INFLATION REPORT

2022
JUNE

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

Miklós Zrínyi: The Life of Matthias Corvinus

INFLATION REPORT

2022

JUNE

Published by the Magyar Nemzeti Bank

Publisher in charge: Eszter Hergár

H-1013 Budapest, Krisztina körút 55.

www.mnb.hu

ISSN 2064-8723 (print)

ISSN 2064-8774 (on-line)

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 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 economic analysis.

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 23 June 2022.

Contents

List of boxes

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.

International economic activity was favourable in the first quarter; however, growth prospects have deteriorated due to the Russia-Ukraine war and rising commodity prices.

In the first quarter of 2022, economic growth accelerated beyond market expectations in China, the European Union and the euro area as well, while it decelerated in the United States. The EU, the euro area, China and the United States registered economic growth of 5.6 percent, 5.4 percent, 4.8 percent and 3.5 percent, respectively, year-on-year. GDP has already exceeded its pre-crisis levels in most of the EU Member States, while in Germany – Hungary's largest trading partner – it still falls short of it. As a result of the Russia-Ukraine war, both global and European growth prospects have deteriorated significantly. Rising uncertainty and the deterioration in economic sentiment also negatively affect the international tourism, which is already slowly recovering.

As a result of the persistently negative supply effects and rapid price increases registered in commodity markets, inflation rose in many countries to their highest levels for several decades. Commodity and energy prices will remain persistently high due to geopolitical tensions, supply constraints and dynamically rising demand.

In the past months, inflation in many countries rose to highs unseen for decades. The rise in the indicator is primarily attributable to persistent growth in commodity, crop and energy prices, also reflecting supply difficulties, which still exist in certain markets. In May, inflation increased to 8.6 percent in the United States, while in the euro area it rose to 8.1 percent. Countries in the CEE region registered double-digit price increases. In May, prices in the Czech Republic, Poland and Hungary rose by 16.0 percent, 13.9 percent and 10.7 percent, respectively.

In the past period the world's leading central banks took additional measures towards a tighter monetary policy stance amid continued increase in inflation and growing inflation risks. The central banks in the region continued their tightening cycle.

At their June rate-setting meeting, Federal Reserve policymakers raised the target band of the key policy rate by 75 basis points to 1.50–1.75 percent. In addition, the central bank started to reduce its balance sheet from 1 June. According to its forward guidance, the Fed anticipates that the policy rate will have to be raised further to achieve the central bank's goals. The European Central Bank announced at its June rate-setting meeting that from 1 July 2022 it would end net purchases under its asset purchase programme (APP) and begin its tightening cycle in July. In addition, at an extraordinary meeting, the central bank decided to apply flexibility in reinvestments under the pandemic emergency purchase programme (PEPP), and to create a new "anti-fragmentation" instrument.

In the CEE region, since March 2022 the Polish central bank raised the base rate by a total of 250 basis points to 6.00 percent. At the end of March, in May and then in June, the Czech central bank raised its policy rate by 50, 75 and 125 basis points, respectively, to 7.00 percent. The Romanian central bank raised the base rate by 50 basis points in April and by 75 basis points to 3.75 percent in May. From the end of March 2022 until the June interest rate decision the MNB raised the base rate by 150 basis points in total, while it increased the one-week deposit rate by 110 basis points.

Unfavourable sentiment persisted in international markets in the past quarter. In parallel with the monetary tightening implemented by developed countries' central banks stock market indices typically declined. As regards commodity and energy prices, the price of industrial and precious metals as well as of agricultural products fell, while fuel prices rose moderately further.

During the period under review, risk appetite deteriorated gradually – partly due to the Russia-Ukraine war and partly as a consequence of the tightening of monetary policy by developed market central banks – which was also reflected in a significant growth in financial market volatility. In most of the period, developed and emerging market equity indices declined. The US dollar strengthened against both the developed and emerging markets – including our close regional peer currencies – currencies. Developed market long-term bond yields typically rose; yields on ten-year US and UK government securities rose by more than 110 basis points, while those on euro area ten-year government securities grew by 140-170 basis points. The price of industrial metals was mostly influenced by the fall in global demand, and thus particularly aluminium and nickel prices declined in the past period; in addition, due to the better average crops, prices of agricultural products also fell.

Rises in energy, commodity and food prices are expected to raise domestic inflation further on the cost side.

In the first five months of this year, due to the high energy and commodity prices, companies repriced their products and services to a much greater degree than the average of previous years, which resulted in an increase in domestic inflation. However, the pass-through of external cost factors to domestic inflation was mitigated by the cap on fuel and staple food prices, and the freezing of household energy prices. Rises in energy, commodity and food prices are expected to raise domestic inflation further, as the increase seen in producer prices is still passing through into consumer prices. In addition, in the short term, the consumer price index is significantly influenced by the timing and manner of the phase-out of the price cap measures and by the pass-through of the newly announced tax measures to consumer prices. Inflation may reach its peak in the autumn months, followed by a slow decline in price dynamics. Inflation is expected to be between 11.0 percent and 12.6 percent this year.

In the medium term, commodity prices may remain persistently high. However, looking ahead their annual dynamics may decline significantly, and thus from the next year, base effect supports a decline in inflation dynamics. Anchoring inflation expectations in line with the inflation target will play a crucial role in the achievement of price stability. According to our expectations, inflation will return to the central bank tolerance band at the end of 2023, as the first-round effects of war tensions abate, external inflationary effects moderate, the inflationary effects of the tax measures announced in June fade and as a result of the proactive central bank measures, and then to meet the 3 percent central bank target in the first half of 2024. The consumer price index is expected to be 6.8–9.2 percent in 2023 before meeting the inflation target from 2024.

The short-term view on economic activity is favourable. However, as of the middle of this year, there will be a slowdown to be expected in economic growth.

In the first quarter of 2022, Hungary's GDP grew beyond expectations, by 8.2 percent, year-on-year. According to our forecast, favourable economic performance persisted in the second quarter as well. However, looking ahead the growth rate of the economy is expected to decline, and next year's growth is surrounded by downside risks. The Russia-Ukraine war continues to generate uncertainty and there are also difficulties affecting the international supply chains. External demand may fall short of our previous expectations, which has a negative impact on Hungary's exports. In addition to external market trends, domestic factors are also likely to curb economic growth in 2023. Looking ahead, the phasing-out of one-off income subsidies paid to households, the reduction of public investments and rising corporate costs may have a negative impact on economic activity.

In 2022, the time profile and structure of Hungary's GDP have strongly shown a dual nature. In our forecast, components of domestic demand, particularly household consumption, are expected to contribute to growth this year. By contrast, net exports are likely to hold down the expansion. Looking forward, however, consumption and investment dynamics are also expected to slow considerably, while net exports are expected to make a positive contribution to GDP growth again as external markets and supply chains slowly recover. This year, the rise in household consumption is supported both by increases in wages and the government measures raising households' income. In addition to the increase in the minimum wage, the tight labour market also helps to maintain strong wage growth. However, major growth in the net wage bill and in household disposable income is curbed by rising inflation. In 2023, the growth rate of investment will decelerate, primarily due to a fall in public investment. Looking ahead, rising costs also reduce the corporate sector's investment activity. However, the investment rate will stabilise at a high level, above 27 percent, over the forecast horizon. Hungarian GDP may expand by 4.5–5.5 percent in 2022, 2.0–3.0 percent in 2023 and 3.0–4.0 percent in 2024.

Rising demand, ample lending capacity at banks and subsidised credit facilities have continued to boost private sector credit growth.

The financial intermediary sector's outstanding lending to the corporate sector rose by HUF 308 billion in the first quarter of 2022, and consequently the annual growth rate of the stock of loans reached 11.6 percent in March, rising by 0.8 percentage points. Also taking into account corporate bonds subscribed by banks, credit institutions' loans and bonds outstanding vis-a-vis the non-financial corporate sector increased by 18.5 at the end of the first quarter, year-on-year. Outstanding lending to the SME sector increased by 13.7 percent year-on-year in the same period. During the quarter, nearly four-fifths of the newly disbursed corporate loans was on a market basis. According to Lending Survey, during the first quarter banks did not change the lending conditions significantly in any of the enterprise size categories, but looking ahead, credit standards are likely to be tightened. Banks did not perceive any material change in demand in the first quarter of 2022, while looking ahead they expect demand for short term loans to rise and for long-term loans to decline. Overall, due the rising interest rate environment and the impact of the Russia-Ukraine war on the real economy the annual growth rate of corporate loans outstanding may decelerate in the second half of the year; however, it may return to around 8 percent by 2024.

In the first quarter of 2022, the stock of household lending by the financial intermediary system rose by HUF 73 billion. As a result, annual lending growth amounted to 12.1 percent in the end of March. The volume of housing loans concluded by credit institutions in the first quarter of 2022 exceeded the year-on-year figure by 49 percent. The FGS Green Home Programme and demand brought forward due to the rising interest rate environment also greatly contributed to the high volume of disbursements. Interest-subsidised credit products largely support growth in transactions and their role may grow further in the rising interest environment. Based on the responses to the Lending Survey, banks reported a pick-up in demand for housing loans in the quarter, but looking ahead they expect demand to decline. In the first quarter, young married couples concluded prenatal baby support loan contracts amounting to HUF 104 billion, falling short of the level one year earlier by 24 percent. Due to the real economic effects of the rising interest rate environment and the Russia-Ukraine war, growth in household lending dynamics may slow down to 5 percent by the second half of the year, while it may rise close to 9 percent by 2024.

The current account deficit is expected to temporarily rise further in 2022.

Decline in trade balance this year is likely to reflect the deterioration in the terms of trade due to high energy prices, the slowdown in external markets, and imports in connection with buoyant domestic demand. However, significant new export capacities have been built in recent years, and as a result, the external balance is expected to improve quickly as the global economic environment normalises. The economy's net lending position may return to positive territory at the end of the forecast horizon.

The budget deficit in 2021 was 6.8 percent of GDP, while the accrual-based deficit in 2022, 2023 and 2024 may be 4.9 percent, 3.5 percent and 2.5 percent, respectively. In 2022, the achievement of a balance that is in line with the budgetary objectives is supported by the high tax revenue realised to date as well as by the expenditure-cutting and revenue-increasing measures, announced in parallel with the preparation of the 2023 Budget Act, which offset the unfavourable budgetary impacts of the Russia-Ukraine war and the high energy prices. Owing to economic growth and the fall in deficit, the government debt ratio may fall from 76.6 percent, registered at the end of previous year, to below 75 percent of GDP in 2022, which may be followed by an additional annual decline of about 2.5 percentage points.

In the deteriorating international sentiment, the forint depreciated.

Yields on government securities in the CEE region rose as a result of increasing global yields, interest rate expectations and spreads. The interbank yield curve also shifted upwards. The forint depreciated by 6.5 percent against the euro, while the Polish zloty and the Czech koruna were essentially unchanged. At the beginning of the period and in the first half of May the currencies of the region reflected roughly identical dynamics; however, at the beginning of April and end of May the forint depreciated, detached from regional currencies.

The inflation outlook is surrounded by upside risks.

The Monetary Council highlighted three alternative scenarios around the baseline projection in the June Inflation Report. In the scenario of persistently higher energy and commodity prices, a higher inflation and lower growth path will be realised than in the baseline scenario. The scenario presenting a strengthening of second-round inflation effects is in line with a higher inflation and higher growth path compared to the baseline scenario. The alternative scenario that presumes decelerating global economic activity suggests lower domestic inflation and lower growth paths than the baseline forecast. In addition to the highlighted scenarios, the Monetary Council discussed paths involving capital outflows from emerging markets and faster implementation of competitivenes

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2021 Actual	2022	2023 Projection	2024
Inflation (annual average)[1]				
Core inflation	3.9	13.0 -14.0	6.6 -8.2	2.7 -3.3
Core inflation excluding indirect tax effects	3.9	13.0 -14.0	6.6 -8.2	2.7 -3.3
Inflation	5.1	11.0 -12.6	6.8 -9.2	2.5 -3.5
Economic growth				
Household consumption expenditure	4.6	8.4 - 8.7	0.6 - 1.4	2.4 - 3.4
Government final consumption expenditure[6]	3.6	2.4 - 3.1	0.4 - 1.6	0.4 - 1.6
Gross fixed capital formation	5.9	3.7 - 4.8	(-0.9) - 1.8	2.0 - 5.0
Domestic absorption	5.5	5.7 - 6.2	0.2 - 1.2	1.9 - 3.2
Exports	10.3	4.8 - 5.7	5.0 - 6.9	4.4 - 6.2
Imports	8.7	6.0 - 6.9	2.7 - 4.6	3.1 - 5.2
GDP	7.1	4.5 - 5.5	2.0 - 3.0	3.0 - 4.0
Labour productivity[5]	4.3	3.2 - 3.6	1.7 - 2.9	2.6 - 4.0
External balance[2]				
Current account balance	-3.2	(-6.6) - (-5.6)	(-3.3) - (-2.1)	(-2.7) - (-1.3)
Net lending	-0.6	(-4.6) - (-3.6)	(-1.3) - (-0.1)	(-0.9) - 0.5
Government balance				
ESA balance	-6.8	-4.9	-3.5	-2.5
Labour market				
Whole-economy gross average earnings[3]	8.7	15.8 - 16.4	7.1 - 8.3	7.0 - 8.2
Whole-economy employment	0.8	1.0 - 1.2	(-0.2) - 0.5	(-0.2) - 0.6
Private sector gross average earnings[3]	7.8	13.2 - 13.8	8.8 - 9.9	7.3 - 8.4
Private sector employment	0.6	1.9 - 2.1	0.2 - 0.7	0.1 - 0.6
Unemployment rate	4.1	3.5 - 3.6	3.2 - 3.6	2.9 - 3.7
Private sector nominal unit labour costs	2.1	5.7 - 6.7	4.2 - 5.8	3.8 - 5.6
Household real income[4]	2.8	5.1 - 5.7	0.8 - 2.0	2.7 - 3.9

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

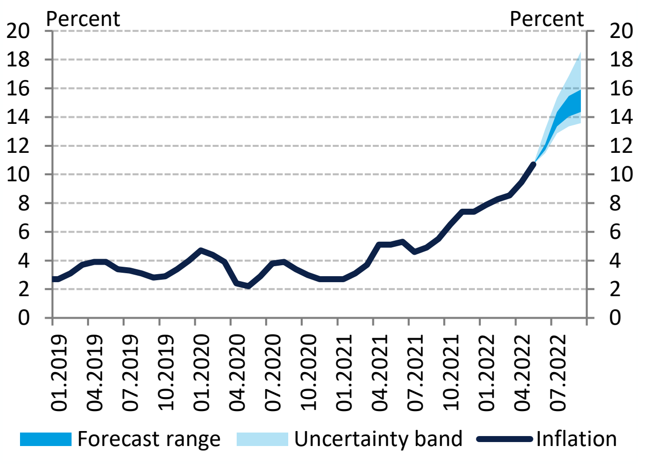
1. Inflation and real economy outlook

1.1 Inflation forecast

In preparing our inflation forecast, we have assumed that the sanctions imposed during the war will last, leading to persistently high levels of energy and commodity prices in the coming quarters. In addition, future developments in inflation depend to a large extent on the duration of price-control measures. According to the current regulations, the price stop for certain basic foodstuffs and fuels will remain valid until 30 September. After 1 October, we have no further information on the evolution of these measures, so we have made a technical assumption that price stops will be phased out on a monthly basis from 1 October up to and including 30 June 2023. Our expectation regarding the utility cost cut is that this measure will remain unchanged during the entire forecast horizon.

The year-on-year rate of increase in consumer prices advanced to 10.7 percent in May. The price rise seen in the past period was mainly attributable to food products, but as a general phenomenon companies repriced their products and services in the first five months of this year to a much stronger degree than the average recorded for previous years. From the cost side, rising energy, commodity and food prices also continue to fuel domestic inflation, and the increase in producer prices is still passing through into consumer prices. The evolution of inflation is fundamentally affected by the price-control measures and the announced tax measures. Depending on termination of the price-control measures, inflation may peak in the autumn months, followed by a decline in price dynamics. The consumer price index may be between 11.0-12.6 percent in 2022. As a result of the fading of the first-round effects of the war tensions, a decline in external inflationary effects, the gradual ending of the inflationary effect of the tax measures announced in June and the proactive steps taken by the central bank, inflation may return to the tolerance band in the final quarter of 2023 and reach the 3-percent central bank target in 2024 H1. According to our forecast, price dynamics will be 6.8–9.2 percent in 2023 and 2.5–3.5 percent in 2024. Core inflation excluding indirect tax effects may be 13.0–14.0 percent this year, 6.6–8.2 percent in 2023 and 2.7–3.3 percent in 2024.

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

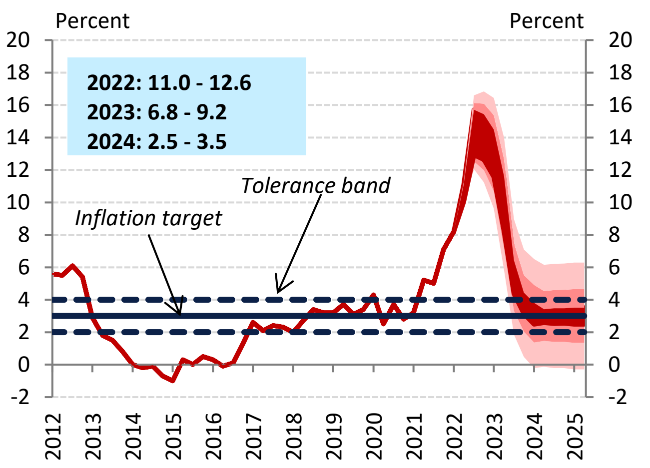


Note: Annual change. The uncertainty band shows the uncertainty around the forecast range with regards to the root mean squared error of previous years' near-term forecasts.
Source: HCSO, MNB

The year-on-year rate of increase in consumer prices advanced to 10.7 percent in May. The price rise seen in the past period was explained to a large degree by food products, but changes in the prices of core inflation items (industrial goods, market services and processed food) were also high. In view of rising energy and commodity prices, companies repriced their products and services during the first five months of this year to a much stronger degree than the average of previous years, which resulted in an increase in inflation in Hungary.

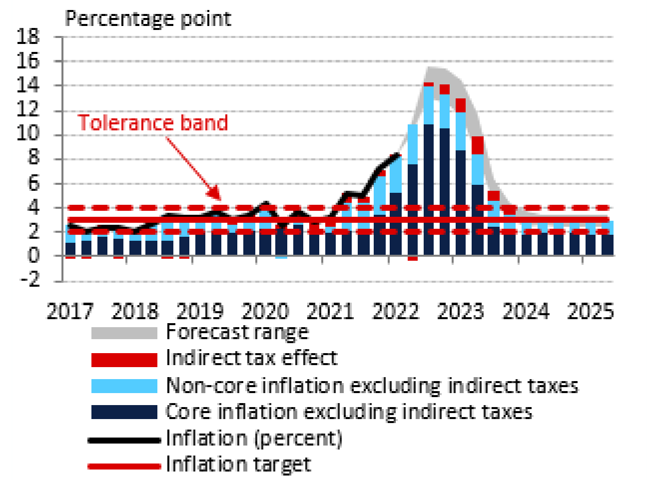
The ongoing rise in energy, commodity and producer prices since March boosts inflation from the cost side. These effects contribute to higher core inflation via food and industrial goods prices. The rise in energy prices (gas and electricity) and in the world market price of oil may appear primarily in the consumer prices of food and industrial goods, via the increasing costs of enterprises. The pass-through of higher producer prices into consumer prices is still going on, further increasing in core inflation. Inflation of industrial goods may be around 13–15 percent in the months ahead: this is well above the normal periodic historical average for these goods, which is usually around 1.0 percent. As the central bank's proactive steps take effect, core inflation excluding indirect taxes will embark on a downward

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

path from the end of this year. According to our forecast, core inflation excluding indirect tax effects may be 13.0-14.0 percent this year, 6.6–8.2 percent in 2023 and 2.7-3.3 percent in 2024.

The development of inflation is fundamentally affected by the price-limit measures and the announced tax measures. On 16 June, the government announced that the food price caps for basic food products and the price cap introduced for fuels would be extended until the end of September. After 1 October, we have no further information on the evolution of these measures, so we have made a technical assumption that the price cap will be phased out gradually by the end of June 2023 (see Box 1-2 for details). Over the short run, this mitigates the inflationary impacts of our oil price forecast, which is higher versus March. With the phase-out of the price cap, fuel prices are expected to return to levels justified by futures prices, which will raise inflation in 2023 compared to our March forecast, due to the base effect. Depending on the termination of the price-control measures, inflation may peak in the autumn months of this year, followed by a decline in price dynamics. Inflation is projected to reach the central bank's 3-percent target in 2024 H1. In 2022, the consumer price index is surrounded by even greater uncertainty than usual. According to our expectations, the annual average may be between 11.0 and 12.6 percent. The consumer price index in 2023 and 2024 will be 6.8-9.2 percent and 2.5–3.5 percent, respectively, in the baseline scenario of our forecast (Chart 1-1).

Tax changes contribute to the increase in inflation, before fading out completely from 2024 Q2 (Chart 1-3). The government announced tax revenue measures amounting to some HUF 900–1000 billion for the 2022–2023 fiscal years, including excise tax hikes and an increase in the public health product tax (PHPT), which are important in terms of inflation (see Box 1-2 for details). On the whole, these measures are estimated to increase inflation by 0.4 percentage point this year, whereas next year they may contribute 1.5 percentage points to the rise in inflation. Among the announced tax changes, the largest inflationary effect is expected for sales taxes, while the 'extra profit' taxes do not have a significant effect on inflation. According to its June announcement, the government abolished the public health product tax (PHPT) on alcohol and at the same time significantly raised the excise tax on alcohol and tobacco. As a result of the two measures, the inflation of alcohol and tobacco products may exceed our previous expectations and amount to around 13 percent in the remaining part of the year. The excise tax is being raised in multiple steps, and thus the inflationary effect of the tax change will fade at end-2023. Administered

Table 1-1: Details of the inflation forecast

		2022	2023	2024
Core inflation excluding indirect tax effects		13.5	7.4	3.0
Core inflation		13.5	7.4	3.0
Non-core inflation	Unprocessed food	19.9	9.5	3.0
	Fuel and market energy	12.4	20.9	4.6
	Regulated prices	1.6	2.0	2.0
	Alcohol and tobacco	9.9	10.0	3.2
	Total	8.8	8.2	2.8
Inflation		**11.8**	**8.0**	**3.0**

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

energy prices will not change until the end of the forecast horizon, and administered household energy and water prices will continue to contribute to the reduction of inflation, whereas in the case of non-energy regulated prices we expect price dynamics to be similar to our March assumption.

In the case of non-core inflation items, prices of fuel and unprocessed food are expected to increase considerably. If no major adjustment takes place in the commodity markets, we project that fuel prices will gradually rise starting from the autumn, as price-control measures are gradually lifted. Unprocessed food may register double-digit inflation this year. Global food prices continued to climb in the past period, and the sharp rises in wheat and corn prices due to the Russia–Ukraine conflict, as well as the indirect effects of higher energy and commodity prices, were reflected in the inflation rate of this product group. Consequently, unprocessed food inflation advanced to above 18 percent by May and will exceed our former expectation in the coming period. Overall, after the cost effects have faded out, the price dynamics of non-core inflation items will be around 3 percent at the end of the forecast period (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	2022		2023		2024		Change		
	Previous	Current	Previous	Current	Previous	Current	2022	2023	2024
EUR/USD	1.10	1.08	1.10	1.07	1.10	1.07	-1.4%	-2.5%	-2.5%
Oil (USD/barrel)	95.7 - 120.8	101.5 - 122.2	85.8 - 110.6	88.4 - 119.6	85.4 - 110.0	86.6 - 117.1	1.4 - 5.8%	2.6 - 9.0%	1.2 - 7.1%
Oil (EUR/barrel)	86.7 - 109.6	94.9 - 114.7	78.1 - 100.8	84.3 - 114.0	77.8 - 100.2	82.5 - 111.7	5.1 - 8.2%	6.2 - 13.2%	4.7 - 11.5%
Euro area inflation (%)	5.1	6.8	2.1	3.5	1.9	2.1	1.7 pp.	1.4 pp.	0.2 pp.
Euro area real GDP (%)	3.7	2.8	2.8	2.1	1.6	2.1	-0.9 pp.	-0.7 pp.	0.5 pp.
GDP growth of Hungary's main export partners* (%)	2.5 -3.3	2.3 - 2.8	3.0 - 3.5	2.4 - 3.3	2.6 - 3.2	2.4 - 3.3	(-0.5) - (-0.2) pp.	(-0.6) - (-0.2) pp.	(-0.2) - 0.1 pp.

Note: Annual average for oil prices. *Growth rate of Hungary's 21 most important export partners, weighted by share in exports.
Source: Bloomberg, Consensus Economics, MNB, ECB

Economic growth in 2022 Q1 was generally better than expected, but international economic activity is restrained by a number of factors. In 2022 Q1, the economies of the EU and of the euro area grew by 5.6 and 5.4 percent, respectively, in year-on-year terms. In 23 of the EU-27 countries economic activity exceeded the pre-crisis level. However, Germany, Hungary's most important trading partner, is low in the European ranking, with its economic performance still falling short of the pre-crisis level, which affects the regional countries as well, as they are embedded in the production chain. Growth prospects in Hungary's external markets deteriorated compared to March. Short- and medium-term developments in international economic activity continue to be determined by geopolitical events, disruptions in international production chains as well as high transportation costs, commodity and energy prices.

Compared to the March forecast, the euro area has seen more restrained growth and higher inflation. According to the ECB's latest forecast, euro area inflation may be 6.8 percent in 2022, 3.5 percent in 2023 and 2.1 percent in 2024. In 2022, the higher rate of inflation is driven by the sharp rise in energy prices, the Russian-Ukraine conflict, stronger wage growth and the persistence of supply disruptions. Euro area GDP growth may be more restrained compared to the previous forecast, at 2.8 percent in 2022 and 2.1 percent in 2023 and 2024.

In April, the average world market price of Brent crude oil was USD 105.8 per barrel, before gradually climbing to an average of USD 112.4 per barrel in May. The increase this year exceeded 50 percent, with oil prices reaching a 10-year high. The significant price increase is the combined result of several factors. At its previous meeting (held on 2 March), OPEC+ noted that the significant market volatility was caused by the geopolitical situation rather than by fundamentals. Oil prices were pushed further up by market concerns related to insufficient supply in conjunction with increasing demand. Following the outbreak of the war between Russia and Ukraine and the sanctions imposed on Russia, the world market price of oil rose further. The world market price of Brent crude was above USD 100 per barrel in the past months. At its meeting on 2 June, OPEC+ decided to increase production in July and August to a larger degree than previously planned, i.e. by 648,000 barrels a day, thus compensating for the lower production in Russia and stabilising the world market price of oil. Nevertheless, agents are not sure whether OPEC+ will be able to fulfil the undertaken production expansion as there are concerns related to technical problems as well as tight capacity constraints.

As a result of developments on global markets, oil prices in euro – which determine changes in fuel prices in Hungary – are significantly higher compared to our March assumption. At the same time, the price caps that were introduced influence the changes in petrol prices in Hungary. The spread between Russian Ural Med crude oil and Western Brent has recently risen to around USD 35 per barrel. Our assumption for the EUR/USD cross rate is lower compared to the March projection.

According to our forecast, in line with the deficit target, the budget deficit may be 4.9 percent in 2022 and may then decline to 3.5 percent in 2023 and further to around 2.5 percent by the end of the forecast horizon. Firstly, one factor contributing to achievement of the budget deficit target is that, on the basis of macroeconomic developments, more tax revenue will be collected compared to the assumption in the Budget Act. Secondly, the fiscal adjustments announced in parallel with the preparation of the 2023 Budget Act may contribute to achieve the deficit target in 2022 and 2023 as well. On the expenditure side, the measures contribute to the reduction of the general government deficit by approximately

1.7 percent of GDP in 2022, while on the revenue side they contribute to it by more than 1.3 percent of GDP (mainly through the extra profit taxes). For more details, see in Box 1.2 and Chapter 5.3.

According to our expectations, following the adoption of the Recovery and Resilience Plan as well as the Partnership Agreement and the operational programmes, absorption of funds under the 2021–2027 programming period may commence. At the same time, the absorption of funds related to the cohesion and recovery programmes remains highly uncertain.

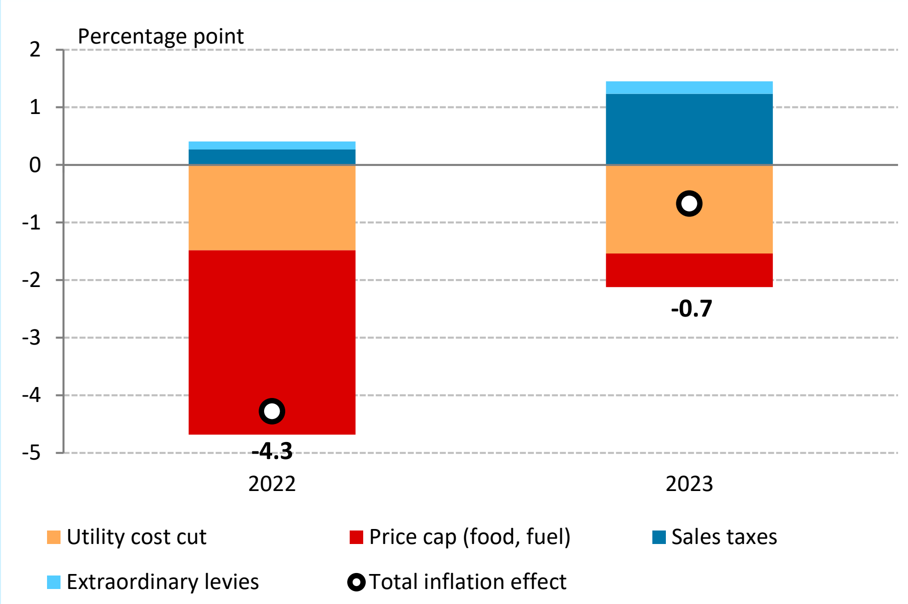
Box 1-2: Impact of government measures on inflation

The government announced tax revenue measures amounting to some HUF 900–1000 billion for the 2022–2023 fiscal years. The revenue measures are characterised by 'extra profit' taxes and other tax measures, which may increase inflation in the short run. The vast majority of the revenue measures, some HUF 800 billion a year, are related to the extraordinary levies. In addition to that the announcement contains other tax revenue measures as well in an annual amount of around HUF 100–200 billion, including excise tax hikes, and amendments to the public health product tax (PHPT) as well, which are important in terms of inflation. On the whole, the changing of the PHPT may entail negative inflationary effects, as in parallel with raising the tax rate on certain products, the public health product tax on alcohols ceases to exist (and instead the excise tax on alcohols increases significantly). The effect of the changes in excise and sales type taxes is expected to be perceived quickly (within 1–3 months). This assumption is based on the fact that companies know the government measures already 1 month before their entry into effect in July, and thus they can get prepared for the related changes.

Based on previous experience, in the case of sales type taxes we presume that their effect is fully reflected in the changes in consumer prices. Included here are the effects of the excise tax increases concerning fuels as well as alcohol and tobacco products, the amendments to the PHPT and the financial transaction tax and also the raising of the extraordinary levy on retail sector. Other extra profit taxes are not expected to have a significant inflationary effect. Overall, the inflationary impact of the tax increases is temporary and will disappear by the end of the forecast horizon.

In the case of the price cap concerning fuels and basic food products we assumed that pursuant to the currently effective government measure these measures will remain in force until 1 October, before being gradually phased out by mid-2023. Our expectation regarding the utility cost cut is that this measure will remain unchanged during the entire forecast horizon. On the whole, the inflation increasing effect of sales taxes and extraordinary levies is offset or even significantly exceeded by the joint price reducing effect of the utility cost cut and the price caps. **The average inflationary effect may be (-4.3) percentage points this year and (-0.7) percentage point next year** (Chart 1-4).

Chart 1-4: Estimated inflationary impact of government measures in 2022 and 2023



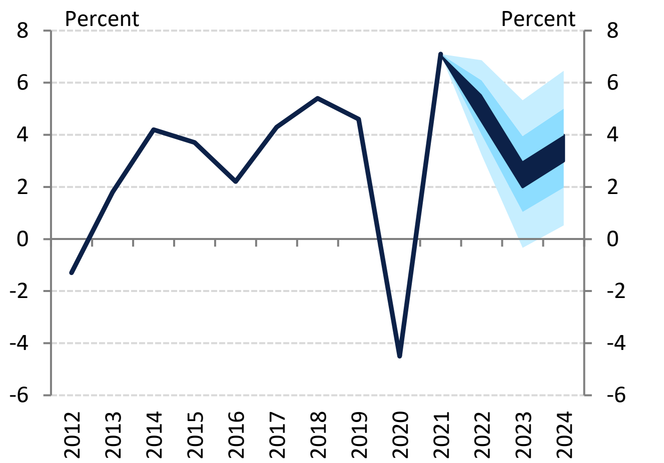
Note: Sales taxes include the estimated inflationary effects of excise duties (fuel, alcohol, tobacco), public health product tax, the financial transaction tax and the extraordinary levy on retail sector.
Source: MNB calculation

1.2 Real economy forecast

Hungary's GDP growth was better than expected in 2022 Q1, coming in at 8.2 percent year-on-year, and according to our estimates favourable economic performance also continued in the second quarter. In 2022, Hungary's GDP may grow to a larger degree than expected in March, expanding by 4.5–5.5 percent. However, economic growth in 2023 is surrounded by downside risks. Economic growth is projected to be 2.0–3.0 percent in 2023 and 3.0–4.0 percent in 2024. Households' consumption will rise significantly this year: in addition to wage increases, this will be supported by one-off government grants and consumption brought forward due to high inflation expectations. This is consistent with a higher consumption rate and lower savings rate this year. From next year, as the effects of one-off consumption-boosting measures wear off, the consumption rate will decline, while the savings rate will once again start to rise. Growth in investments may continue this year at a higher rate and in 2023 at a lower rate, compared to our previous expectations. The volume of public investments will decline both in 2022 and 2023 in annual terms, in line with the announced measures aimed at budgetary adjustments. Corporate investment activity may develop more favourably in 2022 than previously expected, but looking ahead, rising operational and financing costs also reduce the corporate sector's investment activity. This year, home-creation measures continue to support growth in household investment. The investment ratio will stabilise at a high level of around 27–28 percent over the forecast horizon. In line with the deteriorating prospects for external economic activity, expectations for growth in Hungary's trading partners were revised downwardly. In 2022, as a result of the slowdown in exports attributable to external factors and due to the rapidly growing domestic demand items, the growth dynamics of imports exceeds that of exports, and thus net exports curb GDP growth. On the other hand, in line with domestic demand items, import dynamics decelerate, and thus on the whole net exports will make a positive contribution to growth from 2023. Hungary's export market share will improve over the entire forecast horizon.

In 2022 Q1, Hungary's GDP growth was better than expected, with a year-on-year rate of 8.2 percent. Hungarian economic output exceeded the pre-pandemic level by 5.9 percent. Last year's high carry-over effect has a positive impact on this year's economic growth. According to the high-frequency data, favourable economic performance also continued in the second quarter.

Chart 1-5: Fan chart of the GDP forecast



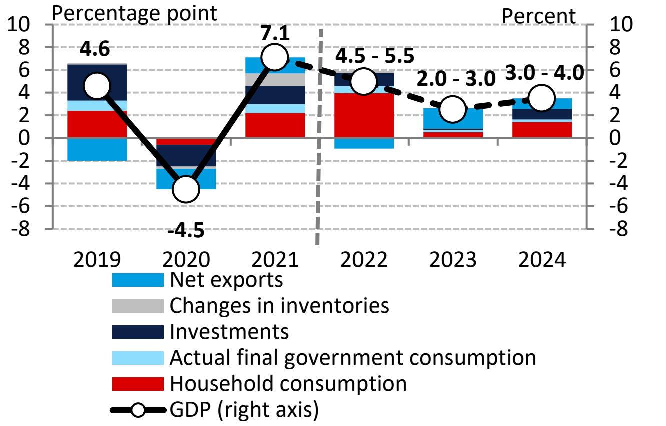
Note: Based on unadjusted data.
Source: HCSO, MNB

Short-term prospects for economic activity are favourable. However, looking ahead the growth rate of the economy is expected to decline, and next year's growth is surrounded by downside risks. The war between Russia and Ukraine continues to generate uncertainty and there are also difficulties affecting the international production chains. In addition to external market trends, domestic factors are also likely to curb economic growth in 2023. The phase-out of the one-off income subsidies paid to households, the reduction of public investments and rising corporate costs may have a negative impact on next year's economic activity. Hungarian GDP may expand by 4.5-5.5 percent in 2022, 2.0–3.0 percent in 2023 and 3.0-4.0 percent in 2024 (Chart 1-5 and Chart 1-6).

Hungarian economic fundamentals are strong, and thus convergence to the Europen Union will continue in the coming years. The Hungarian economy's growth surplus compared to the Europen Union may amount to around 0.8–1.8 percentage points over the forecast horizon.

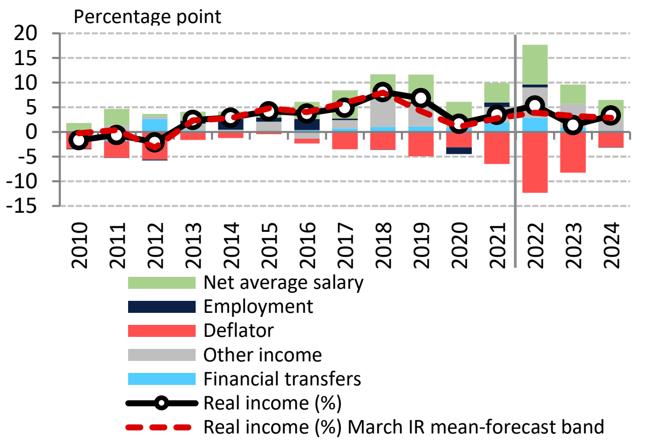
This year, households' disposable income will grow faster than last year, supported by – in addition to dynamic rises in wages – the one-off government grants paid to

Chart 1-6: Expenditure-side decomposition and forecast of GDP



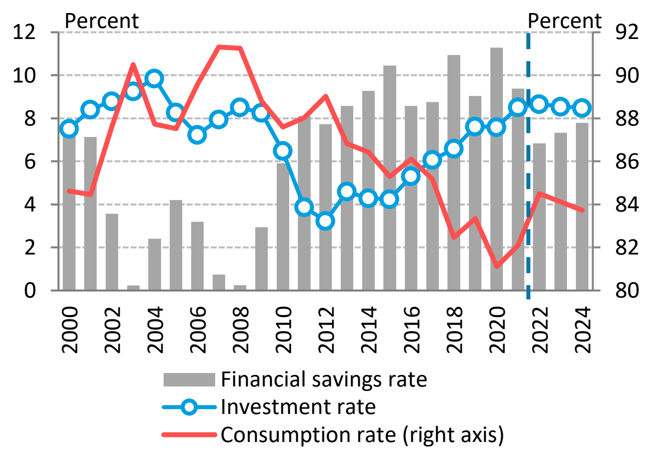
Note: The values represent the middle of the forecast range. Actual final government consumption includes government consumption and the transfers from government and non-profit institutions.
Source: HCSO, MNB

Chart 1-7: Evolution of household disposable income



Note: Based on the mean of the forecast band. Source: HCSO, MNB

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



Source: HCSO, MNB

households (Chart 1-7). The aggregate amount of payments in early 2022 approaches HUF 2,000 billion. Households receive half of this amount as a one-off benefit. According to the MNB's Household Survey, between February and April households used 65 percent of the additional income from the personal income tax refund for consumption and 16 percent for loan repayment. In addition to the increase in the minimum wage and guaranteed wage minimum, the tight labour market also helps to maintain buoyant wage growth. However, strong growth in the net wage bill and through that in households' disposable income is curbed by rising inflation. Due to high inflation expectations, households may bring forward their consumption.

This year, the consumption rate rises sharply, and in parallel with that the saving rate declines, while the investment ratio remains stable. The consumption rate will decrease from 2023, also due to the decline in inflation dynamics and expectations. Savings will be rebuilt, and the investment rate will decline at a moderate pace (Chart 1-8).

Looking ahead, growth dynamics in household lending may slow significantly. Growth in retail lending based on transactions decelerated in the first quarter, mostly due to the large volume of Lombard loan repayments. This was partly offset by elevated interest in the FGS Green Home Programme, which came to an end in the first quarter, and demand brought forward due to the rising interest rate environment. Looking ahead, the growth rate of outstanding household borrowing may fall slightly short of our previous expectations, as households' propensity to borrow may be reduced by the inflationary impacts of the conflict between Russia and Ukraine, and the sanctions introduced to curb it, together with the increasing interest environment resulting from rising inflation (Chart 1-9). In our forecast, we incorporate the impact of the subsidised credit schemes which are available pursuant to current legislation. Accordingly, a potential extension of the subsidies aimed at homebuyers which are slated to end in 2022 may further boost the expected growth rate of outstanding household borrowing.

Growth in investments may continue this year at a faster pace than expected in March, while we anticipate a lower rate in 2023. This year, more buoyant growth is primarily attributable to corporate sector investments, while the volume of public investments may decline, in line with the announced measures aimed at budgetary adjustments. The growth rate of household investments will remain stable in the coming years. The investment rate will stabilise around 27–28 percent over the forecast horizon (Table 1-3).

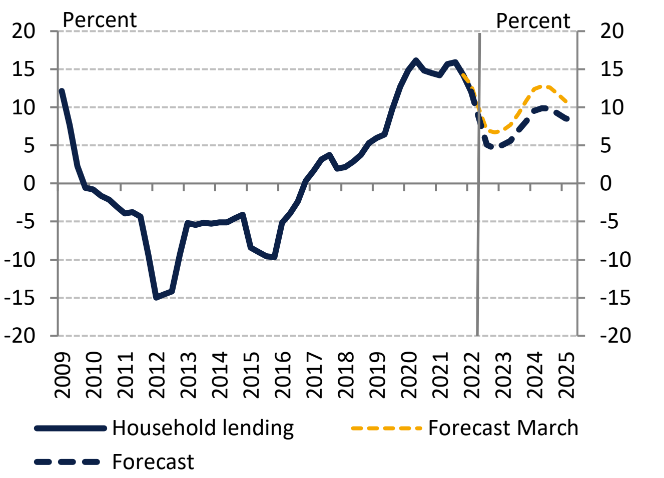
The growth rate of outstanding lending to corporations may decelerate significantly in the second half of the year.

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

	2022	2023	2024
Gross fixed capital formation	4.2	0.5	3.5
Government investments	-3.0	-15.5	7.5
Private investments	6.1	4.5	2.7
Investment rate	28.1	27.1	27.2

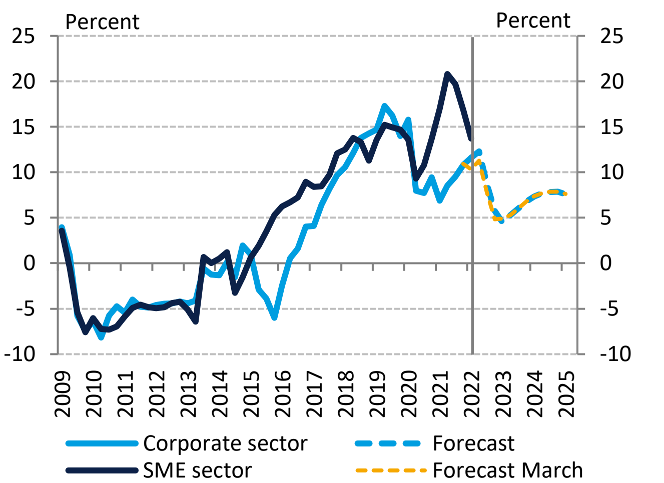
Note: The values represent the middle of the forecast range. Year-on-year growth for gross fixed capital formation; investment rate as a percentage of GDP. Source: MNB

Chart 1-9: Annual changes in lending to households



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

Chart 1-10: Annual changes 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

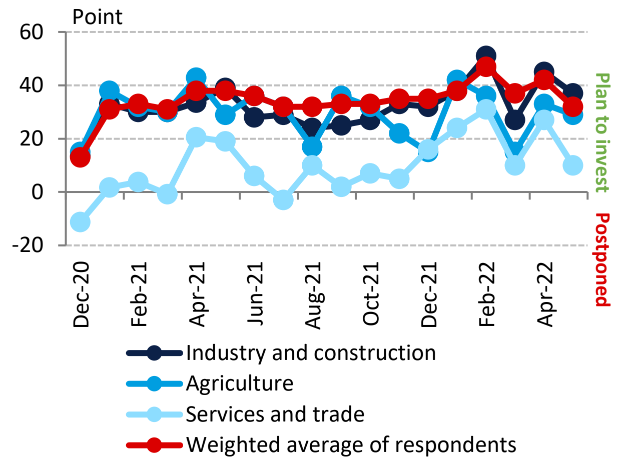
In light of the actual data for the first quarter, the annual growth rate of outstanding lending to non-financial corporations outstripped our previous expectations. Recovery of the real economy, subsidised lending schemes and banks' ample lending capacities supported the maintenance of high corporate credit dynamics (Chart 1-10). In addition to other government credit and guarantee schemes, the pick-up in corporate borrowing and investments was also supported by the Bond Funding for Growth Scheme with a volume of HUF 1,550 billion. However, the vast majority of new corporate loan contracts were already concluded on a market basis in the first quarter. In light of the rising energy and commodity prices, corporations' demand for working capital loans may actually increase in the short run, but overall, due to the uncertain environment, the annual growth rate of outstanding lending to non-financial corporations may decelerate until early 2023 and only return to around 8 percent by 2024.

In 2022, corporate investment activity may develop more favourably than previously expected, while we anticipate slightly lower growth in 2023, due to rising operational and funding costs. In 2022 Q1, gross fixed capital formation rose by 13.2 percent. The increase in the investment stimulation facility by HUF 70 billion also suggests higher corporate investments this year. In the first five months of the year, the GKI business confidence index exceeded the pre-pandemic level overall. The MNB's business sentiment survey showed a correction in May, after the favourable value registered in April, with regard to expectations related to investments (Chart 1-11). In 2023, we expect corporate investments to grow at a more moderate pace. Increased energy and commodity prices raise corporate operating expenses, which may lead to the postponement of certain investments and fewer new investments going forward. Looking ahead, a more subdued expansion of corporate investment activity could result from the introduction of extra tax measures, affecting the banking sector, the energy sector, airlines, the pharmaceutical sector, telecommunications providers, insurance companies and the retail sector.

In annual terms, the volume of public investments will decrease both in 2022 and 2023. In line with the rescheduling of the announced investment expenditures, the volume of public investments may fall moderately in 2022 and to a larger degree in 2023 before then rising again in 2024, according to our forecast.

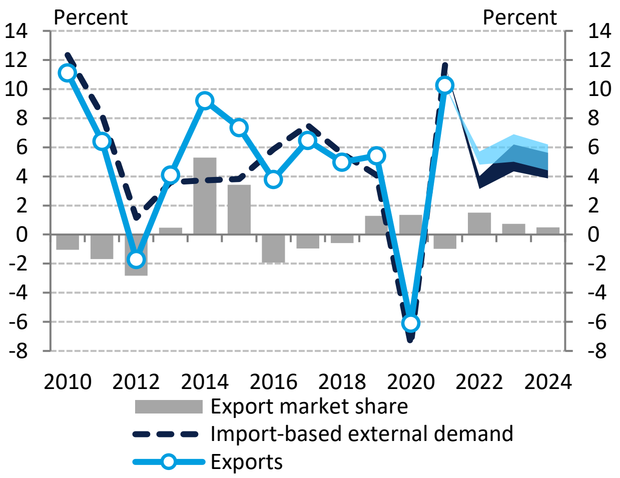
We project a stable expansion of household investments. Home-creation measures continue to support growth in households' investments this year. Robust disbursement

Chart 1-11: Share of companies planning investments in the next three months



Note: The index is a difference of the shares of positive and negative answers.
Source: MNB

Chart 1-12: Changes in export market share



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

was registered in the first quarter in the housing loan market, also supported by the Green Home Programme, which bolstered borrowing for housing purposes even in April. Rural HPS was extended until the end of 2022, which also contributes to growth in household investment. On the other hand, construction capacities remain scarce, and production is curbed by labour and material shortage, which – via the increase in home construction costs – may result in more moderate growth in household investment.

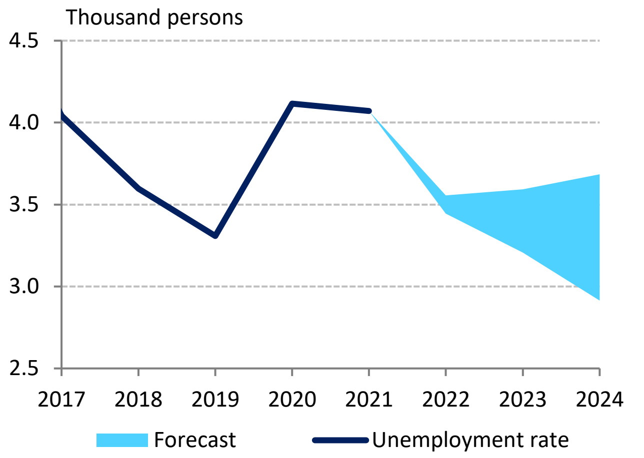
Short- and medium-term developments in Hungary's external trade continue to be driven by the war in Ukraine, disruptions in international supply chains and by high transportation costs, commodity and energy prices. Problems affecting the global economy may persist longer than previously assumed, and thus expectations for growth in Hungary's trading partners were also revised down. More moderate growth in Hungary's external partners also reduces their demand for imports. In addition, the global semiconductor shortage continues to have a direct effect on Hungary's automotive industry and the manufacture of electronic products, with production mostly for export. Poor industrial performance also impacts domestic and regional production, which is strongly embedded in supply chains. The war may also curb the recovery of international tourism in the region, due to higher uncertainty. The growth-curbing effects of monetary policy tightening in response to high inflationary pressure, the possibility of additional sanctions and the oil embargo represent additional downside risks.

In 2022, as a result of the slowdown in exports attributable to rapidly expanding domestic demand items and external factors, the growth rate of imports will exceed that of exports, and thus net exports will curb GDP growth. In the first quarter of this year, significant growth in investments and buoyant consumption resulting from the surplus funds received by households triggered a significant temporary rise in import growth, which will impact the full-year performance. Mounting uncertainty due to the war may curb tourism in the region and undermine the short- and medium-term performance of Hungary's services exports. Growth in exports will decelerate this year compared to 2021, while it is expected to grow further at a moderate rate from 2023. In line with domestic demand items, import dynamics will decelerate, and thus on the whole net exports will make positive contribution to growth from 2023. In 2022, we expect Hungary's export market share to increase, which will persist over the entire forecast horizon (Chart 1-12).

1.3 Labour market forecast

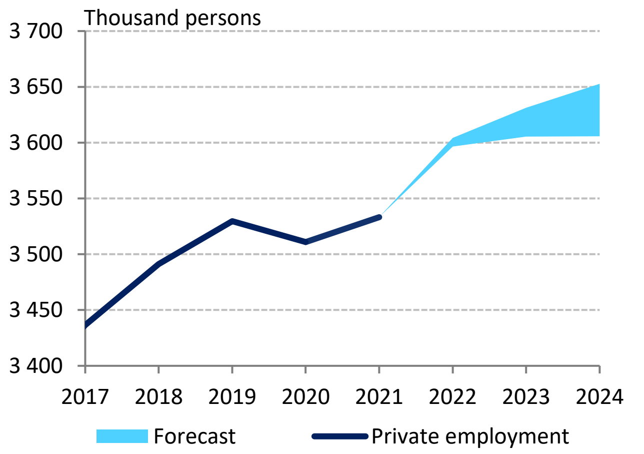
Wage growth this year is determined by the large minimum wage increase at the beginning of the period, the further tightening labour market and the elevated inflation expectations. According to our forecast, annual wage growth in the private sector will amount to 13.2–13.8 percent in 2022, after which wage growth of approximately 8–9 percent will remain in place over the rest of the forecast horizon. Labour demand remains strong, while employment is at a historically high level. Continued rises in commodity and energy prices resulting from the conflict between Russia and Ukraine together with elevated inflation developments may also impact labour demand, while Ukrainian refugees may boost labour supply. The number of employed in the private sector is expected to increase by 2.0 percent in 2022. The unemployment rate may be 3.5 percent this year. Full employment may be achieved in the Hungarian labour market by 2023.

Chart 1-13: Change in the unemployment rate



Source: HCSO, MNB

Chart 1-14: Employment in the private sector



Source: HCSO, MNB

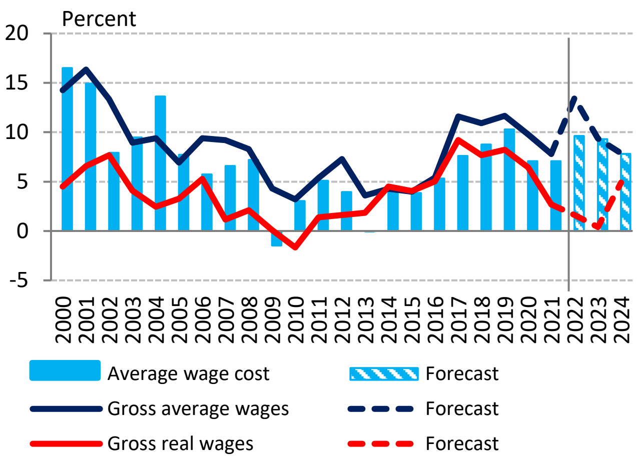
Corporate labour demand may grow further. The number of people in employment is historically high. The effects of the existing geopolitical tensions cannot yet be felt intensively in the domestic labour market. According to the ESI survey, which monitors employment prospects, corporations plan to increase the headcount in all key sectors in the coming months, and an increasing number of enterprises cited labour shortage as a production bottleneck. On the other hand, external risks, high corporate costs and the possibly postponed investments may also cause a slowdown and stagnation in employment growth in the medium term.

Whether it will be possible to once again approach full employment depends largely on demand and supply frictions and on the degree of the labour market's resilience in the higher inflationary environment. The number of whole-economy employees reached a historic high of 4.670 million in 2022 Q1. The number of the unemployed exceeds the pre-crisis level by roughly 20,000, reflecting an increase in activity. The unemployment rate may reach the pre-pandemic level of 3.3 percent faster than expected earlier. In 2022 Q1, the seasonally adjusted unemployment rate was 3.6 percent. According to our forecast, in 2022 the unemployment rate may be between 3.5 percent and 3.6 percent (Chart 1-13). Full employment may be achieved in the Hungarian labour market by 2023.

Based on our forecast, private sector employment will increase by 1.9–2.1 percent in 2022. Based on the first-quarter seasonally adjusted data, employment is at a historical high. Depending on corporate investments, the number of employees permanently returning from abroad and the number of Ukrainian refugees taking up work, additional growth going forward may amount to 1.9-2.1 percent in 2022, and a further 0.2–0.7 percent in 2023 (Chart 1-14).

Wage growth in 2022 is determined by the large minimum wage increase at the beginning of the year, the tight labour market and the elevated inflation expectations. Based on incoming data, the additional impact of the

Chart 1-15: Annual changes in gross average wages and average labour cost in the private sector



Source: HCSO, MNB

minimum wage increase contributed to higher-than-expected wage dynamics in the first quarter; in addition, double-digit wage growth was registered even in the higher income brackets, which reflects higher underlying developments. Inflation expectations rose by almost 3 percentage points since February, part of which is also expected to appear in wage-setting trends. The labour market has become increasingly tight in recent months, reaching the mid-2019 level at present, which supports the persistence of high wage dynamics.

Double-digit wage growth may be registered in 2022. The impact of the minimum wage increase was already integrated into the wage index, which exceeded the prior-year figure by 13.7 percent in 2022 Q1. According to our latest projection, private sector wage growth in 2022 may be 13.2–13.8 percent, and strong, 8–9 percent, wage dynamics may persist over the rest of the forecast horizon (Chart 1-15).

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

	2021	2022		2023		2024	
	Actual	Previous	Current	Previous	Current	Previous	Current
Inflation (annual average)[1]							
Core inflation	3.9	7.9 - 9.4	13.0 - 14.0	3.7 - 5.1	6.6 - 8.2	2.7 - 3.3	2.7 - 3.3
Core inflation excluding indirect tax effects	3.9	7.9 - 9.4	13.0 - 14.0	3.7 - 5.1	6.6 -8.2	2.7 - 3.3	2.7 -3.3
Inflation	5.1	7.5 - 9.8	11.0 - 12.6	3.3 - 5.0	6.8 - 9.2	2.5 - 3.5	2.5 - 3.5
Economic growth							
Household consumer expenditure	4.6	3.9 - 5.7	8.4 - 8.7	3.0 - 3.7	0.6 - 1.4	2.8 - 2.9	2.4 - 3.4
Government final consumption expenditure[6]	3.6	1.8 - 2.0	2.4 - 3.1	1.1 - 1.2	0.4 - 1.6	1.0 - 1.2	0.4 - 1.6
Gross fixed capital formation	5.9	0.8 - 2.4	3.7 - 4.8	3.9 - 4.3	(-0.9) - 1.8	2.5 - 3.7	2.0 - 5.0
Domestic absorption	5.5	2.4 - 3.7	5.7 - 6.2	2.7 - 3.2	0.2 - 1.2	2.2 - 2.6	1.9 - 3.2
Exports	10.3	2.5 - 5.8	4.8 - 5.7	6.6 - 7.9	5.0 - 6.9	4.6 - 6.6	4.4 - 6.2
Imports	8.7	2.3 - 4.8	6.0 - 6.9	4.9 - 5.8	2.7 - 4.6	3.5 - 4.8	3.1 - 5.2
GDP	7.1	2.5 - 4.5	4.5 - 5.5	4.0 - 5.0	2.0 - 3.0	3.0 - 4.0	3.0 - 4.0
Labour productivity[5]	4.3	1.4 - 2.8	3.2 - 3.6	3.7 - 4.9	1.7 - 2.9	3.2 - 3.4	2.6 - 4.0
External balance[2]							
Current account balance	-3.2	(-5.3) - (-2.8)	(-6.6) - (-5.6)	(-1.5) - 0.1	(-3.3) - (-2.1)	(-1.0) - 0.8	(-2.7) - (-1.3)
Net lending	-0.6	(-3.1) - (-0.7)	(-4.6) - (-3.6)	0.4 - 1.9	(-1.3) - (-0.1)	0.3 - 2.0	(-0.9) - 0.5
Government balance							
ESA balance	-6.8	-4.9	-4.9	-3.5	-3.5	-2.5	-2.5
Labour market							
Whole-economy gross average earnings[3]	8.7	10.8 - 12.2	15.8 - 16.4	7.0 - 7.1	7.1 - 8.3	7.4 - 7.5	7.0 - 8.2
Whole-economy employment	0.8	0.3 - 0.9	1.0 - 1.2	(-0.1) - 0.1	(-0.2) - 0.5	(-0.1) - 0.6	(-0.2) - 0.6
Private sector gross average earnings[3]	7.8	9.8 - 10.4	13.2 - 13.8	8.1 - 8.7	8.8 - 9.9	7.9 - 8.4	7.3 - 8.4
Private sector employment	0.6	0.6 - 1.0	1.9 - 2.1	0.1 - 0.4	0.2 - 0.7	0.3 - 0.8	0.1 - 0.6
Unemployment rate	4.1	3.7 - 4.1	3.5 - 3.6	3.4 - 4.0	3.2 - 3.6	3.3 - 3.4	2.9 - 3.7
Private sector nominal unit labour cost	2.1	4.1 - 5.3	5.7 - 6.7	3.4 - 3.6	4.2 - 5.8	3.9 - 5.0	3.8 - 5.6
Household real income[4]	2.8	2.7 - 5.1	5.1 - 5.7	2.8 - 3.7	0.8 - 2.0	2.9 - 2.9	2.7 - 3.9

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

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

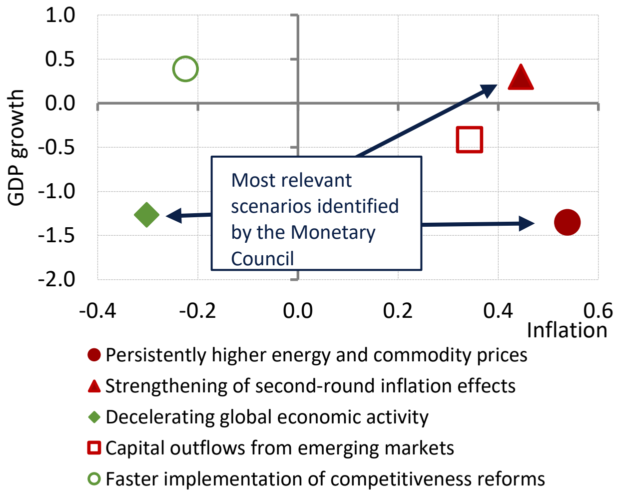
	2022	2023	2024
Consumer Price Index (annual average growth rate, %)			
MNB (June 2022)	11.0 -12.6	6.8 -9.2	2.5 -3.5
Consensus Economics (June 2022)[2]	8.4 - 9.9 - 10.7	4.6 - 6.2 - 8.0	
European Commission (May 2022)[2]	9.0	4.1	
IMF (April 2022)	10.3	6.4	3.0
OECD (June 2022)	10.3	7.0	
Reuters survey (June 2022)[1]	9.0 - 10.2 - 10.9	4.6 - 6.6 - 8.0	3.2 - 4.0 - 6.0
GDP (annual growth rate. %)			
MNB (June 2022)	4.5 - 5.5	2.0 - 3.0	3.0 - 4.0
Consensus Economics (June 2022)[2]	2.5 - 4.5 - 6.1	1.8 - 3.1 - 4.9	
European Commission (May 2022)[2]	3.6	2.6	
IMF (April 2022)	3.7	3.6	2.7
OECD (June 2022)	4.0	2.5	
Reuters survey (June 2022)[1]	2.5 - 4.7 - 6.1	2.0 - 3.3 - 5.0	3.0 - 3.8 - 4.6
Current account balance[3]			
MNB (June 2022)	(-6.6) - (-5.6)	(-3.3) - (-2.1)	(-2.7) - (-1.3)
European Commission (May 2022)	-5.5	-3.5	
IMF (April 2022)	-1.3	0.1	0.5
OECD (June 2022)	-5.0	-3.8	
Budget balance (ESA 2010 method)[3]			
MNB (June 2022)	-4.9	-3.5	-2.5
Consensus Economics (June 2022)[2]	(-6.5) - (-5.4) - (-4.5)	(-5.1) - (-3.9) - (-3.0)	
European Commission (May 2022)	-6.0	-4.9	
IMF (April 2022)	-6.8	-5.4	-3.9
OECD (June 2022)	-5.5	-5.4	
Reuters survey (June 2022)[1]	(-6.0) - (-5.1) - (-4.6)	(-5.0) - (-3.8) - (-3.0)	(-3.3) - (-3.0) - (-2.5)
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate. %)			
MNB (June 2022)	2.3 - 2.8	2.4 - 3.3	2.4 - 3.3
ECB (June 2022)	2.8	2.1	2.1
Consensus Economics (June 2022)[2]	1.1	2.5	
European Commission (May 2022)[2]	2.0	2.1	
IMF (April 2022)[2]	1.6	2.5	2.1
OECD (June 2022)[2]	2.6	1.7	

[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. In the scenario of persistently higher energy and commodity prices, a higher inflation and lower growth path will be realised than in the baseline scenario. The scenario presenting a strengthening of second-round inflation effects is in line with a higher inflation and higher growth path compared to the baseline scenario. The alternative scenario that presumes decelerating global economic activity suggests lower domestic inflation and lower growth paths than the baseline forecast. In addition to the highlighted scenarios, the Monetary Council discussed paths involving capital outflows from emerging markets and faster implementation of competitiveness reforms as alternative scenarios.

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 monetary policy than in the baseline forecast, while the green markers represent looser monetary policy.

Source: MNB

Persistently higher energy and commodity prices

Inflation has continued to rise in several countries – reaching multi-decade highs – and is in the double-digit range. Reasons underlying the global increase in inflation include demand and supply imbalances, along with rising commodity prices. In the past period, the world market price of oil ranged around USD 115, amidst great volatility. On the supply side, the war between Russia and Ukraine was the key driver, while on the demand side fears of recession and concerns related to Chinese demand were the main factors. Prices of other key commodities were at steadily high levels.

One of the most important drivers of the price increases and volatility characterising the commodity markets is that Russia and Ukraine play a significant role in the production and exports of several key commodities. Russia is one of the key actors of global oil and natural gas production, while the two countries involved in the war together account for a major portion of global wheat exports. The war and the sanctions imposed led to a decline in production and trade, once again exacerbating production and supply chain disturbances.

Several factors indicate that commodity market disruptions and higher prices may persist over the medium and long run as well. Firstly, futures markets have priced the impacts of the present price shock as being lasting over the long term. Secondly, stocks of key commodities, such as oil and wheat, were limited before the war, which may exacerbate the consequences of the disturbances in production and commodity trade. Thirdly, the sanctions are expected to remain in place at least until the end of the war, but presumably for a longer time even after resolution of the conflict. The fourth risk is represented by the pass-through of primary commodity market impacts to additional markets. These factors point to the persistence of higher prices, representing an upside risk for global inflation developments.

Due to the geographical proximity and a larger share of trade with the two parties involved, the impacts in Europe are strong, putting downward pressure on growth prospects. Moderate growth in external markets may appear through weaker external demand, resulting in declining Hungarian exports. Short-term economic prospects are determined by the duration of the war and the sanctions that have been imposed.

In our alternative scenario, global supply problems and the protracted situation with the war result in stronger supply chain disruptions. As a result of this, we assume lower external demand than in the baseline scenario and, in parallel with that, more moderate domestic export dynamics. 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. Should this scenario materialise, tighter monetary conditions, compared to the baseline scenario, may be justified.

Strengthening of second-round inflation effects

The rise in inflation and core inflation continued in Hungary from the beginning of the year, with the rate of price increase exceeding 10 percent in May. Rapid price increases in the spring months affected an increasingly wide range of goods and services: a price increase of more than 10 percent was registered for half of the consumer basket in May. Food prices once again showed double-digit year-on-year increases.

Households' inflation expectations. which were high in the previous quarter, rose further and are well above the central bank's tolerance band. In addition, a continued rise in retail sales prices and service prices may be expected. According to our calculations, the rise in consumer prices still falls short of the level justified by producer prices, and in the present high inflation environment, this strengthens the upside risks to inflation. At the same time. households' inflation expectations are backward-looking, i.e. if there is a turnaround in the CPI, it will also moderate inflation expectations.

The labour market remains tight. with a steadily low unemployment rate. Labour market tightness increased further compared to previous quarters, and the value of the tightness indicator has come close to the pre-crisis level.

Since there is strong competition for skilled labour force in all sectors, robust wage growth is likely to persist, which increases the risk of rising underlying inflation developments. In the first quarter, regular average wages rose faster than expected in March. The strong wage growth of those earning above the average implies high underlying wage-setting trends. The increase in the minimum wage and the guaranteed wage minimum also contributed to the high wage growth.

Households' consumption significantly grew in the past quarter. Due to the increasingly tight labour market, higher-than-expected wage growth may persist in certain sectors, which may result in additional consumption growth.

In the **alternative scenario**. the risk of the development of second-round inflationary effects materialises: the current higher price dynamics filter through to economic agents' expectations, and high inflation remains in place for a longer time compared to the assumption in the baseline scenario, and thus a decline in core inflation can also only be expected later. Due to high inflation expectations in a tight labour market environment, wage growth and households' consumption will increase faster than assumed in the baseline scenario, and the savings rate will decline, which points to a further rise in inflation and requires tighter monetary policy conditions.

Decelerating global economic activity

Looking at the world's major economies, economic growth decelerated in the United States in 2022 Q1. Incoming data for the European Union and the euro area reflect an accelerating growth rate, but outlooks have deteriorated. Stagflation expectations for the global economy are at a high level, and global growth forecasts were revised downwards in recent months.

In 2022 Q1. China recorded year-on-year economic growth of 4.8 percent. Growth is expected to decelerate in the second quarter, primarily as a consequence of the strict restrictions connected to the pandemic. Furthermore, factors such as the slow recovery of the logistics sector of ports and the drastic fall in the volume of retail sales and property sales also point to more moderate growth.

China's economic growth is resource- and commodity-intensive, and thus the slowdown in growth there has a negative impact on exporter countries that supply it with energy and other raw materials. In addition, the declining growth also **has a negative impact on those producer countries** for which China represents the market of semiconductors and motor vehicles. Germany – Hungary's largest trading partner – also belongs to the latter category.

In our alternative scenario, global growth decelerates at a faster rate compared to the baseline scenario, the primary reason for which is moderate growth in China. In parallel with deteriorating economic prospects, we assume that the buoyant demand for energy and commodity will weaken, which will be also reflected in decreasing prices. Decelerating global growth undermines Hungary's export performance and GDP growth rate, while the correction of commodity prices reduces both global and domestic inflation.

Other risks

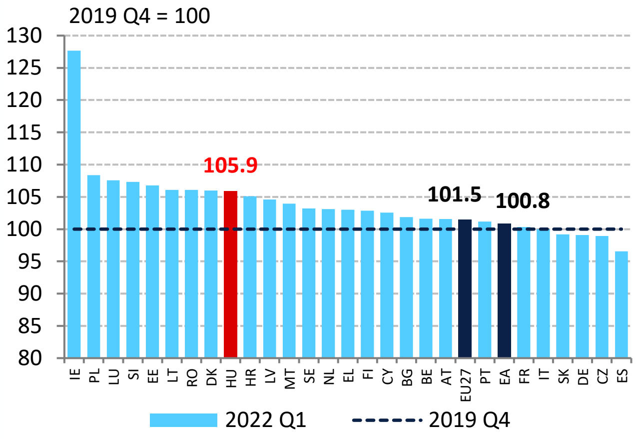
In addition to the scenarios highlighted above, the Monetary Council considered two other alternative scenarios. In the alternative scenario featuring capital outflows from emerging markets, risk aversion will rise more steadily and sharply vis-à-vis emerging markets, including Hungary, as compared to the baseline scenario. As a result of this, capital outflows and further rise in inflation may occur. In the scenario assuming the faster implementation of competitiveness reforms, the improvement in competitiveness provides further stimulation to the domestic economy primarily from the supply side. Competitiveness may improve to a greater degree compared to the assumption in the baseline scenario if further recommendations are implemented out of the 330 steps presented by the Magyar Nemzeti Bank for improving competitiveness, and the implementation of the 144 points of the essay entitled Sustainable balance and convergence commences. 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.

3. Macroeconomic overview

3.1. Assessment of macroeconomic trends

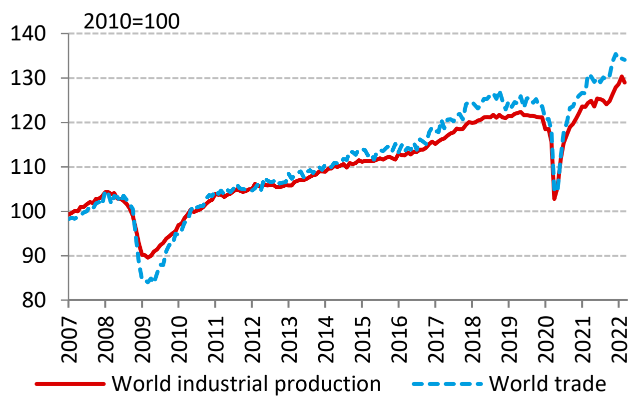
In 2022 Q1, economic growth exceeded expectations in most of the major countries. Looking at the EU Member States, the GDP of 23 countries already exceeded the pre-crisis level, while GDP in Germany– which is Hungary's largest trading partner – still falls short of the pre-crisis level. As a result of the war between Russia and Ukraine, both global and European growth prospects have deteriorated significantly. The conflict intensifies supply chain disruptions, while high commodity prices are passing through to all sectors of the economy, thereby raising producer prices. Mounting uncertainty and deteriorating economic sentiment also negatively impact prospects for the slowly recovering international tourism. In the past period, in response to the ongoing rise in inflation, most central banks continued to tighten monetary conditions. The Federal Reserve launched its tightening cycle in March and also commenced the reduction of its balance sheet. In March, the European Central Bank closed its pandemic emergency purchase programme. while in June it announced that net asset purchases under the APP will also come to an end at the beginning of July 2022. In addition, the central bank noted that in July it would start its tightening cycle. In response to rising inflation, the level of interest rates continued to rise in the countries of the region.

Chart 3-1: Development of GDP



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

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



Note: Based on seasonally adjusted data.
Source: CPB

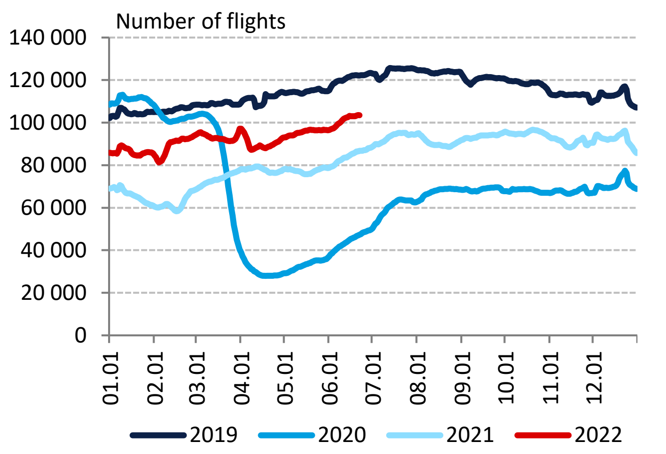
3.1.1. International activity trends

Economic growth in 2022 Q1 was generally above expectations. China's economy expanded at a year-on-year rate of 4.8 percent. US economy grew slower than in the fourth quarter of last year, at a rate of 3.5 percent, registering a decline on a quarterly basis. In 2022 Q1, the economy of the EU and of the euro area grew by 5.6 and 5.4 percent, respectively, in year-on-year terms. Economic activity exceeded its pre-crisis level in 23 of the EU-27 countries. Germany, which is Hungary's most important trading partner, is low in the European ranking, with its economic performance still falling short of the pre-crisis level (Chart 3-1).

Since 24 February, developments in international economic activity – and particularly in the European economies – have been strongly influenced by the war between Russia and Ukraine, in addition to the previously dominant coronavirus pandemic. The conflict exacerbated disruptions in supply chains, and the already high energy and commodity prices have continued to rise. World industrial production and global trade once again started to grow at the end of 2021, showing strong dynamics before the war, but signs of deceleration could then be seen as early as March (Chart 3-2). Since the March Inflation Report, global and European growth prospects have both deteriorated significantly.

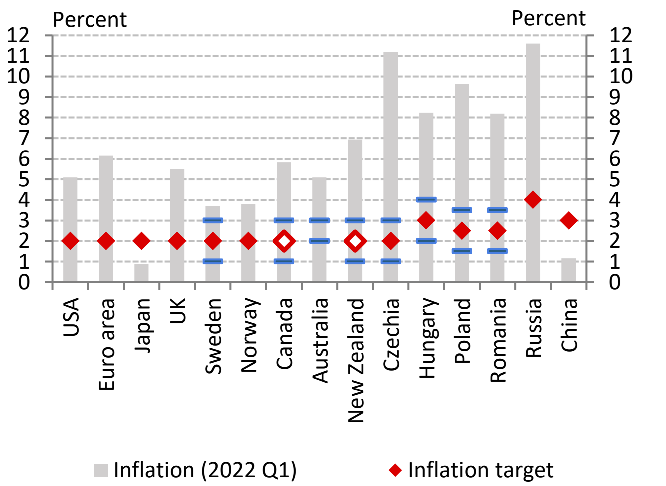
In the area of services, tourism is still the most affected by the global turbulence. In conjunction with the prevailing restrictions, international tourism has only strengthened gradually however, and the prospects – particularly in the CEE region – are once again overshadowed by the war. The number of daily commercial flights rose slowly to over

Chart 3-3: Total number of global commercial flights



Note: The index is based on 7-day moving averages.
Source: Flightradar24

Chart 3-4: Central bank inflation targets 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

100.000 by early June globally, which still remains below the 2019 figure (Chart 3-3).

3.1.2. International monetary policy. inflation and financial market trends

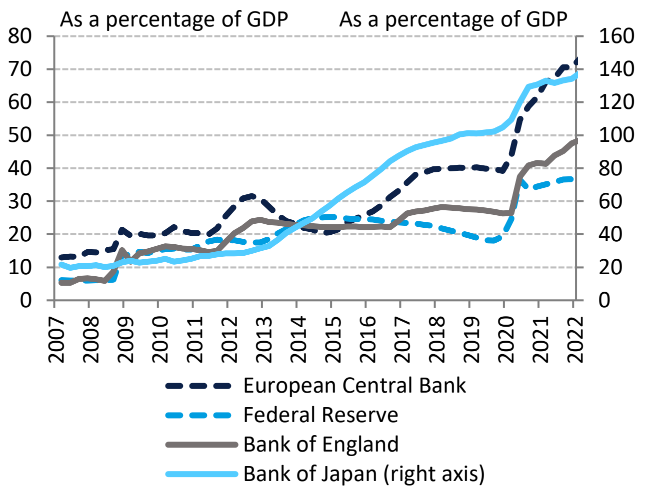
Global inflation continued to rise in recent months. In the past period, the rate of inflation was well above central bank target values in most advanced economies (Chart 3-4). In response, most central banks continued to tighten monetary conditions by raising key interest rates; in addition, certain central banks gave priority to ending net asset purchases as well as to shrinking their balance sheets.

Inflation in the euro area climbed to 8.1 percent in May 2022, mostly due to rising food and energy prices. At the same time. in 2021 Q4, economic growth continued at a slower pace than before. The underlying reasons for the slowdown include rising energy prices, protracted supply side constraints and spill-over from COVID-related lockdowns in China.

At its June rate-setting meeting. the ECB left the key policy rates unchanged, while it decided to end net purchases under the APP from 1 July 2022. The central bank will reinvest the maturing securities even after the date of the first interest rate increase, until such time as necessary to maintain ample liquidity. At the end of March 2022, the ECB closed it asset purchase programme under PEPP and it will reinvest the maturing securities purchased under the programme until the end of 2024. According to the central bank's June communication, key interest rates will rise in July by 25 basis points, to be followed by another increase in September. After September, the central bank may raise key policy rates gradually for a longer time. At an extraordinary meeting, the central bank decided to apply flexibility to reinvest in the PEPP programme and announced the creation of a new "anti-fragmentation" tool (to limit the excessive widening of yield spreads between euro area members). Inflation rose further in May and is well above the ECB's 2-percent target. In addition, inflationary pressure is increasingly present in the economy, due to which the central bank revised up its inflation forecast to a significant degree. The balance sheet total of the ECB rose to EUR 8.818 billion (73.9 percent of GDP) by the beginning of June 2022 (Chart 3-5).

In the United States, due to the increasing inflation risks, the Fed started a tightening cycle in March 2022 and began shrinking its balance sheet from June 2022. At its most recent June 2022 rate-setting meeting, the central bank raised the target band of the key policy rate by 75 basis points to 1.50–1.75 percent. The Federal Open

Chart 3-5: Central bank balance sheet totals in developed countries



Source: Databases of central banks, Eurostat, FRED

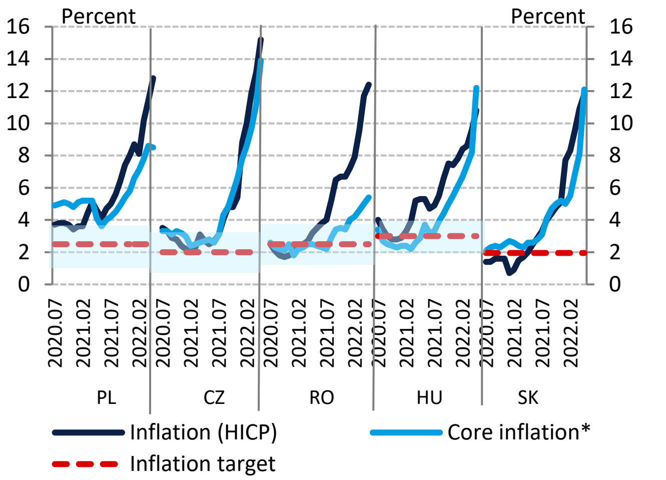
Market Committee expects that the ongoing increases in the target band for the key policy rate will be instrumental in achieving the central bank's objectives related to price stability and maximum employment. The central bank continue the balance sheet reduction at the pace announced in the May, primarily by limiting the reinvestment of principal repayments related to maturing securities. The FOMC has significantly revised its forecast, with the key rate likely to be 1.5 percentage points higher by the end of the year than in the March forecast. According to the new forecast, economic growth may be significantly lower this year and next than expected in March, and the unemployment rate may be slightly higher than previously forecasted. After the rate of 8.3 percent registered in April, inflation rose to 8.6 percent in May, while the PCE inflation rate, as the central bank's focus, dropped from 6.6 percent in March to 6.3 percent in April. The Fed's balance sheet total amounted to USD 8.984 billion (37.4 percent of GDP) at the middle of June 2022 (Chart 3-5).

At its June 2022 rate-setting meeting, the Bank of Japan left its 0-percent target applicable to the 10-year government securities market yield and the -0.1 percent interest rate charged on excess reserves unchanged. The Bank of Japan is continuing its asset purchase programme and noted in its communication that with a view to maintaining the yield target it offers to purchase government bonds in unlimited volume at a fixed rate of 0.25 percent, which is also the upper bound of the central bank's yield target. Japan's balance sheet total as a percentage of GDP rose to 137.9 percent by the end of May 2022. The central bank forecasts higher inflation and lower growth in 2022.

The decision-makers at the Bank of England increased the policy rate by 25 basis points to 1.25 percent at their June 2022 meeting. Based on their judgement related to economic prospects, policymakers will pay particular attention to signs of sustained inflation in the coming months and react strongly if necessary. Despite the smaller rate hike than in May, interest rate expectations have risen as a result of the hawkish announcement.

Of the central banks in the region, the Czech decided on 125-basis point interest rate increase, the Polish and Romanian central banks also decided on rate increases of 75 basis points at their latest meetings. As regards the Harmonised Index of Consumer Prices and core inflation, in 2022 Q1 a significant rise was observed in the countries in the region, and inflation was well above the target figures (Chart 3-6). Each of the central banks in the region

Chart 3-6: Inflation and core inflation in the region



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

increased their earlier inflation forecast and reduced their projections for economic growth.

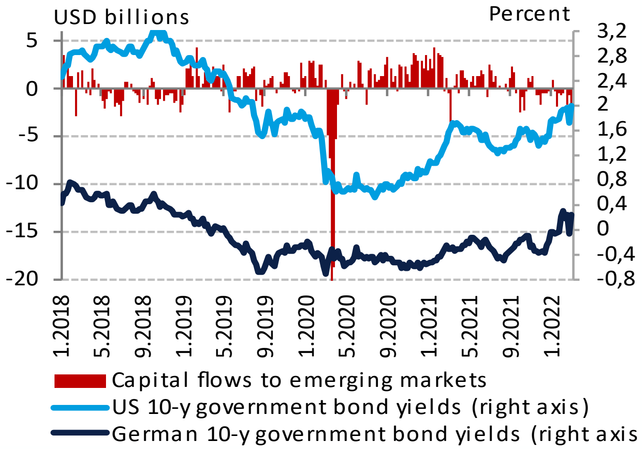
In June, the Polish central bank raised its key policy rate by 75 basis points to 6.00 percent. In Poland, inflation and the harmonised price index rose to 13.9 percent and 12.8 percent, respectively (Chart 3-6) in May, mostly due to the strong rises in food prices resulting from the conflict between Russia and Ukraine and the increasing prices of global agricultural products. The central bank believes that there is still a risk that inflation will exceed the central bank target over the horizon of monetary policy transmission, and thus it may be necessary to raise the key policy rate further.

The Czech central bank has raised its key rate by 125 basis points to 7.00 percent, and according to the central bank's communication the decision is backed by new macroeconomic forecasts and information since then. Inflation rose to 16 percent in May, significantly exceeding the upper bound of the tolerance band around the inflation target**.** The harmonised consumer price index stood at 15.2 percent in May (Chart 3-6). According to the central bank's forecast, inflation will be in double digits this year, but will start to decline rapidly in the first half of next year and return to close to the 2-percent target by the end of 2023.

In May, the Romanian central bank raised the base rate by 75 basis points to 3.75 percent. In Romania, inflation and the harmonised consumer price index rose to 14.5 percent and 12.4 percent, respectively, in May (Chart 3-6). The central bank's latest inflation forecast shows a renewed, significant deterioration in inflation outlooks. Inflation outlooks were revised higher over the entire forecast horizon. According to the central bank's expectations, inflation will rise further in 2022 Q2 and only start to decline gradually in the third quarter. Inflation is expected to fall below 10 percent in the latter half of 2023 and will be above the tolerance band over the entire forecast horizon.

Unfavourable sentiment persisted in the international bond and foreign exchange markets during the past quarter, and in parallel with the monetary tightening implemented by developed central banks stock market indices typically declined. Commodity and energy prices, together with government securities market yields, continued to rise. For most of the period, volatility deteriorated further due to the escalation of the war between Russia and Ukraine and the failed ceasefire negotiations. At the end of the period under review, volatility declined in the financial markets and risk appetite improved. Developed and emerging equity indices both declined for most of the period under review, followed by a minor correction at the end of the period. Developed equity indices fell less than in the previous period, with the major US and European stock exchange indices registering declines of 2–8 percent. Stock exchanges in emerging countries fell by 10–15 percent on average. The US dollar mostly strengthened versus developed and emerging currencies, including the currencies of the narrower region, appreciating by 5 percent against the euro and 12 percent versus the Japanese yen, while gaining 7 percent against the British pound. Developed market long-term bond yields typically increased, especially in the case of the 10-year US government security, which rose 95 basis points (Chart 3-7). Emerging market bond yields, including yields in the region, increased, supported by monetary policy steps as well as by rises in yields in developed markets.

Chart 3-7: Capital flows to emerging markets (weekly) and US and German 10y-government bond yields



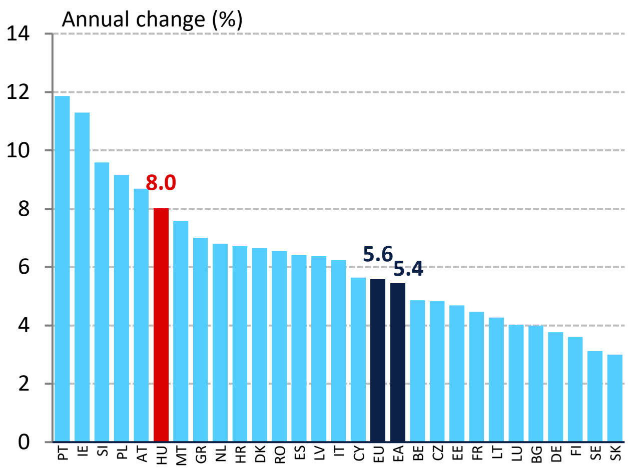
Source: EPFR. Bloomberg

Market pricing implies strengthening interest rate expectations, which was also supported by the incoming inflation data together with the central banks' communication. Based on market pricing, expectations with regard to interest rate hikes by the Fed and the ECB rose further. In the case of the Fed, the interest rate level priced in for the end of year rose by 150 basis points to 3.5 percent during the period under review, while in the case of the ECB it rose by 110 basis points to 1 percent.

3.2. Analysis of the production and expenditure side of GDP

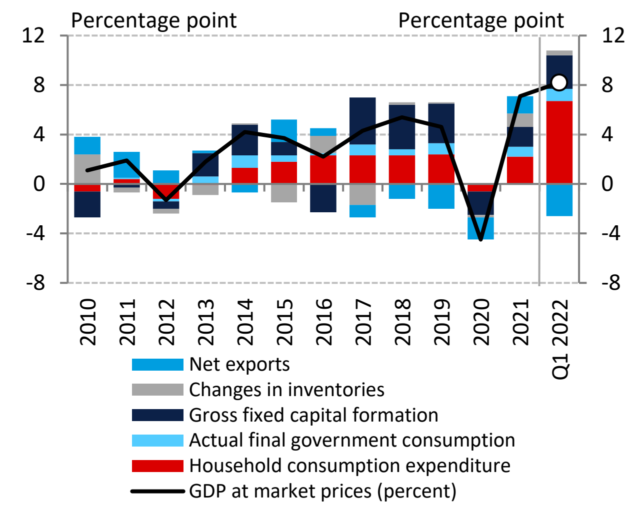
The Hungarian economy continued to grow at an accelerating rate with gross domestic product expanding at a year-on-year rate of 8.2 percent in 2022 Q1. Hungarian economic output exceeded its pre-pandemic level by 5.9 percent. Household consumption accounted for most of the growth on an annual basis. Corporate sector investments grew in the first quarter, while investments by budgetary organisations declined. In the first quarter, the merchandise trade balance remained in deficit. The terms of trade deteriorated significantly on an annual basis, due to the rising price of mineral fuels.

Chart 3-8: 2022 Q1 annual GDP change in EU countries



Note: Based on seasonally and calendar adjusted data.
Source: Eurostat

Chart 3-9: Contribution to annual GDP growth



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

Following a successful restart, the Hungarian economy continued to grow at an accelerating rate. In 2022 Q1, gross domestic product expanded by 8.2 percent in year-on-year terms. Based on seasonally and calendar adjusted data, the increase was 8.0 percent. The economies of the euro area and the EU-27 countries expanded by 5.4 percent and 5.6 percent, respectively, in year-on-year terms (Chart 3-8). Hungary's growth surplus compared to the euro area was 2.6 percentage points in 2022 Q1.

On the expenditure side, households' consumption was the main driver of growth, while net exports curbed annual GDP growth.

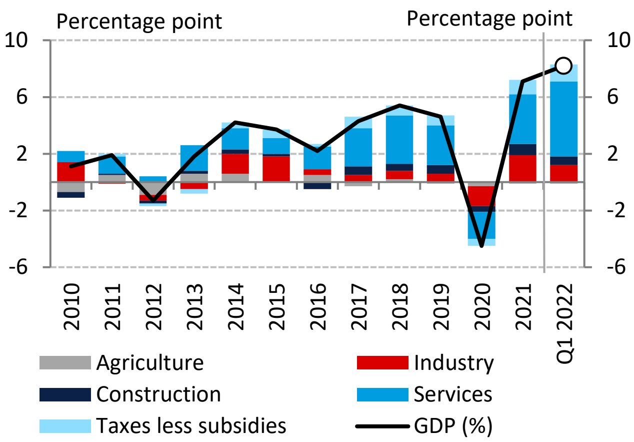
Households' consumption expenditures climbed significantly, rising by 14.1 percent in year-on-year terms. The largest growth was registered in the consumption of services (+23.3 percent) and semi-durable goods (+23.2 percent). Actual final government consumption rose by 4.1 percent on an annual basis.

The value added of gross fixed capital formation increased by 13.2 percent compared to the same period of the previous year. The volume of construction investment expanded to a greater degree than that of investment in machinery and equipment. The investment rate was 27.5 percent. Changes in inventories made a slightly positive contribution to growth as in the fourth quarter (Chart 3-9).

Growth in the volume of imports (+8.3 percent) was higher than that in exports (+5.2 percent). Goods exports grew by 2.0 percent, while services exports by 23.1 percent in year-on-year terms. Goods and services imports increased by 7.1 percent and 15.5 percent, respectively, on a year-on-year basis. Net exports reduced growth in the first quarter by 2.6 percentage points.

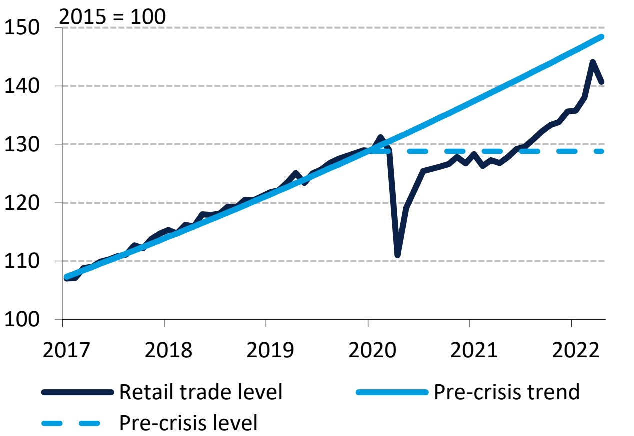
The performance of all sectors of the economy, excluding agriculture, grew in year-on-year terms (Chart 3-10). Industrial output rose 4.9 percent compared to the same period of the previous year. Of the manufacturing sectors, the expansions registered in metal processing and the food industry were the strongest contributors to annual growth in industry. Construction's value added rose by 18.3 percent, while that of agriculture fell by 3.9 percent

Chart 3-10: Decomposition of change in production-side GDP



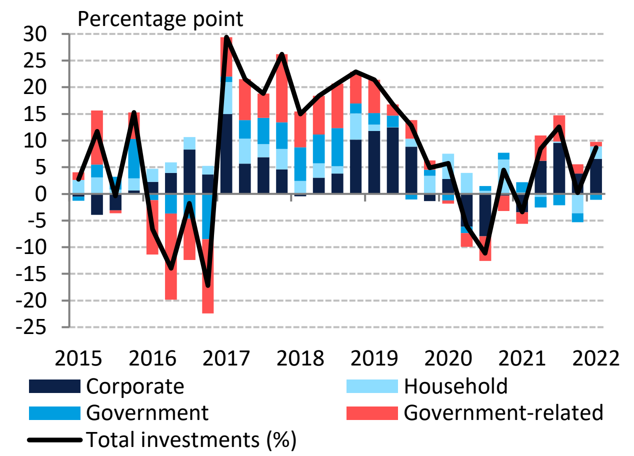
Source: HCSO

Chart 3-11: Evolution of retail trade and the pre-crisis trend



Note: Seasonally and calendar adjusted data. The pre-crisis trend is an extension of the trend from January 2017 to January 2020.
Source: HCSO, MNB

Chart 3-12: Decomposition of the annual change in investments



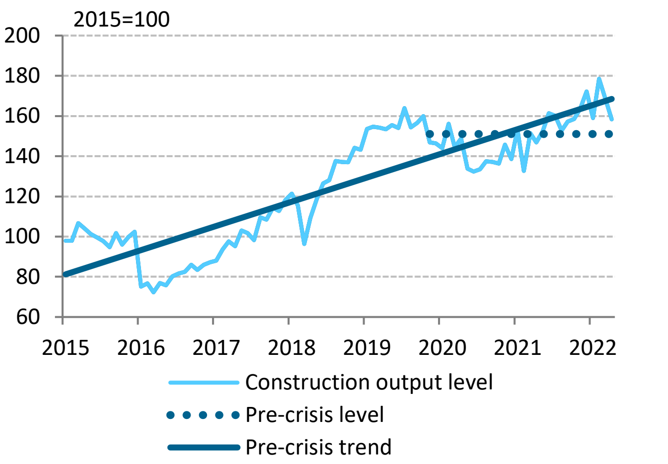
Source: HCSO

year-on-year. Services' value added rose by 9.9 percent. The strongest growth occurred in those areas of the economy that registered the largest fall a year ago in connection with the restrictions implemented to contain the pandemic.

In 2022 Q1, retail sales continued to exceed the pre-crisis level, and in March they came close to the growth trend of past years (Chart 3-11). In April 2022, the sales volume of retail shops increased by 15.8 percent year-on-year, based on calendar adjusted data. The recovery of services continued. The online cash register data of NTCA for March – which also contain the turnover of catering, accommodation services and taxi services – reflect substantial growth in the volume of retail sales. The significant growth also reflects the sharp rise in fuel retail sales and the impact of last year's low base. Based on the NTCA's online cash register data, strong growth in retail sales persisted in April and May as well.

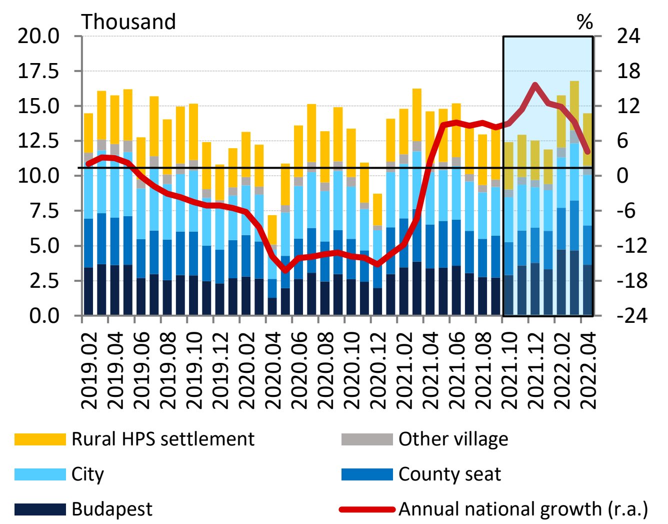
The volume of new household loans increased, but outstanding borrowing rose at a slower pace compared to previous quarters. In 2022 Q1, household loans outstanding vis-a-vis the financial intermediary system as a whole expanded by HUF 73 billion due to transactions, and thus at the end of March, the annual growth rate of household loans outstanding was 12.1 percent, representing a slowdown of 2.1 percentage points. From November 2021, the payment moratorium's instalment-reducing effect declined materially: instead of the previous 28 percent, only 6 percent of outstanding household debt entered the programme, which was continued with a narrower scope. The growth in loans outstanding was also curbed by the significant volume of Lombard loan repayments. The volume of housing loans concluded by credit institutions in 2022 Q1 exceeded the year-on-year figure by 49 percent. In addition to the new housing subsidies, robust growth in disbursements is also strongly attributable to the FGS Green Home Programme. The product accounts for 90 percent of the loans granted in March for the purchase or construction of new housing. Disbursement of personal loans exceeded the volume registered in 2021 Q1 by 30 percent. In the first quarter, young married couples concluded prenatal baby support loan contracts amounting to HUF 104 billion, down by 24 percent year-on-year. According to the Lending Survey, in 2022 Q1 banks did not significantly change retail lending standards. However, looking to the second and third quarters of 2022, a net 44 percent of the banks already anticipate tightening in the consumer loan market. Respondent institutions perceived increasing demand for

Chart 3-13: Evolution of construction output and the pre-crisis trend



Source: HCSO, MNB

Chart 3-14: Number of residential transactions carried out by real estate agents by month



Note: Only taking into account 50-percent and 100-percent private acquisitions. From July 2020 to September 2021, the data of the NAV 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 highlighted months.

Source: NAV, MNB, housing market intermediary database

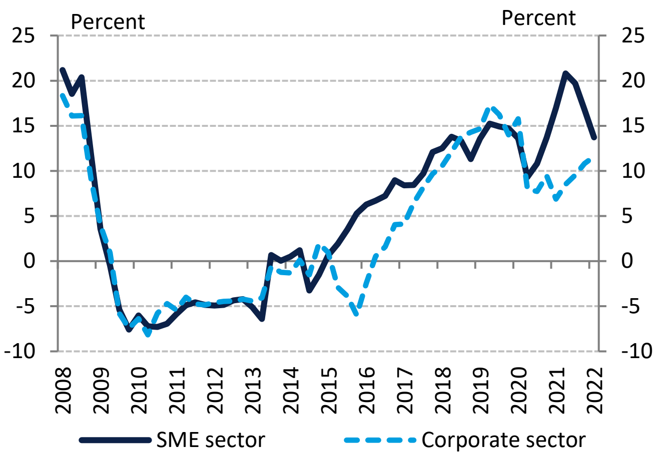
housing loans in the first quarter, but looking ahead, they anticipate a fall in demand both in the housing loan and consumer loan markets.

In 2022 Q1. the volume of whole-economy investment rose at a year-on-year rate of 8.7 percent based on investment statistics (Chart 3-12). In terms of the material-technical composition, investments in machinery increased by 7.0 percent, while building-type investments expanded by 10.1 percent in year-on-year terms. Budgetary organisations' investment volume fell by 13.0 percent. According to the information provided by the HCSO, compared to the base period, local governments increased their tangible asset purchases, while central public administration organisations significantly reduced their purchases of such assets. The volume of investment by medium-sized and large enterprises employing at least 50 people grew by 10.5 percent, in which the developments of foreign-owned enterprises played a significant role. Investment in manufacturing, which represents the highest weight, increased by 19.7 percent. In 2022 Q1 4.528 new homes were completed, down 26.4 percent in an annual comparison.

In 2022 Q1. construction output increased by 15.7 percent in year-on-year terms. The construction of buildings and other structures expanded by 17.3 percent and 13.9 percent, respectively, year-on-year. Based on seasonally and calendar adjusted data, the volume of construction output remained above the pre-crisis production level between January and April (Chart 3-13). In February and March, construction output already exceeded the growth trend of recent years.

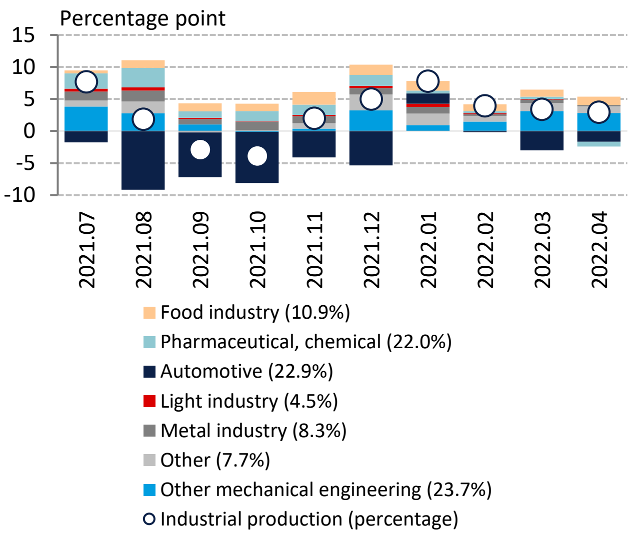
In the first months of 2022, the number of housing market transactions rose substantially in the capital, while it fell to a similar degree in the county seats in annual terms. According to our estimate, in 2022 Q1 the number of transactions fell by 12.1 percent in the county seats, by 3.6 percent in the settlements eligible for rural HPS, by 11.4 percent in other towns and by 5.3 percent in other villages, in year-on-year terms (Chart 3-14). However, the number of transactions rose by 12.7 percent in Budapest during the same period, and thus at the national level the number of sales and purchases was close to that of the same period of last year. In April 2022, the regional realignment of sales and purchases continued similarly; the number of transactions fell by 10.6 percent in the county seats, while it rose by 7.4 percent in the capital. According to the MNB house price index, in nominal terms the prices of homes in 2021 Q4 increased by 2.4 percent at the national level, by 1.5 percent in Budapest, by 3.8 percent in

Chart 3-15: Annual changes 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

Chart 3-16: Sectoral breakdown of annual change in domestic industrial production



Note: The weight of the sectors in industrial production is given in brackets. Without the water and waste management industry.
Source: HCSO

cities outside Budapest and by 0.6 percent in villages. Based on preliminary data, house prices continued to rise at an extraordinary pace in 2022 Q1, appreciating by 10.0 percent on a national average and by 9.5 percent in Budapest.

Corporate loans outstanding increased dynamically in the first quarter. In the balance sheet of the entire financial intermediary system, corporate loans outstanding expanded by HUF 308 billion in 2022 Q1, and thus the annual growth rate amounted to 11.6 percent (Chart 3-15). Also taking into account the corporate bonds subscribed by banks, credit institutions' loans and bonds outstanding vis-à-vis the non-financial corporate sector increased by 18.5 percent in end-March. Within corporate lending, the annual growth rate of SME loans outstanding was 13.7 percent at the end of the first quarter. In the quarter under review, 78 percent of new corporate loans were concluded on a market basis.[1] This ratio is only marginally lower than the 85–90 percent recorded in the pre-pandemic period. Since November, 2 percent of the outstanding corporate loans participated in the narrower moratorium on payments available to corporations that have suffered a significant loss of revenues. down substantially versus the earlier participation ratio of 17 percent. According to Lending Survey, during the first quarter banks did not change standards significantly in any of the enterprise size categories. However, a net 36 percent of respondent credit institutions tightened the conditions of commercial property financing loans, and looking ahead credit standards are likely to be tightened in all segments. Banks did not perceive any material change in demand in 2022 Q1, while looking ahead they expect demand for short-term loans to rise and for long-term loans to decline.

In the first quarter, domestic industrial production rose by 5.5 percent year-on-year, and the weak performance of the automotive industry was offset by other subsectors (Chart 3-16). Dynamic growth in battery manufacturing continued. In the first four months of this year, the merchandise trade balance remained in deficit. The terms of trade deteriorated significantly in March, by 6.7 percent on an annual basis due to the rising price of mineral fuels.

[1] When calculating the ratio of market-based loans we examined the ratio of non-overdraft type loans, classified as "Normal market", within the new contracts of credit institutions excluding the Hungarian Development Bank and Eximbank.

Box 3-1: Relationship between the evolution of prices and profits

The relationship between the rise in prices and profits has become one of the focal points of economic analyses around the world during the economic recovery after the coronavirus pandemic. In the past quarters, a significant rise in profits was observed in certain areas, and thus the analyses focused on determining whether this was the consequence of or the cause for the rise in prices. For the quantitative analysis of this issue, it is worthwhile to set out from the general price index of GDP rather than from the rise in consumer prices, as the former can be statistically decomposed from the change in the degree of labour costs and profits.

Economists usually examine the rate of price increase using the change in consumer prices; however, for a broader understanding of the process, it is also worthwhile to analyse the change in the GDP deflator in more detail. While the consumer price index only includes the price changes of consumer goods, the GDP deflator also measures the price change of a wide range of domestic value added. such as e.g. capital goods and exports.

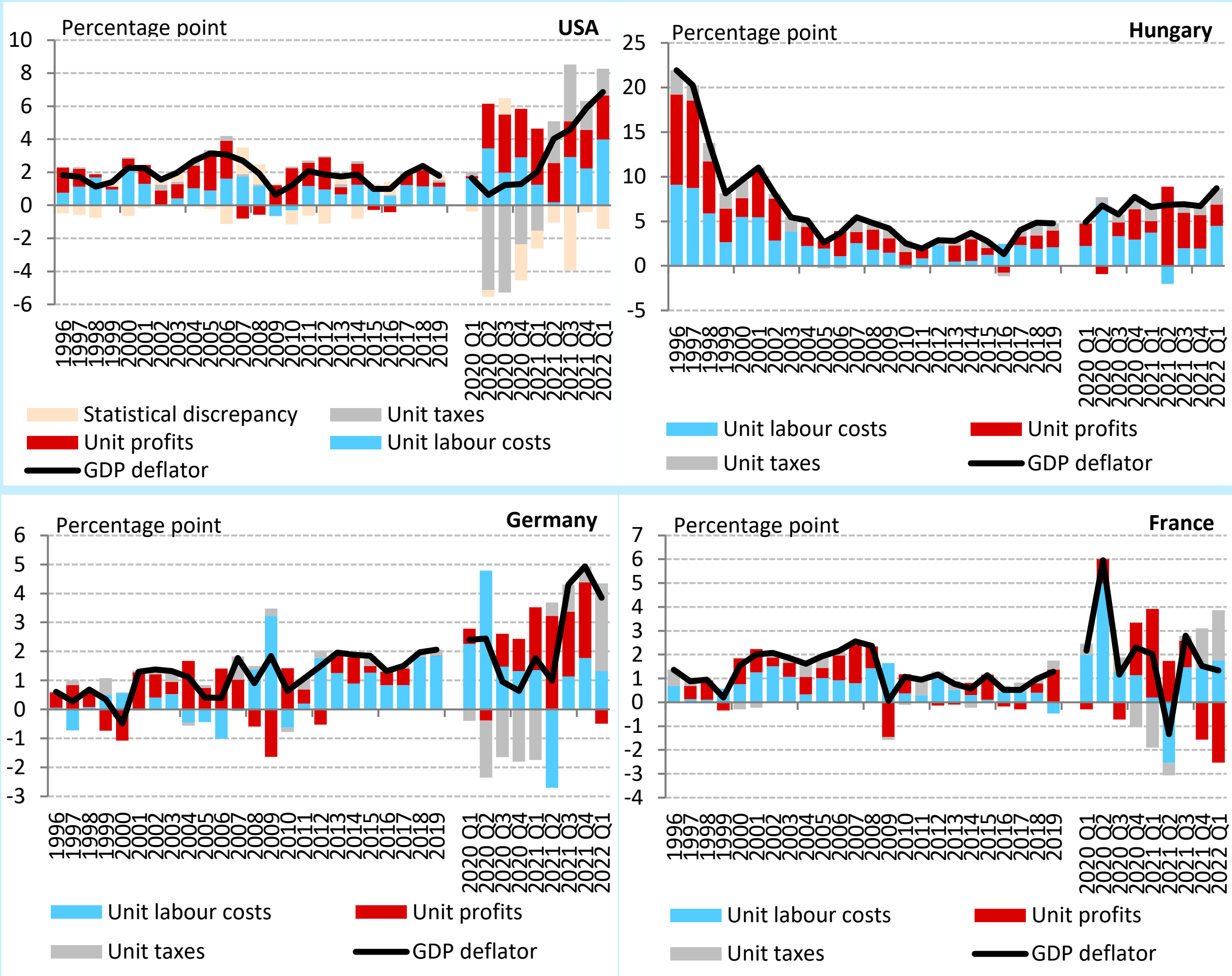
The change in the price level of GDP can be decomposed from the income side. In the income approach, nominal GDP is the sum of the labour costs, profit income and the balance of main tax items and subsidies. If both sides of the equation are divided by the base year average price GDP (in Hungarian practice, 2015), the evolution of the GDP price level is explained by the unit employee revenue, unit profit income and unit taxes and subsidies.

$$\frac{GDP^n}{GDP^{2015}} = \frac{LC}{GDP^{2015}} + \frac{P}{GDP^{2015}} + \frac{T}{GDP^{2015}}$$

The recent high price dynamics observed in the USA were mostly attributable to rising corporate profits, while employee revenues also contributed to the rise in the deflator. Examining the question in the above analytical framework, we found that in 2020 profits significantly contributed to the growth in price level of GDP, while their ratio declined in 2021 (Chart 3-17). International comparisons show different trends. In Germany, following the higher values registered in the past quarters, the contribution of unit profit was negative in 2022 Q1, while labour costs were relatively stable from the second half of 2021. In France, the contribution of unit profit income to the deflator already turned negative in 2021 Q4.

In Hungary, over the past two and a half decades on average almost half of the change in the GDP deflator was attributable to the changes in unit profits. During the pandemic, the contribution of unit profit was higher than average in several quarters. The outlier in 2021 Q2 may have been attributable to the stronger demand accompanying restarting of the economy and to supply side bottlenecks. It should be noted that the various labour market measures significantly influence the analyses in this framework. In 2020 Q2, the job protection wage subsidy caused a sharp rise in unit labour costs, and the same occurred in 2022 Q1 as a result of the administrative wage increases and the armed forces benefits.

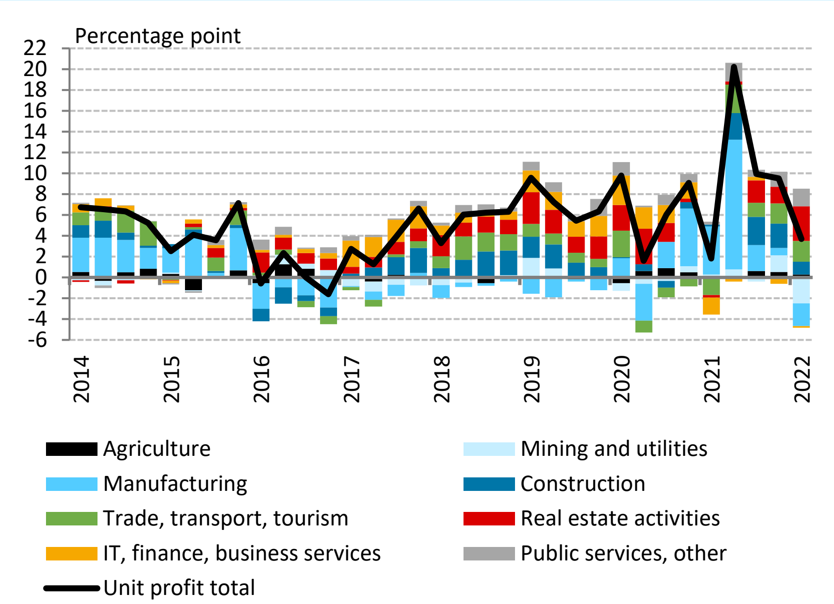
Chart 3-17: Decomposition of GDP deflator based on the income account



Note: In the case of Hungary, from 2015 the unit employee revenue is an MNB calculation based on national accounts and institutional statistics. Source: Eurostat, OECD, MNB

The annual change in domestic unit profit income can be also decomposed to sectors (Chart 3-18). In manufacturing, the stoppage related to the pandemic caused a significant deterioration in 2020 Q2. However, in parallel with the fast recovery of the sector, unit profits also improved. In 2020 H2 and in 2021 H1, manufacturing registered the largest profit increase (in the methodological framework we use). It should be noted that in 2022 Q1 the contribution of the sector was already negative. In recent quarters, construction and real estate transactions, together with the trade sector were the key contributors to the rise in profits.

Chart 3-18: Sectoral decomposition of the annual change in unit profit

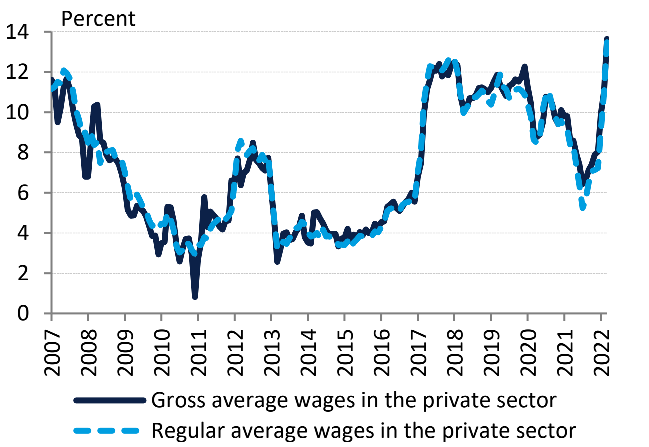


Source: MNB calculation based on Eurostat

3.3. Labour market

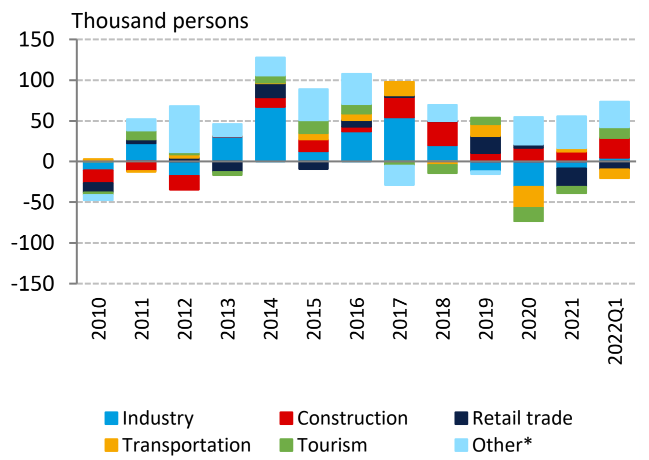
Gross average earnings in the private sector rose 13.7 percent in year-on-year terms in 2022 Q1. Among the countries of the region, Hungary's wage index was the highest. In addition to the large minimum wage increase and the one-off benefits at the start of the year, high underlying wage-setting trends also contributed to the current strong wage growth. In the first quarter, the average number of employed in the whole economy amounted to 4.674 million, up 107.000 on the same prior-year period. In recent months, the labour market continued to expand. Based on seasonally adjusted data, the number of people in employment is still at a historic high. Corporate labour demand is growing mainly in manufacturing and the service sector.

Chart 3-19: Annual change in gross average wages in the private sector



Note: Quarterly moving averages.
Source: HCSO.

Chart 3-20: Decomposition of annual changes in private sector employment



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

3.3.1. Wages

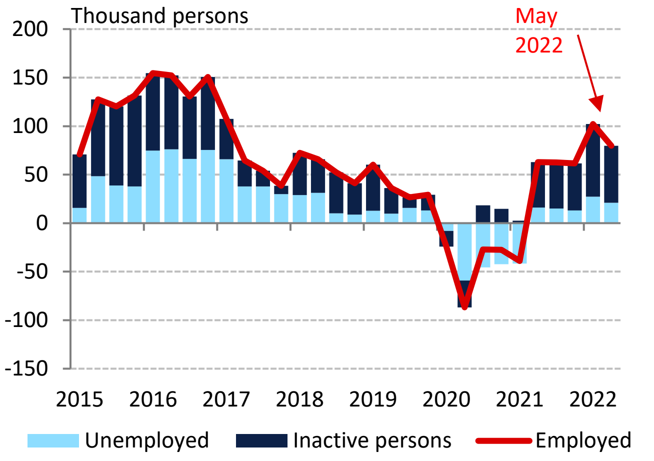
In 2022 Q1, gross average earnings in the private sector increased by 13.7 percent compared to the same prior-year period, up 5 percentage points on the last quarter of the previous year (Chart 3-19). Regular average earnings rose by 13.5 percent year-on-year, while bonus disbursements remained at a similar level as in the same period of last year. In the first quarter, annual wage growth was above 10 percent in most private sector industries. Wages in tourism and real estate transactions rose by 22 percent and 15 percent, respectively. Wage growth was more moderate, i.e. 5–6 percent, in the coke production, crude oil refining and pharmaceutical sectors. As a result of the wage review of doctors and nurses, gross wages in the health sector rose by 19.8 percent on an annual basis in the last quarter.

Based on the Q1 data. wage growth was the highest in Hungary among the countries in the region. Hungarian wage growth amounted to 21 percent in the fourth quarter. By contrast, wages in Poland, Romania and Slovakia rose by 11.2 percent, 9.8 percent and 8.9 percent, respectively, in annual terms. The surge in average wages was mainly attributable to the service benefit in the amount of six-months' salary for defence and law enforcement personnel (armed forces benefit), the wage increases and the large minimum wage and guaranteed wage minimum increases. For more details on the factors determining the higher wage dynamics, see Box 3-2.

3.3.2. Employment and unemployment

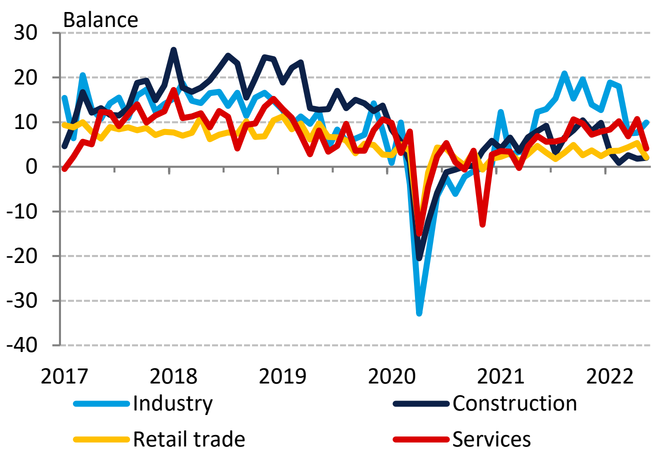
In recent months, based on the employment data the negative impacts of the conflict between Russia and Ukraine have not yet been felt in the labour market. Owing to the government's programme supporting the employment of dual Ukrainian-Hungarian citizens a large volume of labour force may appear in the market, which may ease the labour shortage. Total employment remains at a historically high level. The tax exemption for those below 25 may have also contributed to the rise in the

Chart 3-21: Decomposition of the annual changes in whole-economy employment



Note: Instead of 2022 Q2. monthly data for May is available. Changes in the number of unemployed and economically inactive have the opposite sign.
Source: HCSO

Chart 3-22: 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

labour force participation rate and in the number of people in employment.

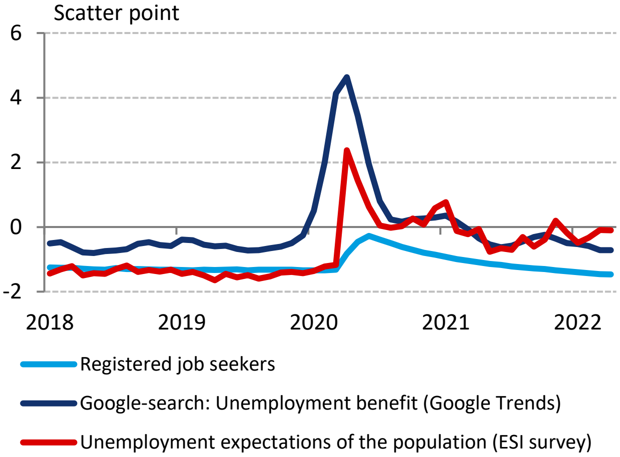
According to the Labour Force Survey, employment expanded by 107.000 in 2022 Q1 in year-on-year terms. The average number of whole-economy employees amounted to 4.674 million during this quarter. The primary labour market was the largest contributor to growth in employment. The number of fostered workers declined by 10.000, while those employed at places of business abroad increased by 14.000 versus one year ago. Private sector employment increased by 3.6 percent in year-on-year terms and by 0.6 percent compared to the previous quarter on a seasonally adjusted basis. The number of hours worked increased significantly, and thus the full-time equivalent (FTE) headcount rose by 6.3 percent in year-on-year terms. In the private sector, the number of employees grew substantially on an annual basis in transportation and in certain market services subsectors (tourism. real estate transactions), while it declined in agriculture, and in the area of administrative and service support activities (Chart 3-20). In the public sector, the decline in the number of employees in health care and education was mitigated by an increase in the number of those employed in administration.

In May 2022, the average number of employees aged 15-74 was 4.686 million. For the period March–May 2022, the average headcount was 4.693 million, representing an increase of 99.000 versus one year earlier (Chart 3-21)**.** According to seasonally adjusted data, the number of employed was the same as in the previous month. The seasonally adjusted unemployment rate fell to 3.5 percent in April from its Q1 level of 3.6 percent. Unemployment in Hungary is still considered low in an international comparison.

According to the ESI business survey, which monitors economic sentiment, companies' expectations regarding employment were positive at the beginning of the year, and headcount increases are planned in all major sectors. Demand for labour in manufacturing and the services sectors is higher than before the pandemic (Chart 3-22).

Despite increasingly tense global market sentiment, for the time being indicators capturing the short-term trends in unemployment do not indicate any labour market risks (Chart 3-23). In February, the number of registered unemployed was 234.000, lower than the annual level before the epidemic in 2019. The Google Trends indicator concerning unemployment benefits is low in a historical comparison. According to the ESI household survey,

Chart 3-23: Indicators capturing the short-term evolution of unemployment



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

households' fear of unemployment remained broadly unchanged in April compared to 2022 Q1.

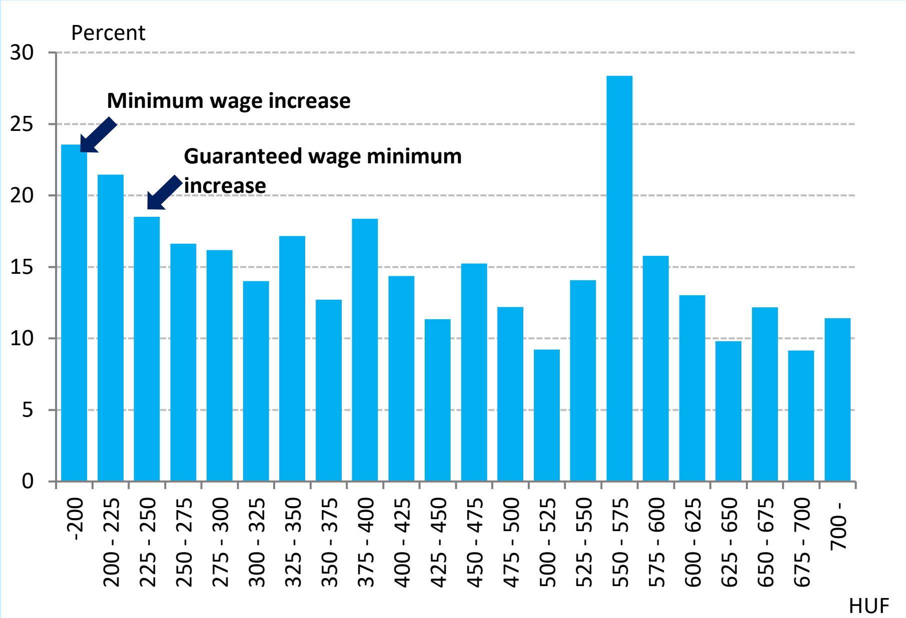
Box 3-2: Factors underlying the higher wage dynamics

In 2022 Q1, gross wages in the national economy and in the private sector rose by 21 and 13.7 percent, respectively, in year-on-year terms, with the latter representing a rise of 5 percentage points compared to the average of previous years. Thus, during this period, despite the rising inflation rate, private sector gross real wages grew by 5.5 percent, contributing to the rise in households' disposable income.

The large minimum wage increase and one-off benefits paid early this year played a significant role in the current high wage dynamics. In 2022, the minimum wage and guaranteed wage minimum rose by 19.5 and 18.5 percent, respectively, in annual terms. The minimum wage increase primarily raises the wage of those in the lower income brackets; however, as a result of wage compression it has an impact on earnings up to the level of the average wage. In addition to the minimum wage increase, one-off benefits also increased the gross average wage. Military and law enforcement personnel received six months' pay on average in February 2022, and thus the annual dynamics of average gross wages in public administration rose by 184 percent in that month. Wage growth in this sector increased the Q1 national economy wage index by 6 percentage points.

A double-digit wage increase was registered also in the higher income brackets, which implies strong underlying wage setting trends. Underlying wage setting trends are robust, which is evidenced by the fact that the regular average wage net of benefits rose at a similar rate as the gross average wage in the private sector. The monthly dynamics in regular wages exceeded that of previous years in each month this year. Gross average wages rose by around 10 percent also in the top income brackets in 2022 Q1 (Chart 3-24), which suggests that, in addition to the minimum wage increase, other factors are also contributing to the strong wage growth.

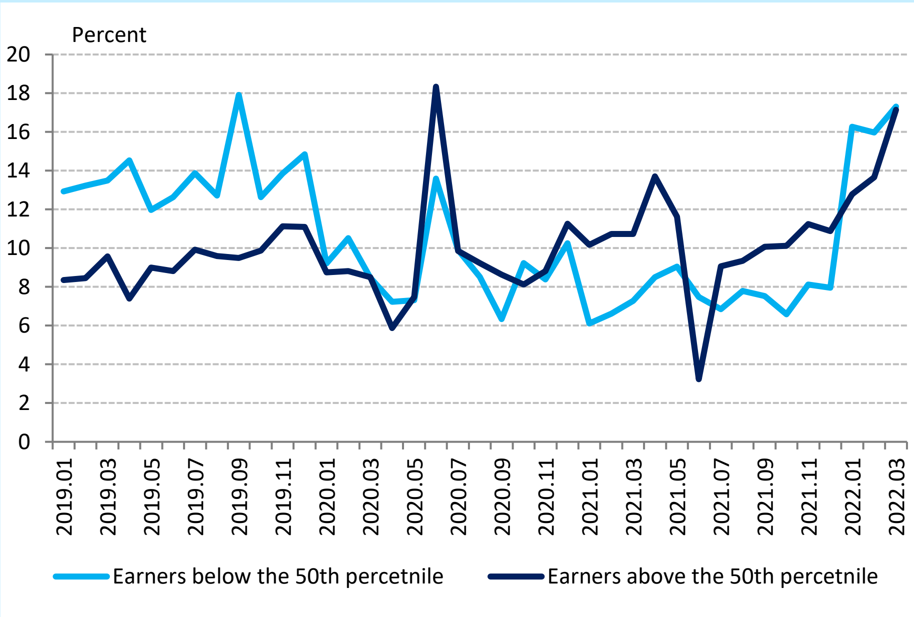
Chart 3-24: Annual wage dynamics of earnings categories in 2022 Q1



Note: The earnings categories were determined based on the average wage in 2021.
Source: HCSO

Wage growth is also supported by the increasingly tight labour market. The Hungarian labour market remained resilient to the crisis caused by the coronavirus pandemic. At the end of 2021, it once again achieved full employment, and the seasonally adjusted unemployment rate fell consistently below 4 percent. Labour market tightness is approaching its pre-pandemic level, registered at the end of 2019, when the labour market was tightest. Labour shortages appearing in an increasing number of sectors (mainly construction. IT) provide workers with more room to enforce their wage claims. Those earning above the average also benefit from double-digit wage dynamics, which implies high underlying wage setting trends (Chart 3-25).

Chart 3-25: Annual wage dynamics in income brackets earning below and above the average

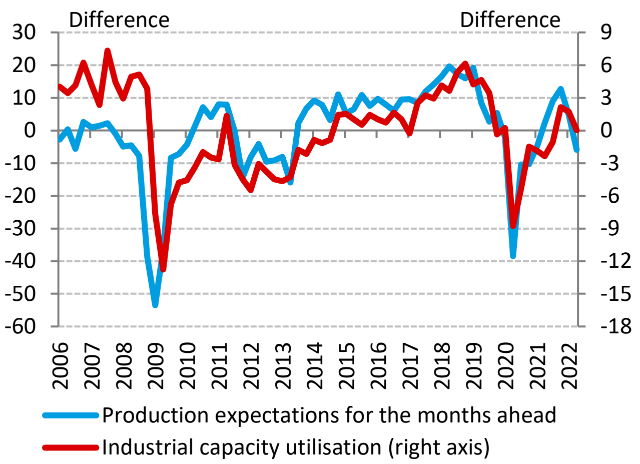


Source: HCSO

3.4. Cyclical position of the economy

The Hungarian economy continued to recover in 2022 Q1. The cyclical position of the economy has improved in recent quarters, allowing output to reach its potential level. Changes in the cyclical position involve even greater uncertainty than usual, and the quantification and separation of demand and supply effects is very difficult in the current situation. Looking ahead, the war between Russia and Ukraine further increases uncertainty, as new supply problems may emerge in the commodity market. Pressures on global supply chains may once again increase, and difficulties in transport point to an increase in inflation. The capacity utilisation of manufacturing companies declined in recent months, and production expectations also deteriorated.

Chart 3-26: Capacity utilisation and production expectations in manufacturing



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

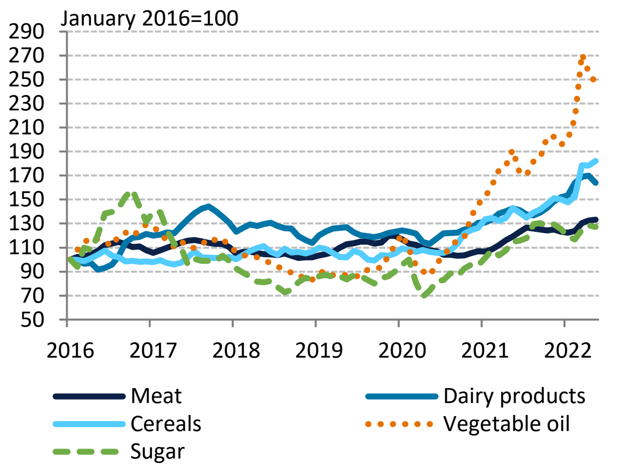
According to our estimations, the cyclical position of the economy has improved in recent quarters, allowing output to reach its potential level. Changes in the cyclical position involve even greater uncertainty than usual, and the quantification and separation of demand and supply effects is difficult in the current situation. Looking ahead, the war between Russia and Ukraine further increases uncertainty, as new supply problems may emerge in the commodity market. Pressures on global supply chains may once again increase, and difficulties in transport point to an increase in inflation.

According to the questionnaire-based surveys, the capacity utilisation of manufacturing companies has declined in recent months, thus returning to the level around the historical average (Chart 3-26). The production expectations related to the coming months deteriorated to a larger degree than the capacity utilisation and were already below the historical average.

3.5. Costs and inflation

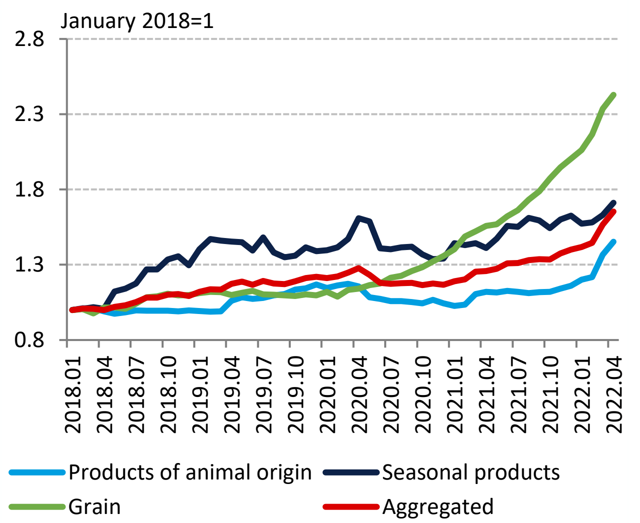
The annual growth rate of consumer prices was 10.7 percent in May. The underlying reasons for the significant increase in inflation observed in recent months primarily include the rise in food prices and the significant repricing of industrial goods and market services. A large part of the price increase in Hungary continues to be explained by external factors. The higher repricing rate, which substantially exceeds that observed in recent years, is a general phenomenon, which is attributable to the fact that the rise in global commodity and energy prices and transportation costs appears swiftly in the consumer prices of a wide range of products. Core inflation excluding indirect taxes rose above 12 percent in the past months. The rise in core inflation is explained by the accelerating price increases in all three product groups (processed food, industrial goods and services). Inflation of processed food and industrial goods has exceeded 20 percent and 10 percent, respectively, since March. The indicators capturing longer-term inflationary trends have been continuously rising in recent months.

Chart 3-27: Development of world market prices of food



Note: Real price indices.
Source: FAO

Chart 3-28: Development of agricultural prices



Note: Based on seasonally adjusted data.
Source: HCSO

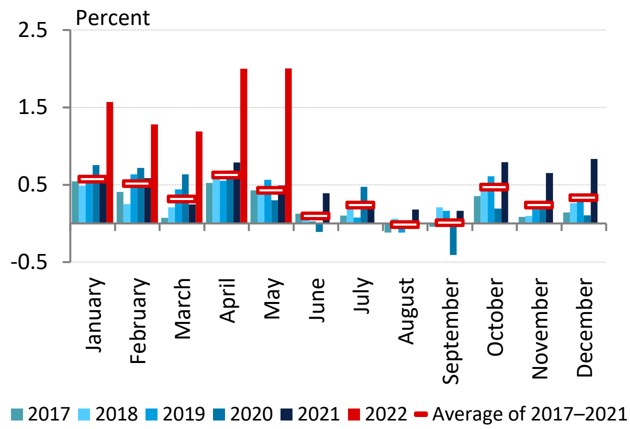
3.5.1. Producer prices

The rise in world market food prices continued in recent months, although there was some correction in May. In terms of cereals, quotes for wheat rose to the largest degree, which is attributable to the increased demand and the global supply uncertainties resulting from the disturbances in the main wheat exporter countries. The recent rise in the price of oil crops was supported by scarce global supply and the increase in world market crude oil prices; however, in May, the effect of the fall in demand was also reflected in the prices (Chart 3-27).

Domestic agricultural producer prices continued to rise compared to the previous quarter, showing a more than 20-percent year-on-year increase in 2022 Q1. The largest increase can be still observed in grain prices, which rose by 50 percent year-on-year in 2022 Q1. This rise was equally attributable to wheat and oil crops. The price of products of animal origin rose further compared to 2021 Q4, which was mainly attributable to the rise in poultry, milk and egg prices. Meanwhile, there was a moderate correction in the producer prices of fruits, which only partially offset the further substantial rise in vegetable prices (Chart 3-28).

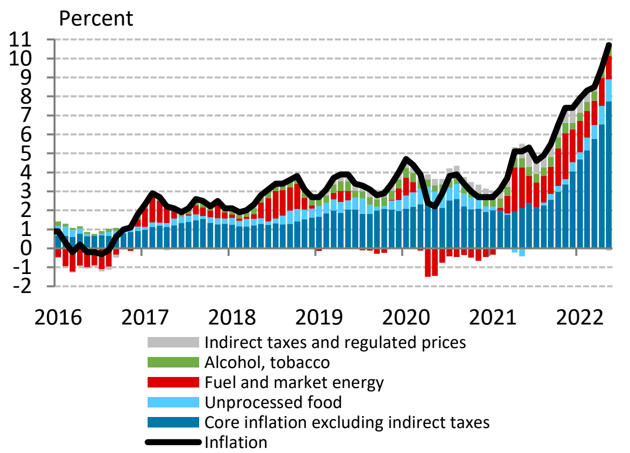
In the case of consumer goods, compared to the same period of the previous year, the rise in domestic industrial producer prices exceeded the historical average by several times up until April 2022. The domestic sales prices of industry as a whole showed a year-on-year increase of around 40 percent – exceeding the historical average by more than eight times – mostly driven by the rise in commodity prices and the energy producing sector, in line with the rise in global energy prices and their high level compared to the average of previous years, which was also attributable to the conflict between Russia and Ukraine. External, expenditure-side effects continue to infiltrate into consumer prices rapidly. Accordingly, Box 3-3 deals in more detail with the link between producer and consumer prices.

Chart 3-29: Monthly price changes of consumer prices excluding fuel and regulated prices



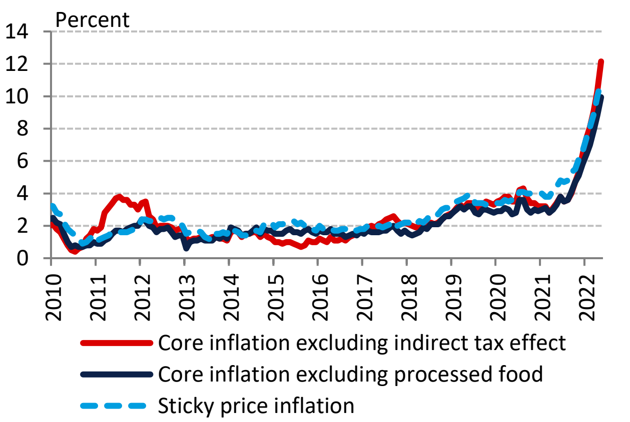
Note: Tax-adjusted, seasonally unadjusted monthly change.
Source: MNB calculation based on HCSO data

Chart 3-30: Decomposition of inflation



Source: MNB calculation

Chart 3-31: 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

3.5.2. Consumer prices

The annual growth rate of consumer prices was 10.7 percent in May (Chart 3-29). **In May, the monthly price change of the basket excluding fuels and administered prices was 2.0 percent, six times higher than the May values registered in previous years.** The underlying reasons for the significant increase in inflation observed in recent months primarily include the rise in food, industrial goods and market services prices (Chart 3-29). A large part of the price increase in Hungary is explained by external factors. The increase in global commodity prices and transportation costs is gradually reflected in the consumer prices of a widening range of products, leading to historically high inflation worldwide, exceeding analysts' expectations.

Core inflation excluding indirect taxes advanced to 12.2 percent in May. The rise in core inflation is due to price developments in processed food, industrial goods and market services. The indicators capturing longer-term inflationary trends have been continuously rising over the past period (Chart 3-30).

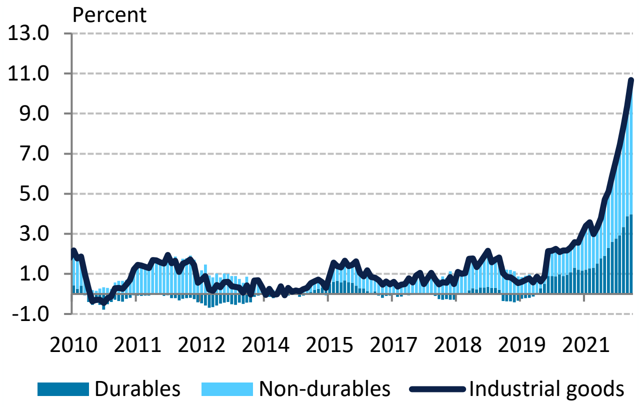
Industrial goods inflation exceeded 10 percent in May. The rise in the price of industrial goods is substantially larger than the average recorded for previous years, in line with international trends. The global semiconductor shortage and the high level of base material prices also pointed to a rise in the consumer prices of the product group. Within this product group, inflation of durable goods rose to 11.4 percent, while inflation of non-durables reached 10.3 percent (Chart 3-32 and Chart 3-33).

Market services inflation increased to close 9.0 percent from March. In recent months, the monthly price increase was two or three times higher than in previous years and characterised a wide range of services. Similarly to previous periods, prices of food-related services (restaurant and catering services) accelerated further (Chart 3-34).

Prices of alcohol and tobacco products recently rose to a more moderate degree than last year, climbing by 6 percent on average year-on-year. The fall in the annual price index of this product group is attributable to the gradual disappearance of the impact of earlier excise duty hikes.

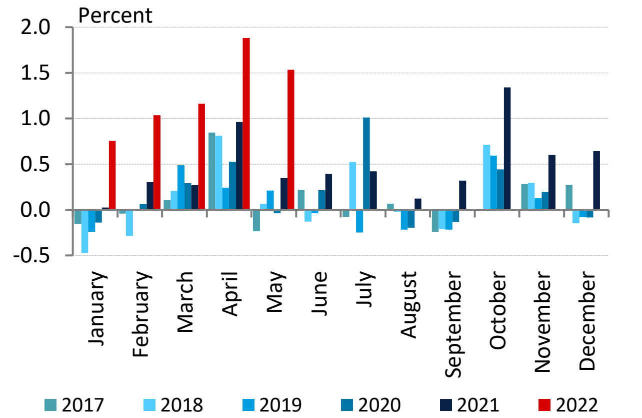
Food inflation rose to 20.2 percent in May, well above the historical average for this product group. Unprocessed and processed food inflation accelerated to around 19 percent and 21 percent, respectively. The main contributor to the former was the change in the prices of seasonal products (fresh fruit, potatoes) and to the latter the changes in the

Chart 3-32: Inflation of industrial goods



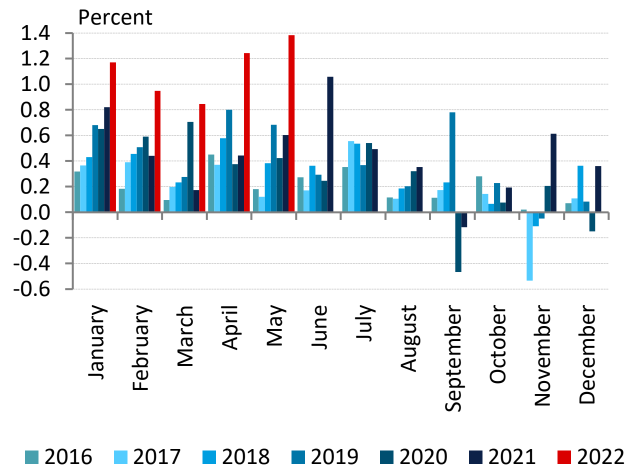
Note: Annual change, excluding the effect of indirect taxes.
Source: MNB calculation based on HCSO data

Chart 3-33: Monthly price changes of traded goods



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

Chart 3-34: Monthly price change of market services



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

prices of a wide range of products. The price cap introduced by the government on staple food products has curbed the pace of price increases in recent months.

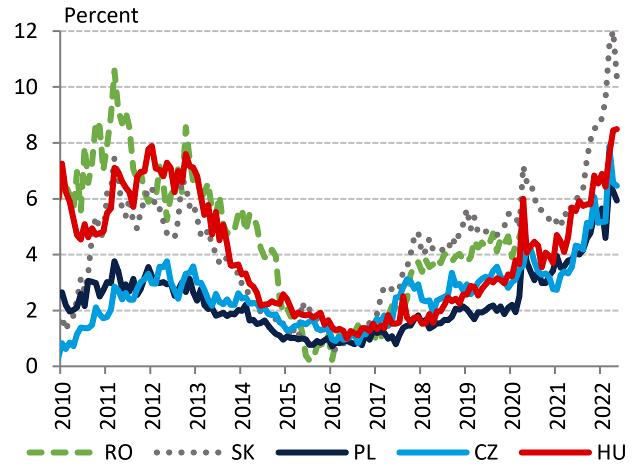
Consumer prices of fuels were recently shaped by government measures, which curbed the spillover effect of the rise in world market oil prices. Fuel inflation changed from 18.7 percent in February to 10.8 percent in May. The price cap in force since 15 November 2021 substantially mitigates the inflationary effect of the world market oil price increase on fuel prices, maximising the price at HUF 480 for domestic consumers.

Based on data from recent months, inflation was higher than the forecast in the March Inflation Report. It is a global phenomenon that actual figures regularly exceed previous forecasts. The underlying reasons for the strong inflation include the sharp rise in food prices, supply-demand imbalances and intense energy market disturbances.

3.5.3. Inflation expectations

Households' inflation expectations rose compared to February and continue to exceed the central bank's target band. In the countries of the CEE region, inflation expectations increased on the whole compared to the beginning of the year, in line with the recent rise in inflation. On the other hand, in May a moderate correction was observed compared to April in the countries of the region (Chart 3-35). For more details on inflation expectations, see Box 3-4.

Chart 3-35: Inflation expectations in the region



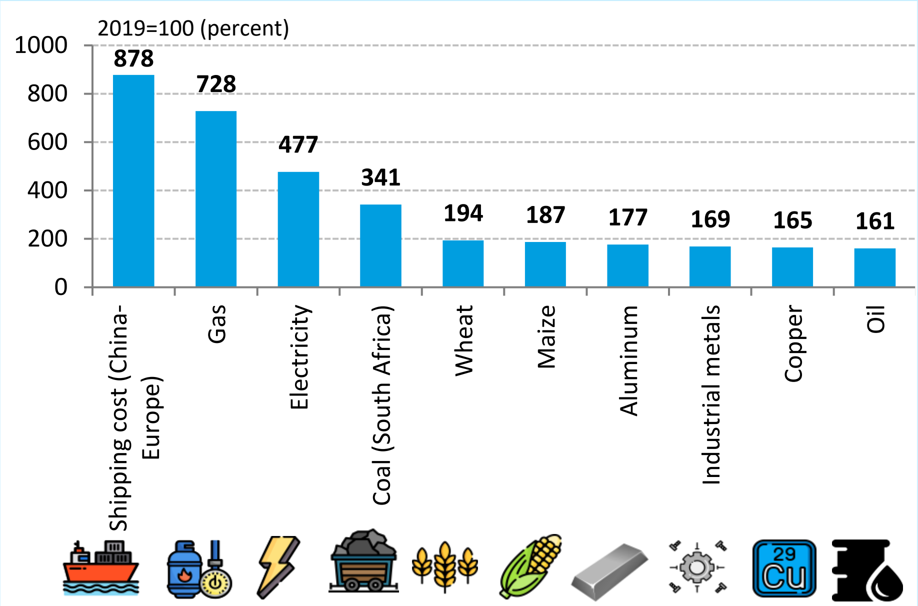
Note: No data are available for Romania since May 2020.

Source: MNB calculations based on European Commission data

Box 3-3: Correlation between industrial producer and consumer prices

In the past period, domestic producer costs increased significantly as a result of several external factors. External, expenditure-side effects continue to rapidly pass through into consumer prices, thus playing a major role in short-term inflation developments. From the second quarter of last year, the rise in producer prices was mainly driven by global supply chain tensions, increasing transportation costs and rising commodity prices. From autumn 2021, energy costs surged higher, with the price of gas and electricity climbing to historic highs. Since the outbreak of the war between Russia and Ukraine at the end of February, the world market price of crude oil also rose to a 10-year high, exceeding the level of USD 100 per barrel. Compared to the period before the coronavirus pandemic, the world market price of crude oil rose by more than one and a half times, the price of electricity increased by almost five times, while transportation costs from China to Europe registered an almost ninefold rise (Chart 3-36).

Chart 3-36: Price change of main commodity and energy market products and shipping compared to 2019

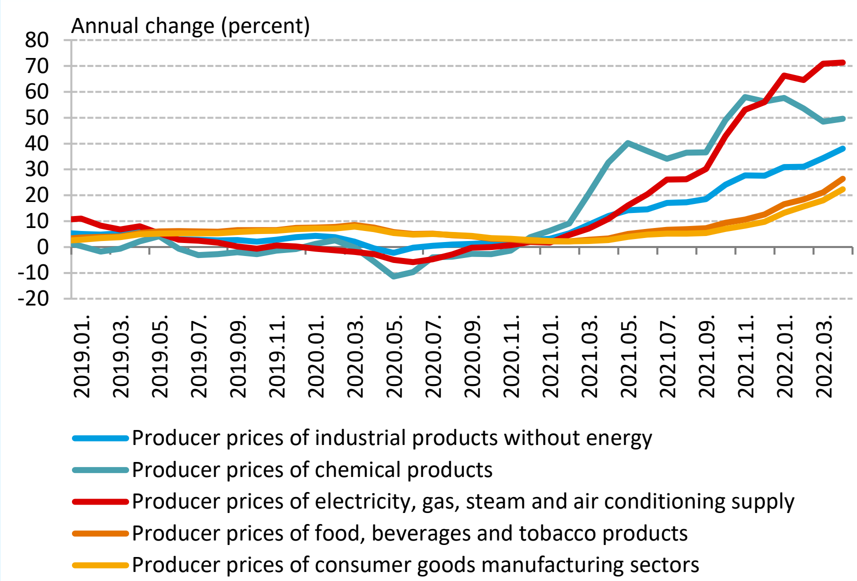


Source: MNB calculation based on Bloomberg and World Bank data

As a result of the sharp increases in costs, producer prices rose in all sectors and throughout Europe. In the euro area, producer prices rose by more than 34 percent on average for January-April in annual terms, while in the first months of 2022, double-digit increases were also observed in the countries of the CEE region. In Romania, the change in industrial producer prices in March was as high as 60 percent.

In line with international trends, producer prices of industrial products in Hungary increased by 38.3 percent year-on-year between January and April. The higher dynamics of producer prices is largely connected to the energy-producing sector: in the first four months of the year, the producer price index of this sector rose by more than 68 percent on average. On the other hand, the producer price of industrial goods increased by 33.6 percent at the beginning of the year even without the energy sector. Within manufacturing, the producer price of chemicals rose by more than 50 percent compared to the first four months of last year. Producer prices of food, beverages and tobacco products climbed by 20.6 percent, while those of the consumer goods manufacturing sectors rose by 17.3 percent year-on-year at the beginning of 2022 (Chart 3-37).

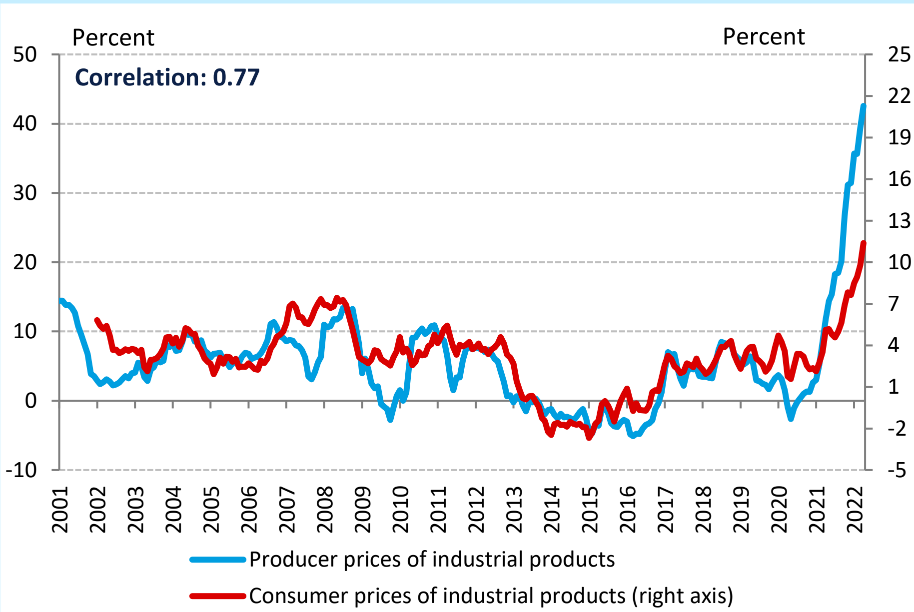
Chart 3-37: Annual change in the producer price of Hungary's main industrial sectors (percent)



Source: HCSO, MNB calculations

The producer price of consumer durables and the consumer price of this product group have shown close co-movement in the past; this currently implies that the increase in producer prices has not yet fully passed through into consumer prices (Chart 3-38). The differences between the dynamics of the producer and consumer price indices suggest that repricing dynamics, exceeding previous seasonal patterns, may continue in the coming period. Higher repricing in consumer prices of industrial goods compared to previous years already commenced at the end of last year. Based on data from recent months, an increasing range of products are characterised by substantial price increases. In May, industrial goods prices rose by 10.7 percentage points, matching the trends also observed in producer prices. Looking ahead, via rising corporate expenditures, higher producer prices may appear primarily in the consumer prices of food and industrial goods, thereby contributing to the rise in inflation. However, government measures (capping fuel prices. excise tax cuts. freezing the prices of some certain staple food items. and utility tariff cuts) play a significant role in curbing the pass-through of commodity and energy prices in Hungary.

Chart 3-38: Evolution of producer prices and consumer prices of industrial goods



Note: Consumer prices of industrial products mean the price index of those products in the consumer basket that can be mapped with the sectors and subsectors constituting the producer prices of industrial goods.
Source: HCSO, MNB calculations.

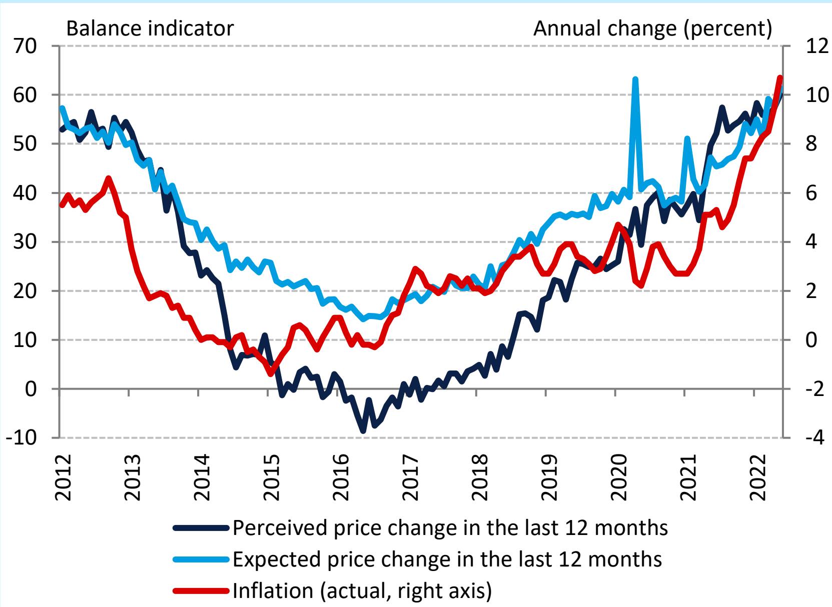
Box 3-4: Changes in inflation expectations

Inflation expectations are of the utmost importance for inflation-targeting central banks. In addition to inflation expectations, the monitoring of perceived inflation is also important, as these data determine not only the macroeconomic forecasts, but also the monetary policy. Data related to inflation expectations and perceived inflation are available to us from questionnaire-based on qualitative surveys. In the case of questionnaire-based surveys, it should be taken into account that the heterogeneity of the respondent households, in particular their different information base, can make the results noisy and volatile. Despite this bias, households' inflation perceptions and expectations may provide meaningful information on short-term inflation developments.

Based on the estimations, domestic inflation expectations are essentially backward-looking,[2] i.e. their evolution is significantly influenced by past inflation. Households' price index expectations are influenced both by the central bank's inflation forecasts and the economic policy decisions, both monetary and fiscal. In addition, it is an important feature of inflation expectations and inflation perception that the goods and services that households purchase more often, consume daily or use regularly – e.g. food or fuels – have a higher weight in inflation expectations. As a result of the foregoing, the perceived and expected inflation may be more sensitive to price changes for more frequently purchased goods and services and may differ from the actual price changes measured by the HCSO.

The difference between expected, perceived and real inflation disappeared in recent months, which is the first sign of the stabilisation of inflation expectations. When examining the responses related to perceived and expected price changes, we find that the difference that persisted between them in recent years disappeared, i.e. the expected and perceived inflation 'caught up' with each other (Chart 3-39). This may suggest that at present households perceive the inflation that they expect for the future, and thus looking ahead no additional inflation effects should be expected from consumer expectations.

Chart 3-39: Perceived and expected price change, and evolution of actual inflation in Hungary



Note: The balance indicator in this case is the difference between the percentage of responses to price increases and the percentage of responses to price decreases.
Source: European Commission, HCSO, MNB

[2] See: Péter Gábriel - Judit Várhegyi (2014): Inflation expectations Hungary, MNB Occasional Papers 113.

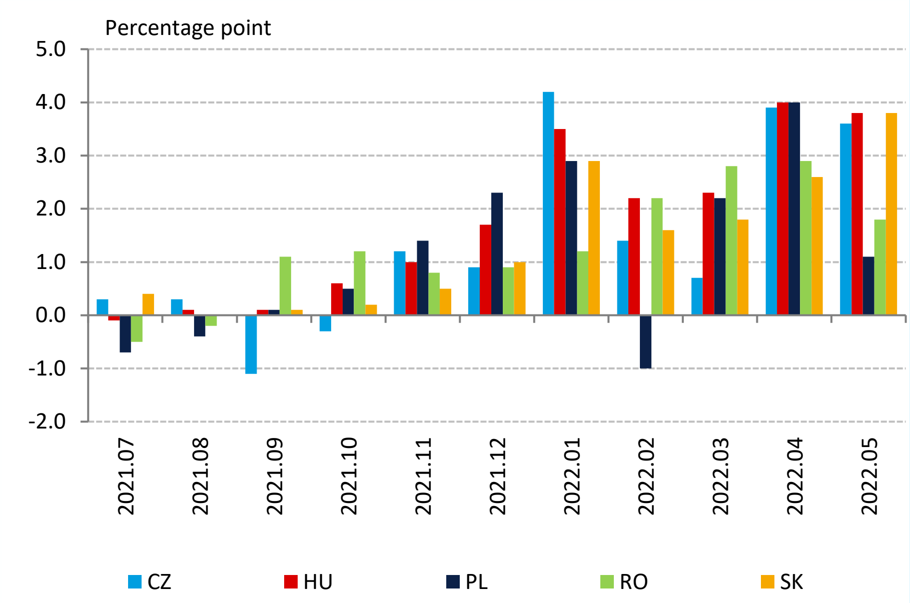
Box 3-5: Inflationary effects of rising food prices

As the increase in food prices significantly contributed to the acceleration in inflation, we examined what cyclical pattern followed the previous years' major agricultural price rises and to what extent it was reflected in the consumer prices of food products. According to our findings, around one half of the sudden rises in agricultural prices remained persistent in the past, while the initial rise in level remained completely in the food prices perceived by consumers. It means that asymmetry can be detected in terms of pricing, which may decelerate the start of the disinflation process following the turn of the commodity price cycle and within that the food price cycle.

Rising food prices are typical of the entire region

In the first months of this year, food price rises accelerated in each country of the region, exceeding the general dynamics observed in the European Union (+7.1 percent in January–May). In the first five months of the year, the increase in food prices measured on a monthly basis was around 1–4 percent in the region, with the highest value in April (Chart 3-40).

Chart 3-40: Monthly food price dynamics in the countries of the region

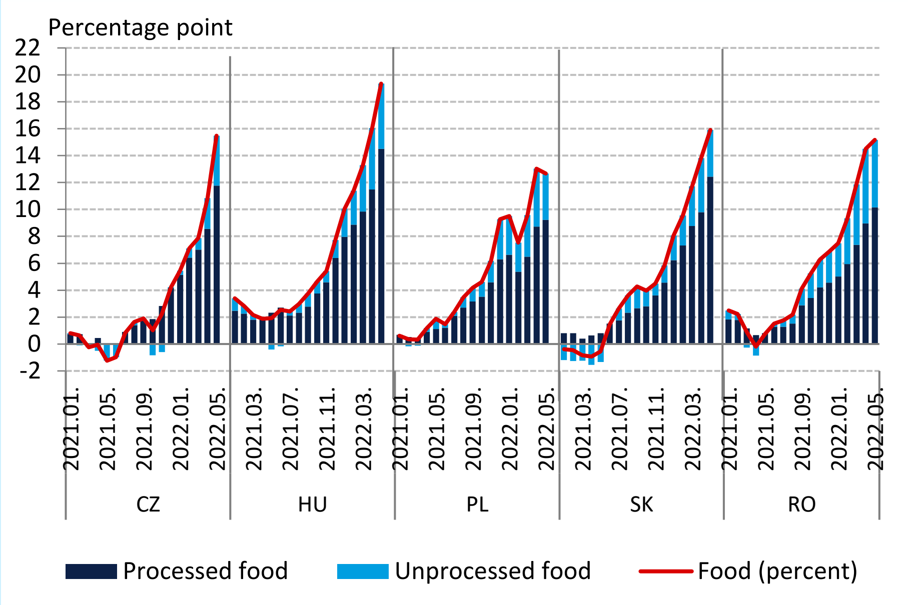


Note: Based on HICP data.

Source: Eurostat, MNB calculation

In view of the accelerating monthly repricing, food inflation measured on an annual basis increased to above 10 percent in the countries of the region, reaching the highest value in Hungary. It is a general phenomenon that the price rise of processed food is the main contributor to food price increases (Chart 3-41). In Hungary, in the case of processed food the price rise of dairy products was the determinant in the past months (+19.7 percent in January–May), whereas in terms of unprocessed food the price index of meat products was a major contributor to the increase in prices (+12.1 percent in January–May). In Hungary, the inflation of foodstuffs contributed to the 10.7 percent inflation measured in May by 3.9 percent.

Chart 3-41: Food price inflation in the countries of the region



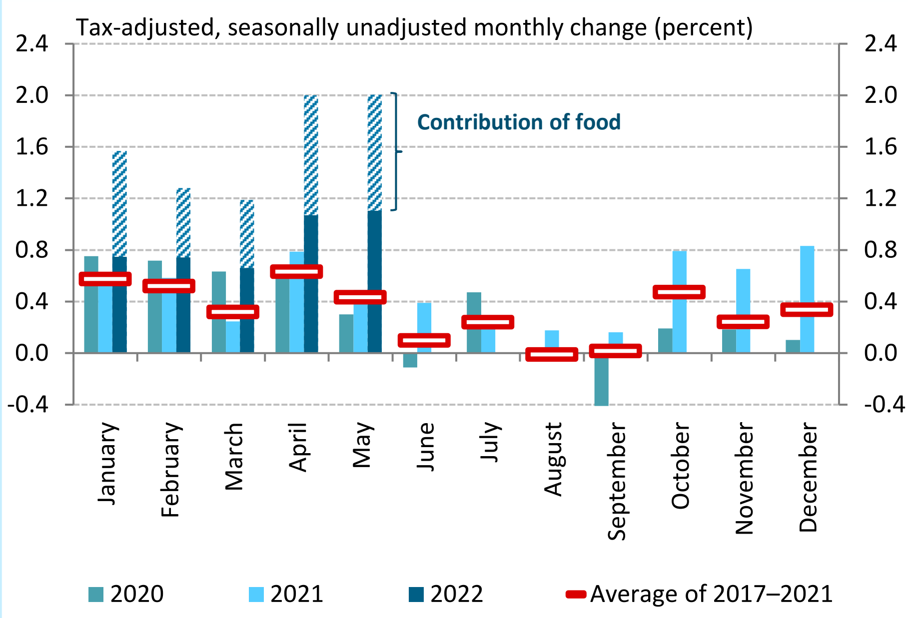
Note: Based on HICP data.

Source: Eurostat, MNB calculation

The inflationary effect of food products is significantly affected by the fact that their weight in the consumer basket in Hungary is relatively high in European comparison. On average, the share of foodstuffs in the V4 countries' consumer baskets is 3.0 percentage points higher than the EU average (15.9 percent). Food accounts for nearly 20 percent of consumption expenditures in Hungary and around 30 percent in Romania. If the weight of foodstuffs in the Hungarian consumer basket was similar to that in the European Union, on the basis of May data, the contribution of food products to inflation would be 0.7 percentage point lower.

In order to attenuate food price rises, various government measures were introduced in Hungary and Poland in the past period. In Hungary, starting from February 2022. the maximum prices of 7 basic food products were fixed at the level where they had been on 15 October last year, while in Poland the VAT on food products whose VAT rate had been 5 percent was reduced to zero from February until July 2022. Price dynamics below the regional average have been observed since February in the product groups affected by the limitations, while the prices of other products increased faster than the regional average. As a result, nearly half of the monthly price changes stemmed from the changes in food prices in the first five months of the year (Chart 3-42).

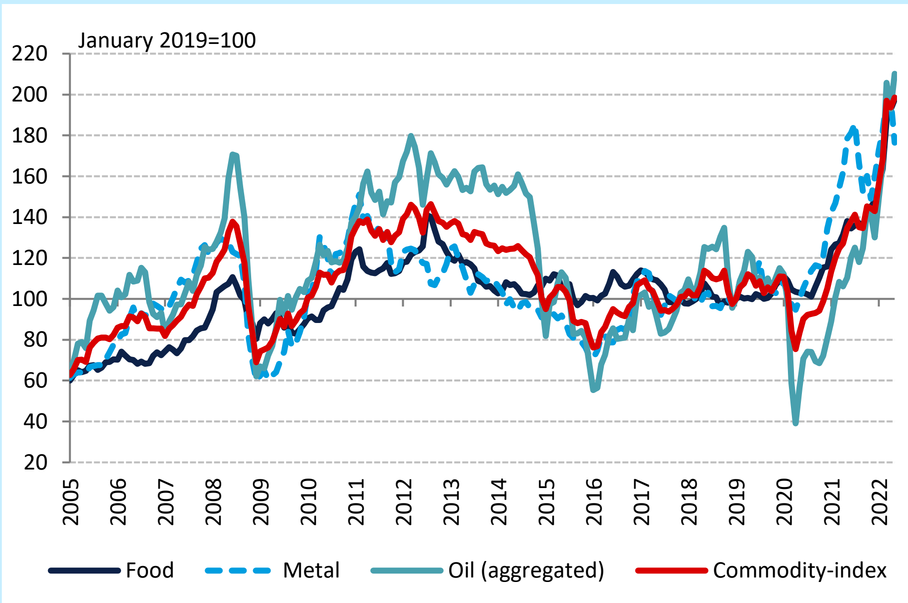
Chart 3-42: Monthly changes in consumer prices excluding fuel prices and administered prices



Note: Seasonally unadjusted monthly changes excluding indirect tax effects.
Source: MNB, HCSO.

Agricultural prices rose in line with global market developments in the past period. Simultaneously with the gradual restart of economies following the coronavirus pandemic and with the evolving of global supply problems, general increases in both commodity (Chart 4-43) and food prices were observed. The conflict between Russia and Ukraine resulted in a further increase in energy and commodity prices, whose impact indirectly affects food prices as well through the production costs. The FAO Food Price Index has been at a historical high since February (Chart 3-44). Between January and May, the prices of wheat and corn rose by 40 percent and nearly 30 percent, respectively. Concerning the commodity exchange prices of wheat and corn, developments in the war as well as the changes in areas under cultivation and average yields carry uncertainties in the two major exporting countries. The surge in food prices significantly contributed to the recent rise in inflation, and therefore we examined how much time it was needed historically for the adjustment of food prices following major food price increases and how it is correlated with the changes in consumer prices of food.

Chart 3-43: Changes in price levels of commodities in euro

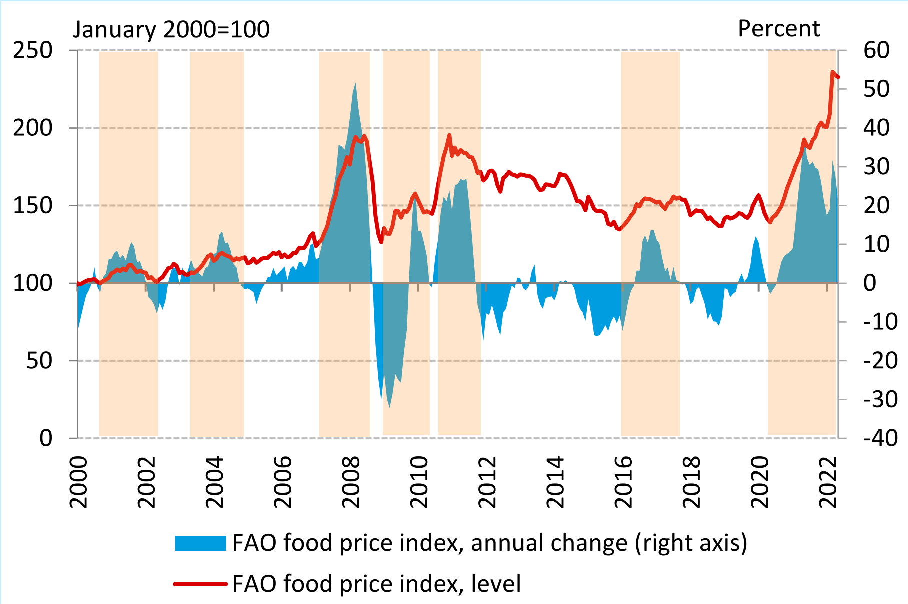


Source: World Bank

Produce prices usually declined following surges in the past, but consumer prices remained high

In the past 20 years, 7 periods can be identified when the rise in global food prices was persistently above the historical average, starting in the years listed here: 2001. 2004. 2008. 2009. 2011. 2016 and 2021 (Chart 3-44). In three and two of the seven periods the greatest increases in the FAO Food Price Indices exceeded 10 percent and 20 percent, respectively. In May 2021, the surge in food prices was nearly 40 percent, whereas global food prices were more than 50 percent up in early 2008 (Chart 3-45).

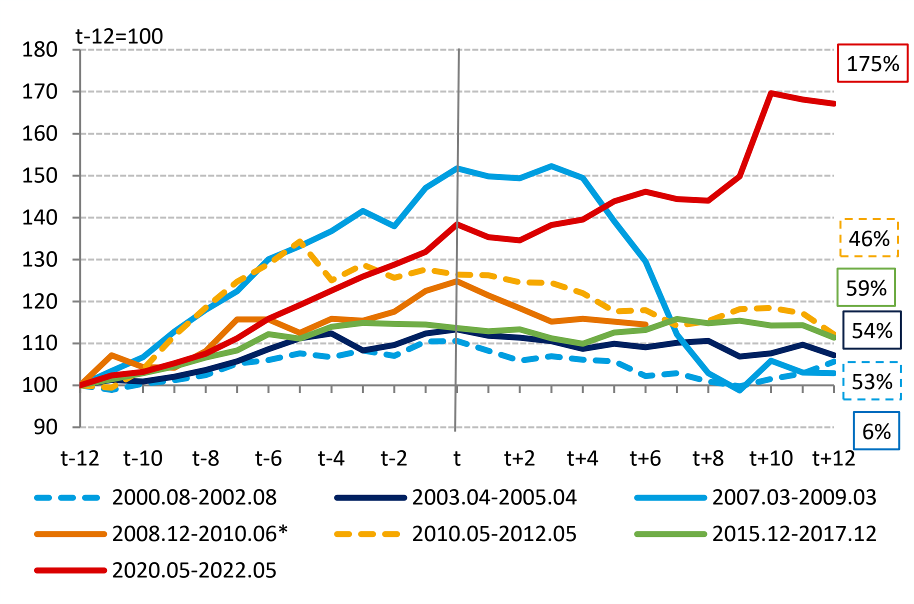
Chart 3-44: Annual change in the FAO Food Price Index and the developments in its level



Note: The FAO Food Price Index represents the price changes of meat, dairy products, cereals, oil crops and sugar.
Source: FAO

Agricultural prices were characterised by adjustment following phases of increase, and thus typically 50 percent of the rise in prices persisted. The global food shocks under review became adjusted completely in 2008–2009, i.e. commodity prices returned to the levels seen prior to their rise. In another four periods some 50 percent of the price rise remained permanently in place. In 2016–2017, food industry raw material prices declined by a mere 20 percent compared to the peak. By contrast, at present no adjustment is seen for the time being, but the price rise has been going on for two years, and following 38 percent in the first year, producer prices of food increased by a further 21 percent in the second year, (Chart 3-45).

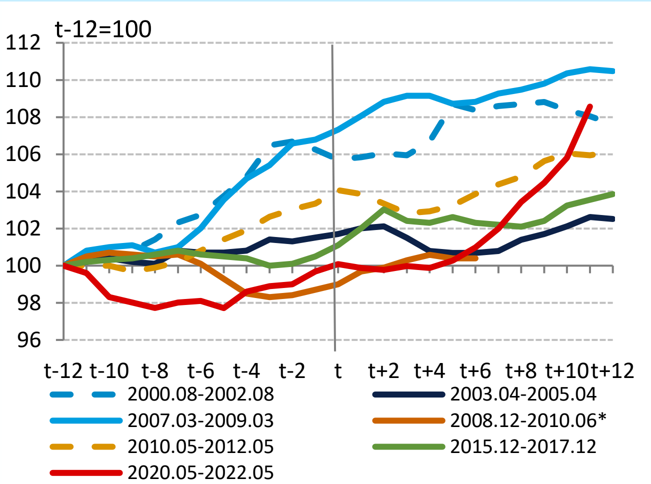
Chart 3-45: FAO food price index level change

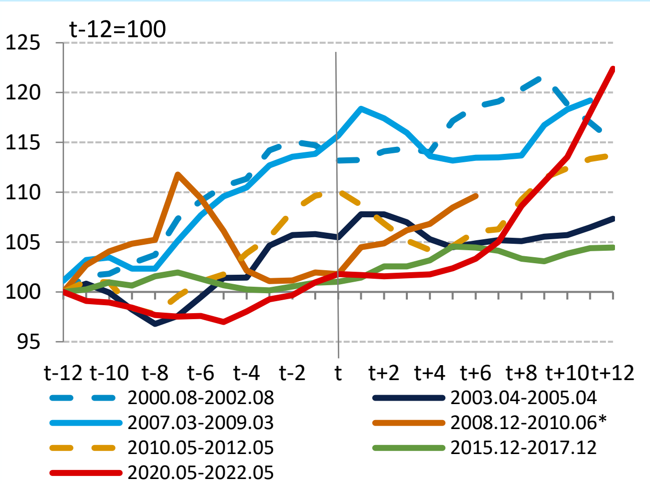


Note: The local maximum of the periods that permanently exceed the historical average was fixed as t=0. Then we examined the preceding and subsequent 12 months symmetrically for the t=0 point of time. *The period between December 2008 and June 2010 is shorter (lasting from t-12 until t+6) as the shocks peaking in December 2009 and May 2011 are close to one another in time, and thus an overlap would have evolved between the time windows.
Source: FAO, MNB

As opposed to producer prices, the consumer price of foodstuffs did not decline even following the peak of the food price shocks. The rise in the global food price index passed through into inflation as well each time. Moreover, the pattern taking shape in the past decades was that even if agricultural prices declined globally following the peaks of the individual cycles, consumer prices of food products did not adjust in the European Union or Hungary, but remained at the high levels that they had reached (Chart 3-46). At present, the upswing in producer and commodity prices and their feed-through into consumer prices is still going on. Pricing asymmetries indicate that if geopolitical tensions ease and the commodity price cycle reverses, consumer prices will not show any adjustment. The underlying explanation is that the companies that raise prices because of the raw material price increase do not continue the downward repricing after the decline in the world market prices of commodities, which limits the decrease in consumer prices.

Chart 3-46: Consumer price levels of food products in the European Union (left panel) and in Hungary (right panel) during the waves of price increases





Source: Eurostat, MNB.

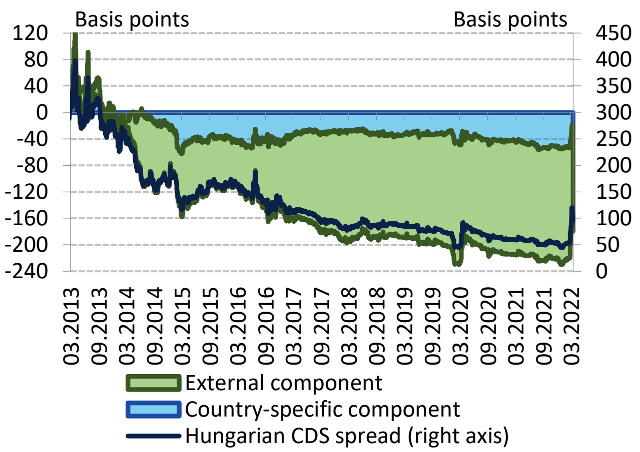
Source: HCSO, MNB

4. Financial markets and interest rates

4.1. Domestic financial market developments

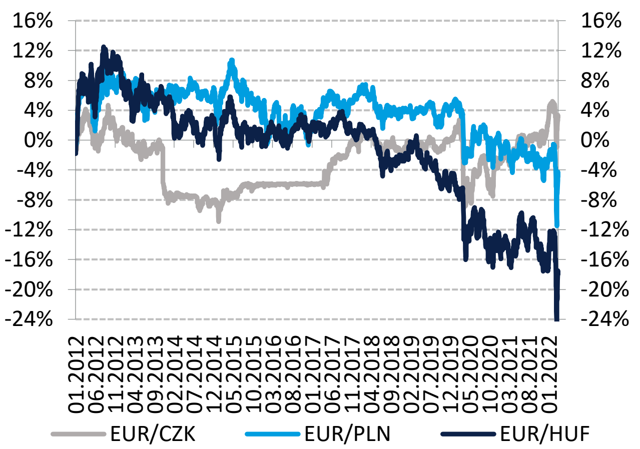
Financial and capital market sentiment remained unfavourable in the past quarter, and volatility in the developed markets was high. Due to mounting tensions, commodity and energy prices once again rose significantly, which also contributed to the increase in the interest rate path priced in the regional markets. As a result of increasing global yields, higher inflation and central bank interest rate hikes, government bond yields rose in the region and thus in Hungary as well. The interbank yield curve also shifted upwards. The forint depreciated by nearly 8 percent against the euro, while the Polish zloty weakened by 3.7 percent, and the Czech koruna and Romanian leu were essentially unchanged.

Chart 4-1: Components of 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

Chart 4-2: Exchange rates in the region



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

4.1.1. Risk assessment of Hungary

Hungary's risk premium decreased slightly at the beginning of the period, followed by a significant increase (Chart 4-1). During the period under review, the international factor contributed to the rise in the CDS spread, while the domestic factor reduced it slightly. At present, the indicator stands at 130 basis points.

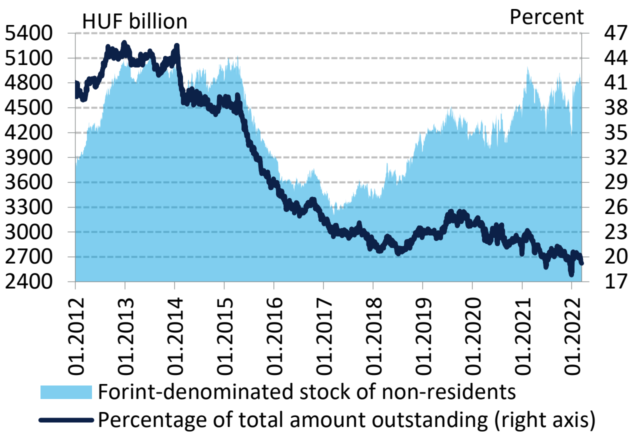
4.1.2. Developments in foreign exchange markets

The forint depreciated by nearly 8 percent against the euro, while the Polish zloty weakened slightly. The Polish zloty depreciated by roughly 3.7 percent, while the exchange rate of the Czech koruna and the Romanian leu against the euro remained essentially unchanged during the period under review (Chart 4-2). While the currencies of the region showed roughly identical dynamics at the beginning of the period and between end of April and mid-May, the forint depreciated at the beginning of April and end of May. which was a country-specific feature. The forint depreciated by 14 percent against the US dollar, while the Czech koruna the leu and the Polish zloty depreciated by 5 to 6 percent versus USD.

4.1.3. Government securities market and changes in yields

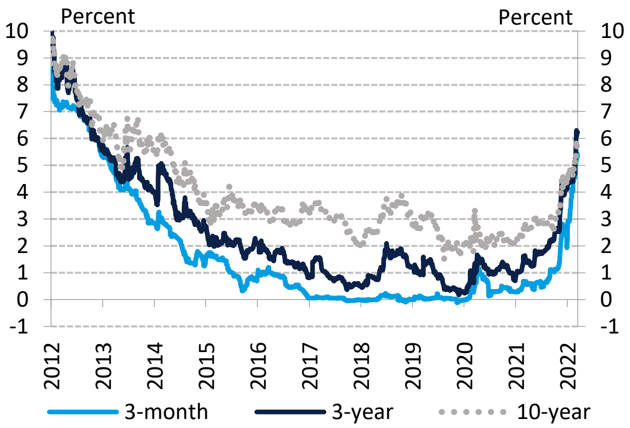
Non-residents' HUF-denominated government securities holdings increased in the past quarter (Chart 4-3). Non-residents' forint government securities holding declined last year, but then started to increase from early this year. Holdings expanded by nearly HUF 264 billion to HUF 4.884 billion in the past three months. Their share within HUF-denominated government securities dropped slightly to 18.5 percent. During the period, the Debt Management Agency accepted bids for higher amounts than announced at the government bond auctions, although lower-than-announced issuances also occasionally took place. Average auction yields rose at all maturities in the past quarter, in line with the increase in the secondary market yields. Average auction yields increased by 71 basis points at the 3-month discount

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



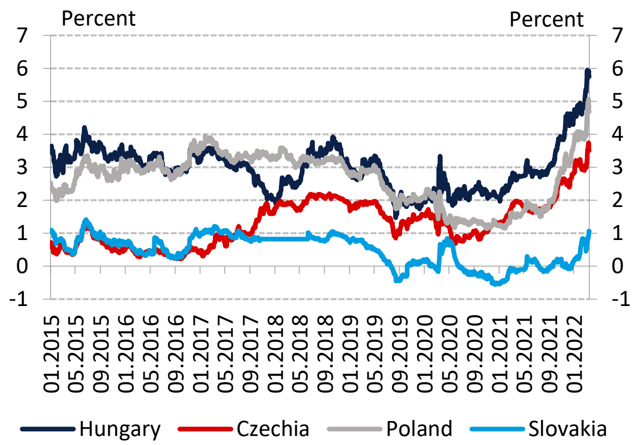
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

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

treasury bill auction and by 136 basis points at the 10-year auction. Accordingly, average auction yields were at 6.28 percent and 7.12 percent, respectively, at the end of the period.

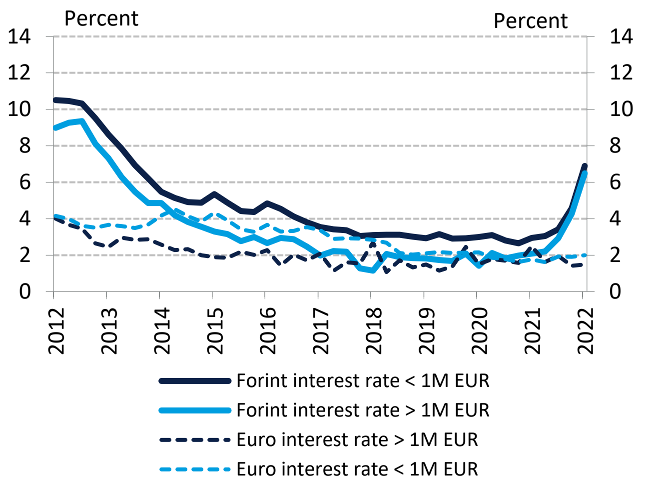
Yields increased over the entire government securities market yield curve. Rising yields characterised the entire period, while in certain periods long-term yields dropped considerably (Chart 4-4). On the whole. during the quarter, 3-year and 10-year yields rose by 198 and 212 basis points, respectively, due to global factors and the continuation of the cycle of interest rate hikes. Regarding interbank yields, the 3-month BUBOR rose by 150 basis points to 7.7 percent.

Long-term government bond yields in the region also increased during the period (Chart 4-5). The 10-year Polish yield rose by 227 basis points, while the 10-year Czech yield climbed 145 basis points versus the end of the previous quarter. Slovak (euro) yields rose by around 130 basis points.

4.2. Credit conditions of the financial intermediary system

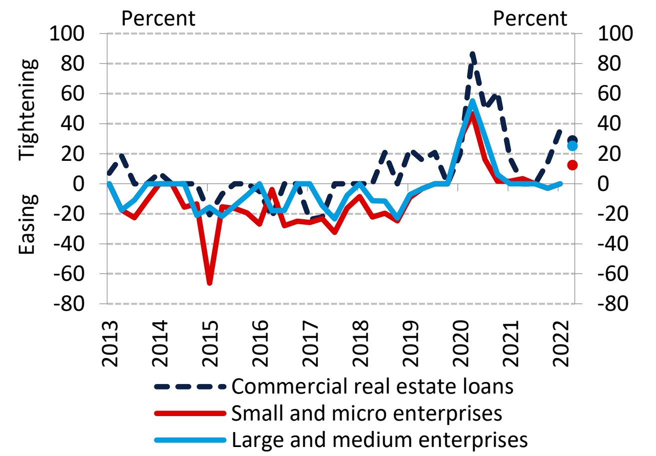
In 2022 Q1, corporate lending conditions did not change significantly in any enterprise size categories, but respondent credit institutions tightened conditions in the commercial property financing segment, and looking ahead credit standards are likely to be tightened in all segments. Standards of household loans did not change significantly in 2022 Q1, but tightening can be expected in consumer loans in 2022 Q2 and Q3. The average cost of funds of corporate HUF-denominated loans and the APR on long-term fixed-rate housing loans increased in the period under review. Of the housing loan contracts concluded during the quarter, 85 percent had rate fixation for at least 10 years, ensuring the long-term predictability of instalments.

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 2022 Q2 and Q3.
Source: MNB. based on banks' responses

4.2.1. Corporate credit conditions

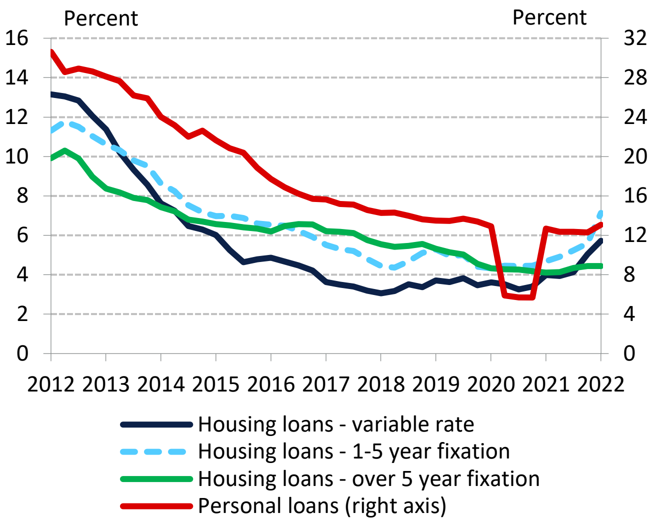
In 2022 Q1, the average interest rate on corporate HUF loans rose significantly. Excluding money market transactions, the smoothed average interest rate level on new corporate HUF loans with interest rates variable within one year (largely market based loans) rose by 233 basis points in the case of low-amount loans and 223 basis points in the case of high-amount loans compared to the previous quarter (Chart 4-6). Accordingly, within the loans the interest rate of which is variable within one year, the average interest rate on forint loans amounted to 6.6 percent in March. During the quarter, the interest rate level on low- and high-amount euro loans increased by 9 and 7 basis points, respectively, and thus the average cost of funds of euro loans stood at 1.3 percent at end-March. The significant rise in corporate forint interest rates is attributable to the rapid pass-through of the rise in funding costs into bank lending rates.

Standards did not change significantly during the quarter in any enterprise size category, while looking ahead, a tightening can be expected. Banks participating in the Lending Survey did not significantly change the conditions of access to credit in any of the enterprise size categories in the first quarter, although a net 36 percent of the respondent credit institutions continued to tighten in the sector of commercial real estate financing. Looking ahead to 2022 Q2 and Q3, corporate credit conditions are likely to be tightened: a net 29 percent. 25 percent and 12 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

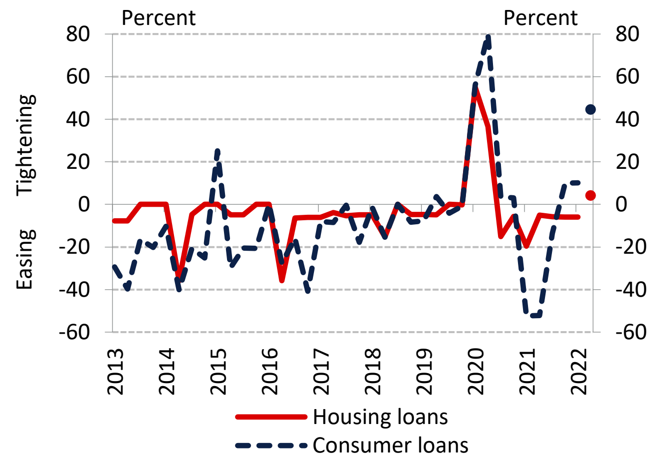
Banks only partly reflected the increase in the yield environment in their pricing during the quarter. At the end of the quarter, the average APR level of housing loan contracts concluded in 2022 Q1 stood at 7.1 percent after a rise of 161 basis points in the case loans with interest rate fixation for 1–5 years, while in the case of loans with interest rate fixation for more than 5 years it reached

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



Note: Quarterly average of lending rates on newly disbursed loans.
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 2022 Q2 and Q3.
Source: MNB. based on banks' responses

4.4 percent, without any major change due to the average interest rate reducing effect of the Green Home Programme (Chart 4-8). The ratio of the Certified Consumer Friendly Housing Loans within new disbursements fell to 46 percent due to the high demand for the Green Home Programme. In parallel with this, the ratio of loans with interest rate fixation for at least 10 years rose to 85 percent in new disbursements, reaching an unprecedented share. Increasing by 76 basis points, the average APR on personal loans reached 13.1 percent by the end of the period under review.

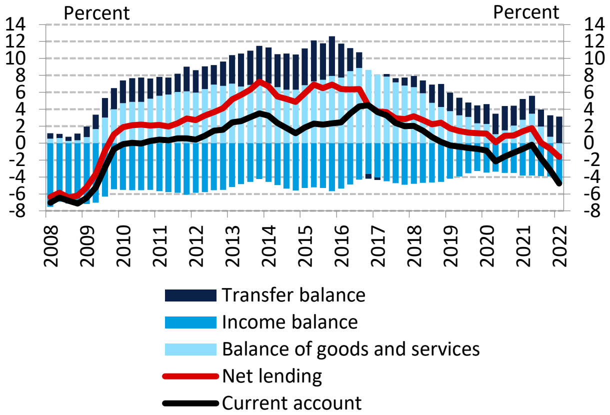
Standards on household loans did not change significantly, but looking ahead the banks are planning tightening in the case of consumer loans. According to responses to the Lending Survey, banks did not make any major changes to housing loan standards in 2022 Q1. In terms of partial conditions, however, almost half of the respondent institutions indicated a lowering of spreads. Looking ahead to 2022 Q2 and Q3, a net 4 percent of banks plan to tighten housing loan conditions, but as regards partial conditions, a net 48 percent of banks already anticipated raising the spread between the loan interest rate and cost of funds (Chart 4-9). As far as consumer loans are concerned, a net 10 percent of credit institutions tightened conditions of access to loans in the first quarter. Looking ahead to the next half year, a net 44 percent of the banks plan further tightening in the standards in the market of consumer loans, primarily in respect to the payment-to-income ratio and required minimum level of creditworthiness.

5. Balance position of the economy

5.1. External balance and financing

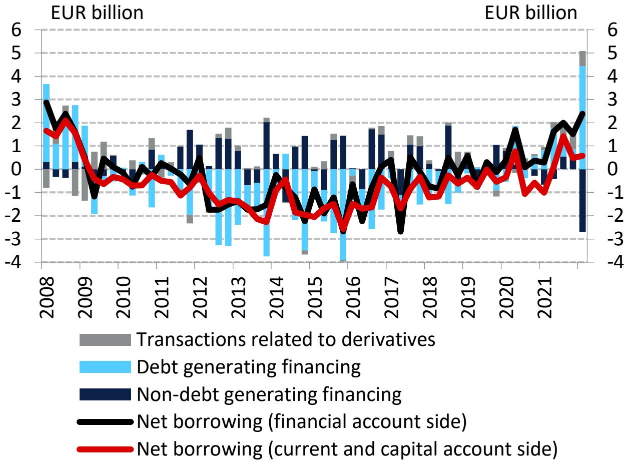
In 2021, the current account deficit rose to 3.2 percent of GDP, and in parallel with this the economy registered net borrowing. The underlying reason was the continued decline in the trade balance: on the exports side, the global semiconductor shortage and weakening external demand undermined the balance, while on the imports side the pick-up in domestic demand and rising commodity and energy prices had a similar effect. As the combined result of these factors, the trade balance already showed a deficit in 2022 Q1, resulting in further deterioration in the current account and net borrowing. According to the financing data, the inflow of net FDI continued in 2021, with the large volume of net inflow of funds in 2022 Q1 attributable to higher debt liabilities. In parallel with this, net external debt also rose, mostly due to the private sector.

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: 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 time series.
Source: MNB

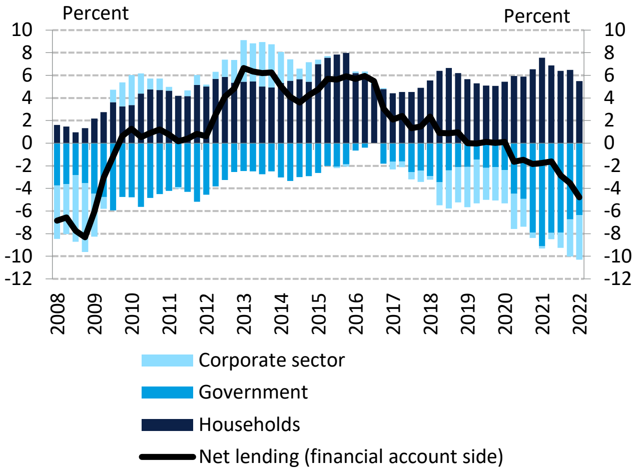
5.1.1. Developments in Hungary's external balance position

In 2021, the four-quarter current account deficit rose to 3.2 percent of GDP, while Hungary's external balance position turned into net borrowing (Chart 5-1). The deterioration in the external balance is attributable to the persistent decline in the trade balance, which also continued in 2022 Q1. The current account deficit and net borrowing rose to 4.8 percent and 1.6 percent of GDP, respectively, in 2022 Q1. The global semiconductor shortage and weakening external demand were reflected in a slowdown in exports, while dynamic consumption and rising commodity and energy prices were reflected in growing imports. As a combined results of these factors, the trade balance already showed a deficit in 2022 Q1. In 2021, the income balance deficit rose slightly due to the declining income of those temporarily working abroad, and then improved in 2022 Q1 as a result of the decreasing revenues of non-resident enterprises. After a temporary slowdown in mid-2021, the absorption of EU transfers started to rise again from the end of 2021, and it significantly improved the external balance position in 2022 Q1 as well.

5.1.2. Developments in financing

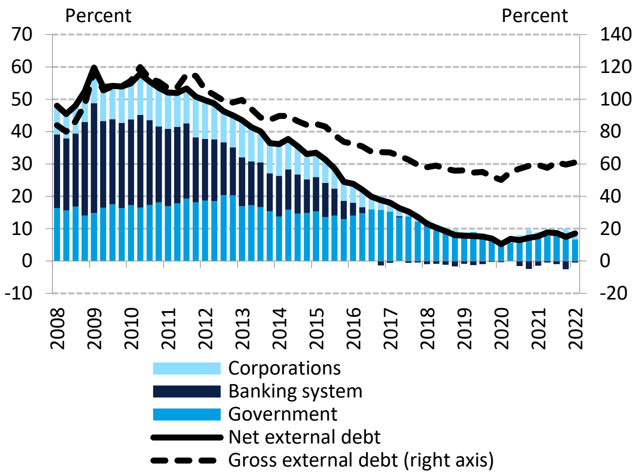
In 2021, net FDI inflow continued in an amount over EUR 2 billion, while the economy's external debt liabilities rose (Chart 5-2). The rise in net FDI was primarily attributable to reinvested earnings. The major decline in net portfolio equity investments continued in 2021 (and in early 2022 as well), which was primarily attributable to the purchase of foreign mutual fund shares and equities by residents, while non-residents' equity investments in Hungary also declined. The net inflow of debt liabilities appeared primarily at the general government, which mostly reflected the impact of items that reduce foreign exchange reserves (e.g. pandemic control measures and government expenditures related to defence industry procurements). In 2022 Q1, the large

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 is excluded from the time series, along with intercompany loans. As a percentage of GDP.
Source: MNB

volume of net inflow of funds was due to higher debt liabilities, while net FDI and portfolio equity investments declined.

At the end of 2021 and in 2022 Q1, in conjunction with the general government's net borrowing, the private sector's net financial savings continued to decline from a high level (Chart 5-3). The fall in the private sector's net financial position took place in parallel with rising net borrowing of corporations, related to investment activity and changes in inventories. The net financial savings of households – including the receivables related to the settlement of the tax refund – reached a high level in 2021, and then gradually declined in line with the pick-up in consumption. Meanwhile, the general government's net borrowing remained high, even after the decline registered at the end of 2021 and early 2022.

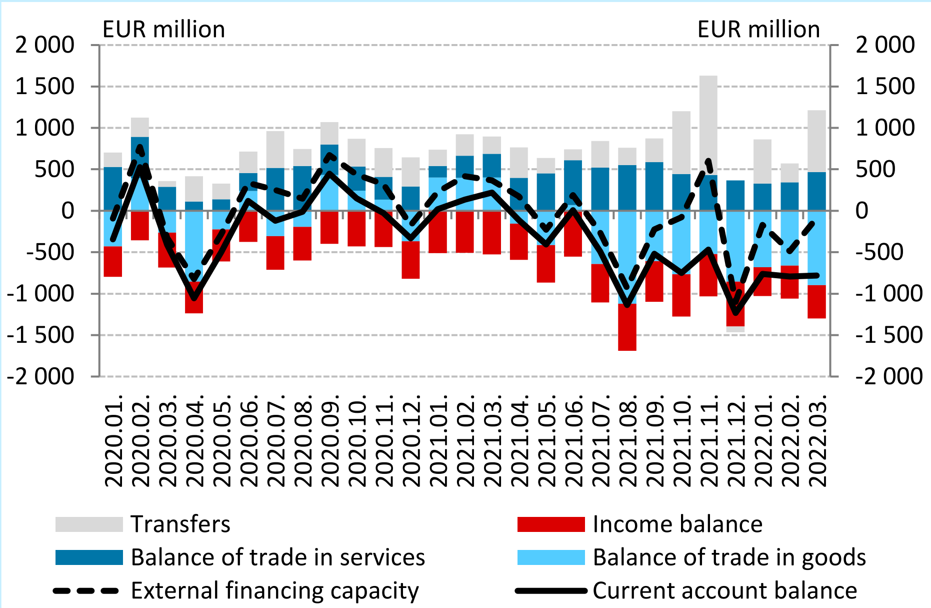
At end-2021, the net external debt of the economy was close to its historic low point, i.e. 7.5 percent of GDP; however, the ratio then increased to 8.6 percent of GDP at the beginning of 2022 (Chart 5-4). In 2022 Q1, gross external debt advanced to nearly 61 percent of GDP, driven by significant private sector borrowing, while the general government indicator continued to decline due to revaluation effects. The large inflow of debt liabilities pointed to a rise in net external debt, which was mostly connected to the private sector.

Box 5-1: Factors underlying the deterioration in the external balance

Recently, the focus was often on Hungary's external balance position; accordingly, this box deals with factors underlying the deterioration in the external balance of Hungary.

The recent deterioration in external balance indicators is mainly attributable to the persistent decline in the goods balance (Chart 5-5). According to the trends observed in past years, the current account balance is improved by services trade, and is deteriorated by the income balance. while goods trade sometimes contributes to it negatively and sometimes positively. On the other hand, from 2021 H2, the persistent and high goods deficit significantly deteriorated the current account (and also net lending). Due to the recovery of tourism, the services balance in March exceeded both the February and the March 2021 figures, but still falls short of the pre-pandemic level, which was registered in 2019. The average 12-month income balance deficit declined moderately, while the seasonally adjusted transfer balance surplus rose substantially, due to the higher absorption of EU transfers compared to the previous month. On the other hand, the impact of the sub-items that caused improvement was suppressed by the deteriorating goods balance, and thus on the whole the current account showed a deficit of around EUR 780 million throughout the first quarter.

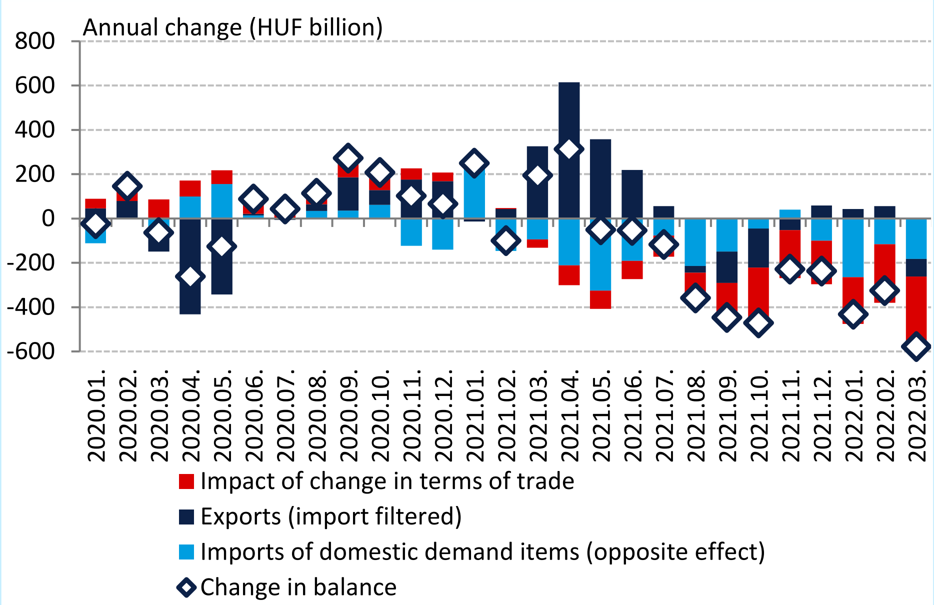
Chart 5-5: Developments in external balance indicators in Hungary



Note: Transfer balance: sum of the capital account, other primary income and secondary income.
Source: HCSO, MNB

From 2021 H2, the largest contribution to the deterioration in Hungary's goods balance came from the worsening terms of trade (Chart 5-6). Changes in the goods balance are influenced by three factors: the value of exports net of imports, the import demand of domestic demand items (households' consumption. investments) and the change in export and import prices relative to each other, i.e. the terms of trade. In March 2022. the Hungarian goods trade deficit was EUR 708 million (HUF 265 billion), the largest deficit since April 2004: more than half of this was attributable to the terms of trade. Due to the steadily rising transport costs, and commodity and energy prices, the rise in import prices significantly exceeded that in export prices, and thus the terms of trade were highly negative from 2021 H2. The global semiconductor and commodity shortage curbs export growth, In conjunction with moderate export performance. Hungary's imports increased in line with the fast growth in domestic demand items (household consumption and investments), which also has a negative effect on the goods balance.

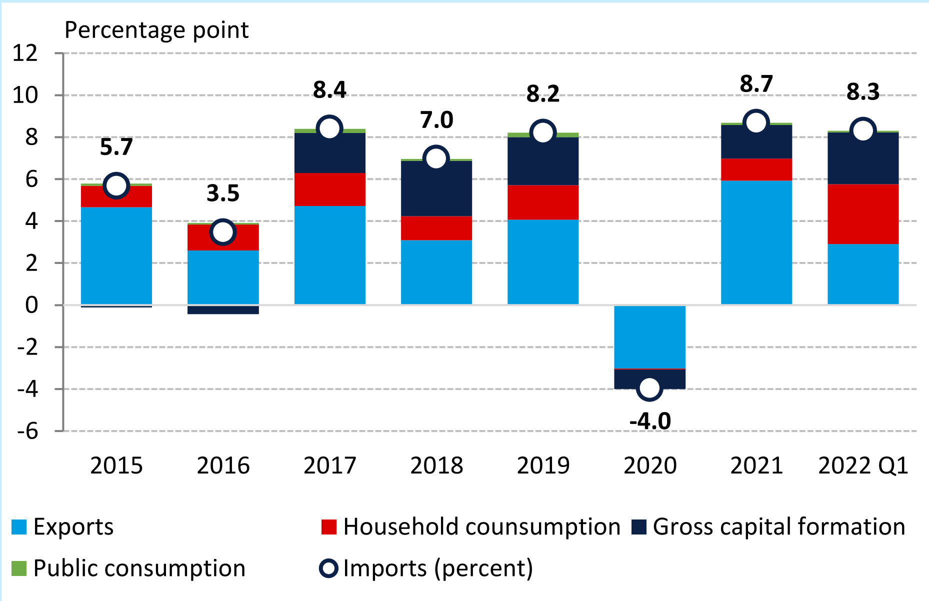
Chart 5-6: Evolution of factors determining the goods balance



Source: HCSO, MNB calculations

In 2022 Q1, household consumption contributed to a larger degree to the rise in Hungary's volume of imports compared to previous years (Chart 5-7). According to our estimate based on the input-output tables, the high dynamics of gross capital formation and household consumption substantially increased imports, while import-intensive exports rose more moderately in the first quarter. Households' consumption expenditures rose by 14.1 percent, presumably with a large contribution from the extra benefits received by households (personal income tax refund for families with children, armed forces benefits, minimum wage increase. etc.). In 2022 Q1, gross capital formation increased 17.6 percent year-on-year, supported primarily by building activity. On the other hand, due to the base material supply problems also affecting the automotive industry, representing a large share, export activity grew more moderately (+5.2 percent).

Chart 5-7: Contribution of expenditure items to the change in import volume

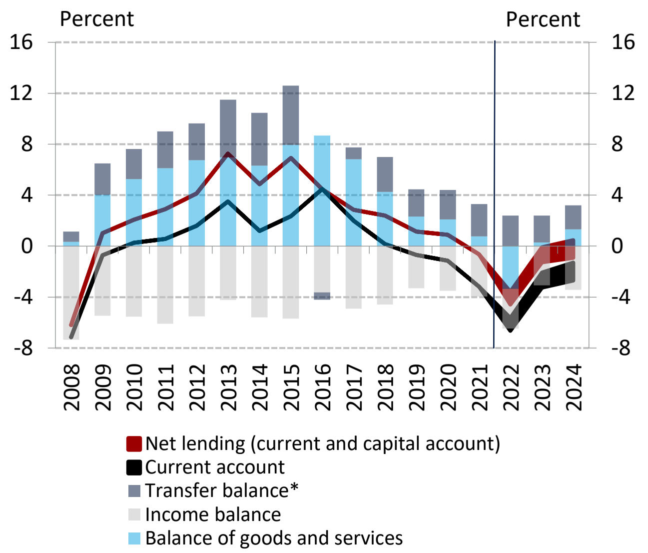


Note: Actual final government consumption includes social transfers in kind from NPISHs and government.
Source: HCSO, MNB calculations

5.2. Forecast for Hungary's net lending position

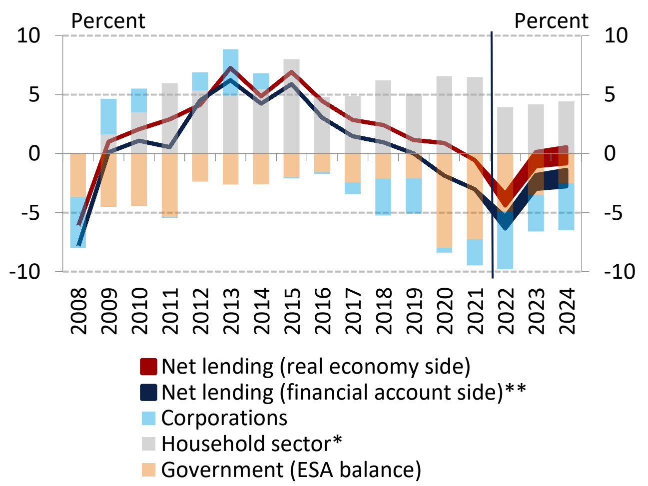
In 2022, the current account deficit will temporarily rise to 6.1 percent of GDP and subsequently improve rapidly. The balance of goods will decline substantially this year, primarily due to the deterioration in the terms of trade resulting from high energy prices, together with a significant contribution from households' accelerating consumption. The pace of recovery for the balance of services is further slowed by the uncertain external environment. In parallel with easing geopolitical tensions and slowdown in domestic use, the current account may improve rapidly from 2023. The general government deficit will steadily decline, owing to rising tax revenues, expenditure-side measures and the introduction of the taxes on extra profits, while the private sector's balance position will turn into net borrowing in 2022, as a result of recovering domestic absorption, followed by a gradual improvement from 2023.

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

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 official net saving is different from the data in the chart. ** We expect that 'Net errors and omissions' (NEO) will return to the historical average.
Source: MNB

In 2022. the current account deficit will temporarily rise to 6.1 percent of GDP, mainly due to external factors and then rapidly improve starting from 2023 (Chart 5-8). The supply chain disruptions arising in connection with the war between Russia and Ukraine, together with continued poor external demand, will reduce exports, while high energy prices will give rise to strong growth in imports. The significant trade deficit is also attributable to steadily growing investments and household consumption, brought forward due to the large price increase. At the same time, the uncertain external environment slows down the recovery of tourism after the coronavirus pandemic. The deterioration in the trade deficit is only partially offset by the improving income balance attributable to the introduction of taxes on extra profits. Overall, the current account deficit may peak at around 6.1 percent of GDP in 2022. In parallel with the easing of geopolitical tensions, rapid improvement may commence in external balance developments from 2023, and thus by the end of the forecast horizon the current account deficit will be around 2 percent of GDP.

As regards the sectors' savings approach, the private sector's net position will temporarily turn into net borrowing, while the general government deficit will decline (Chart 5-9). In 2022, the phase-out of healthcare expenditures related to the pandemic and the economy protection and recovery measures point to a decrease in the budget deficit. In 2022 and 2023, the rising budgetary expenditures resulting from the increase in energy prices and the impacts of the war between Russia and Ukraine may be primarily offset by the special taxes on extra profits and the curbing of general government and investment expenditures. Thus, according to our forecast the deficit targets, which are declining year by year, may be met. Owing to the rising tax and contribution revenues resulting from the economic growth, the budget deficit will fall further in 2024. In parallel with accelerating consumption, net household savings will drop substantially in 2022: consumption brought forward as a result of the rising inflation expectations impacts not only one-off income transfers, but also reduces savings. Overall, in 2022, the high investment ratio and the introduction of the taxes on extra profits will result in a rise in corporations' net borrowing, which will moderately decline in line with the adjustment in external demand and the inflow of EU funds.

Box 5-2: Effect of the Russia–Ukraine conflict on the current account

The external balance position of the Hungarian economy deteriorated considerably as of 2021 H2, with contributions from both domestic and external factors. Firstly, the significant wage growth and high amounts of government transfers (such as personal income tax refund, 'arms money', 13th month pension) resulted in a major increase in household consumption and – through the import content of the latter – in the current account deficit as well. Around one third of the real expansion in imports was related to the increase in consumption. Secondly, the majority of the direct impacts, such as the change in the terms of trade, the slowdown in exports or the rise in interest rates are developments determined by external factors, and they have significant negative effects on the current account. Our box focuses on the quantifiable direct external impacts.

The most important external channels that affect this year's external balance developments. and within that primarily the channels determined by the war between Russia and Ukraine, can be summarised as follows. For the sake of simplicity, we are attempting to quantify the impact of external factors on the 2022 deficit using framework unchanged conditions until the end of the year.

Effects that worsen the terms of trade (2.5–3.0 percent of GDP): High energy and commodity price can impair the external balance to the greatest degree. The price rise already started in 2021 H2, but presumably it was already partly attributable to the war preparations as well. In addition to the effect of the higher energy price, the effect of the higher income from Hungarian exports due to the fall in cereals supply is also reflected in the developments in the terms of trade.

Drop in exports to Russia (0.4–0.5 percent of GDP): In 2021, the sectors achieving a surplus on their exports to Russia generated a total net income of EUR 1.2 billion. Starting from March, however, the embargo significantly reduced the profit achieved by the exporting sectors. resulting in a worsening balance of goods at annual level.

Decline in exports to Ukraine (0.4–0.6 percent of GDP): In 2021. net exports to Ukraine exceeded EUR 900 million, before decreasing to a minimum level in the first four months of 2022.

Decrease in car exports (0.4–0.6 percent of GDP): The shortage of chips and the disruptions in supply chains were already perceived in the second half of last year as well, which was exacerbated by the drop-out of the Ukrainian supply networks: as a result of all this, net exports of motor vehicles in recent months have corresponded only to about 70 percent of the value recorded a year earlier.

Increase in domestic defence expenditures (0.2–0.3 percent of GDP): Increasing the defence expenditures and achieving the target expected by NATO were priorities for the government previously as well, but the war that broke out in the neighbouring country is presumed to significantly contribute to the realisation of higher defence expenditures.

Lost revenue from Russian tourism (0.1–0.2 percent of GDP): As part of the restrictions, tourism revenues from Russia are expected to be lost this year. They were estimated by taking into account the related services as well as the feed-through effects on the basis of the impacts on GDP.

Increase in interest expenditure (0.1 percent of GDP): The risk premium, which is rising due to the higher energy price and greater uncertainty, significantly increases the country's interest expenditure in long term. Nevertheless, in view of the relatively slow repricing of long-term debt, the net interest balance will worsen only slightly in 2022.

Profit balance improvement (0.3–0.4 percent of GDP): In view of the aforementioned effects, foreign-owned companies' profits will decline considerably, which – together with an improvement in the income balance – will partly offset the negative effects.

As a result of the above effects, external impacts (mainly including the war) may impair the current account by around 3.7–4.9 percent of GDP in 2022. At the same time it is important to note that there are also factors that may attenuate the impact of the above factors on the current account. The above-listed negative impacts may be attenuated by various factors: firstly, if the war situation eases before the end of the year, it will improve the balance significantly both in terms of exports and energy prices; secondly, instead of the lost Russian and Ukrainian export markets, the produced products may be exported to other target countries as well; thirdly, previously implemented investment projects that are launching production increase net exports considerably; and finally, the imposed extra profit tax improves the income balance further.

5.3. Fiscal developments

Following the budget deficit of 6.8 percent registered in 2021, the deficit as a percentage of GDP may be 4.9 percent in 2022 and 3.5 percent in 2023, according to the submitted bill. i.e. the budget deficit targets may be met in accordance with our forecast. Achieving the deficit path corresponding to the deficit targets is supported in 2022 by the high tax revenues realised to date and the fiscal measures announced in parallel with the 2023 budget bill, which will offset the expenditure-increasing effects of the war between Russia and Ukraine and high energy prices by restraining expenditures and raising tax revenues. Owing to the economic growth and decrease in the deficit, the government debt ratio as a percentage of GDP will decline from 76.6 percent of 2021 to 74.7 percent by the end of 2022, followed by an annual average decrease of 2.5 percentage points, and finally falling below 70 percent by the end of 2024.

5.3.1. Main balance indicators

According to our forecast, the government sector's accrual-based deficit as a percentage of GDP may amount to 4.9 percent in 2022 and 3.5 percent in 2023. In 2021. the budget deficit was 6.8 percent, compared to which the decrease in deficit this year is primarily attributable – in addition to the increase in revenues resulting from economic growth – to the measures announced in parallel with the submission of the 2023 budget bill, which offset the unfavourable budgetary effects of the war in the neighbouring country and the high energy prices (Table 5-1).

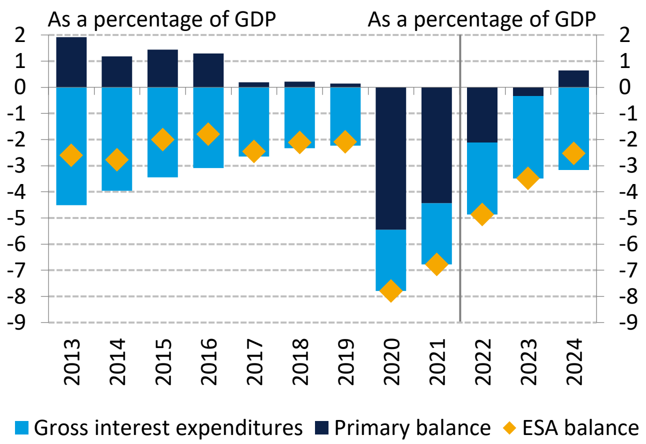
Table 5-1: General government balance indicators

	2021	2022	2023	2024
ESA balance	-6.8	-4.9	-3.5	-2.5
Primary ESA balance	-4.4	-2.1	-0.3	0.6
Fiscal impulse*	-1.7	0.2	-3.4	-1.0

Note: As a percentage of GDP. *Change in the augmented (SNA) primary balance.
Source: HCSO. MNB

In the submitted 2023 budget bill, the budget deficit decreases to 3.5 percent of GDP, which is achievable according to our forecast. According to our projection, the surge in commodity prices will have a significant expenditure-increasing effect in 2023 as well, which will be offset by the measures submitted at the same time with the budget bill, and thus the deficit target may be met. According to our technical projection for 2024, the deficit will decline further compared to previous years and will reach the level of 2.5 percent to GDP, complying with the Maastricht deficit criteria (Chart 5-10).

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



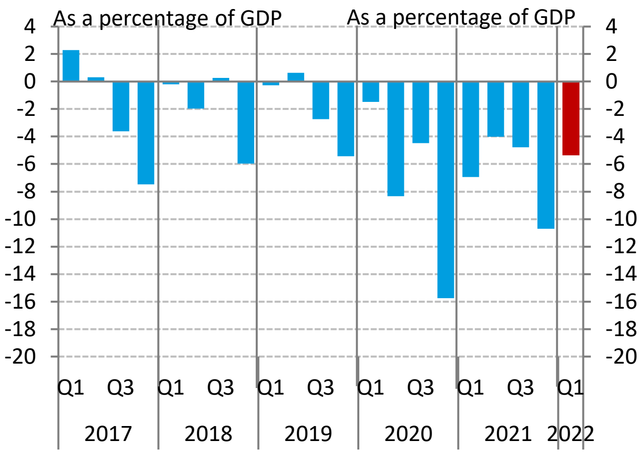
Source: HCSO, MNB

Exemption from compliance with the EU fiscal rules is also provided in 2023, as in the Spring Package of the European Semester, the Commission emphasised that it is necessary to maintain the general escape clause that partially suspends the EU fiscal rules in 2023 as well. Accordingly, the 3-percent deficit criterion and the rule regarding the medium-term budgetary objective set forth in the Stability Pact were also suspended until end-2023.

5.3.2. Budget balance in 2022

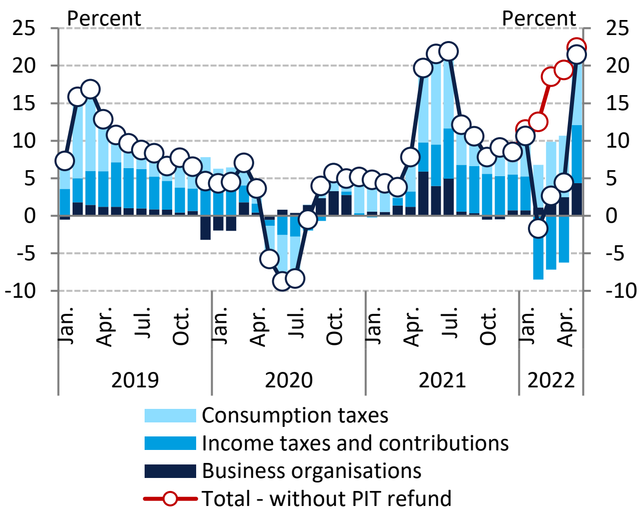
According to our projection, the 4.9-percent deficit target specified in the 2022 Budget Act will be met. According to the general government data published by the MNB in the preliminary financial account, the first-quarter accrual-based deficit amounted to 5.4 percent of GDP after the implementation of measures resulting in one-off expenditures of higher amounts (13th month pension.

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



Note: The 2021 Q1 data show 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 2019–2022, year-on-year, 3-month moving average



Source: HST, MNB

armed forces service benefit) (Chart 5-11). In addition to the individual decisions, underlying processes also increase budgetary expenditures: expenditures related to energy prices, pensions and interest expenditures are expected to exceed the appropriation considerably.

The first-quarter deficit was mitigated by favourable developments in tax revenues. Due to the fast nominal growth in wages and consumption following inflation, until May tax revenues exceeded the amount registered a year ago by almost 20 percent (adjusted for the effect of the personal income tax refund). Revenues are expected to exceed the appropriation considerably throughout the year (Chart 5-12).

Due to the additional expenditures, a package of measures (Table 5-2) amounting to about 3 percent of GDP was announced together with the 2023 budget bill in order to meet the target deficit. Most of the measures affect the expenditure side: the savings of budgetary institutions and organisations may reach 1 percent of GDP, the restraint or rescheduling of investments represents an expenditure cut of 0.5 percent of GDP, while the additional expenditure measures will result in a savings of 0.2 percent as percentage of GDP. As regards the measures on the revenue side, revenues of more than 1.1 percent of GDP may come from the special taxes imposed on extra profits in 2022. Payments by the bank and insurance sector, taxes imposed on energy companies, the retail sector, telecommunication companies and pharmaceutical actors will rise, and contribution by airlines will also appear as a new element. Advertising tax will be reintroduced again. In addition, revenues reaching 0.2 percent of GDP may come from additional measures aimed at increasing tax revenue and reducing the shadow economy (related to excise duty, public health product tax, company car tax and simplified employment, etc.).

5.3.3. Balances in 2023 and 2024

According to our forecast, the 3.5-percent deficit target included in the 2023 budget bill will be met. The decline in the budget deficit is primarily supported by the revenue and expenditure measures announced in accordance with the budget bill and the tax revenues resulting from the growth of the Hungarian economy.

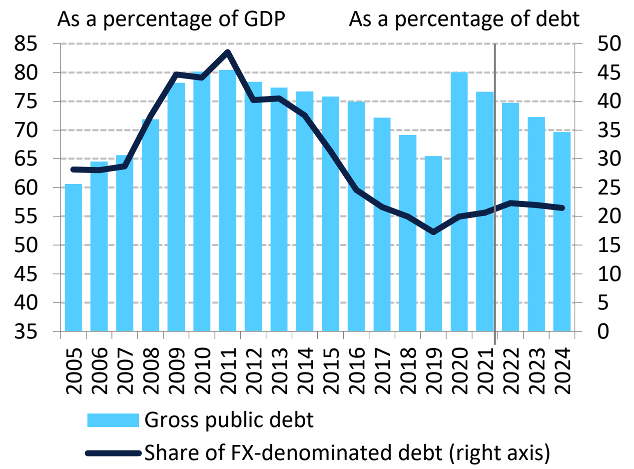
General government expenditures related to energy prices may increase in 2023 to an even larger degree than this year. To cover this, a Utilities Protection Fund amounting to roughly 1 percent of GDP has been set up. However, unless energy prices decrease, the necessary expenditures will exceed that. The surplus expenditures are covered by the fast nominal increase in tax bases.

Table 5-2: Announced measures

	2022
Revenue-side measures in % of GDP for 2022. in total	**1.34%**
Special taxes on windfall profits	1.14%
Duties. taxes on company cars and public health taxes	0.15%
Formal sector widening and employability simplifying measures	0.05%
Expenditure-decreasing measures in % of GDP. in total	**1.7%**
Economising and efficiency increase at ministries, budgetary authorities, and government programs	1.0%
Rescheduling and preplanning of public investment projects	0.5%
Utilisation of revenues from feed-in tariffs (KÁT) in universal services	0.2%

Source: Ministry of Finance, MNB

Chart 5-13: Gross public debt forecast



Source: MNB. GDMA

According to the budget bill, the family support measures – initially scheduled for phase-out in 2022 – will remain in place even in 2023. The aggregate estimated budgetary impact of the prolongation of certain elements of the Family Housing Support Program (support for citizens living in preferred small settlements, tax reimbursement), the Home Improvement Subsidy, the Prenatal Baby Support and the car purchase subsidy for large families is around 0.5 percent of GDP.

In the absence of a Budget Act, we prepare a technical forecast for 2024. according to which based on the expected macroeconomic path and estimated expenditure the deficit is in line with Maastricht deficit criterion.

5.3.4. Risks surrounding the baseline scenario

The uncertainty about the amount of fund inflows from the European Union poses the biggest risk to the developments in our forecast. The approval of Hungary's Recovery and Resilience Plan and the Partnership Agreement, expected to take place in the second half of this year, together with the pre-financing and receipt of subsidies affect the development of the government debt, while the scheduling of its implementation has an impact on the accrual-based balance and real economy trends. Until the approval of the submitted plans, the budget provides pre-financing for the beneficiaries for the expenditures connected to the new programming period. A possible shortfall in EU revenues may primarily increase the ESA deficit, if advance payments made outside the general government for programmes are not yet approved by the EU.

5.3.5. Expected developments in public debt

According to the preliminary data, at the end of 2022 Q1, the gross government debt-to-GDP ratio was 77.3 percent. Accordingly, the debt ratio rose by 0.7 percentage point compared to the end-2021 level and declined by 2.8 percentage points year-on-year. The high Q1 cash deficit and the related higher net issuance of government securities increased government debt, which was partly offset by the dynamic GDP growth.

According to our forecast, the gross government debt-to-GDP ratio will decline to 74.7 percent by end-2022. The decrease in the government debt ratio is supported by the declining deficit and the dynamic economic growth. 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 70 percent by the end of 2024 (Chart 5-13).

The change in the EUR/HUF exchange rate affects the debt ratio through revaluation of FX debt, and thus a 10-forint change in the EUR/HUF exchange rate modifies the government debt-to-GDP ratio by around 0.4 percentage point. In 2022, as a result of the significant foreign currency issuance, the foreign currency ratio of the central government debt may rise further, followed by a moderate decline thereafter. According to our forecast, the foreign currency ratio of the central government debt will be within the tolerance band of 10–25 percent, which corresponds to the target of the Debt Management Agency.

6. Special topics

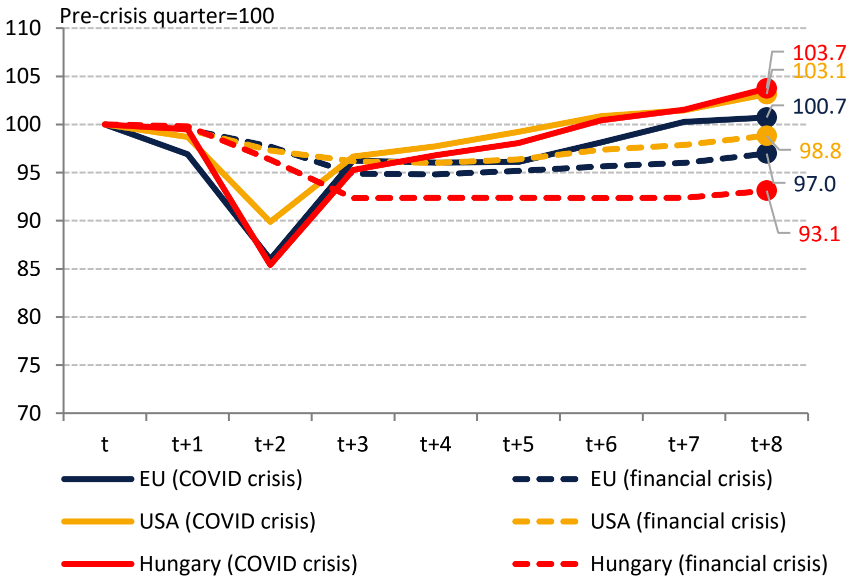
6.1. Nature of the two different crises – main patterns of the financial crisis and the COVID crisis

This analysis presents the differences between the 2008/2009 financial crisis and the COVID crisis of the past two years. Both the starting points of the two crises and their management by economic policy were different, resulting in different patterns in the outcomes as well.

A much more gradual, but also much more protracted recession was observed at the time of the financial crisis, whereas in the case of the COVID crisis the initial major downswing was followed by a much quicker recovery both in the EU countries and the United States (Chart 6-1). In Hungary after the 2008/2009 crisis, it took more than 6 years for GDP to return to its previous level, around one and a half years was needed after the COVID crisis. Household consumption recovered from the 2008/2009 crisis after 7–8 years, whereas it was achieved during the coronavirus crisis in 5 quarters in the case of Hungary. In terms of investment as well, similarly to household consumption, 7–9 years were needed before, while in the case of the current crisis Hungary attained its pre-crisis performance in 1.5 years. Compared to other variables, exports showed much faster recovery during the financial crisis (10–11 quarters), whereas they were able to recover in 4-6 quarters at the time of the COVID crisis. In the case of the COVID crisis, however, apart from government consumption, regarding all the other variables under review Hungary showed quicker recovery than the EU, where household consumption, investment and employment still have not reached their pre-crisis levels.

While during the financial crisis the downturn primarily affected manufacturing and construction, at the time of the pandemic it mainly affected the services sector. In the case of the financial crisis, the performance of construction and industry declined by some 10–15 percent in 1–1.5 years compared to the pre-crisis state and was only followed by slow recovery, whereas in the case of the COVID crisis both sectors were able to almost completely recover and come close to their pre-crisis performance within a year. The decline in services amounted to only some percentage points in the case of the 2008/2009 crisis, but in the COVID crisis services was the most affected sector due to the lockdowns: this sector suffered a downturn of nearly 15 percent in two quarters compared to its pre-crisis performance. Following that, however, the recovery was relatively fast in this sector as well.

Chart 6-1: GDP in the EU and USA during the two crises



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: Eurostat. NBER

During the management of the two crises, the increase in the strength of the economic policy response was a crucial difference globally, and especially in Hungary. During the financial crisis, central banks and budgets alike were reluctant to use the means available for them to support the economies that had fallen into recession (actually, at that time there was no fiscal leeway in Hungary), which resulted in a serious drop in economic performance and a slower recovery. Drawing the lesson from the lengthy nature of the previous crisis, rapid and determined fiscal and monetary reactions during the COVID pandemic contributed to the faster recovery. Budget deficits increased considerably, even involving a rise in government debt, but they supported demand, which was falling in view of the lockdowns due to the pandemic. Targeted sectoral and general wage subsidy programmes contributed to job retention and preventing a wave of corporate bankruptcies in many countries. Economies were funded to a great degree by central banks. Central banks of developed and developing countries increased their balance sheets to a larger degree than in the financial crisis, thus preventing the evolution of a potential financial crisis. In Hungary, central bank programmes were not only particularly strong contributors to the successful avoidance of the credit crunch experienced during the financial crisis, but the effective crisis management could be expressly credit based.

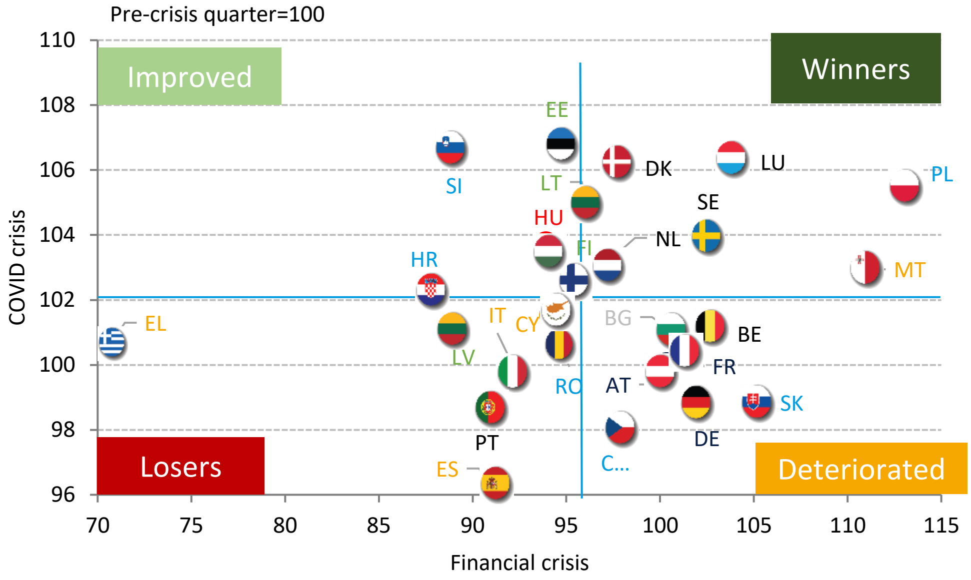
Table 6-1: The speed of recovery in the two crises in the EU and in Hungary

Length of recovery in quarters	Financial crisis		COVID crisis	
	EU	HU	EU	HU
GDP	25	25	7	6
Household consumption	26	33	>9	5
Government consumption	0	2	3	5
Investment	36	27	>9	6
Export	11	10	6	4
Employment	33	15	>8	5

Note: After how many quarters after the crisis did the given variable reach its pre-crisis level.
Source: Eurostat, MNB-calculation.

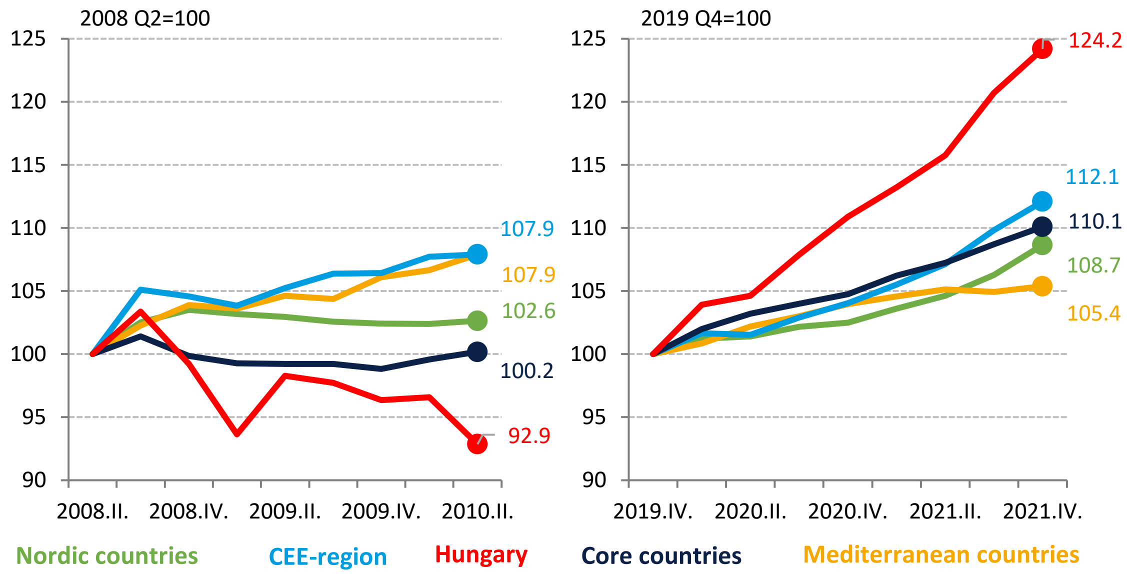
During the crises, different patterns were observed across EU country groups: Mediterranean countries performed poorly in both crises, whereas the Nordic and CEE countries achieved the best results in the COVID crisis (Chart 6-2). According to Chart 2, the winners are those who recovered from both crises as fast as possible: they are primarily the Scandinavian countries as well as Luxembourg and Poland. The ones that improved were Hungary, Estonia and Slovenia, which recovered from the financial crisis more slowly than the average, but recovered more rapidly from the COVID crisis. The performance of the majority of the core countries as well as of the Czech Republic and Slovakia worsened; in their case the good performance in the previous crisis is coupled with the slower recovery from the current crisis. The losers are the Mediterranean countries, whose performance was weak during both crises. One contributor to Nordic countries' resilience to crisis was their level of digitalisation, which became an even more important factor during the crisis characterised by lockdowns. The downswing and the recovery were mostly influenced by structural factors: the structure of the economy, the reaction to the pandemic, digitalisation, lending and competitiveness. Hungary's performance in supporting lending was outstanding during the COVID crisis, as it recorded the highest private sector credit expansion across the entire EU compared to the pre-crisis level (Chart 6-3).

Chart 6-2: GDP developments in EU countries during the two crises



Note: The blue lines indicate the average performance for the period. During the financial crisis, the 2012 IV. quarterly data. In the case of the COVID crisis in 2021. IV. quarter. Without Ireland.
Source: Eurostat

Chart 6-3: Changes in private sector credit in each EU country group



Note: Core countries: Germany, France, Belgium, Netherlands, Luxembourg, Austria. Nordic countries: Denmark, Sweden, Finland, Latvia, Lithuania, Estonia. CEE region: Poland, Czech Republic, Slovakia, Hungary, Slovenia, Croatia, Romania. Mediterranean countries: Greece, Spain, Italy, Portugal, Cyprus, Malta. The average for each group of countries was calculated as the simple arithmetic average for each country (Ireland, Without Luxembourg and Bulgaria).
Source: Eurostat

At the same time, in certain areas less favourable developments were observed after the COVID crisis compared to the financial one. Firstly, twin deficits evolved in a number of countries: in addition to budget deficits, the current account balance also moved in an unfavourable direction. On the one hand, the reason for this was the rise in energy prices, which resulted in a major deterioration in the terms of trade for energy importing countries, and on the other realisation of the consumption postponed during the crisis, which – together with the difficulties in global supply chains – led to price rises and an increase in imbalances. The above reasons resulted in a rise in inflation rates, the other unfavourable development after the COVID crisis. Following the financial crisis, low demand led to persistently subdued inflation rates, but the rapid economic recovery after the pandemic as well as other factors independent of that (one-off effects reflected in energy prices, Russia–Ukraine war) resulted in inflation rates unprecedented for decades in many countries of the world.

7. Breakdown of the average consumer price index for 2022

Table 7-1: Decomposition of inflation to carry-over and incoming effects (percentage point and percent respectively)

	Effect on CPI in 2022		
	Carry-over effect	Incoming effect	Yearly index
Administered prices	0.1	0.1	0.2
Market prices	2.8	8.8	11.6
Indirect taxes and government measures	0.1	-0.1	0.0
CPI	**3.0**	**8.8**	**11.8**

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of so-called carry-over and incoming effects. The carry-over effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index and calculated the inflationary effects of changes in the indirect taxes, administered prices, and market prices (non-administered prices excluding indirect tax effects). The subgroups may not sum to the aggregate figure due to rounding.

Source: MNB

Table 7-2: Detailed decomposition of our inflation forecast into carry-over and incoming effects (percentage point and percent respectively)

	2022				
	Average carry-over effect	Carry-over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	3.6	0.0	18.1	0.1	21.8
non-processed	0.9	0.0	19.0	0.0	19.9
processed	4.9	0.0	17.7	0.1	22.7
Tradable goods	3.2	0.0	8.4	0.1	11.7
durables	4.2	0.0	12.7	0.0	16.9
non-durables	2.7	0.0	6.1	0.1	8.9
Market services	2.2	0.0	8.2	0.0	10.4
Market energy	6.0	0.0	2.9	0.0	8.9
Alcohol and Tobacco	1.9	0.8	4.0	3.2	9.9
Fuel	7.3	-0.5	9.7	-5.6	10.9
Administered prices	1.0	0.0	0.6	0.0	1.6
Inflation	**2.9**	**0.1**	**8.9**	**-0.1**	**11.8**
Core inflation	3.2	0.0	10.3	0.0	13.5

Note: The tables show the decomposition of the yearly average change of the consumer price index forecast range. The yearly change is the sum of so-called carry-over and incoming effects. The carry-over effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index and calculated their inflationary effects. The subgroups may not sum to the aggregate figure due to rounding.

Source: MNB

List of charts and tables

List of charts

List of tables

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.

INFLATION REPORT

June 2022

Print: Prospektus Kft.

H-8200 Veszprém, Tartu u. 6.

mnb.hu

H-1013 BUDAPEST, KRISZTINA KÖRÚT 55.