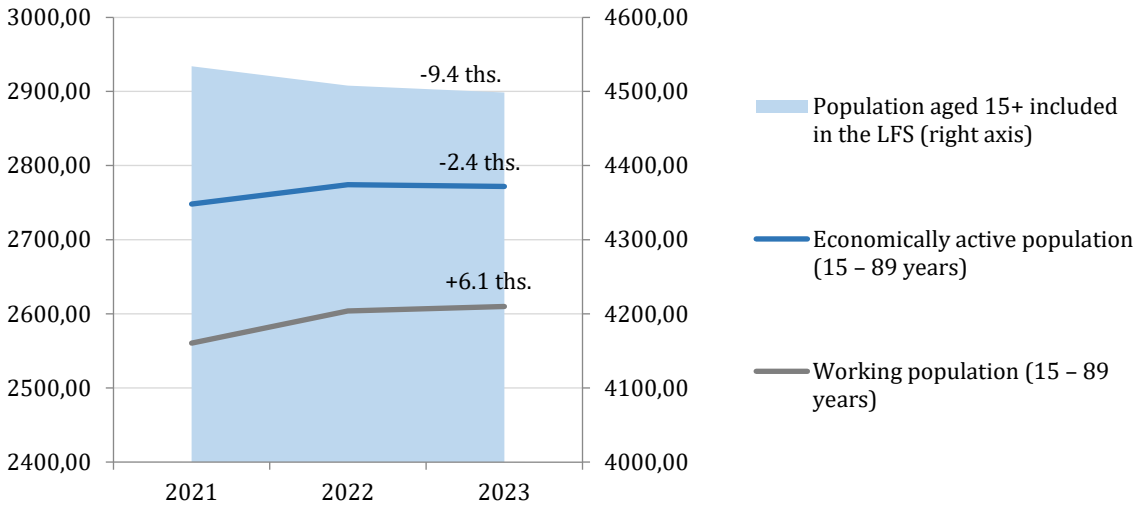
In addition to Ukrainian citizens, the number of other foreigners in the labour market also increased at a higher pace in the first half of 2023. Thus, while at the outbreak of the war, there were fewer than 70,000 foreign nationals employed in Slovakia, by October

2023, this number exceeded 100,000 for the first time (area chart in Figure 4.5 and displayed values). On average for the year, the number of foreigners employed in Slovakia rose by 17,100 compared to 2022, which is significantly more than the overall increase in employment in the economy according to the LFS (6,100) and much more than the increase in the number of employed persons according to statistical reporting (4,300). Although these are different statistics and methodologies for data collection, it can be inferred that without the inflow of foreigners, employment in the past year would likely not have increased. Regarding the positions occupied by foreigners, our conclusions from last year's publication were confirmed by a commentary from the Institute of Financial Policy (IFP, 2023): foreigners predominantly filled positions with the highest demand and difficulty in filling (operators, machine assemblers, and auxiliary workers), thereby helping to more effectively fill unoccupied jobs.

Slowing Decline in Unemployment Signals Cooling

While the structural change in employment (fewer workers in the manufacturing sectors and more in services) is evident, the stagnation of overall employment development needs to be placed in a demographic context. A weak 0.2 percent growth in employment, representing an increase of only about six thousand workers, should be viewed within the overall framework of the population aged 15 and over. As Figure 4.6 shows, the total size of the population over 15, which was included in the calculation of LFS for 2023, decreased by more than 9,000 persons year-on-year (and yet, the number of pensioners, both old-age and disability, has risen by about ten thousand), and the number of economically active persons fell by 2,400. This partly corrects the perception of weak dynamics in employment growth.

F i g u r e 4.6
Labour Force Sample Survey Baseline Values (in thousands of persons)

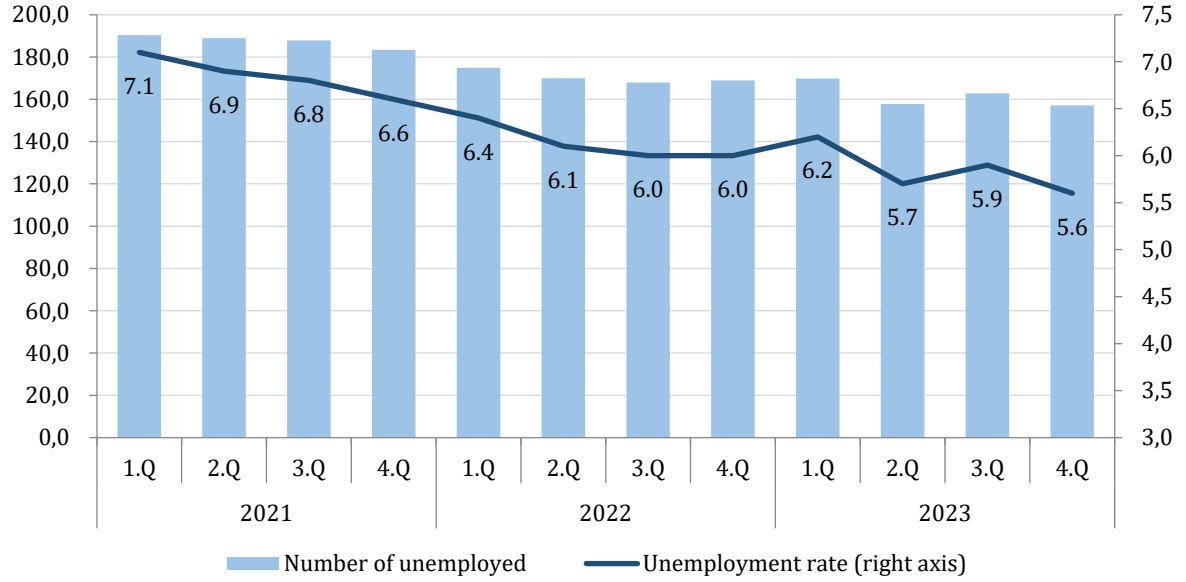


Source: processed according to data from Datacube database (ŠÚ SR, 2024b).

We can still talk about a worse year-on-year result, as the productive population has been declining also in 2022 (even more significantly), but the labour market situation was favourable enough at that time to drive an increase in economic activity (supported by stronger employment growth). The trend of declining and aging workforce has now become a permanent feature of the Slovak labour market, a topic we covered in detail in the previous edition. Labour immigration is thus becoming an increasingly important factor in sustaining employment growth. (For the sake of completeness, the natural population decline was seven times stronger than the positive migration balance.)

Thus, a more comprehensive picture of the situation in 2023 can only be obtained by examining the development of unemployment. This will reveal that claiming a complete stagnation in the labour market might be overly pessimistic, although there has indeed been a noticeable cooling. This can be inferred, among other things, from the slowing rate of decline in unemployment, even though it is important to note that the number of unemployed continued to decrease for the second consecutive year. A more detailed quarterly view reveals that signs of cooling demand for labour, following its two-year recovery from the pandemic crisis, began to emerge in unemployment statistics even before the end of 2022. As illustrated in Figure 4.7, the continuous decline in unemployment halted in the last quarter of that year, with the number of unemployed slightly increasing quarter-on-quarter, and the unemployment rate stabilizing at 6%, ceasing to decline.

Figure 4.7
Quarterly Development of Unemployment in 2021 – 2023
(unemployed in thousands; rate in %)



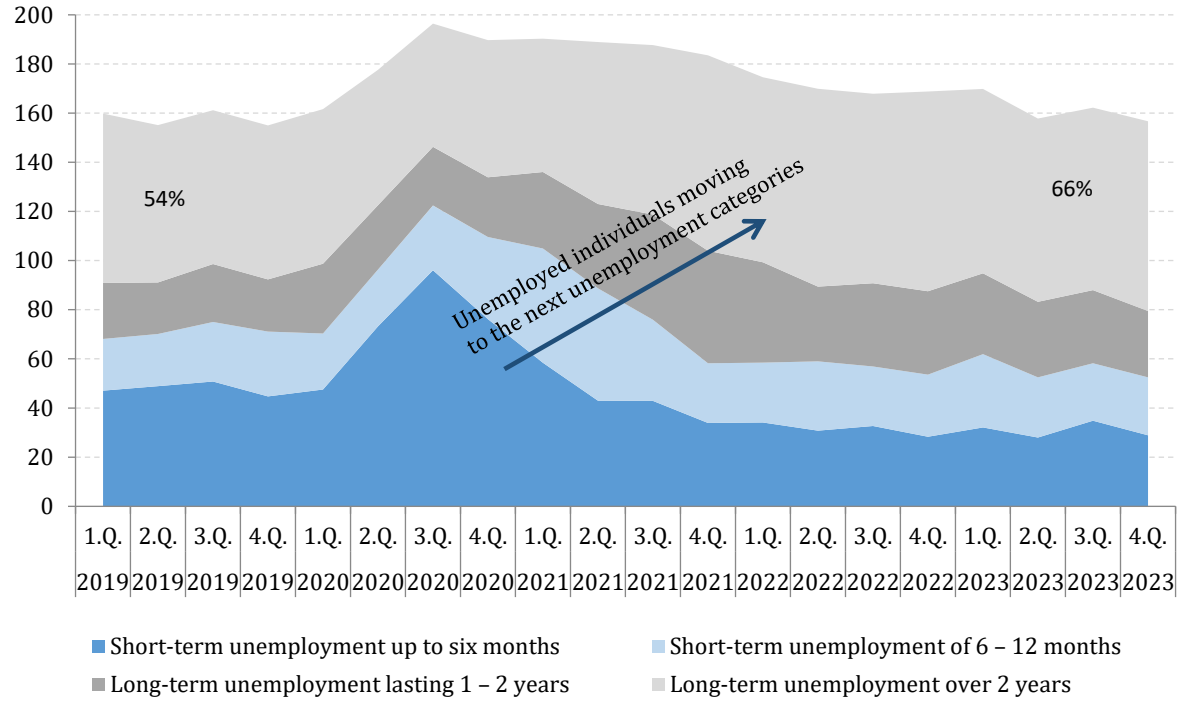
Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 – Working persons in the Slovak Republic according to the LFS (ŠÚ SR, 2024a).

This trend was further amplified in the first quarter of 2023, and throughout the year, the number of unemployed fluctuated, yet remained at a lower level than the previous year. On average for the year, the pace of unemployment reduction slowed to half. The

slowdown in the decline of unemployed individuals must also be viewed in the context of the accelerated inflow of foreigners, as migrants from Ukraine alleviate the decline in the productive population and increase the potential labour force. Unemployment reduction, although at the slower pace, still resulted in a year-on-year decrease of 8,500 unemployed individuals and a decline in the unemployment rate from 6.1% to 5.8%, bringing it back to pre-pandemic levels (2019). The number of unemployed (just above 160,000) approached the historical lows from 2019 (though precise comparisons are not possible due to changes in methodology since 2021).

The comparison of developments among the categories of unemployed individuals based on the duration of their unemployment reveals the effects of the pandemic crisis, as a significant part of unemployment arose from the crisis in 2020. It was reflected in a sharp increase in short-term unemployment lasting up to 6 months, peaking shortly after the outbreak of the pandemic, in the third quarter of 2020 (see Figure 4.8). This surge occurred shortly after the outbreak of the pandemic in Europe because, in the case of the Slovak labour market, its onset coincided with a few months of declining demand for labour that had already been underway. Some of these unemployed individuals, who did not find jobs later, gradually moved into next categories of unemployment duration, ultimately ending up in the long-term unemployment category lasting more than 2 years by 2022. As a result, the share of this category in total unemployment increased from the pre-pandemic level of 54% (in the last quarter of 2019) to 68% by the end of 2022.

Figure 4.8
Structure of the Unemployed by Duration of Unemployment (in thousands of persons)



Note: Between 2020 and 2021, there was a change in the definition of the unemployed in the LFS methodology, so this is not an exact comparison but rather an illustration of the phenomenon.

Source: processed according to data from Datacube database (ŠÚ SR, 2024b).

In 2023, two shifts occurred. Among the long-term unemployed, only the number of those who had been without work for more than four years increased, indicating that the initial impact of the pandemic on unemployment was gradually fading (the number of people unemployed for 2 to 4 years decreased). However, the share of the longest-term unemployed in total unemployment was still higher than before the pandemic (see Figure 4.8). The situation in the labour market, even two years after the end of the pandemic-related decline in employment, continued to disadvantage those who had been out of work the longest, whereas before the pandemic there was a significantly higher number (and share) of short-term unemployed compared to the situation in 2023. Overall, however, the total number of long-term unemployed (defined as those without work for more than a year) finally decreased year-on-year, which is a trend worth highlighting. The second shift was the fact that, unlike in 2022, there was an increase in unemployment among the short-term unemployed in 2023, as the number of people who had been out of work for 3 to 5 months rose. This is yet another manifestation and sign of cooling in the labour market.

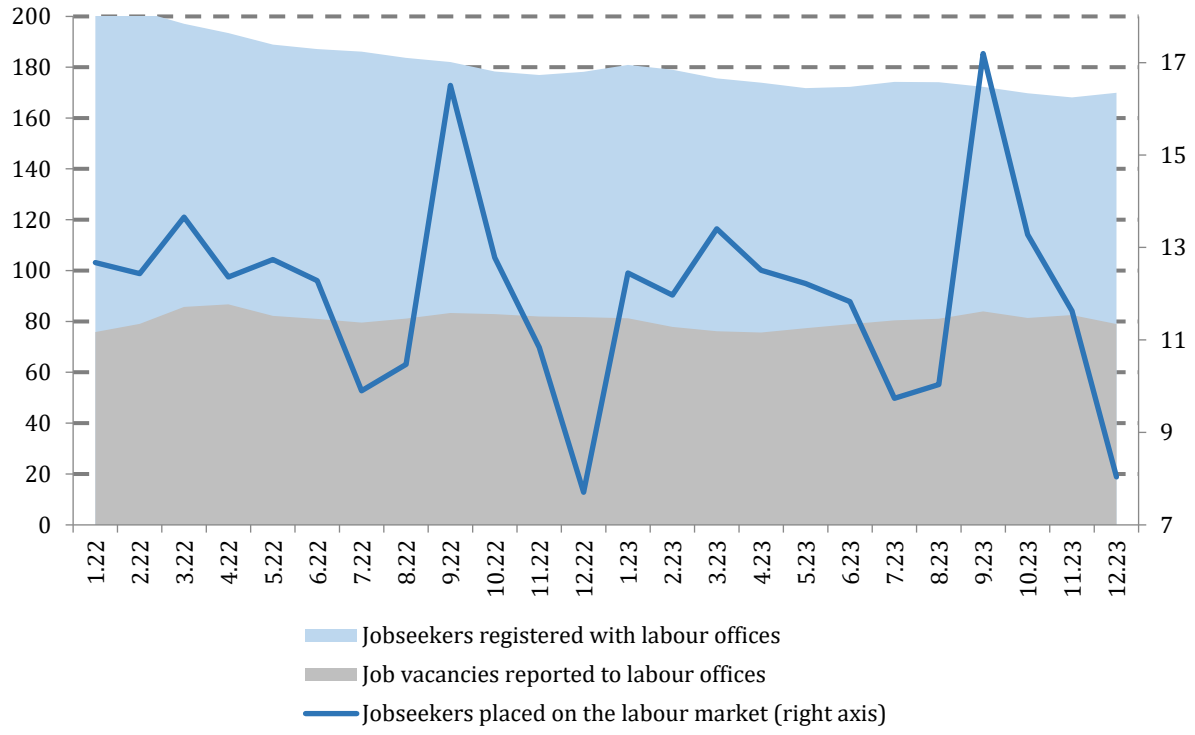
Statistics of Registered Unemployment Confirmed the Trend

A gradual shift in the structure of the unemployed by duration of unemployment (from long-term to short-term) is also confirmed by the labour office statistics, which showed a decrease in the average duration of registration for job seekers to 10.8 months (down from 11.54). The development of the registered unemployment rate also confirmed the trend visible in survey data (LFS), namely its decline and approach to historical lows from the pre-pandemic period: the latest annual figure for the registered unemployment rate (2023) is 5.3%, just 0.3 percentage points above the level of 2019. Similarly, these statistics also exhibited an annual slowdown in the rate of decline in the number of registered unemployed, mirroring the situation observed in the LFS data, roughly halving the rate of decrease.

In addition to the slowing rate of unemployment decline on average for the year 2023, a more detailed monthly view in Figure 4.9 reveals a similar fluctuation in the first and third quarters, as indicated by the trend in the number of unemployed according to the LFS, which, along with the unemployment rate, increased quarter-on-quarter during these two quarters. With certainty confirmed by labour office statistics, we can affirm the statement from the previous section of the text that the development throughout the year was fluctuating; however, it did improve year-on-year (with the stabilization of the values of the number of unemployed and the unemployment rate at lower levels). In accordance with this trend, the development of the number of job seekers removed from the register due to their placement in the labour market also reflected this pattern, with monthly figures serving as an indicator of labour demand. The placement curve for job seekers mirrored the seasonal trend from 2022 with only minor deviations, and except for April (when they performed better year-on-year), fewer job seekers found employment in the labour market up to September 2023 compared to the previous year, which can be

considered a result of reduced labour demand in the first and third quarters. In contrast, starting in September 2023, they fared slightly better than the previous year (most notably in November, when 7.3% more job seekers were employed than in the same period in 2022; the curve in Figure 4.9 is at year-on-year higher values from September 2023).

Figure 4.9
Selected Monthly Data on Registered Unemployment (in thousands)



Source: processed according to the Central Labour Office (ÚPSVaR) data: Unemployment - monthly statistics (ÚPSVAR, 2024a).

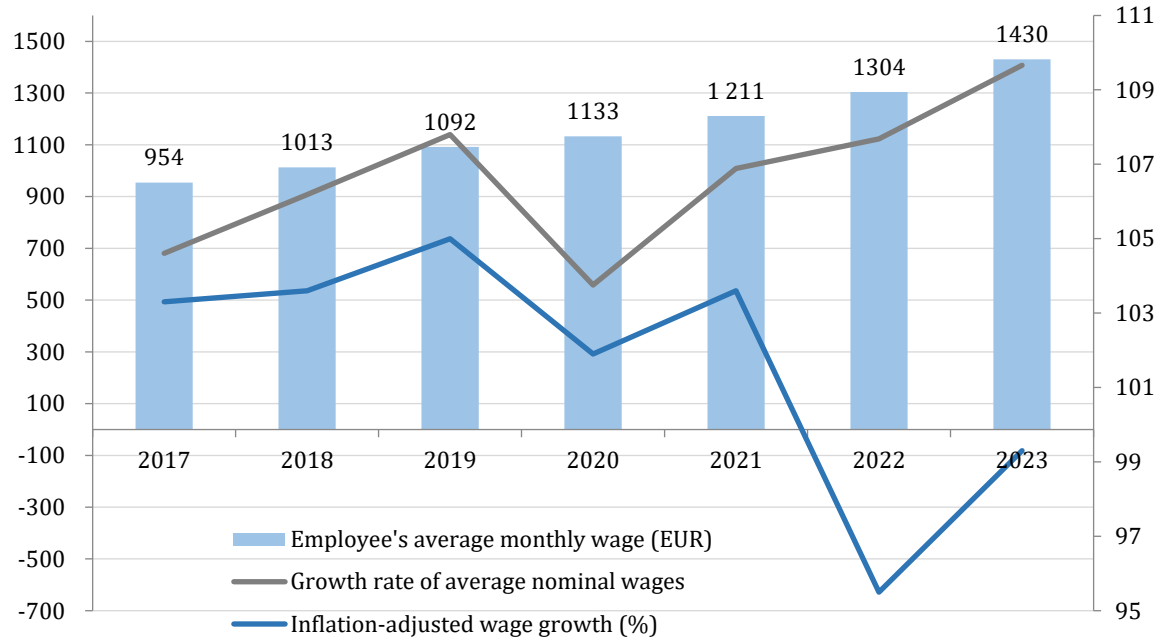
Another signal of the recovering demand for workers after the summer of 2023, which can also be gleaned from the figure, is the renewed increase in the number of job vacancies, which had actually been declining in the first half of the year (the number of open positions peaked in September and November). The improvement starting in September 2023 aligns with the findings of the LFS, where the unemployment rate fell the most in the last quarter and there was also a renewed acceleration in the decrease of unemployment. By December 2023, the number of unemployed registered with labour offices was only 4,500 individuals short of the record low level prior to the pandemic (December 2019).

The Decline in Real Wages Finally Halted at the End of 2023

The average wage in the economy increased year-on-year by 9.7%, which was a growth rate 2 percentage points higher than in 2022 and the highest in the past 19 years. The average wage thus reached EUR 1,430, with employees earning EUR 126 more in gross than the previous year (Figure 4.10). Among the main manufacturing sectors, wages grew

the fastest in construction, which reported the largest shortage of worker in 23 years (IFP, 2023). In the service sectors, employees in the public sector saw a more significant improvement, as wages underwent a notable increase in 2023 after previous stagnation.

Figure 4.10
Development of Average Nominal and Real Wages, 2017 – 2023



Source: processed according to the tabular part of the Statistical Report on the Economy of the Slovak Republic in the 4th quarter of 2023 – Working persons in the Slovak Republic according to the LFS (ŠÚ SR, 2024a).

Even with the acceleration of average wage growth to record levels and slowing inflation, real wages remained in negative territory on average for the year. However, it should be noted that their decline significantly eased to 0.7% (for comparison, real wages plummeted by 4.5% in 2022, marking the largest real wage depreciation in the past 22 years). A more detailed look at the quarters of 2023 would reveal that there was indeed a reversal of the unfavourable trend in real wage decline, specifically in the last quarter, when average wages nominally increased at a rate exceeding 10% while inflation slowed to 6.4% (it exceeded 15% in the first quarter). Thus, the decline in real wages was halted after seven quarters. Previously, real wages had last fallen during 2011 – 2012, when the effects of the global financial crisis were still being felt.

In comparison to the previous year, the situation regarding old-age pensions improved, as they increased nominally by only 2.6% on average in 2022, which, in an environment of high inflation, led to a decline in their real value of over 12% (having decreased for two consecutive years). Thanks to the two-phase pension indexation (in January and July 2023), the average old-age pension rose by 25% in 2023, resulting in a real increase of more than 18%. However, this was largely just a compensation for the decline in their real value in the previous two years. The average old-age pension thus approached the threshold of EUR 650.

Given the significance of household decision-making for the overall economic development, it is useful to place the issue of real incomes in a broader macroeconomic context at the end. After witnessing an unusually high increase in final household consumption in 2022 despite significant price rises, the second consecutive year of declining real wages due to persistent inflation ultimately forced households to save. While the behaviour of households in the previous year (which we examined more closely in last year's publication) resulted in a record decline in gross household savings (by 39% according to ESA 2010 methodology; households made purchases at the cost of depleting their savings with real incomes falling), in 2023 there was a revival of savings growth. This turnaround was also noted by the IFP, which, in June 2023, issued a commentary on the impact of high prices on household consumption (IFP, 2023). After the inflation shock and the depletion of original savings, the institute anticipated a redirection of part of households' disposable income towards rebuilding reserves.

With the decline in household consumption since the beginning of 2023, a weakening of domestic demand was to be expected. The reversal of the trend in household consumption ultimately had a fundamental effect on GDP development. While in 2022, household consumption grew at a solid rate of 5.7%, contributing to a nearly 3% increase in domestic demand and supporting GDP growth, the decline in household consumption by 2.5% in 2023 marked the worst result in almost three decades. This, along with a significant decrease in gross capital formation, resulted in a 5% drop in domestic demand (which was as deep as a decline during the pandemic in 2020), clearly dampening economic growth. The economy was eventually driven by a strong positive balance of foreign trade. It can be expected that this is a temporary effect and that household consumption will strengthen again in the coming year.

* * *

In 2023, the positive dynamics in the labour market continued to moderate. Overall employment grew slowly, both according to survey data and enterprise statistics. In fact, the increase in employed foreigners was significantly higher than the increase in total employment. A more optimistic perspective was offered by the development of unemployment, which illustrates the situation in the labour market without distortion from demographic factors. The trend of declining unemployment clearly persisted, although the pace of decline also slowed. Both the survey data and the statistics from employment offices confirmed that the development of unemployment and demand for labour fluctuated throughout the year, with a more noticeable improvement mainly in the last quarter. On average for the year, the number of unemployed decreased according to both methodologies, and the unemployment rate approached pre-pandemic historical lows; however, the average annual number of registered unemployed who managed to find employment also decreased, as did the number of reported job vacancies. The dynamics in the labour market were not as strong as the previous year, which was reflected in the fact that

economic activity no longer continued to grow alongside a shrinking productive population. Another perspective on the halt in economic activity growth is presented by the National Bank of Slovakia (NBS, 2024), which contextualizes the turnaround in the third quarter of 2023 with public policies, linking the increase in the number of old-age and disability pensioners to more substantial pension adjustment and changes in the conditions for granting early old-age and disability pensions.

The slowdown in dynamics in the labour market was driven by the manufacturing sectors, where a long-term decline in employment in industrial production was joined by agriculture. While industry suffered from the energy and geopolitical crisis and related changes in foreign trade, construction, on the other hand, benefited from the accelerated absorption of EU funds due to the ending programming period, increasing its workforce (which was documented not only by statistics on employed and working persons but also by the increasing number of self-employed individuals). The reduction in employment in industry was fully compensated by its increase in services, continuing the structural change. Thus, despite the apparent slowdown in labour market dynamics, the tension within it persisted, gradually intensifying with the improving situation towards the end of the year – the indicator of perceived labour shortages from cyclical surveys reached its historically highest value in the last quarter (NBS, 2024). Another testament to the persistent tension was the record-low unemployment alongside a record-high number of employed foreigners.

A positive aspect of 2023 is the decline in long-term unemployment, which had increased as a result of the pandemic crisis. However, the number of individuals without work for more than four years continued to rise. The variability in developments throughout the year was reflected also in the increase in the number of those who were unemployed for less than six months. While the first half of the year saw a continuation of the cooling trend from the end of 2022, data from the last months of 2023 appeared more optimistic.

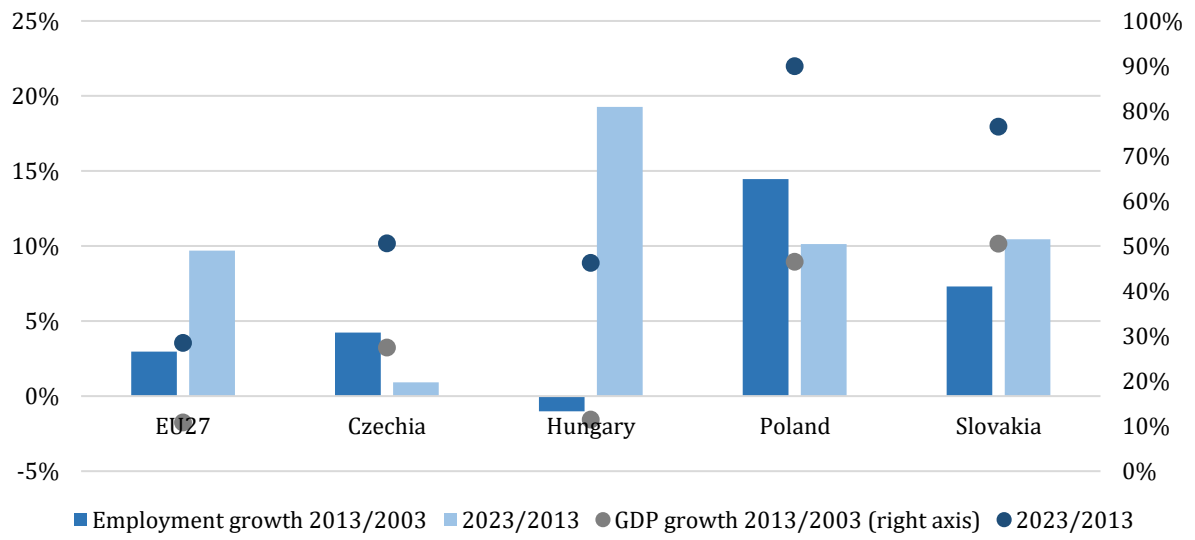
Another positive aspect of 2023, although only towards the very end, was the cessation of the trend of declining real wages, which had persisted for seven quarters prior, despite the strong growth in nominal wages. Good news also includes the indexation of old-age pensions, which underwent a two-phase increase in 2023, compensating for the decline in their real value over the previous two years. Under the pressure of continued inflation following strong consumption (in an unusual situation) in 2022, households decided to save more, which increased their savings but significantly dampened economic growth. A risk for future developments may be the growing tension in the labour market due to the shrinking in the productive population, partially mitigated by the influx of foreigners and, over time, likely also by increasing automation and robotization in some sectors. In local labour markets, a risk also lies in the dependence of certain regions on a single key employer with energy-intensive production or from a declining sector.

5. HUMAN CAPITAL CRISIS (?)

After thirty years of its existence, Slovakia urgently needs to respond to current trends and challenges of the global, low-carbon digital economy and society. One area in which Slovakia significantly lags behind is the development of human capital. According to Karšay (2021), the quality of human capital positively affects the structural unemployment rate. In an earlier study, Rafaj and Rehák (2015) pointed out the positive impact of human capital on local economic growth. In the Slovak context, human capital can therefore be considered a significant element for long-term economic and stable growth. This chapter examines the development of human capital in Slovakia over the past two decades and compares the findings with the other countries in the Visegrad Four (V4) region or the average levels of the European Union (EU27) countries. In cases where the analysis addresses foreign migration, the authors refer to people born outside of Slovakia.

Over the past twenty years, Slovakia has achieved rapid economic growth, nearly doubling the value of its GDP (Figure 5.1). At the same time, overall employment has increased by just over 20%. This ratio indicates relatively dynamic labor productivity growth. However, compared to other V4 countries, Slovakia recorded one of the highest employment growth rates. This was also due to the high unemployment rate at the start of the millennium, which primarily affected Slovakia and Poland. The high economic growth in the region's countries was largely driven by the relatively accessible quality labor force and the inflow of foreign direct investments. The highest productivity growth was recorded in the Czech Republic, while Hungary had the lowest. Slovakia managed to bring its economic performance closer to the EU average, especially during the first decade of the observed period. However, the success of Slovakia in catching up to more developed countries faded after 2015, as noted by several authors (e.g., Morvay et al., 2023; Dujava and Žúdel, 2023).

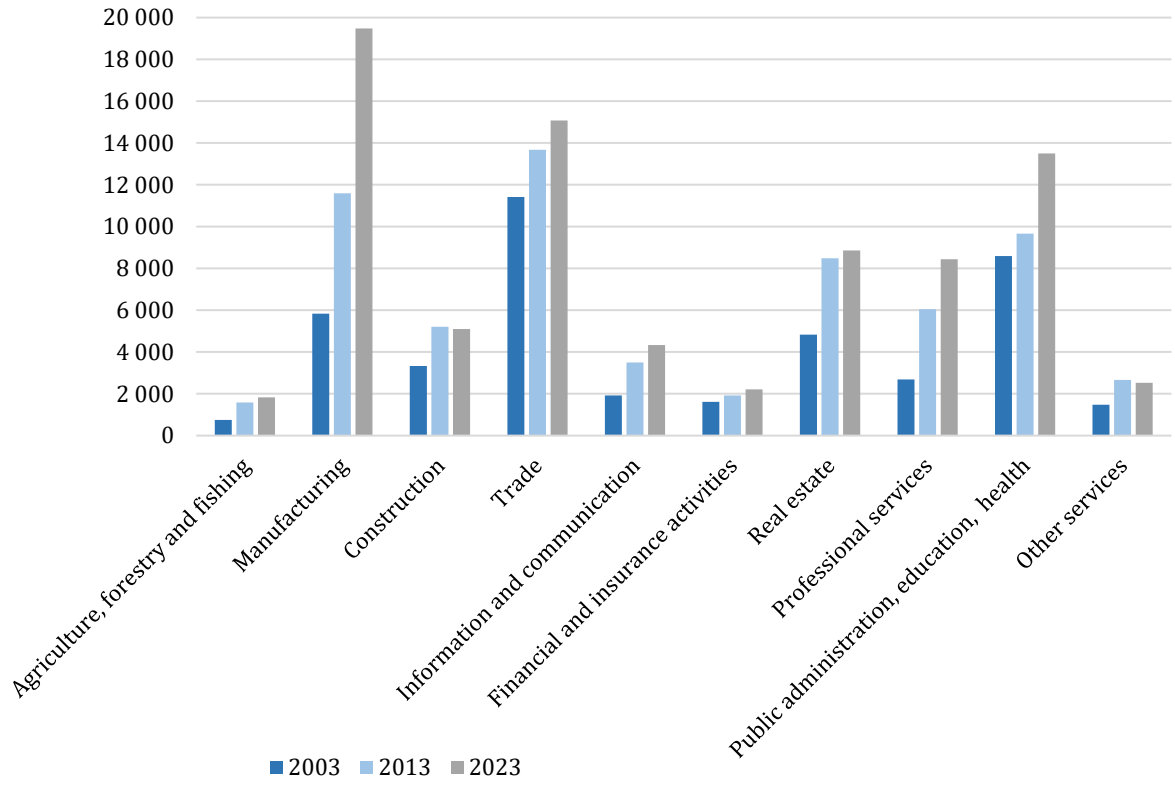
Figure 5.1
Employment and GDP Growth (constant prices) **Over the Last Two Decades**



Source: Eurostat [nama_10_gdp a lfsa_egan].

During the same period, Slovakia experienced the most dynamic development in the area of industrial production (Figure 5.2). The high availability of a skilled labor force, along with lower wage costs, is cited (Hlušková, 2019) as one of the main reasons for the influx of foreign investments into Slovakia. These investments boost the country's economic strength, labor productivity, and usually the standard of living for its population. However, Slovakia's focus on industrial production has largely led to the preservation of the structure of study fields in secondary and higher education. Given the inertia of the educational system, this situation represents a significant limiting factor for the further development of the Slovak economy in the ongoing green and digital transformation.

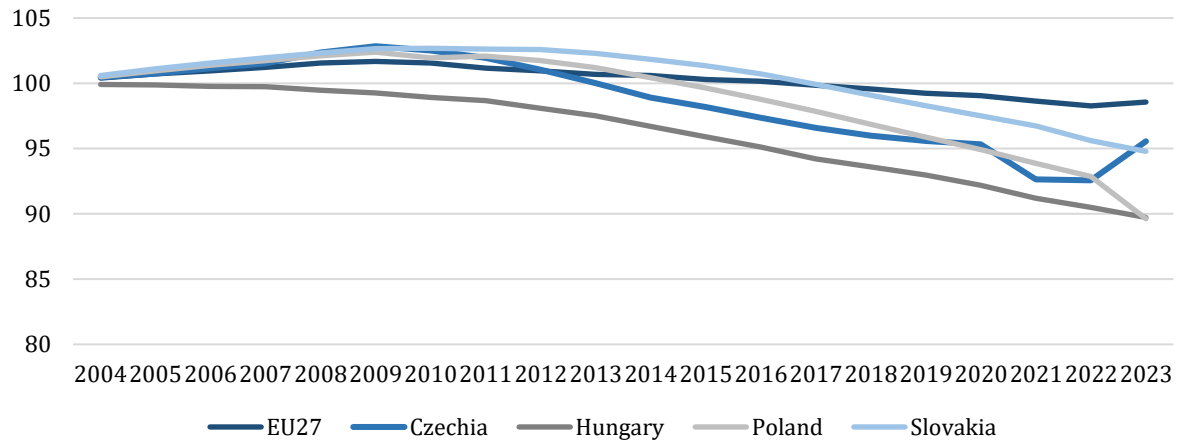
Figure 5.2
Gross Value Added by Economic Sector, EUR Million, Constant Prices



Source: Eurostat [nama_10_a10].

The Europe-wide trend of population aging has not bypassed Slovakia and will significantly impact the supply of the workforce, composed of the working-age population, which includes people aged 15 to 64. Since 2010, Slovakia, like the other V4 countries, has seen a decline in the population within this age cohort (Figure 5.3). In recent years, there has been a noticeable trend of this population segment decreasing in all countries of the region, with varying amplitude and starting years. In Hungary, the working-age population has been steadily declining since 2002. The most significant increase after 2010 occurred in 2023 in the Czech Republic, mainly due to its open asylum policy for Ukrainian immigrants. The size of this population segment in the EU27 countries has experienced only a slight decline compared to the V4 countries.

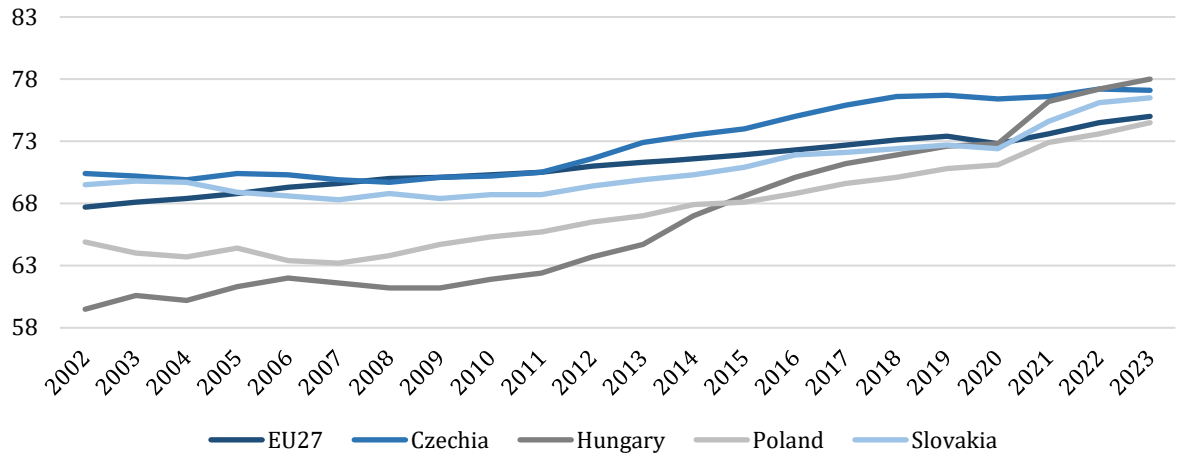
Figure 5.3
Labour Supply – Population Aged 15 – 64 Years, Index: 2003 = 100



Source: Eurostat [demo_pjanbroad].

The foundation of the labor supply is formed by the total working-age population, but the effectively usable portion depends on the economic activity of the population. This indicator shows what portion of the population is active in the labor market (either employed or unemployed). Slovakia, along with the Czech Republic, had a relatively high rate of economic activity already 20 years ago (Figure 5.4).

Figure 5.4
Economic Activity of the Population Aged 15 – 64 Years (%)

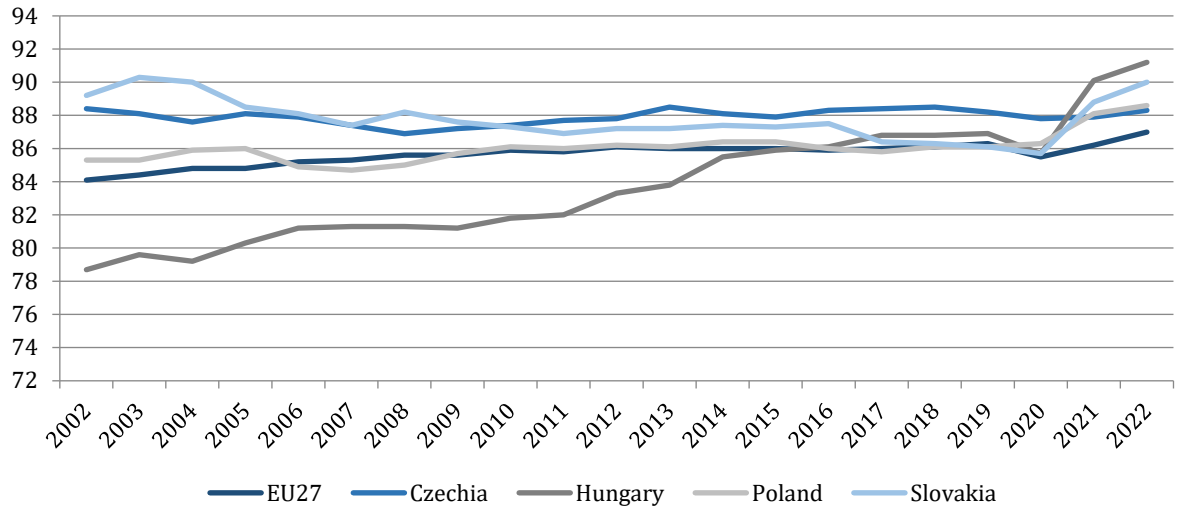


Source: Eurostat [lfsa_argaedn].

This rate stagnated in both countries for a long time and only began to increase when the total working-age population started to decline after 2010. At the same time, the unemployment rate began to drop rapidly during this period, which also contributed to the increase in economic activity. The most significant growth in economic activity between 2003 and 2023 was recorded in Hungary, which, on the other hand, also saw the largest decline in the working-age population (Figure 5.3).

Looking at the development of the economic activity rate among the 25 to 49 age group, we can observe that in Slovakia, this rate gradually declined until 2020 (a cumulative drop of 5 percentage points) (Figure 5.5). This suggests that the increase in economic activity after 2010 was driven by a rising rate of economic activity in older age groups (50+). Growth in this age category helped mitigate the negative effects of the declining economic activity rate in younger age cohorts. In comparison with other V4 countries (as well as the EU27), Slovakia was the only country to record a decline in economic activity in this age group. Other countries saw stagnation (Czech Republic, Poland) or dynamic growth (Hungary).

Figure 5.5
Economic Activity of the Population Aged 25 – 49 (%)



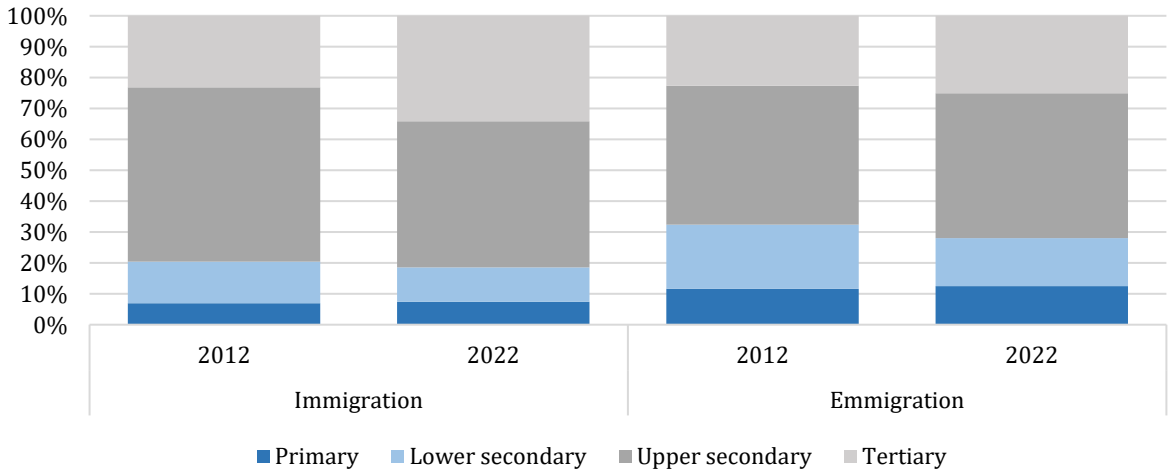
Source: Eurostat [lfsa_argaedn].

From the state's perspective, highly educated citizens represent the most costly category of the workforce due to the investment in their skill development. The loss of this population category through migration is therefore an undesirable phenomenon. The development of international movement among the highly educated can be viewed very negatively, as their share of emigration increased from 23% in 2012 to more than one-third in 2022 (Figure 5.6). In contrast, they account for only one-quarter of immigration. This negative ratio contributes to Slovakia's poor ranking of 120th out of 134 countries in the "Brain Retention" indicator according to INSEAD (2023). In this area, increased efforts will be needed from relevant actors, including the state, municipalities, employers, and educational institutions. The educational composition of Slovaks returning to Slovakia between 2012 and 2022 has not significantly changed, with high school-educated individuals dominating, making up over 60% of returnees.

Over the past two decades, there has also been a gradual decline in the economic activity rate among young people with higher education in Slovakia. By 2020, this decline reached 9 percentage points compared to 2002 (Figure 5.7), which was the highest value

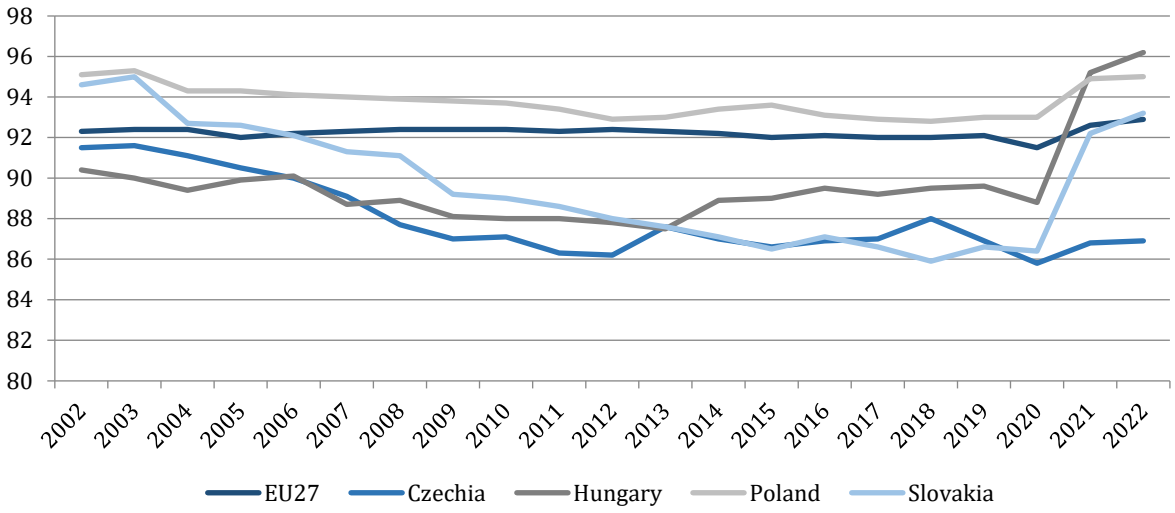
among V4 countries. It was only during the COVID period[33] that the economic activity rate for the 20 – 49 age group with higher education increased, but it still does not reach the levels from twenty years ago. A partial explanation could be the low motivation to officially deregister residency in case of moving abroad. In other countries (except for the Czech Republic), this rate stagnated. This raises the question of what other factors are contributing to the decline in the economic activity rate among the most educated part of the population.

Figure 5.6
Changes in Permanent Residence of Slovaks to and from Abroad by Level of Education[34]



Source: ŠÚ SR.

Figure 5.7
Economic Activity of the Population Aged 25 – 49, Tertiary Education (%)



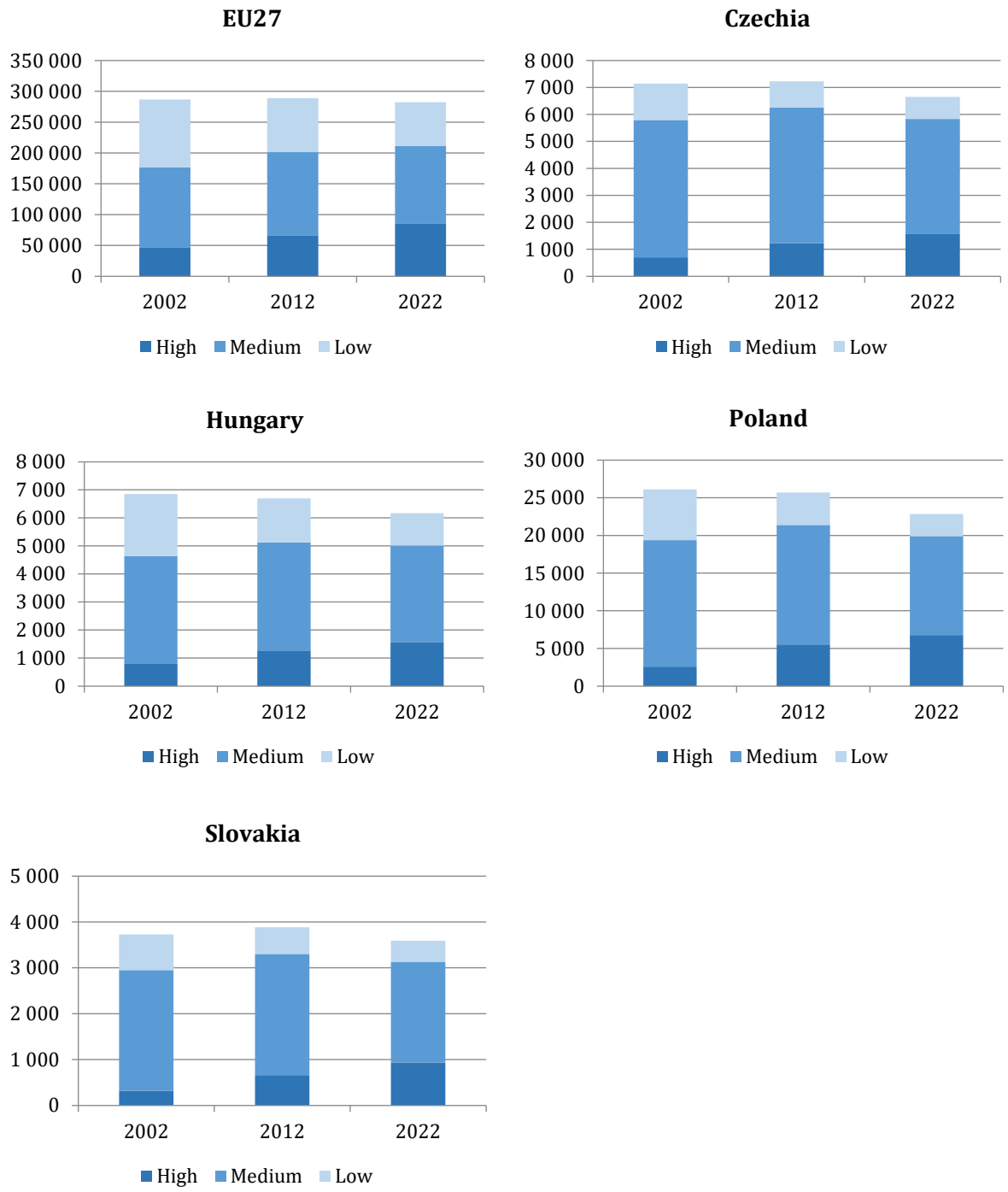
Source: Eurostat (lfsa_argaedn).

[33] Behind the increase in the economic activity rate of the population in all countries in 2021, there may also be a change in methodology and a broadening of the definition of the economically active population.

[34] Immigration and emigration data about persons without education were not included as the vast majority is formed by children aged 0 – 14 years.

Figure 5.8

Thousands of People Aged 15 – 64 Years by Education



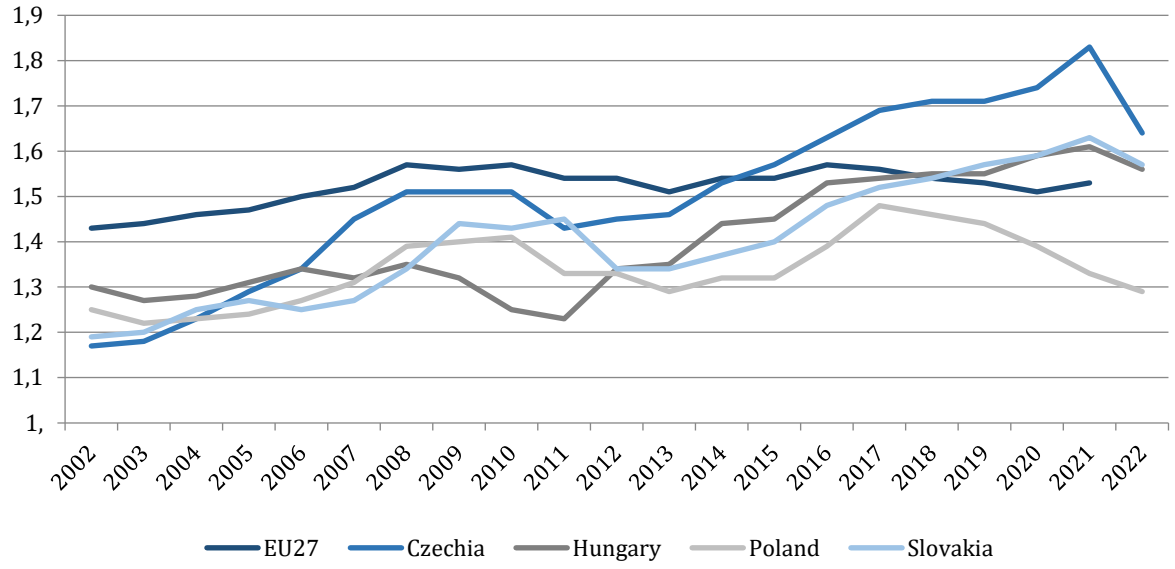
Source: Eurostat (lfsa_pgaed).

In all countries (V4 and EU27), the share of university educated people is increasing at the expense of those with low or secondary education (Figure 5.8). This development is determined mainly by the increasing availability of higher education. However, the total working population is declining in all V4 countries, most notably in Poland and Hungary. If we add to this decreasing economic activity rate for the university-educated part of the

population, we find that despite the growth of the total number of people with the highest education, there is a relatively smaller labour force in the labour market. Moreover, according to the results of the study by Blanár (2023), graduates of Slovak universities evaluated the application of the knowledge and skills acquired during their studies in their current position relatively positively.

The options to supplement the gradually declining availability of human capital in Slovakia are relatively limited and can be divided into short-term and long-term options. One potential long-term solution is to increase the birth rate. However, Slovakia, as well as neighboring countries and the EU27, are below the natural fertility rate[35] (Figure 5.9), which in the long term means that the "native" population will continue to decline (Šprocha and Šídlo, 2018; Šprocha and Tišliar, 2021). However, even a rapid increase in fertility will be reflected only in the labour market situation in the 20-year period. The long-term trend indicating an increasing number of children per mother (from 1.2 children in 2002 to 1.6 in 2022) can be viewed positively. This upwards trend is visible in all V4 countries except Poland after 2017.

Figure 5.9
Fertility Rate Trends



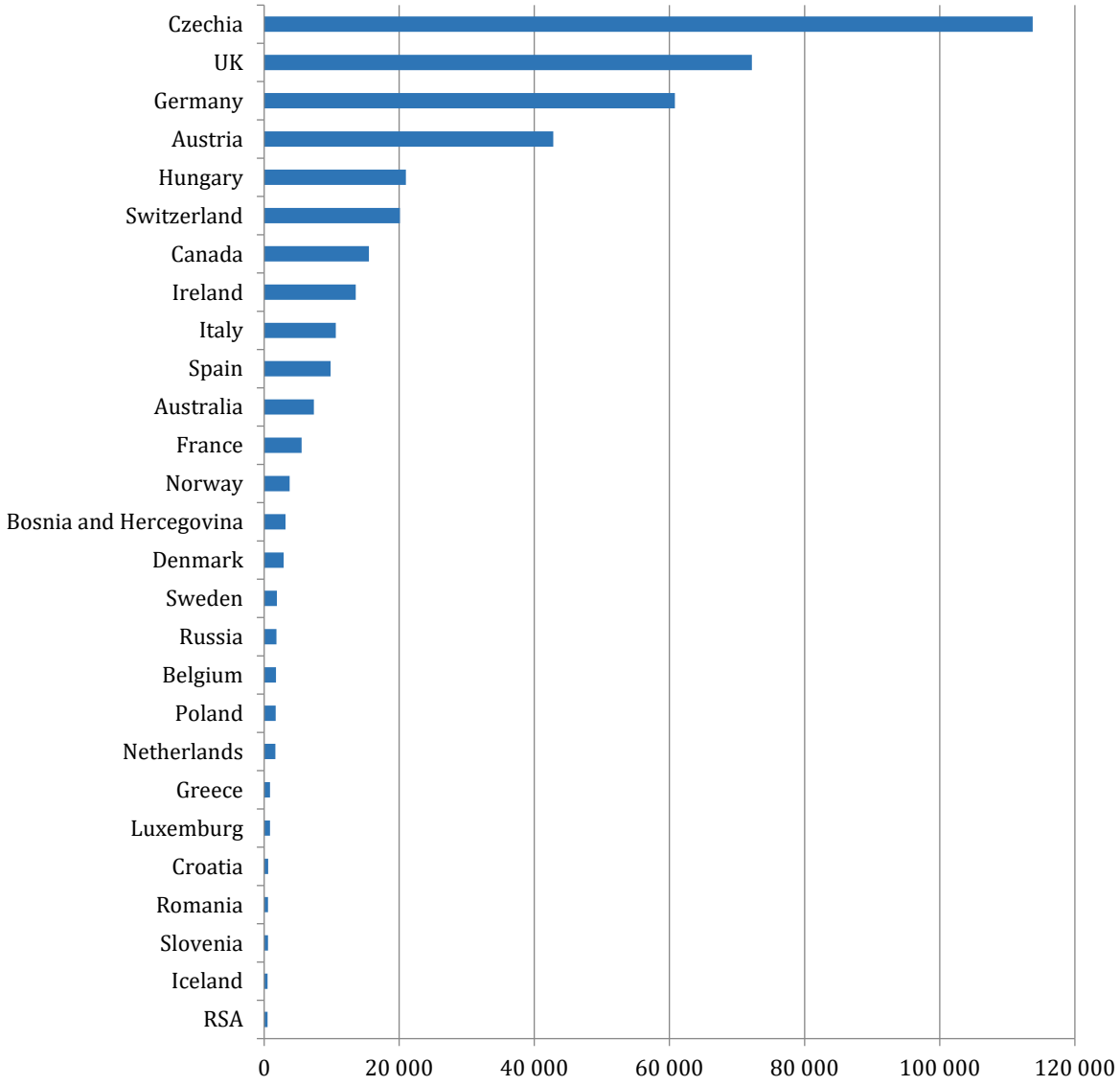
Source: Eurostat [demo_find].

In the short term, one of the possible solutions is the return of Slovaks living or working abroad for a short period of time. However, there are no sufficiently precise statistics to determine the exact potential of this solution; therefore, we must be satisfied with the data of the United Nations (UN) estimates, according to which approximately 420 000 Slovaks lived abroad in 2020. The highest diaspora living abroad according to UN data is in the Czech Republic, with a share of more than ¼ of the diaspora. Another approximately 170 thousand Slovaks are summarily active in England, Germany and Austria. It can be

[35] The threshold is set at 2.1 child per mother.

assumed that during the COVID-19 pandemic, some Slovaks living abroad returned to their homeland. Nevertheless, Slovaks living abroad represent one of the main potential resources for the future. According to the findings of the studies by Mýtna Kureková and Žilinčíková (2018), foreign experience is beneficial for reintegration into the Slovak labour market when returning to Slovakia from abroad, but higher salary expectations may have the opposite effect, especially in lower-skilled positions.

Figure 5.10
Number of Slovaks Abroad in Persons

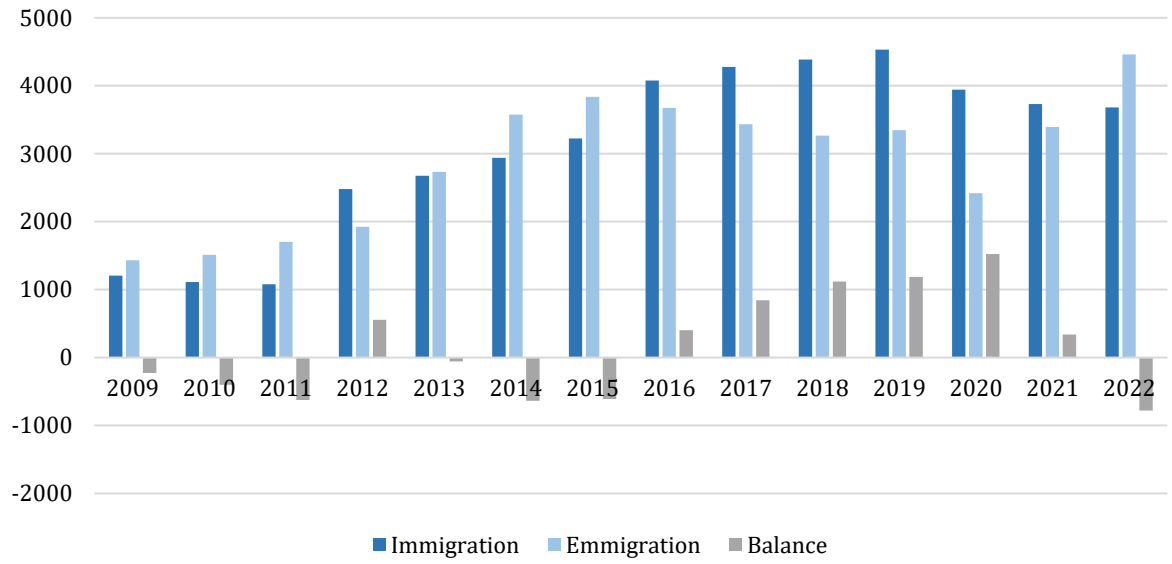


Source: OSN.

Partial information on the sentiment of Slovaks towards their foreign migration is provided by data on the change in permanent residence from Slovakia to abroad and returns from abroad to Slovakia (see Figure 5.11). The explanatory power of this statistic is limited by the low level of formal registration by those moving outside Slovakia owing to

the administrative burden and the low added value of this act. In the case of emigration abroad, after an initial increase from 2012 – 2015, we can see its subsequent stabilisation and a drop in the pandemic year 2020. In the case of the returns of Slovaks from abroad, their numbers gradually increased until 2019. In the periods of 2021 and 2022, an acceleration of emigration abroad was observed, while the number of returns stagnated. The positive balance of permanent residence changes in the period 2016 – 2021 was replaced by a negative balance in 2022.

Figure 5.11
Changes in Permanent Residence of Slovaks to and from Abroad



Source: ŠÚ SR.

Looking at the age structure of this category of movements of Slovaks, the diversity of motivations to change permanent residence is also evident. In the case of emigration, the age category of 15 – 44-year-olds dominates, which indicates labour (economic) migration. In the case of immigration, children aged 0 – 14 years are the dominant group, and this fact points to return to migration for the purpose of starting a family and raising children in the native country.[36]

No Country for Old Men?

Foreign university students can serve as another source of building the human capital base in Slovakia. Every country has a certain proportion of students who go abroad to study. In general, this trend is a consequence of the internationalisation and commercialisation of higher education in the EU at the turn of the millennium, according to the conclusions of Giousmpasoglou and Koniordos (2017). According to research carried out in

[36] Part of this category represents new-borns who were born in maternity hospitals abroad and subsequently returned with their mothers to Slovakia.

Slovakia, in the long run, only half of Slovaks studying abroad return (IFP, 2017). A similar rate of intended return after studying abroad was revealed by King and Gëdeshi (2023) for Albanian students. At the same time, they are the highest-quality students who go abroad to study (IFP, 2021). The international migration of university students is a desirable phenomenon, but it must be proportionate. This is where a major problem arises in the case of Slovakia. Compared with that in neighboring countries, the amount of brain drain in China is enormous. More than 22% of Slovak university students study abroad (mainly in the Czech Republic). This figure is several times greater than those of other V4 countries (from 2% in Poland to 4.8% in Hungary in 2021). With a significant proportion of the best talent left to study abroad, it is currently necessary to look for ways to reverse this trend by increasing the competitiveness of domestic higher education or by motivating Slovak students to return more effectively.

Moreover, by increasing the quality of domestic universities and colleges, attracting foreign talent to Slovak universities becomes possible. Just as neighbouring countries currently benefit from Slovak students, Slovakia could also benefit from foreign students, some of whom are likely to stay in Slovakia after graduation. Although the share of foreign students in Slovak universities is not low (approximately 12%), in absolute terms, only a third of students study in Slovakia compared with the Czech Republic (Table 5.1).

T a b l e 5.1
Data on University Students by Country in 2021

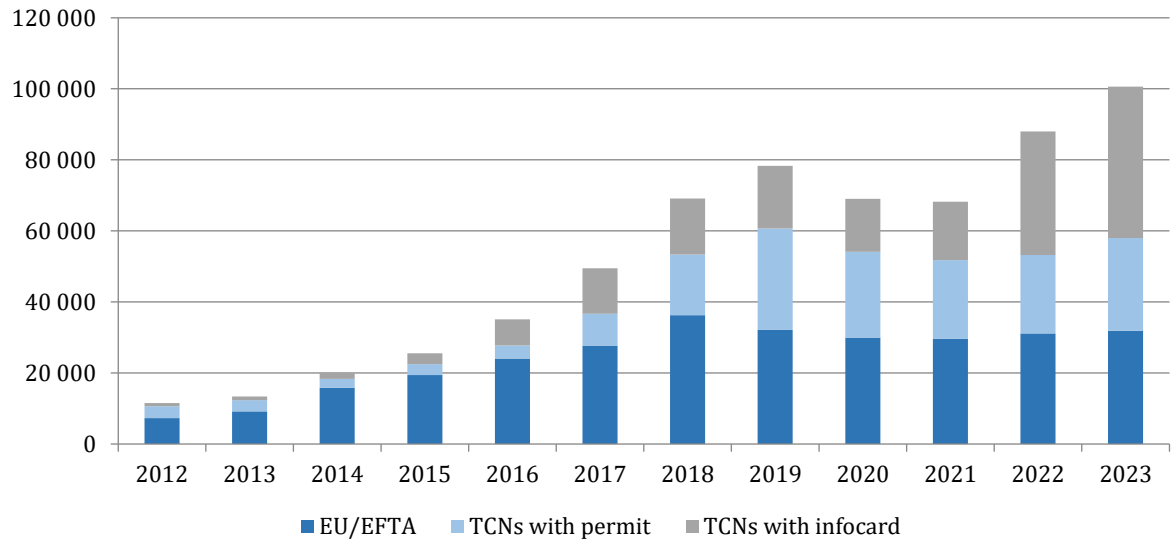
	Czechia	Hungary	Poland	Slovakia
Number of students in HE	324 100	286 800	1 367 500	140 800
Number of students at universities abroad	12 316	13 764	27 350	31 107
Share of students studying abroad (%)	3.8	4.8	2	22.1
Number of international students in HE	51 203	37 925	91 751	16 696
Share of international students in HE (%)	15.6	13.2	6.7	11.9

Source: UNESCO.

Among the standard tools for compensating for the shortage of skilled labour is undoubtedly foreign migration, which is able to compensate for the negative tendencies in the relatively short term. The number of foreign workers (labour migrants) increased several times between 2012 and 2019. This dynamic process was due mainly to the growth in the output of the Slovak economy. After a slight decline in the number of foreign workers migrating during the pandemic in 2020, the total number of foreign workers surpassed the 100 thousand mark in 2023. During the last few years, the number of foreign workers coming from EU countries has been relatively constant, with a significant increase in the number of workers coming from third countries with an infocard. Even in the case of those employed registered through infocards, the increase in 2022 and 2023 is only due to the influx of refugees from Ukraine. In the previous period, their number stagnated, and migrants falling into this category that could enter the Slovak labour market in this way appeared to be gradually declining (Lichner, 2022). We can expect that the next potential increase in foreign employees will also consist mainly of people coming

from third countries (outside the EU), given the stagnating level of the Slovak Republic's economic level compared with the EU average. In the post-2020 period, there was also a dynamic increase in the interest of economic migrants in obtaining a residence permit for the purpose of doing business. While at the end of 2020, only slightly more than 16 thousand migrants had this type of permit valid, by the end of 2023, there were already 44.5 thousand valid stays in this category.[37]

Figure 5.12
Migrant Workers in Slovakia by Type



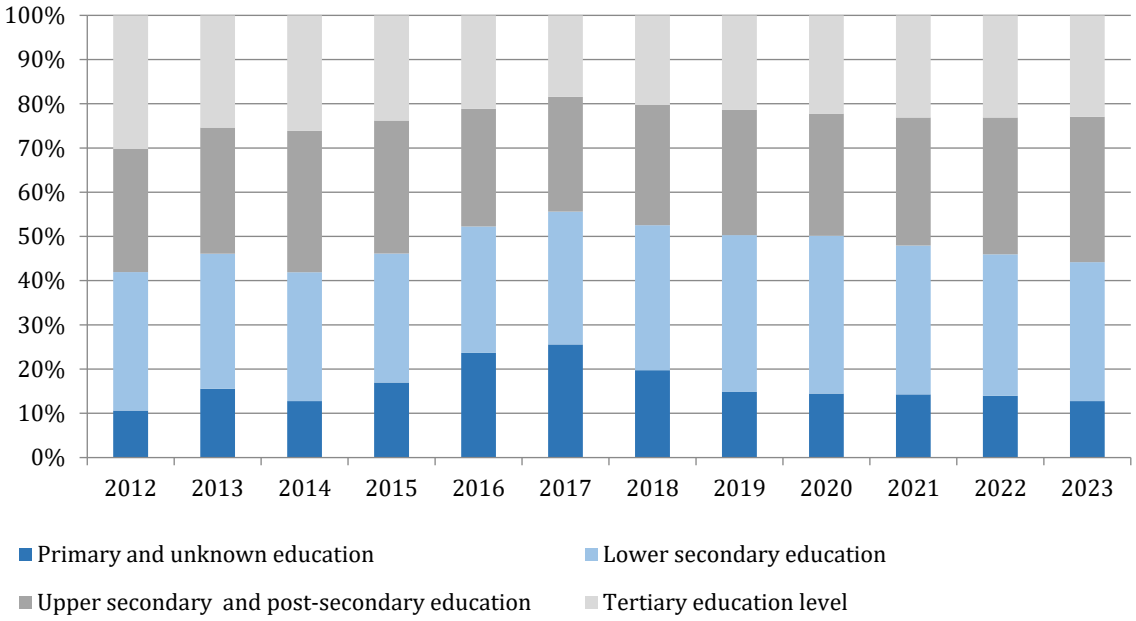
Source: based on Ústredie práce, sociálnych vecí a rodiny.

Considering the structure of working migrants by education, it is evident that in recent years, the Slovak labor market has seen a relatively stable representation across all education levels. This indicates that the labor market, given its demand, attracts individuals from all educational categories. The segment in which migrants most significantly contribute to compensating for labor shortages is in positions within the occupational groups of machine and equipment operators, assemblers (ISCO 8), and elementary or unskilled workers (ISCO 9). Even during the decline in the number of foreign workers between 2019 and 2020, the labor market remained flexible, and there were no structural changes in the educational levels of foreign workers.

When comparing the share of migrants in the total population (Figure 5.14), it is evident that Slovakia is a less attractive destination for migrants compared to the surrounding V4 countries (with the exception of Poland 6). The share of migrants in the population does not even reach 4%. It is important to clarify that a large portion of Slovakia's migrant population consists of elderly (mainly Czech) individuals aged 65 and over, who are inactive in the labor market. The share of this age group of migrants in Slovakia is the highest compared to the neighboring V4 countries.

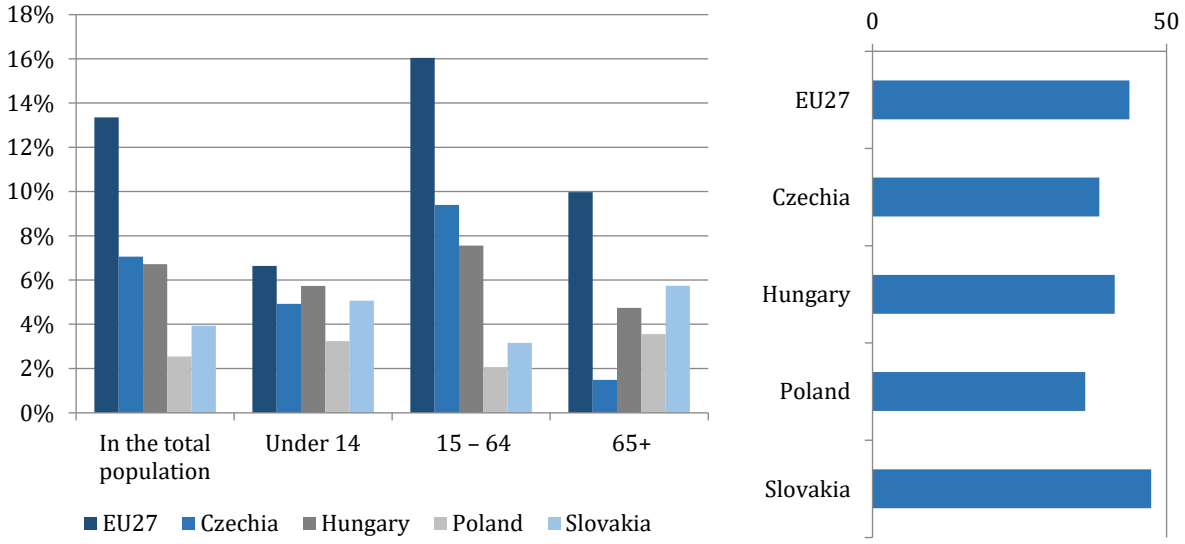
[37] According to data of Foreign and Border Police Office, available at: <https://www.minv.sk/?rocenky>.

Figure 5.13
Structure of Migrant Workers by Education



Source: based on Ústredie práce, sociálnych vecí a rodiny.

Figure 5.14
Share of Migrants by Age Group and Median Age of Migrants (right-hand figure), **2023**

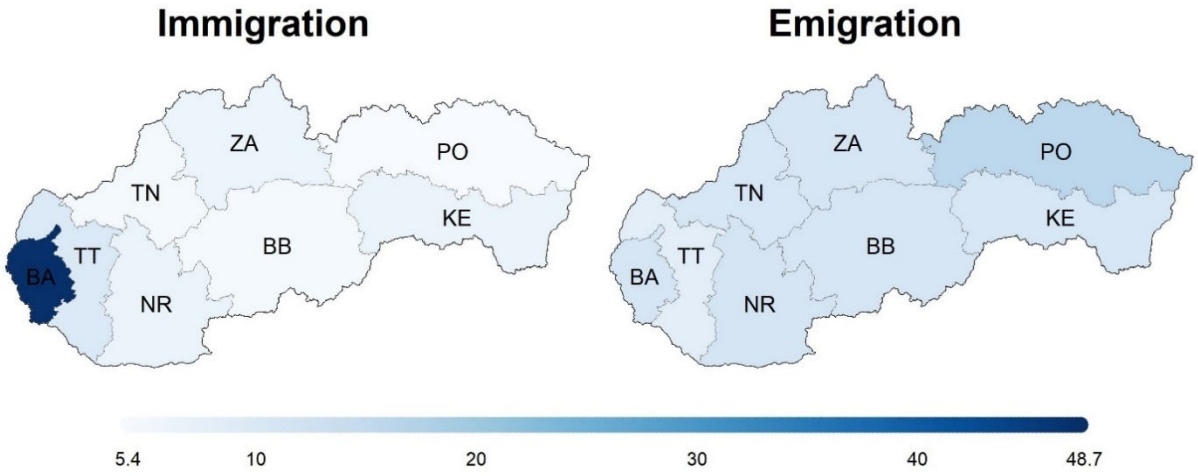


Source: Eurostat [demo_popmdctb].

In addition to the national perspective on labor mobility, there is also a view highlighting significant inter-regional differences among university-educated individuals (Map 5.1). Since 2012, nearly half of the university-educated citizens who changed their permanent residence settled in the Bratislava region. On the other hand, the source regions were relatively evenly distributed, with a slight lead by the Prešov region. However, it is important to note that this is the most populous region in Slovakia.

M a p 5.1

Regional Direction of Changes in the Permanent Residence of the University Educated, Average Share 2012 – 2022 (%)



Source: ŠÚ SR.

The analysis by Baláž, Lichner and Jeck (2023) on the motives for inter-district migration within Slovakia pointed to a significant concentration of this phenomenon in suburban districts of wealthy metropolitan regions. In other words, mainly in the districts of Senec, Malacky, Pezinok, and Košice-surroundings. The study identified that even in cases where non-economic motives for internal migration were declared (e.g., new housing or following family), employment and income remained the main explanatory factors for the intensity of migration flows.

For university-educated individuals, their consistently positive outcomes in economically stronger regions have the potential to further deepen interregional disparities in the economic performance of Slovakia's regions. The main problems perceived by residents of Eastern Slovakia are economic performance and unemployment,[38] which will not be significantly improved without reversing the emigration trend from the Košice and Prešov regions.

* * *

The results of Eurobarometer 529 survey pointed to significant issues businesses face in finding qualified workers, with as many as 90% of small and medium-sized enterprises reporting large or moderate difficulties in finding employees with the right skills. Slovakia has recently experienced a concentration of trends leading to a decline in labor availability, driven by an aging population, the emigration of skilled workers, and the departure of young, talented individuals to study at universities abroad. Economic policy will need to make considerable efforts and implement a range of measures to gradually mitigate these negative tendencies in the short term and, in the long term, largely eliminate them.

[38] Eurobarometer 539: Public opinion in the EU regions. Available at: <https://europa.eu/eurobarometer/surveys/detail/3218>.

This chapter outlines some of the potential short-term solutions to address the growing problem of the availability of skilled labor. However, we must not overlook other possibilities for strengthening the labor market in the medium term, such as increasing employment among older residents or better integrating certain population groups (long-term unemployed, women on maternity leave, etc.) into the labor market. Given the primary aim of this chapter – to highlight the main determinants of the human capital crisis in Slovakia – we have focused in detail on selected options for mitigating the negative impacts in the short term. However, policymakers should not overlook these tools and should subject them to a thorough analysis.

6. QUALITATIVE FACTORS OF ECONOMIC DEVELOPMENT

The development of the Slovak economy is largely based on external sources of financing; in the case of private investments, foreign direct investments (FDI) are a significant factor not only in employment growth but also in the modernization and technological advancement of the business sector. Foreign direct investments have become a dominant source of process (both technological and non-technological) and product innovations, particularly in export-oriented sectors of the manufacturing industry and the business services sector. After joining the EU, EU funds have become an important source of public finances and investments. As part of public finances, EU funds have been focused on the reform and modernization of the domestic research system (human resources and research infrastructure).

It was anticipated that after an initial lag, the strong domestic R&D base, stimulated by EU resources, would become the main driver of innovative progress and competitiveness of the Slovak economy. However, this has not yet happened; the innovative progress of businesses in Slovakia still largely stems from innovation expenditures that are not based on their own R&D. The impact of EU funds and their use in building the domestic research system has yet to be realized. This chapter addresses some of the contexts of innovation development in Slovakia, examines some structural aspects, and focuses on the business sector. Particular attention is given to the sector of foreign-controlled enterprises (FCEs).

Innovation Stagnation in Slovakia According to the European Innovation Scoreboard

The European Commission annually publishes a ranking of countries based on the European Innovation Scoreboard (EIS), which is based on a variety of indicators capturing the complex issue of national economic innovation. According to this ranking, Slovakia is in the group of the least innovative economies (along with Romania, Bulgaria, Latvia, Poland, and Croatia). This group of EU countries consists of economies that achieve innovation performance lower than 70% of the EU average. In 2023, Slovakia achieved an overall innovation performance of 65.6% of the EU average, according to the EIS methodology (EC, 2023). A slight positive is that since 2016, it has seen an improvement of 6.4 percentage points, indicating only modest progress in innovation activities.

Looking at the economy's innovativeness from a long-term EIS evaluation perspective, Slovakia's economy has shown virtually no relative innovation progress since joining the EU. Hungary and the Czech Republic have pulled ahead of Slovakia, while countries like Romania and Bulgaria, which previously lagged far behind, have caught up. Slovakia has even been overtaken in innovativeness by Croatia.

When examining some components of innovation in Slovakia, according to the 2023 EIS, one of the main issues is the low mobility of employees between positions in science and technology. This has a direct impact on the exchange and sharing of knowledge, which

in turn affects innovation capacities. In this area, Slovakia reaches only 30% of the EU average. Additionally, business sector spending on research and development (R&D) represents just 38% of the EU average, indicating insufficient investment from both the private and public sectors. Another negative aspect is the weak support for corporate R&D from the government, with Slovakia achieving only 33% of the EU average.

A chronic, long-term problem remains the area of international patent applications (PCT), where Slovakia also reaches only one-third of the EU average. This points to a low level of research and innovation commercialization, which is crucial for transforming research activities into economic benefits and improving competitiveness.

Despite these issues, Slovakia's innovation system also has a few relative strengths, albeit to a lesser extent. Slovakia excels in the export of medium- and high-tech goods, achieving 101.8% of the EU average, demonstrating strong performance in some manufacturing sectors. Similarly, in the sale of innovative products, where Slovakia reaches 114.5%, it indicates the ability to successfully bring new and innovative products to market. Both of these indicators are more a reflection of the strength of the sector controlled by foreign-owned enterprises rather than domestic companies. It also confirms a persistent innovation model that is not based on R&D but rather on non-R&D-driven innovations, primarily within the foreign-controlled enterprise sector.

Innovativeness of the Economy and the Business Sector

A crucial element of the national innovation system is the business sector. The stagnation of innovation progress based on domestic R&D is well illustrated by the development of gross expenditures on research and development (GERD), which are a key prerequisite for the development of the domestic R&D system. The evolution of GERD is depicted in Figure 6.1, comparing Slovakia with Czechia, Poland, Hungary, and the EU27. In the observed period, Slovakia’s GERD failed to surpass the 1% threshold, with the exception of 2015. This increase in 2015 was mainly due to a "feverish" last-minute drawdown of EU funds from the 2007-2013 programming period. In 2018, there was a notable decrease in GERD’s growth dynamics. Similar trends between 2017 and 2018 can be partially observed in Hungary and the Czech Republic.

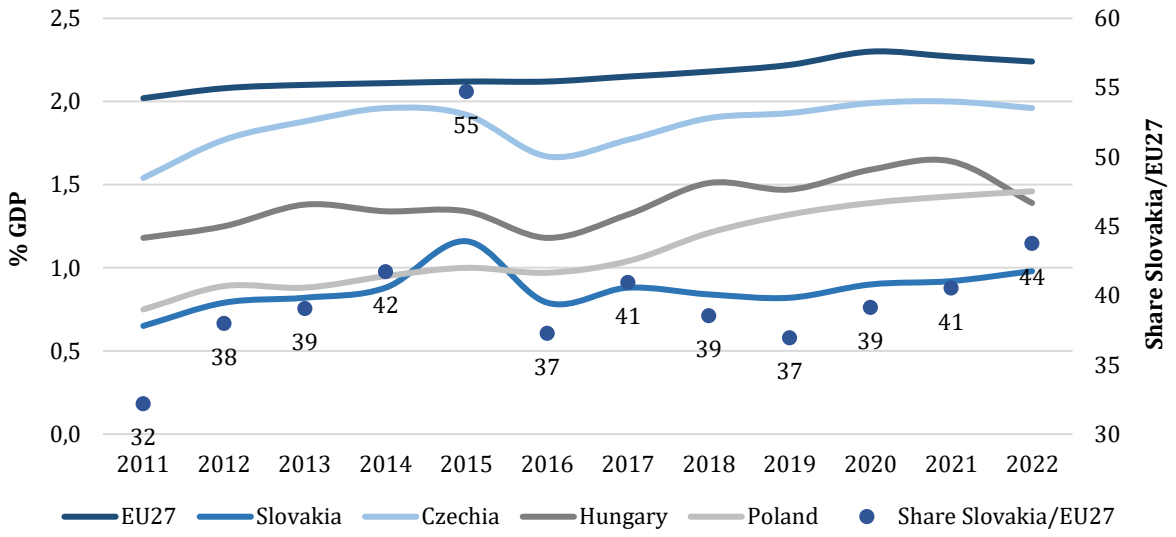
While data for 2023 is not yet available, it is expected that there may be a temporary increase in GERD in this year, spurred by another spike in EU fund drawdown, as 2023 was the last year of the 2015 – 2021 programming period. Poland can be viewed as a positive example of the importance the country places on utilizing GERD. While Slovakia and Poland were in a comparable position in 2011, by 2022 Slovakia had achieved a GERD level of nearly 1%, whereas Poland reached nearly 1.5%. Czechia is also a positive example, with EIS 2023 data (EC, 2023) showing that it is now aspiring to join the group of strong European innovators. A modest positive for Slovakia is that in the last four years it has been gradually catching up with the EU27 average (right axis – the share of SK/EU27).

However, in the longer term, this indicator has a cyclical development, which can be attributed to fluctuations in EU fund drawdown.

A similar trend can be observed in business expenditures on research and development (BERD), as shown in Figure 6.2. In this case, Slovakia's lag behind the V4 countries and its low level compared to the EU27 are evident. The divergence between Slovakia and Poland is even more pronounced here. The decline in Hungary's GERD and BERD in 2022 can be attributed to the European Commission's suspension of EU funds for the country.

Figure 6.1

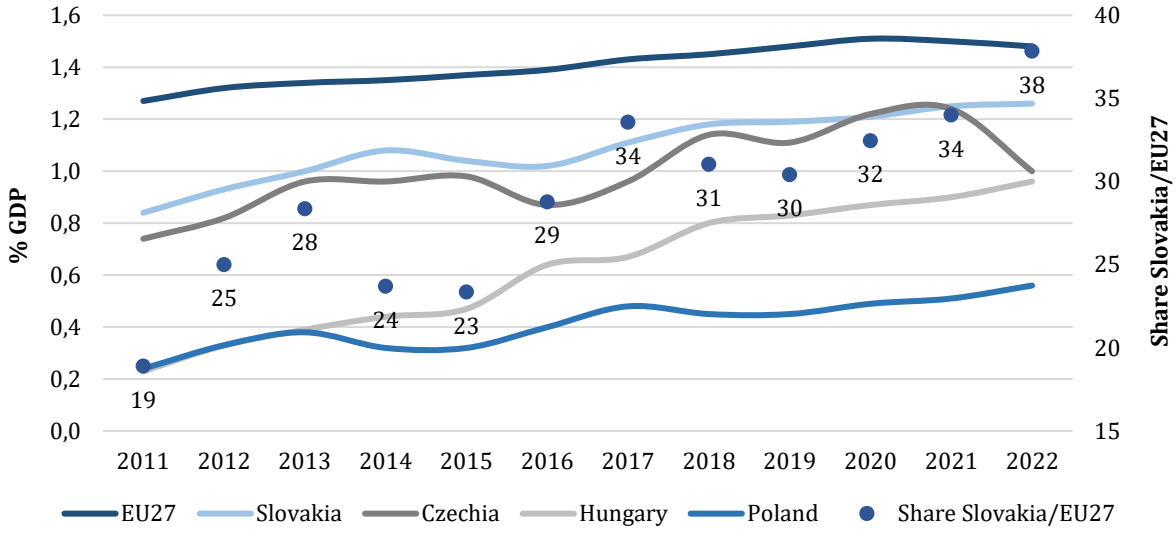
Gross Expenditures on Research and Development in V4 and EU27



Note: [tsc00001].
Source: Eurostat (2024).

Figure 6.2

Business Expenditures on Research and Development in V4 and EU27

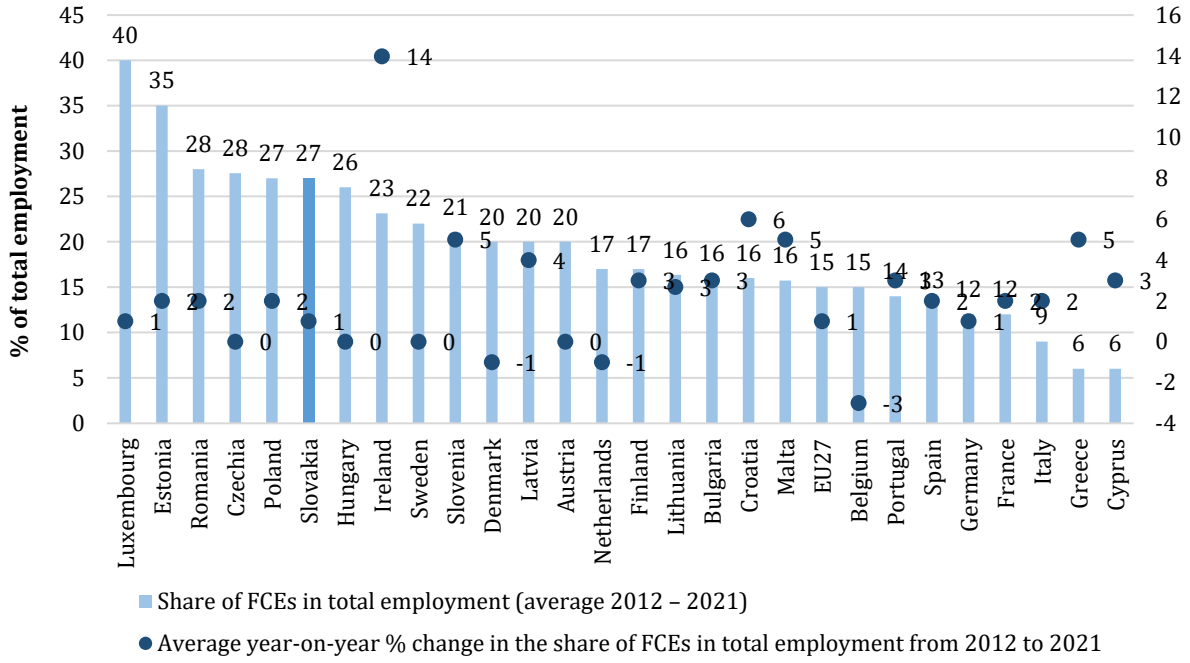


Note: [tsc00001].
Source: Eurostat (2024).

Sector of Foreign-Controlled Enterprises – the Engine of Slovak Innovation

In recent years, foreign direct investment (FDI) has been one of the main drivers of economic growth, employment, and technological advancement in the Slovak business sector. High inflows of FDI have resulted in an increased share of the sector of foreign-controlled enterprises[39] (FCE) in the national economy. Over the past decade, the sector of foreign-controlled enterprises employed nearly 27% of the total workforce in Slovakia, based on the average from 2012 to 2021. In this regard, Slovakia is part of the group of Central and Eastern European countries with a high share of the FCEs sector (see Figure 6.3).

Figure 6.3
The Share of Foreign-Controlled Enterprises in Employment



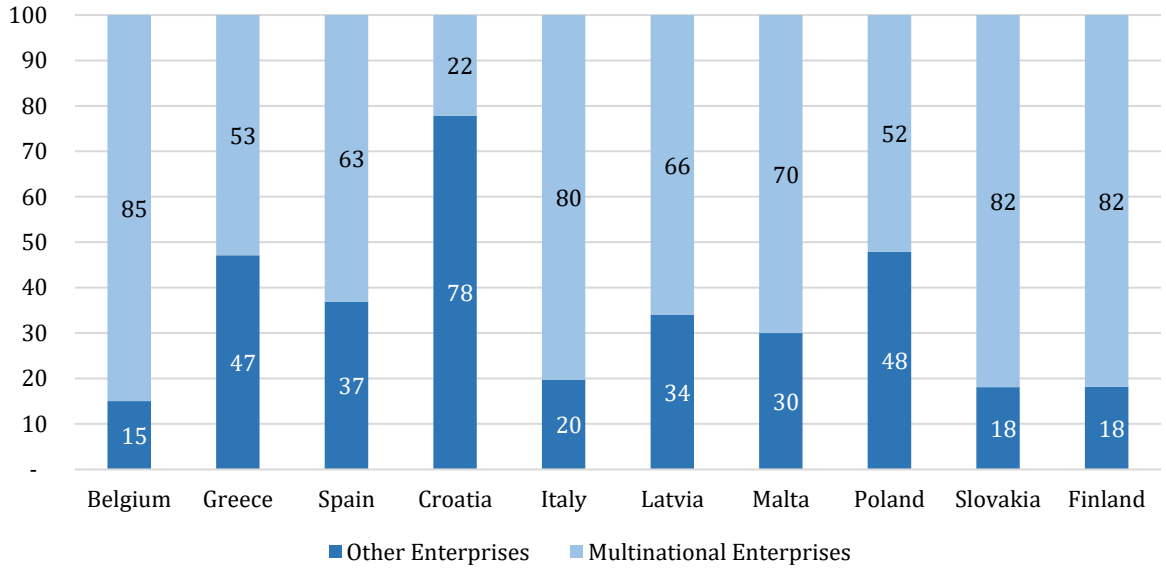
Source: Eurostat (2024).

Foreign-controlled enterprises play a key role in strengthening the innovation capacities of the Slovak economy, which directly impacts its competitiveness and economic growth. Foreign companies come to Slovakia with advanced technologies and processes. Their presence creates positive pressure on domestic firms, motivating them to adopt new technologies and innovative strategies and models. As a result, a stronger, more dynamic innovation ecosystem is created, capable of generating and commercializing new ideas and solutions.

Although foreign companies primarily locate the manufacturing phases of their production chains ("assembly workshops") in Slovakia, statistics show a significant involvement of foreign firms in research and development (R&D) as well (see Figure 6.4).

[39] In Eurostat statistics, a foreign-controlled enterprise is considered to be an enterprise that is a resident in a given country but is controlled by an institutional unit that is not a resident of that country. Control is understood as the ability to determine the overall policy of the enterprise and to appoint its directors.

Figure 6.4
Structure of BERD by Type of Enterprise (2021 in %)



Note: The category "Other Enterprises" includes: a) independent enterprises (enterprises that are not part of any larger group or corporation and make autonomous decisions about their activities and strategic directions); b) enterprises within a domestic group (enterprises that are part of a larger group of companies at the national level and are connected through ownership or other relationships with other enterprises within the same country).
Source: Eurostat (2024).

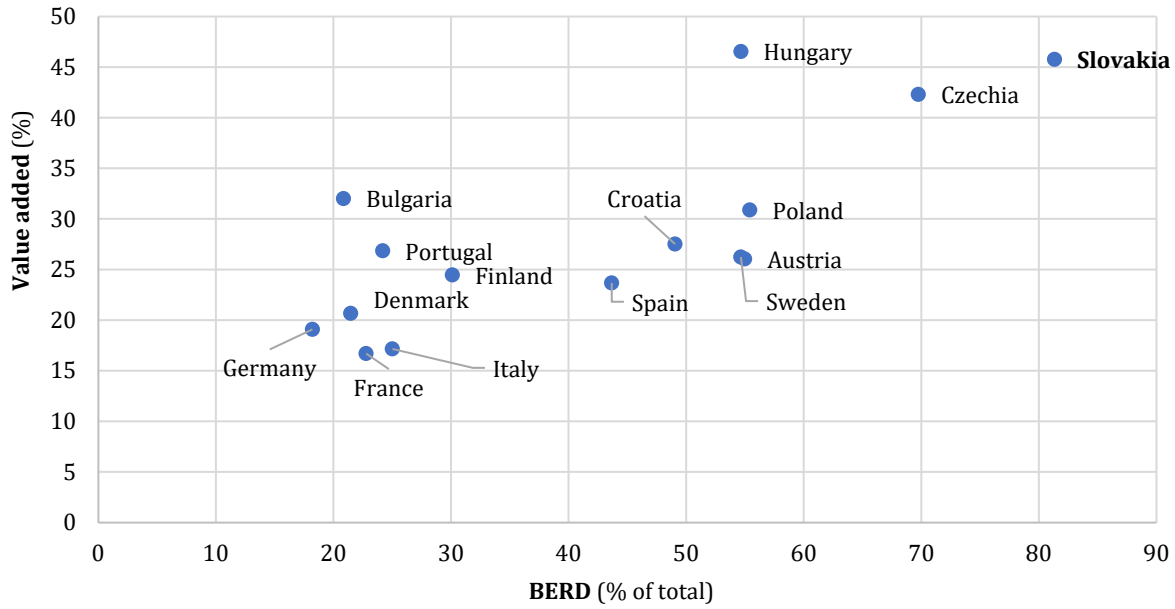
If we look at the use of BERD (Business Enterprise Research and Development) by enterprise type (with data available only for 2021 and for certain EU economies), we can see that the Slovak economy has a structure very similar to that of innovation- and economically advanced EU countries like Finland or Belgium (as well as innovation-lagging Italy). In Slovakia, most BERD is carried out by multinational enterprises (Slovak branches of multinational corporations). A small portion of BERD, 18%, is realized in the segment of the business sector categorized as "Other Enterprises," which essentially represents domestic small and medium-sized enterprises (SMEs).

At first glance, in relative terms, i.e., in the structure of BERD with respect to domestic versus foreign enterprises, Slovakia resembles advanced innovative economies. These investments are not limited to the development of new products or technologies but also include process and efficiency improvements, which have a broader positive impact on the entire industrial sector. However, the critical factor is the absolute level of these expenditures, which remains consistently insufficient (as shown in Figure 6.2, Slovak BERD is only 38% of the EU average). Thus, the combination of generally low BERD and a low share of the SME sector represents a weakness in the Slovak innovation system.

The position of the R&D sector is also documented in Figure 6.5, which illustrates the relationship between the value added by the R&D sector and BERD in the R&D sector (in both cases, as a percentage of the overall economy). Although data are available for a limited number of European economies, Slovakia's "marginal" position is evident. In 2021, the R&D sector accounted for more than 45% of total value added and 80% of BERD.

Figure 6.5

Added Value and R&D Expenditures in the Foreign-Controlled Enterprise Sector
(2021, % of total economy)



Source: Eurostat (2024).

Table 6.1

Share of Foreign Enterprises in Innovation Expenditures in Slovakia
(% of total expenditures, 2020, n = 3,512)

	Expenditures on innovation:					
	Internal R&D	*External R&D*	*Own personnel working on innovation activities*	*Services. materials. and supplies from other enterprises*	*Acquisition of machinery. equipment. software. or buildings*	*FDI (Share of the national stock of received FDI in %)*
Bratislava region	51	92	74	93	83	69.3
Trnava region	58	90	64	49	39	4.4
Trenčín region	30	55	83	65	47	5.0
Nitra region	87	98	50	86	56	4.2
Žilina region	71	90	65	35	48	8.9
Banská Bystrica region	93	39	94	94	11	2.2
Prešov region	41	97	52	21	18	1.5
Košice region	91	89	97	96	82	4.3
Slovakia	**56**	**79**	**71**	**86**	**77**	100

Source: ŠÚ SR (2024); NBS (2024).

A more detailed look at the role of foreign enterprises is provided by the latest statistical survey on business innovation activities in Slovakia for the year 2020. Table 6.1 shows the share of foreign enterprises in total business expenditures, categorized by type of innovation activity and region. In the previous text, we focused only on business R&D, which, however, is not the only source of innovation progress. Innovation expenditures can take various forms, in addition to the aforementioned R&D, including expenditures on own employees working on business innovations, expenditures on materials, supplies, or services from other enterprises. Capital expenditures for acquiring machinery, equipment,

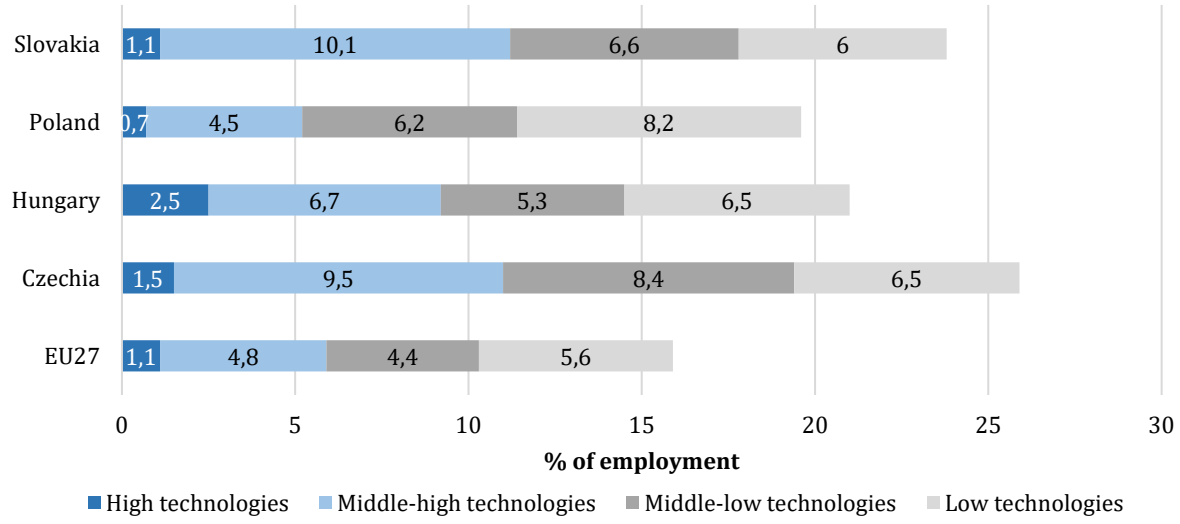
software, or buildings are also significant innovation expenditures. According to the data in Table 6.1, we can see the dominance of the R&D sector in other forms of innovation as well, not just in R&D.

Structure of the Economy by Technological Intensity

The structure of the economy by technological intensity is a classification of economic sectors or industries based on the level of technology and R&D required for their production and services. This classification allows for comparisons of economies or their parts in terms of their technological advancement and innovation potential. Manufacturing industries are typically divided, according to OECD methodology, into four categories based on technological intensity.[40]

A distinctive feature of the Slovak economy is the high share of manufacturing in its economic structure. In 2022, nearly 23% of workers in Slovakia were employed in the manufacturing sector (this was the second highest rate in the EU after the Czech Republic). A relatively strong aspect of Slovakia's economic structure is the higher share of industries with medium-high technological intensity, accounting for 10.1% of employment, which is above the EU average (4.8%).

Figure 6.6
Employment Structure of the Manufacturing Industry by Technological Intensity in 2022
(% of employment)



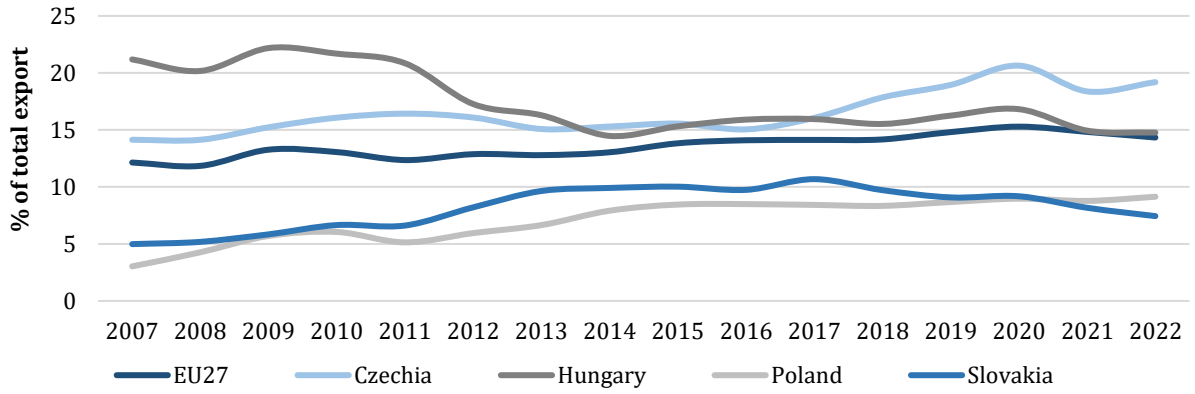
Source: Eurostat (2024).

[40] 1. High technological intensity – sectors that require substantial investments in R&D and produce cutting-edge technology products or services. Examples include the pharmaceutical industry, aerospace industry, semiconductor manufacturing, and information technology.
2. Medium-high technological intensity – industries that also invest significant resources in R&D but whose products or services are less technologically demanding than those in the high technological intensity category. This includes the automotive industry, chemical industry, and certain branches of engineering.
3. Medium-low technological intensity – sectors with lower R&D requirements compared to medium-high and high categories, such as metal manufacturing, rubber and plastic products, and construction.
4. Low technological intensity – industries primarily based on traditional production processes, requiring minimal R&D. This category includes the textile industry, clothing manufacturing, and food and beverage production.

Another positive factor is the share of high-technology industries in Slovakia, which is also equal to the EU average. A comparison of Slovakia with other V4 and EU economies is shown in Figure 6.6.

The structure of the economy based on technological intensity is an important indicator for assessing a country's competitiveness, its ability to innovate, and adapt to changes in the global market. Countries with a higher share of high and medium-high technological sectors are often considered technologically advanced and have better prospects for productivity growth and economic development.

Figure 6.7
Development of the Share of High-Tech Exports in Total Exports in V4 Countries and the EU in 2007 – 2022 (%)



Source: Eurostat (2024).

An important indicator of the technological level of the economy and foreign competitiveness is the share of high-tech exports[41] in total exports. A higher technological intensity of exports signals a country's greater competitiveness in international markets, as it is able to produce and export goods at the forefront of technological advancement. Countries with a higher value of this indicator tend to achieve faster economic growth due to the higher added value and better profit margins of these products. In Figure 6.7, we can observe a gradual slight decline in the share of high-tech exports in total exports in the case of the Slovak economy after 2017. Our third indicator, chosen to describe the technological structure of the Slovak economy, is the sum of the share of employment in knowledge-intensive market services[42] (excluding high-tech services and financial intermediation) in total employment and the share of high-tech knowledge-intensive services in total employment (Figure 6.8).

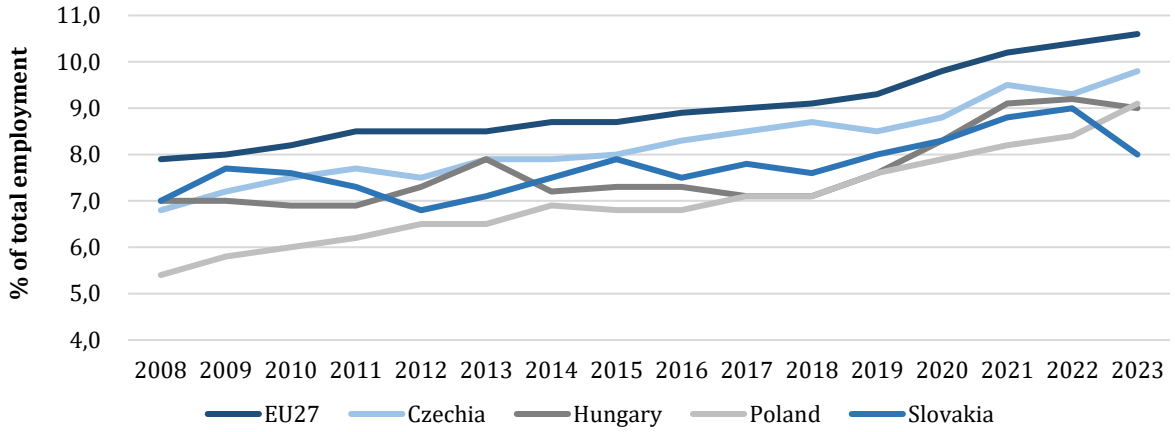
The presence of the business services sector (concentrated in Business Service Centers – BSCs) is another result of foreign direct investment (FDI) inflows into Slovakia. These centers, operating either as branches of foreign companies or as part of Slovak firms,

[41] Aerospace, computers and office machines, electronics-telecommunications, pharmaceuticals, scientific instruments, electrical machinery, chemistry, non-electrical machinery, and armaments.

[42] Sectors: water transport, air transport, legal and accounting activities; management consultancy, business management; architectural and engineering activities, technical testing and analysis, advertising and market research; other professional, scientific, and technical activities, employment placement services, security, and investigative services.

provide various internal corporate services. Their main areas of focus include accounting and legal services, finance, information technology (IT), customer service, human resources support, as well as procurement and sales-related areas. BSCs not only improve the operational efficiency of parent and sister companies but often also provide services to third parties, thus contributing to the dynamic development of the Slovak economy.

Figure 6.8
Employment in Knowledge-Intensive Services (share of total employment in %, 2008 – 2023)*

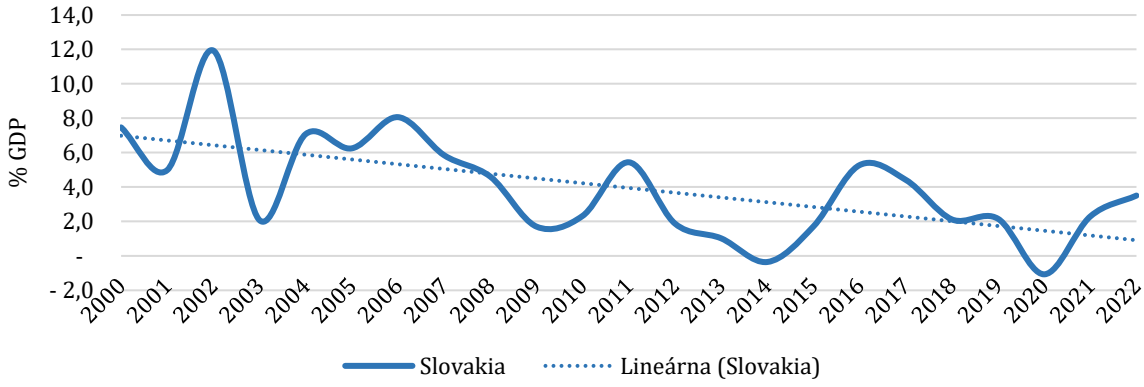


Note: * – sum of the share of employment in knowledge-intensive market services and the share of high-tech knowledge-intensive services.
Source: Eurostat (2024).

Instead of a Conclusion

Foreign direct investment (especially in the form of "greenfield" investments) has been one of the decisive factors in economic development over the past two decades of Slovakia's economic progress. In many respects, it has been a source of positive changes in the corporate sector, innovation advancement, and improvements in the technological structure of employment, exports, and more. A risk to the future competitiveness of the national economy is, therefore, the decline in the dynamic inflow of FDI (Figure 6.9).

Figure 6.9
Net FDI Balance (% of GDP) **in Slovakia from 2000 to 2022**



Source: Eurostat (2024).

7. FOREIGN TRADE AND FOREIGN INVESTMENT

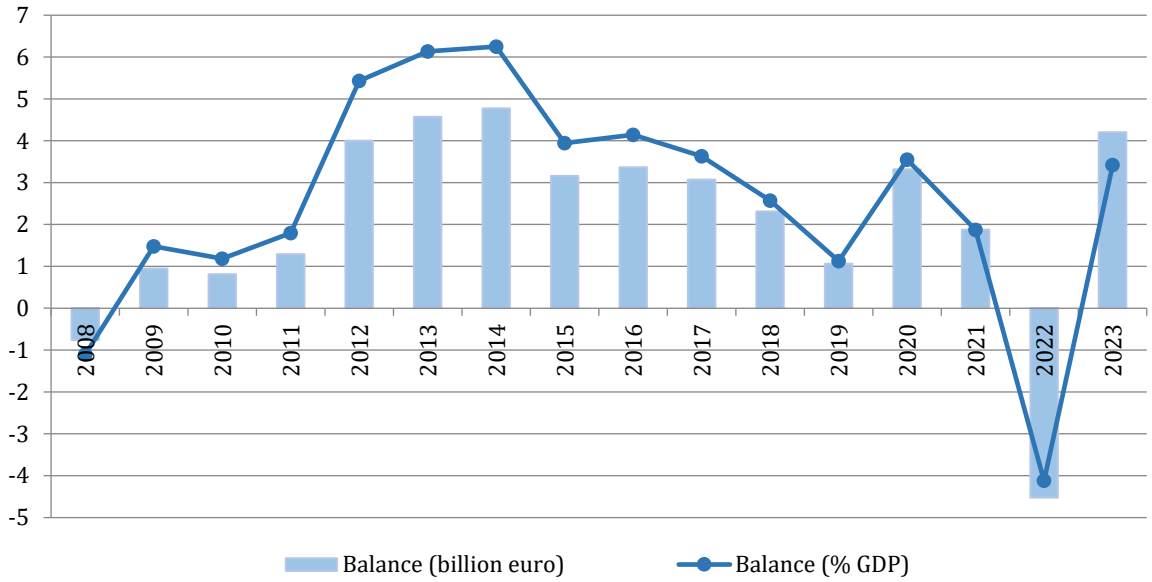
After an exceptional drop in Slovakia's foreign trade balance recorded in 2022, the balance returned to positive territory in the following year, even to its highest value since 2014. In this chapter we take a closer look at development of which items and why led to such a reversal or return to "normal", and also how the territorial structure of foreign trade changed. At the same time, we also pay attention to other indicators of external (im)balance, in the light of the Macroeconomic Imbalance Procedure (MIP) implemented at the EU level. We conclude the chapter by looking at the volume and structure of foreign direct investment (FDI).[43]

Foreign Trade Balance in Surplus Again

In contrast to the exceptionally recorded deficit of the external trade balance in 2022 (EUR 4.3 billion), its balance reached a surplus of almost EUR 4.2 billion in the following year, representing 3.4% of GDP (Figure 7.1).

Thus, exports of goods from Slovakia once again exceeded imports, as has been the case for the last fifteen years, with the exception of the year 2022 mentioned above. The large surplus in the foreign trade balance was primarily driven by a much lower year-on-year deficit in the Mineral Fuels class, combined with a significantly higher surplus in the Machinery and Transport Equipment class.

Figure 7.1
Foreign Trade Balance (EUR billion, % GDP)

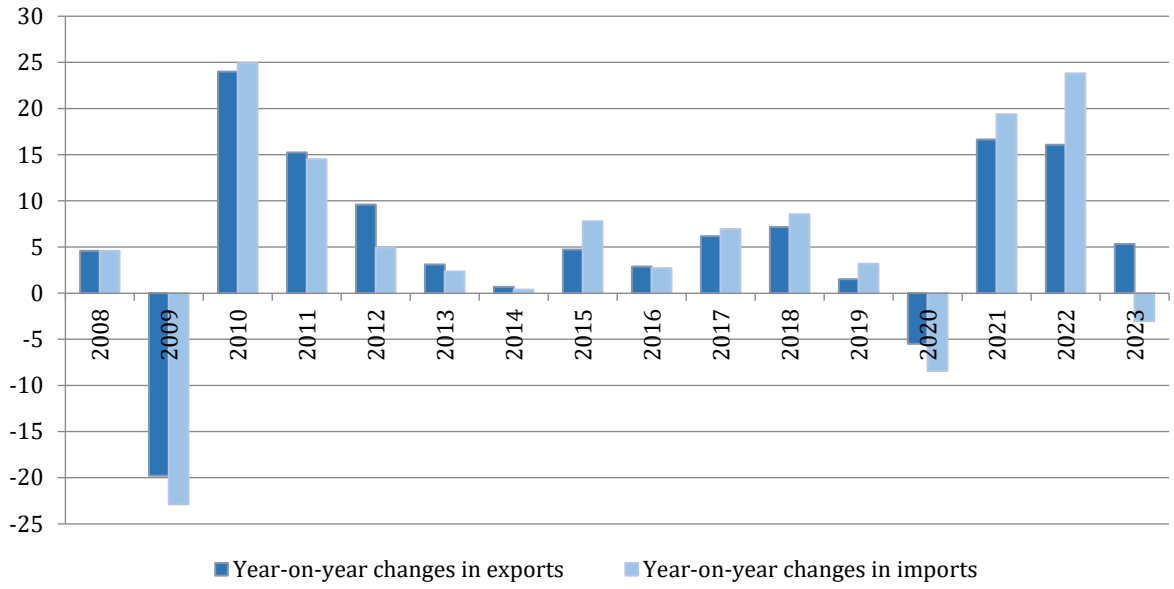


Source: based on NBS data (2024b).

[43] The issue of FDI and its effects on the economy is addressed in more detail in the chapter Qualitative Factors of Economic Development.

Exports in current prices grew by over 5% year-on-year (to more than EUR 108 billion), slowing down their dynamics compared to the previous two years. On the other hand, imports in current prices fell by 3% year-on-year to over EUR 104 billion, in sharp contrast to their double-digit growth in the last two years, determined by the development of energy commodity prices (Figure 7.2). The fall in imports was not only the result of significant changes in the prices of imported energy commodities, but also to a large extent the result of a drop in domestic demand.[44]

Figure 7.2
Year-on-Year Changes in Exports and Imports (current prices, %)



Source: based on NBS data (2024b).

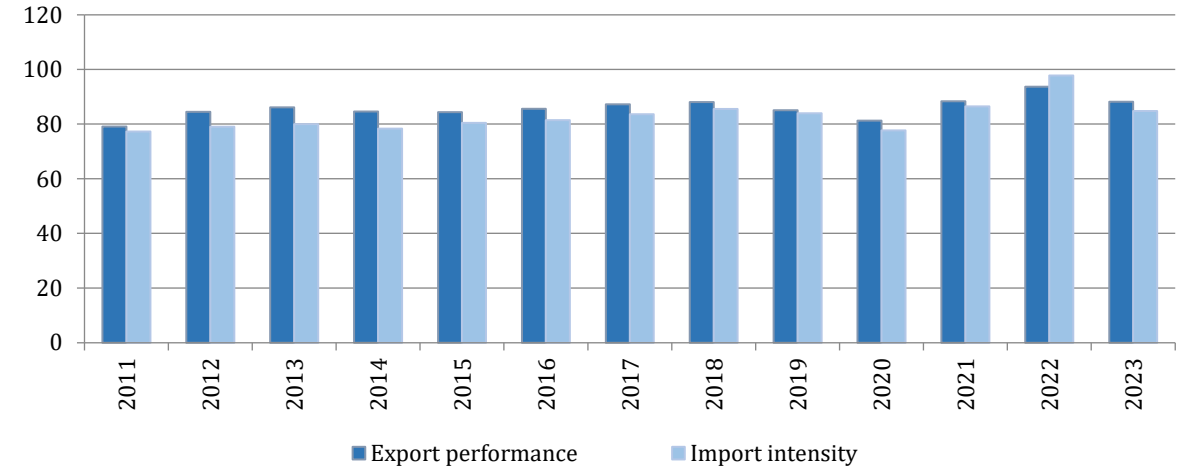
Slightly different results can be obtained when exports and imports are expressed in constant prices. Year-on-year, exports in constant prices decreased by 1% and imports by almost 7%, while in the previous year, exports increased by 3% and imports by 4.5% in the same price terms. This view on foreign trade developments in 2023 is thus even less optimistic. It shows more realistically the impact of weakening foreign demand for Slovak production in the case of exports, and the aforementioned impact of the decline in domestic demand in the case of imports.

Given the significantly faster growth of GDP in current prices compared to the year-on-year increase in exports in current prices, the export performance of the Slovak economy (measured as the share of exports of goods in GDP) fell back below 90% of GDP in 2023 after the record level seen in the previous year, i.e. to around the level of 2021 (Figure 7.3). Import intensity (measured as the share of imports of goods in GDP in current prices) fell even more (from almost 100% of GDP to 85% of GDP) due to the year-on-year decline in imports.

[44] This issue is discussed more in the first chapter.

Figure 7.3

Export Performance and Import Intensity of the Slovak Economy (% GDP)

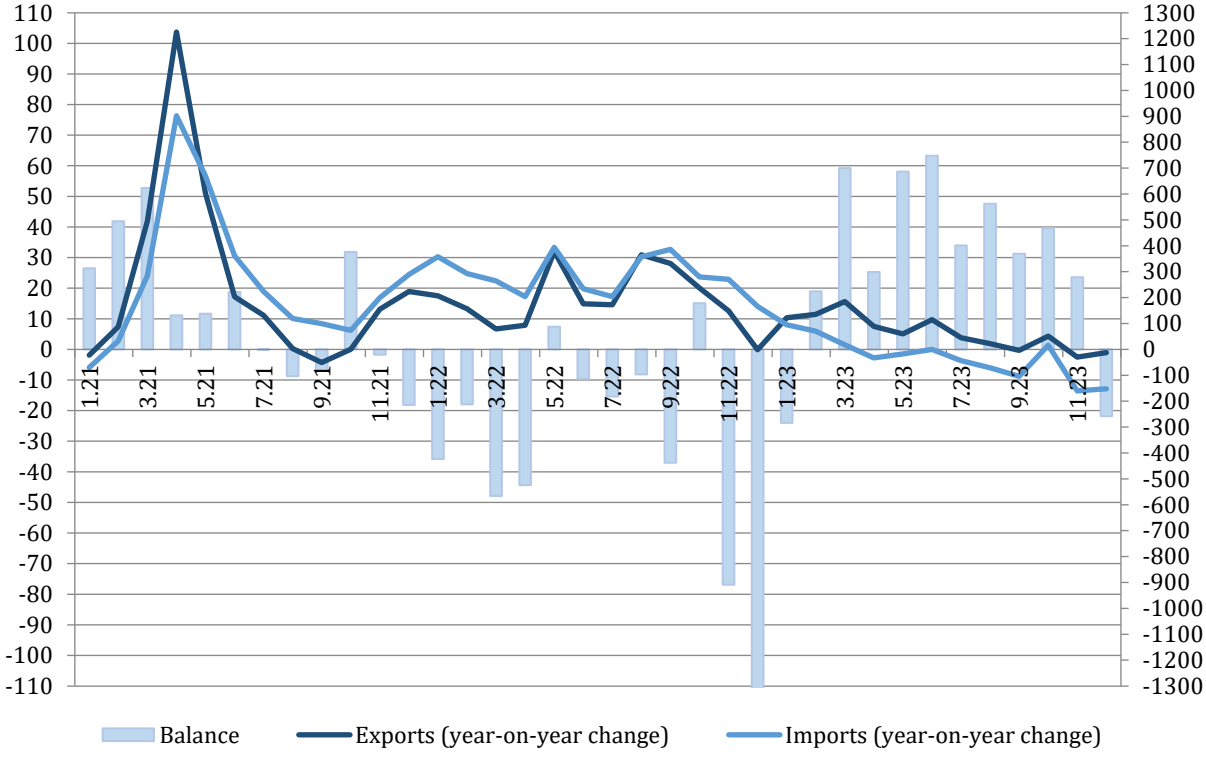


Source: based on NBS data (2024b).

Already in the first quarter of 2023, a diametrically different development of foreign trade compared to the previous year was recorded. The balance reported in this period was active in a volume of more than EUR 600 billion, while in 2022 the foreign trade balance ended the same period with a deficit of more than EUR 1 billion (Figure 7.4).

Figure 7.4

Year-on-Year Changes in Exports and Imports (left axis, %) **and Foreign Trade Balance** (right axis, EUR million) **in the Individual Months of 2021 – 2023**



Source: based on NBS data (2024b).

This development was strongly supported by higher year-on-year exports of cars since January, also due to the completion of the accumulated orders from the previous period, as the functioning of the supply chains was normalised and the supply of the missing components was thus smoother.

Also, at the beginning of the year, the foreign trade balance showed a significant decline in imports, caused both by subdued consumption (due to the spending of excess savings from the pandemic period) and lower imports of energy commodities (especially gas, due to the relatively warm winter), as well as by the frontloading of industry with increased imports at the end of the previous year. However, already in March the highest total imports for the whole year were recorded (given the highest exports also accompanied by one of the highest surpluses of the year).

The second and third quarters contributed even more to the full-year surplus and contrasted even more strongly with developments in 2022. The June surplus was among the highest in more than a decade. Foreign trade surpluses continued to be driven mainly by a double-digit year-on-year increase in exports in the Machinery and Transport Equipment class, which also includes exports of automobiles. The sector continued to make up orders from the past, while exports also benefited from a more favourable production structure compared to the automotive industry in other countries. Other industries already started to feel weakening foreign demand during this period.

In September, for the first time in 2023, a slight year-on-year decline in total exports was recorded, mainly due to a fall in deliveries to the EU. However, a continued decline in domestic demand as well as a drop in imports in the Mineral Fuels class stemming from reduced energy consumption in a subdued industry prevented a fall in the overall foreign trade balance.

In October, both exports and imports recorded their second highest values in 2023. However, already in November, both imports and exports of goods fell most sharply year-on-year (exports in the Machinery and Transport Equipment class, although maintaining a positive year-on-year change, declined month-on-month). On the import side, in addition to the lower value of imported energy commodities, there was also an impact of lower imports of motor vehicle parts. The total value of imports fell in this month most significantly since the pandemic-marked May 2020.

At the end of the year, the trade balance fell into negative territory for the first time after ten months, which is not unusual when looking at December balances in previous years. Weaker foreign demand hit also the automotive industry, which kept exports afloat throughout the year. Imports were pushed down by further supply problems and increased production from inventories. At the same time, however, energy imports increased due to the winter season, which in the end pulled the December balance into negative territory.

Exports Driven Mainly by the Automotive Industry

Looking at the commodity structure of foreign trade, it can be stated that SITC class 7 – *Machinery and transport equipment* had once again the most significant impact on the dynamics of Slovak exports in 2023. The slowdown in import dynamics was most significantly affected by development in SITC 3 – *Mineral fuels and lubricants*, but also in SITC 6 – *Manufactured goods,* which includes, among others, products of the metal processing, metallurgical and rubber industries. Overall, the development across SITC classes was mixed. Half of the classes showed year-on-year growth and other half showed year-on-year decline in exports, and the same was true on the import side (Table 7.1).

T a b l e 7.1
Year-on-Year Changes in Imports and Exports by SITC Rev.4 Classes and Commodity Structure of Slovakia's Foreign Trade (%)

		Index 2023/2022	Structure 2023 (%)
SITC0 – Food and live animals	Imports	109.6	5.5
	Exports	108.5	3.8
SITC1 – Beverages and tobacco	Imports	106.5	0.8
	Exports	118.0	0.3
SITC2 – Crude materials, inedible, except fuels	Imports	74.2	2.1
	Exports	80.4	1.7
SITC3 – Mineral fuels, lubricants and related materials	Imports	59.5	8.7
	Exports	71.1	3.5
SITC4 – Animal and vegetable oils, fats and waxes	Imports	125.6	0.4
	Exports	78.7	0.1
SITC5 – Chemicals and related products not classified elsewhere	Imports	94.3	8.1
	Exports	86.9	4.0
SITC6 – Manufactured goods classified chiefly by material	Imports	91.1	13.5
	Exports	92.2	14.7
SITC7 – Machinery and transport equipment	Imports	109.5	49.2
	Exports	115.1	63.0
SITC8 – Miscellaneous manufactured articles	Imports	105.6	11.4
	Exports	102.9	8.6
SITC9 – Commodities and transactions not classified elsewhere	Imports	75.0	0.2
	Exports	114.9	0.2

Source: ŠÚ SR (2024a).

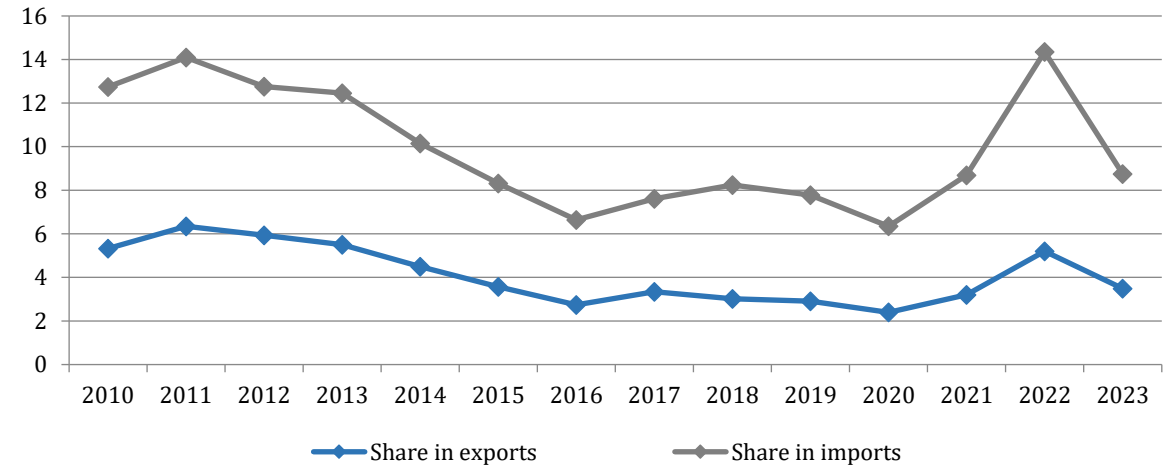
The most traded SITC 7 class, which also includes the automobile trade, recorded year-on-year export growth in all months over the year. For the whole year, the value of goods exported within this class was 15% higher than in the previous year, representing the highest year-on-year change in the last decade and a significant re-increase in the share of this class in total exports.[45] At the same time, imports within this class also grew year-on-year, but at a slightly slower pace (less than 10%), which was probably related to some frontloading by carmakers in the previous year.

On the import side, SITC 3 – *Mineral fuels and lubricants*, which also includes crude oil, natural gas and electricity, recorded a year-on-year reduction in the value of imports by

[45] In 2023, Slovakia produced nearly 200 cars per 1000 inhabitants, which was a record number.

40%. As a result, the share of this class in total Slovak imports returned to the 2021 level, i.e. below 9%, after the increase recorded due to the dramatically high prices of energy commodities in the previous year (Table 7.1, Figure 7.5).

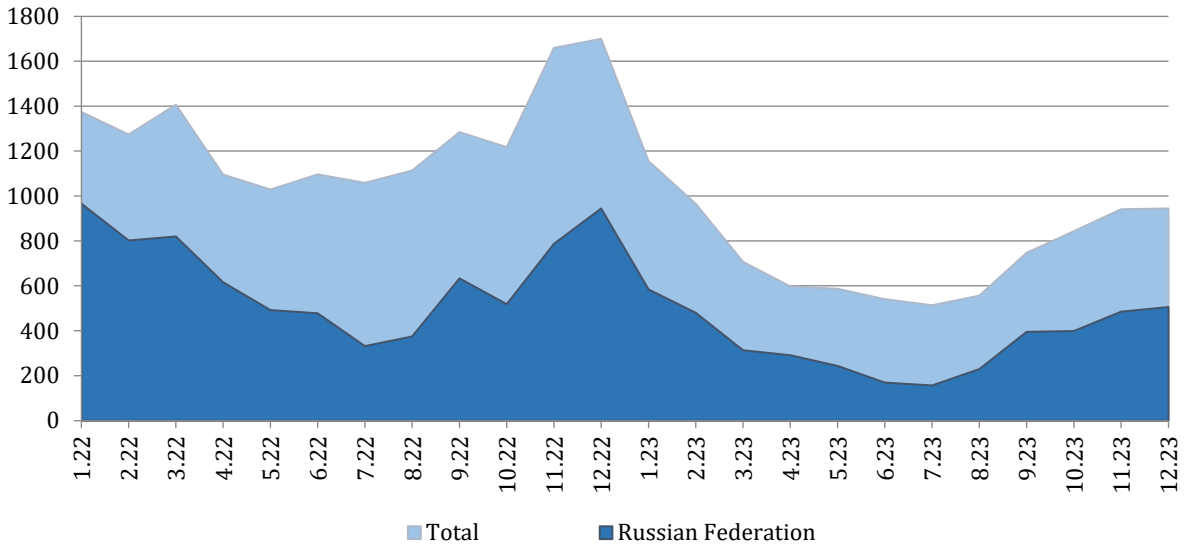
Figure 7.5
Share of SITC 3 – *Mineral Fuels and Lubricants* in Total Exports and Imports (%)



Source: based on ŠÚ SR data (2024a).

The share of the Russian Federation in SITC 3 imports reached 47% in 2023, whereas it was 51% in the previous year. Thus, in terms of geographical structure, there was only a slight reduction in dependence on imports of energy commodities from Russia in 2023. However, in terms of value, due to price developments, imports from Russia in this class decreased by almost half year-on-year. Figure 7.6 documents the monthly development of imports in SITC 3, showing clearly the seasonal effects.

Figure 7.6
Imports of Goods in SITC 3 – *Mineral Fuels and Lubricants* into Slovakia (EUR million)

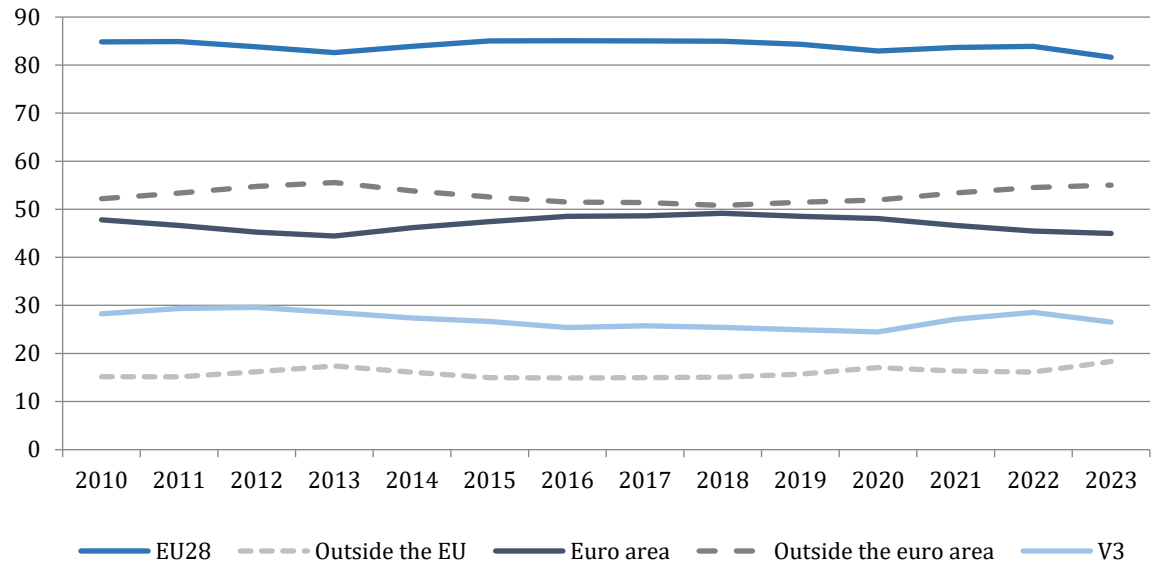


Source: based on ŠÚ SR data (2024a).

Slovakia's Trade with Non-EU Countries: Accelerating Export Dynamics and Decreasing Imports

In 2023, more than 80% of exported goods went to EU Member States (45% to the euro area, Figure 7.7), with exports to the Union increasing by 2.5% year-on-year. Slovak exports to the euro area, driven mainly by exports to Germany (which slowed down towards the end of the year), grew at a faster pace (4%). The lower dynamics of exports to the EU compared to the euro area was also linked to a decline in exports to some Union Member States that have not yet adopted the euro (in particular Hungary). The share of both European groupings in total Slovak exports decreased slightly given these weaker dynamics.[46]

Figure 7.7
Exports of Goods from Slovakia by Territory (%)



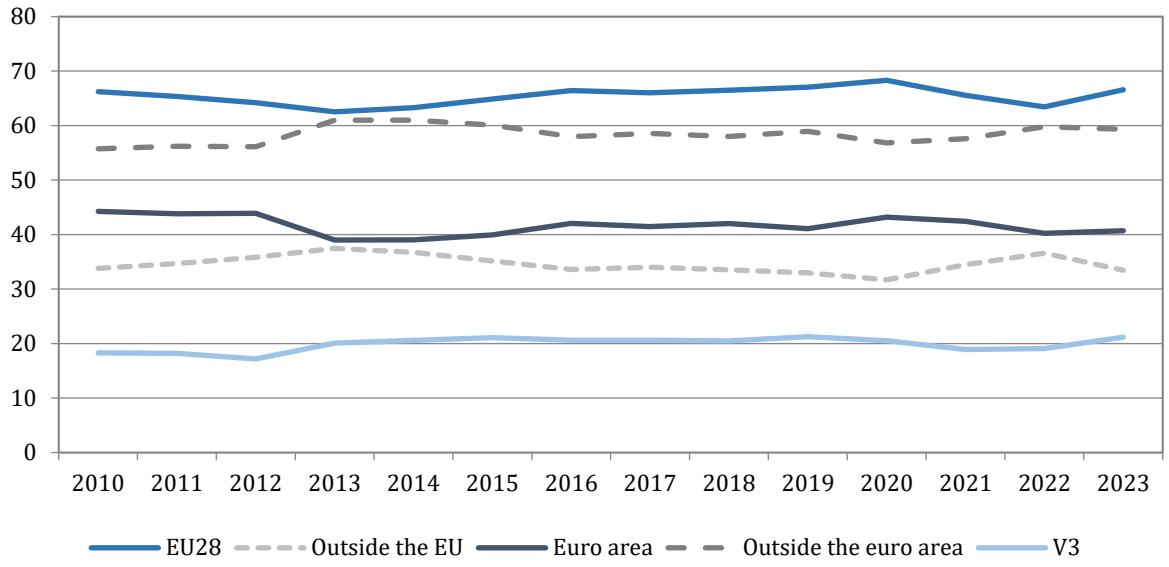
Source: based on NBS data (2024b).

On the other hand, exports to non-EU countries grew by almost 20% year-on-year. This was also driven by an increase in Slovak exports to the UK (19%), supported by accelerated growth in car exports (almost 21%), which account for more than four-fifths of exports to this country. The UK's share in total Slovak exports has thus reached a value comparable to the pre-Brexit period (over 4%).

Imports from EU Member States to Slovakia increased similarly to exports in 2023 (by less than 2%), bringing the EU share in total Slovak imports back to two-thirds of total imports (Figure 7.8). In particular, imports from the V3 countries (Czech Republic, Hungary and Poland) grew and their share again exceeded one fifth of total imports.

[46] The development of the shares of the euro area and the EU in Slovak exports and imports is analysed in more detail in the study *How Does the Assumption of an Increase in Foreign Trade with the Euro Area after Euro Adoption in Slovakia Come True?* (Šikulová, 2023), in which it is stated that Slovakia's foreign trade with euro area members has been on a more or less upward trend in terms of volume for a long time, but it is not growing any faster than foreign trade with other countries.

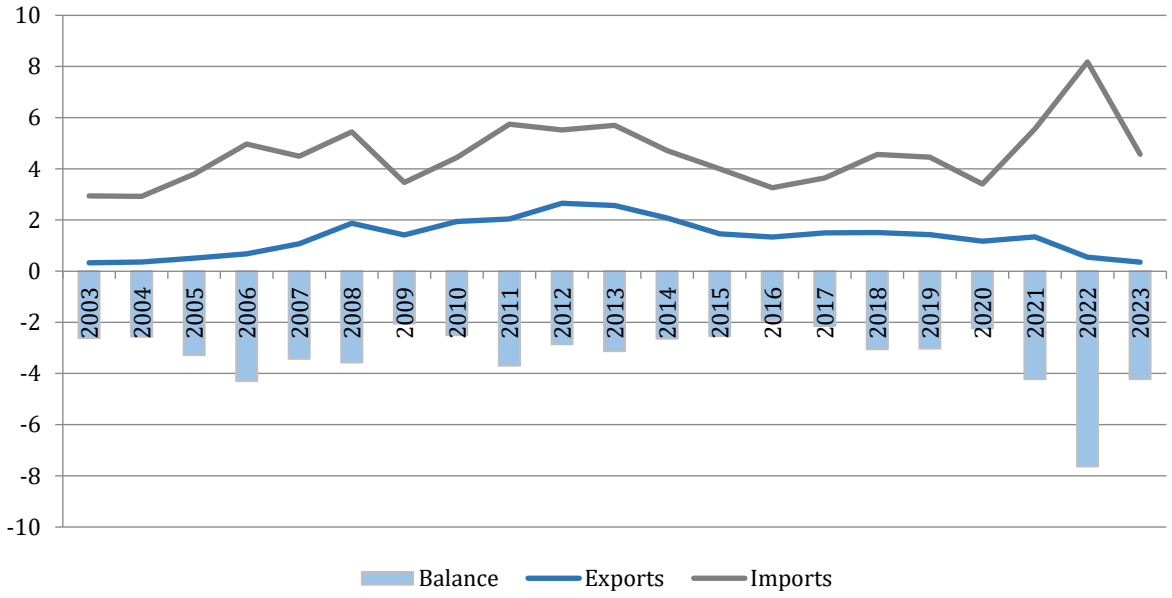
Figure 7.8
Imports of Goods into Slovakia by Territory (%)



Source: based on NBS data (2024b).

On the other hand, imports from non-EU countries fell by 11%, with Russia contributing significantly to this (given the considerably lower value of energy raw material imports), while recording a year-on-year drop of almost half (Figure 7.9). Although Slovak exports to Russia also declined, the passive trade balance returned to its 2021 level after the extreme value recorded in the previous year. Besides Russia, slightly lower dynamics of goods imports from China also contributed to decrease in imports from non-EU countries.

Figure 7.9
Slovakia's Foreign Trade with Russia (EUR billion)



Source: based on NBS data (2024b).

In 2023, Germany clearly remained the trading partner with which Slovakia achieved the highest trade surplus (EUR 7.8 billion), even more significant than in the previous year, given the accelerated dynamics of Slovak exports to this country. On the other hand, Slovakia recorded the highest passive balance (more or less "as standard") with the Republic of Korea (EUR –5.4 billion), China (EUR –4.8 billion) and with the above mentioned Russia (EUR –4.2 billion).

Economy Examined (also) for External Imbalances

In 2023 (and again in 2024), Slovakia was for the first time among the EU Member States where the European Commission (EC) conducted an *In-Depth Review* (IDR). These are analytical documents that focus on identifying and examining the relevance of macroeconomic imbalances. They are an important part of the *Macroeconomic Imbalances Procedure* (MIP) introduced in 2012 as a part of the European Semester[47] to prevent excessive macroeconomic imbalances in the EU.

In the case of Slovakia, several indicators were examined in the IDR, including some indicators of external imbalances. In the November 2023 *Alert Mechanism Report* (AMR), the EC concluded that Slovakia is not experiencing imbalances, as its vulnerability appears to be generally limited in the near future and is expected to moderate as economic conditions normalise (EC, 2023). However, four of the monitored indicators were outside the thresholds, namely the net international investment position, export market shares, unit labour costs and the youth unemployment rate.[48] The 2023 AMR was followed up by the March 2024 IDR for Slovakia, which again examines the vulnerability of the Slovak economy in light of the above-mentioned and new developments.

In this chapter, we take a closer look at critical indicators of external imbalances. In the case of the Net International Investment Position (NIIP),[49] the threshold is defined at –35% of GDP, which Slovakia exceeded during the entire period of MIP implementation (Table 7.2). Among the other V4 countries, only Hungary has a problem with meeting this indicator. The more negative the NIIP-to-GDP ratio, the more vulnerable a country is to volatility in international financial markets. In the last decade, Slovakia's NIIP has fluctuated between –60% and –70% of GDP, with direct investments representing the major part of foreign liabilities. If there is no significant improvement in the credit position, the EC expects Slovakia's NIIP to deteriorate over the next decade to around –75% GDP in the baseline scenario (EC, 2024). In 2022, Slovakia (as well as the Czech Republic) exceeded for the first time the export market share indicator threshold (% of world exports), which is set as a five-year change of –6%.

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[47] The European Semester is a part of the EU's economic governance framework. During the European Semester, Member States coordinate their fiscal and economic policies with the rules agreed at the EU level. This process of coordinating economic and social policies is conducted annually from November to July of the following year.

[48] Among the V4 countries, like Slovakia, Hungary exceeds the thresholds for four indicators, the Czech Republic for three and Poland for one.

[49] NIIP is the stock of foreign assets minus the stock of foreign liabilities, i.e. it is the value of foreign assets owned by the private and public sectors of a country minus the value of domestic assets owned by foreigners. It is usually expressed in relation to GDP.

The current account balance also approached the threshold (–4%/+6% GDP) for the first time in 2022, when Slovakia reported a value of –3.6% GDP as the observed 3-year average.[50] In 2022 alone, Slovakia's current account deficit reached 7.3% GDP (one of the largest deteriorations in the EU), primarily due to a significantly negative external trade balance. This was caused mainly by the extremely high value of energy raw material imports due to their sharp increase in prices.

T a b l e 7.2
Development of Selected MIP Indicators for External Imbalances

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net international investment position (% GDP)	–62.0	–63.4	–63.6	–66.6	–68.2	–69.4	–65.6	–64.7	–60.5	–61.0
Export market shares (5 y. % change)	–4.3	1.7	3.9	7.1	4.8	1.9	1.1	7.2	–1.9	–6.6
Export market shares (1 y. % change)	4.9	–1.6	–2.7	6.0	–1.6	2.0	–2.4	3.2	–3.0	–6.2
Current account balance (% GDP, 3 y. average)	–0.7	1.3	0.3	–1.2	–2.2	–2.3	–2.5	–1.7	–2.2	–3.6
Current account balance (% GDP)	1.9	1.1	–2.1	–2.7	–1.9	–2.2	–3.3	0.6	–4.0	–7.3

Source: Eurostat (2024).

In 2023, the Slovak current account deficit narrowed significantly to 1.6% GDP reflecting the more favourable development of the foreign trade balance analysed above (NBS, 2024b). The European Commission as well as the Institute for Financial Policy of the Ministry of Finance of the Slovak Republic and the NBS forecast a slight deterioration of the current account deficit in the next two years, but not exceeding 3% (EC, 2024) and 4% of GDP (IFP, 2024), respectively. The NBS is even more optimistic, expecting a deficit of up to 2% GDP (NBS, 2024a).

Foreign Direct Investment by Volume and Structure

For the year 2023, data on foreign investments in Slovakia are available from the Slovak Investment and Trade Development Agency (SARIO), which is a state agency of the Slovak Republic within the competence of the Ministry of Economy of the Slovak Republic. SARIO supports investment projects with significant social and economic benefits. In the course of 2023, it finalised another 25 investment projects with a total value of over EUR 1.2 billion, and these investments are expected to generate more than 4.3 thousand new jobs (SARIO, 2024). Although this is a lower amount compared to the previous year (when the announced investment of Volvo Cars near Košice dominated), 2023 was the third most successful year (after 2022 and 2015) within the last decade in this respect. It is positive that more than a third of the investment projects reported in 2023 have the potential to generate higher added value.

According to preliminary data from the NBS (2024c), in 2022 (the latest available data), investment inflows to Slovakia amounted to nearly EUR 2.8 billion, which is almost double the inflows of the previous year. The Netherlands (40%) accounted for the highest

[50] Among the V4 countries, only Hungary exceeded the MIP threshold for this indicator in 2022.

share of investment inflows in 2022, followed by Austria (21%), France (17%) and the Czech Republic (12%).

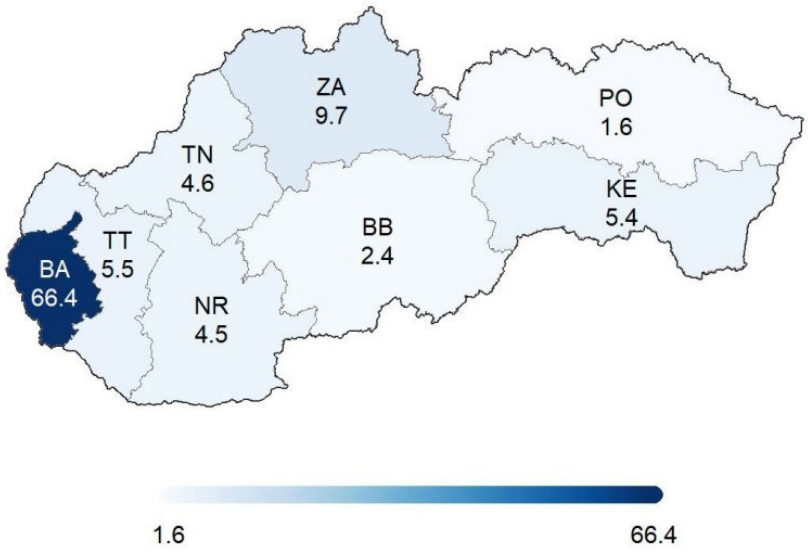
The total stock of foreign FDI in Slovakia thus rose to almost EUR 54 billion, the vast majority of which consists of equity and investment fund shares and only one twentieth of debt instruments. The Netherlands strengthened its position as the top investor country with a share of 23% in total investment, while Dutch companies invest in Slovakia mainly in financial services, technology, metal processing, food industry, retail and logistics. Austria remains the second most significant country in terms of investment in Slovakia (16%) followed by the Czech Republic (13%).

In 2022, more than EUR 0.4 billion flowed from Slovakia to other countries, which was also a higher value than in the previous year. Investments were concentrated more than in the past in the geographically closest countries, with almost 90% of them directed to other V4 countries (64% to the Czech Republic, 16% to Poland and 7% to Hungary) and 8% to Austria. The total stock of Slovak FDI abroad thus exceeded EUR 5 billion at the end of 2022, with more than half of it in the neighbouring Czech Republic. Three quarters of all Slovak FDI abroad represent equity and investment fund shares and one quarter are debt instruments.

The latest available data on FDI by Slovak regions are from 2021 (NBS, 2024c). The shares of individual regions in the total FDI volume in Slovakia are documented in Map 7.1. The Bratislava region accounts for two-thirds of total FDI in Slovakia, although particularly in recent years there has been a tendency to allocate as much FDI as possible to other regions, and there has been a slow decline in the share of the Bratislava region. In the case of Slovak FDI abroad, the share of the Bratislava region reaches up to 80%, while the next largest investor is the Žilina region with a share of 5%.

Map 7.1

Structure of the Direct Investment Stock in the Slovak Republic by Regions at the End of 2021 (%)



Source: based on NBS data (2024c).

The latest available data on direct investment in Slovakia by activity are from 2020. It can be concluded that industry accounted for 32% of total FDI in Slovakia as of that year (motor vehicle manufacturing 9%) and services for 59% (financial and insurance services alone for 25%). For comparison, in 2012, industry accounted for a similar share of 33% (motor vehicle manufacturing 7%), but services only for 50% (financial and insurance services 23%) (NBS, 2024c). To put it simply, the share of services in the stock of direct investment in Slovakia has increased over this period, mainly "at the expense" of the share of electricity, gas, steam and air conditioning supply (declining from 14% to 7%).

Increasing share of services indicates some progress in the structure of incoming direct investment, however if Slovakia is to move forward, a further shift towards high value-added investment is necessary. This should mean a gradual increase in the share of knowledge-based sectors, with a decline in the share of industry, agriculture, as well as basic services. However, such ambitions require improving the business environment and conditions for foreign investors.

It also implies a necessity to intensify development of the knowledge economy, increase the quality of education and improve the skills of the workforce, which can only be achieved through focused, systematic and long-term efforts.

* * *

At the beginning of 2024, the weakened demand of Slovakia's major trading partners (mainly Germany, but also France and Italy) for Slovak production dampened export and thus the overall performance of the economy. While in January exports of goods from Slovakia were still growing weakly year-on-year, in February there was already a decline, the most significant in more than two years. This was mainly due to a decrease in the value of exports in machinery and transport equipment by more than 7%, which is the largest decline since spring 2022 (ŠÚ SR, 2024b).

On the import side, the double-digit year-on-year decline in the value of imported mineral fuels continued, reflecting lower prices of energy commodities compared to the previous year. However, in February this was already accompanied by a decrease in the value of imported motor vehicle parts. Together, they contributed to an active trade balance of almost EUR 1.2 billion in the first two months of the year. Thus, the external trade balance remained improved not by higher export performance but by reduced import intensity.

In the second half of the year, in a situation of a possible inflation moderation (especially in energy) and an increase in real incomes, a renewed growth in foreign demand for Slovak goods could be expected. This trend could become more pronounced in the next two years (NBS, 2024a), when Slovak exports could also be supported by the future expansion of production capacity in the automotive industry. Transition to electromobility remains a challenge, whose successful management is crucial for the Slovak economy

concentrated on the automotive industry.[51] Given its high interdependence with the German economy, the further development of (not only) Slovakia's exports will also depend to a large extent on how Germany will perform.

On the import side, a major challenge is the high dependency of Slovakia on energy imports, which requires reducing the energy consumption of the economy and increasing the production of energy from renewable sources. A successful process of energy transition would contribute to a more favourable future development of Slovakia's trade balance and hence current account balance.

[51] Volvo Cars Košice, which is already in the process of construction, will be the first automotive plant in Slovakia to produce exclusively electric vehicles. It is important for Slovakia to be able to compete with other V4 countries in attracting other similar foreign investments. At the same time, the European automotive industry is facing competition in production of electric vehicles from the United States and in particular from China. In this country, majority of global production of electric vehicles is manufactured and thanks to the approximately one-third lower prices it is successful in expanding also into the European market.

8. PUBLIC FINANCE

In 2023, public finances were positively affected by the post-covid recovery, negatively by the impact of Russia's military aggression in Ukraine, political instability (three finance ministers were replaced during 2023) and the ending electoral cycle.

Economic growth has been supported by EU funds, but affected by inflation and interest rates. The Slovak economy recorded moderate growth of 1.6% in 2023 This growth was supported by the absorption of EU funds, which had the greatest impact on the construction sector. Although all sectors have seen growth in value added, households have had to reduce their consumption in response to high inflation and rising interest rates. This has led to weaker GDP growth than initially expected. The labour market remained strong with low unemployment rates. However, labour shortages have hampered stronger employment growth, which has increased mainly due to foreign workers.

Development in the General Government Budget

The general government deficit reached EUR 6 billion in 2023, representing 4.89% of GDP. The general government has been running a significant deficit during this electoral cycle and will require consolidation on both the revenue and expenditure side. The new government declared that it would reduce the structural balance by 0.5 p.p. and later revised this target to 1 p.p. per year. Table 8.1 shows the development of the public finances. The Budgetary Responsibility Council concluded that the public finances were not sustainable in the long term at the end of 2022 and that the long-term sustainability indicator stood at 5.5% of GDP in the high-risk zone. Taking into account the revised data and the update of the baseline scenario, it was reduced by 0,2 pp to 5,3 % of GDP and thus remained in the high-risk band in 2023 (RRZ, 2024).

T a b l e 8.1

Key Economic Indicators for Public Finances in 2020 – 2023

Indicator		2020	2021	2022	2023
Net lending (+)/borrowing (–)	mil. eur	–8672.3	–5 973	–5 398	–6 010
Net lending (+)/borrowing (–)	% HDP	–9.7	–6.2	–5.0	–4.9
Primary balance	% HDP	–8.6	–5.0	–4.1	–3.7
Structural primary balance	% HDP	–6.5	–4.4	–3.9	–3.6
Structural balance	% HDP	–5.6	–2.1	–2.9	–3.3
General government gross debt (Maastricht)	mil. eur	55551.7	61 259	63 545	68 830
General government gross debt (Maastricht)	% HDP	62.2	63.1	58.6	56.0
General government net debt	% HDP	56.7	51.3	49.9	48.3

Source: MF SR (2024a).

In a more detailed structure, we will focus on the performance of local government, social security funds, costs related to aid to Russian-invaded Ukraine and energy aid to several sectors of the Slovak economy.

T a b l e 8.2

Impact of Local Government Economic Performance on the General Government Budget in the Years 2021 – 2023 (EUR million)

	2021	2022	2023 Budget	2023 Reality	Difference
Municipalities and their budgetary organizations	2 371	–287 784	–255 679	124 779	380 458
Selfgoverning regions (VÚC) and their budgetary organizations	–26 748	–141 839	–50 167	–89 995	–39 828
Municipal contributory organizations	44	–1 694	6 163	1 213	–4 950
Selfgoverning region (VÚC) contributory organizations	13 940	–1 050	9 287	11 419	2 132
Transport enterprises	–9 641	–9 411	–32 507	63 062	95 569
Health care facilities of local selfgovernment	–8 710	29 023	293	–13 352	–13 645

Source: ŠZÚ (2024).

In 2023, the territorial self-government achieved a surplus of EUR 97 707 thousand, which is EUR 420 317 thousand more than the planned deficit of EUR 322 610 thousand. The main factor behind the surplus was the management of the municipalities, which initially had an approved cash deficit of EUR 255 679 thousand, but actually achieved a surplus of EUR 11 708 thousand.

The surplus at the level of the municipalities was influenced by a significant increase in revenue over expenditure:

- Increased tax revenue: by EUR 98 622 thousand, mainly from the share taxes and from the DPPO revenue paid.
- Increase in the share of personal income tax revenue by EUR 228 059 thousand.
- Disbursement of DPPO revenue which was not included in the approved budget for 2023.
- The actual cash transfer of personal income tax to the municipal budgets (including DPPO) amounted to EUR 2 700 920 thousand.
- Increase in revenue from tax on buildings, flats and non-residential premises, development tax, accommodation tax and non-tax revenue by EUR 143 024 thousand.
- Increase in administrative and management fees, revenue from catering fees, sale of products and services, revenue from rent of buildings and premises and revenue from parents for reimbursement of costs in schools and educational establishments.
- An increase of EUR 22 605 thousand in revenue from the sale of capital assets and from the sale of land.

This positive trend was slightly affected by a decrease of EUR 8 084 thousand in other revenue, mainly from the gaming levy, insurance refunds, credit notes, refunds and revenue from budgetary and contributory organisations. Overall, this is a significant success for the local government, which has managed to manage more efficiently than initially expected.

Table 8.3

Impact of the Economic Performance of the Social Security Funds on the General Government Budget in 2021 – 2023 (EUR thousand)

Social Security Funds	2021	2022	2023 Budget	2023 Reality	Difference
Social Insurance Agency	327 853	87 441	–226 004	51 124	277 128
Public health insurance	–42 511	552	44 245	223 292	179 047

Source: ŠZÚ (2024).

The Social Insurance Agency achieved a cash deficit of EUR 178.9 billion in 2023, exceeding the budget expectations, which foresaw a deficit of up to EUR 297 million. The main factor behind the lower deficit was the transfer received from the State Budget of EUR 1.16 billion. This transfer is linked to increased expenditure on certain types of insurance, in particular pension benefits. The transfer was not included in the original budget for 2023. Thanks to this transfer, the Social Insurance Institution managed to achieve a significantly lower deficit than expected. Health insurers achieved an overall surplus of EUR 223.2 billion in 2023, exceeding budget expectations by EUR 179 million.

The main drivers of the surplus were:

- Higher collection of levy revenue: EUR 385 573 thousand more than expected.
- Year-on-year increase in receivables: by EUR 25 321 thousand, mainly to health care providers (EUR 21 112 thousand) and the Health Care Supervisory Authority (EUR 8 342 thousand).
- The performance of insurance companies was also affected by a year-on-year increase in payables of EUR 19.2 million, mainly to healthcare providers (EUR 16.8 million) and from taxes (EUR 19.8 million).

The government also continued to assist people displaced by Russian aggression in Ukraine. The one-off impact on the general government finances was EUR 128.1 million. Table 8.4 shows the expenditure pattern in more detail.

Table 8.4

Impact of Aid to Ukraine on the General Government Budget in ESA 2010 Methodology (EUR thousand)

Expenditures related to refugees	**128 193**
Funding for the tasks of the Ministry of Interior arising from the influx of a large number of people + transportation	4 269
Students in regional education	24 237
Social assistance benefits	16 477
Costs for integration (language, training, counseling)	203
Healthcare	11 775
Housing allowance	70 962
Other (incurred) expenditures	**23 641**
Other (e.g., costs for repairing civil shelters, additional defense expenses)	4 061
Incurred investments (container village for NATO soldiers and others)	19 580
Total	151 834

Source: ŠZÚ (2024).

In 2023, the state, in an effort to help citizens and businesses cope with the sharp rise in energy prices, massively subsidized prices through various forms (Table 8.5). These expenditures were primarily related to the capping of electricity, gas, and heating prices. The most significant forms of assistance included:

- Energy price compensation for selected vulnerable groups of consumers.
- Heating price subsidies for households and businesses.
- Gas price compensation for households.
- Energy price compensation for small consumers.
- Compensation for electricity consumption tariffs.
- Energy subsidies for selected groups of consumers.

In addition to subsidies, other costs were associated with energy assistance:

- Gas subsidies for households: The largest item, which included compensation paid to gas suppliers.
- Freezing of distribution tariffs and regulated fees in the electricity price: The government had to compensate the recipients of these "frozen" fees.
- Heating price subsidies: The government compensated for the foregone revenue due to capped prices.
- Compensation for capping electricity and gas prices for small businesses and vulnerable consumers: Assistance in the form of so-called energy subsidies paid directly to consumers.

Table 8.5

Impact of Energy Aid Expenditure on the General Government Budget (EUR million)

Scheme	Payed in 2023	Payed in 2024 for 2023
Gas for households	1 237	0
Heating for households	371	0
Selected vulnerable groups (electricity + gas)	55	21
Small consumers (electricity + gas)	201	36
Electricity tariffs (households + others)	901	12
Total (excluding 2.1.)	2 764	69
2.1. (businesses + public sector + nonprofits)	231	52
Total (amounts include VAT)	2 995	121

Source: ŠZÚ (2024).

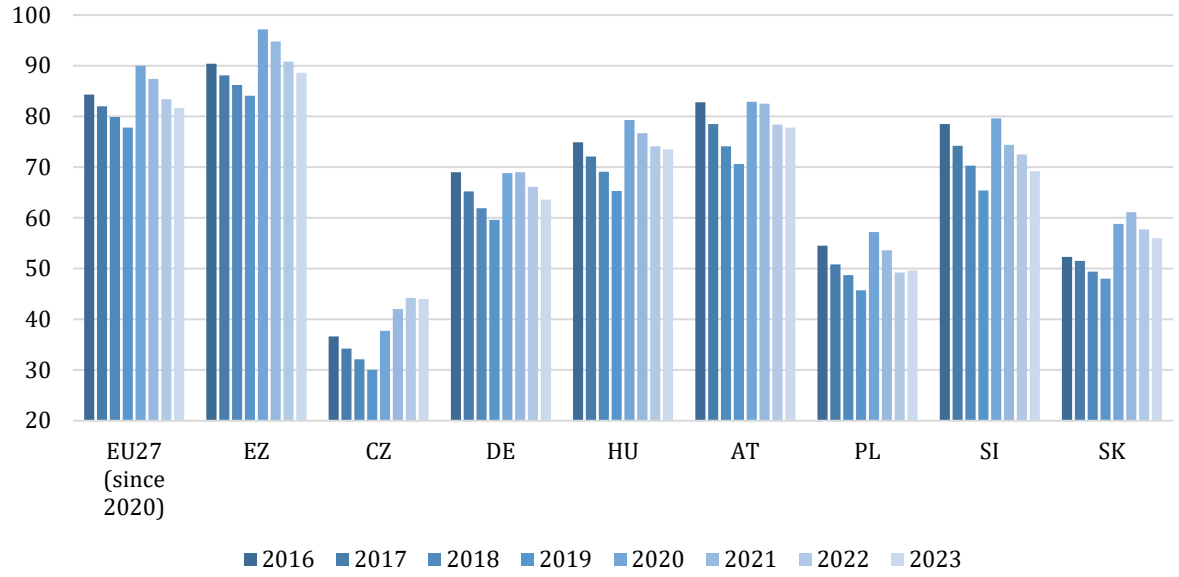
Not only households, but also businesses and the public sector, such as municipalities, social service homes and civic associations, could apply for compensation. This massive support helped to mitigate the impact of soaring energy prices on citizens and businesses, but also had a significant cost for the state budget.

The general government gross debt ratio declined slightly to 56% of GDP. Within the V4 countries, Slovakia had the second highest debt after Hungary (Figure 8.1). By initial maturity, gross public debt consists of:

- Short-term debt of 0.6% (EUR 381.5 million).
- Debt with an original maturity of more than one year of 99.4% (EUR 68.4 billion).

Figure 8.1

Comparison of Gross Public Debt as % of GDP (2016 – 2023)



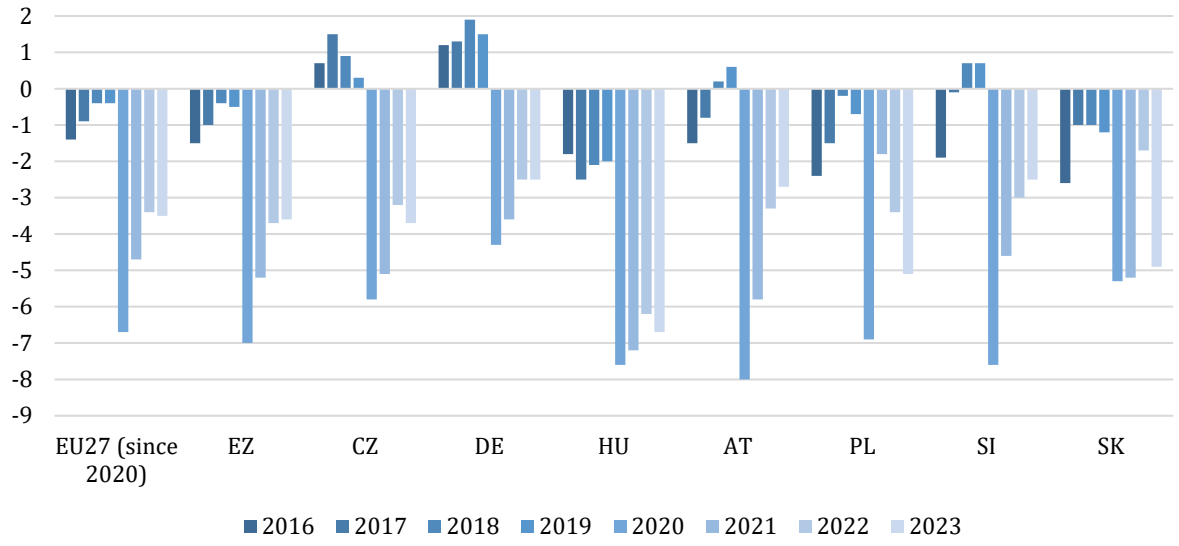
Source: Eurostat (2024).

In terms of territorial structure, foreign creditors hold the majority of the Slovak government's Maastricht debt, namely 51.9% (EUR 35.7 billion). 48.1% (EUR 33 billion) of the Maastricht debt is held by domestic creditors.

The comparison of the general government deficit with the V4 countries and selected EU countries is already more unfavourable. Slovakia had the third highest deficit after Hungary and Poland. This development highlights the need for consolidation of public finances over the next electoral cycles.

Figure 8.2

Comparison of General Government Deficits as % of GDP (2016 – 2023)



Source: Eurostat (2024).

Development of the State Budget in 2023

In 2023, the state budget ended with a deficit of EUR 7.6 billion, the highest since 2020 (which was marked by the first and second waves of the pandemic) and deteriorated by almost EUR 3 billion year-on-year.

However, the government had planned for a deficit of EUR 8.3 billion. Income tax, profit, and capital gains revenue exceeded the plan by EUR 408.3 million. Revenues from EU budget transfers also rose significantly due to the ending of the program period, increasing to more than EUR 4.5 billion.

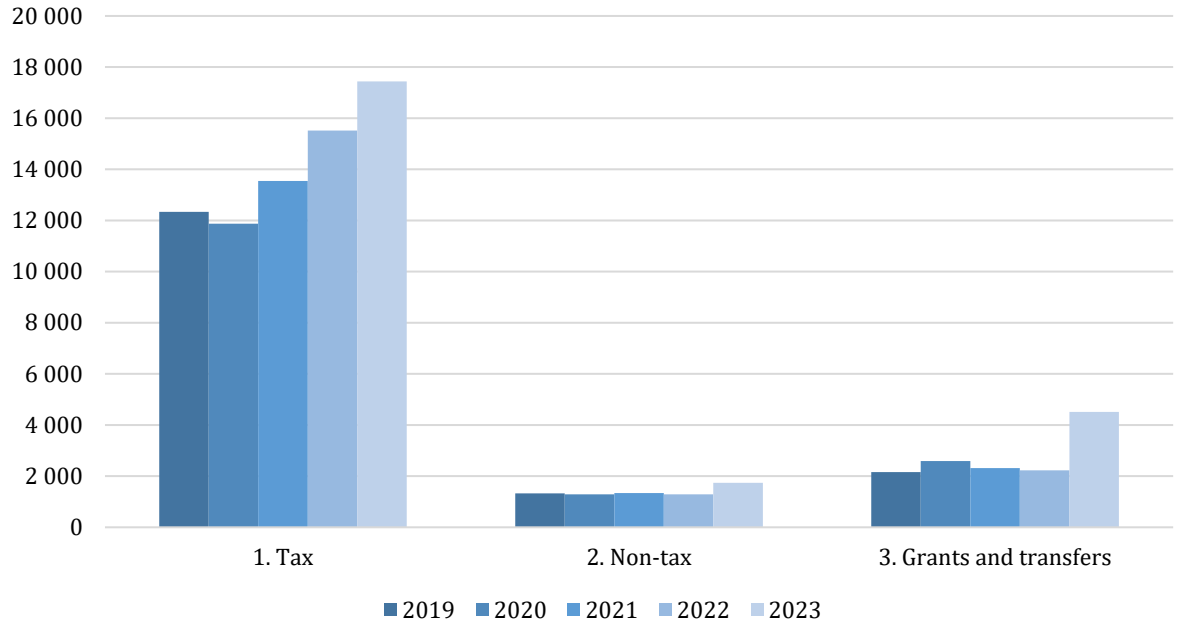
Figure 8.3 illustrates the development of state budget revenues over the past 5 years. Over this period, total revenues increased by EUR 7.8 billion, of which tax revenues grew by EUR 5.1 billion and non-tax revenues by EUR 411 million.

Table 8.6
Development of the State Budget in 2023 (EUR million)

	2020	2021	2022	2023
Total revenue	15 750	17 197	19 029	23 688
1. tax	11 872	13 546	15 517	17 441
2. non-tax	1 289	1 338	1 285	1 738
3. grants and transfers	2 588	2 313	2 227	4 509
Total expenditure	23 509	24 211	20 847	31 364
Current expenditure	20 846	21 772	20 847	26 650
Capital expenditure	2 662	2 440	2 707	4 714
Deficit/Surplus (right axis)	–7 758	–7 014	–4 524	–7 675

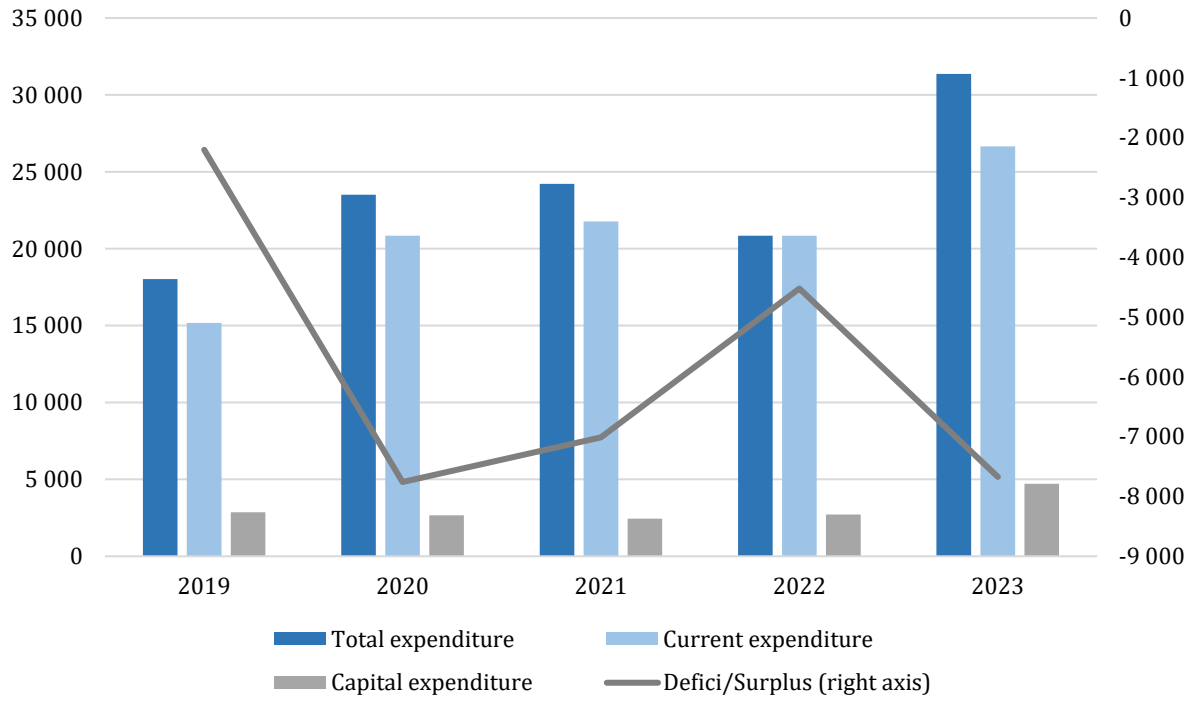
Source: MF SR (2024b); own calculations.

Figure 8.3
Development of State Budget Revenues 2019 – 2023



Source: MF SR (2023a).

Figure 8.4
Development of State Budget Expenditure 2019 – 2023



Source: MF SR (2023a).

Looking at expenditures, we can observe an even greater increase over the past 5 years (Figure 8.4). Compared to 2019, total expenditures were higher by EUR 13.3 billion. Current expenditures rose by EUR 11.4 billion during this period, while capital expenditures increased by only EUR 1.8 billion. However, the capital expenditure figure is skewed by the final implementation of cohesion policy funds. This continued the trend of relatively low capital expenditures from domestic sources, with a greater impact of replacing them with EU budget funds.

Table 8.7 captures the development of expenditures by functional classification (COFOG). For the purposes of this chapter, we will focus on two areas with the highest year-on-year increase in expenditures: economic affairs and social security.

In the economic sector, expenditures increased by EUR 4.3 billion compared to the previous year. The most significant increase was seen in the Ministry of Economy of the Slovak Republic (MH SR), which recorded an increase of EUR 2.8 billion. This rise was driven by expenditures related to supporting the financing of costs associated with increased energy prices.

The highest expenditures were in the Ministry of Economy of the Slovak Republic (EUR 3.3 billion), the Ministry of Investment, Regional Development, and Informatization of the Slovak Republic (EUR 1.1 billion), the Ministry of Transport of the Slovak Republic (EUR 2.7 billion), and the Ministry of Agriculture and Rural Development of the Slovak Republic (EUR 803.7 million).

In terms of sectors, the highest expenditures were in the "Fuels and Energy" group (EUR 2.9 billion), with an increase of EUR 2.7 billion compared to 2022. In this area, the expenditures of the Ministry of Economy dominated (EUR 2.9 billion). Expenditures in the "Transport" group reached EUR 2.6 billion, almost entirely covered by the Ministry of Transport. In the "General Economic, Commercial, and Labor Affairs" group, expenditures amounted to EUR 1.8 billion.

T a b l e 8.7
State Budget Expenditure by Functional Classification (EUR million)

	2021	2022	2023 Budget	2023 Reality	Difference	in %
Economic area	5 788	4 291	9 508	8 652	–856	–9,01
Social security	5 689	5 134	5 343	7 938	2 596	48,58
General public services	3 986	4 850	8 571	4 301	–4 270	–49,82
Education	2 960	3 028	3 607	3 591	–15	–0,42
Public order and security	2 129	2 359	2 647	2 732	86	3,24
Defence	1 857	1 930	1 980	1 981	1	0,05
Environmental protection	344	438	1 490	680	–810	–54,34
Recreation, culture and religion	551	528	471	641	169	35,98
Housing and amenities	88	103	469	456	–13	–2,81
Health	819	894	956	392	–564	–59,04
Total	24 211	23 555	35 041	31 364	–3 677	–10,49

Source: ŠZÚ (2024).

In the area of social security, the increase was driven by higher financial demands for the payment of old-age pensions.

A significant year-on-year percentage decrease was recorded in the healthcare sector, mainly due to the reduction of measures and costs associated with the COVID-19 pandemic.

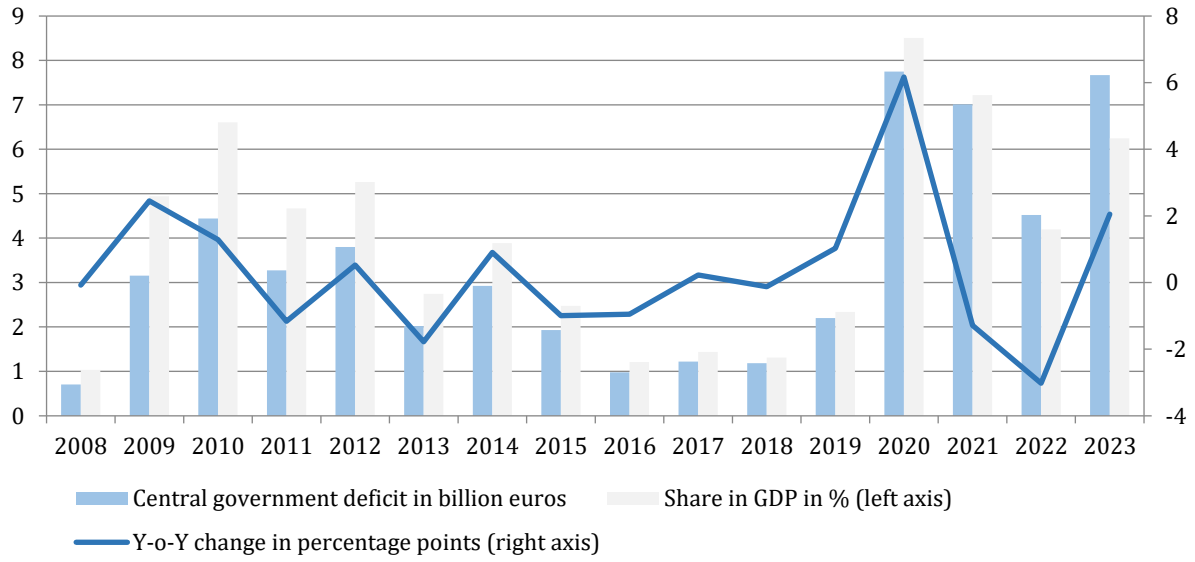
State Budget Deficit and Central Government Debt

During the past election cycle, state budget deficits reached their highest levels since 2008 (Figure 8.5). This was caused by several external shocks that required the state budget to respond with a sharp increase in expenditures. The pandemic, Russia's aggression in Ukraine, and the resulting energy crisis necessitated massive subsidies for compensatory measures across various economic sectors, as well as subsidies to offset energy carrier prices.

By 2023, energy prices had stabilized at a level that no longer required substantial subsidies from the state budget. As part of negotiations with the European Commission, EUR 1 billion was transferred from structural funds to cover a portion of the costs for energy price compensations.

Figure 8.5

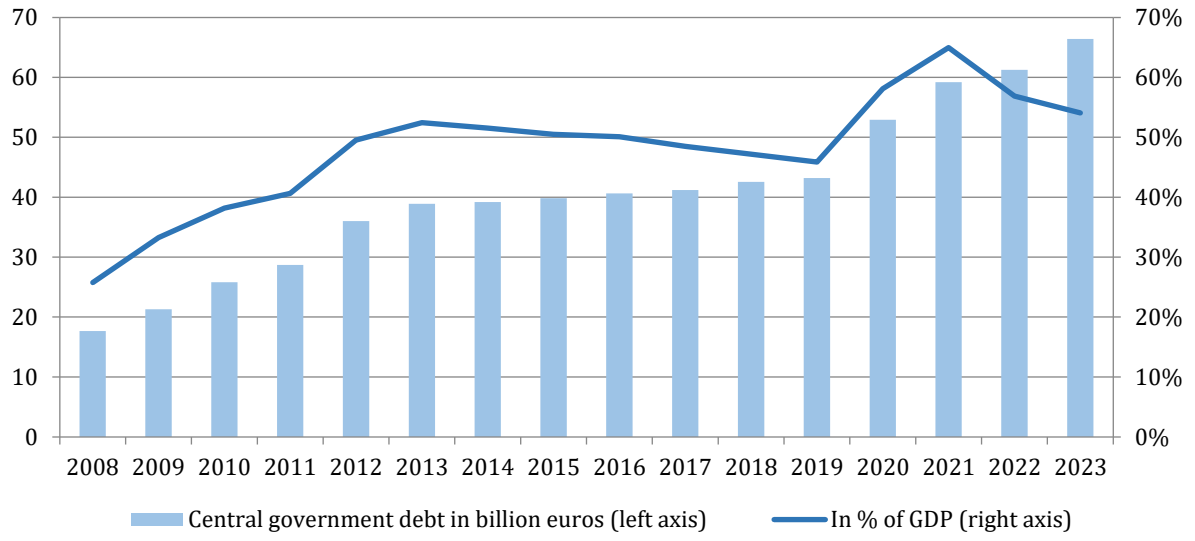
State Budget Deficit in 2008 – 2023



Source: MF SR (2023a); own calculations.

Figure 8.6

Central Government Debt in 200 – 2023



Source: MF SR (2023a); own calculations.

The size of the deficits in the last four years has naturally been reflected in the central government debt, which has reached EUR 66.4 billion. However, as a proportion of GDP, central government debt has been declining, mainly as a result of higher economic growth.

Table 8.8 shows the composition of government debt by maturity, ranging from one year to thirty years or more. In the category of government bonds and treasury bills, the largest share is in the maturity category of up to 15 years. In the category of bank loans and other instruments, maturities of up to 29 years and 30 years or more predominate.

Table 8.8

Central Government Debt by Initial Maturity in 2023

	Government bonds and State Treasury Bills	Bank credits and other	Other liabilities	Total
Up to 1 year	0	0	99.9	0.4
Up to 5 years	2.6	0.4	0.1	2.4
Up to 7 years	5	9.4	0	5.3
Up to 10 years	4.9	4.6	0	4.8
Up to 15 years	43.6	9.7	0	40.5
Up to 29 years	34.7	44.6	0	35.5
30 years and over	**9.2**	**31.3**	**0**	**11.1**

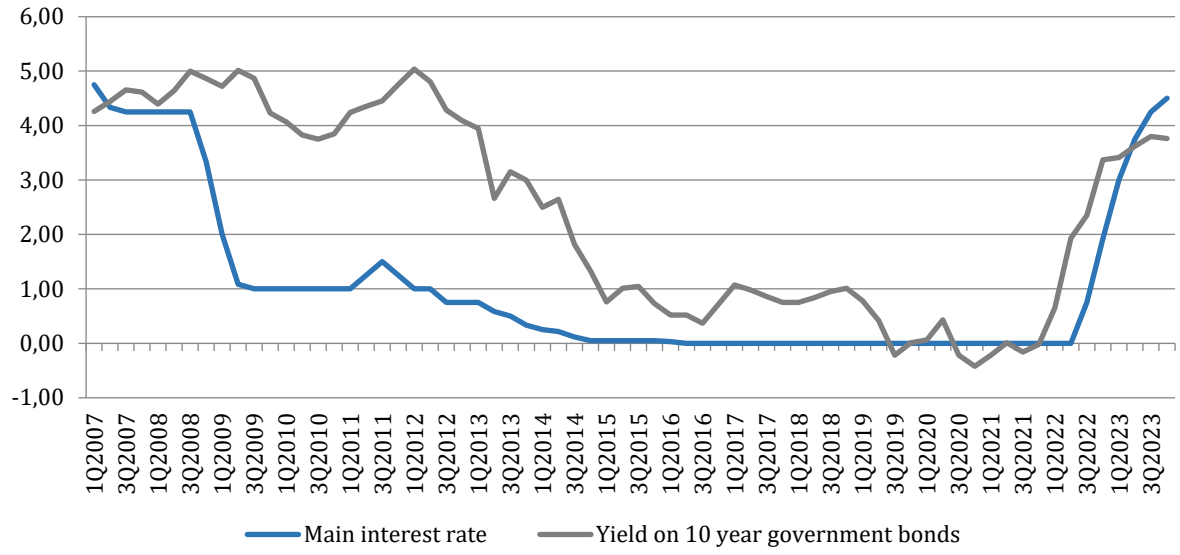
Source: ŠZÚ (2024).

Based on this structure, we can conclude that 75% of the national debt is covered by debt instruments with maturities ranging from 15 to 29 years. This provides the necessary stability for medium- and long-term debt service operations.

The inflationary pressures caused by the rise in price levels following Russia's aggression in Ukraine required interventions from the European Central Bank (ECB) and naturally increased the cost of servicing Slovakia's debt. Figure 8.7 shows the development of interest rates on Slovak government bonds with a ten-year maturity. By the end of 2023, the average interest rate on these bonds reached 3.76%, returning to the levels seen in 2013 after a period of low interest rates.

Figure 8.7

The Development of Interest Rates on 10-Year Slovak Government Bonds between 2007 and 2023 Shows



Source: Macroeconomic database of the NBS (2024).

The development of interest rates on 10-year Slovak government bonds between 2007 and 2023 shows significant fluctuations due to various economic and financial conditions. From 2007 to 2008, interest rates were relatively high, reflecting the global financial instability leading up to the crisis. In the years following the 2008 financial crisis, interest

rates gradually decreased, reaching historically low levels around 2015 – 2016 as part of broader monetary policies, including quantitative easing by the European Central Bank (ECB), which aimed to stimulate economic growth and control inflation.

From 2016 to 2020, the interest rates on 10-year Slovak government bonds remained at historically low levels, hovering near zero, as Slovakia benefited from favorable conditions in the bond market and strong demand for government debt instruments. However, starting in 2022, interest rates began to rise again, driven by inflationary pressures caused by the post-pandemic recovery and the energy crisis stemming from Russia's aggression in Ukraine. By the end of 2023, the average interest rate on these bonds had reached 3.76%, marking a return to levels last seen in 2013 after years of low-interest rates.

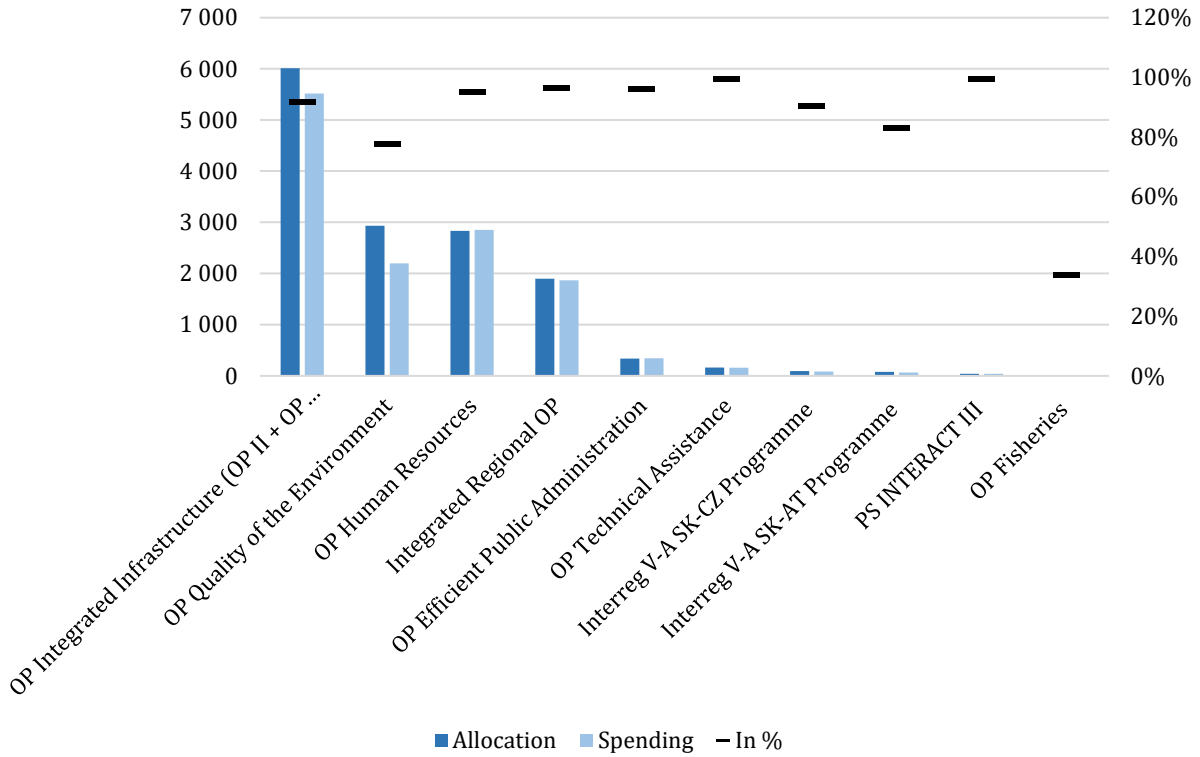
This increase in interest rates reflects the broader trend of rising inflation and tightening monetary policies by central banks to combat price increases.

Implementation of EU Cohesion Policy

The year 2023 marked the final year in which funds from the 2014 – 2020 programming period could be utilized. Out of the total EUR 14.5 billion allocated for 10 operational programs during this period, EUR 13.1 billion (EU resources) had been approved as of December 31, 2023, representing a 90.41% utilization rate.

Figure 8.8

Implementation of ESIF in the 2014 – 2020 Programming Period by Operational Programmes at the End of 2023 in % (EU funding)



Source: MF SR (2024d); own calculations.

By the end of June 2024, Slovakia must submit eligible expenditures totaling EUR 2.05 billion to the European Commission to finalize the funding of these programs. The largest amounts pending approval are in the “Integrated Infrastructure”, “Environmental Quality”, and “Human Resources” programs. The status of the fund utilization is illustrated in Figure 8.8.

In 2021, Slovakia received EUR 722 million from the REACT-EU initiative to mitigate the impact of the pandemic. These funds were allocated to the Human Resources, Integrated Regional Operational Program, and Effective Public Administration programs.

In response to the war in Ukraine, EUR 315 million was transferred from the European Structural and Investment Funds (ESIF) to aid with the crisis (FAST CARE). As of December 31, 2023, EUR 275 million (80.94%) of this amount had been approved.

In March 2023, the SAFE initiative was approved, allowing the use of unspent EU funds to provide energy compensation for vulnerable households. For this purpose, EUR 1.03 billion was initially earmarked. To date, EUR 500 million (48.38%) has been disbursed from the Integrated Infrastructure Operational Program for these purposes.

T a b l e 8.9
Allocation of FAST-CARE from ESIF by Ministries in EUR

OP	Responsible ministry	Fund	Amount
OP II	MT SR	ERDF	205 618 080
		CF	551 589
	MIRDI	ERDF	150 000 000
	ME SR	ERDF	74 818 551
OP HR	MI SR	ERDF	48 000 000
OP QE	ME SR	CF	387 899 356
IROP	MIRDI SR	ERDF	155 292 844
	MH SR	ERDF	15 404 830
	MC SR	ERDF	18 302 326
Total			1 055 887 576

Source: MF SR (2022f).

Although the 2014 – 2020 programming period formally ended with the application of the n+3 rule in 2023, payments can still be processed until June 2024, so the percentage of total allocation utilization is expected to approach 100%. In 2023, Slovakia's net position against the budget was EUR 4.4 billion. For comparison, in 2022, it was EUR 1.1 billion.

During the year, the caretaker government implemented a set of measures to accelerate fund utilization, as approximately EUR 800 million was at risk as of May 2023. Measures taken by the government included:

- Transfer of funds to the SAFE tool for addressing the energy crisis or the FAST CARE tool for migration crisis support.
- Utilization of available flexibilities within the same program's priority axes.
- Implementation of increased oversight to expedite implementation.

The government also developed the so-called "Ten Commandments" for better utilization of EU funds. They are briefly outlined below (Úrad vlády SR, 2023):

1. Develop and subsequently approve a long-term strategy for Slovakia's development until 2050.
2. Create a fund for pre-project preparation with a minimum annual amount of EUR 50 million.
3. Establish a binding and predictable schedule for announcing calls for proposals.
4. Accelerate and improve the evaluation of applications.
5. Continue oversight of EU fund utilization at the government level.
6. Improve the quality of the preparatory phase of public procurement.
7. Increase the level of digitalization and focus audits on expenditures of projects evaluated as risky.
8. Strengthen the preventive function of audits.
9. Ensure full electronic processes. Reduce administrative burden and develop additional functionalities of the information system to speed up processes.
10. Improve communication and proactively consult with key partners before issuing calls for proposals.

These measures were largely effective and significantly accelerated fund utilization in the final year of the programming period.

Structure of the Operational Program Slovakia for 2021 – 2027

In the new programming period 2021 – 2027, the structure of cohesion policy was fundamentally changed. The Slovakia 2021 – 2027 program is the single operational program replacing the previous six operational programs. Investments will continue to be made through the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+), the Cohesion Fund (CF), and a new fund, the Just Transition Fund (JTF).

The Just Transition Fund (JTF) will be a separate priority axis of the Slovakia Operational Program. The JTF will be the main tool for addressing the impacts of the transition, supporting regions most affected by the shift towards climate neutrality, and preventing an increase in regional disparities. The specific objective of the fund is to "enable regions and people to address the social, employment, economic, and environmental consequences of the transition to achieve the Union's climate goals by 2030 and a climate-neutral economy by 2050, based on the Paris Agreement." The total allocation for Slovakia is EUR 459 million. The structure of the Slovakia Operational Program is depicted in Table 8.3.

The Slovakia Operational Program has defined 5 objectives, which are divided into specific priority axes. Although the programming period began in 2021, actual utilization only started in 2023. It is relatively low at EUR 74.4 million, representing 0.59% of the total allocation for the Slovakia Operational Program. The delay was due to the approval process for the Slovakia Operational Program, the simultaneous implementation of the old and new programming periods, and the preparation and approval of the Recovery and Resilience Plan, which created pressure on existing administrative capacities. It is a common fact that the largest portion of the allocation is usually implemented in the final possible year of the current programming period.

The total allocation for the Slovakia Operational Program is EUR 12.5 billion without national co-financing.

T a b l e 8.10
Structure of the Operational Programme Slovakia 2021 – 2027 at the End of 2023

Policy objective or technical assistance	Priority	Name of the priority	Allocation EU source	Implementation – beneficiary level (advance payments)	
				EU source	Of total allocation EU source
1	1P1	Science, research and innovation	1 778 050 000	0	0.00
	1P2	Digital connectivity	112 100 000	0	0.00
Total CP1 – A more competitive and smarter Europe			1 890 150 000	0	0.00
2	2P1	Energy efficiency and decarbonisation	1 276 450 890	0	0.00
	2P2	Environment	2 030 497 280	0	0.00
	2P3	Sustainable urban mobility	890 600 000	0	0.00
Total CP2 – A greener, low-carbon and resilient Europe			4 197 548 170	0	0.00
3	3P1	Transport	2 003 127 273		0.00
Total CP 3 – A more connected Europe			2 003 127 273	0	0.00
4	4P1	Adaptive and accessible labour market	589 497 494	1 066 750	0.18
	4P2	Quality and inclusive education	609 293 550	34 425 000	5.65
	4P3	Skills for better adaptability and inclusion	252 906 000	0	0.00
	4P4	Youth Guarantee	283 969 292	0	0.00
	4P5	Active inclusion and accessible services	1 110 632 000	13 361 750	1.20
	4P6	Active inclusion of Roma communities	269 000 000	25 599 267	9.52
	4P7	Social innovation and experimentation	68 153 000	0	0.00
	4P8	Food and material deprivation	68 153 000	0	0.00
Total CP4 – A more social and inclusive Europe			3 251 604 336	74 452 767	2.29
5	5P1	Modern regions	400 413 611	0	0.00
Total CP5 – Europe closer to citizens			400 413 611	0	0.00
FST	8P1	Just Transition Fund	440 658 242	0	0.00
Just Transition Fund			440 658 242	0	0.00
TP	7P1	ERDF technical assistance	255 696 315	0	0.00
	7P2	Technical assistance CF	51 632 244	0	0.00
	7P3	ESF+ technical assistance	84 543 983	0	0.00
	7P4	Technical assistance FST	18 360 759	0	0.00
Total technical assistance			410 233 301	0	0.00
Total Programme Slovakia 2021 – 2027			**12 593 734 933**	**74 452 767**	**0.59**

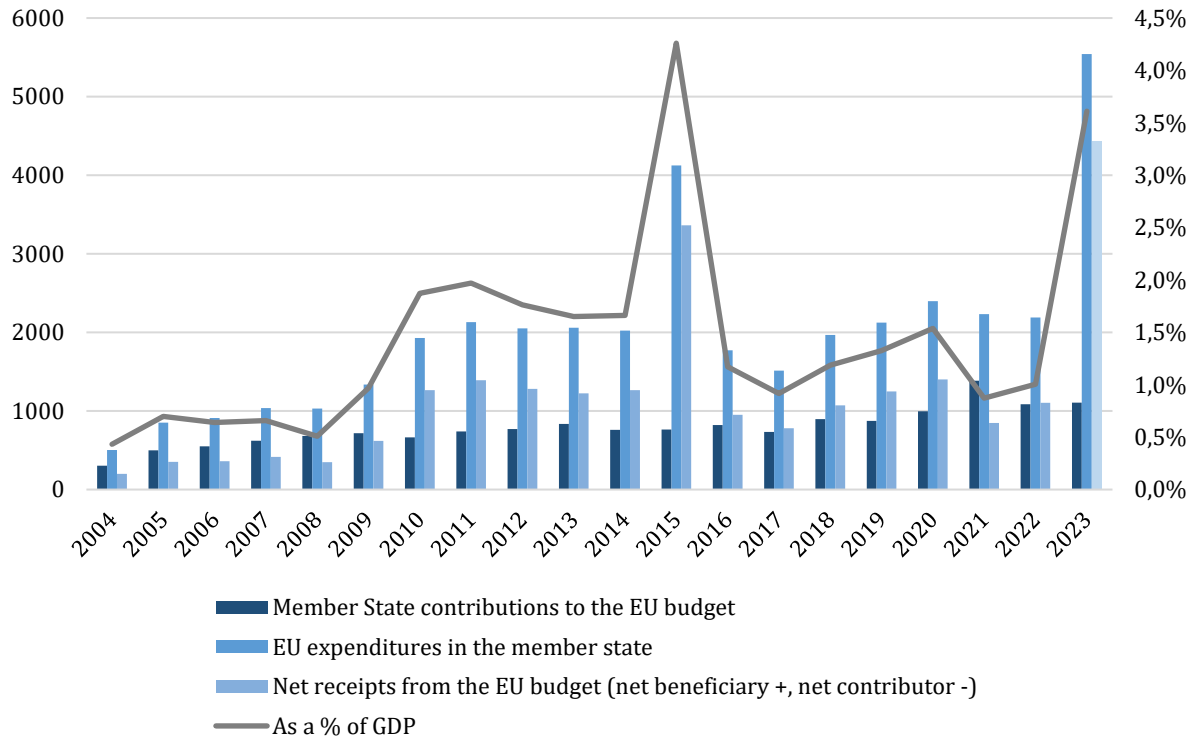
Source: MIRRI (2024).

Financial Position of the Slovak Republic in Relation to the EU Budget

Since joining the EU, Slovakia has been a net beneficiary of funds from the EU budget. Since accession, EUR 24 billion has been invested from cohesion policy resources across three programming periods. Figure 8.9 illustrates the development of Slovakia's net position and its position relative to the EU budget.

Figure 8.9

Development of Net Position of Slovakia Against the EU Budget in 2004 – 2023



Source: Macroeconomic database of the NBS (2024).

A closer look shows that traditionally a large amount of resources is invested at the end of the programming periods (2015 and 2023). We have discussed the reasons for this in previous editions of our publication.

* * *

In recent years, public finances have been exposed to multiple crises, which required responding by increasing expenditures to support various sectors of the Slovak economy. A positive aspect has been that the Slovak economy did not fall into recession in recent years. However, in the coming years, it will be necessary to consolidate public finances to ensure their long-term sustainability. The planned pace of consolidation, aiming to reduce the public deficit by 1 percentage point per year, will require measures on both the revenue and expenditure sides. In 2024, the government presented a consolidation plan but also increased spending in the social sector, which partially complicates this goal. The approval of the thirteenth pension will require expenditures of approximately EUR 828 million annually. Long-term low capital expenditures from national sources should be supported by the new programming period after the end of the previous one. The implementation of the Slovakia Operational Program is only slowly getting underway and remains inadequate. For successful fund utilization, it is essential to set up the cohesion policy management system in a way that allows for accelerating the implementation pace in the coming years.

9. ECONOMIC OUTLOOK

After the previous partial views on various aspects of economic development, this chapter returns to an overall view, in an attempt to provide an idea of future developments in the short term. The first part of the chapter introduces some of the factors arising from current developments that could have a significant impact on the performance of the economy in the near future. This will be followed by a quantification of the expected parameters of the economy.

Driving Forces and Threats

At the turn of 2023 and 2024, the trajectory of a number of macroeconomic parameters has moved in the desired direction: along with disinflation, strong real wage growth has already emerged in the last quarter of 2023, gross fixed capital formation has risen strongly, and real GDP growth has also accelerated slightly (it further accelerated in the first quarter of 2024 – according to the preliminary estimate of the Statistical Office of the Slovak Republic).

Nevertheless, the relevant policy-supporting organisations (IFP or NBS) have revised their expectations in a conservative direction. For example, the Financial Policy Institute (2024) warned that rather downside risks were "materialising" in their spring forecast. Also, the NBS corrected its spring medium-term forecast to less optimistic values (NBS, 2024). Thus, the seemingly paradoxical shifts towards more cautious forecasts, despite the improvement in several parameters at the end of the previous year and at the beginning of the current one, should be seen.

Scarce Workforce Pushes Up Wage Levels

The more than ten per cent growth in average wages in the final quarter of 2023 was primarily the result of a rise in the scarcity of the labour force. The shortage of suitable workers, compounded by the steady decline in the working-age population (presented in Chapter 1), has allowed the workforce to exert pressure to offset the inflationary surge of previous years. The fact that employment growth has slowed to a halt in 2023 itself (and, according to preliminary data, in early 2024) has not changed much. The nature of current wage growth differs from what has been observed in recent years: there is currently no stimulus from the public sector (there has been repeatedly in recent years, in the form of pay rises for health care, teachers, and public administration workers). At present, wage growth is rather outside the public sector. Without public sector leadership, wage growth is more in line with natural labour market developments. The economy rewards what is scarce. Currently, labor is scarce.

This does not mean that the high wage growth that was seen at the turn of the year will persist for much longer. Continued disinflation is also dampening wage growth. However, the scarcity of labour will keep the rate of wage growth above the rate of inflation. The challenge for the corporate sector will be to adequately raise labour productivity growth. Labour productivity dynamics, which is the basis for healthy wage growth, has been too low in the long run.

Disinflation Unblocks the Economy

There is an opportunity for household consumption growth to resume, following its decline in 2023. The low inflation rate (which has been falling continuously from 11% in 2023 to around a quarter of that level in mid-2024) is likely to trigger at least modest growth in household consumption. In the first response to renewed real wage growth (at the end of last year and the beginning of the current one), households reacted modestly. The household sector first boosted its previously depleted savings and only to a lesser extent increased consumption. However, it is noticeable (Figure 9.1) that the renewed growth in real wages is being translated into an improvement in retail sales or in the consumer confidence index.

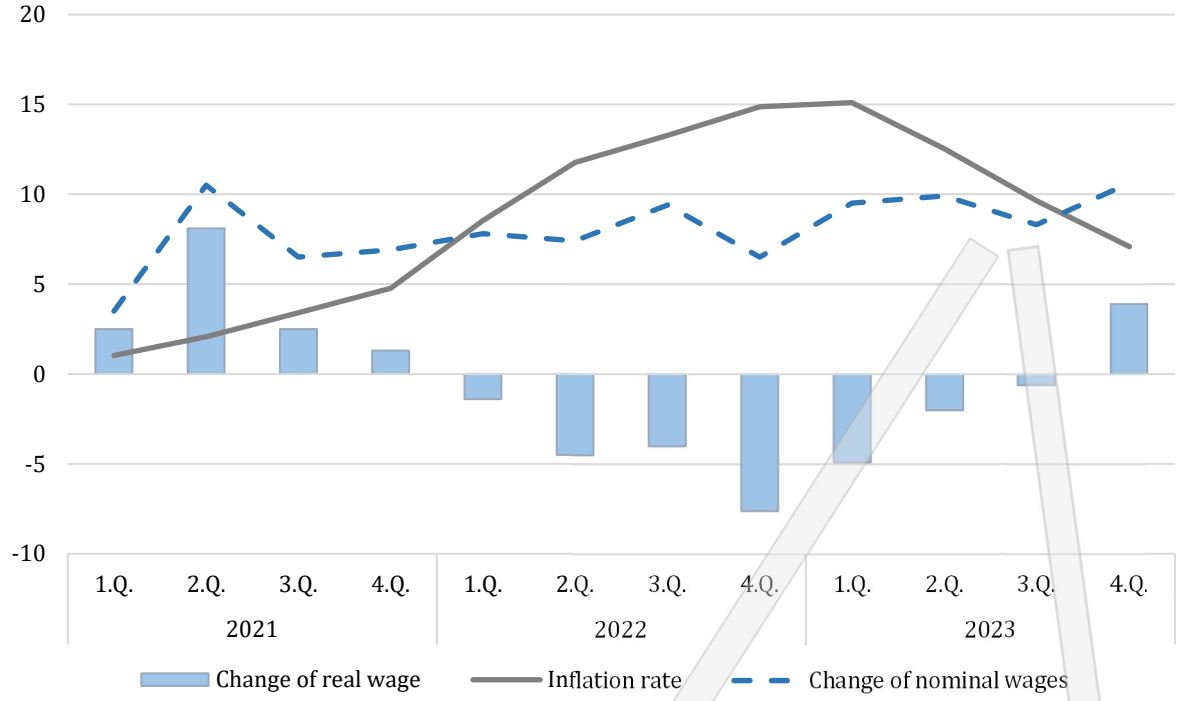
Accelerated wage growth is generally a driver of consumption and hence economic growth. However, increased wages may not translate into increased consumption immediately. In part, households use this to stabilise their finances; only in part does the retreat in inflation and real wage growth translate into consumption growth. The slower transmission of real wage growth into consumption growth is one of the factors for which the forecasts have been revised towards more cautious variants. Moreover, the weaker pick-up in household consumption demand is compounded by even weaker external demand, mainly due to Germany's position between stagnation and sluggish growth. Another reason for a more conservative approach.

„A "Boring" Outlook? Consolidation of Public Finances Brings Tensions

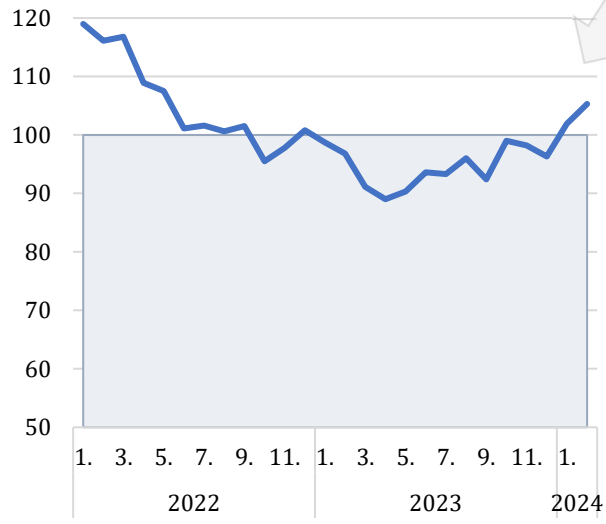
The return of economic parameters to acceptable limits is the common message of the forecasts that appeared in the spring forecasting season. The NBS has introduced its spring-forecast by saying that it is "boring". "Boring" forecast in this context means that no sharp reversals and fluctuations are expected in it, that the parameters are supposed to return to the usual corridor as it were, without shocks. This is a fundamental change from the extremely turbulent years 2020 – 2023, which saw an unusual mix of disturbances: from a global pandemic, through a war in a neighbouring country, to domestic political turbulence (we discussed the impact of this mix of shocks in last year's edition of this publication).

F i g u r e 9.1
Recovering Growth in Real Wages, Retail Sales and Consumer Confidence Index

a) Change s of inflation rate and nominal wages (y/y change in %)



b) Retail trade index (y/y)



c) Consumer confidence index

Note: Year-on-year retail sales index is calculated from constant prices. Level in the same period last year = 100.
Source: Statistical Office of the Slovak Republic

A eagerly awaited phenomenon that inevitably introduces uncertainty is the consolidation of public finances. In hindsight, without knowing many of the details of the expected consolidation measures, three areas of concern can be expressed on the basis of what is already known:

- The first is that the measures will not be in time and effective enough. A credible programme must be presented and implemented before the markets show their distrust (and in part they already do with more expensive loans). At present, the shape of the process is only partially known. The measures are only just taking shape.
- The second is the fear of damaging the functionality of the public sector or reducing the performance of the economy. At no stage should consolidation of public finances be downgraded to unselective cuts. The challenge for policymakers is to consolidate in such a way that the economy emerges from the consolidation more efficient and competitive than it was before.
- The third concern, more broadly socially understood, is the fear of deepening divisions in society. Consolidation politics always brings some "winners" and some "losers". But this division should not be very striking. What we know so far is that there is a risk of an over-explicit victory for the seniors at the expense of younger and middle-aged workers. Intergenerational conflict, rather than the desired intergenerational solidarity, may then be at risk. It is understandable that the seniors (given that they have objectively limited possibilities to defend themselves economically) need a certain degree of protection in austerity measures. But a deepening gap between the groups of 'winners' and 'losers' in the consolidation process could further weaken the cohesion of society (a problem at the interface between sociology and economics).

Forecasting Macroeconomic Parameters of the Slovak Economy

In this section, we look at the expected development of the Slovak economy in the period 2024 – 2028 through the regular macroeconomic forecast of the Institute of Economics of the Slovak Academy of Sciences. This forecast is specific in that, unlike the NBS forecasts, it focuses on a longer time period (the NBS makes its forecasts for the next two years). The ECM (error correction model) econometric model, which has been continuously developed and regularly updated at the IER SAS for a long time, has been used in the forecasting process.

The current version of the model consists of quarterly time series covering the period from the first quarter of 1997 to the fourth quarter of 2023. The data come from the databases of the Slovak Statistical Office, the Ministry of Finance of the Slovak Republic, the National Bank of the Slovakia, the Institute of Labour and Social Policy and Eurostat. The model is divided into 5 blocks (labour market, state budget, prices, foreign trade and GDP) and contains a total of 71 equations. More on the methodology of the model can be found e.g., in Radvanský, Páleník and Slobodníková (2010).

In developing the forecast, we had to rely on a number of assumptions that have influenced the development of the economy in the recent period and are highly likely to continue to influence the further development of the Slovak economy. Such factors included:

- The end of the election cycle, the government's new programme statement;
- In the previous period, the economy faced several successive crises;

- Relatively reduced uncertainty in forecasting;
- Gradual price stabilisation;
- Continued labour market mismatch and shortage of workers in specialised areas;
- Gradual decline in the economically active population due to demographic developments.

Once the starting points were identified, it was then possible to proceed with the forecasting process. In a first step, the assumptions that we expect to happen in the near term were defined. These assumptions can be summarised as follows:

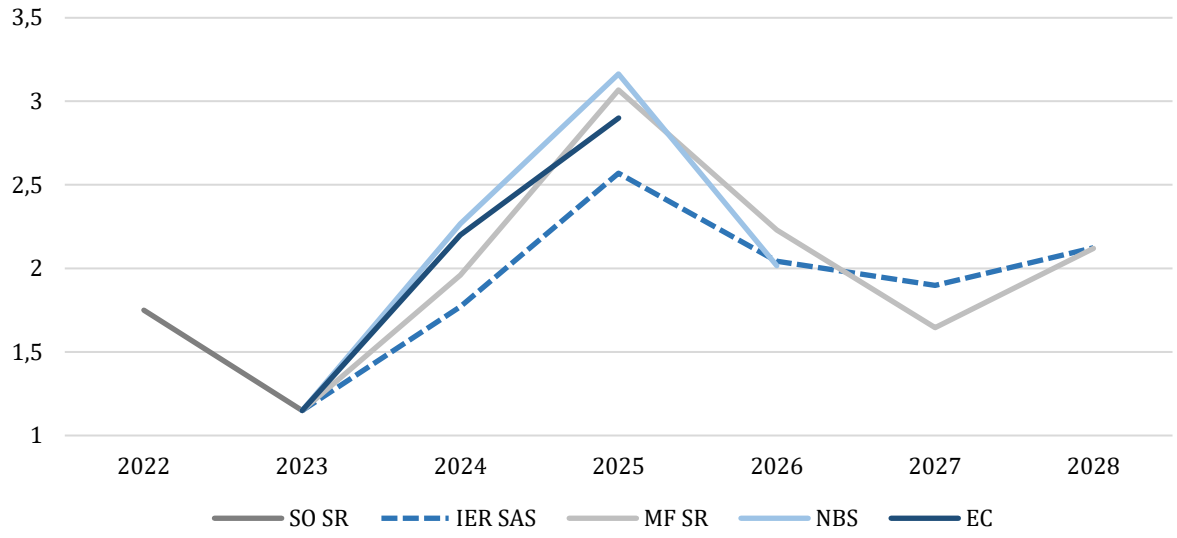
- The recovery of household consumption in 2024 is postponed to later years. This is due to the slow recovery of consumer confidence, uncertainty especially about inflation after sharp shocks, loss of savings leading to a cautious approach to consumption. In line with aggregate demand, household consumption can be expected to stabilise only in 2025, growing roughly in line with the GDP growth rate and the savings rate recovering as well.
- In 2024, we expect weaker export capacity to persist. In addition, we expect a slow recovery in external demand, with traditional sectors with a positive trade balance (mainly the automotive industry) growing only moderately. Uncertainties lie in iron production (sale of U.S. Steel) and higher input requirements for the chemical industry (still higher energy prices; Slovnaft shutdowns due to the switch to processing non-Russian oil). This year, we still expect lower imports than originally expected after the big drop in 2023. Imports will be lower due to weaker domestic consumption, also lower uptake of EU funds investments after high uptake in 2023. We expect a weak start-up of the Recovery and Resilience fund investments with high import intensity. Between 2025 and 2026, we expect exports to grow in line with the recovery in foreign trade. In 2027 and 2028, the Slovak economy will have increased export capacities (e.g., the start of Volvo car production).
- In 2024, public wages growth from 2023 will be carried over. On the other hand, consolidation will be needed from 2025 onwards, which is likely to be implemented on the wage side rather than through redundancies. For this reason, there will also be a lower government consumption deflator from 2025 onwards (1/3 of the wage growth according to the methodology of the ŠÚ SR is carried over to the deflator). We expect consolidation at 0.5% of GDP per year from 2025 (in line with the new EC rules). Due to consolidation, government consumption growth will be weak, but it will be kept above zero by the absorption of EU funds.
- The slowdown in inflation growth will continue in 2024, with energy and food prices rising more slowly than in the previous periods. In 2025, we expect a return to market levels of energy prices (the government has declared that it will no longer subsidise energy for companies and households). In the coming years, we expect standard inflation to reach level of 2.2% (while gradually catching up with price levels in Western economies). We also anticipate additional growth driven by environmental measures (e.g., the introduction of ETS transport purchases from 2026).

- Inventories will recover only slowly (pro-cyclicality), so the negative contribution from 2023 will not be reversed immediately in 2024, but synchronously with the recovery of domestic and foreign demand gradually. From 2026 onwards, inventory growth will be in line with GDP.
- In terms of investment, we expect a much lower absorption of EU funds compared to other estimates (only 90% compared to the MF SR). More will be drawn in 2025 than in 2024.
- In employment, we expect a gradual decline in the potential, with the decreasing number of economically active population to be partly offset by foreign workers. The unemployment rate will stabilise at around 5%.

As a result, the forecast produced by the IER SAS is slightly more pessimistic compared to other institutions (NBS or MF SR). This lower projected growth is mainly due to a different view on three main risks. The first is external developments, which are beyond our control. We are most affected by developments in the global (and especially European) economy and the war in Ukraine. These two aspects will have a major impact on our development. As a second risk we identify the expected consolidation of the government budget, structure of which is currently unknown. Poorly chosen consolidation measures may have negative effects on the development of the economy, especially in selected sectors (e.g., the banking sector). These effects may in turn spill over to other sectors. A final risk is the use of the potential of the EU funds, where we are halfway through the budget period (2021 – 2027) and only a relatively small part of the total budget has been contracted. In the case of the Recovery and Resilience Plan, there is also potential scope for Slovakia to stop payments. These main risks to the forecast may result in an even more negative impact on the expected developments presented in Table 9.1.

Figure 9.2

Real Growth and GDP Growth Projections at Constant Prices of Selected Institutions
(spring 2024 forecasts)



Source: EÚ SAV; MF SR; NBS; ŠÚ SR; European Commission (EC).

Table 9.1

Medium-Term Forecast of the Slovak Economy

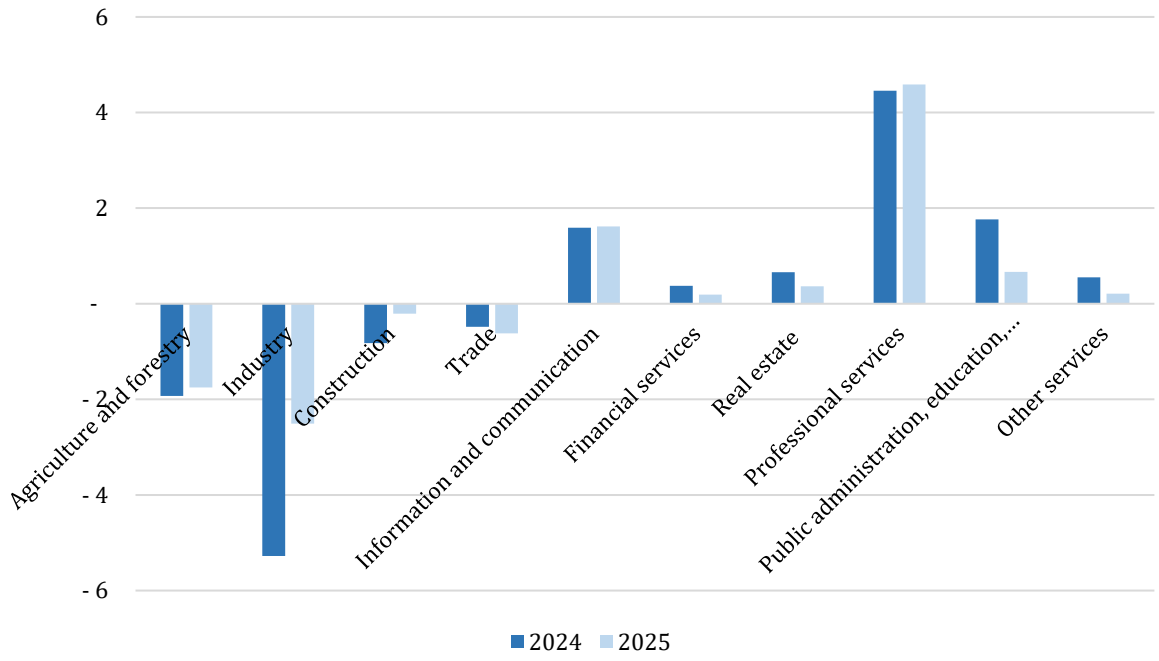
	Reality						Forecast					
					Billions EUR	Growth						
Forecast of GDP components, c.p. 2015	**2019**	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**	**Average 2024 – 2028**
Gross domestic product	89.7	86.7	90.8	92.4	93.5	*1.1%*	*1.8%*	*2.6%*	*2.0%*	*1.9%*	*2.1%*	2.1 %
Household final consumption	49.3	48.8	50.1	52.9	51.6	*–2.5%*	*1.5%*	*2.5%*	*2.1%*	*1.8%*	*2.0%*	2.0 %
Gross fixed capital formation	19.4	17.3	17.9	18.7	20.5	*9.6%*	*–1.3%*	*4.0%*	*0.3%*	*–1.0%*	*2.0%*	0.8 %
Final consumption of general government	16.1	16.0	16.6	15.9	15.9	*–0.5%*	*–1.0%*	*1.2%*	*0.1%*	*0.3%*	*0.2%*	0.1 %
Imports of goods and services	82.9	76.2	85.1	88.7	82.1	*–7.4%*	*2.7%*	*4.9%*	*4.7%*	*3.8%*	*3.7%*	3.9 %
Exports of goods and services	84.7	79.3	87.6	90.2	89.0	*–1.3%*	*1.6%*	*3.7%*	*4.5%*	*4.6%*	*4.0%*	3.7 %
							billions EUR. c.p. 2015					
Net exports, billion EUR, c.p. 2015	1.8	3.2	2.5	1.5	6.9		6.1	5.3	5.4	6.4	7.0	6.0
Labour market LFS	**2019**	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**	**Average 2024 – 2028**
Economically active population, thou. persons	2 746.2	2 712.7	2 747.8	2 773.3	2 770.8	(–2.5 thousand)	*2 768.1*	*2 764.0*	*2 765.1*	*2 757.4*	*2 744.1*	*2 759.8*
Employed, thousand persons	2 583.7	2 531.3	2 560.2	2 602.9	2 608.9	(+6 thousand)	*2 611.3*	*2 611.6*	*2 616.7*	*2 610.3*	*2 596.1*	*2 609.2*
Unemployed, thousand persons	162.5	181.4	187.6	170.4	161.9	(–8.5 thousand)	*156.8*	*152.4*	*148.4*	*147.1*	*148.0*	*150.5*
Unemployment, %	5.8%	6.7%	6.8%	6.1%	5.8%		*5.7%*	*5.4%*	*5.3%*	*5.1%*	*5.1%*	*5.3%*
Wages	**2019**	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**	**Average 2024 – 2028**
Average monthly nominal wage. EUR	1 092	1 133	1 211	1 304	1 430		*1 525*	*1 615*	*1 702*	*1 788*	*1 879*	
Real wage growth, % (2015 = 100)	5.0%	1.8%	3.6%	–4.5%	–0.8%		*3.6%*	*2.2%*	*2.9%*	*2.6%*	*2.5%*	*2.8%*
Real labour productivity growth, %	1.8%	–1.3%	3.6%	0.1%	0.9%		*1.7%*	*2.6%*	*1.8%*	*2.1%*	*2.2%*	*2.1%*
	2019	**2020**	**2021**	**2022**	**2023**		**2024**	**2025**	**2026**	**2027**	**2028**	**Average 2024 – 2028**
Consumer price index, inflation, % (HICP)	2.7%	1.9%	3.2%	12.8%	10.5%		*3.0%*	*3.7%*	*2.5%*	*2.5%*	*2.5%*	2.8%

Source: EÚ SAV.

The results of the forecast suggest that the Slovak economy will grow by 1.8% of GDP (in constant prices) in 2024. In 2025, we expect growth to reach 2.6%, after which we foresee a slowdown (to 2.0% and 1.9% respectively). We expect the Slovak economy to grow the most in 2025, supported mainly by growth in household consumption, gross fixed capital formation (we expect a strong pace of Recovery Plan spending) and a stronger recovery in foreign trade. Unemployment will be close to 5%, while employment will not grow significantly. This paradox will be caused by a smaller economically active population due to the ageing of the Slovak population.

The results of the macroeconomic forecast at the aggregate national level were subsequently used as inputs to the integrated econometric model SLAMM – EC-IO. This model is continuously developed at the Institute of Economics of the Slovak Academy of Sciences and a more detailed description can be found in Radvanský et al. (2019). The primary focus of this model is to disaggregate the demand side of the labour market in Slovakia, which we will also focus on in this year's edition. As already discussed in the chapter on labour market developments in 2023, the evolution of employment in terms of its sectoral breakdown can be expected to continue to show major positive trends in the services sector in the near term, with a continued slight weakening in the manufacturing part of the economy.

F i g u r e 9.3
Expected Year-on-Year Evolution of Employment (thousands of persons)



Source: authors.

However, the magnitudes of the individual changes are relatively limited, which is due to the assumption of only very subdued growth in total employment at around 2,500 persons. Compared to the very turbulent energy developments in 2023 and the subsequent

drop in industrial employment, a smaller scale of job losses can be assumed given the relatively more stable pro-centre. In the construction sector, after a relatively dynamic growth in the previous year, the demand for new employees is expected to stagnate in 2024. For the agriculture and forestry sector, a continuation of the employment decline seen in 2023 seems likely. In 2024, the most dynamic growth is estimated for the professional services sector, which includes, for example, legal, scientific and administrative activities. Following the decline in employment in the information and communication sector in the previous year (2023), this is expected to be offset slightly over the next two years. The projection for 2025 is relatively similar, with a slight acceleration of the decline in industrial employment due to further development of automation and an expected slight increase in energy price uncertainty. The magnitude of employment changes in public administration, education and health is mainly linked to expected consolidation measures.

* * *

The outlook for the near term appears to be significantly more stable than in previous years. The main factors influencing the dynamics of the development of individual economic sectors will be uncertainty in energy prices, the extent and structure of the need for consolidation efforts, the dynamics of absorption of the available resources of the European Multiannual Financial Framework 2021 – 2027 and the evolution of the external environment. Although the expected dynamics are slightly more positive than the historical development of 2023, there are not yet adequate signals for greater optimism. Slovakia's public finances have faced several crises in recent years, which have triggered an increase in spending to support various sectors of the economy. Despite these increases, a recession has been avoided. In the coming years, consolidation of public finances will be necessary to ensure their long-term sustainability. The planned deficit reduction of 1% per year will require measures on both the revenue and expenditure sides. Although the government presented a consolidation plan in 2024, it also increased social spending, making it partly more difficult to achieve the target. The introduction of the 13th pension will have an annual cost of around EUR 828 million. Low capital expenditures from national sources is a long-standing problem. They should be supported by resources from the new programming period once the current programming period is over. However, the implementation of the Operational Programme Slovakia is slow and still insufficient. For successful absorption, the cohesion policy management system needs to be set up in such a way as to allow the pace of implementation to accelerate in the coming years.

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