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COMMISSION STAFF WORKING DOCUMENT

In-depth review for Slovakia

Accompanying the document

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN CENTRAL BANK, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE, THE COMMITTEE OF THE REGIONS AND THE EUROPEAN INVESTMENT BANK

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European Commission

Slovakia

In-Depth Review 2023

On the basis of this in-depth review for Slovakia undertaken under Regulation (EU) No 1176/2011 on the prevention and correction of macroeconomic imbalances, the Commission has considered in its Communication "European Semester – 2023 Spring Package" (COM(2023) 600 final) that:

Slovakia is not found to experience imbalances. Vulnerabilities relating to competitiveness, housing, household debt and external balance have been increasing, but overall seem contained in the near future and are expected to ease as economic conditions normalise. The economy was strongly hit by the energy prices shock with inflation rising fast. Core inflation and unit labour costs growth are well above the euro area average While they are forecast to normalise, there is the risk that pressure on cost competitiveness could take time to unwind, and that strong domestic demand will continue to put pressures on external accounts. The current account deteriorated markedly in 2022 owing to higher energy import prices as well as marked falls in net exports of non-energy goods. The current account deficit is forecast to improve mildly but to remain large in 2023 and 2024, despite the falling energy prices. Nonetheless, external sustainability risks are assessed to be limited in the near term. Government deficits are forecast to be significant this year and next and to correct from 2024. House prices appear to be mildly overvalued after several years of marked growth. That occurred alongside high borrowing, which is now cooling, and a strong increase in household debt, which altogether present some risk for financial stability. However, the banking sector remains well capitalised, highly profitable and recording low non-performing loans. Continued efforts are needed to tackle Slovakia's economic vulnerabilities. In particular, excess demand should be reined in to support the correction of the current account deficit and the core inflation differential vis-à-vis the rest of the euro area. That can be achieved by ensuring adequate fiscal consolidation and measures to address household debt, while retaining housing affordability through property taxation and measures supporting housing supply.

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1. INTRODUCTION

In 2022, over the previous annual cycle of surveillance under the Macroeconomic Imbalance Procedure (MIP), Slovakia was not subject to an in-depth review to assess its vulnerabilities. ([1]) The 2023 Alert Mechanism Report published in November 2022 concluded that an in-depth review (IDR) should be undertaken for Slovakia this year, with a view to examine newly emerging vulnerabilities and their implications. The AMR concluded that in Slovakia, concerns related to cost competitiveness and house price developments existed already before the COVID-19 pandemic and were increasing. Nominal unit labour cost growth was set to accelerate, and core inflation was very high compared with Slovakia's euro area peers. Strong house price growth continued and was accompanied with sustained increases in household debt over recent years. The current account deficit was increasing strongly. The high government deficit warranted close monitoring. ([2])

The Slovak economy slowed down in 2022 and 2023 amidst an uncertain economic environment. ([3]) The economic recovery from the COVID-19 crisis came to an abrupt end in 2022, when Russia's invasion of Ukraine placed a drag on the economy by triggering supply chain disruptions and a surge in energy prices. Slovakia experienced a slowdown in GDP growth to 1.7% in 2022, compared to 4.9% in 2021. GDP growth is forecast at 1.7% in 2023 and to pick up to 2.1% in 2024. Economic activity is dampened by the deterioration of global growth prospects, resulting in reduced confidence of economic agents, and the prolonged pressure on prices, adversely impacting demand. Inflation has picked up from 2.8% in 2021 to 12.1% in 2022, with energy and food prices passing through to prices of other goods and services. As the governmental measures start being phased out in 2024, energy inflation will remain strong. Consumer food prices grew swiftly in Q1 2023 and labour market tightness is set to contribute to more persistent growth of prices in the service sector. Therefore, inflation is forecast at 10.9% in 2023 and at 5.7% in 2024. This represents a significant inflation difference to the other EU countries posing a risk to cost competitiveness along with a further deterioration of the trade balance given Slovak economy's dependence on exports.

This in-depth review presents the main findings of the assessment of macroeconomic vulnerabilities for Slovakia. The assessment is backed by a thematic section on household debt. Vulnerabilities related to competitiveness, external balances and housing, in Slovakia are also discussed in horizontal thematic notes that that were recently published. ([4]) The MIP assessment matrix is published in the 2023 Country Report for Slovakia. ([5])

([1]) European Commission (2022), European Semester Spring Package 2022, COM(2022) 600 final.

([2]) European Commission (2022), Alert Mechanism Report 2023, COM (2022) 381 final.

([3]) European Commission (2023), European Economic Forecast: Spring 2023, Institutional Paper 200.

([4]) European Commission (2023), Housing Market Developments: Thematic Note to Support In-Depth Reviews, European Economy: Institutional Papers, 197. European Commission (2023), Inflation Differentials in Europe and Implications for Competitiveness: Thematic Note to Support In-Depth Reviews, European Economy: Institutional Papers, 198. European Commission (2023), External Sustainability Analysis: Thematic Note to Support In-Depth Reviews, European Economy: Institutional Papers, 196.

([5]) European Commission (2023), Country Report Slovakia 2023, SWD(2023) 625 final.

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2. ASSESSMENT OF MACROECONOMIC VULNERABILITIES

Gravity, evolution and prospects

Inflation has been elevated in recent years and accelerated strongly as of mid-2021, diverging further from the EA average. Both headline and core inflation are substantially higher than the euro area average. The possibility of higher inflation becoming persistent raises concerns over a possible decrease in Slovakia's competitiveness. External balances deteriorated, driven primarily by the sharp increase in energy prices and the current account turned strongly negative after a long period of moderate deficits. In parallel, the Slovak economy has experienced very rapid house price growth over the last two years, accompanied by strong credit flows to households. This IDR examines these effects to assess the extent of vulnerabilities facing the Slovakian economy and whether they are cause for concern over the near future.

Competitiveness

On 5 April 2023 the Commission published a horizontal thematic note on competitiveness, which also covers Slovakia. It showed that unit labour costs have grown faster than in other European countries over the last decade, as wage growth outpaced productivity growth. Slovakia's core and HICP-based REERs have been appreciating continuously since 2015. While inflation is high and strongly accelerated in 2022, both on account of imported inflation, and of inflation in domestic value added; domestic inflation plays a relatively limited role in the overall increase in export prices. This could be linked to Slovakia's integration in European manufacturing supply chains, producing goods exports with very high import content. As export prices are almost fully driven by import price developments, there are no major concerns yet about more persistent price competitiveness losses. At the same time, current inflation developments could lead to a lasting deterioration in economy's competitiveness if the inflation differential persists and is possibly associated with higher wage growth.

Unit labour costs (ULC) have been on the rise since 2015 and are likely to accelerate in the near term. Since 2015, nominal unit labour cost (ULC) growth in Slovakia has been consistently above the EU and EA averages. The average annual growth of unit labour costs in Slovakia was 4.6% over the years 2015-2022, compared to an EU average of 2.0% and an EA average of 1.9%. Unit labour cost growth was underpinned by steady nominal wage growth exceeding 5% since 2017. While real wage growth was also relatively strong and outpaced productivity until 2021, inflation differentials played an increasing role as of 2017. In 2022, due to skyrocketing inflation, real wages declined – and more strongly so than in the EU and EA. They are expected to further decline in 2023, as firms are under pressure from high energy costs and have little room to raise wages. In 2024, a partial recovery of real wages is expected in spite of inflation remaining relatively high, bringing nominal wage growth to 7.5%, and giving another boost to ULC growth as productivity lags behind. Slovak labour market is very tight, and the situation is not expected to improve given the labour

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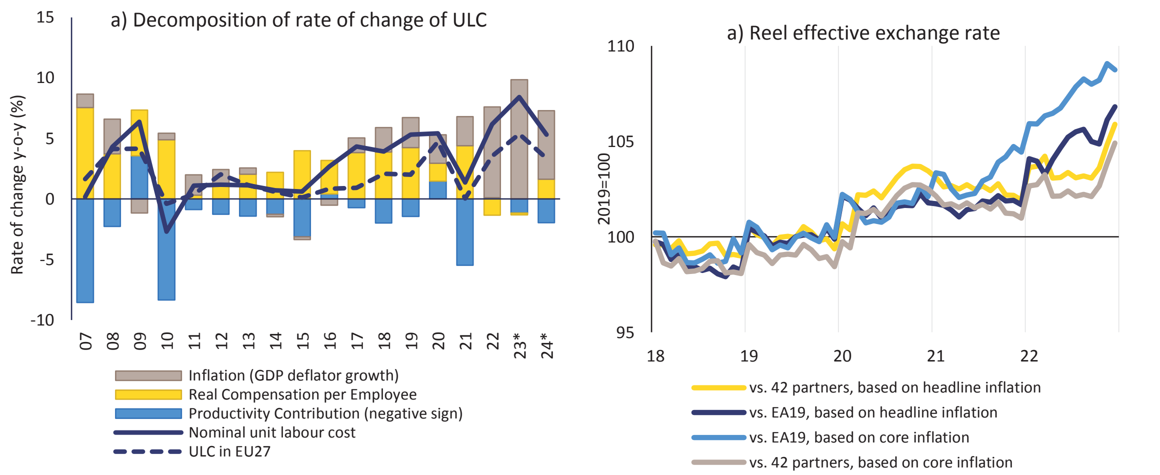
demand and falling population. The differential of inflationary developments in Slovakia represents a significant risk for the ULC growth in 2023 and 2024, having a potentially detrimental effect on Slovak competitiveness (graph 2.1 a).

The real exchange rate has been appreciating and is now estimated to be overvalued. Slovakia experienced a real appreciation of both HICP and ULC-based REERs over the period 2016-2022 and a Commission analysis points to a possible overvaluation of REERs both in terms of HICP and ULC (graph 2.1a). ([6]) Medium to large REER overvaluation in 2021 was also observed in the IMF model estimations. ([7]) In 2021 and 2022, the main contribution to headline REER appreciation was the core inflation differential with the euro area, while energy and food inflation differentials even contributed negatively (graph 2.2 a). The Commission forecast on continued strong ULC growth in 2023 and 2024 is likely to imply further appreciation of ULC-based REERs.

Graph 2.1: **Unit labour cost and real effective exchange rate developments**



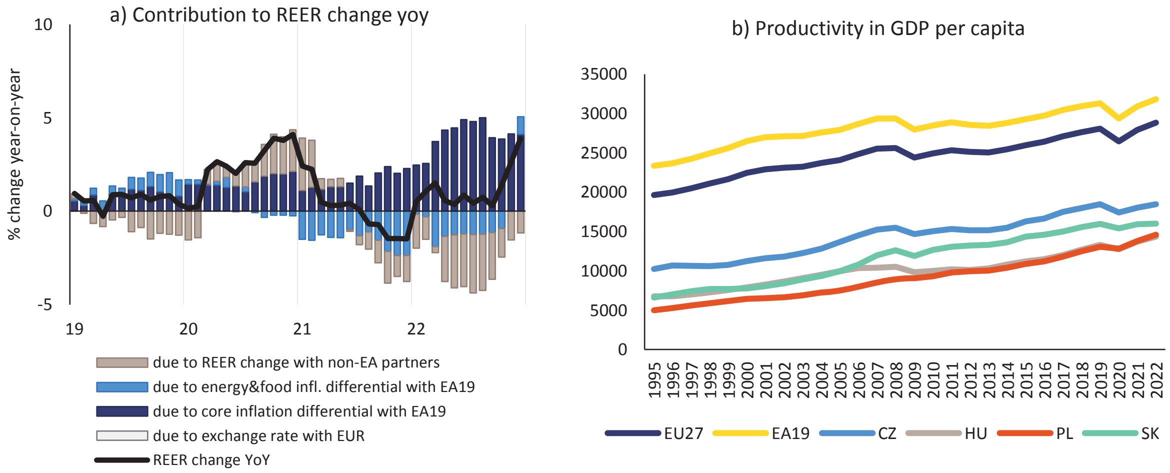
Source: European Commission services

The rate at which Slovakia was catching up with the other EU countries in terms of productivity growth has slowed down compared to the early 2000s. Slovakia was growing faster than the other EU countries in terms of productivity until 2015. Afterwards, productivity has been growing at a slower pace in Slovakia in comparison with peer countries (graph 2.2 b). Lower productivity growth can be partially explained by lower FDI inflows and an associated slowdown in technological progress. In addition to ongoing demographic shifts, the shortage of skilled labour also reflects remaining weaknesses in the domestic education sector, which are likely to contribute to weak productivity and innovation outcomes.

([6]) European Commission (2023), XXX, COM (2023) XXX final. (Cost competitiveness note)

([7]) 2022 ARTICLE IV CONSULTATION - SLOVAK REPUBLIC, IMF Country Report No. 22/202

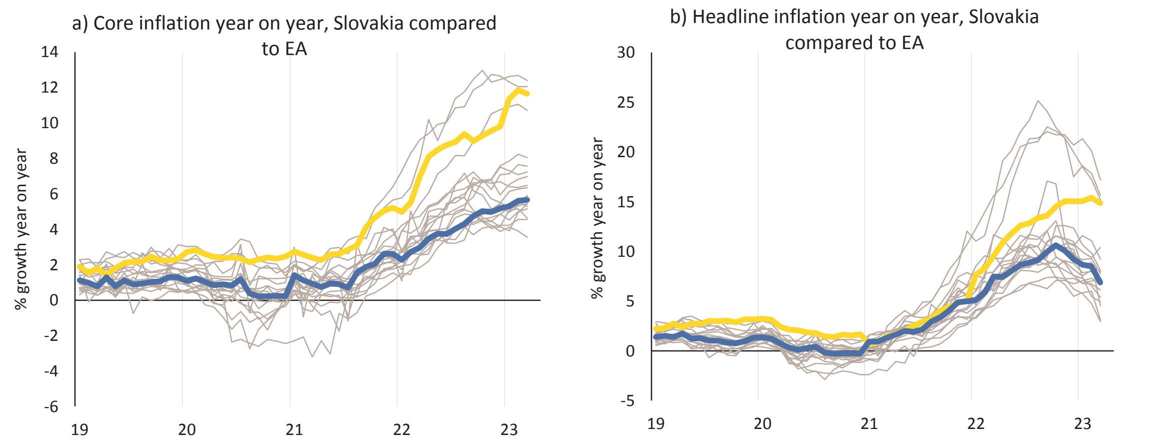
Graph 2.2: **Reer and productivity in GDP per capita (in chain linked volumes 2010, euro per capita)**



Source: European Commission services

Inflation in Slovakia grew rapidly in 2022 and the first quarter of 2023; and persistent inflation differentials could adversely affect cost competitiveness going forward. Headline inflation in Slovakia consistently outpaced inflation in the EU and the EA over the period 2018-2021. It then accelerated as of mid-2021 in the aftermath of the pandemic. In 2022 it shot up, to 12.1% (from 2.8% in 2021), as a result of the Russian invasion of Ukraine and the rapid increase in energy prices that accompanied it, causing it to further diverge from the EU average (at 9.2%) and the EA average (at 8.4%). Like in other countries in the region, core inflation in Slovakia was considerable as well, at 10.4%; whereas it remained more contained in the EU (4.7%) and the EA (4.0%). On the other hand, the contribution of energy prices to overall HICP inflation was significantly lower in Slovakia than in neighbouring countries reliant on energy imports. In the first months of 2023, inflation continued to accelerate in Slovakia. Even if energy inflation is expected to subside, headline inflation is expected to remain high even in 2024, above levels forecast for other EA member states. If inflation differentials with other euro area countries or other major trade partners of Slovakia persist, and feed into wage increases, Slovakia's price competitiveness risks eroding even further.

Graph 2.3: **Core and headline inflation evolution**



Source: European Commission services

Potential competitiveness losses resulting from high inflation may deteriorate the performance of the export sector. Export market shares and the real exchange rate had been broadly stable until 2020. Slovak exporters lost part of their market shares in 2021 and 2022, likely caused by supply disruptions. As supply bottlenecks resolve, Slovakia may regain some of the losses. Still, real appreciation driven by high inflation differentials worsened the position of Slovak exporters in 2022. As the inflation slowdown is likely to be more sluggish than in the euro area, real appreciation may continue. In addition, nominal wage growth has picked up recently. Although more persistent wage growth above inflation is unlikely, the cumulative growth of labour cost is set to weigh on businesses unless countered by productivity gains. Still, the competitiveness losses in general, and the recent energy price shock in particular, are unlikely to lead to a substantial relocation of production or large shifts in the Slovak economy in the short term. The deep integration in the supply-chain ecosystem for motor vehicles cannot be easily replicated elsewhere.

Slovakia's reliance on low value-added activities represents a vulnerability in a context of deteriorating cost competitiveness. Slovakia ranks at the bottom of the EU regional competitiveness index (RCI). ([8]) Transformation readiness of Slovakia is also very low while it has one of the highest shares of jobs at risk of automation in the OECD. ([9]) Slovakia benefits from a strong integration in global value chains. However, its role focuses mostly on assembly of imported items; resulting in a high share of foreign inputs and a very small share of domestic value added in exports. Moreover, production and exports are concentrated strongly on the electronics and automotive sectors, which are expected to be strongly affected by structural change as a result of the green and digital transition. ([10])

The impact of the present inflation differentials on price competitiveness and the sustainability of the external position can be a risk that warrants close monitoring. In the past, factors promoting non-price competitiveness seem to have successfully countered the impact of deteriorating price competitiveness on Slovakia's export performance in spite of years of steady REER appreciation. Slovakia's starting point of comparatively low labour costs vis-à-vis many other EU Member States and progressive integration into global value

(8) EU Regional Competitiveness Index 2.0 - 2022 edition, https://ec.europa.eu/regional_policy/assets/regional-competitiveness/index.html#/

(9) The Global Competitiveness Report SPECIAL EDITION 2020, World Economic Forum, How Countries are Performing on the Road to Recovery, https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2020.pdf

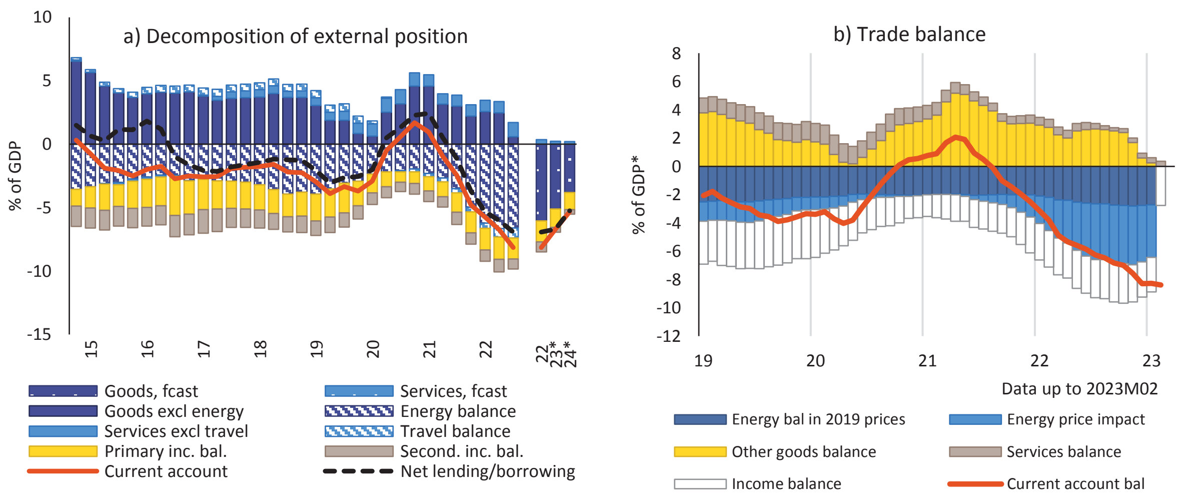
(10) Giorno, C. (2019) Increasing the benefits of Slovakia's integration in global value chains. OECD Economics Department Working Papers No. 1552. https://one.oecd.org/document/ECO/WKP(2019)21/En/pdf

chains has certainly played a beneficial role. At the same time, future developments remain fraught with uncertainty and Slovakia's future export performance will depend on absorbing the effects of high inflation and productivity growth consolidating.

External balances

On 5 April 2023 the Commission presented a horizontal thematic note on external sector's sustainability, which also covered Slovakia. The note analysed the decline in Slovakia's current account in 2021 and in the first three quarters of 2022, which was one of the sharpest among the EU countries. It was mainly driven by the evolution in the balance of trade, which was, in turn, largely determined by the worsening balance of trade in energy goods, amid increasing energy prices. While the deterioration of the energy balance accounted for most of the trade balance decline in 2022, the balance of trade in goods excluding energy also worsened. As the deterioration in the balance of trade was largely driven by the worsening terms of trade, the decline was smaller when trade flows are measured in constant prices. Slovakia also has a significantly negative net international investment position (NIIP), which is below the MIP indicative threshold of -35% of GDP, as well as below the fundamental and prudential NIIP thresholds. The NIIP excluding the non-defaultable (NENDI) instruments was much less negative.

Graph 2.4: **Current account**



Source: European Commission services

Slovakia's current account has continued to deteriorate throughout 2022 and is below the level explained by economic fundamentals. Before the pandemic crisis, Slovakia had been recording moderate current account deficits, which had gradually deteriorated and reached -3.3% of GDP in 2019. After improving briefly to -0.6% in 2020, it declined to -2.5% of GDP in 2021 and to -8.2% in 2022 (see graph 2.4a). It is now far below the level suggested by the economic fundamentals, but also below the current account levels required to reach the prudential NIIP threshold or stabilise the NIIP over the next ten years. The fall in the current account after 2020 was one of the sharpest among the EU countries. It was mainly driven by movements in the goods balance, which first improved by more than 2 pp to 2.1% of GDP in 2020. It then deteriorated to -0.03% in 2021 and continued to decline in 2022 to -5.7% in 2022. The balance of trade in goods dynamics has been largely determined by the energy balance, which worsened from -2.1% of GDP in 2020 to -3.5% in 2021, and with the decline accelerating in 2022 to -6.6% of GDP. This development has mostly been caused by the soaring energy prices, which have recently been the major driving force in shaping the overall current account movements (graph 2.4 b). In addition, also balance of trade in goods excluding energy deteriorated significantly in 2022, from 3.0% of GDP in 2021 to 0.6% in 2022. Further, albeit smaller, contributions to the declining current account came from the balance of trade in services and the primary income account.

In 2022, the changes of the overall export and import flows have mainly been driven by the changes in deflators. After a strong fall in trade flows during the pandemic crisis, exports and imports of goods and services recovered to, i.e. exceeded, the pre-pandemic values already in Q2 and Q3 2021, respectively (graph 2.5c). ([11]) The recovery was mainly driven by the change in volumes of trade, while price changes remained relatively contained until the last quarter of 2021. However, especially in 2022, contributions to changes in trade from the changes in deflators became dominant (graph 2.5 d), with much steeper increases in prices of imported goods and services, than of exported, being the main factor behind the worsening trade balance. As exports and imports in constant prices changed less in 2022, the trade balance did not deteriorate by as much in real terms as it did when trade flows are measured in current prices. The alternative perspective (graphs 2.5a and b) shows the developments in output and domestic demand, with the growth of the latter considerably outpacing GDP growth, in current, but also in constant prices, pulling down the trade balances in 2022. The price effects were dominant, as the changes in demand deflator exceeded those of the output deflator. The decomposition of domestic demand shows again that dynamics were determined mostly by the deflators, especially for consumption. Domestic demand grew in real terms, mainly driven by real consumption developments but with some positive contribution coming also from real investment (graphs 2.5e and f).

([11]) When measured in constant prices, both exports and imports reached the pre-pandemic levels already in Q2 2021. However, they remained rather stagnant thereafter, likely also reflecting the supply chain disruptions. In particular, many industries began to significantly delay production due to late chip deliveries. Among others, several car companies were forced to limit production. Thus, for Slovakia's export-oriented economy with a high share of cars in total exports (25% in 2021), bottlenecks in supply chains have been a significant slowing factor.

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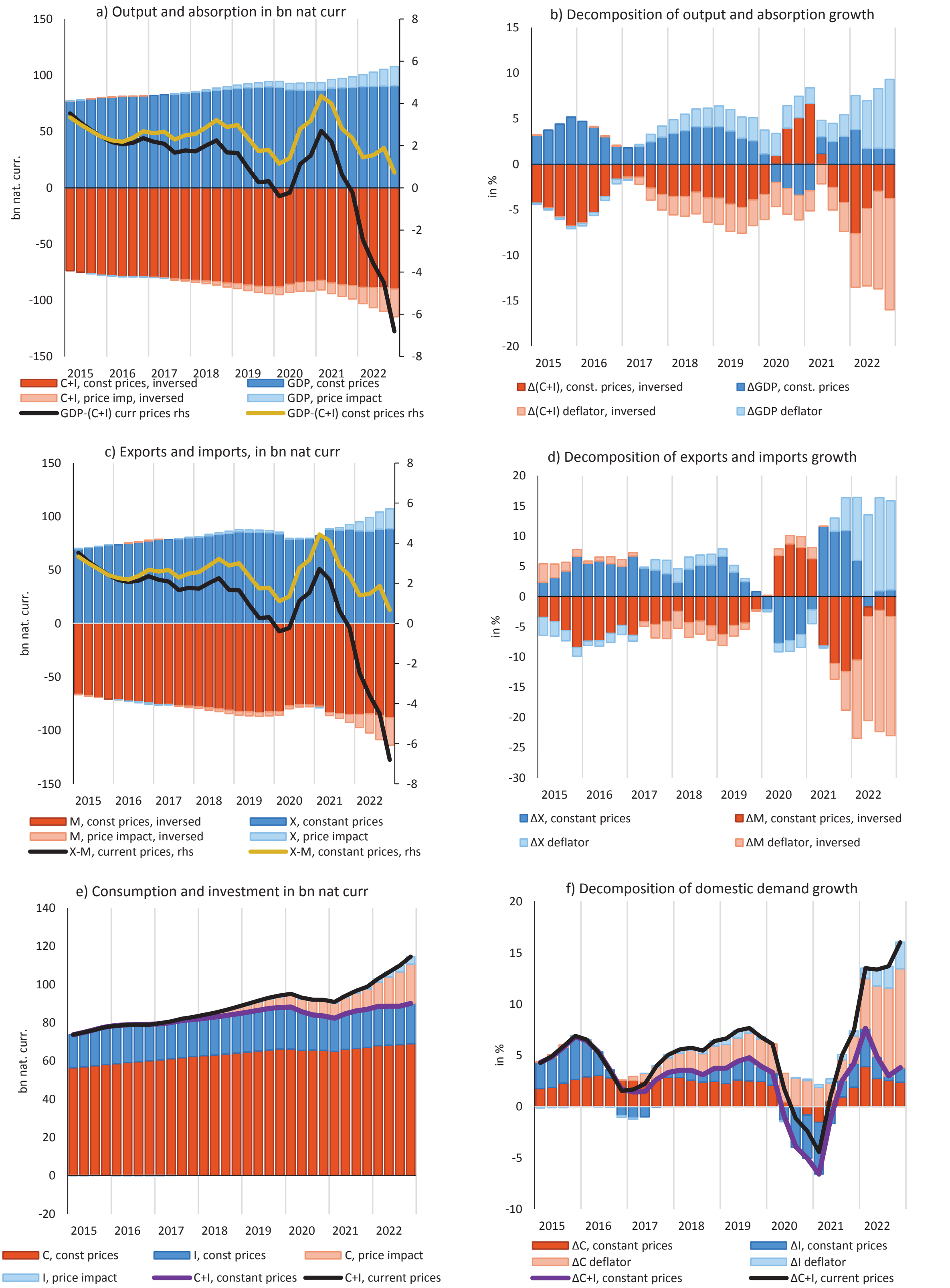
Graph 2.5: **Export/imports growht and domestic absorption**

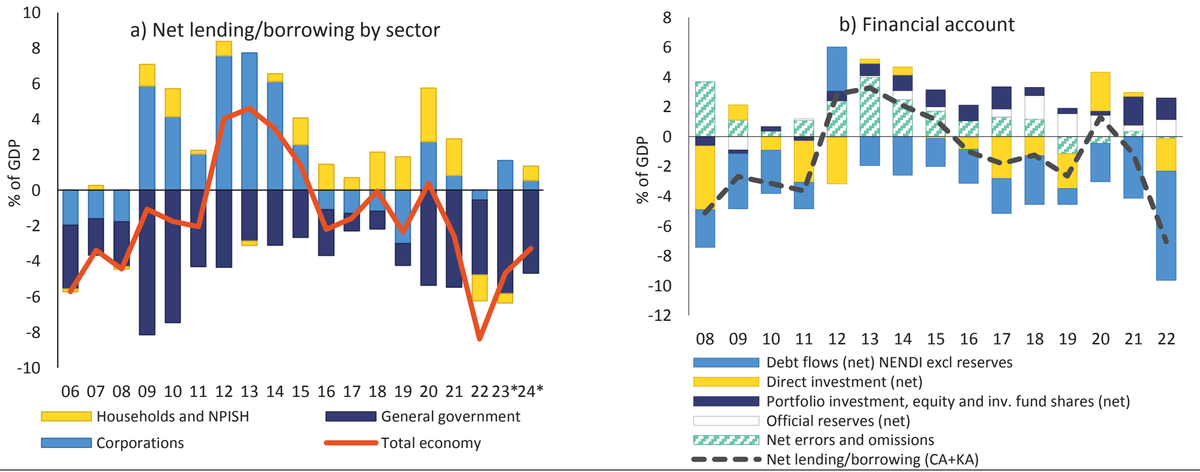


Source: European Commission services

The government deficit decreased in 2022 but is expected to increase in 2023 due to costs of the support measures in the energy crisis. Households significantly reduced their energy consumption, and market prices are already below the governmental price cap. The large government deficits observed in 2020 and 2021 subsided somewhat in 2022, from

5.4% of GDP to 2.0% (graph 2.6a). As the worsening of the private sector's position in 2022, both of households and corporates, have exceeded the improvement in government net borrowing, the total economy's net position deteriorated further, from -2.4% of GDP in 2021, to -7.9% in 2022. After accounting for the transfers from the EU budget under the RRF and the MFF, which are an important source of external finance, the recent deficit has primarily been financed by net inflows in form of other investment debt instruments (graph 2.6b). In addition, while foreign direct investment started flowing in again in net terms, outflows in form of portfolio investment, both equity and debt, continued.

Graph 2.6: **NLB and financial account**



Source: European Commission services

The current account deficit is expected to close only gradually. As the energy prices moderate and temporary supply chain disruptions subside, Slovak exports of goods should regain traction. Overall Slovak exports are expected to grow in real terms at 3% in 2023 and 6.3% in 2024, against an import growth of 4.0% in 2023 and 5.3% in 2024, leading to a gradual improvement of the trade balance. This should help the current account to start improving as of 2023, reaching -7.0% in 2023 and -5.6% in 2024. Faltering export growth in 2022 was caused by temporary problems with supplies in industry and temporarily weaker demand for Slovak products. The main engine of Slovak exports is the automobile sector where bottlenecks could remain in 2023, although they are expected to be less disruptive than in 2022. Government net borrowing is expected to have gone down in 2022, but it is expected to increase again in 2023 due to energy measures and lower revenues. In 2023, households' net position is expected to remain negative while corporations are expected to turn into net lenders. Some small improvements in the current account beyond 2022 should be driven by recovering private sector savings coupled with a small decline in private sector investment.

Over the last decade, the NIIP of Slovakia was broadly stable floating between 60% and 70% of GDP. Contrary to most EU countries, Slovakia improved its NIIP position during the pandemic period from -65.6% in 2019 to -61% in 2021. However, it then deteriorated slightly again, reaching -62.1% of GDP by the end of 2022 (graph 2.7 a), despite a considerable positive contribution from the nominal GDP growth. Given the substantial negative NIIP, the contribution from investment income has expectedly been consistently negative over a longer period, but in 2022 it was reinforced by the substantial negative net transaction effect on the financial account excluding the investment income (graph 2.7b). The NIIP remains below the fundamental NIIP and the prudential threshold. In gross terms, foreign direct investment account for a large share of liabilities (graph 2.7d), including equity and intercompany loans, with little reliance on foreign credit by the private sector and therefore little risk of capital outflows. Thus, the NIIP excluding the non-defaultable instruments (NENDI), at -18.5% of GDP in 2022, is much more favourable than the NIIP. Slovakia registered a significant recent increase in assets and liabilities in form of other investment (graph 2.7d). Both started decreasing again over the last two quarters, but in net terms, the negative stock of other investment widened considerably. As for the sectoral composition, the central bank's position has worsened since 2019, while those of the general government and of the private sector improved (graph 2.7 a).

The outlook for the NIIP over the medium term is negative. As shown by the NIIP projections for the next ten years (graph 2.7c), under the baseline scenario, which assumes that the trade balance remains constant beyond the forecast horizon, i.e. after 2024, the NIIP of Slovakia is projected to worsen and come to around -84% of GDP in 2032. ([12]) However, as the trade balance adjustment following the very strong recent shocks may take longer to unwind, the more positive alternative scenario includes assumptions of higher trade balance in 2025 and beyond by 2 pp of GDP, as compared to the baseline scenario. The improvement in trade balance in 2025, assumed to be driven by lower energy prices and higher exports relative to the baseline, is assumed to lead to higher real GDP growth in that year by 2 pp of GDP as compared to the baseline. In addition, a more negative alternative scenario is also explored, as one cannot exclude the possibility of future adverse shocks to energy prices and exports. The more pessimistic scenario assumes lower trade balance in 2025 and beyond by 2 pp of GDP, as well as lower real GDP growth in 2025 by 2 pp of GDP, as compared to the baseline. The NIIP projections under the alternative scenarios bring the NIIP in 2032 down to levels of around -68% of GDP under the more optimistic alternative assumptions, i.e. -100% of GDP assuming more adverse developments.

([12]) The methodology used for the projections is described in European Commission, 2015, 'Refining the methodology for NIIP-based current account benchmarks', LIME Working Group 17 June 2015; and in European Commission, 2021, 'External sustainability assessment – gauging the impact of the Recovery and Resilience Facility', Note for the attention of the EPC LIME Working Group, 9 September 2021.

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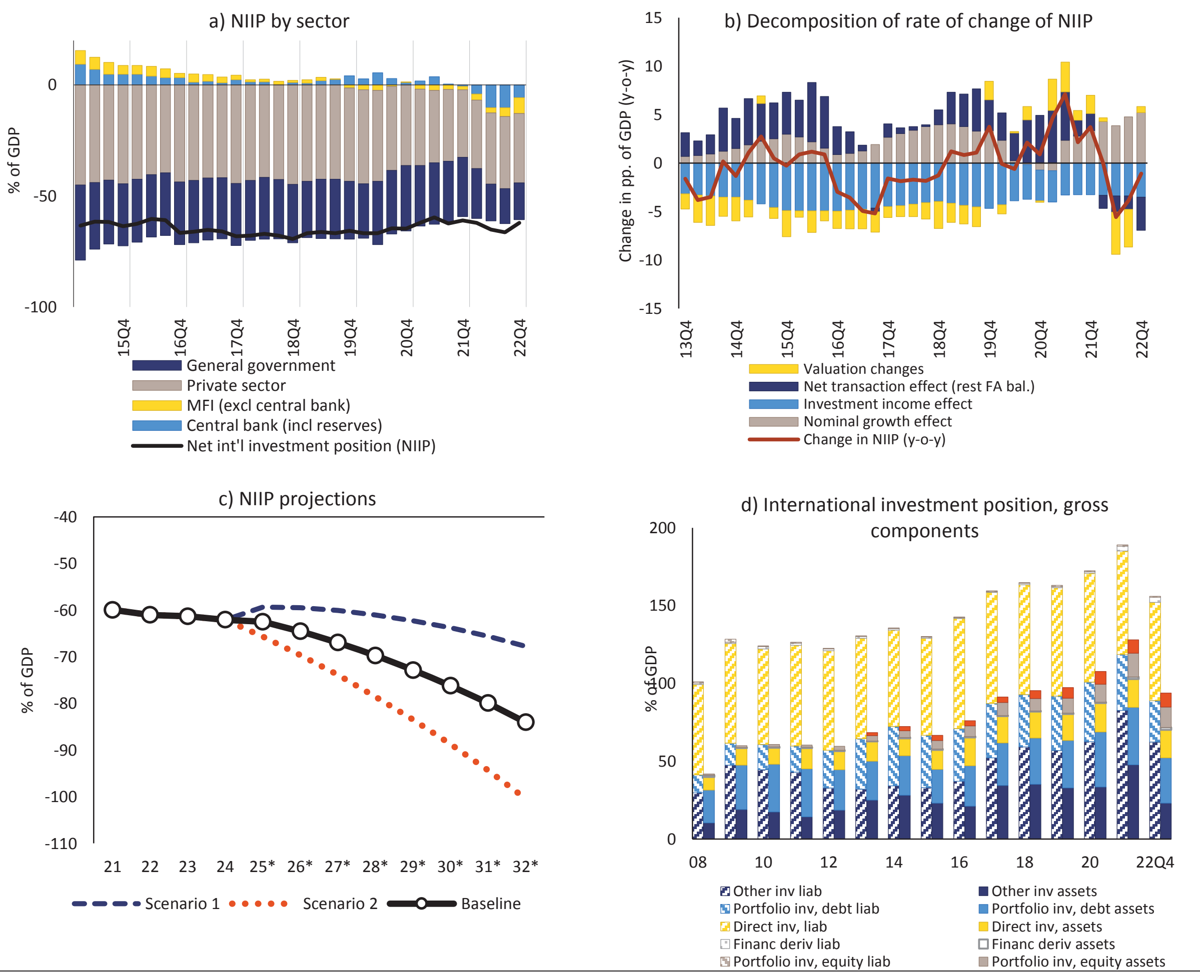
Graph 2.7: **Net international investment position**



Source: European Commission services

In sum, while recent developments of the external balance have been concerning, conditions are likely to start improving going forward, but important risks remain. After years of running a moderate current account deficit, conditions swiftly deteriorated as a result of the economic consequences of Russia's invasion of Ukraine. Changes in the trade balance reflected mostly price effects, even if net exports also worsened in real terms. Several of the drivers of the current deterioration are likely to be temporary; as a result the current account is forecast to strengthen, but to still remain in a non-negligeable deficit. Nevertheless, important risks remain. If inflation differentials persist and become entrenched, pushing REERs to further appreciate, this could in the medium term result in deteriorating export prospects and exacerbate the trade deficit in the context of an already substantial negative NIIP.

Housing Market

On 5 April 2023, the Commission presented a horizontal thematic note on housing, which also covers Slovakia. The note documented that housing prices in Slovakia have almost doubled in nominal terms over the last decade (Table2.2). The global financial crisis had triggered a sharp decline in property prices in Slovakia, when they fell by up to 25%. Subsequently, prices increased by 90% between 2012 and 2022 (Graph2.8 b), while disposable income increased by 57% over that period, and over half of this increase in house prices took place over the last three years. House prices have accelerated mainly since the pandemic, and the house price-to-income ratio is now 30% higher than a decade ago. The strong growth in housing prices occurred on the back of an increase in the household debt-to-GDP ratio and dynamic credit growth developments in the past decade, with a sharp acceleration in recent years (see Section 3: Thematic chapter on household debt). Nominal house prices grew by 21.3% year-on-year in 2022, while in real terms they increased by 7.7%. These are high growth rates by historical standards and the growth in nominal house prices was the third highest among EU countries.

Slovak property prices appear to be overvalued, which present a risk for financial stability alongside household indebtedness. Given the house price increase over the last years, the price-to-income ratio now stands over 30% higher than a decade ago and is close to its level in the run-up to the global financial crisis. The increase in house prices exceeds rental price growth, as the price-to-rent ratio is 86% higher than in 2012 (Graph2.8). The Commission's house price valuation methodology suggests that prices are overvalued by 12% (the average valuation gap of three methods), while the ECB estimates the overvaluation of the Slovak housing market to be even higher. The valuation estimates are affected by the high increase in house prices relative to rents – which is in part driven by the structure of the rental market – but also by the strong increase in house prices relative to incomes that has taken place since the pandemic. In December 2021, the European Systemic Risk Board (ESRB) issued a warning to Slovakia ([13]) about medium-term vulnerabilities in the residential real-estate market being a potential risk to the country's financial stability because of the potential house-price overvaluation coupled with the high rate of house price growth as well as rising household indebtedness with pockets of risk related to increasing household indebtedness and high mortgage credit growth.

The acceleration in house price growth in recent years appears to have been driven by favourable economic conditions and occurred alongside a strong increase in household debt over the last decade. Before the outbreak of the pandemic, households benefited from favourable macroeconomic development, notably high GDP growth and low unemployment. Historically low interest rates and easily available loans motivated them to take mortgages for property purchases. In 2010, household debt in Slovakia stood at just under 25% of GDP and was amongst the lowest in the EU. Since then, household debt has increased gradually, reaching close to 48% in 2022. Following these years of increases, Slovakia stands out among EU countries for the rate of increase of household debt, and among its regional peers for its relatively high level of household debt. This debt is concentrated primarily among households with mortgages, who comprise a quarter of Slovak households. Section 3 of this IDR analyses household debt in more detail.

After the pandemic and up to early 2022 house price growth accelerated, before starting to decline. After the outbreak of the pandemic, property prices accelerated due to attractive financing conditions accompanied by the wish to make working in the home office more convenient and supportive government measures, which protected the purchasing power of households and further boosted the demand for housing and mortgage credit despite the macroprudential measures adopted since 2018 (see Section 3 on household debt), notably increases in the countercyclical capital buffer and tighter borrower-based measures (loan-to-value, debt service-to income and debt-to-income limits, as well as restrictions on loan maturities). Growth in housing prices peaked in the first half of 2022, when the expectation of a rise in interest rates motivated households to lock in attractive loan conditions, either for housing or for investment as protection against an expectation of further rising inflation and nominal interest rates. The volume of approved loans reached historical highs, mainly due to the refinancing of existing loans, which allowed households to prolong their portfolio fixation at still relatively low interest rates. Households preferred to

([13]) Warning of the European Systemic Risk Board of 2 December 2021 on medium-term vulnerabilities in the residential real estate sector of Slovakia.

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take loans with a 5-years fixation period (see Section 3: Thematic chapter on household debt). However, with rising interest rates and an increase in the cost of living, lending (including refixation) slowed down significantly in the second half of 2022. As a consequence, the speed of house sales has slowed, and the number of available real estate advertisements started to accumulate after a long time. This led to a quarter-on-quarter decline in housing prices by 1.9% in the fourth quarter of 2022, even though prices still grew on year-over-year basis. House prices fell most significantly in the Bratislava and Žilina regions.

Housing supply is insufficient and has been lagging behind the strong demand in recent years. The average growth in the number of constructed dwellings was 6.2% over the last 5 years before the pandemic, which seems to be lagging behind the strong demand for housing given that the average growth in loans for housing reached 11.8% over the same period. The number of building permits for new buildings in Slovakia has been decreasing each year since 2018 ([14]) In 2020, it took an average of 300 days to obtain a building permit in Slovakia, which ranked Slovakia last among all OECD high-income countries in the World Bank's Doing Business ranking. In 2021, the number of newly constructed dwellings decreased by 3.9% 2021, which could be a result of the slowdown in construction activity during the pandemic. The largest decrease was in the capital region of Bratislavský (by 16.6%) and the Košický region (by 16.1%), which have a high population density and therefore also a high demand for housing.

In Slovakia's thin rental market, home rental remains relatively unattractive in comparison with home ownership. In Slovakia, over 90% of households own their home, with most of them having no mortgage (see Section 3: Thematic chapter on household debt). This is the result of a large-scale privatisation of state-owned real estate properties in the 1990s at a preferential rate. Only 7.7% of all households lived in rental housing in 2021, which is the second-lowest share in the EU after Romania (3.9%). An underdeveloped rental market boosts the demand for properties and puts a limit on domestic labour mobility. The share of young people aged 18 to 34 still living with their parents was 65.2% in 2020, which is much higher than the euro-area average (48.3%), although the share has been falling in recent years. With the tightening of financial conditions in 2022, living in owner-occupied accommodation has become less affordable in all regions and for all income and age groups, according to the National Bank of Slovakia (NBS) ([15]). Housing is least affordable in the Prešov, Košice, and Žilina regions, while Bratislava is better off, thanks to both dynamic wage growth and falling house prices in the recent months.

A significant number of residents own more than one property, while not offering them on the rental market, suggesting a high share of unoccupied properties. In 2020, approximately 22% of property owners owned more than one property, which indicates that Slovaks buy real estate not only for housing but also as a form of safe investment. However, almost 87% of those who own more than one property did not pay property rental tax for the relevant fiscal year. It indicates that either these properties were offered to owners' family members or friends without any income, or they were illegally rented without meeting tax liability, or they were indeed unoccupied, which worsens the supply issue. The supply of housing for rent (especially in the capital city of Bratislava) also competes with the increased interest in offering real estate for short-term rent via online platforms, which cooled down during the pandemic, but is still very popular. On the acquisition of housing assets, capital gains from transfer of immovable properties are taxed as part of a taxpayer's annual income. Capital gains derived from the sale of real estate are exempt from taxation if an individual

([14]) The exception is the year 2021, when the number of building permits increased by 5.7% year-over-year. This increase is likely caused by the catch-up from the pandemic years and does not cover the decrease from 2018. In 2022, the number of building permits decreased again by 6%.

([15]) Financial Stability Reprot of the National Bank of Slovakia from November 2022.

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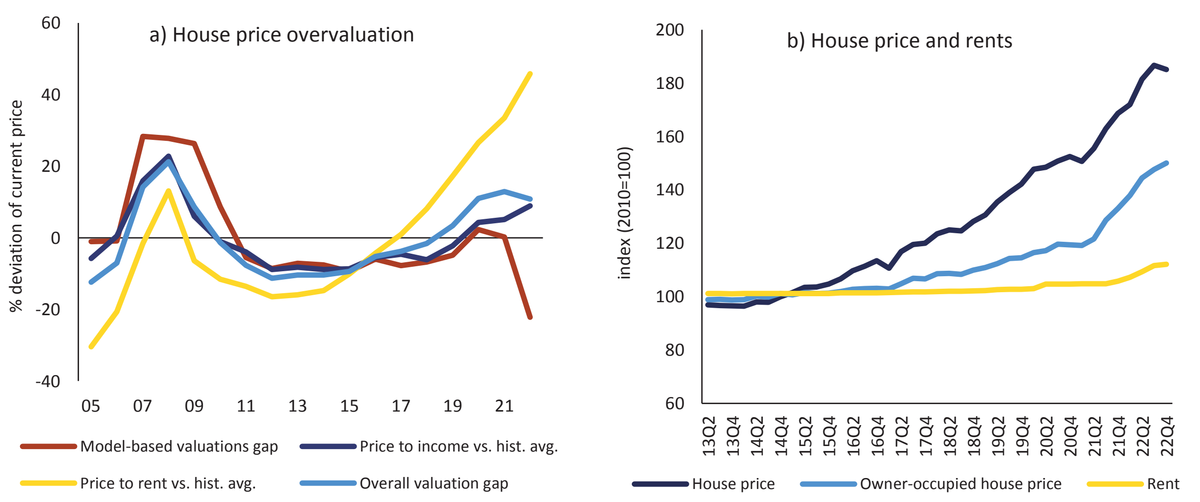
has held the property as a non-business asset for longer than 5 years prior to the sale. Although the property tax is recurrent over the holding period of the asset, the tax revenue is low compared to the EU (0.5% of GDP compared to 1.1% in the EU). Slovakia uses area-based property taxation, where the tax liability is primarily based on the size of the property.

Graph 2.8: **House price evolution**



Source: Eurostat and European Commission services

Going forward, a number of demand-side and supply-side factors give rise to the expectation of moderating house price developments. First, for the next two years markets expect a further tightening of monetary policy and increasing interest rates. In addition, banks are tightening credit standards, also in response to additional macroprudential measures that have been coming into force (see 3: Thematic chapter on household debt). This more difficult access to credit dampened the demand for housing and is expected to continue doing so. Second, the current economic slowdown with a reduction in household purchasing power and increased economic and geo-political uncertainty are weighing on housing demand. Third, envisaged policy measures, such as the shortening of the time to obtain a building permit or the support of government rental housing, should improve the situation of housing supply. Fourth, expected easing of supply chain disruptions and labour shortages in the construction sector should improve. Taking these demand and supply factors together, the growth of property prices is expected to be very moderate in the coming years if not even coming to a halt in nominal terms.

Assessment of MIP relevant policies

Macroprudential policy measures have been taken to address concerns about the high household debt. In 2018, the National Bank of Slovakia (NBS) introduced a new set of macroprudential measures with the aim of curbing the growing household indebtedness. Although the restriction of credit supply did not translate into a decrease in demand for properties, the resilience of the financial system improved, which can be observed, for example, in historical lows of NPLs. However, despite these measures, in February 2022 the ESRB issued a warning to Slovakia with view of the increasing risk of house price overvaluation, high house prices growth, and rising household indebtedness suggesting fine-tuning the existing borrower-based measures framework to tackle these pockets of vulnerability. In June 2022, the central bank adjusted the limit for total indebtedness for loans

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approaching the borrower's retirement age with the aim to mitigate the risks of excessively high debt burden upon retirement. The current macroprudential measures alongside ongoing tightening of monetary conditions in the euro area are expected to limit mortgage growth and further household debt accumulation.

The approved amendment to the Construction Act should shorten the length of construction procedures and reduce the administrative burden. The record length of dealing with building permits should be addressed by two new laws (the Construction Act and the Act on Land-Use Planning), which were approved in 2022. Both laws will enter into force from April 2024 and should reduce the administrative burden on construction-related activities, simplify building permit procedures, introduce electronic processes and digitalization of data related to land-use planning and construction. It is expected that the issuance of a building permit will be possible within 40 working days.

The law on state support for rental housing is supposed to improve the insufficient availability of rental housing. The government law approved in 2022 aims to build a total of 9,000 rental apartments for approximately 1.5 billion euro. The rent in these apartments should be significantly cheaper compared to the mortgage payment. State-supported rental housing should bring about higher availability of housing for people who do not have sufficient income to obtain a mortgage, or it would be disadvantageous for them. However, progress in the construction of new apartments has been limited so far. Supporting insufficient housing supply, including by supporting the development of the rental market, would help to dampen the housing price pressures. The social housing is also addressed in Programme Slovakia, where support should be focused on primarily marginalized (mainly Roma) communities.

There is room to improve the tax mix, which would reduce the gap between supply and demand in the housing market. Slovakia applies an area-based property taxation, which is common in Central Europe (e.g. also in Czechia and Poland), but exceptional among other OECD countries. A new system, in which tax obligations would depend on the estimated market value of the property could improve the fairness, bring revenues to public finances, and dampen the strong demand for housing properties. The identification of the reasons for non-payment of rental tax and the penalization of those who evaded the tax obligation should also contribute to the stabilization of prices in the housing market.

Slovakia recognised the urgent need to diversify away from Russian energy imports, lower energy intensity and make progress in greening electricity production. Ongoing discussions on REPowerEU and RRP-financed projects are expected to help accelerate the energy transition. With the existing high demand for renewables, plans are being pursued by the Ministry of Economy to reduce the administrative barriers for renewables, improve the regulative framework and expand grid capacity. These investment are however expected to improve the energy security in the medium term, not immediately. There are also ongoing campaigns on energy efficiency of buildings. This should lower the dependence on imports of energy and help to avoid any further current account balance shock. The temporary governmental intervention in the energy market should start being phased out in 2024. This should lead both to a lower government lending, which was necessary to sustain this subsidy, and higher energy price which should moderate consumption.

Improving non-price competitiveness and promoting productivity growth is essential to counter the losses in cost competitiveness. The Slovak government has already defined a national strategy for research and innovation which aims to simplify burdensome regulation and improve skilled labour by attracting and retaining educated young people. Given their high share in the total business, low-productive micro firms weigh down the aggregate productivity of the economy, pointing to the need of a policy focus on scaling up the innovation potential of smaller businesses. The productivity of larger small and mediumsized businesses, albeit higher, still remains comparatively low among OECD countries ([16]). Important policy levers include effective education and training and research and development policies.

Slovakia could further promote the competitive advantages and technological capabilities of the automotive industry by strengthening local conditions for investment. Slovakia already attracts international companies which plan to invest in the electric vehicle production in Slovakia. However, they are facing delays in construction due to planning procedures, pointing at further scope to reduce administrative burden. Policy should also tackle other structural problems such as weaknesses in the capacity of public administration to invest and implement reforms, and problems linked to late payments and access to finance.. Slovakia could also consider promoting tests in specific locations to allow companies to test the implementation of autonomous vehicles by introducing the necessary legislation on the circulation of autonomous vehicles and introduce legislation on alternative fuel vehicles.

Conclusion

In Slovakia, vulnerabilities relating to competitiveness, housing, household debt and external balance have been increasing. The Slovak economy was strongly hit by the energy price shock. While still facing elevated price pressures and related secondary effects, Slovakia's price competitiveness is projected to partially recover going forward amid decreasing energy prices. A concern is whether growth of inflation and ULC will revert to historical averages or remain more persistent. The trade balance in volumes remain mostly unchanged in 2022 but significantly deteriorated in value terms due to increased energy import prices and partially because of supply-chain bottlenecks leading to lower growth in exports. The deficit in trade of goods is expected to start closing gradually. House prices are likely to undergo a period of moderation, given the interest rate rises and the economic slowdown underway. Yet, the possible moderation of mortgage growth through the channel of rising interest rates ultimately depends on the European Central Bank monetary policy for the eurozone. Although a decrease in housing prices is expected also in the near future, the risk of a 2007-style boom-bust cycle seems low. Credit to households is likely to slow down, additional macroprudential measures have been taken, and the banking sector is well capitalized, highly profitable and benefiting from the low NPL. Going forward, Slovak inflation is expected to be still one of the highest in the EU in both 2023 and 2024 with serious implications for Slovakia's competitiveness, possibly hampering a healthier recovery of the trade balance. While the current account deficit is forecast to reduce, it will remain in the short term at a significant deficit. Any further deterioration, or any incomplete correction, of the trade balances would increase the current account deficit.

Continued efforts are needed to provide a policy environment conducive of keeping the identified vulnerabilities in check. Macroprudential policy measures have been taken to address concerns about the high household debt. Continued efforts to improving non-price competitiveness and promoting productivity growth can help countering the losses in cost competitiveness, and excess demand should be kept in check to support the correction of the current account. This can be achieved by ensuring adequate fiscal consolidation and taking measures to keep household debt in check, which could be via the tax system. To address vulnerabilities related to the housing market, the approved amendment to the Construction Act should shorten the length of construction procedures and reduce the administrative burden. The law on state support for rental housing is supposed to improve

([16]) 2022 ARTICLE IV CONSULTATION - SLOVAK REPUBLIC, IMF Country Report No. 22/202

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the insufficient availability of rental housing but further supporting the development of the rental market would also contribute. Moreover, there is room to improve the tax mix, to reduce the gap between supply and demand in the housing market.

Based on the findings in this in-depth review, the Communication "European Semester – 2023 Spring Package" ([17]) sets out the Commission's assessment as to the existence of imbalances or excessive imbalances in Slovakia, in line with Regulation 1176/2011.

([17]) European Commission (2023), European Semester Spring Package 2022, COM(2023)XXX final.

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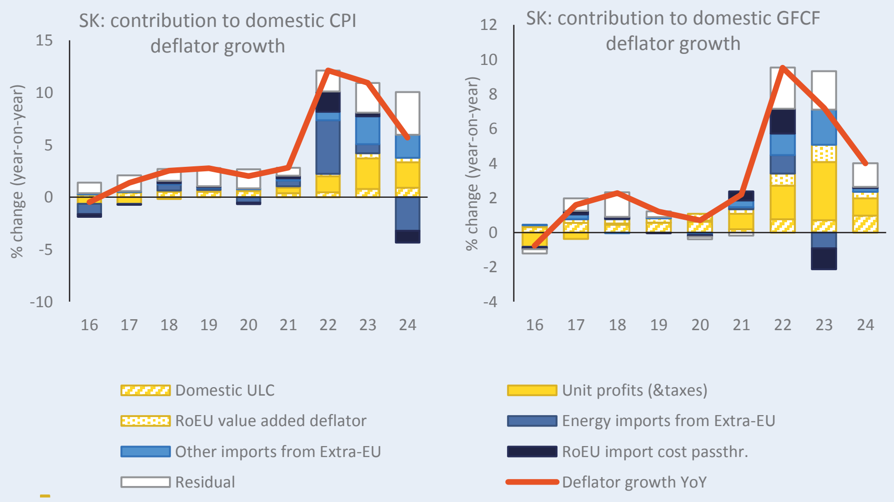
Box 1: Inflation exposures and cross-border pass-through

This box sheds light on the sources of inflation in Slovakia and its spill-overs with EU partners. The period since 2021 has been characterized by pandemic aftershocks and global supply chain disruptions compounding global inflationary pressures and a surge in commodity prices triggered by Russia's war of aggression against Ukraine. As a result, inflation in Slovakia surged to unprecedented levels. In response, wages and profits also picked up across the EU, which further added to price pressures in Slovakia. With input-output data, domestic inflation can be decomposed into the contributions from key cost factors. Taking into account some data limitations, the framework can be used to attribute consumer and investment price changes to i) extra-EU import price changes, which include both directly imported inflation and inflation passed through from EU partners import costs ii) domestic unit labour cost changes iii) domestic unit profit changes, including indirect taxation changes and iv) rest-of-EU value added price changes. ([18])

Data suggests that much of inflation in Slovakia in 2022 reflected surging import prices, whereas the importance of domestic drivers is expected to increase in 2023. In 2022, as shown in Graph 2.9, energy prices were a key driver of consumer inflation. The contribution from inflation passed through EU partners and from domestic value-added inflation, namely unit profits, were substantial. Energy inflation contributed much less to investment inflation. The impact of energy inflation is set to subside and to eventually decrease inflation this year and next. Value added inflation in EU partners also increased investment inflation in Slovakia somewhat. The importance of domestic value added inflation is expected to increase. Both unit profits and unit labour cost are expected to keep inflation elevated in 2023 and 2024. Non-energy imports from outside the EU are also expected to continue fueling inflation in Slovakia. In addition, spill-overs from value added inflation in EU partners are set to add to investment inflation.

Graph 2.9: **Components of gross fixed capital formation deflator growth and consumer price inflation**



Source: European Commission services

([18]) The graphs below are based on national accounts data and the Commission's Spring 2023 forecast, combined with Eurostat input-output data. HICP is taken as the measure of the price of private consumption, including non-residents. Changes in import prices and value-added deflators are assumed to affect demand prices with a delay of 5 months. For a similar analysis using an input-output-based methodology, see "Inflation Differentials in Europe and Implications for Competitiveness: Thematic Note to Support In-Depth Reviews" European Commission 2023, Institutional paper 198.

Table 2.1: **Selected economic and financial indicators (Part 1), Slovakia**

all variables y-o-y % change, unless otherwise stated	2003-07	2008-12	2013-18	2019	2020	2021	2022	forecast 2023	2024
Real GDP	7.3	2.1	2.9	2.5	-3.3	4.9	1.7	1.7	2.1
Potential growth (1)	5.5	3.7	2.2	2.5	1.4	1.7	1.9	2.5	2.1
Contribution to GDP growth:									
Domestic demand	5.2	0.6	2.6	3.8	-3.1	3.0	3.4	2.8	1.5
Inventories	0.3	-0.6	0.4	0.0	-1.9	2.6	-0.1	-0.1	0.0
Net exports	1.8	2.0	-0.1	-1.3	1.6	-0.8	-1.6	-0.9	0.6
Contribution to potential GDP growth (1):									
Total Labour (hours)	0.3	0.7	0.0	-0.3	-0.7	-0.3	0.2	0.4	0.0
Capital accumulation	0.9	1.0	1.0	1.2	0.5	0.5	0.6	1.0	1.0
Total factor productivity	4.2	2.1	1.2	1.6	1.6	1.5	1.1	1.0	1.1
Output gap (2)	1.0	-0.1	-0.7	2.0	-2.8	0.3	0.0	-0.7	-0.7
Unemployment rate	15.3	12.6	10.5	5.7	6.7	6.8	6.1	5.8	5.4
Harmonised index of consumer prices (HICP)	4.9	2.7	0.7	2.8	2.0	2.8	12.1	10.9	5.7
GDP deflator	3.5	1.0	0.8	2.5	2.4	2.4	7.5	9.8	5.7
External position									
Current account balance (% of GDP), balance of payments	-7.2	-3.6	-1.0	-3.3	0.6	-2.5	-8.2	-7.0	-5.6
Trade balance (% of GDP), balance of payments	-2.8	-0.2	2.3	0.1	2.1	0.0	-5.7	.	.
Primary income balance (% of GDP)	-3.9	-2.3	-1.7	-2.3	-0.8	-1.5	-1.7	.	.
Secondary income balance (% of GDP)	-0.5	-1.2	-1.6	-1.1	-0.7	-1.0	-0.8	.	.
Current account explained by fundamentals (CA norm, % of GDP) (3)	-0.7	-0.3	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.2
Required current account to stabilise NIIP above -35% of GDP over 20Y (% of GDP) (4)	-1.8	-1.4	-1.9	-1.7	-1.8	-1.6	-1.3	-0.8	-0.5
Capital account balance (% of GDP)	0.2	1.3	1.4	0.7	0.8	1.3	1.2	.	.
Net international investment position (% of GDP)	-47.2	-61.4	-65.5	-65.7	-64.7	-59.9	-61.0	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (5)	0.3	-9.9	-14.0	-14.1	-14.8	-14.4	-18.2	.	.
Net FDI flows (% of GDP)	-5.7	-2.0	-0.7	-2.3	2.6	0.3	-2.1	.	.
Competitiveness									
Unit labour costs (ULC, whole economy)	2.2	2.0	2.6	5.3	5.4	1.3	6.2	8.4	5.3
Nominal compensation per employee	8.3	3.8	3.6	6.8	3.9	6.9	6.0	9.7	7.4
Labour productivity (real, hours worked)	5.5	1.8	2.2	2.2	6.0	4.7	-2.5	0.8	1.5
Real effective exchange rate (ULC)	5.7	2.2	0.8	2.8	1.2	1.0	2.2	1.6	1.3
Real effective exchange rate (HICP)	8.1	2.6	0.4	0.8	2.1	0.0	2.1	.	.
Export performance vs. advanced countries (% change over 5 years)	83.9	16.4	4.4	-0.4	8.0	1.5	.	.	.
Private sector debt									
Private sector debt, consolidated (% of GDP)	47.3	66.5	83.7	91.0	94.7	92.2	91.8	.	.
Household debt, consolidated (% of GDP)	11.9	24.6	36.3	43.4	46.5	47.0	47.1	.	.
Household debt, fundamental benchmark (% of GDP) (6)	12.9	19.9	25.6	27.2	29.6	30.0	29.1	.	.
Household debt, prudential threshold (% of GDP) (6)	54.2	44.6	56.0	55.4	50.5	48.1	47.8	.	.
Non-financial corporate debt, consolidated (% of GDP)	35.4	42.0	47.4	47.6	48.2	45.2	44.6	.	.
Corporate debt, fundamental benchmark (% of GDP) (6)	43.0	42.5	45.4	44.4	47.3	47.4	45.5	.	.
Corporate debt, prudential threshold (% of GDP) (6)	69.8	57.6	76.3	70.0	68.2	67.1	67.8	.	.
Private credit flow, consolidated (% of GDP)	6.9	6.0	5.9	4.5	2.8	4.4	8.1	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	-2.5	3.6	2.1	-3.0	3.2	0.8	-4.2	1.8	0.4
Households, net lending (+) or net borrowing (-) (% of GDP)	-0.1	0.7	1.0	1.9	2.9	2.2	-1.7	-2.4	-0.8
Net savings rate of households (% of net disposable income)	0.7	1.7	2.4	3.9	5.5	4.2	-2.6	.	.

(e) estimate based on ECB quarterly data
(1) Potential output is the highest level of production that an economy can reach without generating inflationary pressures. The methodology to compute the potential output is based on K. Havik, K. Mc Morrow, F. Orlandi, C. Planas, R. Raciborski, W. Roeger, A. Rossi, A. Thum-Thysen, V. Vandermeulen, The Production Function Methodology for Calculating Potential Growth Rates & Output Gaps, COM, European Economy, Economic Papers 535, November 2014.
(2) Deviation of actual output from potential output as % of potential GDP.
(3) Current accounts in line with fundamentals ("current account norms") are derived from reduced-form regressions capturing the main determinants of the saving-investment balance, including fundamental determinants, policy factors and global financial conditions. See L. Coutinho et al. (2018), "Methodologies for the assessment of current account benchmarks", European Economy, Discussion Paper 86/2018, for details.
(4) This benchmark is defined as the average current account required to halve the gap between the NIIP and the indicative MIP benchmark of -35% of GDP over the next ten years, or to stabilise the NIIP at the current level if it is already above the indicative MIP benchmark. Calculations make use of Commission's T+10 projections.
(5) NENDI is a subset of the NIIP that abstracts from its pure equity-related components, i.e. foreign direct investment (FDI) equity and equity shares, and from intracompany cross-border FDI debt, and represents the NIIP excluding instruments that cannot be subject to default.
(6) Fundamentals-based benchmarks are derived from regressions capturing the main determinants of credit growth and taking into account a given initial stock of debt. Prudential thresholds represent the debt threshold beyond which the probability of a banking crisis is relatively high, minimising the probability of missed crisis and that of false alerts. Methodology to compute the fundamentals-based and the prudential benchmarks based on Bricongne, J. C., Coutinho, L., Turrini, A., Zeugner, S. (2019), "Is Private Debt Excessive?", Open Economies Review, 1- 42.
Source: Eurostat and ECB as of 2023-04-28, where available; European Commission for forecast figures (Spring forecast 2023)

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Table 2.2: **Selected economic and financial indicators (Part 2), Slovakia**

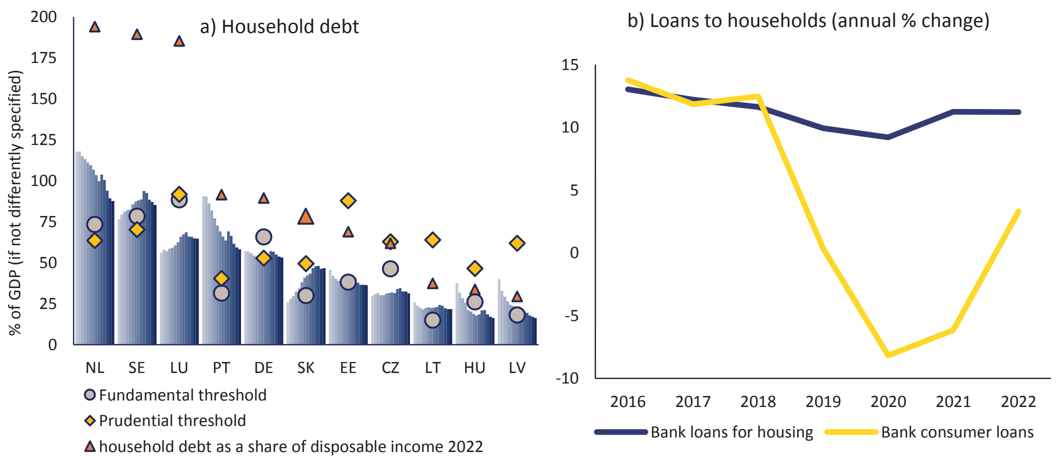
all variables y-o-y % change, unless otherwise stated	2003-07	2008-12	2013-18	2019	2020	2021	2022	forecast 2023	forecast 2024
Housing market									
House price index, nominal	.	-1.1	4.6	9.1	9.6	6.4	13.7	.	.
House price index, deflated	.	-3.6	3.8	6.2	7.2	3.0	1.3	.	.
Overvaluation gap (%) (7)	-1.7	1.9	-6.8	3.4	11.1	13.0	10.8	.	.
Price-to-income overvaluation gap (%) (8)	3.6	3.0	-7.0	-2.2	4.3	5.1	8.9	.	.
Residential investment (% of GDP)	3.1	2.9	3.0	3.3	3.8	4.0	4.3	.	.
Government debt									
General government balance (% of GDP)	-2.8	-5.4	-2.2	-1.2	-5.4	-5.4	-2.0	-6.1	-4.8
General government gross debt (% of GDP)	36.3	40.1	52.2	48.0	58.9	61.0	57.8	58.3	58.7
Banking sector									
Return on equity (%)	6.7	4.8	5.8	5.0	4.3	5.8	.	.	.
Common Equity Tier 1 ratio	28.3	19.0	17.6	18.8	19.8	20.3	.	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (9)	1.5	3.4	3.6	2.5	2.1	1.7	.	.	.
Gross non-performing loans (% of gross loans) (9)	.	.	4.2	2.9	2.5	2.0	1.8	.	.
Cost of borrowing for corporations (%)	.	3.6	2.3	2.3	1.9	1.8	3.9	.	.
Cost of borrowing for households for house purchase (%)	.	5.2	2.4	1.1	1.0	0.9	3.1	.	.

(7) Unweighted average of price-to-income, price-to-rent and model valuation gaps. The model valuation gap is estimated in a cointegration framework using a system of five fundamental variables; total population, real housing stock, real disposable income per capita, real long-term interest rate and price deflator of final consumption expenditure, based on Philiponnet, N., Turrini, A. (2017), "Assessing House Price Developments in the EU," European Economy - Discussion Papers 2015 - 048, Directorate General Economic and Financial Affairs (DG ECFIN), European Commission. Price-to-income and price-to-rent gaps are measured as the deviation to the long term average (from 1995 to the latest available year).
(8) Price-to-income overvaluation gap measured as the deviation to the long term average (from 1995 to the latest available year).
(9) Domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
Source: Eurostat and ECB as of 2023-04-28, where available; European Commission for forecast figures (Spring forecast 2023)

3. THEMATIC CHAPTER: HOUSEHOLD DEBT

Driven by household debt, the private debt-to-GDP ratio in Slovakia has been rising over the years until it reached an all-time high in 2021, before it slightly decreased in 2022. Although Slovakia's private debt-to-GDP ratio was lower than in most EU countries in 2022, it was one of the highest ratios among the Central and Eastern European countries (see Graph 3.1a). In 2020, the private debt-to-GDP ratio stood at 95% of GDP, up from 65% in 2010. In 2022, it slightly decreased to 93% of GDP (Table3.1). The strong growth of private debt has been primarily driven by household debt, namely mortgage debt. The household debt-to-GDP ratio has increased by over 20 pps over the last decade to 48%, which is still below the prudential threshold (50%), but well above the fundamental benchmark (29%). Approximately 25% of households have a mortgage, which is an increase of 5 pp since 2017, and most of these are higher-income, younger households. ([19]) The ongoing tightening of market credit conditions is expected to slow down the demand for household loans. The banking system in Slovakia is considered stable and macroprudential regulation sufficient to prevent possible risks. ([20])

Graph 3.1: **Household debt and loans**



Source: European Commission services, NBS

The pandemic did not weaken household demand for loans due to government measures, resulting in a strong increase in household debt up to 2021. After a slump during the global financial crisis, household credit flows again kept rising thereafter, peaking at 4.4% of GDP in 2016. In parallel, the household debt-to-GDP ratio grew sharply over the past decade until it reached its peak of 48% in 2021. During the pandemic the government responded with measures amounting to 1.9% of GDP in 2020 and 3.1% of GDP in 2021.

([19]) According to the NBS, average net monthly income of all debtors is 2.559 EUR, while their median net monthly income is 1.900 EUR. The average age is 37.

([20]) In turn, the non-financial corporation debt-to-GDP ratio has been slowly decreasing over the last 7 years, and it is now at the fundamental benchmark (45%) and well below the prudential threshold (76%). For these reasons, the remainder of this chapter will focus on household debt.

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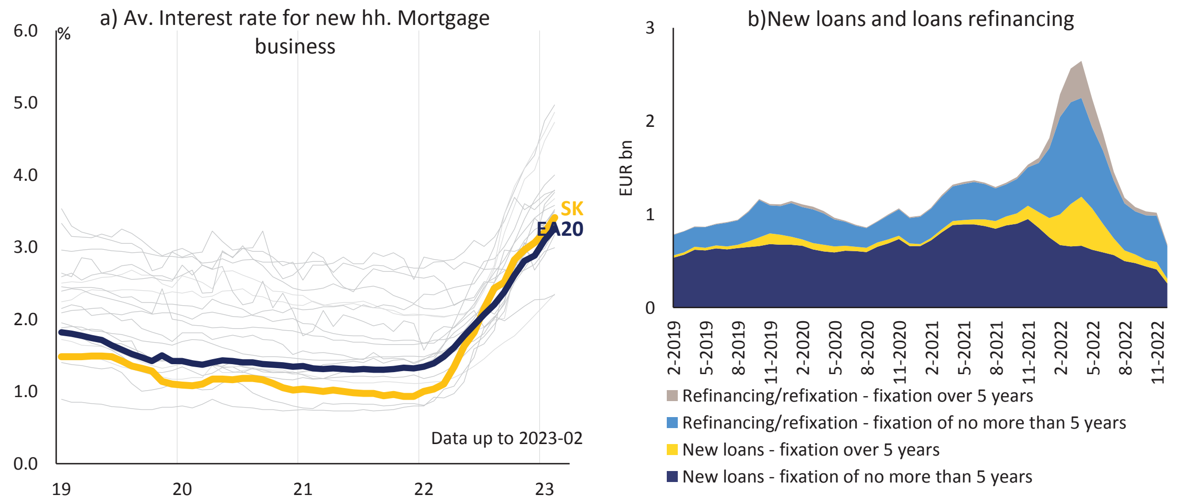
These measures aimed to support employment and help the business sector. Likewise, the unemployment rate increased only slightly to 6.9% in 2021, and in both pandemic years it did not exceed the average of the last 4 years before the pandemic. Consequently, household income and demand for loans remained strong, while consumer credits declined. Following the slowdown in 2020, overall household credit flows reached again 3.7% of GDP in 2021. At the same time, nominal GDP fell in 2020 and then grew by only 5.5% in 2021, which also contributed to the sharp rise in debt indicators in 2020 and 2021.

In 2022, while credit flows to households picked up, the household debt-to-GDP ratio declined slightly due to strong nominal GDP growth. On the one hand, household credit flows accelerated to 4.2% of GDP, which is the second highest value in the EU and more than twice exceeding the benchmark for credit flows of 1.9% of GDP (Table3.1). On the other hand, strong nominal GDP, driven by both real growth and inflation, helped to avoid an increase in the debt-to-GDP ratio, which remained unchanged at the level 48% in 2022.

Household demand for mortgages has grown dynamically, which was also driving developments in the housing market (see Chapter 2 on housing prices). Growth in household bank loans for house purchases slowed significantly after the global financial crisis but remained well above 10% in the years before the pandemic. It slowed to 9.2% in 2020 but increased again by 11.2% in 2021 and also in 2022 (graph 3.1b). Consequently, the share of loans for house purchases in household bank debt reaches almost 90%. The strong growth in mortgage loans before the pandemic was driven by rising wages and low unemployment, fuelling demand for real estate investments. In addition, the easing of monetary policy translated into lower mortgage interest rates in Slovakia (1.5% on average in 2018-2019), making mortgages more affordable (graph 3.2a). The remainder of household debt is mostly made up of somewhat riskier consumer loans ([21]) (10% in 2022), which have also grown dynamically over the last decade, but their growth dropped in 2020 and only mildly recovered in the following years (graph 3.1-b).

Graph 3.2: **Mortgage rate and new loans**



Source: European Commission services, NBS

([21]) In Slovakia, only banking institutions are authorized to provide loans, which eliminates the risks associated with shady non-banking institutions. The share of non-bank consumer loans in total household debt portfolio is approximately 1.5%.

In response to the rapid growth of household debt, since 2018 the National Bank of Slovakia (NBS) has introduced a set of borrower-based measures aimed at a prudent provision of mortgages and consumer loans. The NBS has introduced a limit on the loan-to-value (LTV) ratio so that no loan may exceed an LTV of 90%, while a maximum of 20% of all loans granted may exceed an LTV of 80%. Furthermore, a limit on the debt-to-income (DTI) ratio was introduced, whereby only a maximum of 5% of the total loans provided may exceed the limit of 8 times the net annual income of the applicant. Another 5% of the loans provided must be in the range of 8 to 9 times the net annual income of the applicant (which applies only to loans "for young people"). From 2020, the NBS also adjusted the limit on the debt service-to-income (DSTI) ratio, determining that no repayments can exceed 60% of the household income, which is deducted by the subsistence minimum. Only 5% of loans can have repayments between 60% and 70% of household income, while another 5% of consumer loans up to 5 years can have repayments between 60% and 70% of household income. Repayments on consumer loans for financing the renovation of a family house within the Recovery and Resilience Plan can be reduced by 50 EUR.

The ESRB warning from December 2021 assessed these macroprudential policies as appropriate but only partially sufficient. ([22]) The report points out that the NBS might consider tackling the vulnerabilities arising from the topping-up of existing mortgages and the length loan maturities being extended beyond retirement age. The NBS addressed the issue of loan maturities exceeding retirement age by adjusting the DTI limit for clients older than 40 years taking loans exceeding beyond their retirement age since January 2023. To further strengthen the resilience of Slovak banks, the NBS announced an increase in the countercyclical capital buffer rate applicable to the risk exposure of local banks from 1% to 1.5% as of 1 August 2023.

Overall, the Slovak banking sector remains resilient and well capitalised. Slovak banks remain profitable and well capitalised, with a common equity tier 1 ratio of 16.5% in Q3-2022 (EU average: 15.3%). There is a significant amount of liquidity in the banking system, as the liquidity coverage ratio was at 152.3% in Q3-2022. The non-performing loans ratio decreased to 1.8% in Q3-2022, the lowest level since 2016 (EU average: 1.8%). The banking sector is highly concentrated, with the five largest banks in the system holding 79.3% of total banking-sector assets. Foreign-owned banks in Slovakia account for around 87% of total banking-sector assets). The NBS does not plan to further change the countercyclical capital buffer for banks given that it expects increasing interest rates to cool down the demand for credit.

Monetary policy and lending conditions began to tighten in 2022 in response to the rise in inflation, resulting in a decline in credit with some delay. In the first half of 2022, inflation began to rise sharply in the euro area (see Section 2). The ECB responded by tightening monetary policy, including by raising interest rates. Similarly, average interest rates on new mortgages in Slovakia increased from 1% in January 2022 to approximately 3% at the end of the year (graph3.2). As a result of rising interest rates in 2022, the credit market accelerated before slowing down. Initially, households sped up their decisions to apply for a loan when interest rates started to increase, while demand for loan interest rate re-fixation increased. In the first half of 2022, the demand for new loans more than doubled compared to the previous year. The share of loans requested for refinancing doubled to almost 57% of all new loans, while pure new loans represented only approximately 43%. In particular, the demand for refinancing loans with a 5-year fixation period increased. As a result, the volume of approved loans reached all-time highs. In turn, in the second half of 2022 the demand for loans eased on the back of further increasing interest rates. The average monthly growth in total bank loans decreased from 1.0% in the first half of the year

([22]) Warning of the European Systemic Risk Board of 2 December 2021 on medium-term vulnerabilities in the residential real estate sector of Slovakia.

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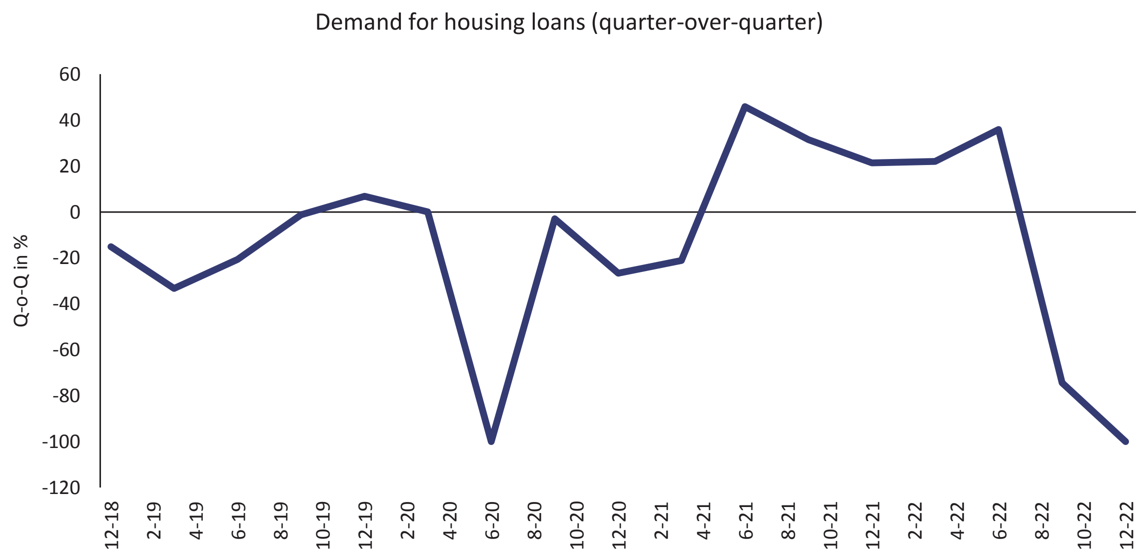
to 0.6%. According to the NBS, property sales also slowed and the number of available advertised properties started to increase after a long time. The rising cost of living contributed in September to the weakest annual increase in loans to households since 2013, with demand for new loans falling the most (see Graph 3.2b).

Credit flows are expected to slow down in the coming years, mainly because of the expected further increase in interest rates. As the expected inflation rate in the euro area in the next two years is well above the target of 2%, markets expect further monetary tightening. Debt servicing costs in Slovakia are therefore set to increase further over the coming years. The labour market is expected to remain strong, but inflation will dampen the growth of households' disposable income and weigh on their purchasing power. While GDP growth is forecast to gradually increase again to 2.1% in 2024, uncertainty remains high given the current global economic and political environment. Against the background of these developments, the demand for new loans, especially mortgages, is expected to decrease further. This is also confirmed by the Bank Lending Survey of the NBS (graph3.3). Debt repayment capacity is currently at a good level and, given the expected solid development in the labour market, it should not deteriorate significantly even if interest rates rise further, although some loan agreements may need to be adjusted.

Graph 3.3: **Demand for housing loans**



Source: European Commission services ECB BLS
Note: The graph shows the assessment of the changes in the demand for mortgage loans based on the survey among individual banks

Table 3.1: **Private debt indicators, Slovakia**

	Source	2003-07	2008-12	2013-19	2020	2021	2022f	22Q1	22Q2	22Q3	22Q4
Total private sector											
(Households and Non-financial corporations)	Source										
Stocks											
Private debt level (% of GDP)[1]	*(a,d)*	47	67	85	95	92	92	99	98	99	97
Private debt level (% of potential GDP)[1]	*(a,b,d)*										
Prudential threshold (% of GDP)	*(c)*	109	102	131	119	115	116				
Fundamental benchmark (% of GDP)	*(c)*										
Flows											
Private credit flows (transactions, % of GDP)[4]	*(a)*	6.9	6.0	5.7	2.8	4.4	8.1	3.5	7.2	14.1	3.6
Private credit flows (transactions, % of potential GDP)[4]	*(a,b)*										
Benchmark for flows (% of GDP)	*(c)*										
Households (HH)											
Stocks											
HH debt level (% of GDP)	*(a,d)*	13	25	37	47	47	47	47	48	47	47
HH debt level (% of potential GDP)	*(a,b,d)*										
Prudential threshold (% of GDP)	*(c)*	51	44	56	51	48	48				
Fundamental benchmark (% of GDP)	*(c)*										
Debt (% of gross disposable income)	*(a,b,d)*	23	41	63	73	75	74	75	75	75	74
Interest paid (% of gross disposable income)	*(a,b)*	1.4	1.4	0.5	0.4	0.4	0.5				
Debt (% of gross financial assets)	*(a,d)*	22.3	35.0	40.9	44.6	44.4	49.6	46.1	47.9	49.2	49.6
Share of variable rate loans for house purchase (%)	*(d)*	43.8	47.2								
Domestic loans in forex (% of dom. loans)	*(d)*	0.2	0.1	0.0	0.0	0.0	0.0				
Flows											
HH credit flows (transactions, % of GDP)[4]	*(a)*	4.8	3.6	3.5	2.7	3.6	4.2	3.7	5.9	4.1	3.3
HH credit flows (transactions, % of potential GDP)[4]	*(a,b)*										
Benchmark for flows (% of GDP)	*(c)*	1.8	1.3	2.2	2.5	1.8	1.8				
Savings rate (% gross disposable income)	*(b)*	6.7	7.5	8.3	11.4	10.9	5.2				
Investment rate (% gross disposable income)	*(b)*	7.3	7.1	6.6	7.1	7.6	7.9				
p.m. Bank HH NPLs (% of HH loans) [2]	*(d)*			*3.6*							
Non-financial corporations (NFC)											
Stocks											
NFC debt (% of GDP)[1]	*(a,d)*	34	42	47	48	45	45	52	51	52	50
NFC debt (% of potential GDP)[1]	*(a,b,d)*										
Prudential threshold (% of GDP)	*(c)*	58	58	75	68	67	68				
Fundamental benchmark (% of GDP)	*(c)*										
Debt (% of value added)	*(a,b,d)*	66	80	88	92	87	88	100	99	101	99
Interest paid (% of gross operating surplus)	*(a,b)*	5.6	5.0	2.7	2.4	2.5	3.2				
Debt (% of gross financial assets)	*(a,d)*	80	92	101	90	83	84				
Domestic loans in forex (% dom. Loans)	*(d)*	2.2	1.6	0.8	0.4	0.4	0.2	0.4	0.2	0.1	0.2
Flows											
NFC credit flows (transactions, % of GDP)[4]	*(a)*	2.0	2.4	2.2	0.1	0.7	4.0	-0.2	1.3	10.0	0.3
NFC credit flows (transactions, % of potential GDP)[4]	*(a,b)*										
Benchmark for flows (% of GDP)	*(c)*										
Investment (% of value added)	*(b)*	38.8	30.5	27.8	22.4	27.3	30.1				
Savings (% of value added)	*(b)*	33.2	35.7	30.2	27.2	29.4	22.6				
p.m. Banks NFC NPLs (% of NFC loans) [3]	*(d)*			*5.8*	*3.4*	*2.8*					

Source: European Commission services

Table 3.2: **Selected housing market indicators, Slovakia**

			2003-07	2008-12	2013-18	2019	2020	2021	2022	22Q1	22Q2	22Q3	22Q4
House price developments	Unit	Source											
Real house price, yoy growth	%	(a)	18.5	-3.2	3.8	6.2	7.2	3.0	1.3	2.9	3.4	1.7	-2.4
Nominal house price, yoy growth	%	(a)	22.8	-0.6	4.6	9.1	9.6	6.4	13.7	14.2	16.6	14.6	9.7
Price to income in level [1]	years	(b)	8.7	8.7	7.9	8.3	8.8	8.9	9.2	9.5	9.3	9.3	8.8
Rent price developments		Source											
Nominal rent price index	2015=100	(a)	80.5	97.2	100.3	101.4	103.0	103.9	108.2	110.3	110.9	111.9	112.6
Nominal rent price, yoy growth	%	(a)	13.3	2.2	0.2	0.6	1.5	0.9	4.1	9.4	9.9	11.0	11.7
Valuation gaps													
Price to income gap [2]	%	(c)	3.6	3.0	-7.0	-2.2	4.3	5.1	8.9	5.9	9.2	11.3	9.7
Price to rent gap [2]	%	(c)	-17.5	-7.0	-6.0	17.3	26.6	33.5	45.8	41.0	45.6	48.4	48.3
Model valuation gap [3]	%	(c)	8.8	9.7	-7.4	-4.8	2.3	0.2	-22.2	-17.1	-20.6	-22.8	-27.6
Average house price gap [4]	%	(c)	-1.7	1.9	-6.8	3.4	11.1	13.0	10.8	10.0	11.4	12.3	10.1
Housing credit													
Bank mortgages (% GDP)	%	(d)	11.7	15.8	26.2	32.8	36.1	37.5	37.9				
Bank mortgages, yoy growth	%	(d)	30.0	15.3	12.8	9.7	9.0	11.5	10.4				
Housing supply						0.0	0.0	0.0	0.0				
Residential construction - dwellings (% GDP)	%	(e)	3.1	2.9	3.0	3.3	3.8	4.0	4.3				
Residential construction - dwellings, yoy growth	%	(e)	64.0	2.9	4.8	2.9	9.9	7.6	4.1				
Non-residential construction (% GDP)	%	(e)	8.4	7.2	6.1	5.4	5.6	5.3	5.6				
Value added in the construction sector, yoy growth	%	(e)	14.6	4.5	0.2	-16.7	-7.1	-3.4	3.8				
Building permits index	2015=100	(a)	85.5	92.7	98.6	115.5	108.0	129.9	108.8	92.8	135.5	104.7	102.3
Building permits, yoy growth	%	(a)	17.3	-2.1	10.5	-0.9	-6.5	20.3	-16.2	0.7	1.0	-20.7	-36.5
Number of transactions, yoy change	%	(f)											
Other housing market indicators													
Share of owner-occupiers, with mortgage or loan	%	(a)	4.1	7.8	13.1	20.6	23.3	25.8					

(') Forecast. The forecast of house prices is computed on the basis a housing valuation model shared with Member States in the context of the EPC LIME working group. The forecasts represent real house price percentage changes expected based on economic fundamentals (population, disposable income forecast, housing stock, long-term interest rate, and the price deflator of private final consumption expenditure), as well as the error correction term summarising the adjustment of prices towards their long-run relation with fundamentals. The source for the forecast of other variables is Ameco.
(1) Price to income in level is the number of years of income necessary to buy an assumed 100m2 dwelling. See Bricongne, J-C, A Turrini, and P Pontuch, 2019, “Assessing House Prices: Insights from HouseLev, a Dataset of Price Level Estimates”, Discussion Paper 101, European Commission, available in "https://ec.europa.eu/info/publications/assessing-house-prices-insights-houselev-dataset-price-level-estimates_en".
(2) Price to income and price to rent gaps are measured in deviation to the long term average (from 1995 to the latest available year).
(3) The model valuation gap is estimated in a cointegration framework with nominal house prices as the dependent variable and five fundamental explanatory variables: total population, real housing stock, real disposable income per capita, real long-term interest rate and price deflator of final consumption expenditure. See Philiponnet and Turrini, Assessing House Price Developments in the EU (2017) available in "https://ec.europa.eu/info/publications/economy-finance/assessing-house-price-developments-eu_en" and revision notes presented to LIME in October 2019 and June 2020.
(4) The average house price gap is the simple average of the price-to-inome, price-to-rent and model valuation gaps.

Source: Eurostat, OECD, ECB, BIS, Ameco, national sources, European Commission calculations.

Table 3.3: **Selected household debt indicators, Slovakia**

	Source	2003-07	2008-12	2013-20	2021	2022	2023f	21Q1	21Q2	21Q3	21Q4
Stocks											
Debt, consolidated (% of GDP)	*(a,d)*	13	25	39	47	47	46	47	46	47	47
Debt, consolidated (% of potential GDP)	*(a,b,d)*										
Prudential threshold (% of GDP)	*(c)*	54	44	55	48	48	48				
Fundamental benchmark (% of GDP)	*(c)*	13	20	26	30	29	29				
Debt (% of gross disposable income)	*(a,b,d)*	23	41	64	75	74	73	73	73	74	75
Interest paid (% of gross disposable income) (2)	*(a,b)*	1.4	1.4	0.5	0.4	0.5					
Debt (% of gross financial assets)	*(a,d)*	22.3	35.0	41.4	44.4	49.6		43.9	43.7	44.5	44.4
Share of variable rate loans for house purchase (%)	*(d)*	43.8	47.2								
Domestic loans in forex (% of adjusted dom. loans)	*(d)*	0.2	0.1	0.0	0.0	0.0					
Adjusted domestic loans (% of gross disposable income)	*(d)*	31.0	37.7	60.5	72.5	72.1					
Loans for house purchase (% of gross disposable income)	*(d)*	20.6	26.4	46.8	59.9	59.6					
Flows											
Credit flows (% of gross disposable income) (2)	*(a)*	10.5	6.1	5.6	5.8	6.5	4.0	3.5	7.0	7.1	6.9
Loans for house purchase (% gross disposable income)	*(a,b)*	4.9	3.4	5.0	6.0	5.6					
Benchmark for flows (% of GDP)	*(c)*	1.8	1.3	2.3	1.8	1.8	1.7				
Savings rate (% gross disposable income)	*(b)*	6.7	7.5	8.7	10.9	5.2	5.9				
Investment rate (% gross disposable income)	*(b)*	7.3	7.1	6.7	7.6	7.9	7.3				
p.m. Bank HH NPLs (% of HH loans) (1)	*(d)*			*3.5*	*2.2*						

f) European Commission forecast, . (1) Gross non-performing bank loans and advances to Households and non profit institutions serving households (% of total gross bank loans and advances to Households and non profit institutions serving households). (2) Quarterly data is annualized.
Source: (a) Eurostat, (b) Ameco, (c) European Commission calculations, (d) ECB.