INFLATION REPORT

2023

JUNE

'... wise is the man who can put purpose to his desires.'

Miklós Zrínyi: The Life of Matthias Corvinus

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Pursuant to Act CXXXIX of 2013 on the Magyar Nemzeti Bank, the primary objective of Hungary's central bank is to achieve and maintain price stability. Low inflation ensures higher long-term economic growth and a more predictable economic environment, and moderates the cyclical fluctuations that impact both households and companies.

In the inflation targeting system in use since August 2005, the Bank has sought to attain price stability by ensuring an inflation rate near the 3-percent medium-term target. The Monetary Council, the supreme decision-making body of the Magyar Nemzeti Bank, performs a comprehensive review of expected developments in inflation every three months, in order to establish the monetary conditions consistent with achieving the inflation target. The Council's decision is the result of careful consideration of a wide range of factors, including an assessment of prospective economic developments, the inflation outlook, financial and capital market trends and risks to stability.

In order to provide the public with a clear insight into how monetary policy works and to enhance transparency, the Bank publishes the information available at the time of making its monetary policy decisions. The Report presents the inflation forecasts prepared by the Directorate Economic Forecast and Analysis, the Directorate Monetary Policy and Financial Market Analysis, the Directorate for Fiscal and Competitiveness Analysis and the Directorate Financial System Analysis, as well as the macroeconomic developments underlying these forecasts. The forecast is based on the assumption of endogenous monetary policy. In respect of economic variables exogenous to monetary policy, the forecasting rules used in previous issues of the Report are applied.

The analyses in this Report were prepared under the general direction of the acting Director Responsible for Economic Analyses and Competitiveness. The Report was prepared by staff at the MNB's Directorate Economic Forecast and Analysis, Directorate Monetary Policy and Financial Market Analysis, Directorate for Fiscal and Competitiveness Analysis, Directorate Financial System Analysis and Directorate for International Monetary Policy Analysis and Training of Economic Sciences. The Report was approved for publication by Barnabás Virág, Deputy Governor responsible for Monetary Policy and Financial Stability.

The Report incorporates valuable input from other areas of the MNB and the Monetary Council's comments.

The projections are based on information available for the period ending 15 June 2023.

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The Monetary Council's key findings related to the Inflation report

The primary objective of the Magyar Nemzeti Bank (MNB) is to achieve and maintain price stability. Without prejudice to its primary objective, the Magyar Nemzeti Bank preserves financial stability and supports the Government's economic policy, as well as its policy on environmental sustainability.

In 2023 Q1, economic growth in most major economies exceeded analysts' expectations. The ongoing Russia–Ukraine war and the sanctions policies in response to it continue to pose a significant risk to the developments in international economic activity and especially to the European economic outlook.

In 2023 Q1, the rate of economic growth accelerated in the United States and China in year-on-year terms, and decelerated further in the European Union. In the first three months of the year, the US economy expanded by 1.6 percent year-on-year. As a result of the lifting of the strict containment measures, an annual growth of 4.5 percent was recorded in China in 2023 Q1. In the same period, the economies of the EU and the euro area grew by 1.0 percent, year-on-year. The output of Germany, Hungary's most important trading partner, declined by 0.5 percent year-on-year in 2023 Q1. The fall in energy prices is mitigating the adverse effects of the energy crisis in Europe, which points to an improvement in the outlook for economic activity of the Continent. At the same time, the protracted Russia–Ukraine war and the related sanctions continue to pose a major risk to developments in the European economic outlook.

The consumer price index declined further in the European Union in May. Inflation continues to be close to historical highs in the economies of the world; however, global trends project a continued decline in price indices.

Weakening global demand, the adjustment in energy and commodity prices as well as the decline in international freight costs point to a continued decline in inflation rates. In the United States, the slowdown in inflation, which had started in July 2022, continued. Euro area inflation was 6.1 percent in May. Double-digit price increases were still registered in the countries in the region: according to the data released by national statistical offices, prices increased by 21.5 percent in Hungary, by 12.3 percent in Slovakia, by 11.1 percent in Czechia and by 10.6 percent in Romania in May.

In the past quarter, the world's leading central banks continued to tighten monetary conditions. Central banks in the region maintained their respective policy rates.

At its June rate-setting meeting, following the 25 basis points increase in May, the Federal Reserve (Fed) kept the target band of the key policy rate at an unchanged level of 5.00–5.25 percent. At the same time, in the opinion of all the members of the Open Market Committee, some further tightening until the end of the year is justified. As a result of the liquidity providing measures introduced in view of the financial turbulence that evolved in March, there was a temporary significant increase in the balance sheet of the Fed, followed by gradual readjustment. The European Central Bank (ECB) continued its interest rate hike cycle at a slower pace than before, raising the policy rates by 25 basis points at each of its May and June rate-setting meeting. In addition, the central bank announced that as of July it would terminate the reinvestment of the maturing securities purchased under the APP, resulting in a faster decline in the asset portfolio.

The Polish central bank left its policy rate unchanged at 6.75 percent in the past quarter. The Czech central bank kept the base rate at 7 percent during the quarter. The central bank continues to stand ready to prevent excessive fluctuations of the exchange rate of the Czech koruna. The Romanian central bank also left the policy rate at 7 percent. The Magyar Nemzeti Bank maintained the 13 percent level of the base rate since last September, while it reduced the interest rate on the one-day deposit quick tenders by 100-100 basis points in May and June to 16 percent.

Overall, investor sentiment improved in the past quarter. Following the US bank failures, market turbulences also spreading over to Europe eased. Investors' improving risk appetite was supported by expectations related to the monetary policies of the world's leading central banks, by incoming macroeconomic data and by a further decline in commodity prices.

In the past quarter, developments in asset prices were primarily affected by tensions in the banking sector expectations regarding the interest rate hike paths of the world's leading central banks and the uncertainty around the debate about the US debt ceiling. Recession fears declined in the US based on incoming data and expectations related to the growth of the Chinese economy also affected investor sentiment. Primary indicators of inflation already eased in developed economies in the past months, while core inflation indicators declined at a much slower pace. The uncertainty due to the Russia–Ukraine war became permanent, still exerting a negative effect on investor sentiment. At present, the market expects the Fed and the ECB to maintain tight monetary policies, and compared to the end-March projections, the possibility of the first interest rate cut was postponed to later dates in the case of both central banks.

Overall, commodity and energy prices declined slightly in the past quarter. The price of European gas reached a two-year low before starting to rise sharply at the end of the period. Initially, the decline in prices had been attributable to the high level of reserves in gas storage facilities and the ample supply of liquefied natural gas before increasing at the end of the period in view of the significant energy demand caused by high average temperatures. The dollar weakened slightly against the euro. Both developed market long-term bond yields and stock market indices rose overall throughout the period. Emerging market equity indices rose, while long-term bond yields were mixed in the past quarter.

The stability of domestic financial markets and Hungary's risk assessment improved permanently in the past quarter. Hungarian interbank yields and government securities market yields fell significantly. For most of the period under review, the forint strengthened against the euro, and was close to its one-year high, but at the end of the period it slightly weakened.

Following a significant decline in the previous quarter, the 5-year CDS spread was stable as of end-March, while the government securities yield curve shifted downwards. Although to a lesser degree than government securities yields, interbank rates also declined, and FX swap yields lowered. Short-term money market yields followed the decline in the effective interest rate in each market segment. With minor corrections during the period and in spite of a weakening at the end of the period, the forint appreciated against the euro by nearly 2.2 percent in total.

During 2023, the disinflationary effect of tight monetary policy, falling global commodity prices, declining domestic consumption and the Government's measures to strengthen market competition becomes increasingly apparent. Disinflation will continue to accelerate. As a result, inflation may reach single digits by the end of the year. Nevertheless, a further decrease in the consumer price index will be necessary in 2024 in order to achieve price stability.

Inflation has been declining steadily since its peak in January, which is primarily attributable to food inflation, which declined for the fourth consecutive month in April. Looking ahead, the continued fall in annual price dynamics is supported by both external and internal factors. In recent months, energy and commodity prices as well as freight costs have been at levels seen before the outbreak of the war, tensions in value chains have eased, while the slowdown in global economic activity will curb external inflation further. The continued decline in food price inflation is supported by the continuously decreasing global food commodity prices since last May.

Internal factors also significantly contribute to the deceleration in inflation. In 2023, tight monetary conditions exert their disinflationary impact in a widening range, causing a substantial slowdown in inflation. Repricings experienced in inflation already corresponds to the historical average, but the monthly change in core inflation is higher. Similarly to inflation, the increase in core inflation was also primarily caused by cost shocks and significantly elevated corporate profits, but their effect appeared in core inflation later, and will be more persistent, primarily reflected in higher price increases for market services. The inflation path expected for next year has shifted slightly upwards relative to March due to the Government's tax measures, and thus the consumer price index may return to the central bank tolerance band in early 2025. Annual average inflation may fluctuate between 16.5–18.5 percent this year, 3.5–5.5 percent in 2024 and 2.5–3.5 percent in 2025.

Hungarian GDP is expected to grow by 0.0–1.5 percent in 2023, 3.5–4.5 percent in 2024 and 3.0–4.0 percent in 2025. In 2023, decreasing real wages, rising corporate costs and cautious consumer and investment decisions all contribute to a decline in domestic demand, while net exports support GDP growth. This year's economic performance is also improved by the correction in agricultural growth after last year's drought.

In 2023 Q1, Hungary's GDP declined by 0.9 percent. The economic performance declined by 0.3 percent compared to the previous quarter, and thus the level of GDP declined for three consecutive quarters. On the whole, household consumption is declining this year due to deteriorating income trends and high inflation, while elevated corporate costs and uncertain prospects are expected to result in a rescheduling of investments. By contrast, agriculture is expected to achieve a much higher output this year, following last year's drought. There may be a new upswing in economic growth in the second half of the year, in line with the real wage index becoming positive again. Despite the more subdued industrial production, Hungarian exports may increase this year as well, and thus the contribution of net exports to growth may remain positive in 2023. Both internal and external factors support GDP growth in 2024 and 2025. The nominal investment rate stabilises close to 27–28 percent over the forecast horizon, partly as a result of high price dynamics.

Credit expansion in the private sector may continue to decelerate as a result of the uncertainty surrounding the real economy, the cautious behaviour of borrowers and banks as well as high inflation and tight monetary conditions.

The annual growth rate of the whole financial intermediary system's stock of outstanding corporate loans slowed by 1.2 percentage points compared to the previous quarter and reached 14.2 percent in March. With 10.2 percent, the annual credit dynamics of micro, small and medium-sized enterprises, which better capture the underlying trends, was lower than that. In Q1, 64 percent of new corporate loans were concluded on a market basis, and due to the upswing in the Széchenyi Card Programme and the Baross Gábor Loan Programme this figure was lower than the 72 percent in Q4. Looking ahead, the share of market-based loans may continue to decline with a higher disbursement of large-volume subsidised credit schemes. According to responses to the Lending Survey, few banks tightened the credit standards in Q1, and the responding institutions foresee further tightening in the future as well. Banks justified the tightening primarily with cyclical factors, and still only a few banks indicated that their respective liquidity and capital positions would warrant a tightening of credit conditions. Banks' lending capacity therefore is still at a high level. There was a rise in demand for short-term loans, but the vast majority of banks saw declines in demand for long-term (typically investment) loans in 2023 Q1, and looking ahead, they expect this diverging trend to continue. In view of the uncertain real economy environment, high inflation and tight monetary conditions in particular, the annual growth rate of corporate loans outstanding may, on the whole, decelerate to 6 percent by end-2023, before returning to above 9 percent as of end-2024.

In 2023 Q1, slowing by 0.9 percentage points relative to the previous quarter, the annual growth rate of outstanding household loans was 4.6 percent. The volume of housing loans and personal loans disbursed fell short of the year-on-year figure by 67 percent and 9 percent, respectively, which – in the case of housing loans – was also attributable to the high base resulting from the Green Home Programme. In the responses to the Lending Survey, banks reported declining demand for housing loans and increasing demand for consumer loans, and looking ahead, the banks expect increases in demand in both market segments. Annual growth of outstanding household loans may decelerate to 2 percent by mid-2023; however, it will return to around 10 percent by 2024 H2.

This year, in parallel with the improving trade balance, the current account deficit is expected to decline significantly, and will be around 2-3 percent of GDP.

Following its last year's low, the current account balance is increasing considerably in 2023. In addition to the improving energy balance due to falling energy prices and the adjustment of energy consumption, the above improvement is attributable to growing exports and a more subdued expansion in imports decelerating in view of a slowdown in investment and consumption dynamics. Favourable trends will persist throughout 2023, then the utilisation of new export capacities built recently as well as the normalisation in the global economic environment, and within that primarily the decline in energy prices, project continued improvement in the trade balance and net lending for 2024. As a result, the current account deficit will be around 2-3 percent of GDP in 2023, before the deficit turns into surplus by the end of the forecast horizon.

The budget deficit corresponded to 6.2 percent of GDP in 2022, which may be followed by a deficit of 3.9 percent in 2023 according to the budgetary objectives. Pursuant to the 2024 Budget Act, the accrual-based deficit target is 2.9 percent for 2024 and 1.9 percent for 2025. The measures announced in parallel with the preparation of the 2024 Budget Act contribute to the decline in the budget balance by the partial or complete maintenance of windfall taxes introduced in 2022 as well as expenditure cuts, which is also supported by the fall in energy prices. The government debt ratio is expected to fall from

73.3 percent at the end of 2022 to below 70 percent by the end of 2023, and then below 65 percent by the end of the forecast horizon, driven by economic growth and a declining deficit.

With a rise in the baseline projection for inflation, downside risks increased slightly in the alternative scenarios.

The Monetary Council highlighted three alternative scenarios around the baseline projection in the June Inflation Report. In the scenario presuming faster easing of supply constraints, the settlement of problems facing global supply chains and the decrease in energy and commodity prices will have a stronger impact on domestic production processes, resulting in a lower inflation and higher growth path. The scenario presenting persistently lower consumption is consistent with a lower growth and inflation path. The scenario assuming a persistent increase in inflation expectations presumes a higher inflation path and a somewhat lower growth path compared to the baseline scenario.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Data show annual changes and the forecast is based on endogenous monetary policy.)

	2022	2023	2024	2025
	Actual		Projection	
Inflation (annual average)				
Core inflation	15.7	17.7 - 19.6	4.6 - 7.0	3.0 - 3.5
Core inflation excluding indirect tax effects	15.6	17.7 - 19.6	4.6 - 7.0	3.0 - 3.5
Inflation	14.5	16.5 - 18.5	3.5 - 5.5	2.5 - 3.5
Economic growth				
Household consumer expenditure	6.5	(-2.1) - (-1.3)	2.2 - 3.2	2.6 - 3.6
Government final consumption expenditure[1]	0.9	0.0 - 1.8	0.7 - 1.9	0.9 - 2.0
Gross fixed capital formation	1.2	(-5.9) - (-3.0)	2.7 - 5.6	2.6 - 5.5
Domestic absorption	3.9	(-2.7) - (-1.5)	2.1 - 3.3	2.3 - 3.5
Exports	11.8	3.8 - 6.1	5.2 - 7.2	3.7 - 5.4
Imports	11.1	0.6 - 2.8	3.5 - 5.7	2.7 - 4.7
GDP	4.6	0.0 - 1.5	3.5 - 4.5	3.0 - 4.0
Labour productivity[2]	2.8	0.7 - 1.3	3.1 - 4.4	2.4 - 3.8
External balance[3]				
Current account balance	-8.1	(-2.8) - (-1.8)	(-0.8) - (0.4)	0.2 - 1.6
Net lending	-6.0	(-0.4) - 0.6	1.2 - 2.4	1.8 - 3.2
Government balance				
ESA balance	-6.2	-3.9	-2.9	-1.9
Labour market				
Whole-economy gross average earnings[4]	17.4	12.7 - 13.4	9.7 - 10.9	7.4 - 8.7
Whole-economy employment	1.3	0.1 - 0.4	(-0.2) - 0.4	(-0.1) - 0.6
Private sector gross average earnings[4]	15.7	14.7 - 15.5	9.1 - 10.1	6.9 - 8.1
Private sector employment	2.1	0.4 - 0.7	0.2 - 0.7	0.0 - 0.6
Unemployment rate	3.6	3.6 - 3.7	3.1 - 3.6	2.9 - 3.7
Private sector nominal unit labour cost	9.5	13.3 - 14.6	4.7 - 6.3	4.1 - 5.9
Household real income[5]	5.6	(-1.3) - (-0.5)	2.3 - 3.5	2.5 - 3.7

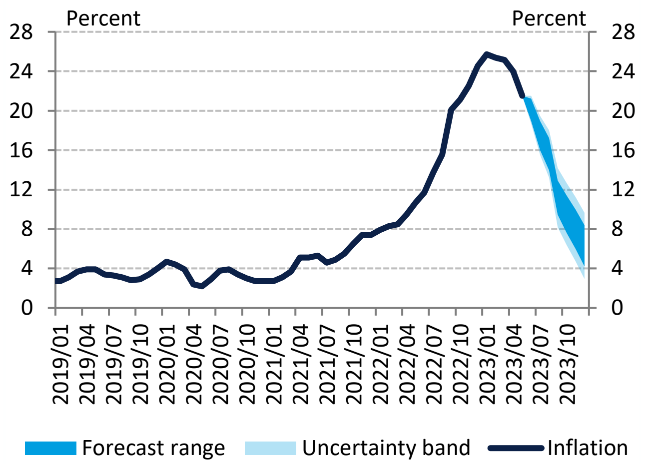
[1]Includes government consumption and the transfers from government and non-profit institutions.
[2]Whole economy, based on national accounts data.
[3]GDP proportionate values, partly based on forecast.
[4]For full-time employees.
[5]MNB estimate.

1 Inflation and real economy outlook

1.1 Inflation forecast

After reaching a peak of 25.7 percent in January, inflation was at 21.5 percent in May year on year. External and internal factors are both pointing toward disinflation: along with freight costs, energy and commodity prices have fallen significantly, and the slowdown in global economic activity is also alleviating external inflationary pressure. In the second half of 2023, the disinflationary effect of tight monetary policy as well as lower global commodity prices and weaker domestic consumption will become increasingly pronounced. Tight monetary conditions help moderate second-round inflationary effects and re-anchor inflation expectations. Faster disinflation will also be supported by last year's high bases. According to our forecast, domestic inflation is expected to drop into single-digit territory by the end of the year. The expected inflation path for next year has shifted slightly higher compared to our March forecast due to tax measures, thus the consumer price index will return to the central bank's tolerance band at the beginning of 2025. As a result of declining uncertainty, the forecast range for 2023 narrowed to 16.5–18.5 percent. The consumer price index may return to the central bank tolerance band in 2024, but the expected path of inflation in 2024 rose slightly compared to the March forecast, mainly due to tax measures. According to our forecast, the consumer price index will be 3.5–5.5 percent in 2024 and 2.5-3.5 percent in 2025.

Chart 1-1: Monthly evolution of the near-term inflation forecast



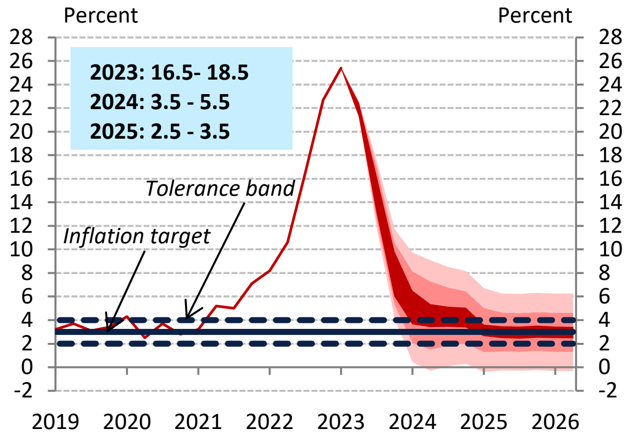
Note: Annual change. The uncertainty band shows the uncertainty around the forecast range with regards to the root mean squared error of previous years' near-term forecasts.

Source: HCSO, MNB

According to our forecast, domestic inflation is expected to drop into single-digit territory by the end of the year. The continued decline in annual price dynamics is supported by both external and internal factors. In the course of 2023, the disinflationary effect of tight monetary policy as well as lower global commodity prices and weaker domestic consumption will become increasingly pronounced. Tight monetary conditions help moderate second-round inflationary effects and re-anchor inflation expectations. Deceleration in global economic activity will also continue to restrain inflation. Disinflation is slowed by the repricing of services, which remains higher than the historical average. Domestic inflation will decline more significantly from the middle of the year. The high bases from the previous year will play an important part in the acceleration of this process. Disinflation will continue in 2024 as well, but its pace is restrained by the tax measures announced for next year.

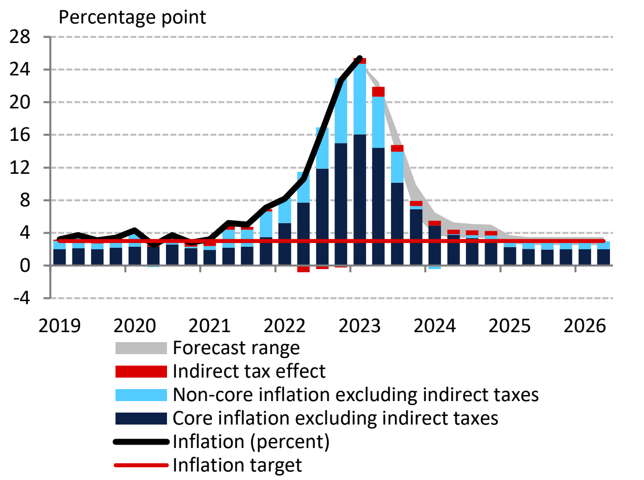
The expected inflation path for next year has shifted slightly higher compared to our March forecast due to tax measures, thus the consumer price index will return to the central bank's tolerance band at the beginning of 2025. In view of the declining uncertainty, the band of our inflation projection for 2023 narrowed versus the March forecast. In 2023, the path of the consumer price index will be similar to that projected in March, although with a different structure. The price level of food decreased slightly in May and that of tradables remained unchanged month on month, but the monthly price increase in market services is still much higher than the average from the past. Inflation

Chart 1-2: Fan chart of the inflation forecast



Note: Based on seasonally unadjusted data.
Source: HCSO, MNB

Chart 1-3: Decomposition of our inflation forecast



Note: The decomposition is based on the midpoint for the forecast range. Source: HCSO, MNB

Table 1-1: Details of the inflation forecast

		2023	2024	2025
Core inflation excluding indirect tax effects		17.7 - 19.6	4.6 - 7.0	3.0 - 3.5
Core inflation		17.7 - 19.6	4.6 - 7.0	3.0 - 3.5
Non-core inflation	Unprocessed food	18.4	3.3	4.7
	Fuel and market energy	22.2	3.2	1.3
	Regulated prices	12.6	0.3	2.6
	Alcohol and tobacco	15.7	3.9	3.0
Inflation		**16.5 - 18.5**	**3.5 - 5.5**	**2.5 - 3.5**

Note: Percent. Based on seasonally unadjusted data. The table is based on the midpoint of the forecast range. Source: MNB.

may amount to 16.5–18.5 percent in 2023, 3.5–5.5 percent in 2024 and 2.5–3.5 percent in 2025 (Chart 1-2).

Our forecast estimates core inflation excluding indirect tax effects at 17.7–19.6 percent in 2023, 4.6–7.0 percent in 2024 and 3.0–3.5 percent in 2025. Due to the higher persistence of core inflation items, core inflation is expected to decline more slowly than the consumer price index. Our forecast for core inflation excluding indirect taxes exceeds the March projection, which is offset at the level of inflation by the more moderate price dynamics of non-core inflation items. The higher path of core inflation excluding indirect taxes is attributable to the higher repricing of market services at the beginning of the year.

Budgetary measures contribute to the increase in inflation (Chart 1-3). Maintaining the surtaxes and raising the rate of the retail trade surtax increases inflation by 0.2-0.4 percentage points. The increase in excise duties on fuels may raise annual inflation by 0.5–0.6 percentage points in 2024. According to our preliminary estimate, the measures that contain tax increases will raise inflation by 0.7–1.0 percentage points in total in 2024.

Lower global energy and crude oil prices as well as food raw material prices result in a decline in prices of fuels and unprocessed food. Global energy prices (gas and electricity) have dropped significantly in recent months and are thus currently below the levels prior to the Russia–Ukraine war. The global price of Brent crude oil fluctuated between USD 70–75 per barrel. The fall in global food raw material prices supports a further decline in food price inflation. Unprocessed food inflation peaked in November, and the annual price increase in this product group may be lower than 20 percent for the whole of this year and in the single-digit range next year. For alcohol and tobacco products, inflation may be around 16 percent this year (mainly due to excise tax hikes), before falling substantially from 2024 as these effects are eliminated. According to our forecast, as result of amending the utility prices (gas and electricity prices), inflation of regulated energy prices will be around 20 percent on average in 2023. In our analysis, we applied the technical assumption that the measures impacting household energy and food prices will remain in force in unchanged form over the entire forecast horizon. Overall, after the cost effects have faded out, the price dynamics of non-core inflation items will be below 3 percent next year and in 2025 (Table 1-1).

Box 1-1: Assumptions applied in our forecast

Hungary is a small, open economy, and as such our forecasts for the most important macroeconomic variables are fundamentally influenced by developments in external factors. The purpose of this brief presentation of the changes in external assumptions is to make our forecasts more transparent (Table 1-2).

Table 1-2: Main external assumptions of our forecast

Technical assumptions	2023		2024		2025		Change		
	Previous	Current	Previous	Current	Previous	Current	2023	2024	2025
EUR/USD	1.07	1.07	1.07	1.07	1.07	1.07	0.6%	0.4%	0.4%
Oil (USD/barrel)	75.9	77.2	71.6	72.0	71.1	71.0	1.8%	0.6%	-0.1%
Oil (EUR/barrel)	71.1	71.8	67.1	67.3	66.7	66.3	1.1%	0.2%	-0.5%
Gas (EUR/MWh)	46.1	37.8	49.5	43.0	49.0	46.1	-18.0%	-13.0%	-5.8%
Euro area inflation (%)	5.3	5.4	2.9	3.0	2.1	2.2	0.1 pp.	0.1 pp.	0.1 pp.
Euro area real GDP (%)	1.0	0.9	1.6	1.5	1.6	1.6	-0.1 pp.	-0.1 pp.	0.0 pp.
GDP growth of Hungary's main export partners (%)	(-0.2) - 1.0	(-0.3) - 0.9	2.4 - 3.3	2.4 - 3.3	1.9 - 2.7	1.9 - 2.7	-0.1 pp.	0.0 pp.	0.0 p.

Source: Bloomberg, Consensus Economics, MNB, ECB

In the first quarter, economic growth in most major economies exceeded analysts' expectations, while the performance of the euro area was slightly below preliminary expectations, due to the downturn in Germany. Based on recent months, the decline in major commodity prices, lower inflation and the favourable labour market situation are also supporting global economic activity. At the same time, compared to the March forecast, global and European growth prospects remained practically unchanged as a result of the contrasting effects of higher interest rate paths, protracted disinflation, significant declines in real wages and declining household consumption. According to international business survey indices, consumer confidence is still at a very low level in EU economies, while business sentiment deteriorated. GDP fell in eight of the 27 countries in the European Union on a quarterly basis. In 2023 Q1, the output of Germany, Hungary's most important trading partner, moderated by 0.5 percent in year-on-year terms. In the first quarter, year-on-year growth rates of 1.6 percent and 4.5 percent were registered for the US and Chinese economy, respectively.

The ECB's growth and inflation forecast for the euro area has not changed substantially compared to the March forecast. GDP growth in the euro area is projected at 0.9 percent in 2023, 1.5 percent in 2024 and 1.6 percent in 2025. Based on the ECB's June forecast, inflation in the euro area may be 5.4 percent in 2023, 3.0 percent in 2024 and 2.2 percent in 2025.

As a result of weak global demand, the price of Brent crude was at a low level, near USD 70–75 starting from the first half of May. In April, the price of Brent crude oil temporarily rose to above USD 80 per barrel due to the production cut of 1.16 million barrels a day by OPEC+. Following that, however, adjustment was observed in line with weak demand data, and the price of Brent has remained near the USD 70–75 range since early May. In June, one of the largest producers, Saudi Arabia, announced another production cut of 1 million barrels from July, but based on the available data this did not result in any major rise in the price of oil. It may have contributed to the low oil prices that Russia's oil exports remained stable, despite the Western sanctions. The price difference between Brent and the Russian type Ural crude oil persisted in the past period as well.

Domestic prices of petrol and diesel oil stopped declining in the second half of May. Hungary still receives Russian Ural crude via pipeline, but the market price of gasoline and diesel is determined by Brent crude oil, and accordingly that price, which is quoted in USD, and the USD/HUF exchange rate have significant impact on fuel prices. In line with international trends, the prices of both petrol and diesel oil declined until the second half of May in our country, but slight increases were observed in the prices of both fuels in the first half of June.

The TTF gas price continued to fall in recent months, but a modest increase was observed in mid-June. Domestic and European purchase prices of natural gas track the TTF gas price, which reached its historical high above EUR 300 in August 2022. The price of natural gas started to fall steeply again from the latter half of December, with this downtrend continuing in the spring months as well. The milder-than-usual winter weather, the high filling level of gas storage facilities and weakening gas demand also contributed to lower gas prices. However, the TTF gas price rose slightly in mid-June and was close to levels of EUR 30-40. Changes in gas prices also affect the price of electricity via natural gas-fired power plants. In line with the low level of gas prices, the 7-day moving average of the German Phelix electricity price was below EUR 110 starting from mid-April, which is well below the December levels of nearly EUR 400.

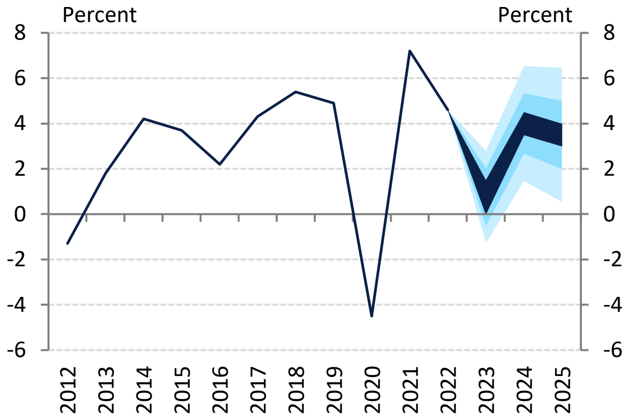
The budget deficit target is 3.9 percent for 2023, after which the deficit may decline to 2.9 percent in 2024 and further to around 1.9 percent by the end of the forecast horizon. The measures announced in parallel with preparation of the 2024 Budget Act contribute to the decline in the budget balance by the partial or complete continuation of the windfall taxes introduced in 2022 as well as by expenditure cuts, which is also supported by the fall in energy prices. As a result of nominal GDP growth and the decrease in deficit, the government debt ratio may decline from 73.3 percent at the end of the previous year to below 70 percent of GDP by end-2023 and fall to below 65 percent by end-2025.

According to our assumption, drawdown of the funds from the 2021–2027 EU budget cycle may start in 2023 H2. Although the uncertainty around EU funds decreased after the adoption of the Hungarian Recovery and Resilience Plan and the signing of the Partnership Agreement, for lack of an agreement, drawdown of the funds still could not start. In our baseline scenario, we continue to presume that the agreement will be reached this year, and the full amount of the funds will be available.

1.2 Real economy forecast

This year, we project GDP growth of 0.0–1.5 percent, while the economy may expand by 3.5–4.5 percent in 2024 and 3.0-4.0 percent in 2025. In the first half of 2023, GDP may continue to drop on an annual basis, due to declining real wages and postponed investments as a result of the uncertainty. In the short term, the decline will be mitigated by agriculture, which is correcting after last year's drought, and the favourable performance of public services. Economic growth is expected to regain momentum in the second half of the year, in line with the decreasing inflation and the real wage index becoming positive. On the production side, market services and industry also contribute to the turnaround. The year as a whole is characterised by moderate, but positive GDP growth. Household consumption will contract overall this year, due to falling real income, and increased costs and uncertain prospects are expected to result in the rescheduling of investments. On the other hand, the contribution of net exports to growth remains positive. Starting from this year, Hungary’s export market share will grow more slowly over the forecast horizon, after last year's significant expansion. GDP growth in 2024 and 2025 is supported by both internal and external factors. Household consumption and investments will rise again. In line with stronger internal demand, imports will expand, although net exports are contributing positively to economic growth over the entire forecast horizon. The nominal investment rate may develop at a high level, close to 27-28 percent over the forecast horizon.

Chart 1-4: Fan chart of the GDP forecast



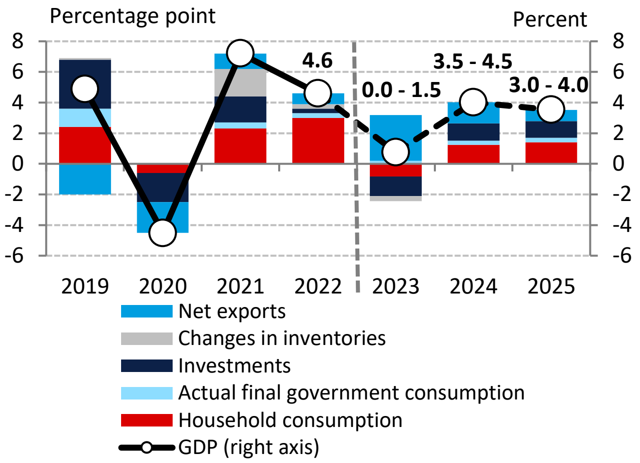
Note: Based on unadjusted data.
Source: HCSO, MNB

In 2023 Q1, Hungary’s GDP contracted by 0.9 percent in year-on-year terms. On a quarterly basis, economic performance decreased for the third consecutive quarter. Industry and market services also contributed to the year-on-year decline in the economy, but the favourable performance of agriculture and public services moderated this. On the consumption side, household consumption (-3.9 percent) and gross fixed capital formation (-6.0 percent) fell significantly in year-on-year terms in the first three months of this year. Net exports contributed positively, by 4.4 percentage points, to economic growth, thus mitigating the economic downturn.

GDP growth is expected to be between 0.0 – 1.5 percent in 2023 (Chart 1-4). In the first half of this year, the performance of the industrial sectors and market services is expected to drop, but this decline will be mitigated by the expansion in agriculture, which is correcting after last year's drought, and in public services, due to the performance of healthcare. In an annual comparison, the change in GDP may return to the positive domain again starting from the third quarter, with market services making the strongest contribution, in addition to agriculture. In the fourth quarter, in line with an improvement in the international economy, the industrial sectors, producing for export may also grow substantially on an annual basis.

The recovery of GDP may become broad-based from the expenditure side as well in 2023 H2. According to our forecast, net exports contribute positively to the growth of the economy over the entire year. At the same time, following last year’s major expansion, Hungary’s export market share will grow more slowly over the forecast horizon from this year. In 2023 overall, we expect reduction in consumption on an annual basis, in line with deteriorating income trends due to high inflation.

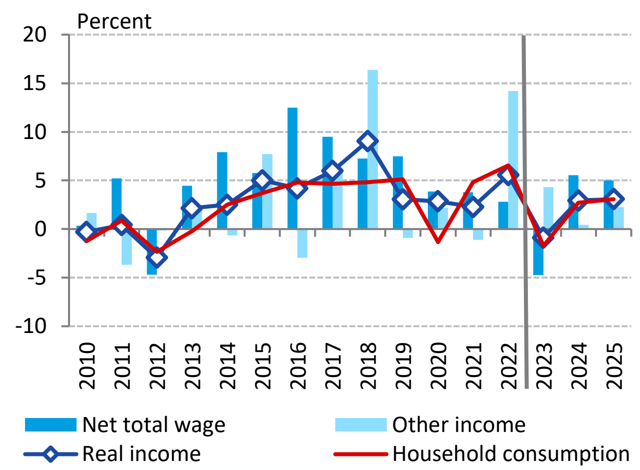
Chart 1-5: Expenditure side decomposition and forecast of GDP



Note: The values represent the middle of the forecast range. Actual final government consumption includes government consumption and transfers from government and non-profit institutions.

Source: HCSO, MNB

Chart 1-6: Annual change in consumption and disposable income items in real terms



Source: HCSO, MNB

Investments may decrease in 2023 due to increased financing and operating costs, as well as uncertainty. At the same time, starting from the fourth quarter, in addition to net exports, household consumption and investments can also contribute positively to the increase in GDP.

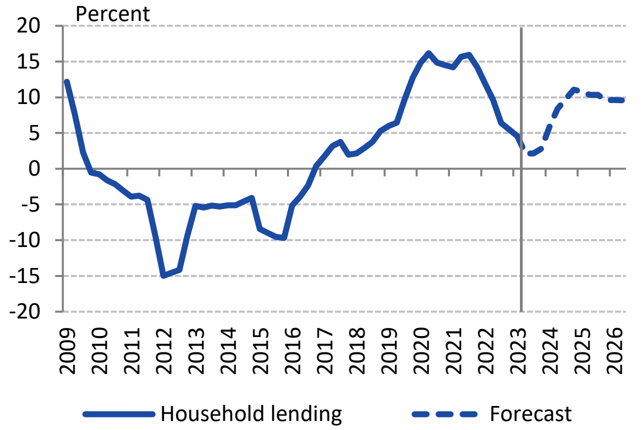
The milder growth this year may be followed by an expansion of 3.5–4.5 percent in 2024 (Chart 1-5). The economic rebound will be facilitated by the stabilisation of the employment and investment rates at high levels. On the demand side, falling inflation will result in renewed growth in real household incomes. As a result of this process, household consumption and investments will be again on an upward trajectory, while the contribution of net exports to economic growth will be positive over the entire forecast horizon. In 2025, GDP growth may approach its long-term trend, thus increasing by 3.0–4.0 percent.

Year-on-year consumption growth is projected to decline in 2023. The deterioration in income conditions is primarily caused by the high inflation, resulting in a fall in the purchasing power of wages. This year, the mild decline in households' real disposable income to reduce consumption as well. However, the fall in labour income will be offset somewhat by the rise in entrepreneurial incomes and households' interest income. From the end of the year, households' real income will rise in parallel with falling inflation, and in line with that consumption will also return to a growth path (Chart 1-6).

The growth rate of household loans outstanding may continue to decelerate in parallel with the uncertainty in the real economy. Based on the actual quarterly figures for 2023 Q1, lending to households slightly exceeded our previous expectations. However, the volume of new contracts concluded during the period fell short of the year-on-year figure by 50 percent. Looking ahead, the growth rate of household loans outstanding may correspond to our earlier expectations: the uncertain real economy environment, high house prices and tight monetary conditions may all reduce households' propensity to borrow (Chart 1-7). Household loan dynamics may decelerate to 2 percent by mid-2023, but then return to around 10 percent from 2024 H2.

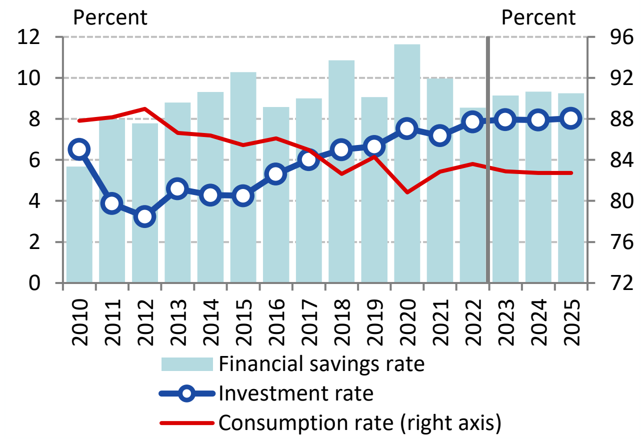
After jumping to more than 11 percent around 2020, the savings rate proportional to income eased to 8.6 percent by 2022 and will stabilise at above 9 percent from this year. The reduction of forced savings during the COVID period has been completed, and households have become more cautious in their consumption and savings decisions in the past period, as evidenced by the renewed rise in the savings rate. The increase in the household investment ratio

Chart 1-7: Annual change in lending to households



Note: Transaction-based, year-on-year data. 2019 Q3 data adjusted for transactions of lombard loans.
Source: MNB

Chart 1-8: Evolution of households' consumption, investment and financial savings rates as a percentage of disposable income



Source: HCSO, MNB

Table 1-3: Evolution of gross fixed capital formation and investment rate

	2023	2024	2025
Gross fixed capital formation	-4.4	4.2	4.0
Government investments	-5.5	-7.0	-3.7
Private investments	-4.1	6.8	5.5
Investment rate	27.3	27.5	27.9

Note: The values represent the middle of the forecast range. Year on year growth for gross fixed capital formation and investment rate as proportion of GDP.
Source: MNB

was primarily caused by the expansion of home improvements and rising price index of investments (Chart 1-8).

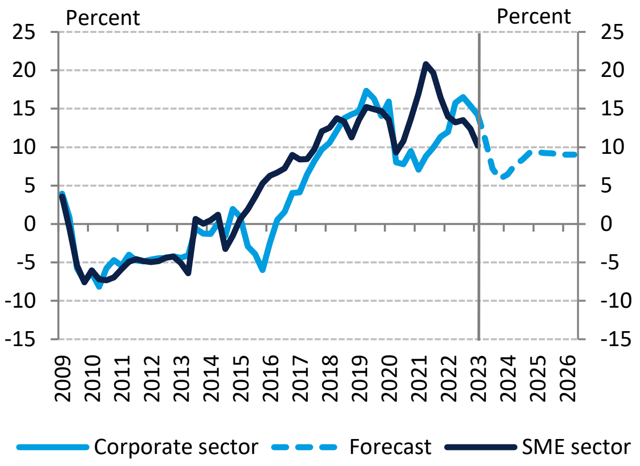
The volume of investments in 2023 may be in line with our March expectations, while we continue to project expansion in 2024 and 2025 (Table 1-3). The decline this year is attributable to developments in public, corporate and household investments, whereas private sector investments will grow in 2024 and 2025. The nominal investment rate may be nearly 27–28 percent over the forecast horizon, albeit this is mostly the result of high price dynamics.

The volume of corporate investments declines considerably in 2023 in our forecast, in view of the increased costs and the uncertainty. In the past period, contrasting trends were observed in the structure of corporate investment. In 2023 Q1, investment in sectors producing for external markets expanded by 7.2 percent year-on-year. At the same time, a decline of 10.6 percent was recorded in the sectors producing and providing services for the domestic market in the first quarter. On the whole, corporate investments may contract this year, owing to the elevated financing and operating costs as well as the uncertainty, but corporate investments are already expected to expand again in 2024 and 2025, in line with the implementation of the announced major investment projects (e.g. battery production).

Corporate loan dynamics may decelerate significantly in 2023. In light of the Q1 figures, the annual growth rate of outstanding lending to non-financial corporations fell short of our earlier expectations (Chart 1-9). During the quarter, it was mainly large transactions exceeding HUF 5 billion and demand for working capital loans due to higher operating and production costs that helped keep nominal corporate loan dynamics in the double-digit range. The share of market-based loans within new corporate loan contracts fell significantly in 2023 Q1, in parallel with the upturn in the Széchenyi Card Programme MAX+ and the Baross Gábor Loan Programme. On the demand side, corporate demand for working capital loans may still grow in the coming period, possibly supported by the expanded subsidised credit schemes as well. However, according to our estimate, in the uncertain environment, corporate loan dynamics may decelerate to 6 percent by end-2023, and then stabilise at a level of 9 percent over the forecast horizon, starting from the end of next year.

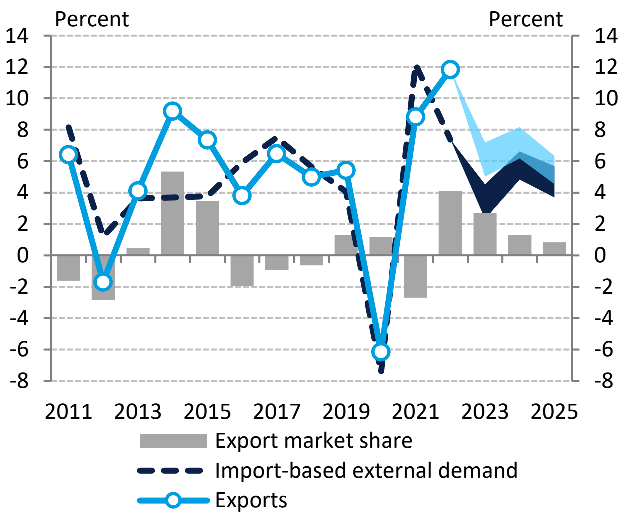
Household investments will decline only this year, whereas public investments will do so over the entire forecast horizon. The disbursement of housing loans in

Chart 1-9: Annual change in lending to non-financial corporations and SMEs



Note: Transaction-based, year-on-year data. The SME sector does not include the self-employed. The growth rate of the overall corporate sector is based on the total amount of outstanding credit to the entire financial intermediary system.
Source: MNB

Chart 1-10: Changes in export market share



Note: Export market share based on the average of the forecast range.
Source: HCSO, MNB

2023 Q1 was down 67 percent on 2022 Q1, pointing to a decline in household investments this year. However, the reduction of government investments may free up capacity in the construction industry, contributing to the supply side of housing construction. The volume of public investments will decrease each year over the forecast horizon. In line with the available information, investments implemented by the state may fall by 5.5 percent in 2023, 7.0 percent in 2024 and 3.7 percent in 2025.

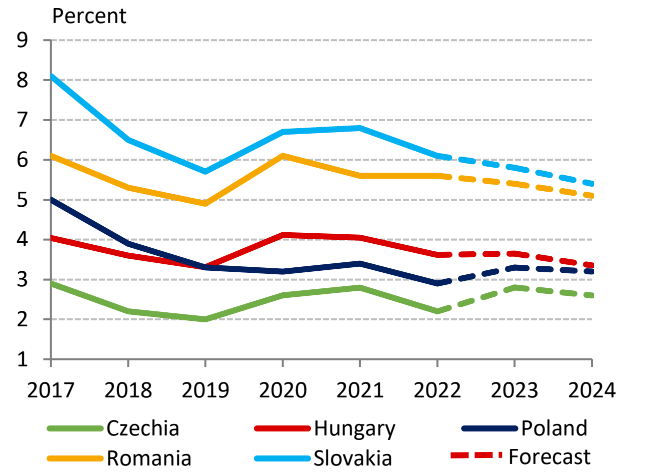
The contribution of net exports to growth remains positive in 2023. Hungarian goods exports expanded strongly in the first quarter, but our forecast for this year remains unchanged compared to our March expectations. Despite the lower industrial production, the increase in exports was supported by the difference in the performance of sectors selling in foreign and domestic markets: Since last September, industrial output in the sectors selling in Hungary has been declining steadily, whereas for companies producing for exports, production was still able to expand in the first quarter, even in spite of a major slowdown, although output already declined in April. As the import demand of Hungary's trading partners is fading in 2023 H1, the expansion in Hungary's exports may continue at a decelerating pace, while in parallel with a downturn in industrial production, the continued Russia–Ukraine war and the sanction policies pose a major negative risk.

In 2023 Q1, the growth rate of imports slowed significantly, in line with contraction in domestic demand items. The subdued year-on-year increase in imports will continue in 2023 H1, but as external economic activity and domestic business activity are expected to become more dynamic from 2023 H2, import growth will also pick up. By contrast, net exports are forecast to make a positive contribution to growth during the whole year; at the same time, following last year's major expansion, Hungary's export market share will grow more slowly over the forecast horizon from this year (Chart 1-10).

1.3 Labour market forecast

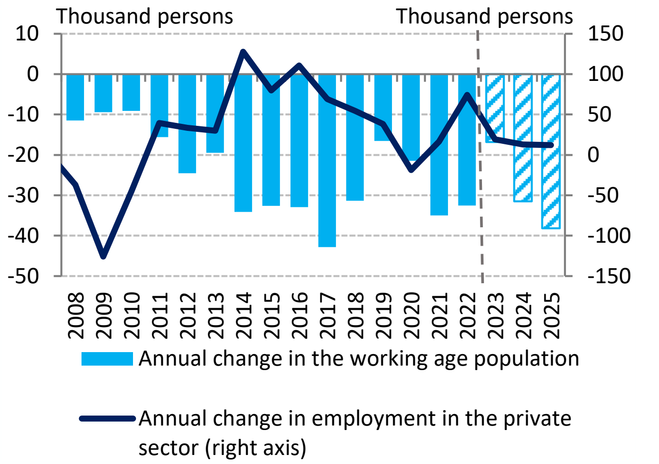
Labour demand remains robust, and thus, despite a slowdown in GDP growth, we expect a moderate increase in employment for 2023 as a whole, whereas the number of employed will remain practically unchanged in 2024. The private sector headcount is expected to rise between 0.4–0.7 percent in 2023 and between 0.2–0.7 percent in 2024. The unemployment rate may be 3.6–3.7 percent this year. Wage dynamics in 2023 are driven by the significant increase in the minimum wage at the beginning of the year and the historically high labour market tightness, while the significant drop in inflation expected in the second half of the year may lead to a slowdown. We project growth of 14.7–15.5 percent in private sector average earnings for this year.

Chart 1-11: Change in the unemployment rate



Note: Data on Hungary based on the midpoint of the forecast range.
Source: Eurostat, European Commission, HCSO, MNB

Chart 1-12: Annual change in the working age population and the number of persons employed in the private sector



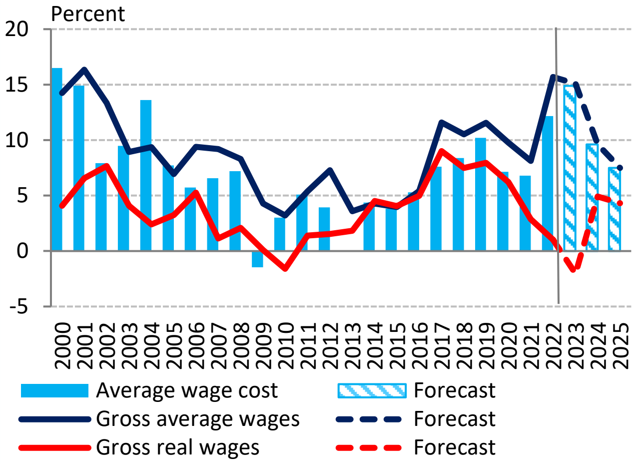
Note: Population aged 15-74. Based on the midpoint of the forecast range.
Source: Eurostat, HCSO, MNB

Labour demand remains robust. The tightness of the labour market is close to the highest pre-crisis values, and the number of new job vacancies increased again in 2023 Q1. According to the May ESI survey monitoring employment expectations, looking at the key sectors, the share of companies expecting an increase in the number of employees in the next three months is already growing in manufacturing, in trade and in other services, while most companies in construction remain pessimistic about changes in headcount. Data from the ESI survey for 2023 Q2 show that the number of companies indicating labour shortage as the main factor limiting production rose slightly in industry and significantly in services, while no trend reversal can be seen in construction.

Despite the economic slowdown, the unemployment rate is expected to decline moderately for the rest of the year. Whole-economy employment rose to a historical high in 2023 Q1, and labour market activity has also shown a rising trend since mid-2020. The seasonally adjusted unemployment rate stood at 3.8 percent in 2023 Q1, reflecting a mild increase compared to the previous quarter, but remaining low by international standards. According to our forecast, the unemployment rate will fall slightly over the rest of the year, in line with a pick-up in business activity. We expect the unemployment rate to reach its pre-pandemic level in the course of 2024. According to our forecast, the unemployment rate will be 3.6–3.7 percent this year and 3.1–3.6 percent in 2024 (Chart 1-11).

Our forecast suggests that headcount in the private sector will rise by 0.4–0.7 percent this year. The tightness of the labour market showed no response to the decline in economic performance. Employment is expected to vary across sectors and corporate headcount categories. Therefore, the level of employment is projected to increase slowly for the rest of the year. According to our forecast, the number of people in employment in the private sector will increase by 0.4–0.7 percent in 2023 and by 0.2–0.7 percent in 2024 (Chart 1-12).

Chart 1-13: Annual changes in gross average wages and average labour cost in the private sector



Note: Based on the midpoint of the forecast range.
Source: HCSO, MNB

Nominal wage dynamics remain high, falling slightly short of the elevated level seen last year. Wage growth is determined by the tightness of the labour market, the significant rise in the minimum wage and the guaranteed wage minimum at the beginning of the year, and by inflation expectations. The increase in the minimum wage was already included in the wage index in 2023 Q1, while some of the corporate wage changes may become perceptible in the second quarter. The steep decline in inflation foreseen for 2023 H2 is expected to result in lower wage dynamics in that period, offsetting the higher values from the first two quarters. According to our forecast, wages in the private sector will increase by 14.7-15.5 percent in annual terms in 2023, while we anticipate growth of 9.1–10.1 percent in 2024 (Chart 1-13).

Table 1-4: Changes in projections compared to the previous Inflation Report

	2022	2023		2024		2025	
	Actual	Forecast					
		Previous	Current	Previous	Current	Previous	Current
Inflation (annual average)							
Core inflation	15.7	16.9 - 19.4	17.7 - 19.6	4.4 - 6.4	4.6 - 7.0	3.0 - 3.6	3.0 - 3.5
Core inflation excluding indirect tax effects	15.6	16.9 - 19.4	17.7 - 19.6	4.4 - 6.4	4.6 - 7.0	3.0 - 3.6	3.0 - 3.5
Inflation	14.5	15.0 - 19.5	16.5 - 18.5	3.0 - 5.0	3.5 - 5.5	2.5 - 3.5	2.5 - 3.5
Economic growth							
Household consumer expenditure	6.5	(-2.0) - (-1.1)	(-2.1) - (-1.3)	2.1 - 3.1	2.2 - 3.2	2.3 - 3.3	2.6 - 3.6
Government final consumption expenditure[1]	0.9	(-0.3) - 1.5	0.0 - 1.8	0.3 - 1.6	0.7 - 1.9	0.9 - 2.0	0.9 - 2.0
Gross fixed capital formation	1.2	(-5.9) - (-3.0)	(-5.9) - (-3.0)	2.7 - 5.6	2.7 - 5.6	2.6 - 5.5	2.6 - 5.5
Domestic absorption	3.9	(-2.5) - (-1.2)	(-2.7) - (-1.5)	2.0 - 3.2	2.1 - 3.3	2.2 - 3.4	2.3 - 3.5
Exports	11.8	3.8 - 6.1	3.8 - 6.1	5.2 - 7.2	5.2 - 7.2	3.7 - 5.4	3.7 - 5.4
Imports	11.1	0.7 - 3.0	0.6 - 2.8	3.4 - 5.6	3.5 - 5.7	2.7 - 4.7	2.7 - 4.7
GDP	4.6	0.0 - 1.5	0.0 - 1.5	3.5 - 4.5	3.5 - 4.5	3.0 - 4.0	3.0 - 4.0
Labour productivity[2]	2.8	0.3 - 1.1	0.7 - 1.3	3.1 - 4.4	3.1 - 4.4	2.4 - 3.8	2.4 - 3.8
External balance[3]							
Current account balance	-8.1	(-4.4) - (-3.2)	(-2.8) - (-1.8)	(-2.3) - (-0.9)	(-0.8) - (0.4)	(-1.3) - 0.1	0.2 - 1.6
Net lending	-6.0	(-2.1) - (-0.9)	(-0.4) - 0.6	(-0.4) - 1.0	1.2 - 2.4	(0.3) - 1.7	1.8 - 3.2
Government balance							
ESA balance	-6.2	-3.9	-3.9	-2.5	-2.9	-1.5	-1.9
Labour market							
Whole-economy gross average earnings[4]	17.4	11.3 - 12.2	12.7 - 13.4	8.4 - 9.6	9.7 - 10.9	6.6 - 7.9	7.4 - 8.7
Whole-economy employment	1.3	(-0.2) - 0.1	0.1 - 0.4	(-0.1) - 0.6	(-0.2) - 0.4	(-0.1) - 0.6	(-0.1) - 0.6
Private sector gross average earnings[4]	15.7	13.7 - 14.4	14.7 - 15.5	9.1 - 10.1	9.1 - 10.1	6.9 - 8.1	6.9 - 8.1
Private sector employment	2.1	(-0.1) - 0.2	0.4 - 0.7	0.2 - 0.7	0.2 - 0.7	0.0 - 0.6	0.0 - 0.6
Unemployment rate	3.6	3.6 - 3.7	3.6 - 3.7	3.1 - 3.6	3.1 - 3.6	2.9 - 3.7	2.9 - 3.7
Private sector nominal unit labour cost	9.5	13.0 - 14.3	13.3 - 14.6	4.5 - 6.2	4.7 - 6.3	3.7 - 5.4	4.1 - 5.9
Household real income[5]	5.6	(-1.4) - (-0.6)	(-1.3) - (-0.5)	2.1 - 3.3	2.3 - 3.5	2.2 - 3.4	2.5 - 3.7

[1] Includes government consumption and the transfers from government and non-profit institutions.
[2] Whole economy, based on national accounts data.
[3] GDP proportionate values, partly based on forecast.
[4] For full-time employees.
[5] MNB estimate.

Table 1-5: MNB baseline forecast compared to other forecasts

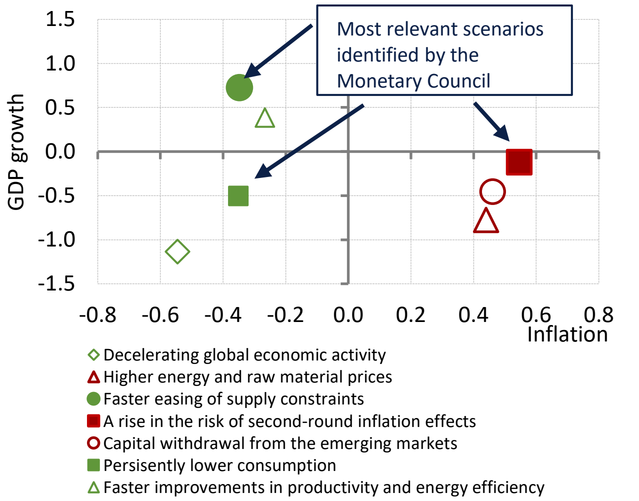
	2023	2024	2025
Consumer Price Index (annual average growth rate, %)			
MNB (June 2023)	16.5 - 18.5	3.5 - 5.5	2.5 - 3.5
Consensus Economics (May 2023)[1]	17.2 - 18.5 - 19.5	3.6 - 5.5 - 9.3	
European Commission (May 2023)[2]	16.4	4.0	
IMF (April 2023)	17.7	5.4	4.2
OECD (June 2023)	19.2	5.4	
Reuters survey (May 2023)[1]	17.7 - 18.7 - 19.2	3.2 - 5.9 - 9.3	3.0 - 3.9 - 6.0
GDP (annual growth rate, %)			
MNB (June 2023)	0.0 - 1.5	3.5 - 4.5	3.0 - 4.0
Consensus Economics (May 2023)[1]	(-0.7) - 0.1 - 1.0	0.8 - 3.0 - 4.3	
European Commission (May 2023)[2]	0.5	2.8	
IMF (April 2023)	0.5	3.2	3.3
OECD (June 2023)	0.0	2.5	
Reuters survey (May 2023)[1]	(-0.5) - 0.2 - 1.0	2.2 - 3.1 - 4.3	3.0 - 3.8 - 5.1
Current account balance[3]			
MNB (June 2023)	(-2.8) - (-1.8)	(-0.8) - (0.4)	0.2 - 1.6
European Commission (May 2023)[2]	-3.5	-2.8	
IMF (April 2023)	-4.6	-1.9	-0.4
OECD (June 2023)	-2.0	-0.7	
Budget balance (ESA 2010 method)[3]			
MNB (June 2023)	-3.9	-2.9	-1.9
Consensus Economics (May 2023)[1]	(-5.1) - (-4.3) - (-3.4)	(-4.0) - (-3.4) - (-2.7)	
European Commission (May 2023)[2]	-4.0	-4.4	
IMF (April 2023)	-3.9	-2.5	-2.9
OECD (June 2023)	-4.2	-4.0	
Reuters survey (May 2023)[1]	(-5.0) - (-4.2) - (-3.8)	(-3.9) - (-3.3) - (-2.8)	(-2.9) - (-2.6) - (-1.9)
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (June 2023)	(-0.3) - 0.9	2.4 - 3.3	1.9 - 2.7
ECB (June 2023)	0.9	1.5	1.6
Consensus Economics (May 2023)[1]	0.8	1.7	
European Commission (May 2023)[2]	0.7	1.4	
IMF (April 2023)[2]	0.7	2.0	2.3
OECD (June 2023)[2]	0.6	1.5	

[1] For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies, we also indicate the lowest and the highest values to illustrate the distribution of the data.
[2] Values calculated by the MNB; the projections of the named institutions for the relevant countries are adjusted with the weighting system of the MNB, which is also used for the calculation of the bank's own external demand indices. Certain institutions do not prepare forecast for all partner countries.
[3] As a percentage of GDP.
Source: Consensus Economics, ECB, European Commission, IMF, OECD, Reuters poll, MNB

2 Effects of alternative scenarios on our forecast

The Monetary Council highlighted three alternative scenarios around the baseline projection in the June Inflation Report. The scenario featuring faster easing of supply constraints is in line with a lower inflation and a higher growth path. The scenario based on an increase in the risk of second-round inflationary effects points to a higher inflation path and a somewhat lower growth path compared to the baseline scenario. The scenario of persistently lower consumption suggests lower growth and inflation paths. In addition to the highlighted scenarios, as alternative scenarios, the Monetary Council also discussed paths involving decelerating global economic activity, higher energy and commodity prices, a capital withdrawal from emerging markets and faster improvement in productivity and energy efficiency.

Chart 2-1: Risk map: effect of alternative scenarios on the baseline forecast



Note: The risk map presents the average difference between the inflation and growth path of the alternative scenarios and the baseline forecast over the monetary policy horizon. The red markers represent tighter and the green markers represent looser monetary policy than in the baseline forecast.
Source: MNB

Faster easing of supply constraints

In the past quarter, various factors indicated a rapid easing of supply constraints. In the past months, the degree of frictions in global value chains continued to decline from the historical high seen at end-2021, as also corroborated by the Global Supply Chain Pressure Index prepared by the New York Fed, which fell to nearly the level seen prior to the pandemic. The decrease in the index was primarily the result of shorter delivery times from Great Britain and China, while delivery times from the territory of the European Union increased. Following the record-setting levels seen in the past one and a half years, the cost of shipments from China to Europe adjusted considerably: by early June, the Freightos Baltic index had dropped from nearly USD 15,000 to below USD 1,400.

World market prices of gas, electricity and oil fell considerably, and prices of industrial metals and agricultural products also decreased. In the case of the former, the decline in the price of nickel stands out, while of the latter group of products the lower price of corn deserves mention. Demand effects played a role in the case of nickel, as the reopening of the Chinese economy is falling short of the expectations. At the same time, in the case of corn it was more supply effects that drove developments, as the increase in global inventories and the expected good crop resulted in a lower price.

The unwinding of global supply chain problems and declining prices of energy, industrial and agricultural products have not yet completely fed through into domestic production processes. However, looking ahead, the favourable external environment may have a positive impact on the production of Hungarian companies as well. If the price effects of improving international trends feed through more quickly than we anticipate, it may result in stronger domestic purchasing power and domestic demand, leading to higher GDP growth. As a result of expanding Hungarian export capacities, Hungarian companies may increase their export market share, with dynamic growth in battery production as a key factor. In parallel with the normalisation of the global economic environment and the terms of trade as well as the utilisation of new, recently built export capacities, declining corporate costs reduce inflationary pressure as well. The easing of global supply constraints is reflected in the decline in Hungarian companies' inflation expectations as well. In addition, the effect of measures taken by the Hungarian authorities is being reflected in firms' pricing trends, which may also accelerate the reduction of profit-driven inflation.

In our alternative scenario, as a result of a faster unwinding of supply disruptions, we presume higher productivity, a faster decline in corporate costs and – due to firm action by the competition authority – a rapid reduction in profit-driven inflation compared to the baseline scenario. In this alternative scenario, inflation is lower than expected, which implies higher real wages and hence higher consumption, which is in line with looser monetary conditions and a higher growth path.

Rise in the risk of second-round inflation effects

Domestic inflation fell to 21.5 percent in recent months, at a quickening pace. Households' inflation expectations remain at high levels, although both households' and companies' price expectations moderated significantly. Price expectations of corporations with regard to retail sales and services remain below their highs of last year. At the same time, core inflation and core inflation excluding indirect taxes only started to decrease from April, with this delay explained by market services, and within that by individual price rises related to the telecommunications sector.

The decrease in inflation seen in recent months is primarily attributable to lower inflation in processed food and fuels. The decline in core inflation is primarily explained by the drop in processed food inflation. Strong monthly price increases are still typical in market services.

The high inflation seen in the past period was driven by sharp rises in food prices as well as companies' repricing, which was much higher than the average of previous years. The high level of inflation reflects not only the rise in costs, as the significant increase in corporate profits observed in a wide range of sectors also contributed to it. The most striking difference between the effective price increase and the increase in costs can be observed for processed food. At the same time, market services, and within that the individual price rises in the telecommunications sector, contributed to the increase in core inflation during the quarter. Backward-looking elements may strengthen in companies' price-setting decisions, possibly resulting in significant second-round inflationary pressures in the economy and thus increasing the persistence of high inflation in the future as well.

According to the **alternative scenario**, the risk of second-round inflationary effects evolving materialises, leading to the persistence of inflation. The primary trigger of this may be if backward-looking elements become more pronounced in companies' pricing decisions, which would result in strong second-round inflationary effects in the economy. Realisation of this scenario points to higher inflation and more subdued economic growth than the baseline scenario.

Persistently lower consumption

The labour market remains historically tight in Hungary. Based on data from the Labour Force Survey (LFS), in April 2023 the average number of employees aged 15-74 amounted to 4,710,000. In 2023 Q1, the average headcount was 4,696,000, representing an increase of 21,000 on the same prior-year period. In the first three months of the year, on average, the number of employees in the primary labour market and of those working on sites abroad rose by 18,000 and 14,000, respectively, while the number of fostered workers fell by 10,000 year on year.

In April, the number of unemployed was 190,000, up 20,000 versus the same period of the previous year; consequently, the unemployment rate stood at 3.9 percent overall. Based on seasonally adjusted data, the number of jobseekers remained unchanged in April 2023 compared to March, and is still lower than in the months prior to the outbreak of the pandemic.

Weaker real economy performance has not been reflected in labour market developments. One underlying reason is that it may affect companies' employment decisions if they consider the economic downturn temporary, which encourages labour hoarding in the tight labour market environment, where it is difficult to hire new employees. In addition, companies implement price increases more easily in the high inflation environment, and thus the corporate profit rate in Hungary is outstanding among the OECD countries as well, which allows the wage bill to be maintained, while real wages are declining.

In our alternative scenario, we expect that the tightness of the labour market will ease and that adjustment will occur as a result of a downturn in economic performance.

Accordingly, employment will decline. The less favourable labour market prospects will result in subdued consumption, which is consistent with a lower inflation path.

Other risks

In addition to the scenarios highlighted above, the Monetary Council considered four other alternative scenarios. In the risk scenario featuring decelerating global economic activity, global growth slows down more than assumed in the baseline scenario. The deceleration in the performance of developed economies, including Germany, which is Hungary's main trading partner, points to deterioration in export performance and a decline in Hungary's GDP growth rate. Although following the COVID crisis the German services sector was able to grow, there was no major expansion in manufacturing, and the level of new orders did not reach the pre-pandemic level. In addition, a lower inflation path materialises compared to the baseline scenario, warranting looser monetary conditions.

In the alternative scenario with higher energy and commodity prices, we presume global supply problems and a prolonged war environment, as a result of which Hungary's external balance position will be less favourable than in the baseline scenario. Commodity market disturbances and the realisation of risks involving persistently higher prices put upward pressure on global inflation. If this alternative path materialises, the external inflation environment will be higher than expected, which will feed through into domestic prices. As the Hungarian economy is a commodity importer, both external and domestic balance developments will change in an unfavourable direction, also raising the risk premium. In the event of this scenario, tighter monetary conditions may be justified compared to the baseline scenario.

In our alternative scenario involving a capital withdrawal from emerging markets, we expect higher global inflation. As a result, the respective monetary policies of the world's leading central banks will become tighter, which in the case of Hungary means an easing of monetary conditions in relative terms. In this environment, also taking account of country-specific vulnerability aspects (inflation, external balance), risk aversion vis-à-vis emerging markets, including Hungary, increases more persistently and more strongly compared to the baseline scenario. As a result of this, major capital outflows and a further rise in inflation may occur, requiring tighter monetary conditions.

In the alternative scenario assuming **a faster improvement in productivity and energy efficiency**, as a result of the changeover to the intensive growth model, improved competitiveness stimulates the domestic economy primarily from the supply side. Productivity may improve to a greater degree compared to the assumption in the baseline scenario if further recommendations are implemented out of the 330 steps for improving competitiveness, and by the implementation of the 144 points of the essay entitled 'Sustainable Balance and Convergence', and thus the improvement in energy efficiency increases by accelerating the green transition. Implementation of the targeted measures leads to a significant increase in productivity, resulting in a lower cyclical position in the domestic economy. This is consistent with a lower inflation path and higher economic output, as well as looser monetary conditions.

3 Macroeconomic overview

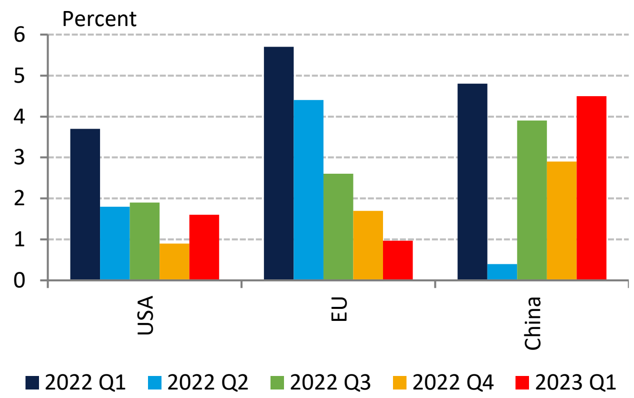
3.1 Assessment of macroeconomic trends

In the first quarter, economic growth in most major economies exceeded analysts' expectations. Inflation declined in the economies of the European Union in 2023 Q1, while household consumption dropped sharply in most member countries in parallel with a decrease in real wages. The labour market remained tight in the EU, despite the slowdown in economic activity. The ongoing Russia–Ukraine war and the sanction policies as a reaction to it continue to pose a major risk to developments in international economic activity and especially in the European economic outlook. In the United States, the Federal Reserve continued its interest rate hikes in May and then left the level of its interest rate unchanged in June; looking ahead, however, it envisaged some further tightening. The central bank also continued its balance sheet tightening that began in June 2022. The ECB continued its interest rate hike cycle and indicated that from July it would stop the reinvestment of maturing securities purchased under the APP. In the CEE region, the Romanian, the Czech and the Polish central banks left the base rate unchanged.

3.1.1 International economic trends

In 2023 Q1, economic growth continued to decelerate in the EU, while the expansion in output accelerated in China and the USA in year-on-year terms (Chart 3-1). **GDP growth in most major economies exceeded preliminary expectations.** For the first three months of the year, the US economy posted year-on-year growth of 1.6 percent and quarter-on-quarter growth of 1.3 percent. Household consumption was a major contributor to growth. In China, as a result of the lifting of the strict containment measures, annual growth of 4.5 percent was recorded, which exceeded the previous quarter significantly, while output expanded by 2.2 percent quarter on quarter. However, incoming data point to a deceleration after the rebound observed early in the year. In May, the year-on-year growth rates of retail turnover and industrial production also decreased. In 2023 Q1, the economy of the EU and of the euro area grew by 1.0 percent in year-on-year terms. GDP fell on a quarterly basis in eight of the 27 EU countries. In 2023 Q1, the output of Germany, Hungary's most important trading partner, fell by 0.5 percent in year-on-year terms.

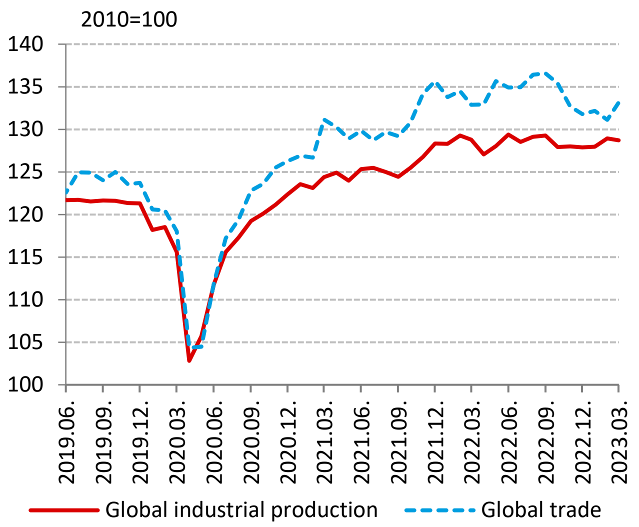
Chart 3-1: GDP growth in the world's leading economies



Note: Based on seasonally and working day adjusted data.
Source: Trading Economics, FRED, Eurostat

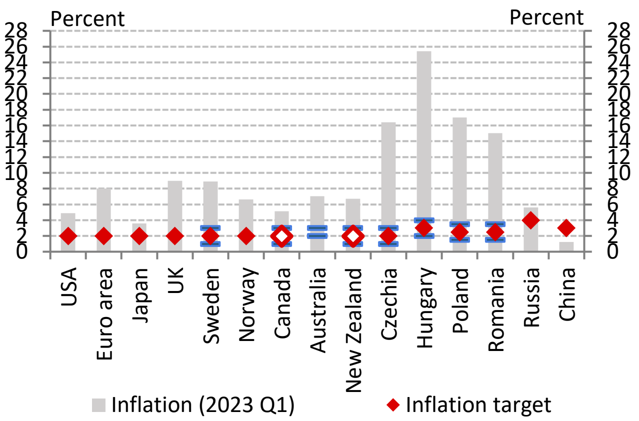
The ongoing Russia–Ukraine war and the ensuing sanction policies continue to pose a major risk to developments in international economic activity and especially in the European economic outlook. Global industrial production and trade, which had weakened as a result of the war, showed strong dynamics starting in Q2, but the increase lost momentum at the end of the year. At the same time, the effect of the major increase in Chinese economic activity compared to the previous quarters and of the further easing of the disruptions in supply chains was not visible. Following previous stagnation, global industrial production expanded only slightly in the first months of the year, while trade was able to grow to some extent in March

Chart 3-2: Development of global industrial production and global trade



Note: Based on seasonally adjusted data.
Source: CPB

Chart 3-3: Inflation targets of central banks and actual inflation



Note: The blue lines represent the inflation control range in Australia, Canada and New Zealand, while in other countries they mark a permissible fluctuation band. In Canada and New Zealand the mid-point of the target band is accentual, which is marked by empty diamond.
Source: OECD, FRED, National Institute of Statistics Romania, Statistics Sweden, Federal State Statistics Service

after a major downturn in the previous months, although it is still below last year's level (Chart 3-2). In the past months, the further decline in major commodity prices and the decrease in inflation as well as the favourable labour market situation were all factors that supported global economic activity. At the same time, compared to the March forecast, global and European growth prospects remained practically unchanged as a result of higher interest rate paths, protracted inflation, significantly decreasing real wages and declining household consumption. According to international business survey indices, consumer confidence is still at a very low level in the EU economies, while business sentiment deteriorated.

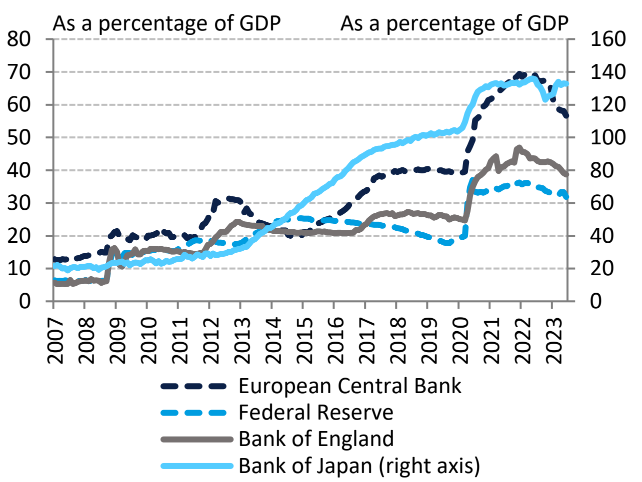
3.1.2 International monetary policy, inflation and financial market trends

Global inflation has decreased in recent months, but core inflation fell only moderately, with further increases seen in some countries. Inflation rates continue to substantially exceed the central bank targets in most advanced economies (Chart 3-3). Considering the disruptions affecting the financial sector in recent months as well as the approaching of the top of the interest rate path, out of the the world's leading central banks, the ECB continued to raise its policy rates more slowly than before, while the Federal Reserve left its interest rate unchanged in June after raising it in May. In the region, the Czech, Polish and Romanian central banks maintained the levels of their respective base rates.

Inflation declined in the United States, but core inflation is still at an elevated level. The CPI inflation indicator dropped from 5.0 percent in March to 4.9 percent in April and then to 4.0 percent in May. Core inflation declined from 5.6 percent in March to 5.5 percent in April and then to 5.3 percent in May. PCE inflation index fell from 5.1 percent in February to 4.2 percent in March, before rising to 4.4 percent in April. In terms of the structure of inflation, it is services inflation that currently dominates.

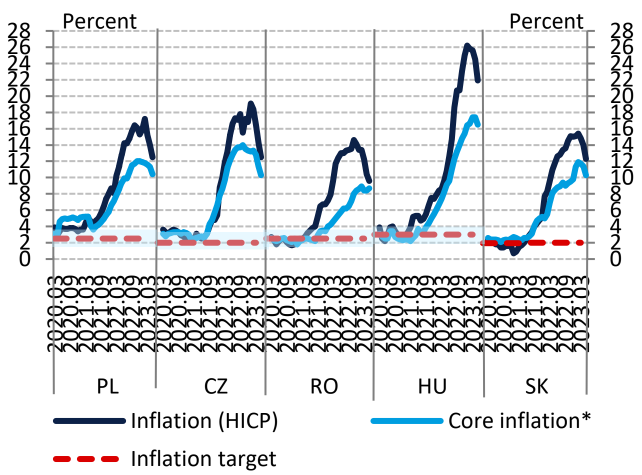
In the United States, the Federal Reserve kept the target range for the federal funds rate unchanged at its June meeting, after raising it by 25 basis points to 5.00-5.25 percent in May. However, the June rate hold does not mark the end of the rate hike cycle, with all members of the Fed's Open Market Committee suggesting that some further tightening is warranted before the end of this year. Fed Chairman Jerome Powell noted that inflationary pressures remain high and that bringing inflation down to 2 percent will thus take a long time. In June, Fed policymakers revised their expectations for the policy rate upwards, with the median rising to 5.6 percent

Chart 3-4: Central bank balance sheet totals in developed countries



Source: Databases of central banks, Eurostat, FRED

Chart 3-5: Inflation and core inflation in the region



Note: Annual change, percent. *In the case of core inflation, we use the definition of the Eurostat (inflation excluding energy, food, alcohol and tobacco). The blue area indicates the tolerance band around the inflation targets.
Source: Eurostat

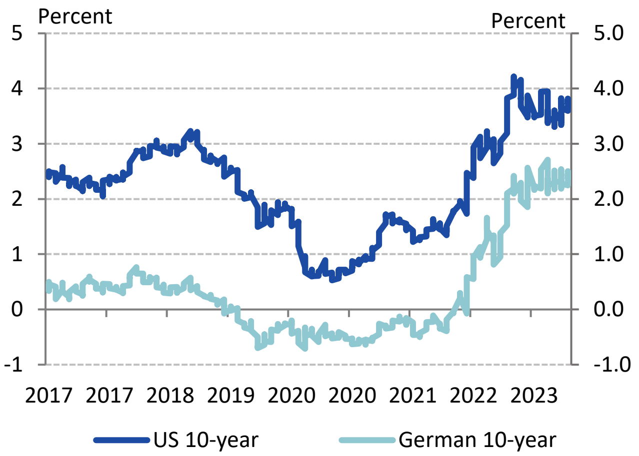
in 2023, 4.6 percent in 2024 and 3.4 percent in 2025. The liquidity-providing measures introduced in March in response to the financial turmoil had temporarily increased the Fed's balance sheet by USD 300 billion, after which the balance sheet started to decline again, reaching USD 8,439 billion, or 31.9 percent of GDP by the start of June 2023 (Chart 3-4).

In the euro area, inflation advanced from 6.9 percent in March to 7.0 percent in April, before easing to 6.1 percent in May. Core inflation declined from 5.7 percent in March to 5.6 percent in April and again to 5.3 percent in May. In its June forecast, the central bank revised upwards its inflation projections to 5.4 percent in 2023, 3.0 percent in 2024 and 2.2 percent in 2025.

The ECB continued its interest rate hike cycle more slowly than before and indicated that from July it would discontinue the reinvestment of maturing securities purchased under the APP. Although the central bank reduced the pace of interest rate increases, through its balance sheet instrument it will apply stronger tightening than before from July. The central bank raised policy rates by 25 basis points at both its May and June rate-setting meeting. The ECB justified the decision by arguing that inflation would remain elevated for too long looking ahead. ECB President Christine Lagarde said in June that further interest rate rises may be needed as inflation proves more persistent than previously expected, despite falling energy prices and easing supply chain disruptions. Assets in the APP portfolio will decline by a monthly average of EUR 15 billion until end-June, and then the reinvestment of assets purchased under the APP will be discontinued from July. Accordingly, the decline in the portfolio will accelerate to an expected monthly EUR 25 billion on average. The maturing securities purchased under the PEPP will be reinvested by the central bank until at least the end of 2024. In June, euro area banks will have to repay their maturing TLTRO III loans amounting to EUR 476.8 billion, which will reduce the balance sheet total of the ECB considerably. The ECB's balance sheet total amounted to EUR 7,713 billion or 56.6 percent of GDP at the beginning of June 2023 (Chart 3-4).

The Bank of Japan left the -0.1 percent interest rate on excess reserves unchanged in the last quater. The central bank also left its 0-percent target applicable to the 10-year government securities market yield unchanged. With a view to maintaining the yield target, the central bank offers to purchase government bonds in an unlimited volume at a fixed rate of 0.5 percent on working days, which is also the upper bound of the central bank's yield target. The central bank can purchase exchange-traded funds (ETFs) with a maximum limit of JPY 12,000 billion and Japanese real estate funds (JREITs) with a maximum limit of JPY 180 billion. Purchases of corporate bonds and securitised debt instruments will continue at the pre-pandemic pace of JPY 3,000 billion for corporate bonds and JPY 2,000 billion for securitised debt instruments. The central bank will continue its qualitative and quantitative easing (QQE) programme until such time as inflation steadily reaches the 2-percent price stability objective. Kazuo Ueda, the new governor of the central bank, indicated that it was appropriate to maintain the loose monetary policy, but over the long term it was necessary to review the existing framework, which the central bank had already started. Inflation fell from 3.3 percent in February to 3.2 percent in March, before rising to 3.5 percent in April. The central bank's balance sheet total-to-GDP ratio amounted to 132.7 percent at the beginning of June 2023 (Chart 3-4).

Chart 3-6: US and German 10y-government bond yields



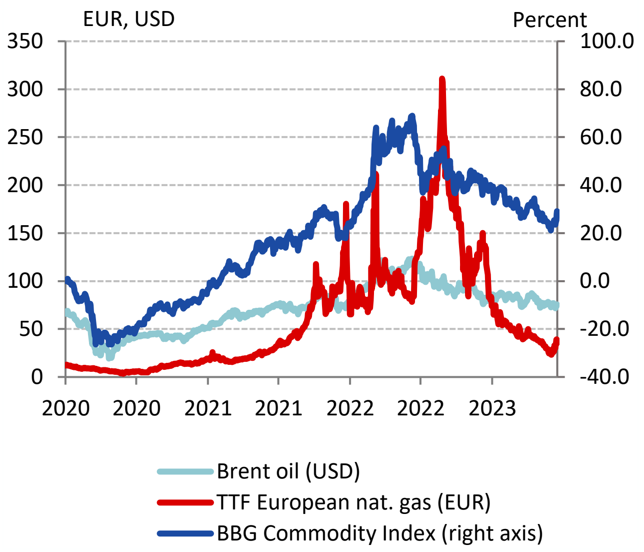
Source: Bloomberg

In June, the Chinese central bank lowered the interest rate on its medium-term borrowing facility by 10 basis points to 2.65 percent and reduced the interest rate on its one-week reverse repo facility by 10 basis points to 1.9 percent. In May, with the help of the policy instrument, the central bank increased the amount of liquidity provided to the banking sector by a net RMB 25 billion (around USD 3.5 billion). Liquidity expansion had not been so low since November last year. Inflation declined from 0.7 percent in March to 0.1 percent in April before rising to 0.2 percent in May. The balance sheet of the central bank has declined since January and stood at 34.9 percent of GDP at the beginning of April.

The Polish central bank left its policy rate unchanged at 6.75 percent. Looking ahead, the central bank will decide on further measures depending on incoming inflation, growth and labour market data. Polish central bank governor Adam Glapinski said that inflation may fall below 10 percent by September. The central bank governor also noted that further interest rate increases would be irrational in a context of falling inflation, but that rate cuts would only be possible if inflation clearly converges towards the target. Inflation eased from 16.1 percent in March to 14.7 percent in April and to 13.0 percent in May. The Harmonised Index of Consumer Prices was 12.5 percent in May (Chart 3-5).

The Czech central bank left its policy rate unchanged at 7.0 percent. According to the statement following the latest rate-setting meeting in May, the decision-makers will decide at the next meeting whether to keep the policy rate at the current level or to raise it. The central bank continues

Chart 3-7: Commodity prices



Source: Bloomberg

to prevent excessive fluctuations of the exchange rate of the Czech koruna. Inflation declined from 15.0 percent in March to 12.7 percent in April and to 11.1 percent in May. The Harmonised Index of Consumer Prices was 12.5 percent in May (Chart 3-5). According to the central bank's forecast, inflation may fall below 10 percent in the second half of the year.

The Romanian central bank left the policy rate at 7 percent at its rate-setting meeting in May. Inflation declined from 14.5 percent in March to 11.2 percent in April and to 10.6 percent in May. The Harmonised Index of Consumer Prices was 9.6 percent in May (Chart 3-5). According to the May forecast of the central bank, the annual inflation rate is likely to decline to single-digit territory in 2023 Q3, but at the end of the forecast horizon it will remain slightly above the target band.

Overall, financial and capital market sentiment improved. During the period since March, investors' risk appetite improved mainly as a result of the easing of market turbulences after the US bank failures, expectations concerning the monetary policies of the world's leading central banks as well as incoming macroeconomic data. Investor sentiment continues to be determined by the globally high inflation environment. In advanced economies, primary indicators of inflation already signalled easing in the past months, although the positive picture is nuanced by the persistently high levels of core inflation, which may result in the persistence of the inflationary pressure stemming from domestic demand. Risks of default of certain maturing bonds recurring with the reaching of the US debt ceiling and the uncertainty that had become permanent in view of the Russian invasion of Ukraine had a negative impact on market sentiment. Recent forecasts regarding global growth painted an improving picture of this year, while expectations concerning growth in the next two years declined slightly. In the past months, incoming macroeconomic data meant an overall positive surprise for the markets, while inflation data – following initial positive surprises – were already at lower levels globally compared to expectations, which also had a favourable effect on global financial market sentiment.

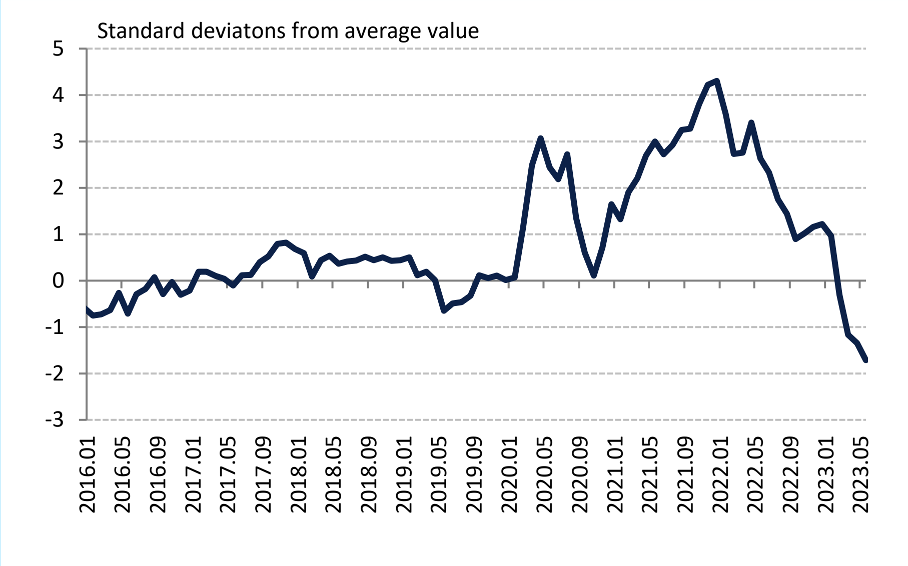
In the past period, commodity and oil prices declined slightly further, while the price of European gas was close to its two-year low (Chart 3-7). On the whole, financial market sentiment in the past quarter was as volatile as before, although risk indicators were slightly down. At present, financial market volatility is lower than at end-March. Developed stock exchange price indices increased by some 10 percent on average, while the index for the emerging economies advanced by 5 percent. The exchange rate of the US dollar against developed currencies depreciated in general, losing 1 percent versus the euro, 2.5 percent against the Swiss franc and 4.4 percent against the pound sterling. USD appreciated 8 percent versus JPY. Developed market long-term bond yields rose, with the US and German 10-year yield advancing by nearly 30 basis points (Chart 3-6). Emerging market bond yields varied; of the long-term yields in the region, the Polish yields rose slightly, while the Hungarian, Czech and Romanian yields declined.

The market continues to expect tight monetary policies from the developed central banks. Based on market pricing, the Fed may start to reduce its interest rate level during the autumn months, which is a later date compared to the end-March expectations. However, according to the Fed's communication, interest rates may remain at higher levels for a longer time compared to market expectations. Based on market pricing, the ECB is expected to carry out another 45 basis points of tightening this year, while interest rate cuts are priced as of the beginning of next year. Accordingly, compared to the end-March expectation, market players are pricing in a possible easing for a later date in this case as well.

Box 3-1: Normalisation of production chains

Following recent years' disruptions, pressure on global supply chains is easing. The strict containment measures taken because of the COVID-19 pandemic caused disruptions in supply chains: demand for various products, such as chips used in the manufacturing of electronic devices, increased considerably in a short time, and in parallel with that the supply of a number of commodities and global industrial production faced obstacles due to the lockdowns. This situation was later exacerbated by the war launched by Russia and the sanction measures introduced in return, which resulted in further frictions in commodity markets. The disruptions in global value chains increased to a historically high level by end-2021 (Chart 3-8). Nevertheless, major adjustment has taken place since then, and in the first months of this year, against the background of decelerating global economic activity and decreasing demand, the index that measures the degree of the friction in global value chains was below the average of the years preceding the COVID-19 crisis.

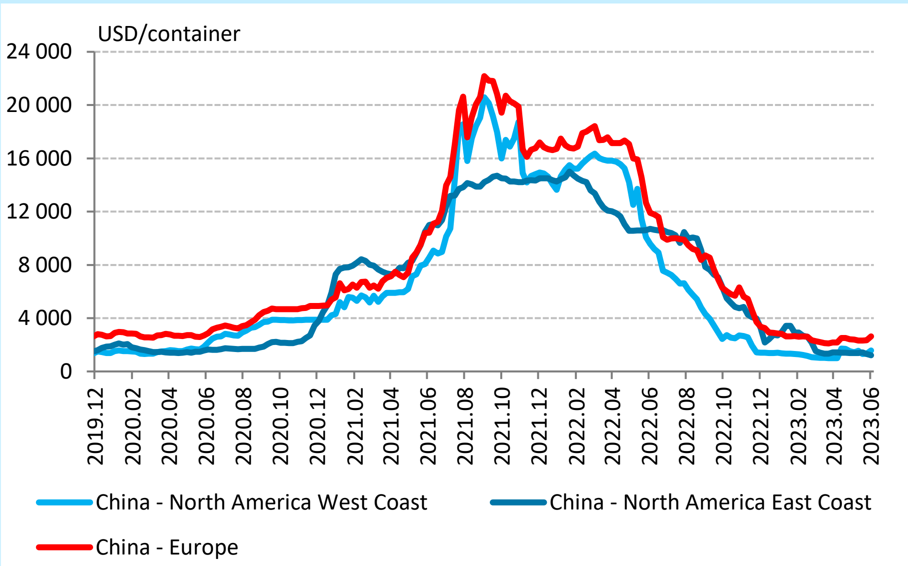
Chart 3-8: Development of the Global Supply Chain Pressure Index (GSCPI)



Note: The index is comprised of indicators that are able to capture the pressure on global supply chains based on both domestic and international criteria.
These include the transport cost indices and certain subindices of purchasing manager indices (e. g. transportation time, inventories, etc.).
Source: Federal Reserve Bank of New York

Global maritime transport costs declined to below the 2019 levels (Chart 3-9). Global demand for goods expanded considerably during the pandemic, which significantly increased the waiting time of cargo vessels in sea ports, which had already faced labour shortages. In view of the longer waiting time, maritime transport costs per container increased manifold. While at end-2019 the charge per container on the China–Europe trade route was around USD 2,600, in 2021 H2 it exceeded USD 22,000. With the decline in global demand for goods and the normalisation of production chains, container charges decreased to below pre-crisis levels in 2023 Q2. Taking the three most important trade routes into account, by June 2023, transportation costs declined by 91.2 percent compared to the highest average value.

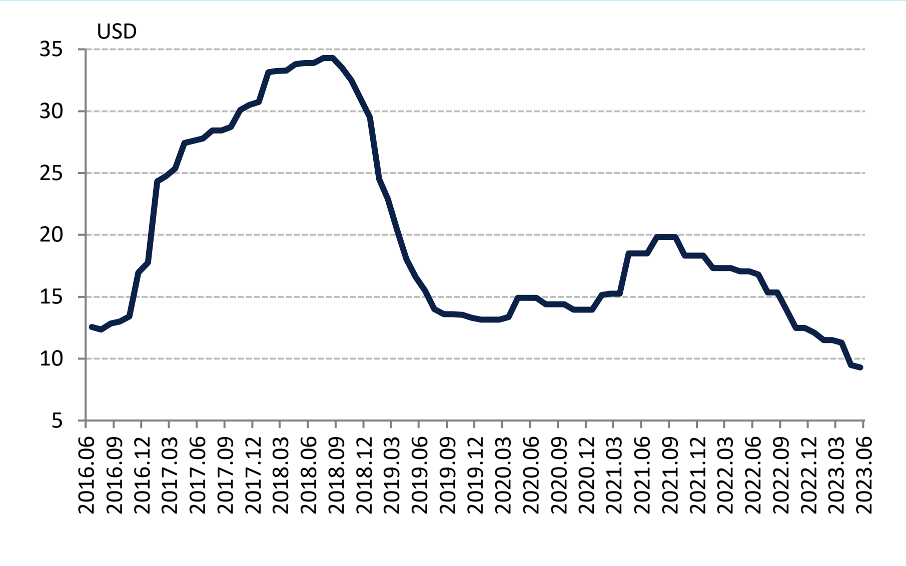
Chart 3-9: Changes in the Freightos Baltic Index for shipments from China



Note: The Freightos Baltic Index (FBX) is based on aggregate and anonymised real-time business data from global carriers of goods and forwarding agents that use the WebCargo by Freightos freight rate management platform.The FBX global index is the weighted average of the 12underlying regional route indices. In the index, each commercial route is represented by the 5–7 main ports of the individual regions. Source: Bloomberg

As a result of the US–China trade war prior to the COVID crisis, disorders evolved in global semiconductor manufacturing. This was exacerbated by the fact that as of 2020, in view of the strict containment measures, there was a surge in the demand for electronic products needed for working at home and learning and for various other electronic devices. This, together with the missing production capacities due to the lockdowns, significantly raised the world market price of semiconductors. Nevertheless, in parallel with a steady decline in demand, a major adjustment took place this year, resulting in much lower world market prices compared to the averages of the previous years (Chart 3-10).

Chart 3-10: Changes in the prices of semiconductors (chips)



Note: The inSpectrum Tech PC DRAM index aggregates the prices of semiconductors covering a wide range of chips used, for example, in laptops, household appliances, LED bulbs and medical devices as well. Source: Bloomberg

The impacts of the disruptions in global production chains varied across domestic sectors, but improvement was observed in all areas in the past period. The shortage of raw material and equipment was the most significant in industry, while the unfavourable effects were perceived to a lesser degree and with a delay in the services sector. The findings of surveys among Hungarian companies suggest that in the first two quarters of 2023 the share of respondents who thought that the shortage of raw materials and equipment was a serious constraint on output was no longer higher in industry than the average of previous years, while in construction the share of such respondents was below the previous years' average (Table 3-1). The delivery time of chips also fell considerably: while in 2022 Q2 the waiting time from ordering to manufacturing and delivery was 27 weeks on average, it decreased to an average 22.4 weeks by 2023 Q1. In parallel with that, developments in goods and commodity market prices also reflect the recovery of supply chains. The price levels of aluminium and copper, which are of key importance in industrial production, exceed those prior to the COVID crisis, but they declined considerably from last year. In the case of silicon, which is indispensable in chip manufacturing, only this year a more than 20 percent fall in price was recorded. As for natural gas, which is of key importance in the Hungarian industrial production, European gas market futures prices decreased by nearly 70 percent, while Brent crude oil prices fell by nearly 10 percent this year.

Table 3-1: Shortage of equipment and raw materials in the Hungarian industry, construction and services sector, and the levels of the global shortage of semiconductors and transportation costs

	Industry	Construction	Service sector	Chip delivery time	Shipping costs	Average index
2018 Q1	-0.1	0.8	0.5	-0.7	-0.6	0.6
2018 Q2	-0.8	1.3	1.5	-0.6	-0.6	0.6
2018 Q3	-0.3	1.7	1.4	-0.5	-0.5	0.9
2018 Q4	-0.2	1.6	1.8	-0.6	-0.4	1.0
2019 Q1	-0.2	1.5	1.3	-0.7	-0.5	0.9
2019 Q2	-0.2	0.8	1.3	-0.8	-0.6	0.8
2019 Q3	-0.5	0.5	0.8	-0.9	-0.6	0.5
2019 Q4	-0.8	0.1	-0.5	-1.0	-0.6	-0.1
2020 Q1	-0.1	-0.2	-0.9	-0.9	-0.5	0.0
2020 Q2	-0.3	-0.2	0.2	-0.8	-0.5	-0.5
2020 Q3	-0.9	-0.7	-0.7	-0.8	-0.3	-0.7
2020 Q4	-0.9	-0.7	0.4	-0.7	-0.1	-0.4
2021 Q1	0.4	-0.4	0.2	-0.3	0.4	0.0
2021 Q2	0.9	0.8	0.0	0.4	0.8	0.3
2021 Q3	3.1	1.9	-0.5	1.0	2.4	1.0
2021 Q4	2.8	1.5	-1.3	1.3	2.5	0.9
2022 Q1	2.0	1.0	-0.7	1.5	2.3	0.8
2022 Q2	2.8	1.5	0.6	1.7	1.8	1.0
2022 Q3	0.9	0.6	1.3	1.6	0.8	0.6
2022 Q4	0.6	0.5	0.1	1.4	-0.1	0.0
2023 Q1	0.0	-0.3	-0.1	0.8	-0.5	-0.3
2023 Q2	0.0	-0.7	0.4		-1.0	-0.2

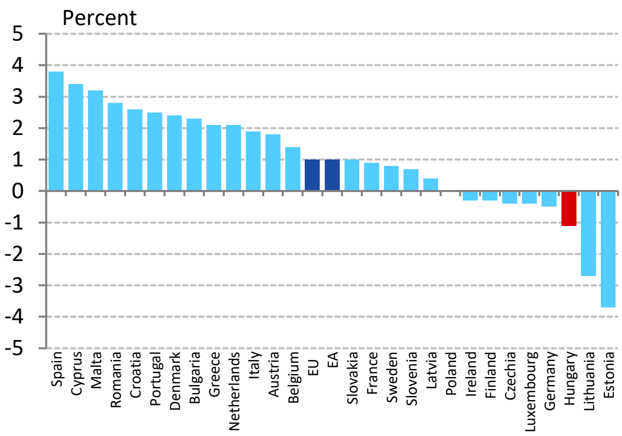
Note: The values in the table for the three domestic sectors show how the proportion of respondents whobelieve that the lack of basic and raw materials represents a significant limitation to the company's output compared to the average of the past years. In the case of the delivery time of the chips, the values in the table show how the time between the order and the delivery developed compared to the average of the past years.
No data is available for the second quarter of 2023. The values for transport costs show how the prices of sea transport costs per container have developed compared to the average of the past years. Source: MNB

The prospects related to global supply chains improved considerably; there were declines in the shortage of base materials and transportation costs this year. Nevertheless, decelerating global economic activity was a major contributor to the easing in the disruptions seen in the economies. International trade in goods dropped considerably this year, while industrial output was unable to grow significantly, and thus with the easing of the disruptions in production chains, falling demand may curb production for the rest of the year.

3.2 Analysis of the production and expenditure side of GDP

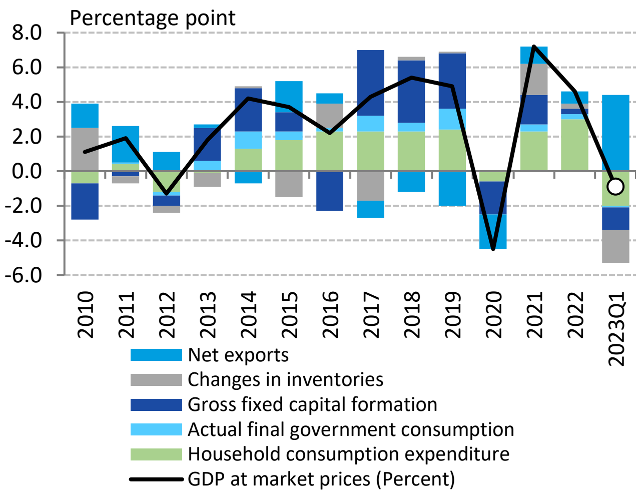
The performance of the Hungarian economy declined in 2023 Q1 gross domestic product contracted by 0.9 percent on an annual basis and by 0.3 percent on a quarterly basis. Looking at production side developments, gross value added in agriculture (+20.2 percent) and services (+1.1 percent) increased, while in 2023 Q1 the performance of industry and construction declined by 3.2 percent and 8.6 percent, respectively, year on year. Except net exports, all items decreased on the expenditure side. Households' consumption, gross fixed capital formation and government final consumption expenditure declined by 3.9 percent, 6.0 percent and 0.6 percent, respectively. Changes in inventories also contributed to the downturn in the economy (-1.9 percentage points), which was only offset by net exports (+4.4 percentage points).

Chart 3-11: Annual GDP change in EU countries in 2023 Q1



Note: Seasonally and calendar adjusted data.
Source: Eurostat, MNB

Chart 3-12: Annual change in decomposition of expenditure-side GDP



Note: Actual final government consumption includes social transfers in kind from the government and NPISHs. Changes in inventories includes acquisitions less disposals of valuables.
Source: HCSO, MNB

The performance of the Hungarian economy declined in 2023 Q1, as gross domestic product contracted by 0.9 percent in year-on-year terms, according to the raw data. On the basis of the seasonally and calendar adjusted data used in international comparison, GDP declined by 1.1 percent year on year and by 0.3 percent compared to the previous quarter. The economies of the euro area and the EU-27 countries expanded by 1.0 percent in a year-on-year comparison (Chart 3-11). Hungary's growth surplus compared to the European Union has disappeared, as the domestic growth rate fell short of the EU average by 2.1 percentage points.

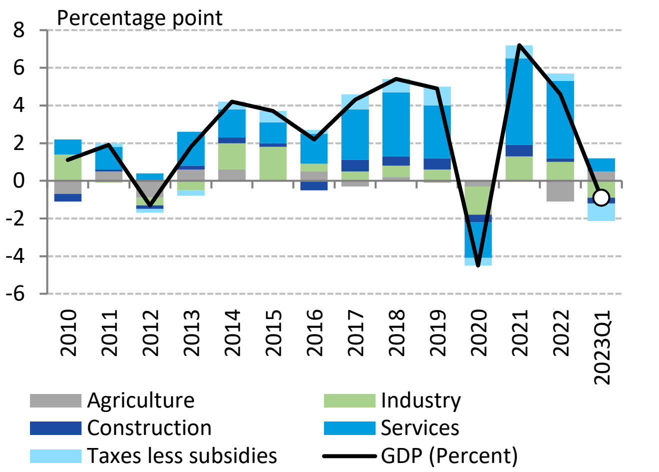
Households' consumption expenditures fell by 3.9 percent in year-on-year terms (Chart 3-12). The largest fall (-9.0 percent) was observed in the consumption of non-durables. The consumption of services dropped by 2.3 percent, while the volume of semi-durable and durable goods increased by 0.7 percent and 3.2 percent, respectively. Actual final government consumption dropped by 0.6 percent on an annual basis. In-kind social transfers received from the government increased by 4.7 percent, while in-kind benefits from the non-profit sector decreased by 1.2 percent and government consumption fell by 4.6 percent versus the same period of the previous year.

The value added of gross fixed capital formation declined by 6.0 percent on an annual basis. The volume of investments in buildings declined, while the volume of investments in machinery and equipment rose. The investment rate was 28.4 percent. **The contribution of changes in inventories to growth was significantly negative (-1.9 percentage points).**

Growth in the volume of exports (+6.6 percent) was higher than that in imports (+1.9 percent). Goods exports grew by 7.0 percent, while services exports rose by 3.9 percent in year-on-year terms. Overall, net exports mitigated the decline in GDP by 4.4 percentage points in the first quarter.

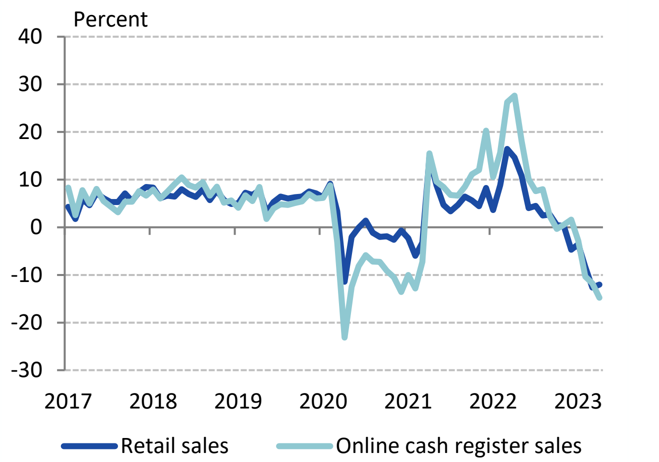
Industrial output contracted by 3.2 percent in year-on-year terms (Chart 3-13). Of the manufacturing sectors, the

Chart 3-13: Annual change in decomposition of production-side GDP



Source: HCSO, MNB

Chart 3-14: Annual change in retail sales and online cash register sales in real terms



Note: Seasonally and calendar adjusted data. Online cash register sales' real values deflated by the consumer price index.
Source: HCSO, MNB, NTCA

production of chemicals and chemical products was the main contributor to the decrease, while the manufacturing of road vehicles and electric equipment mitigated the decline in the industry the most. The downturn in the energy industry contributed significantly to the drop in industrial performance. **The construction industry's value-added fell by 8.6 percent.**

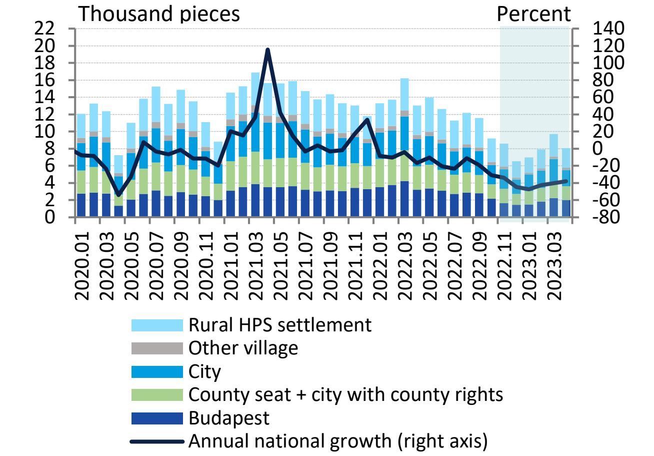
Compared to last year's low base, agricultural output increased by 20.2 percent year on year.

Services' value added, taken together, rose by 1.1 percent. The downturn in the highly-weighted component trade (-6.1 percent) as well as transportation and storage (-4.9 percent) was offset by other sectors. Of the other market services, the output of financial and insurance activities (+4.6 percent), information and communication (+2.2 percent), real estate transactions (+1.2 percent), professional, scientific, technical and administrative activities (+1.1 percent) as well as accommodation services and catering (+0.8 percent) rose, while output in arts, entertainment and recreation activities and other services declined by 0.2 percent. The strongest growth was recorded in the human health, social care sector (+16.9 percent). The output of government-related services (public administration, defence, mandatory social insurance; education; human healthcare, social care) increased by a total 5.3 percent year on year. Within that, in addition to healthcare, growth was recorded in education (+3.4 percent), whereas the volume of administration, defence and mandatory social insurance decreased by 1.2 percent.

In 2023 Q1, the annual growth rate of retail sales continued to decline (Chart 3-14). In April 2023, the volume of retail sales fell by 12.0 percent year-on-year based on seasonally and calendar adjusted data, representing four months of year-on-year decline in retail sales. Turnover of the NTCA's online cash registers rose by 9.2 percent in nominal terms, while turnover adjusted for inflation fell by 14.8 percent in April, in year-on-year terms. This figure differs from the volume of retail sales as it also includes part of the catering, taxi services and accommodation services turnover.

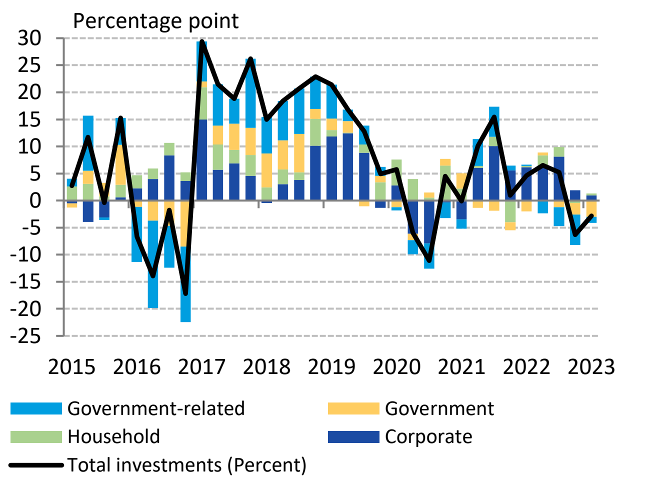
In the household loan market, the number of new contracts declined, and the expansion in loans outstanding decelerated in the first quarter compared to previous periods. After deceleration of 0.9 percentage points compared to the previous quarter, the annual growth rate of the whole financial intermediary system's household loans outstanding was 4.6 percent at end-March. The volume of housing loans granted by credit

Chart 3-15: Number of housing market transactions by settlement type



Note: Only taking into account 50-percent and 100-percent private acquisitions. From July 2021 to September 2022, the data of the NTCA fee database are adjusted based on the estimation of the level of processing by type of settlement. Based on transactions and estimated market share of real estate agents in the months shown.
Source: Housing market intermediary database, MNB, NTCA

Chart 3-16: Decomposition of the annual change in investments



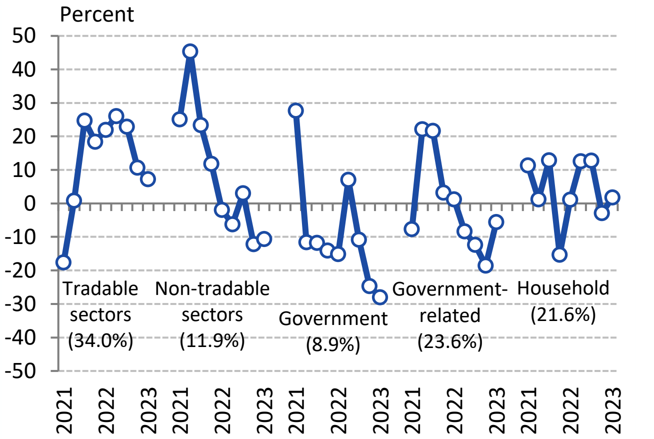
Source: HCSO, MNB

institutions in 2023 Q1 was 67 percent lower than in the same period of the previous year, while the disbursement of personal loans was 9 percent lower. In 2023 Q1, young married couples concluded prenatal baby support loan contracts worth just HUF 37 billion, which is 64 percent lower than in the same period of the previous year. The originally planned phase-out of the programme at end-2022 and the ensuing demand brought-forward that was seen at the end of the year also contributed to this drop. According to the responses in the Lending Survey, in net terms 76 percent of banks reported falling demand for housing loans during the quarter. Looking ahead, however, (to 2023 Q2 and Q3) banks already expect an increase in demand again, in parallel with maintaining the level of credit standards. In the case of consumer loans, 42 percent of banks in net terms perceived growing demand in 2023 Q1, and looking ahead as well they anticipate a pick-up in demand, in parallel with a tightening of credit standards.

In 2023 Q1, the number of housing market transactions stood at an extremely low level. During the first quarter, we estimate that the number of transactions declined by 32 percent in settlements eligible for rural HPS, by 52 percent in Budapest, by 49 percent in towns of county rank, by 36 percent in other towns and by 56 percent in other villages, in year-on-year terms. At the national level, the Q1 number of housing market sales and purchases may have amounted to 24,600 in total (Chart 3-15), which is 43 percent lower than the transaction figure of 43,200 in the same period of the previous year. The last time the number of sales and purchases in the first quarter was lower than this was in 2013, at the time of the turnaround in the housing market cycle. The number of housing market transactions also fell significantly in April 2023 year on year, and no increase in activity was seen month on month either. According to the MNB house price index, in 2022 Q4 house prices in nominal terms compared to the previous quarter declined by 3.6 percent at the national level, by 1.1 percent in Budapest, by 2.9 percent in country towns and – to a similar degree as in the third quarter – by 6.6 percent in villages. **Nevertheless, preliminary data suggest that the quarter-on-quarter increase in house prices already reached 3.8 percent at the national level in 2023 Q1.**

In 2023 Q1, the volume of whole-economy investment declined at a year-on-year rate of 2.8 percent (Chart 3-16). This drop is milder compared to the previous quarter's year-on-year decrease of 6.3 percent. The volume of investments after seasonal adjustment rose by 1.0 percent compared to 2022 Q4. **Investment in**

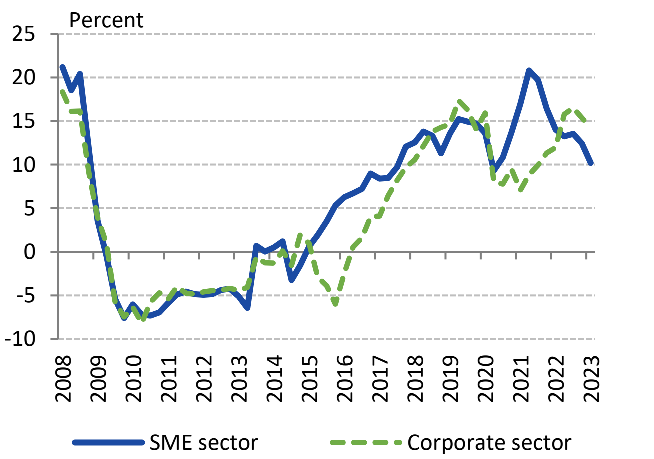
Chart 3-17: Annual change in the investment performance of whole-economy sectors



Note: The 2022 weights within the total investment are given in brackets. Tradable sectors: Agriculture, Mining, Manufacturing; Non-tradable sectors: Construction, Trade, Catering, Communication, Financial activities; Government: Public administration, Education, Health; Government-related: Energy, Water supply, Transportation and several small service sectors; Household: Real estate transactions.

Source: HCSO, MNB

Chart 3-18: Annual change in lending to non-financial corporates and SMEs



Note: Data for the corporate sector are based on transactions with the total financial intermediary system. The SME sector does not include the self-employed.

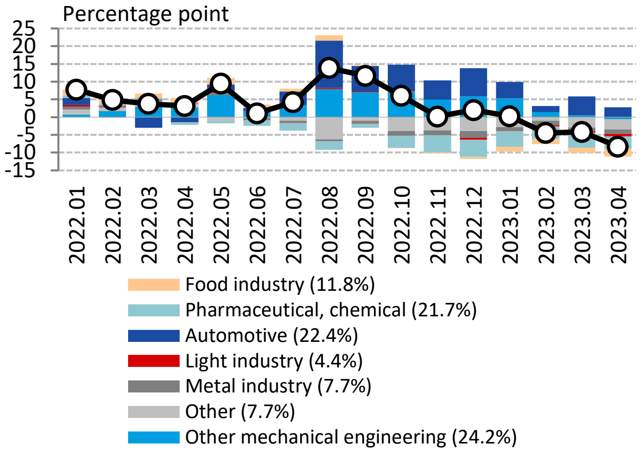
Source: MNB

machinery was up, while construction-type investment dropped in the first quarter. In the first quarter, investments in machinery and equipment expanded by 5.3 percent, while construction investments fell significantly by 8.5 percent on an annual basis. The expansion in the investment in machinery was primarily attributable to a nearly 10-percent increase in the volume of imported machines and vehicles.

Investment by companies producing for external markets increased, while that of domestic sectors dropped. In 2023 Q1, investment in sectors producing for external markets expanded by 7.2 percent year on year. Within this, investment in manufacturing, which represents the highest weight, increased by 7.3 percent. At the same time, an overall decline of 10.6 percent was recorded in the sector producing and providing services for the domestic market compared to the same period of the previous year. In 2023 Q1, budgetary organisations' investment rose by 2.3 percent year on year, due to a technical effect. According to the HCSO's announcement, as of 1 January 2023, some firms that previously had been in the category of undertakings were reclassified into the category of budgetary organisations. The reclassification typically had an increasing effect on the investment performance of budgetary organisations. However, investments by the narrow public sector (public administration, education and healthcare) fell by 28.1 percent in the first quarter. Investments by sectors indirectly linked to the public sector (government-related) dropped by 5.6 percent. Investment in the real estate transactions sector related to household investment expanded by 1.8 percent year on year (Chart 3-17).

The annual growth rate of corporate loans outstanding decelerated, and the share of market-based loans declined due to an upswing in subsidised programmes. The outstanding borrowing of non-financial corporations from the financial intermediary sector as a whole grew by 14.2 percent in 2023 Q1 (Chart 3-18), representing a quarter-on-quarter slowdown of 1.2 percentage points. Within corporate lending, the annual growth rate of SME loans outstanding was 10.2 percent at the end of the first quarter. In the first quarter, 64 percent of the new corporate loans were market-based contracts. Due to the pick-up in the Széchenyi Card Programme and the Gábor Baross Reindustrialisation Loan Program, this ratio was lower than the previous quarter's figure of 72 percent. Most of the contracts under the Baross Gábor Loan Programme, which has an envelope of HUF 1,000 billion, are expected to be signed in 2023 Q2, and thus the share of market-based contracts may continue to decrease.

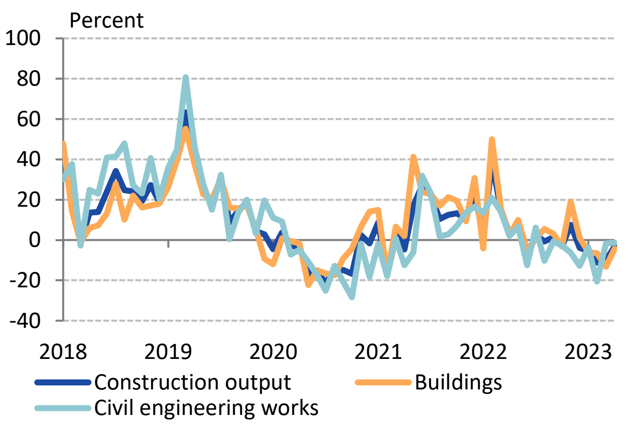
Chart 3-19: Sectoral breakdown of annual change in domestic industrial production



Note: The 2022 weight of the sectors in industrial production is given in brackets. Without water and waste management industry. Total industrial production does not include the performance of enterprises with less than five employees.

Source: HCSO, MNB

Chart 3-20: Evolution of construction output



Source: HCSO, MNB

According to responses to the Lending Survey, in net terms 19 percent of banks tightened credit standards in the first quarter and looking ahead a net 9 percent of them expect further tightening. Banks primarily indicated cyclical factors as ones pointing to tightening, while only fewer banks named bank liquidity and capital position as factors pointing in this direction, as banks' lending capacity is still at a high level. As regards credit demand, a net 61 percent and 37 percent of banks perceived a pick-up in demand for foreign currency and short-term loans, respectively, in 2023 Q1, while 11 percent and 63 percent of banks registered declining demand for forint and long-term loans, respectively, and looking ahead, this diverging trend is likely to persist.

In the fourth quarter, Hungary's industrial production declined by 2.9 percent in year-on-year terms. Among the industrial sub-sectors, battery manufacturing continued its dynamic expansion. As a result of the low base, vehicle manufacturing expanded significantly (Chart 3-19), in parallel with weaker performance in pharmaceuticals, chemicals, food, light manufacturing and metals. **Overall, the performance of the sectors producing for the domestic market was weaker than that of exporters.** In the first quarter, the merchandise trade balance showed a surplus. In 2023 Q1, the terms of trade improved by 1.8 percent year on year, with the correction in the prices of mineral fuels as well as the relative change in the prices of machinery and means of transport as the main contributors.

In 2023 Q1, construction output decreased by 9.2 percent in year-on-year terms. Construction of buildings fell by 9.4 percent, and other construction dropped by 8.0 percent in year-on-year terms (Chart 3-20).

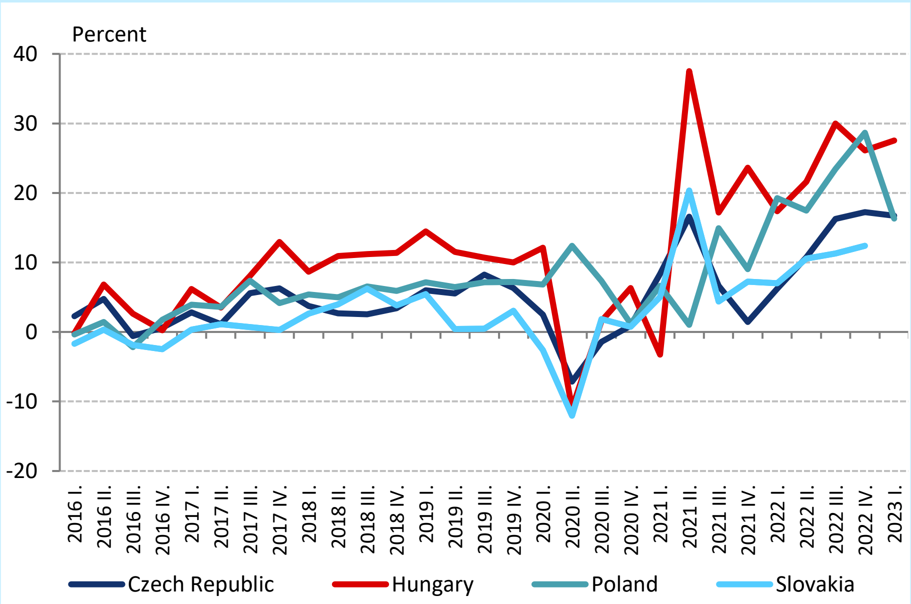
Box 3-2: Profit and inflation: international and domestic experiences

Over the past two years, corporate profitability also increased in parallel with inflation, and thus the phenomenon of profit inflation came into the focus of economic analyses. Profit-driven inflation is not caused by the imbalance of demand and supply, but by the phenomenon when companies – for the sake of profitability – raise prices to a larger degree than justified by increases in costs. Nevertheless, the cause-and-effect relationship between the two variables is worth examining from various aspects.

According to our analysis, the part of inflation not explained by costs has risen significantly from the second half of 2022. In our calculations, we broke down domestic inflation processes into internal and external cost factors, as well as the part not influenced by them. The latter factor, among other effects, also reflects the development of corporate profits. The cost factors that basically determine the inflation items explain the inflation processes of previous years well, but a new phenomenon unfolded in the third and fourth quarters of 2022. The part of inflation that is not explained by the evolution of costs rose significantly. In 2023 Q1, this latter item may have explained nearly a third of 25.4 percent inflation. Within this, however, the direct effect of profits cannot be distinguished from other factors (e.g. stronger non-linearity effects), and therefore the total impact is not necessarily attributable exclusively to profit-driven inflation. However, other data, such as the evolution of gross operating surplus, suggest that increased profitability may have played a significant role.

One appropriate indicator for examining corporate profits is the gross operating surplus, which comes closest to organisations' earnings before taxes. The gross operating surplus can be calculated from the income side decomposition of GDP; by definition it is the difference between gross value added and employee compensation, adjusted for production taxes less subsidies. This indicator may be suitable for analysing the domestic profitability trends in the current environment as well, since many of the surtaxes introduced or modified during last year (e.g. retail tax, financial transaction levy or insurance tax) are considered as product taxes, which are not part of the gross operating surplus.

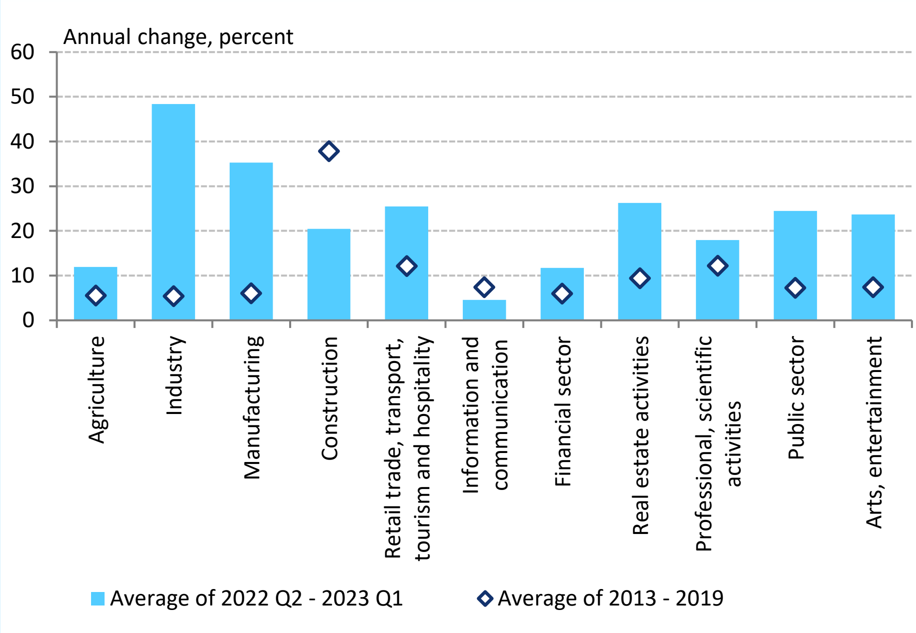
Chart 3-21: Evolution of gross operating surplus and mixed income in the region



Note: Nominal, quarterly data
Source: Eurostat, HCSO,

Increase in profits is a common phenomenon; corporate profits grew to a greater degree than before in all the Visegrád countries in parallel with the rise in the consumer price index (Chart 3-21). Of the countries in the region, it is Hungary where the indicator increased to the largest degree in the past quarters. The increase in profits varied across sectors, but profit rates higher than the ones observed in the period between 2013 and 2019 constitute a phenomenon experienced in a wide range of sectors. During the past quarters, average profits rose by nearly 50 percent in industry and by 25 percent on average in the trade and catering sector as well as in the area of real estate transactions (Chart 3-22).

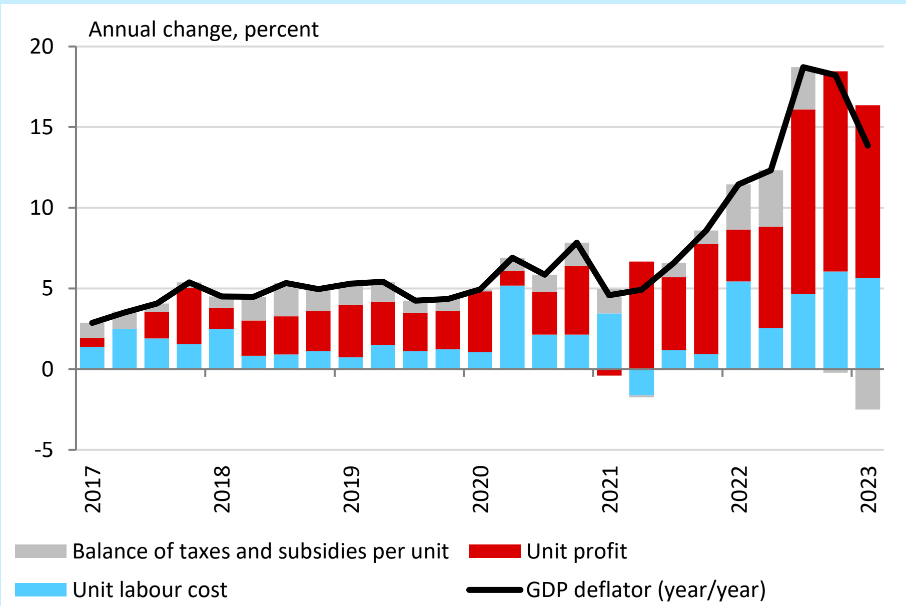
Chart 3-22: Annual change in gross operating surplus by sectors



Note: Nominal, quarterly data
Source: HCSO, MNB

Profits explained a major portion of the increasing GDP deflator in the past quarters. On the basis of the income side approach, the change in the price level of GDP may be decomposed into labour cost, profit as well as the balance of the main tax items and subsidies (see Box 3-1 in the June 2022 Inflation Report). In early 2021, similarly to the consumer price index, the GDP deflator also started to rise, already entering double-digit territory from last year. Starting from mid-2022, the profit contributed to the annual change in the price level of gross domestic product by more than 10 percentage points, which indicates an increase in profitability. By contrast, despite the strong wage dynamics and tight labour market, in the past quarters the employee compensation contributed to the increase in the deflator to a much lesser degree than profits (Chart 3-23).

Chart 3-23: Income-side decomposition of the GDP deflator



Source: Eurostat, MNB

3.3 Labour market

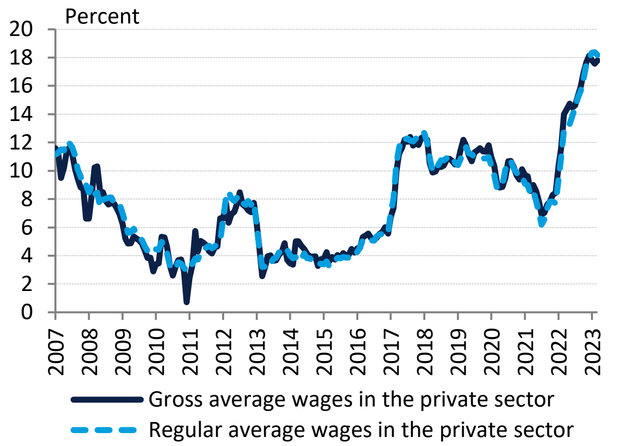
Total employment remains at historically high levels. Employment continued to expand in year-on-year terms in the first quarter, due to the headcount increase in the private sector. The unemployment rate is still low in an international comparison, and the number of job vacancies matches the pre-crisis figures; accordingly, the labour market is stable and has still not reacted to the economic slowdown. Gross average earnings in the private sector rose 17.8 percent in year-on-year terms in 2023 Q1.

3.3.1 Wages

Wage developments continue to be strong, but the degree of wage changes in March, which is of key importance in terms of annual wage dynamics, fell short of that seen in previous years. In 2023 Q1, gross average earnings in the private sector rose at a year-on-year rate of 17.8 percent (Chart 3-24). Average gross regular earnings rose by 18.2 percent compared to the same prior-year period, while bonus disbursements were higher than the average from previous years. Growth in average wages ranged at over 15 percent in most branches of the private sector in 2022 Q1.

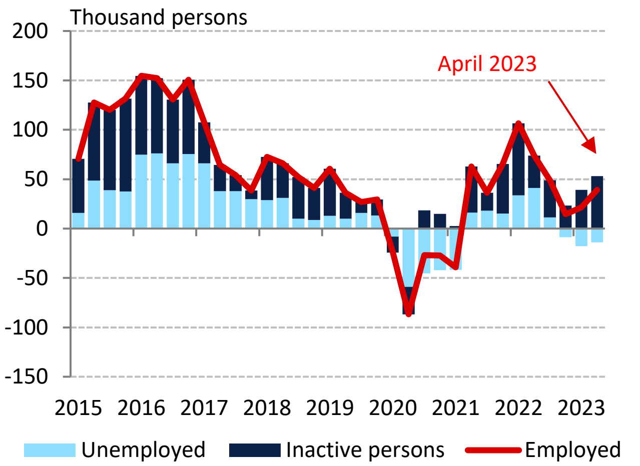
Of the countries in the region, nominal wage growth was the highest in Hungary in 2023 Q1. Whole-economy wage growth – net of the base effect of the six-month service benefit paid in February 2022 to the defence forces and law enforcement employees – amounted to 15.8 percent in Hungary in the first three months of the year. By contrast, wages in Romania, Poland, Slovakia, and Czechia rose by 13.4 percent, 13.2 percent, 10.7 percent and 8.6 percent, respectively, in annual terms. Real wages fell in all of the countries in the region except Romania.

Chart 3-24: Annual change in gross average wages in the private sector



Note: Three-month moving averages.
Source: HCSO

Chart 3-25: Decomposition of annual changes in whole-economy employment



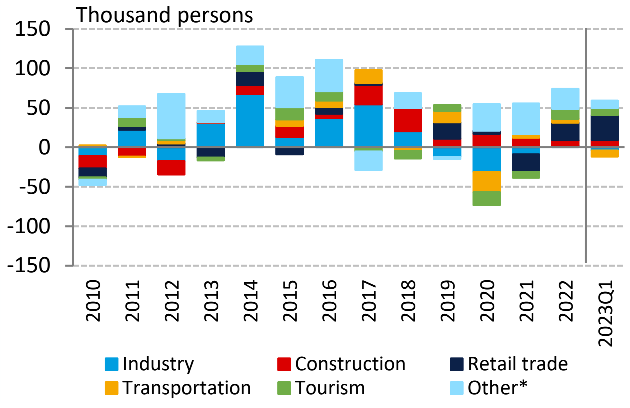
Note: Instead of Q2 2023, monthly data for April is available. Changes in the number of unemployed and economically inactive have the opposite sign.
Source: HCSO

3.3.2 Employment and unemployment

Total employment remains at a high level. In 2023 Q1, the average number of employees aged 15-74 years was 4,696,000, an increase of 21,000 versus the same prior-year period (Chart 3-25). The rise in headcount was mostly attributable to the primary labour market. The number of fostered workers declined by 10,000, while those employed at local units abroad increased by 14,000 in a year-on-year comparison. Based on seasonally adjusted data, employment reached a historical high in the first quarter. The unemployment rate, calculated using the HCSO's methodology based on a three-month moving average, was 3.8 percent on average for the first three months of 2023, according to seasonally adjusted data. The unemployment rate in Hungary can still be considered low by international standards.

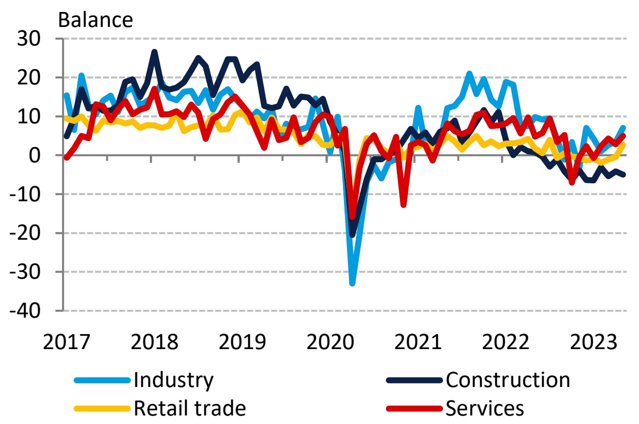
The expansion in employment was driven by the private sector. In 2023 Q1, private sector employment expanded by 47,000 in year-on-year terms. The full-time equivalent (FTE) headcount rose by 1.3 percent year on year. According to

Chart 3-26: Decomposition of annual changes in private sector employment



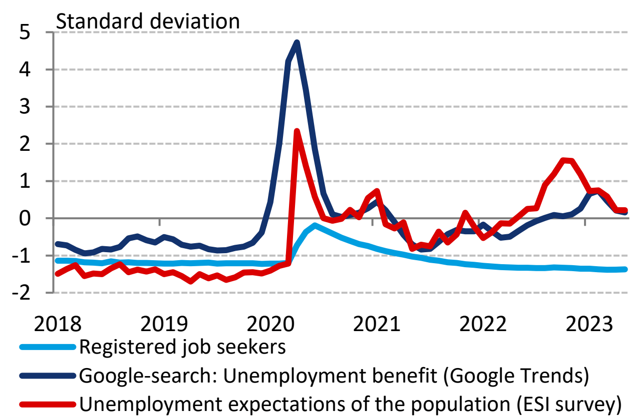
Note: *Agriculture, other industry and service sector branches.
Source: HCSO

Chart 3-27: Employment expectations in the ESI business survey



Note: The balance is positive (negative), if the majority of companies plans to hire (lay off). Seasonally adjusted data.
Source: European Commission

Chart 3-28: Indicators capturing the short-term evolution of unemployment



Note: Standardised values.
Source: NES, ESI, Google

detailed quarterly sectoral data, employment in construction rose, while it did not change significantly in manufacturing. Increases in headcount took place primarily in the market services sector (particularly in trade, accommodation and catering, administrative and service support activities, information and communication, and real estate activities) (Chart 3-26). In the public sector, the number of employees declined in public administration and healthcare on an annual basis.

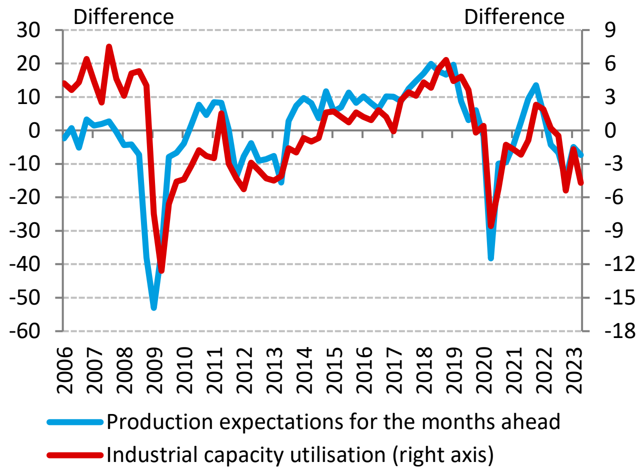
According to the ESI business survey, which monitors economic sentiment, companies' expectations regarding employment followed varying sectoral patterns in May 2023. The negative sentiment stabilised in construction in the first five months of this year, and the majority of companies are planning reductions in headcount for the next three months. In the light of the May data, most companies in trade, services and manufacturing expect increases in headcount. All three sectors have tended to show an improving trend in recent months (Chart 3-27).

Indicators capturing the short-term evolution of unemployment show a mixed picture (Chart 3-28). In May, the number of registered unemployed was 229,000. The seasonally adjusted data show no significant change compared to the figures seen since spring 2022, with the figures remaining low in a European comparison. The Google Trends indicator regarding the unemployment benefit reflected worsening sentiment since the spring of 2022, but has shown an improving trend since February, although it is still higher than the values prior to the COVID crisis. According to the ESI consumer survey, households' fear of unemployment increased significantly in 2022, coming close to the highest value measured during the pandemic, but the data measured since December show that concerns have eased.

3.4 Cyclical position of the economy

The performance of the Hungarian economy declined slightly on a year-on-year basis in 2023 Q1. In parallel with the decelerating economic performance, the cyclical position of the economy has a disinflationary effect. Both the capacity utilisation and production expectations of manufacturing companies deteriorated in recent months.

Chart 3-29: Capacity utilisation and production expectations in manufacturing



Note: Deviation from historical average
Source: MNB based on ESI

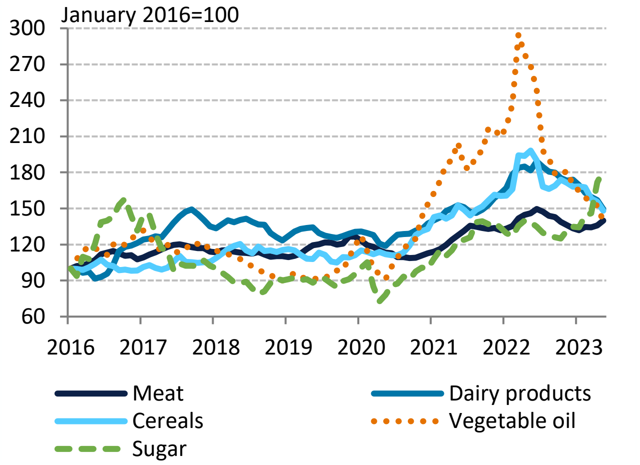
The cyclical position of the economy is estimated to have been negative since 2022 H2 and thus has a disinflationary effect. In the first half of last year, the cyclical position was positive, due to buoyant demand and easing supply chain frictions, resulting in a cyclical position with an inflationary effect. Following that, however, in parallel with the decelerating economic performance, the cyclical position started to worsen and became negative. Looking ahead, the slowdown in demand and the expected unwinding of supply-side constraints will have disinflationary effects.

According to the questionnaire-based surveys, the capacity utilisation of manufacturing companies has deteriorated in recent months and remains below the historical average (Chart 3-29). Production expectations for the coming months also deteriorated to a lesser degree, but remained below its historical average level as well.

3.5 Costs and inflation

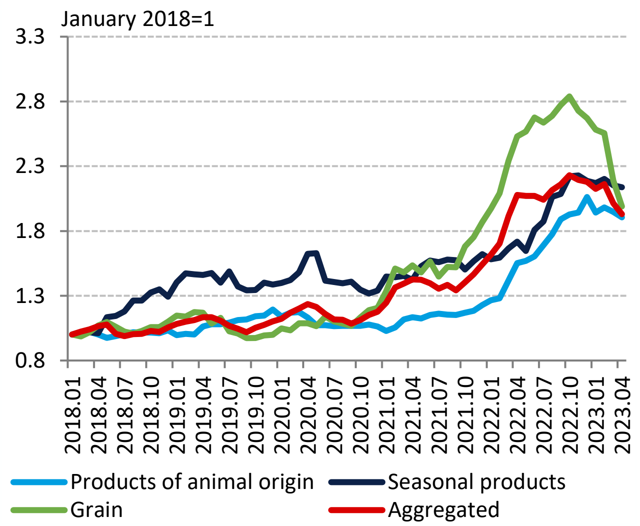
The annual growth rate of consumer prices was 21.5 percent in May. Inflation has been falling since January, primarily due to the decline in the price index of food. Core inflation excluding indirect taxes was 22.7 percent in May. Of the components of core inflation, the changes in market services prices contributed the most to the rise in core inflation in the past period. Food inflation had been decelerating for five months in May, when it reached 33.5 percent according to HCSO data. At the same time, the rise in the prices of market services continued to accelerate, advancing to 19.0 percent. Although the dynamics of producer prices are decelerating, their increase exceeded the historical average severalfold. Our indicators capturing longer-term inflationary trends and calculated on an annual basis declined last month.

Chart 3-30: Development of world market prices of food



Source: FAO

Chart 3-31: Development of agricultural prices



Note: Based on seasonally adjusted data

Source: HCSO

3.5.1 Producer prices

Global food prices continued to decrease. In the spring months, the price indices of dairy products, cereals and oil crops declined gradually, but in May the price index of sugar increased further in view of the uncertainties around the global supply and reached its peak since October 2011 (Chart 3-30).

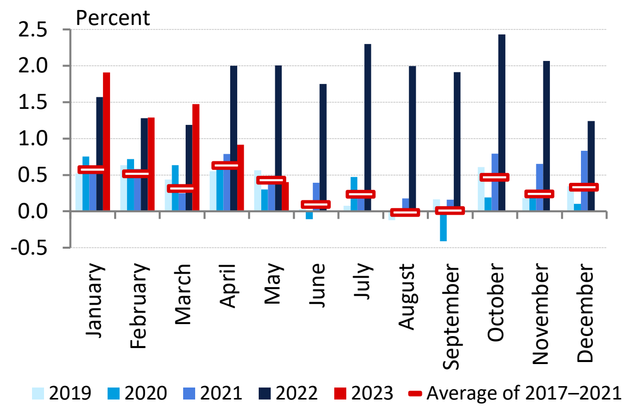
Compared to the previous quarter, the dynamics of domestic agricultural producer prices slowed down, showing a year-on-year increase of 20.4 percent in 2023 Q1. The largest increase can still be observed in the prices of products of animal origin, which rose by 48.1 percent year on year in 2023 Q1. Prices of seasonal products and cereals also rose compared to 2022 Q4, with the largest increase registered in potato prices. In April, the year-on-year producer price indices of products of animal origin and of seasonal products rose by 22.7 percent and 24.5 percent, respectively, while the price index of cereals declined by 21.4 percent (Chart 3-31).

In the case of manufacturing industry products, domestic producer prices increased to a degree exceeding the historical average several fold in the spring months, but by April 2023 price dynamics declined to 14 percent year on year. In the spring months, domestic selling prices in industry as a whole continued to rise by more than 40 percent, with the energy producing sectors as the main contributors. April's 83-percent annual price increase in the energy producing sectors reflects the trend in European energy prices.

3.5.2 Consumer prices

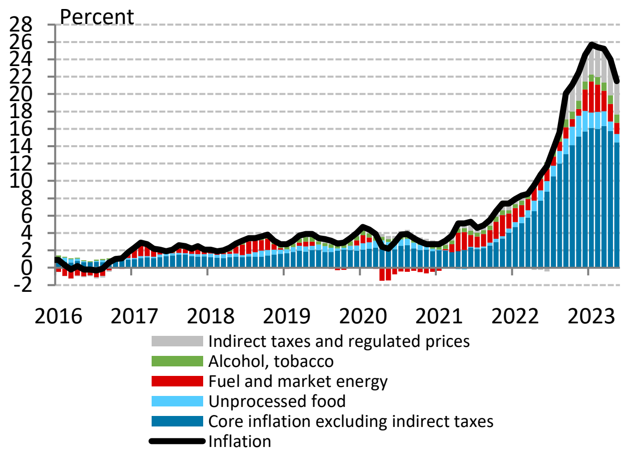
The annual growth rate of consumer prices was 21.5 percent in May. In May, the monthly price change of the basket excluding fuels and administered prices was 0.4 percent (Chart 3-32). The monthly value of core inflation, which better reflects market developments and excludes processed food, was 0.7 percent, which is lower compared to the repricing observed in the autumn months. The decline in inflation accelerated in the past months,

Chart 3-32: Monthly price changes of consumer prices excluding fuel and regulated prices



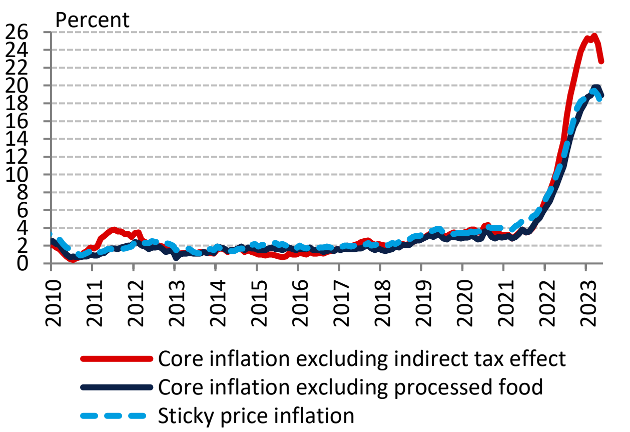
Note: Tax-adjusted, seasonally unadjusted monthly change
Source: MNB calculation based on HCSO data

Chart 3-33: Decomposition of inflation



Source: MNB calculation

Chart 3-34: Underlying inflation indicators



Note: Core inflation excluding processed food, is unchanged from previous demand-sensitive inflation. The reason for the new name is that, during periods of significant cost shocks that are generally effective, the previous name may be misleading. Source: MNB calculation based on HCSO data

primarily as a result of the decrease in the price index of food (Chart 3-33).

Core inflation excluding indirect taxes was 22.7 percent in May. Of the components of core inflation, changes in processed food and industrial goods prices contributed the most to the decrease in core inflation in the past period, which was only partially offset by the increasing inflation of market services. The indicators capturing longer-term inflationary trends declined in May (Chart 3-34).

Industrial goods inflation fell to 17 percent in May. The rise in prices of industrial goods is substantially larger than the average recorded for previous years. Within this group of products, the inflation of durable goods had been declining for four months in May, when it reached 8.1 percent. By contrast, the inflation of non-durables was around 22 percent (Chart 3-35 and Chart 3-36).

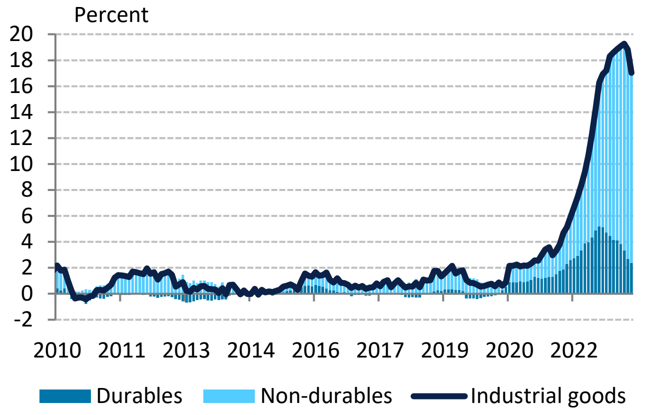
The inflation of market services accelerated further, rising to 19.0 percent in May. Services were repriced by 1.5 percent in May. The repricing compared to the previous month was mainly related to the repricing of banking services (indexed to the previous year's inflation). Excluding one-off effects, the monthly rate of repricing of market services is stagnant and is still higher than the historical average (Chart 3-37).

Prices of alcohol and tobacco products showed double-digit increases in the past months, with inflation in this product group still close to 20 percent in May. The monthly price rise of 0.3 percent of this group of products in May is mainly attributable to the price increase of tobacco products.

Food inflation decelerated for the fifth month in a row in May, but still significantly exceeds the historical average for this product group. Inflation for unprocessed food and processed food declined to 24.4 percent and 37.6 percent, respectively, and thus the price indices for both product groups were lower. The slowdown in food inflation was primarily explained by the development of the prices of milk and milk products, as well as bread and baked goods. Compared to April, prices of unprocessed food increased by 0.2 percent, while prices of processed food fell by 0.3 percent. The food price increase in Hungary is high by international comparison, despite the fact that government measures fixed the prices of certain basic food products (granulated sugar, wheat flour, sunflower oil, pork leg, 2.8-percent UHT milk, chicken breast and chicken backs, fresh eggs and table potatoes).

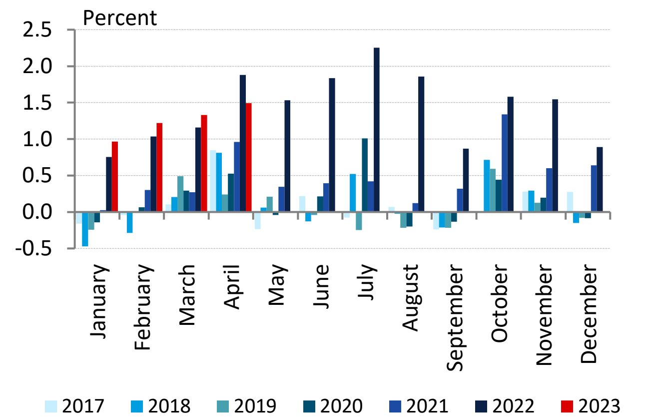
Following the phase-out of the cap on fuel prices in December, the price dynamics of fuels have been

Chart 3-35: Inflation of industrial goods



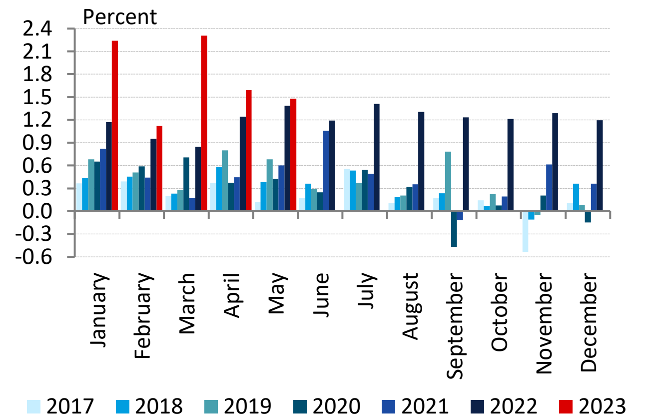
Note: Annual change, excluding the effect of indirect taxes
Source: MNB calculation based on HCSO data

Chart 3-36: Monthly price changes of traded goods



Note: Seasonally non-adjusted, tax adjusted monthly change
Source: MNB calculation based on HCSO data

Chart 3-37: Monthly price change of market services



Note: Not seasonally adjusted monthly price changes excluding indirect tax effects
Source: HCSO, MNB

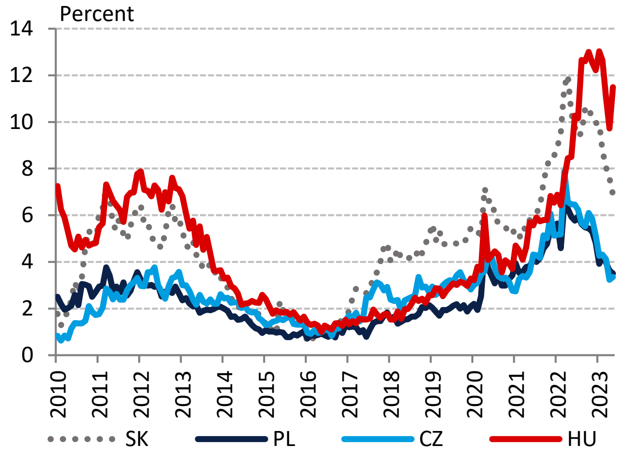
gradually declining since January. The May inflation of this product group was 17.7 percent, and thus the deceleration in the dynamics of this product group has contributed to the slowdown in the consumer price index in recent months.

Looking at recent months' data, inflation was in line with the forecast range in the March Inflation Report.

3.5.3 Inflation expectations

Households' inflation expectations have declined in Hungary since the beginning of the year. In the countries of the region, inflation expectations declined moderately in April compared to the beginning of the year. Within the region, households' inflation expectations in Hungary, Czechia and Slovakia had declined gradually since January and in Poland since February until April, but expectations increased again in May in Hungary and – to a lesser degree – in Czechia (Chart 3-38).

Chart 3-38: Inflation expectations in the region

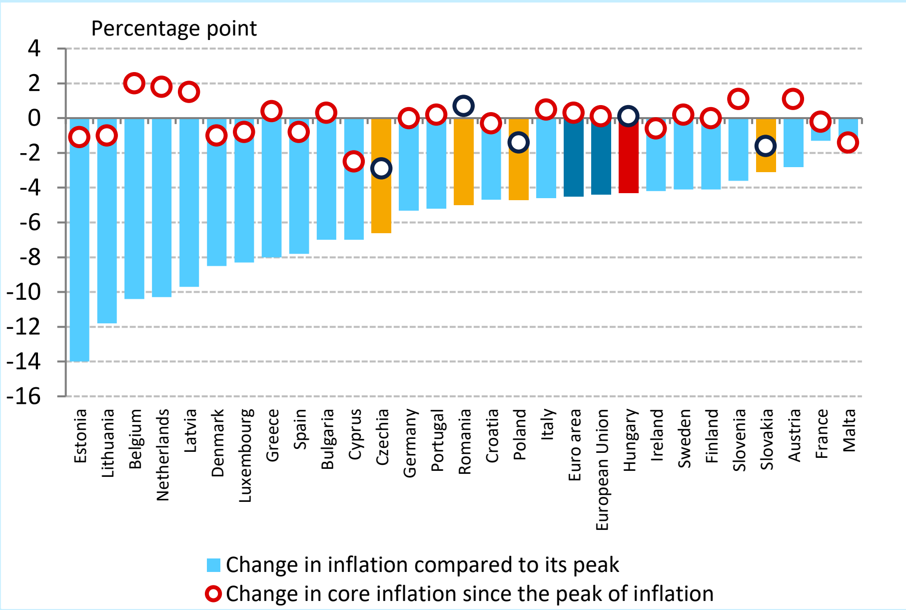


Source: MNB calculations based on European Commission data

Box 3-3: Why should we pay attention to core inflation?

By the spring of 2023, disinflation had clearly started in all EU member countries, but underlying trends are still high in the majority of them. While inflation rates had declined considerably by May 2023 and fallen by more than 10 percentage points in some countries compared to their previous highs, inflation excluding the volatile energy, food, alcohol and tobacco products was still stagnant or rising in 16 countries out of the 27 member countries (Chart 3-39).

Chart 3-39: Changes in inflation and core inflation in May 2023 compared to the highs since January 2022

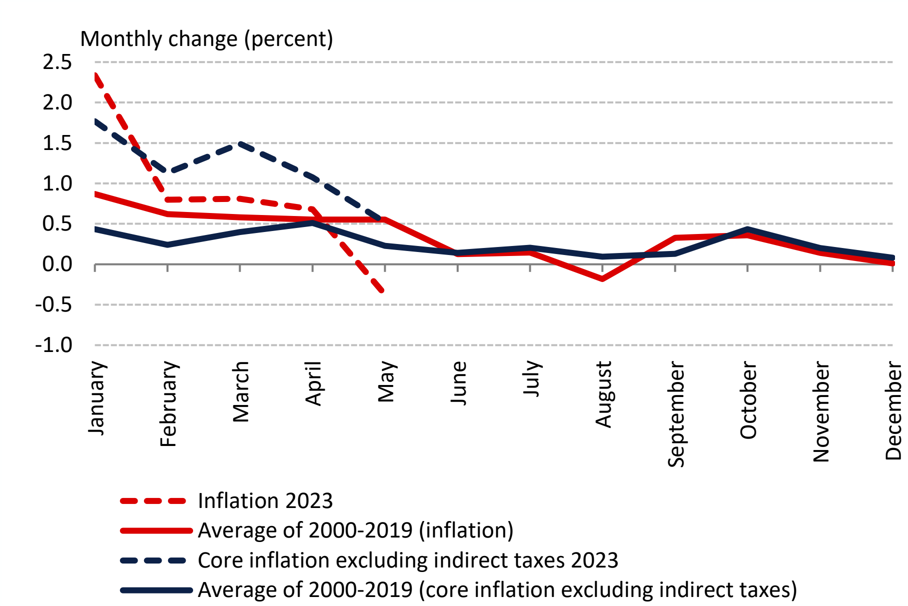


Note: Core inflation calculated according to Eurostat methodology, excluding volatile energy, food, alcohol and tobacco inflation

Source: Eurostat, MNB

A similar trend is observed in Hungary as well, where the repricing experienced in inflation already corresponds to the historical average, but the monthly change in core inflation is still higher (Chart 3-40). Repricing corresponding to the historical average and favourable base effects point to a dynamic decline in inflation. Nevertheless, the decline in underlying developments may take place more slowly, in parallel with the more significant monthly repricing seen in core inflation.

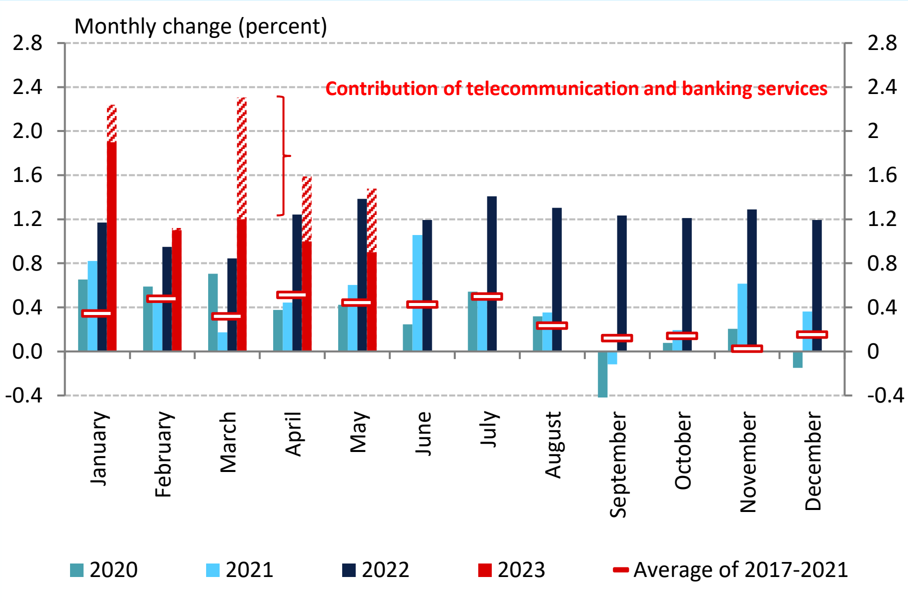
Chart 3-40: Developments in inflation and core inflation in 2023 compared to the historical averages



Source: HCSO, MNB

Of the sub-components of core inflation, the price changes of processed food and durable goods reflect the most the tight monetary conditions applied by the central bank, and thus the price dynamics of processed food and durable goods have been decelerating for five and seven months, respectively. In the case of tradable goods, the significantly decelerating price dynamics of durable goods was only partly offset by the price rises in non-durable goods, and the inflation of market services is still increasing. The major price rises of market services early in the year were attributable to repricing by telecommunication service providers and to banking services indexed to the previous year's inflation. However, even excluding the one-off effects originating from the telecommunications and banking sectors, the monthly rate of repricing of market services is stagnant and still exceeds the historical average (Chart 3-41).

Chart 3-41: Monthly price change of market services



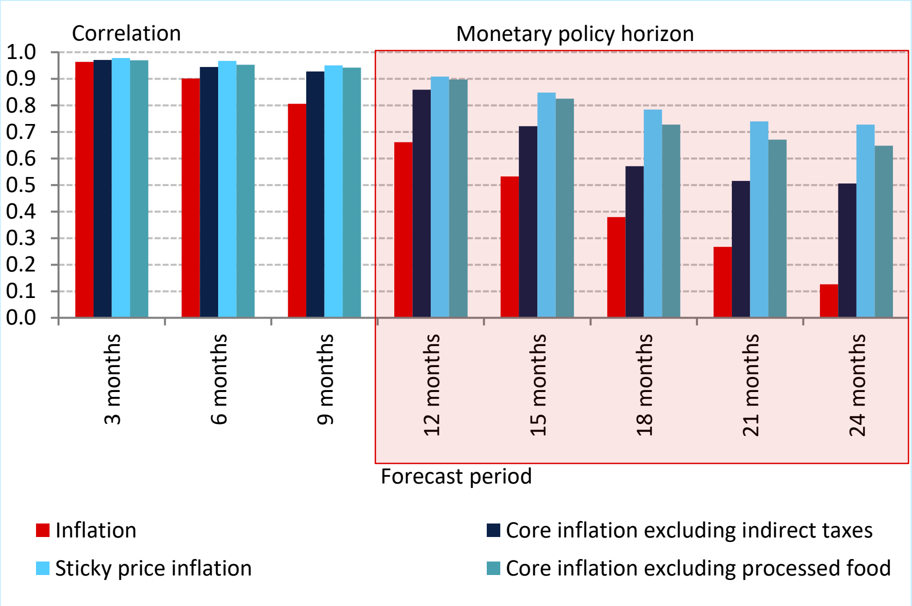
Note: Not seasonally adjusted monthly price changes excluding indirect tax effects
Source: HCSO, MNB

Similarly to inflation, the increase in core inflation was also primarily caused by cost shocks, but their effect appeared later and will last longer due to their higher persistence. Within core inflation, more persistent components, the inflation of which returns to its equilibrium value more slowly after a shock, have a greater weight. If a cost shock extends to these more persistent components as well, the effect of the cost shock remains in core inflation for a longer time than in inflation.

Changes in core inflation and the indicators of underlying developments calculated by the MNB carry a significant amount of relevant information for monetary policy. In the case of the consumer price index, current actual data may reflect the effects of several factors that are temporary or show relative price changes that do not have a material impact on the medium-term inflation outlook. The objective of core inflation and the indicators of underlying trends is to eliminate these volatile and temporary elements and thus to provide a more precise picture of the medium-term changes in inflation. As the central bank's task is to ensure lasting price stability and, in relation to that, to reach the central bank target over the monetary policy time horizon (5–8 quarters), underlying inflation indicators are important sources of information for monetary policy decisions, thanks to their good forecasting capability regarding medium-term inflation.

Underlying inflation indicators still provide good forecasts of the changes in inflation over the monetary policy horizon, and thus their information content continues to be significant for monetary policy. In the turbulent economic environment of the past years, when various previously accepted economic correlations changed (Phillips curve becoming steeper again, changing exchange rate pass-through), it is a relevant question whether the explanatory power of previously applied indicators concerning future inflation is still strong. The finding of our analyses shows that the prediction capability of core inflation and other underlying inflation indicators is still strong over the time horizon of more than one year, and is much better than the prediction capability of inflation regarding itself, i.e. its autocorrelation (Chart 3-42).

Chart 3-42: Autocorrelation of inflation and its correlation with underlying inflation indicators in various forecast periods



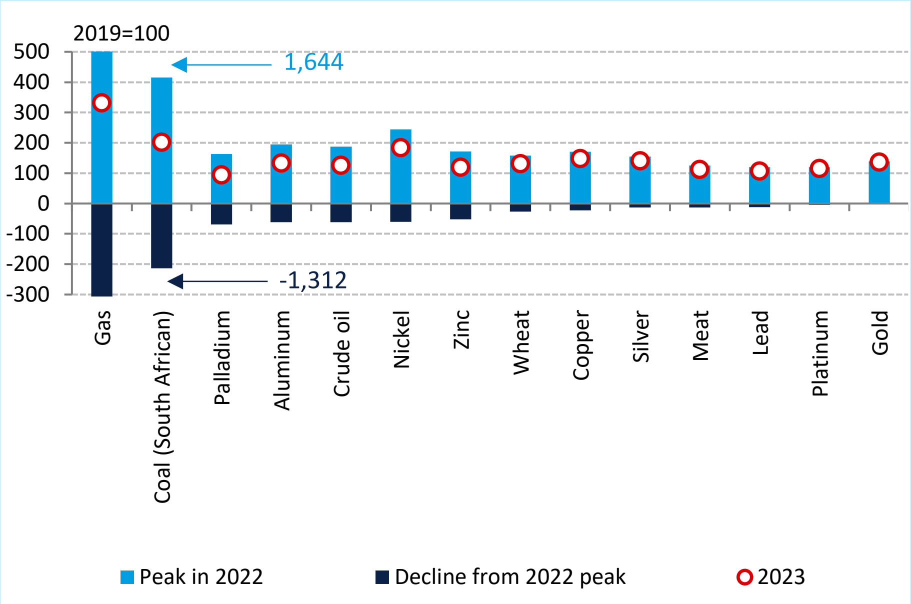
Note: Auto- and cross-correlations estimated on the basis of the data of the period between January 2013 and April 2023
Source: MNB

In terms of attaining lasting price stability, it is crucial to achieve the inflation target in a sound, sustainable structure. In addition to the decline in the inflation of volatile items that react quickly to the appearance and fading of cost shocks, the disinflation of more persistent underlying developments is also necessary, which primarily requires a disciplined monetary policy that takes into account the medium-term inflation trends as well.

Box 3-4: What causes the turn in inflation in Europe?

Declines in inflation are increasingly perceived around the world. Disinflation in Hungary is supported by falling commodity and energy prices as well as by tight monetary conditions and the effect of last year's bases.

Chart 3-43: Price changes of key commodity and energy market products

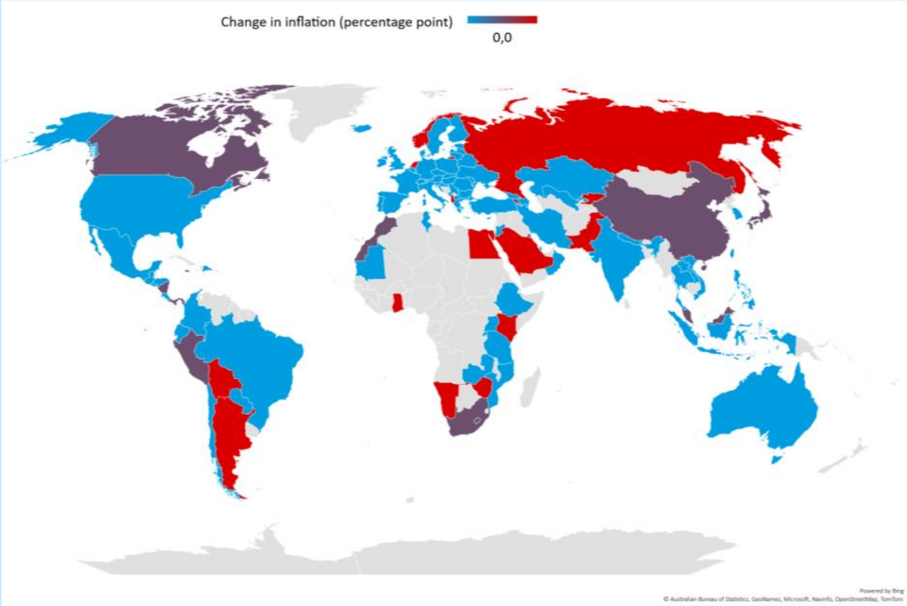


Note: Daily frequency data were examined in the case of gas, electricity and oil, while monthly data are available for other commodities.
Source: MNB calculation based on Bloomberg and World Bank data

A major change took place in global commodity and energy markets. Between mid-2021 and the summer of 2022, steep rises in energy, commodity and food prices entailing significant increases in consumer prices all over the world were observed. However, from 2022 H2, with the deceleration in global economic activity, the risks of a global economic recession strengthened, and the impact of such was perceived the earliest in the commodity markets. After peaking in the summer months, energy prices also fell considerably. According to May data, the quoted price of natural gas dropped by 80 percent compared to the peak seen in August. As fears related to gas shortage unwound, the price of gas reached a two-year low by end-May and was close to the level seen prior to the energy crisis. The mild winter weather typical throughout Europe, the utilisation of alternative resources and the adjustment of demand all contributed to the decline in gas prices. The global market price of Brent crude is stable at USD 70–75 per barrel. In addition, precious metal prices fell by more than one quarter on average compared to last year's peak (Chart 3-43).

Inflation indicators are declining around the world. Inflation has already peaked in most countries of the world. Based on data available for 95 countries, inflation was declining in 76 countries in May 2023 (Chart 3-44). In the European Union, inflation is still the highest in Hungary, which is partly the result of the fact that price-limiting measures temporarily restrained the appearance of external cost shocks in consumer prices last year. Base effects led to disinflation earlier in the countries where the cost shocks were reflected earlier and directly in consumer prices. In the coming months, however, the effect of last year's high bases will play an increasing role in disinflation in Hungary as well.

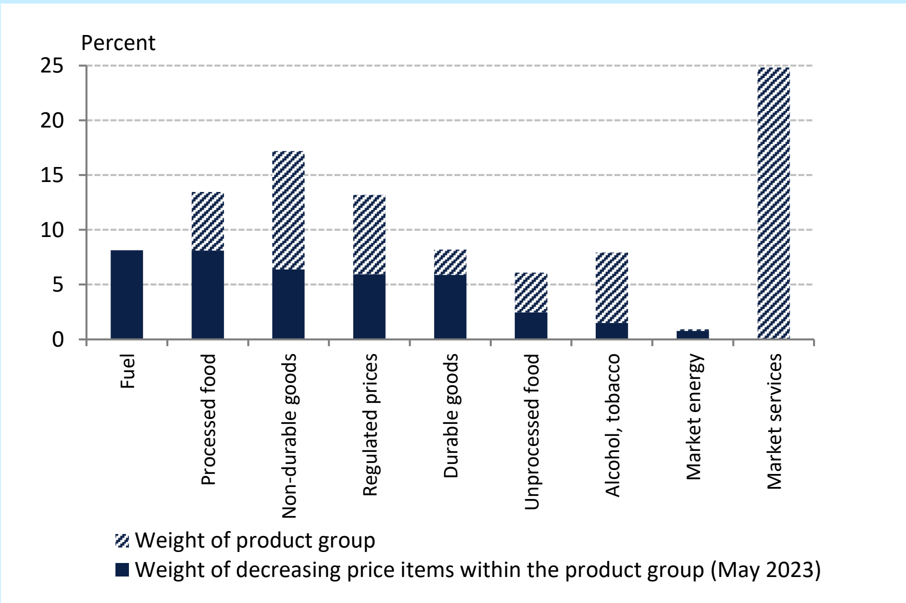
Chart 3-44: Changes in April inflation rates in the world compared to March



Note: Based on data available for 95 countries. 2023 Q1 data for Australia due to quarterly data release.
Source: Macrobond, MNB

Inflation in Hungary is declining across a widening range of items. Lower inflation is mainly perceived in the case of food, durable goods and energy. Although food inflation is still the highest in Hungary within the EU, May was already the fourth month when it declined. Accordingly, the decrease in inflation is already broad-based (Chart 3-45). The year-on-year rate of price increase decelerated in 73.5 percent of the consumer basket, and compared to the previous month the price level was also down in 39.2 percent of the consumer basket. Processed food and tradable goods account for more than half of the items the prices of which are declining. Tradables is the product group where the effect of monetary policy appears the earliest, and this effect can already be perceived. The price level of durable goods has already been decreasing or moderating for two months. While in March it was practically only the item new and used vehicles that caused the price decline in the product group, in April and May moderating prices were already seen in a wider range of durable goods.

Chart 3-45: Share of products the price level of which was decreasing within their own product groups



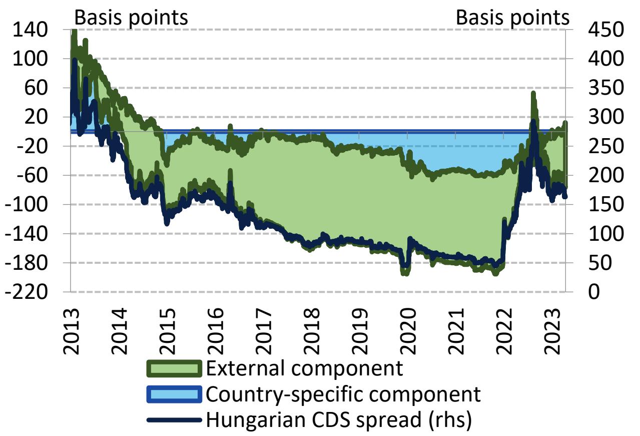
Source: HCSO, MNB

4 Financial markets and interest rates

4.1 Domestic financial market developments

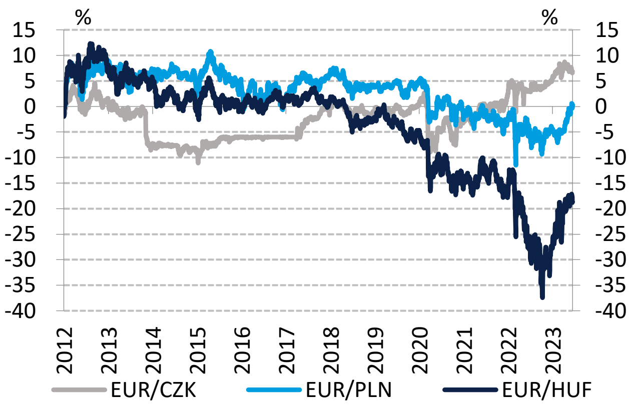
Overall, sentiment on the developed and emerging financial and capital markets improved in the past quarter. The market turbulences triggered by US bank failures eased from end-March, followed by a decline in the fears of recession as well in view of the incoming macroeconomic news and a further decrease in commodity prices, while investors' risk appetite also improved. At the end of the period, the suspending of the US debt ceiling law also reassured the financial markets, entailing a decline in market volatility as well. In spite of a rise in developed market yields, domestic interbank and government securities yields dropped considerably, supported by the start of monetary policy normalisation as well as a decline in the country's risk premium. During the period under review, the forint gradually appreciated against the euro, strengthening to a high unseen for more than a year. On the whole, the forint strengthened by 2.6 percent against the euro, falling short of the 4.6-percent appreciation of the Polish zloty, but at the same time it exceeded the minimal weakening of the Czech koruna and the 0.7-percent depreciation of the Romanian leu.

Chart 4-1: Components of the 5-year Hungarian CDS spread



Note: The decomposition method used can be found in the MNB Bulletin: Variance decomposition of sovereign CDS spreads, Kocsis–Nagy (2011).
Source: Bloomberg, MNB

Chart 4-2: Exchange rates in the region



Note: Changes compared to beginning of 2012. Positive values mean an appreciation of the currency.
Source: Bloomberg

4.1.1 Risk assessment of Hungary

During most of the past period, Hungary's credit risk spread was stable, only moving within a narrow band. There was a decline at the end of the period, and together with that the spread decreased by 13 basis points to 163 basis points during the period (Chart 4-1). Country-specific factors slightly raised the CDS spread, but at the same time this was completely offset by international factors.

4.1.2 Developments in foreign exchange markets

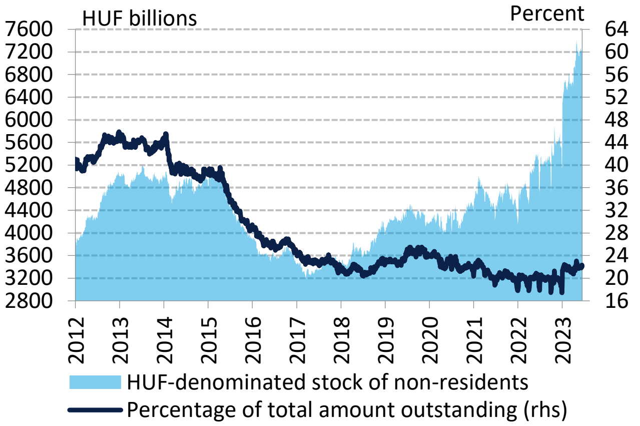
In the period under review, the forint gradually strengthened against the euro, and this dynamic was broken only by minor adjustments. By the end of the period it appreciated by 2.6 percent, corresponding to a peak of nearly 14 months. In the region, the Polish zloty strengthened by 4.6 percent, while the Czech koruna and the Romanian leu both weakened by 0.7 percent during the period under review (Chart 4-2). Exchange rates of the currencies of the region were affected by the global risk appetite, the monetary policy steps of developed and regional central banks as well as incoming macro data. The forint and the zloty strengthened against the US dollar, while the koruna and the leu weakened slightly.

4.1.3 Government securities market and changes in yields

Non-residents' HUF-denominated government securities holdings continued to increase in the past quarter (Chart 4-3). Non-residents' forint government securities holdings increased by HUF 590 billion to HUF 7,258 billion in the past period. The ownership share within HUF-denominated government securities also increased, rising to around 22 percent.

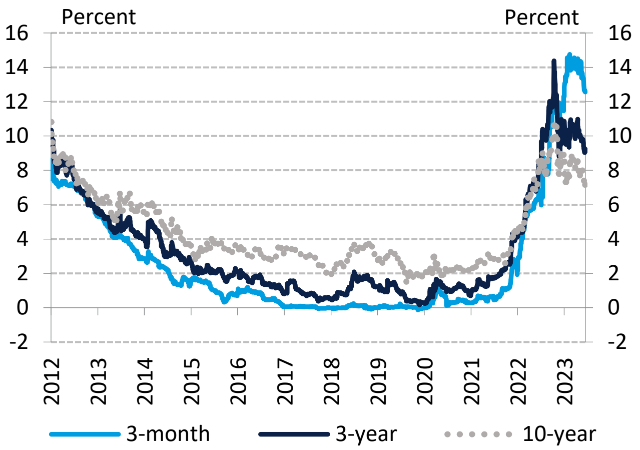
During the period, the Debt Management Agency accepted offers for higher amounts than announced at most of the government bond auctions, although in some

Chart 4-3: HUF-denominated government securities held by non-residents



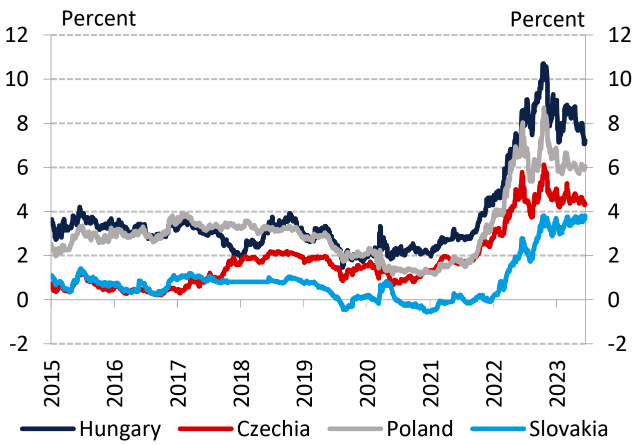
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

Chart 4-4: Yields of benchmark government securities



Source: Government Debt Management Agency (ÁKK)

Chart 4-5: 10-year government benchmark yields in CEE countries



Source: Bloomberg

cases lower-than-announced issuances also took place. In line with the secondary market yield level, average auction yields decreased. Average auction yields declined by 200 basis points at the 3-month discount treasury bill auction and by 146 basis points at the 10-year auction.

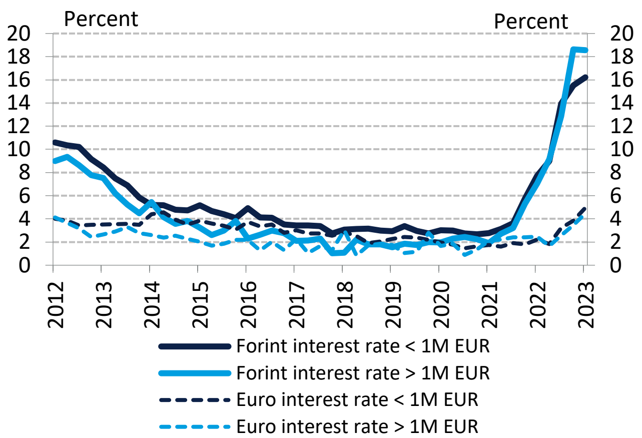
Yields fell on the short, middle, and long sections of the government securities market yield curve as well – to a greater degree on the long end of the curve (Chart 4-4). Overall, during the period the 5-year yield and the 10-year yield declined by 115 basis points and 120 basis points, respectively, although there were volatile periods as well with higher rises in yield. Of the interbank yields, the 3-month BUBOR decreased by 73 basis points to 15.57 percent.

Movements in long-term reference yields were different in the region during the period (Chart 4-5). The 10-year Czech yield declined by 23 basis points, while the Polish yield rose by 13 basis points and the Slovak euro yields increased by 23 basis points.

4.2 Credit conditions of the financial intermediary system

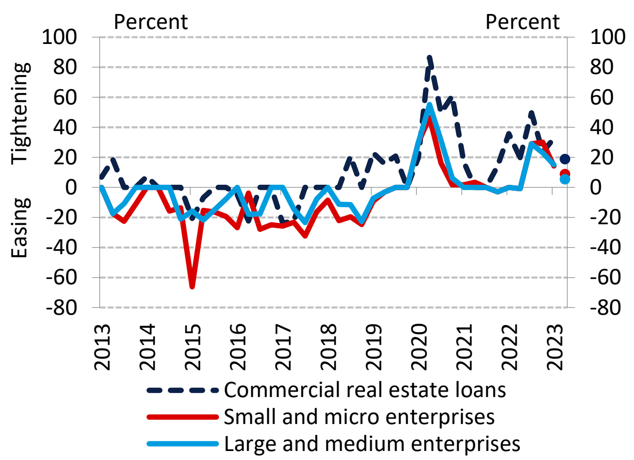
In 2023 Q1, 14–33 percent of banks tightened their corporate credit conditions in the case of small and large companies as well as commercial real estate lending. Looking ahead to 2023 Q2 and Q3, a narrower group of banks indicated further tightening of credit standards. Banks justified the tightening mainly with cyclical factors, while the liquidity and capital positions did not result in a wide-ranging tightening of conditions. This shows that banks' lending capacity is still at a high level. Banks did not change the standards in the case of housing loans, while 11 percent of them tightened in the case of consumer loans, and further tightening is expected in the consumer loan market in the next half year. The average cost of funds of newly contracted corporate HUF-denominated loans and the average APR on newly contracted long-term fixed-rate housing loans increased slightly during the period under review.

Chart 4-6: Interest rates on new corporate loans



Note: Loans with variable interest rate or with up to 1-year initial rate fixation. From 2015, based on data net of money market loans exceeding EUR 1 million.
Source: MNB

Chart 4-7: Changes in credit conditions in corporate sub-segments



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for 2023 Q2 and 2023 Q3.
Source: MNB, based on banks' responses

4.2.1 Corporate credit conditions

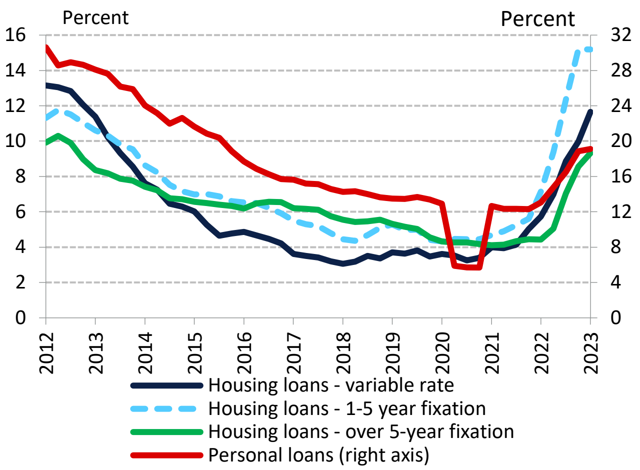
In 2023 Q1, the average interest rate on corporate HUF loans continued to rise moderately. Excluding money market transactions, the average interest rate level on new corporate HUF loans with interest rates variable within one year (largely market-based loans) rose by 70 basis points in the case of low-amount loans, and declined by 8 basis points in the case of high-amount loans compared to the previous quarter, and thus the average cost of funds was 18.1 percent at end-March (Chart 4-6). In the first quarter, the interest rate level on low-amount euro loans increased by 112 basis points, while for high-amount euro loans it rose by 101 basis points, and thus the average cost of funds of euro loans stood at 4.5 percent at end-March. The significant increase in interest rates on corporate euro loans is attributable to a rise in interbank rates.

In 2023 Q1, few banks tightened credit standards for SMEs and large corporations. In the first quarter, the banks participating in the Lending Survey tightened conditions of access to loans in both company size categories as well as for commercial real estate lending. Banks primarily cited cyclical factors as a reason for the tightening, while the liquidity and capital position was still mentioned only by a small part of banks among the factors pointing to tightening, i.e. banks' lending capacity is still at a high level. Looking ahead to the next six months, a small tightening of corporate credit conditions is expected: a net 19 percent, 5 percent and 9 percent of banks anticipate tightening in commercial property financing, for large and medium-sized enterprises and for small and micro enterprises, respectively (Chart 4-7).

4.2.2 Household credit conditions

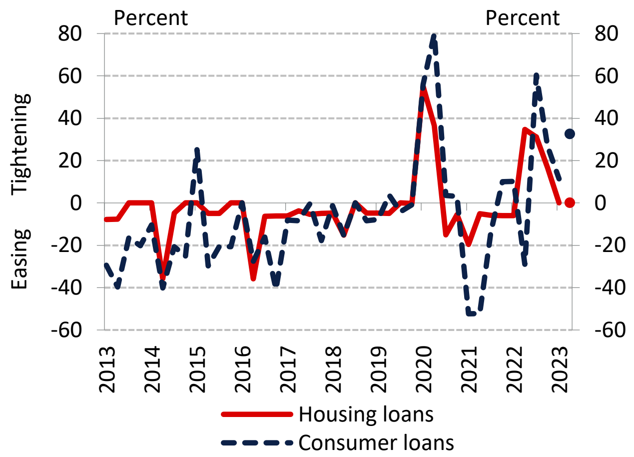
Average interest rates on housing loans increased slightly during the quarter. The average APR level of housing loan contracts concluded in 2023 Q1 stood at 15.2 percent, i.e. the previous quarter's level, in the case of loans with interest rate fixation for 1–5 years (many of which are subsidised-rate loans related to the Home Purchase Subsidy Scheme for Families), while in the case of loans with interest

Chart 4-8: Annual percentage rate of charge on new household loans



Note: Quarterly average of lending rates on newly disbursed loans. In the case of 1-5 year fixation loans, the most recent data points cover loans subsidised by the state, in which case the interest rate shown in the figure also includes the subsidy paid by the state.
Source: MNB

Chart 4-9: Changes in credit conditions in the household sector



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for 2023 Q2 and 2023 Q3.
Source: MNB, based on banks' responses

rate fixation for more than 5 years the increase was 76 basis points, and thus the average APR reached 9.3 percent in March 2023 (Chart 4-8). In 2023 Q1, the volume of certified consumer-friendly housing loans available with an at least 5-year interest rate period accounted for 47 percent of the quarterly new housing loan issuance, while the share of loans fixed for at least 10 years reached 78 percent, and thus many of the new housing loan applicants are protected from the interest rate risk. Increasing by 27 basis points, the average smoothed APR on personal loans reached 19.1 percent by the end of the period under review.

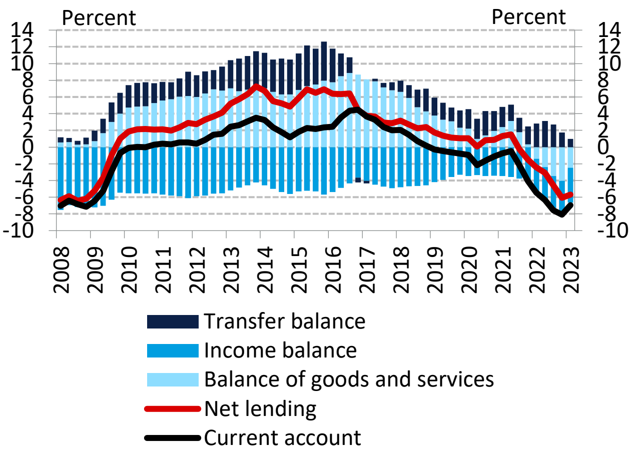
Housing loan standards remained practically unchanged, and no change is expected in the future either. According to responses to the Lending Survey, banks did not change the standards of housing loans in 2023 Q1, and they are also not planning any changes in 2023 Q2-Q3 (Chart 4-9). As far as consumer loans are concerned, a net 11 percent of credit institutions tightened conditions of access to loans in the first quarter. The tightening was primarily attributable to the raising of the spread between the lending rate and the costs of funds. Looking ahead to 2023 Q2 and Q3, a higher ratio, i.e. 32 percent of the banks in net terms are planning further tightening of the standards in the market of consumer loans.

5 Balance position of the economy

5.1 External balance and financing

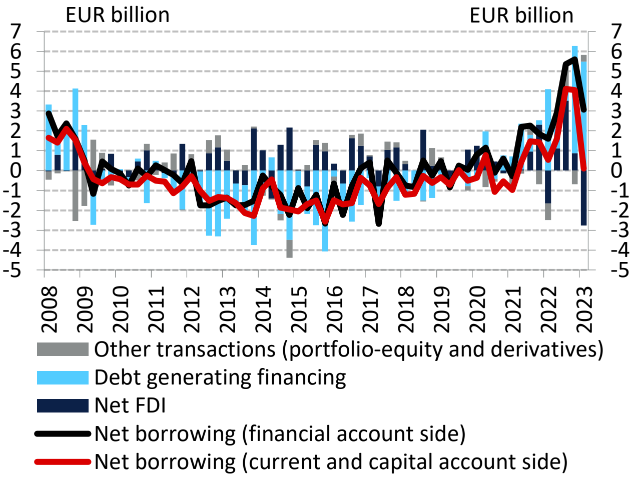
In 2023 Q1, the current account deficit declined to below 7 percent of GDP, while the net borrowing of the economy also decreased. The turnaround that took place in the trade balance was related to the declines in energy prices and in domestic demand. In 2023 Q1, a net FDI outflow (partly due to a one-off item) was recorded on the financing side, while debt inflows increased considerably. In the last quarter of 2022, the country's net external debt-to-GDP ratio remained relatively low in spite of a modest increase, while gross debt rose to some extent: the impact of borrowing was curbed by the growth in nominal GDP.

Chart 5-1: Changes in net lending and its components



Note: Cumulated four-quarter values, as a percentage of GDP.
Source: MNB

Chart 5-2: Structure of net lending



Note: The net lending from the financial account side corresponds to the sum of current account, capital account and the BOP balance of statistical errors and omissions. From an economic point of view, fundamental developments in the dynamics of debt ratios are not affected by the switch between gold bullion and unallocated gold accounts so this technical effect is excluded from the time series.
Source: MNB

5.1.1 Developments in Hungary's external balance position

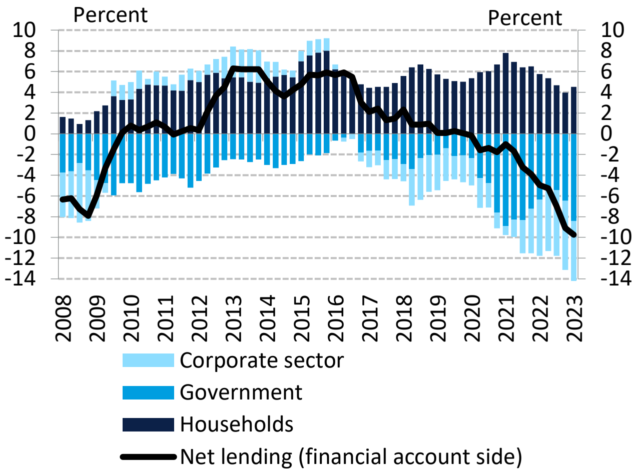
The net borrowing of the economy and the current account deficit declined significantly in 2023 Q1, and thus the deterioration observed in previous quarters came to a halt (Chart 5-1). The improvement in external balance indicators was primarily driven by the trade balance, and within that by the decline in the deficit of the energy balance, due to the improving terms of trade as well as the drop in domestic demand (e.g. in retail sales). In addition, strong exports by the machine industry (presumably partly from inventories) also contributed to the major improvement. In 2023 Q1, the service balance surplus, which plays a key role in the development of the trade balance, was close to 5 percent of GDP, a high unseen since the outbreak of the pandemic. The deterioration in the income balance in parallel with the growth in nominal GDP took place while corporate profits expanded and interest expenditures increased. In parallel with the slightly declining transfer balance, there was a turnaround in the economy's net borrowing as well, which fell significantly.

5.1.2 Developments in financing

In 2023 Q1, in addition to the improving external balance position, the inflow of debt liabilities continued, while there was an outflow of net FDI (Chart 5-2). In the case of net FDI, following significant inflows in the previous quarters, major capital outflows similar to those one year earlier were observed in 2023 Q1. This was partly related to that fact that a Hungarian financial institution acquired shares in a bank in a country in the region. In parallel with that, following rises in previous quarters, net portfolio equity investments started to decrease, primarily due to resident actors' lower investments. Inflows of debt liabilities continued in the first quarter: in parallel with borrowing by the general government and the banking sector, companies reduced their foreign debt.

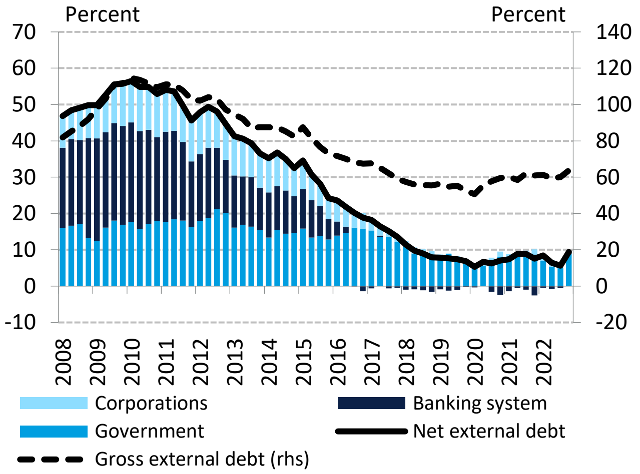
In 2023 Q1, the government's net borrowing increased considerably, while the situation of the private sector's net financial savings improved (Chart 5-3). The net position

Chart 5-3: Decomposition of net lending by sectors



Note: Four-quarter cumulation, as a percentage of GDP.
Source: MNB

Chart 5-4: Development of net external debt by sectors



Note: From an economic point of view, fundamental developments in the dynamics of debt ratios are not affected by the switch between gold bullion and unallocated gold accounts so this technical effect, as well as intercompany loans are excluded from the time series. As a percentage of GDP.
Source: MNB

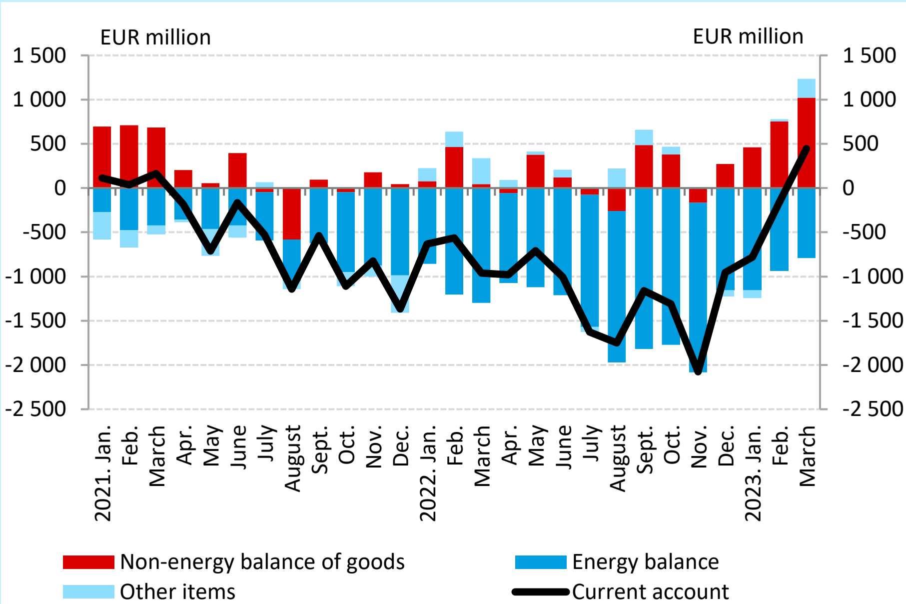
of the general government worsened in 2023 Q1, which was attributable to the funding already disbursed as advance in relation to the missing EU funds, the pension increase to compensate the high inflation and the 10-percent pay rise for teachers in January. The rising payments of wages and pensions by the government as well as the falling and at the same time adapting domestic absorption contributed to the improvement in the private sector's net financial position. Companies' decreasing net borrowing was attributable to high profit income and declining investment activity. Retail sales, which were already falling significantly year on year, improved households' net financial savings.

At the end of December 2022, the net external debt of the economy rose above 9 percent of GDP (Chart 5-4). The moderate increase in the indicator was a result of contrasting effects. The stock-increasing effect of the transactions was partially offset by the expansion of nominal GDP. Gross external debt rose to nearly 64 percent of GDP, which was also attributable to the inflow of debt.

Box 5-1: Improving trend in the current account balance: terms of trade and real economy

The current account balance reached its low last year and following rapid improvement it turned into a surplus by March 2023 (Chart 5-5). Both the energy balance and the balance of goods excluding energy **made significant contributions to the improvement.** Following the low in November 2022, a major change took place in the current account, resulting in a surplus for the first time since March 2021. The favourable developments primarily involved the improvement in the balance of goods, which was due to an increase in exports and a more subdued expansion in imports. The normalisation of energy prices, which started at the end of last year and continued at the beginning of this year, was reflected in a major fall in the value of energy imports: gas prices dropped from EUR 200/MWh typical in the summer of 2022 to around EUR 40/MWh by March 2023, but the adjustment of energy consumption also contributed to the improvement in the external equilibrium (natural gas consumption in Hungary was 30 percent lower in January 2023 than in the same prior-year period). The decline in domestic demand contributed to the deceleration in import volumes in general as well: in March 2023, the volume of retail turnover decreased by 13 percent, whereas the volume of whole-economy investment in 2023 Q1 was down by nearly 3 percent year on year. The recovering balance of services also contributed to the improvement in the current account. On the whole, the rapid improvement in the external balance seen in recent months was related to the decline in energy prices and the broad-based adaptation of the economy.

Chart 5-5: Development of the current account, the energy balance and the non-energy balance of goods

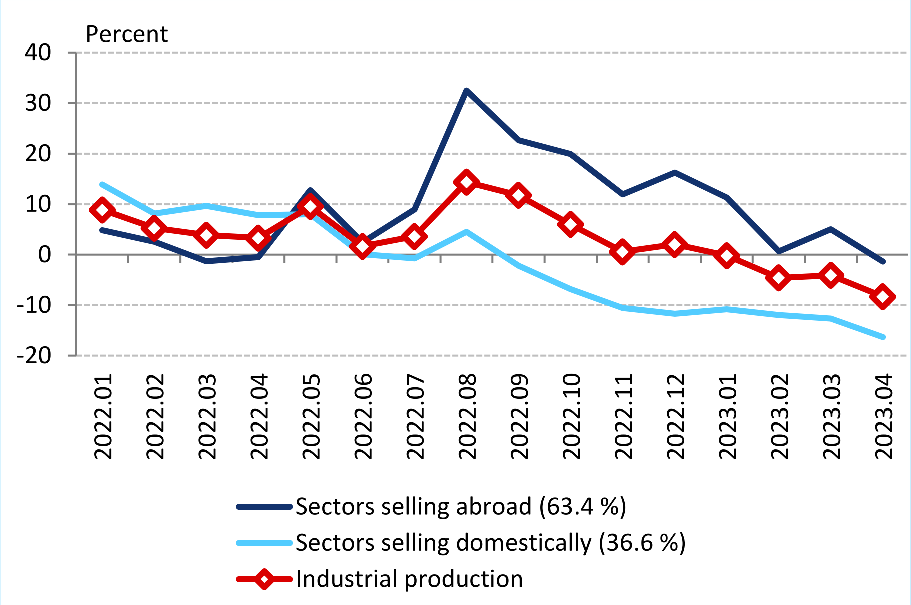


Source: HCSO, MNB

Exports expanded in the first months of the year, despite a decline in industrial production. In the first months of the year, the volume of exports of several product groups declined (e.g. processed products) or stagnated (e.g. chemical products) year on year, but the increase in the volume of Hungarian goods exports still remained significant. This was mostly the result of the fact that the year-on-year growth in the exports of machinery and means of transport, which account for nearly 60 percent of the value of goods exports calculated in euro and comprise the manufacturing of road vehicles and electric machines, remained positive in the first quarter of this year as well. In spite of the downturn in industrial production in the first months of the year, the manufacturing of road vehicles and batteries expanded, making a major contribution to the growth in goods exports.

Nevertheless, there is a difference in the production of the sectors selling to external and domestic markets (Chart 5-6). Industrial output has been declining since last September in the case of the sectors selling in Hungary, while, in spite of a significant slowdown, production was able to expand in the first three months of the year in the case of companies producing for exports. However, in the case of sectors selling to external markets, production also fell slightly on an annual basis in April 2023. Orders point to the continuation of the previous months' trend: new domestic orders declined year on year, while the annual growth in new export orders is positive, although it decelerated in 2023 Q1.

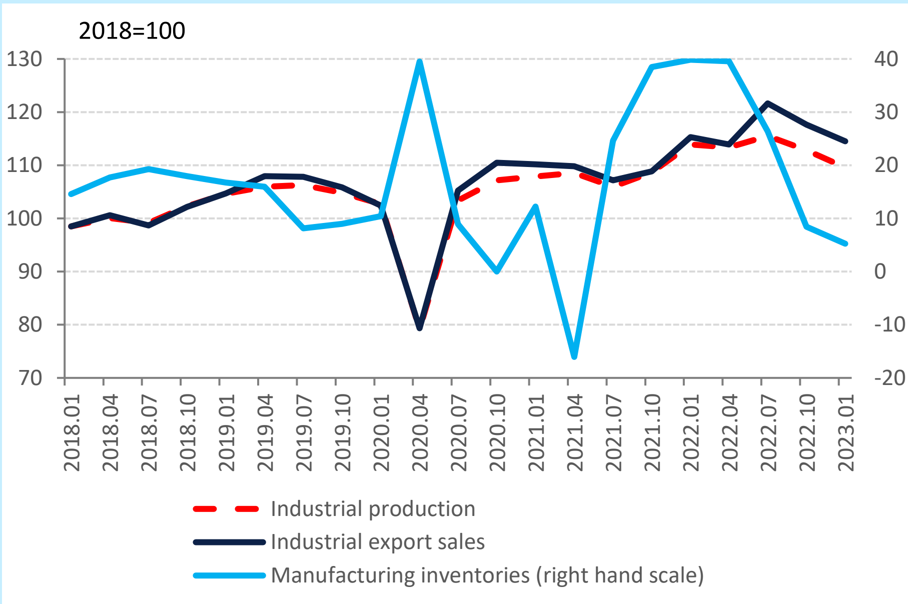
Chart 5-6: Industrial production in exporting sectors and sectors selling to the domestic market



Note: The sectors selling abroad exported at least 70 percent of their 2022 sales.
The weight of the 2022 industrial production is in brackets. Sectors selling abroad: clothing, manufacturing of chemicals, pharmaceuticals, rubber, computers and electronics, manufacturing of electrical equipment and batteries, motor vehicles.
Source: HCSO, MNB

A strong co-movement of industrial production and the sector's export sales was observed in the previous years. In the past quarters, however, the two indicators departed from one another, and industrial production fell short of export sales (Chart 5-7). An explanation for this may be that the increase in inventories in manufacturing decelerated considerably from the second quarter of last year, and thus the selling of inventories may have contributed to the expansion in exports in the sector.

Chart 5-7: Industrial export sales, industrial production and inventories in manufacturing

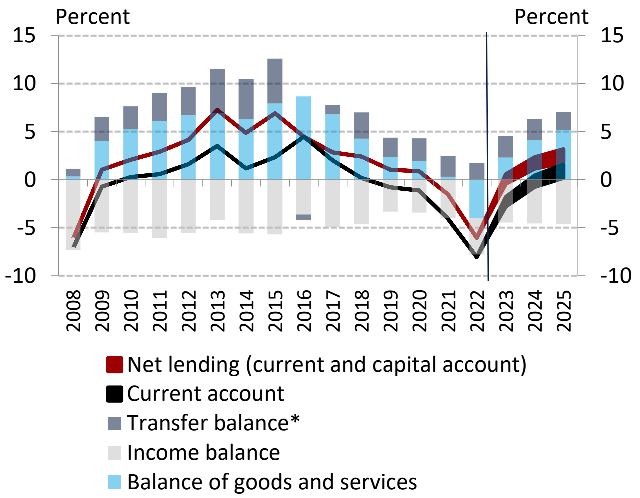


Source: HCSO, MNB

5.2 Forecast for Hungary's net lending position

As a result of an improvement in the trade balance, the current account deficit will decline significantly in 2023 and 2024, and turn into a surplus by the end of the horizon. In view of the lower energy prices and slackening domestic demand, the growth rate of imports will decelerate this year. On the whole, in parallel with further gains in export market share, all of this will result in an improvement in the trade balance. In conjunction with investment projects that start production in the second half of the forecast horizon, normalisation of the global economic environment will result in a further improvement in Hungary's external balance position. According to the sectors' savings approach, the private sector net position will turn into net lending from 2023, while the general government deficit – mostly due to the high revenues and the budget measures – will fall significantly and later stabilise at a low level.

Chart 5-8: Evolution of net lending



Note: As a percentage of GDP* The sum of the balance of the current transfers and the capital account balance.
Source: MNB

In 2023, in parallel with the improving trade balance, the current account deficit will be around 2–3 percent of GDP (Chart 5-8). In early 2023, improvement in the terms of trade due to falling energy prices and the adjustment of domestic sectors reduced the growth rate of imports in the first quarter, while buoyant exports by the machine industry also contributed to the strong improvement in the trade balance. In view of favourable incoming preliminary monthly data and the expected decline in domestic absorption at an annual level as well, the trade deficit will decrease considerably in 2023, which is partly offset by foreign companies' growing profits and the deteriorating income balance due to the rising interest expenditure. As a result of all of this, the current account deficit will be around 2–3 percent of GDP in 2023. Starting from 2024, as a result of a pick-up in external demand and as newly installed export capacities become productive, the external balance position may significantly improve further, and thus the current account deficit will turn into a surplus by the end of the horizon.

Table 5-1: Development of trade balance as a percentage of GDP

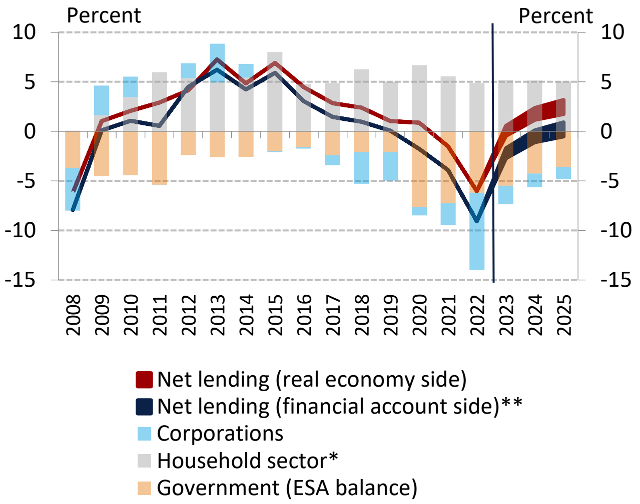
	2021	2022	2023	2024	2025
Balance of goods	-2.9	-8.5	-2.3	-0.8	0.2
Balance of energy	-4.4	-9.7	-3.5	-3.0	-2.7
Balance of other goods	1.6	1.2	1.3	2.2	2.9
Balance of services	3.3	4.5	4.6	4.9	5.0
Trade balance	**0.3**	**-4.0**	**2.3**	**4.1**	**5.2**

Source: HCSO, MNB

The strong improvement in the energy balance in 2023 will contribute significantly to this year's decline in the current account deficit. As a result of much lower energy prices, the gradual adaptation of the domestic sectors and higher GDP, the deficit of the energy balance relative to GDP will decrease substantially in 2023. In addition to the improvement in the energy balance, the decrease in domestic demand is also reflected in the increase in the surplus of other goods. The energy balance, and thus the goods balance, will continue to improve at a more moderate pace in the coming years (Table 5-1).

According to the sectors' savings trends, after peaking in 2022, the general government deficit will fall in 2023, while the position of the private sector may be positive again (Chart 5-9). The net borrowing of the general government declines steadily over the forecast horizon, which – in addition to the drop in energy prices – is attributable to rises in tax and contribution revenues, also supported by the windfall tax measures. Moreover, expenditure reducing fiscal measures also contribute to the

Chart 5-9: Changes in the savings of sectors



Note: As a percentage of GDP. * Net financial saving of households does not contain the pension savings of those who return to the public pension system. The net savings in the financial accounts differ from the data in the chart. ** We expect that 'Net errors and omissions' (NEO) will return to the historical average.
Source: MNB

decline in the budget deficit, while the rise in government interest expenditures and pension expenditures due to inflation has a contrasting effect. Following the decline as a result of high inflation and falling real income in 2022, households' savings trend will remain broadly unchanged until the end of the forecast horizon. In 2023, as a result of the more moderate corporate investments and rising corporate profits, the net borrowing of corporations will decline, also supported by lower energy prices. Recovering external demand and the inflow of EU funds from 2024 will be reflected in a further improvement in corporations' financing position.

5.3 Fiscal developments

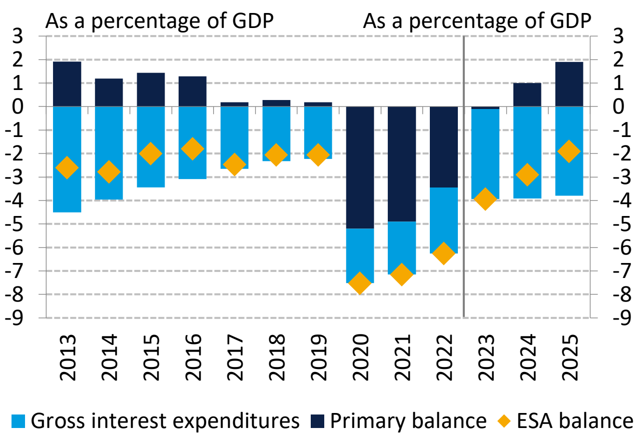
Following the 6.2-percent budget deficit in 2022, the deficit target for 2023 is 3.9 percent, whereas in line with the submitted bill the target for 2024 rose to 2.9 percent from the previously planned 2.5 percent. Achieving the deficit path corresponding to the targets is supported by the lower energy prices, while in 2024 the fiscal measures announced in parallel with the budget bill will facilitate the decline in the budget balance by partially maintaining the windfall taxes as well as by tax increases and expenditure reduction. As a result of the economic growth and the lower deficit, the government debt-to-GDP ratio will fall from 73.3 percent in 2022 to below 70 percent by end-2023, and then drop below 65 percent by the end of the forecast period.

Table 5-2: General government balance indicators

	2022	2023	2024	2025
ESA balance	-6.2	-3.9	-2.9	-1.9
Primary ESA balance	-3.4	-0.1	1.0	1.9
Gross interest expenditures	2.8	3.8	3.9	3.8

Note: As a percentage of GDP.
Source: HCSO, MNB

Chart 5-10: Changes in the fiscal balance and government interest expenditures



Source: HCSO, MNB

5.3.1 Main balance indicators

The government sector's accrual-based deficit as a percentage of GDP may amount to 3.9 percent in 2023 and 2.9 percent in 2024. The ESA deficit of the budget amounted to 6.2 percent in 2022, which may be followed by a deficit of 3.9 percent in 2023 based on the budget deficit target (Table 5-2). The budget deficit corresponds to 2.9 percent of GDP in the 2024 budget bill submitted, meeting the Maastricht criterion, which will apply again as of next year. The decline in the deficit will be facilitated by the much lower energy prices and in 2024 by the new measures announced in parallel with preparing the bill. Compared to the previous years, the deficit may continue to decline in 2025, and may reach 1.9 percent of GDP, which requires the achievement of a nearly 2-percent primary surplus (Chart 5-10).

5.3.2 Budget balance in 2023

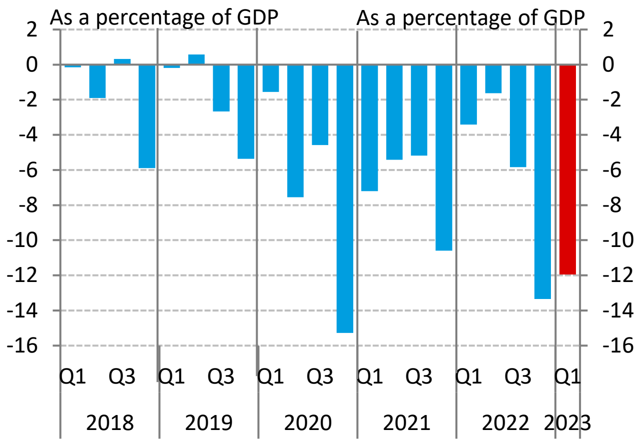
According to the amendment to the Budget Act adopted in March, the budget deficit in 2023 may amount to 3.9 percent of GDP. Based on the general government data published by the MNB in the preliminary financial account, the Q1 accrual-based deficit amounted to around 12 percent of GDP (Chart 5-11). 66 percent of the accrual-based deficit target was met in 2023 Q1. Major contributors to that were the expenditures paid to cover the elevated energy costs, amounting to some HUF 800 billion.

The decline in the budget deficit compared to previous years is supported by the significant fall in energy prices, although at the same time it is hindered by the deceleration in the previously dynamic increase in tax revenues (Chart 5-12) and the rise in government interest expenditures due to high inflation. In 2023, interest expenditures will rise by 1 percentage point to 3.8 percent from the previous year's 2.8 percent.

5.3.3 Balances in 2024 and 2025

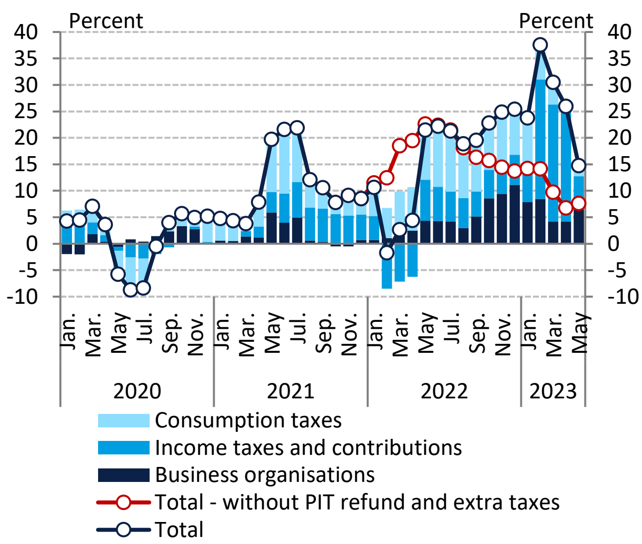
According to the 2024 budget bill, the budget deficit target will fall to 2.9 percent of GDP in 2024. The decline in the budget deficit is primarily supported by the revenue and expenditure measures announced in accordance with the

Chart 5-11: Accrual balance of the general government sector



Note: The Q4 2022 data shows the net lending capacity of general government as reported in the preliminary financial accounts published by the MNB.
Source: HCSO, MNB

Chart 5-12: Evolution of tax and contribution revenues in 2020–2023, year on year, 3-month moving average



Source: HST, MNB

budget bill as well as by the additional tax revenues resulting from the growth of the Hungarian economy and lower expenditures, due to moderating energy prices.

According to the 2024 budget bill, the windfall taxes originally introduced in 2022 will mostly remain in place in 2024 as well. Several of the tax burdens on extra profits (retail tax, insurance tax, income tax on energy providers, telecommunications tax, airlines' contribution) will completely remain in place, and the upper rate of the retail tax will increase from 4.1 percent to 4.5 percent. The other windfall taxes, such as the surtax on the Ural–Brent oil price difference, pharmaceutical producers' tax as well as the mining royalty and the part of the bank levy related to the extra profit will only partially remain in place. Another new tax measure is the raising of the excise duty on fuel in line with the minimum EU level, and, inter alia, a 13-percent social contribution tax will be imposed on time deposits in banks as well (in addition to the already existing 15-percent personal income tax). The planned reduction of expenditures and the fall in energy prices will also contribute to the achievement of the government's deficit target.

In the absence of a Budget Act available, we prepare a technical forecast for 2025, according to which based on the expected macroeconomic path and estimated expenditures, the deficit will decline further, in parallel with a decrease in risks.

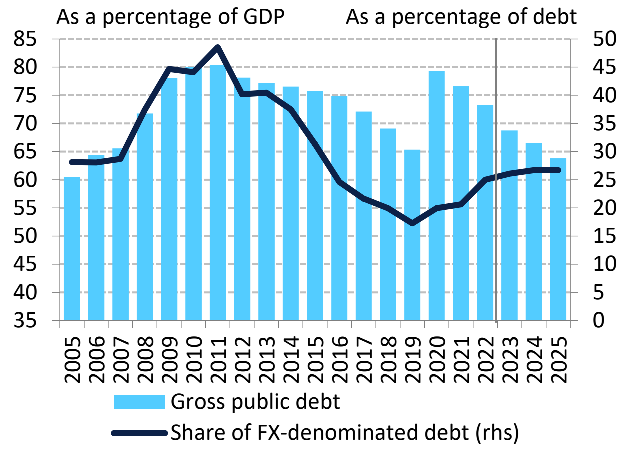
5.3.4 Risks surrounding the baseline scenario

Achievement of the fiscal deficit target is surrounded by risks in 2023 and 2024 as well. The largest risk on the revenue side is the decline in tax revenue dynamics in parallel with the deceleration in economic growth.

Changes in energy prices continue to have a major impact on the budget balance, but at present the price decline carries a positive risk. The energy bill represents a significant budgetary expenditure even if world market prices are much lower than last year and even if new rules are applied. However, the energy bill will decline considerably year by year if world market prices remain at their current levels or decline.

The 2024 budget bill does not foresee any refunding of the MNB's loss. Central bank activities – stimulation of the economy during crisis management and then the series of measures necessary in order to reduce inflation – exert a favourable impact on the whole economy, while the related costs are reflected in the central bank's balance sheet. Together with this year's expected loss, the MNB's equity will become negative by end-2023, creating a

Chart 5-13: Gross public debt forecast



Source: MNB, ÁKK

compensation obligation for the budget distributed over 5 years as of 2024. The 2024 budgetary expenditure related to the reimbursement of the loss expected for 2023 may reach 0.4–0.5 percent of GDP under current legislation, although the exact value is significantly affected by the changes in both the domestic economy and the international environment.

The risks related to EU funding still persist, because until the receipt of the funds the expenditures related to the new cycle are pre-financed to the beneficiaries from the budget. The pre-financing and receipt of funds affect developments in government debt, while the scheduling of implementation has an impact on the accrual-based balance and real economy trends.

5.3.5 Expected developments in public debt

According to the preliminary data, at the end of 2023 Q1, the gross government debt-to-GDP ratio was 73.3 percent. Thus, the debt ratio corresponded to its end-2022 level and declined by 3.6 percentage points year on year. In the first quarter of the year, the government debt increasing effect of the high cash deficit and the related higher net issuance of government securities was offset by nominal GDP growth.

According to our forecast, the gross government debt-to-GDP ratio will decline to 68.7 percent by end-2023. The decrease in the government debt ratio is supported by the decline in the deficit and growth in nominal GDP. Thereafter, according to our projection, the government debt ratio may decrease annually by almost 2.5 percentage points on average over the forecast horizon and may thus fall below 64 percent by the end of 2025 (Chart 5-13).

The change in the EUR/HUF exchange rate affects the debt ratio through the revaluation of FX debt. The lower the share of FX debt within government debt, the smaller this impact is. Currently, a 10-forint change in the EUR/HUF exchange rate modifies the government debt-to-GDP ratio by around 0.5 percentage point. In 2023, as a result of the significant foreign currency issuance, the foreign currency ratio of the central government debt may rise further, while by 2025 the increase may stop.

Box 5-2: Effects of the 2024 fiscal measures

The budget bill for 2024 was submitted on 30 May 2023, followed in early June by the related tax laws as well, which contain various new measures. Of the measures, the partial upholding of the windfall taxes may have the greatest fiscal impact, while the decisions resulting in rises in excise tax revenues result in further increases in revenues. **Overall, the 2024 measures may raise the annual inflation rate by 0.7–1.0 percentage point.**

In view of the measures, revenues may be around HUF 1,000 billion higher. Most of the surplus, approximately HUF 800 billion, is related to the windfall taxes, as – contrary to the original plan – they basically will not be phased out in 2024. Several of the tax burdens on windfall profits (retail tax, insurance tax, income tax on energy providers, telecommunications tax, airlines' contribution) will completely remain in place. Moreover, the upper rate of the retail tax is increasing from 4.1 percent to 4.5 percent. The other windfall taxes, such as the surtax on the Ural–Brent oil price spread, pharmaceutical producers' tax as well as the mining royalty and the part of the bank levy related to the extra profit will be phased out partially. **Maintaining the tax measures may decelerate or prevent the decline in corporate profit margins from the current higher level, thus slowing down the pace of disinflation by 0.2–0.4 percentage point.** Within that, according to our estimate, raising the retail tax rate will increase next year's annual price index by 0.1–0.2 percentage point.

As a result of other revenue measures, the general government may realise further revenues amounting to more than HUF 200 billion. As a result of raising the excise duty on fuel in line with the minimum EU level, the tax revenue will increase by some HUF 190 billion, and **the tax increase may add 0.5–0.6 percentage point to the annual inflation in 2024**. In addition to the 15-percent personal income tax already payable, a 13-percent social contribution tax will be imposed on interest income according to the PIT Act, except for interest income from real estate fund investment certificates, and thus the competitiveness of government securities among the forms of savings may continue to increase.

Table 5-3: Measures of the 2024 budget (HUF billion)

Measure	Total (HUF billion)
SUBMISSIONS	**1 010**
Extra profit taxes	**800**
Extra profit tax on banks	130
Extra profit tax on insurance companies	90
Taxes on the energy sector	370
Special tax on retail trade (surplus)	100
Pharmaceutical industry	80
Telecommunications	30
Other tax measures	**210**
Excise duty increase (fuel in line with EU level)	190

Source: 2024 Budget Act, MNB forecast

According to our preliminary estimate, the measures that contain tax increases will raise inflation by 0.7–1.0 percentage point in total in 2024. Inflation will be increased by the complete or partial maintaining of the windfall taxes and the raising of the upper rate of the retail tax, as well as the increasing of the excise duty on fuel.

Table 5-4: Inflationary impact of the 2024 budget measures

Budgetary measures	**Budgetary impact (HUF billion)**	Direct inflation impact (percentage points)	Redistributed inflation effect (percentage points)	**Overall inflation impact (percentage points)**
Upholding of windfall taxes*	700		+ 0.1 - 0.2	+ 0.1 - 0.2
Increase in retail sales tax	100		+ 0.1 - 0.2	+ 0.1 - 0.2
Increase in excise duty	190	+ 0.5 - 0.6		+ 0.5 - 0.6
Total	**990**	+ 0.5 - 0.6	+ 0.2 - 0.4	**+ 0.7 – 1.0**

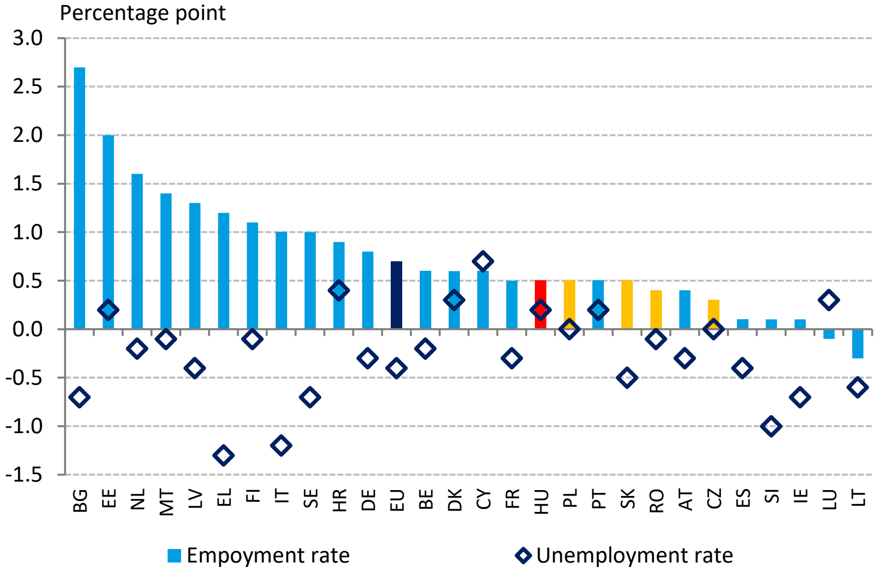
Note: *Measures taken into account: banks' windfall tax, insurers' windfall tax, tax on the Ural–Brentprice spread, raising of energy suppliers' income tax, extension of energy suppliers' income tax, KÁT/METÁR (feed-in tariff/renewable subsidy) surtax, balancing power plants' surtax, mining royalty, telecommunications sector surtax, reduction of utility tax, raising of the pharmaceutical producers' contribution, pharmaceutical producers' surtax.
Source: 2024 Budget Act, MNB forecast

6 Special topics

6.1 Why did labour market and real economy developments part?

The European and Hungarian labour markets continue to prove to be resistant to the slowdown in economic activity, and employment is historically high. In spite of the economic downturn, by the end of 2022 the employment rate increased in every country in the European Union, except Luxembourg and Lithuania. The average increase was 0.7 percentage point compared to the period preceding the Russia–Ukraine war (Chart 6-1). The unemployment rate also declined in the EU as a whole and in most countries, falling by 0.4 percentage point on average. The employment rate increased to a larger degree in the majority of countries compared to what the decrease in the unemployment rate alone would explain. This is the result of the fact that more people became active from inactive in the labour market.

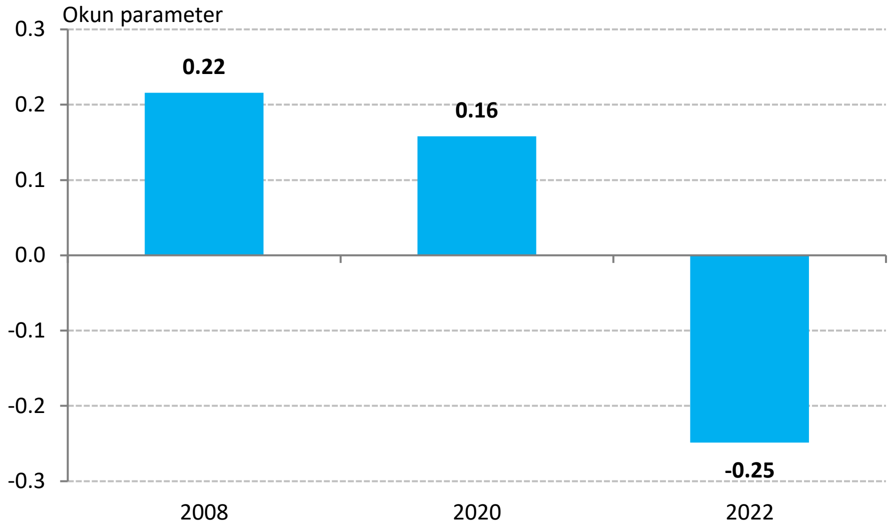
Chart 6-1: Changes in the employment and unemployment rates between the last quarter of 2021 and the last quarter of 2022



Source: Eurostat

In spite of the deceleration in GDP, domestic employment rose in the past quarters, i.e. the sign of the relationship between GDP and employment changed (Chart 6-2). The experiences of past crises showed that after a decline in GDP a change in employment in the same direction (i.e. a decrease) takes place with some delay. The strength of the correlation is demonstrated by the so-called Okun parameter, according to which one unit of GDP decline implied a decrease of 0.2 percent in employment in Hungary in the past. By contrast, employment in Hungary did not decline during the technical recession that started in 2022 Q3, and according to seasonally adjusted data it actually increased by nearly 20,000 people. Accordingly, the sign of the Okun parameter changed and became negative (-0.25 percent). The reasons for this highly important change are discussed below.

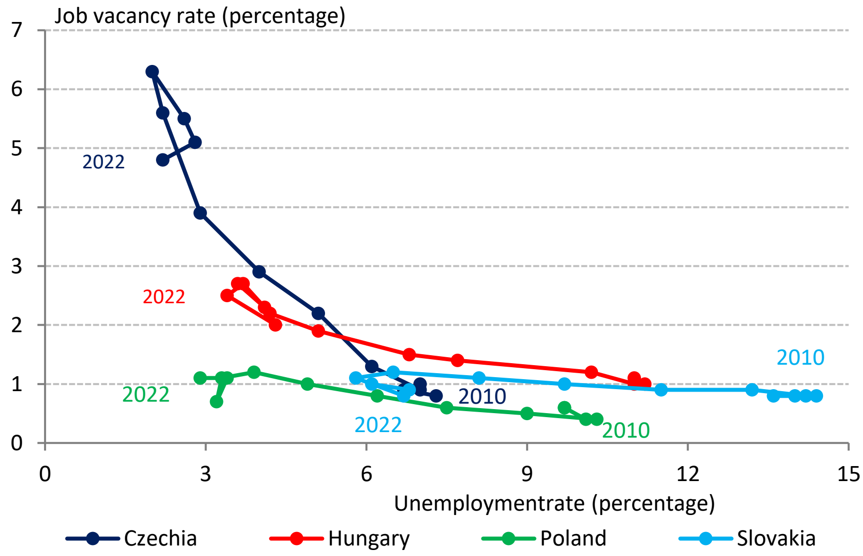
Chart 6-2: Change in employment per unit change in the GDP in Hungary



Note: Based on seasonally adjusted data. Value calculated in the first three quarters of the economic downturn.
Source: MNB, based on the HCSO

Labour demand, which is strong compared to supply, is resulting in tight labour markets in all of the countries in the region (Chart 6-3). The ratio of job vacancies is still high in the region. Within that, companies' labour demand is especially strong in the Czech Republic and Hungary. The unemployment rate came close to pre-pandemic levels again in all of the countries in the region, and in Poland it is even lower than in 2019. The tight labour market improves employees' relative bargaining position, whereas those who lose their jobs are quickly 'absorbed' by companies that have many vacancies.

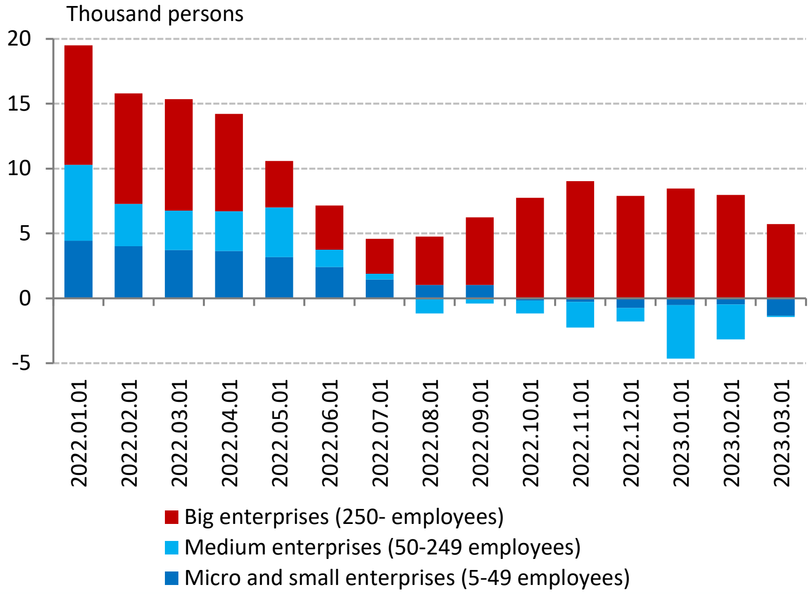
Chart 6-3: Evolution of the Beveridge curve in the V4 countries (2010–2022)



Source: Eurostat, HCSO

Although macroeconomic labour demand is still significant, different reactions are observed in various sectors and company size categories. Rearrangement in headcount tends to take place in favour of large companies. In manufacturing, which operates with record high profits, the expansion in employment in the first half of last year was divided across small, medium-sized and large enterprises, but this changed by the second half of the year, and while employment at large corporations continued to expand, decline already was observed in the SME sector (Chart 6-4).

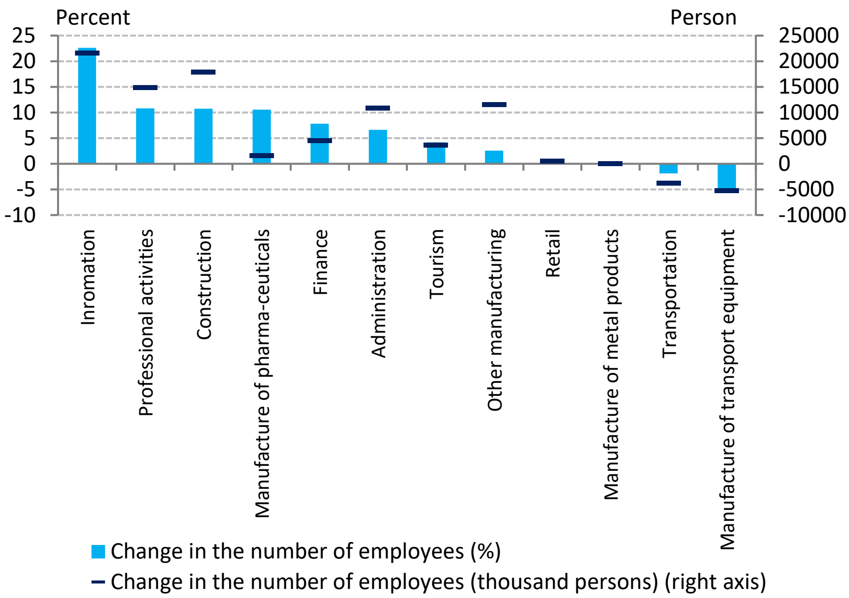
Chart 6-4: Annual change in headcount in manufacturing according to corporate headcount categories



Source: HCSO

Market services are still the biggest winners of the sectoral restructuring (Chart 6-5). The market services sector as a whole employs 4.3 percent (54,000) more people than in the last quarter of 2019. The manufacturing industry was also able to expand in this period, but only by 1.2 percent (8,000 people). Growth dynamics of the number of employees in construction was 10.7 percent (18,000 people), exceeding even that of the market services sector, but due to the much lower headcount of the group, the absolute degree of the expansion was greater in the case of the services sector. Within market services, the highest growth was achieved by the information and communications (22.6 percent), the professional, scientific and technical activities (10.8 percent) as well as the financial (7.8 percent) sectors. Within manufacturing, pharmaceutical production (10.6 percent), where expansion was strong, is worth highlighting, while the number of employees dropped considerably (-4.8 percent) in vehicle manufacturing, which has the highest weight.

Chart 6-5: Changes in the numbers of employees in the main sectors of the national economy since 2019 Q4

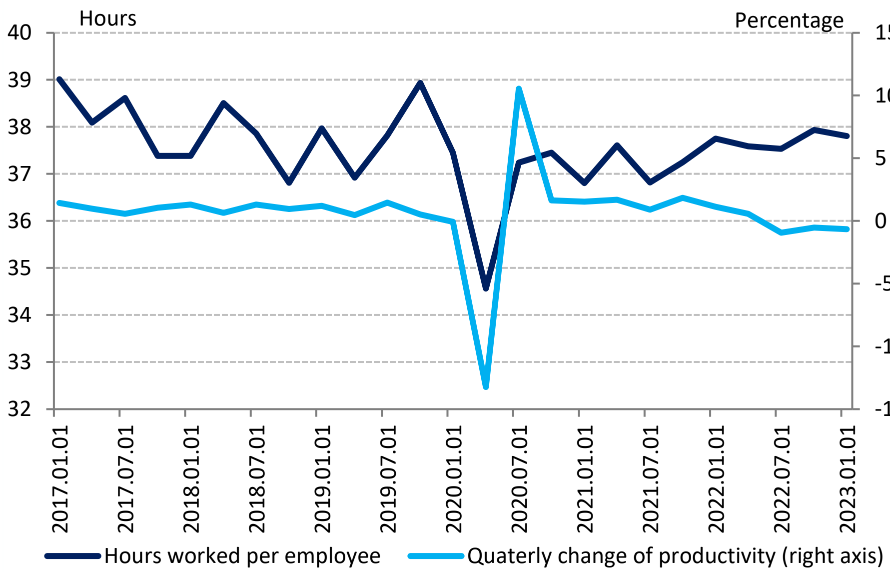


Note: Seasonally adjusted data based on Institutional Labour Statistics.
Source: MNB, based on the HCSO

In the following, we elaborate on three possible reasons for the separation of the labour market cycle and real economy performance. First, we present the phenomenon of labour hoarding, followed by the examination of the effect of the deteriorating demography and finally of the impact of high corporate profits on employment.

As a response to the challenge posed by vacancies that are difficult and slow to fill, employers may resort to labour hoarding, which means keeping more than necessary employees in spite of an economic downturn. Although labour hoarding results in a decline in productivity in the short run, the reason underlying this phenomenon is that when the economy arrives at a phase of upturn again, the companies applying this solution may be in a more favourable position than their competitors, as the former do not have to invest so much in recruitment, which is a major challenge in a tight labour market environment. The more the unfavourable economic situation is thought to be temporary or the tighter the future labour market is seen by employers, the stronger this process may be. Labour hoarding is not a phenomenon that is easy to identify, but its two important signs may be the decrease in the average number of hours worked and the decline in productivity. The average number of hours worked already declined slightly in the first quarter of this year, although one still cannot talk about a drastic change. By contrast, productivity was down in the past three quarters, indicating that undertakings are still attached to their employees, trusting in the upcoming trend reversal (Chart 6-6). Nevertheless, this decline in productivity is not a structural phenomenon, but rather a cyclical one, as companies' production capacities remained 'within the gates of the factory'. At the same time, the production capacity can be quickly mobilised if there is a turnaround in macroeconomic demand.

Chart 6-6: Changes in hours worked per employee and productivity

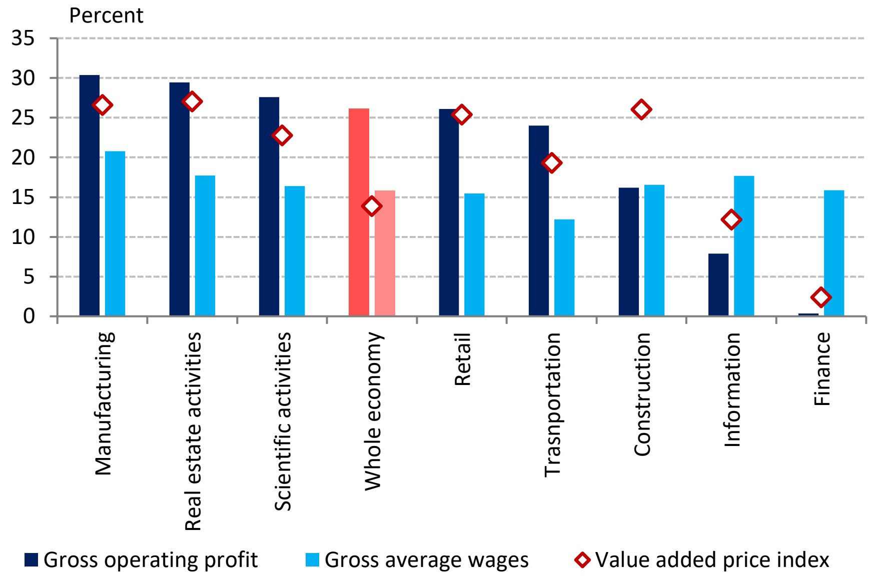


Note: Seasonally adjusted data.
Source: HCSO, MNB

This process may be strengthened by the unfavourable demographic trend as well. In the long run, tightness may increase further in the whole region as demography, as a limiting factor, makes recruitment more and more difficult. The decline in working-age population (aged 15–74 years) will accelerate gradually: in Hungary, for example, it will increase from around 40,000 people a year at present to even 70,000 per year by the end of the decade. The decline in population may affect some countries in the region even more strongly.

In the current environment, the understanding of labour market developments is facilitated not only by the magnitude of real developments, but also by the size of the nominal profits produced at companies. Even in spite of the weak real growth, the major increase in corporate profits recorded recently does not warrant lay-offs. In many sectors, prices increased to a larger degree than costs, resulting in an improvement in gross operating profits (Chart 6-7). The corporate sector and individual entrepreneurs enforced price rises exceeding the increase in their costs, which, on the whole, resulted in a major rise in the profits of these sectors. Gross operating profits increased the most in manufacturing, by 43.8 percent in 2022 Q3, 52.7 percent in 2022 Q4, year on year, and by 30.4 percent in 2023 Q1 (it is important to note, however, that the rise in the price index of value added was the highest in this sector). In addition to the manufacturing industry, gross operating profits expanded considerably in the real estate transactions sector, but, similarly to manufacturing, the degree of wage increases fell short of the growth rate of profits here as well. While profits are high, as a result of increasing inflation, real wages have been declining since September 2022 in year-on-year terms. In 2022, compared to the 14.5-percent inflation, wages in the private sector rose 15.7 percent on average, but real wage dynamics were already negative in the last third of the year. In view of the decline in real wage costs, labour is becoming cheaper and cheaper compared to companies' products and services provided. In a situation like that, in the short run a company is not forced to labour market adjustment. In the longer run, however, the persistence of this trend permanently erodes real wages, which reduces companies' domestic market over the medium and long term through domestic demand. Therefore, profit inflation is able to mitigate companies' and the labour market's compulsion to comply only in the short run; the persistence of this process entails major real economy sacrifices in the long run.

Chart 6-7: Annual dynamics of gross operating profit, average wages and sectoral added value price indices in 2023 Q1 by whole-economy sector



Note: Earnings net of law enforcement employees' extraordinary six-month benefit are shown for the whole economy

Source: HCSO, MNB

Overall, the labour market's resilience to crisis is a phenomenon observed all over Europe and is attributable to various possible reasons, three of which are of crucial importance: the phenomenon of labour hoarding, deteriorating demographic indicators and increasing corporate profits. Basically, the three factors under review can keep employment high only temporarily. It is worth highlighting high corporate profits, as this phenomenon may yield misleading results in the short run, but it may even result in persistent labour market and growth losses in the long run, due to an evolution of imbalances as well as to declining real wages and consumption.

6.2 The disinflationary effects of monetary policy are increasingly evident

Our analysis provides an overview of how the monetary tightening cycle launched by the Magyar Nemzeti Bank in 2021 exerted its disinflationary effect through the various channels of monetary transmission.

The Magyar Nemzeti Bank successfully achieved and maintained price stability between 2017 and 2020. In this period, inflation remained within the central bank tolerance band in 44 out of 48 months and was exactly 3 percent on average, i.e. it corresponded to the MNB's inflation target.

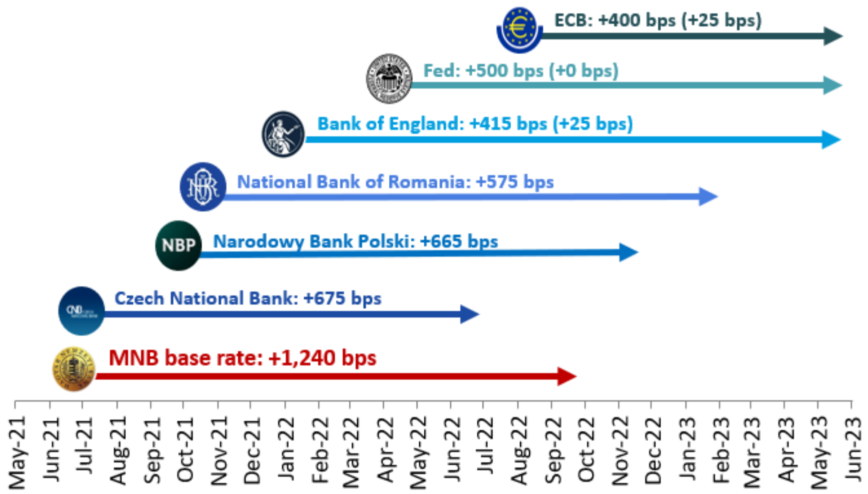
In 2021, however, inflation started to increase mainly as a result of external effects. Global economic reopening following the pandemic entailed major increases in the prices of energy and commodities, due to disruptions in supply chains and the quick recovery in demand. In February 2022, the war between Russia and Ukraine broke out, raising energy and commodity prices further, while global food prices also increased significantly. Successful crisis management in Hungary resulted in a quick economic recovery after the pandemic. Strengthening domestic demand contributed only slightly to the increase in inflation until 2022 H2. According to the MNB's estimates, during this period the role of domestic factors in the developments in the consumer price index was around 20 percent, while 80 percent of the changes were explained by external factors. Following that, the role of domestic factors gradually increased and became the determining factor.

The MNB was closely monitoring the mounting inflation risks, and in reaction to them the Monetary Council launched a cycle of interest rate increases in June 2021, in order to ensure price stability and anchor inflation expectations. **With this, the MNB was the first central bank in the European Union that started the tightening of monetary conditions following the coronavirus crisis.**

Of the central banks in the European Union, the MNB implemented the most severe tightening of monetary conditions. In 17 steps, the central bank raised the base rate by a total 1,240 basis points, and thus the base rate reached its current level of 13 percent in September 2022 (Chart 6-8). In addition, on 14 October 2022, the central bank introduced targeted instruments with one-day maturity in order to preserve financial market stability. The daily application of the one-day quick deposit tender, with an 18 percent interest rate upon introduction, and of the one-day FX swap tender effectively stabilised the financial markets. **In addition to raising interest rates, the central bank took numerous measures to strengthen monetary transmission so that the interest rate steps can exert their effect as efficiently as possible in all of the relevant financial markets.**

Monetary policy steps typically exert their effect over a horizon of 1.5–2 years. The effect of the monetary tightening, which was launched in due course in Hungary, taking decisive steps and using various tools, is now already being perceived in a wide range of the transmission channels. Accordingly, the consumer price index reached its peak in January 2023, 18 months after the first tightening steps of the MNB taken in mid-2021 and then embarked a downward path.

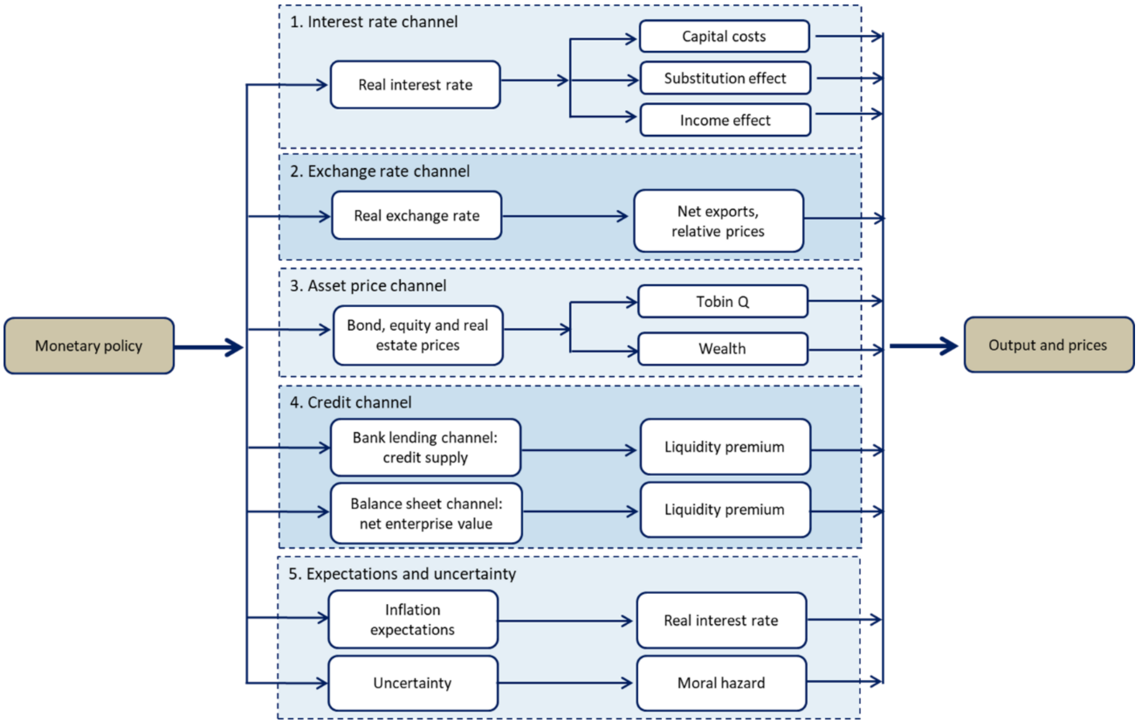
Chart 6-8: Interest rate hike cycle of major and regional central banks



Note: In brackets is the size of the last interest rate step taken in the case of central banks where the interest rate hike cycle has not been closed yet.
Source: Bloomberg

In our analysis, we provide an overview of the main transmission channels and present how the disinflationary effect appeared in the individual cases. The effect mechanism is examined through the five main channels of monetary transmission, i.e. the exchange rate channel, the credit channel, the asset price channel, the interest rate channel and the expectation channel (Chart 6-9). The exchange rate channel describes the impact when the relative price of the domestic currency changes as a result of an interest rate step, and due to international embeddedness it entails adjustments in the commodity and money markets in the domestic economy. The impact of monetary policy on credit demand and supply is captured by the credit channel. The prices of a wide range of assets suitable for investment are affected by the changes in central bank rates; their effect on inflation is described by the asset price channel. The interest rate channel is the mechanism as the central bank policy rate feeds through into money market and bank interest rates, and affects consumption and investment decisions through them. The expectations channel is also an important element of the monetary transmission mechanism, as it plays a role in the functioning of the other channels as well, and the anchoring of expectations is a key condition of the achievement of price stability.

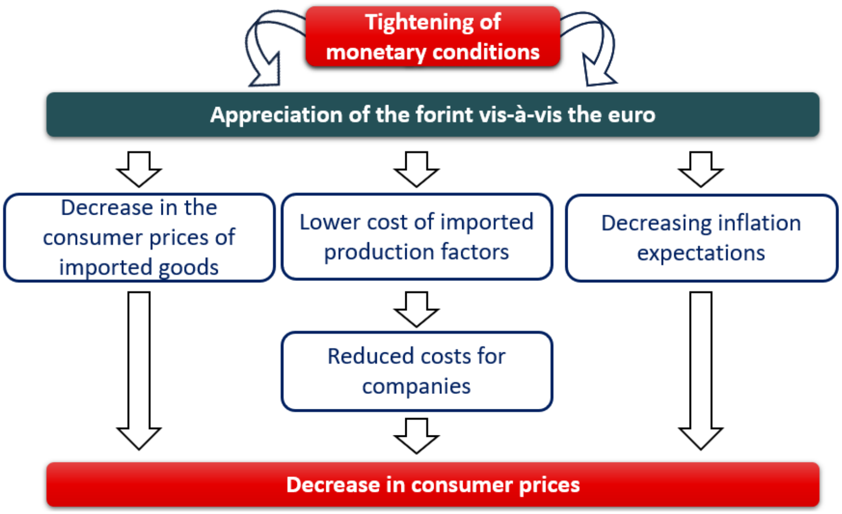
Chart 6-9: Schematic diagram of the monetary transmission mechanism



Source: Based on Felcser et al. (2015: 42)

In a small, open economy the impact of the exchange rate channel is one of the main determinants. The forint stabilised on a considerably stronger level in the recent period, appreciating against the euro by nearly 15 percent since October 2022 and showing strengthening of some 5–10 percent year on year as well. A key role in the appreciation was played by the MNB's monetary tightening cycle, as a result of which the domestic money market interest rates increased to a greater degree than in the neighbouring countries, and thus the forint became relatively more attractive for investors and savers. Appreciation of the domestic currency lowered inflation, directly by reducing the prices of imported consumer goods and indirectly by declines in the prices of imported factors of production (Chart 3-46). The appreciation of the exchange rate also moderated inflation expectations, thus contributing to their anchoring (Chart 6-10). **Accordingly, the strengthening of the forint exerted a wide-ranging disinflationary effect, which is already reflected in the declining price level of durable goods.**

Chart 6-10: Detailed effect mechanism of the exchange rate channel



Source: MNB

According to the MNB's estimates, the effect of the pass-through of the exchange rate change into inflation (so-called 'exchange rate pass-through') approximately doubled in the past years, and became twice as fast compared to the 2010s, and thus the appreciation of the forint makes a stronger contribution to the decline in the consumer price index than in previous periods. At present, a 1-percent appreciation of the exchange rate reduces consumer prices by approximately 0.3 percent in a year. Previously, this effect was between 0.1–0.2 percent. Various factors contributed to the higher exchange rate pass-through, the main underlying reason is that in the recent period, the global economy operated in a generally high-inflation environment, where companies could pass their costs to customers easier, and thus they reflected the rise in the exchange rate in their prices earlier and to a greater degree than before. Increasing expectations as a result of the generally high inflation may also have contributed to the impact of the exchange rate on consumer prices.

The path of the exchange rate would have been significantly and persistently weaker without the central bank's measures to ensure financial market stability. As a result of the stronger exchange rate pass-through compared to the past decade, if the interest rate hike cycle had not taken place, inflation would have increased even more strongly, and it would not have reached a peak. In case the central bank did not take any measures and the exchange rate remained on its average level of October 2022, average inflation in 2023 would be 2.5-3.0 percentage points higher, with whichsingle-digit inflation would not be attainable by the end of the year. **In addition, the developments of October 2022 also highlighted that substantial exchange rate depreciation may trigger non-linear developments in the economy, which could have resulted in the depreciation of the currency, the upsetting of financial market stability and a vicious cycle entailing a further rise in inflation.**

European credit markets are displaying a general deceleration, while domestic data fit well into regional trends. Decline of the growth rate of loans is a natural phenomenon in a time characterized by economic slowdown, high inflation, increasing precaution and general economic uncertainty. **The annual growth rate of household loans outstanding in Hungary** amounted to 4.4 percent at end-April 2023, which was a **major decline** compared to the figure of 12.4 percent in the same period of the previous year. The largest fall took place in housing loans. Domestic housing loan disbursements in April fell 73 percent short of last year's level, for which the Green Home Programme provided a high base. Meanwhile, a decrease of 59 percent took place in the V3 countries, and a drop of 39 percent was observed in the European Union as a whole. The turnaround on the housing loan market was driven by other factors (high inflation, uncertain economic environment) in addition to a rise in the cost of credit. This is supported by the observation that the housing loan market also decelerated significantly in countries where the cost of credit rose by only 1–2 percentage points year-on-year (such in the Netherlands and Germany).

The developments in domestic corporate credit growth are in line with processes across the European Union. Credit growth in April 2023 was 4.1 percent in the EU and 5.9 percent in the aggregated Visegrad region (6.8 percent in Czechia, 4.3 percent in Poland and 10 percent in Slovakia). The annual growth rate of corporate loans outstanding in Hungary was 12.9 percent in April 2023, which is mostly the result of one-off large transactions and government credit schemes and thus significantly exceeds the average growth rate of both the EU and the Visegrad countries. The total corporate loan contract volume in the first months of 2023 was high also partly as a result of certain large transactions. However, **the volume of new SME loan contracts, which captures the underlying developments, declined considerably compared to the same period of the previous year. Mid-2021, the growth rate of outstanding SME loans was 21 percent, compared to the 10 percent figure at the end of 2023 Q1.** The share of market-based loans declined in 2023 Q1, in parallel with the upturn in the Baross Gábor Loan Programme and the new Széchenyi Card Programme.

The disinflationary effect of the MNB's interest rate hike cycle is reflected in the prices of investment assets as well. A correction in the housing market began in 2022 H2, with contributions from the high inflation environment and the uncertainty of economic prospects. Domestic house prices, which had been rising steadily since 2014, decreased by 1.6 percent in 2022 Q3 compared to the previous quarter, followed by a 3.6-percent decline on a national average in 2022 Q4. The decline in house prices was stronger in smaller settlements. According to preliminary house price indices calculated on the basis of real estate agents' transactions, 2023 Q1 was characterised by diverging trends: house prices may have increased by 3.8 percent at national level, while they may have continued to decrease by 1.0 percent in Budapest. The turnaround on the housing market that took place in 2022 H2 was driven by the large drop in demand, which at the same time was a phenomenon observed all over Europe in an economic environment characterised by increasing inflation and uncertain prospects. Due to the decline in house prices, the increase in wages and the sustained tightness in the labour market, there has been a decrease in the overvaluedness of house prices compared to fundamentals.

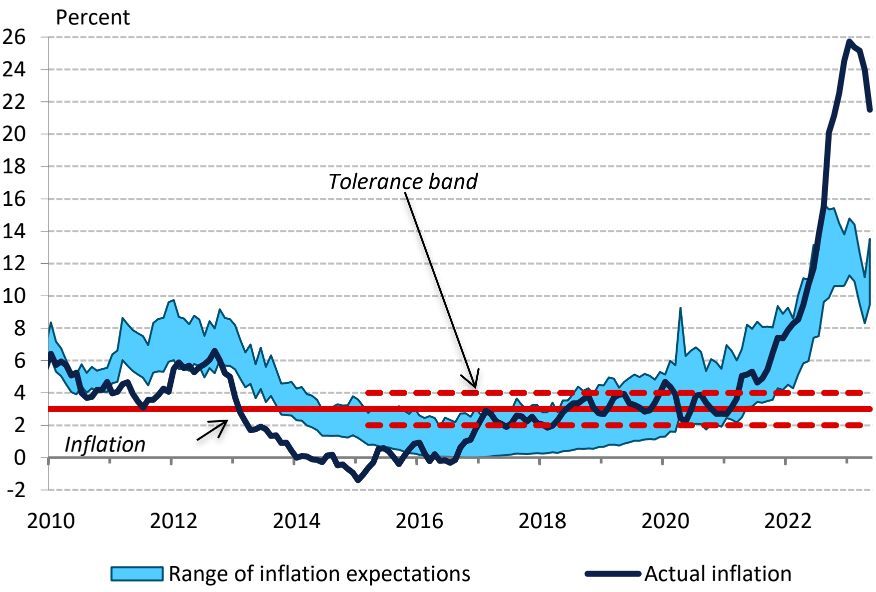
In the past period, the high inflation environment restrained domestic demand. High inflation reduces the purchasing power of wages and erodes households' real disposable income. Inflation peaked in January this year, and the process of disinflation started, but the rate of price increases is still high, and thus consumption is expected to decline in 2023 year on year. Nevertheless, inflation would have been higher without the central bank's tightening measures, which would have resulted in an even stronger decline in consumption.

Savings started to expand, which was facilitated by the attractive interest rate environment created by the active monetary policy and the positive forward-looking real interest rate. Household savings will increase to above 5 percent of GDP again in 2023. As the precautionary motive strengthens, households save a higher fraction of their income, which, in addition, is significantly supported by the favourable interest rate conditions of retail government securities. The higher savings rate may persist until the end of the forecast horizon.

The high energy and commodity prices as well as the disruptions in supply chains observed in the past years resulted in a general rise in the consumer price index around the world. In parallel with the acceleration in inflation, **households' inflation expectations increased, but their degree fell significantly short of inflation, as a result of the active domestic monetary policy** (Chart 6-11). As of the end of last year, by which time the impact of central bank steps started to be increasingly perceived, households' inflation expectations declined considerably. The MNB made an important contribution to anchoring inflation expectations, which is well indicated by the fact that expectations fell significantly short of the level of actual inflation. In addition, inflation expectations started to decline earlier than actual inflation.

The tight monetary policy contributed to the stability of financial markets as well, and thus the uncertainty around inflation expectations declined. The volatility of the exchange rate of the forint has declined significantly since October 2022, contributing to stronger monetary transmission through the exchange rate channel.

Chart 6-11: Households' inflation expectations



Source: MNB calculations based on European Commission data, and HCSO

The effect of the MNB's decisive interest rate hikes is already perceived through a wide range of transmission channels. However, in order to achieve price stability, the disinflationary process must continue even when inflation reaches single-digit territory. Price stability is indispensable for ensuring sustainable growth and convergence.

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Mátyás Hunyadi

(23 February 1443 – 6 April 1490)

He ruled from 1458 to 1490 as King of Hungary, and had been Czech king from 1469 and Prince of Austria from 1486. Hungarian tradition regards him as one of the greatest Hungarian kings whose memory is preserved in many folk tales and legends. He is also known as Matthias Corvinus, King Matthias the Just or officially as Matthias I, but commonly he is simply denoted as King Matthias.

His father, János Hunyadi, the regent of Hungary, was one of the most outstanding military leaders and strategists in the country's medieval history who triumphed at the Battle of Nándorfehérvár in 1456. Matthias' mother was Erzsébet Szilágyi, and he had an elder brother, László Hunyadi. The future king was brought up by his mother and nurse until the age of six, and was subsequently placed under the supervision of his tutors. János Hunyadi did not have a chivalrous education in mind for his son: first, it was a Polish humanist, Gergely Szánoki who introduced him to the realm of knowledge, then this task was assigned to János Vitéz. Mátyás was brought up and educated in a humanistic spirit to become a versatile and curious-minded person who had been taught canon and constitutional law, arts and Latin. In addition to Hungarian, he also spoke German and Czech.

After the death of László V, his uncle, Mihály Szilágyi, and the armed forces supporting Hunyadi exercised pressure to have Matthias crowned as King of Hungary on 24 January 1458. Even in the early years of his reign Matthias had troubles both with the magnates of the country and Emperor Frederick III of the Holy Roman Empire. As the king was still a minor, parliament appointed Mihály Szilágyi to act as regent on his behalf. However, Matthias did not tolerate any guardianship and pushed his uncle to the background who devised a plot against the king in response. Returning from battle with the Turks, the king had the rebels captured and he imprisoned his uncle in the castle of Világos.

Upon his ascension to the throne the annual income of the treasury hardly exceeded 110 to 120 thousand forints. During his rule spanning thirty-two years the king managed to multiple revenues from taxes. Considering the average of the taxes levied, less the revenues from the Czech and Austrian provinces, this yearly amount approximated 628,000 forints and may as well reached 900,000 gold forints in the most prosperous years. This was still much less than the annual revenue of the western powers of the age. In order to raise the low income of the treasury, reform-like and comprehensive financial actions were needed. Matthias recognised that a centralised, nationwide financial system was the only solution to the problem, and that the royal revenues had to be directed to a single person, the treasurer. The reforms of Matthias were adopted by parliament and his decrees were promulgated on 25 March 1467.

We can get a glimpse of the cultural life in the royal court, which represented the elite of European civilisation at the time, at the partly reconstructed Royal Palace in Visegrád. The most distinguished pieces of the cultural legacy of Matthias are the Corvinian books, richly illustrated volumes of the former royal library.

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