



INFLATION REPORT



2020
SEPTEMBER

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

Miklós Zrínyi: The Life of Matthias Corvinus



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

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

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

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

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

The projections are based on information available for the period ending 17 September 2020, while for the balance of payments we also included Q2 data published on 21 September in our analysis.

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

The primary objective of 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.

The coronavirus pandemic hit the world economy when it was in a weakened state. Economic performance declined significantly in most countries due to the restrictive measures taken to slow the spread of the pandemic. With the gradual easing of restrictions, the external economic outlook started to improve; however, infection curves began to rise again in several countries. There continues to be an exceptionally large degree of uncertainty surrounding the time profile of the coronavirus pandemic and the speed of the global economic recovery.

Based on incoming GDP data for the second quarter, economic performance of the United States, at -9.1 percent, and the euro area, at -14.7 percent, fell year on year to an extent never seen before. Chinese GDP rose by 3.2 percent in annual terms, indicating robust growth relative to the 6.8 percent decline in the first quarter. Countries in Central and Eastern Europe also showed considerable, mainly double-digit, declines in the second quarter.

Global economic activity has recently been influenced by the coronavirus pandemic and the consequent re-introduction of restrictive measures in several countries. Economies entered a new phase of gradual recovery in June; however, infection curves started to rise again in several countries. The second wave of the pandemic has led to an increase in risks. There continues to be an exceptionally large degree of uncertainty surrounding the time profile of the health emergency and the speed of the global economic recovery.

Global inflation was moderate over the period, in parallel with subdued economic performance. Some countries were characterised by deflation in the second quarter. Inflation in the euro area fell to close to zero in the second quarter, before turning negative in August. Inflation has recently been above central bank targets in countries in the region.

Due to the second wave of coronavirus, the world's leading central banks expect a significantly lower inflation environment for the coming years. Accordingly, central banks maintained loose monetary conditions and continued their economic stimulus programmes.

In the past quarter, of the world's leading central banks the Federal Reserve (Fed) held the target band of its policy rate close to 0 percent and confirmed the continuation of its asset purchase programmes and liquidity-providing operations. In August, the Fed announced that it would seek to achieve inflation that averaged 2 percent over time and would adopt an asymmetric response to swings in the labour market. The average 2 percent inflation target will allow the Fed to temporarily tolerate inflation rising above the target. In line with this, decision makers in September expect the policy rate to remain at its current low level over the next three years. At the beginning of September, the Fed's balance sheet was around the USD 7,000 billion level reached in June, amounting to over 30 percent of GDP. The European Central Bank (ECB) also left its policy rates and the conditions of its asset purchase programmes unchanged. As a result of its asset purchase programmes, the ECB's balance sheet total amounted to nearly EUR 6,500 billion at the beginning of September, equivalent to over 50 percent of GDP.

In our region, the Czech and Polish central banks kept policy rates at close to zero, while the Romanian central bank reduced its base rate by 25 basis points to 1.5 percent at its August meeting. The Polish and Romanian central banks continued their government securities purchase programmes. Based on market pricing, the world's leading central banks and those in the region are expected to maintain loose monetary conditions over a prolonged period.

Investor sentiment improved and financial market volatility fell in the past quarter as economies restarted; however, the acceleration of the spread of the coronavirus pandemic over recent weeks points to rising uncertainty.

In the past quarter, most of the restrictive measures implemented due to the coronavirus pandemic were eased, and economic activity restarted. As a result, there was a clear improvement in global market sentiment. Overall, the majority

of the main stock indices have risen since June. Long-term yields on government securities mostly declined in developed countries. Risk indicators also improved in the period under review. However, sentiment has deteriorated once again over the past weeks in parallel with the spread of the virus. Developed market stock exchange indices fell, and developing market currencies depreciated as a result of the increase in risk appetite.

In Hungary, supply-demand frictions related to the restart of the economy have led to a pick-up in inflation over the past months. However, based on past crisis experiences, disinflationary effects are expected to appear later, which are likely to feed through to underlying inflation with a time lag of 5 to 6 quarters. Inflation is likely to stabilise at the 3 percent central bank target from 2022 as the effects of volatile, cost-sensitive items fade away.

Demand in specific sub-markets soared, while disrupted supply in others due to the pandemic situation only recovered slowly, which caused an increase in inflation during the summer months. Inflation rose to 3.9 percent year on year in August, primarily reflecting increases in the prices of fuel and industrial goods due in part to base effects.

In the coming quarters, developments in underlying inflation are likely to be driven by the overall balance of supply-demand frictions related to the restart of the economy and the growing disinflationary impact of weak demand. Overall, based on incoming data, inflation is expected to be 3.5-3.6 percent in 2020 and 3.4-3.6 percent in 2021, before stabilising at the 3 percent central bank target from 2022, after the effects of volatile, cost-sensitive items fade away.

The coronavirus pandemic hit the Hungarian economy when its fundamentals were stable and growth was strong. Hungary's health defence against the first wave of coronavirus was successful.

The fundamentals of the domestic economy are strong: the economic policy pursued over the past decade has contributed to maintaining the country's macroeconomic balance and has reduced its external and internal vulnerability. The adverse consequences caused by the first wave of coronavirus to the real economy and the financial market were mitigated by the Hungarian Government's and the Magyar Nemzeti Bank's quick and effective measures.

During the first wave of coronavirus, production in most sectors of the national economy declined. As a result, Hungary's GDP fell by 13.6 percent year on year in the second quarter of 2020. As in most other countries in Europe, the number of infections started to increase again in Hungary towards the end of the summer. Due to the second wave of coronavirus, the economic recovery takes longer than earlier expected.

By the end of 2020, a reversal of the decline in Hungary's GDP is expected; however, average annual growth is expected to contract by between 5.1 percent and 6.8 percent. Economic growth is likely to be 4.4-6.8 percent in 2021 and 4.5-5.7 percent in 2022. This means that economic performance may recover to its pre-crisis level by the turn of 2022.

After the favourable growth data for the first quarter (an annual growth rate of +2.2 percent), the Hungarian economy underwent a particularly strong downturn (an annual decline of -13.6 percent) in the second quarter, due to the economic effects of the coronavirus pandemic. As a result of the restrictive measures, Hungary's economic performance may have reached its low point in the second quarter of 2020. It is assumed that household consumption may exhibit positive annual growth from the beginning of 2021, which is also supported by the utilisation of a portion of financial wealth accumulated in recent years.

Companies adjusted to the changing circumstances mainly by reducing working hours and increasing the number of part-time workers, while preserving a large proportion of jobs. As a result of a stalling housing market cycle due to the phasing-out of the preferential VAT on homes, household investment activity has weakened. Furthermore, public and private investment fell significantly in the first half of the year. Due to the prolonged coronavirus pandemic, the uncertainty surrounding the economic outlook has increased significantly, which forces companies to delay their planned investment projects and to continue to adjust to the labour market.

There remains a high degree of uncertainty surrounding developments in external economic activity. Hungary's exports of industrial goods are likely to remain muted due to unfavourable external demand, and restrictions on travel to Hungary in effect from 1 September are likely to lead to a repeated decline in service exports. As a result, exports in 2020 may fall by between 10.4 percent and 13.3 percent on an annual basis. Changes in domestic demand items also remained below earlier expectations. As a result, imports may decline by 7.9-10.4 percent in 2020.

Central bank and government credit schemes are the main driving forces behind lending.

Due to the adverse economic effects arising from the coronavirus pandemic, the financial intermediary system's (credit institutions and financial enterprises) outstanding lending to the corporate sector declined by HUF 131 billion in the second quarter. As a result, the annual growth rate of outstanding lending to the corporate sector fell to 8.2 percent in June, and there was a 9 percent rise in the SME sector in annual terms. In recent months, the number of contracts signed under the FGS Go! played a major role in supporting corporate lending. The start-up of other government lending schemes was slower; therefore, the utilisation of these schemes is expected to rise significantly only in the second half of the year. The annual growth rate of outstanding lending to the corporate sector is expected to remain in positive territory, and it may return to a level around 10 percent after rising gradually from the second half of 2021.

In the second quarter of 2020, the entire financial intermediary system's outstanding lending to households rose by HUF 230 billion due to transactions, representing a growth of 15.3 percent. After the restrictions had been lifted and the number of transactions in the housing market had grown, the issuance of consumer and housing loans started to return to normal levels. The introduction of the moratorium on payments strongly supported growth in the stock of loans to the household sector through the restriction of the amortisation of loans. In addition, prenatal baby support loan contracts, amounting to HUF 142 billion, largely contributed to strong growth in the second quarter, which may support household lending until the end of the programme. Growth in household lending is likely to slow down to around 5 percent in the first half of 2021 due to the end of the moratorium, and a growth rate of 12 percent may be seen by the end of the forecast horizon.

The current account is expected to show a slight deficit in 2020 and then to improve towards the end of the forecast horizon. With Hungary's net lending position remaining persistently stable, the country's external debt ratios are likely to continue falling in the coming years.

The current account balance has been influenced by opposing trends in 2020. Falling exports and tourism due to weakening external demand and equipment purchases for the protection against the pandemic and for national defence development will reduce the trade surplus. This will be partly offset by declining imports on account of lower domestic use and the effects of an improvement in the terms of trade. A lower income deficit is expected to improve the current account balance, as foreign companies' profits may be lower due to subdued external and domestic demand. Looking ahead, as the effects of the pandemic fade and external demand and the economy recover, in addition to the continuously high transfer balance, the net lending position is likely to be maintained. Consequently, external debt ratios will continue to fall in the coming years.

The government deficit may rise to 7-7.5 percent of GDP in 2020 due to the costs of protection against the coronavirus pandemic, the measures implemented as part of the Economy Protection Action Plan and lower tax revenues arising from the economic slowdown. However, the government deficit in 2020 may fluctuate around the international average. The 2021 government deficit may be around the target set in the Budget Act and may amount to 2.9-3.4 percent of GDP. The government debt-to-GDP ratio will rise in 2020 after declining since 2011, but is expected to move onto a downward path again in 2021 once economic growth is restored and the deficit decreases.

Long-term yields have declined since June.

Interbank yields fell at maturities up to one year in the past quarter, mainly due to a two-step reduction in the base rate. The middle section of the yield curve shifted up, while long-term yields declined. The decline in longer-term government bond yields was largely supported by central bank purchases of government securities. Overall, the forint depreciated against the euro in the period.

The macroeconomic outlook is surrounded by two-way risks.

The Monetary Council highlighted two alternative scenarios around the baseline projection in the September Inflation Report. The alternative scenario that presumes a 'W'-shaped recovery from the economic downturn caused by the global coronavirus pandemic points towards slightly lower domestic inflation and considerably more subdued growth paths compared to the baseline scenario. In the alternative scenario featuring an increase in risk aversion vis-à-vis emerging markets, inflation is higher than in the baseline forecast. In addition to these scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume a permanent rise in food prices and the implementation of competitiveness reforms.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

| | 2019 | 2020 | 2021 | 2022 |
|---|--------|-------------------|-----------------|-----------------|
| | Actual | | Projection | |
| Inflation (annual average) | | | | |
| Core inflation ¹ | 3.8 | 4.2 - 4.3 | 3.3 - 3.5 | 2.9 |
| Core inflation excluding indirect tax effects | 3.4 | 3.7 - 3.8 | 2.9 - 3.1 | 2.9 |
| Inflation | 3.4 | 3.5 - 3.6 | 3.4 - 3.6 | 3.0 |
| Economic growth | | | | |
| Household consumption expenditure | 5.0 | (-4.0) - (-2.2) | 4.1 - 5.5 | 3.4 - 4.4 |
| Government final consumption expenditure ⁶ | 2.1 | 0.9 - 1.1 | 0.8 - 2.4 | 2.2 - 2.4 |
| Gross fixed capital formation | 15.3 | (-11.2) - (-9.2) | 5.1 - 10.3 | 6.7 - 8.4 |
| Domestic absorption | 5.6 | (-4.1) - (-2.9) | 3.5 - 6.0 | 4.1 - 5.1 |
| Exports | 6.0 | (-13.3) - (-10.4) | 7.3 - 10.2 | 5.7 - 8.0 |
| Imports | 6.9 | (-10.4) - (-7.9) | 6.1 - 9.2 | 5.4 - 7.3 |
| GDP | 4.9 | (-6.8) - (-5.1) | 4.4 - 6.8 | 4.5 - 5.7 |
| Labour productivity ⁵ | 3.2 | (-3.2) - (-1.8) | 3.5 - 5.0 | 3.4 - 3.9 |
| External balance² | | | | |
| Current account balance | -0.3 | (-1.3) - (-0.9) | (-1.0) - (-0.5) | (-0.9) - (-0.6) |
| Net lending | 1.6 | 1.3 - 1.7 | 1.7 - 2.1 | 1.2 - 1.5 |
| Government balance² | | | | |
| ESA balance | -2.0 | (-7.5) - (-7.0) | (-3.4) - (-2.9) | (-2.9) - (-2.2) |
| Labour market | | | | |
| Whole-economy gross average earnings ³ | 11.4 | 8.7 - 9.2 | 6.6 - 7.1 | 6.1 - 6.6 |
| Whole-economy employment | 1.0 | (-2.1) - (-1.8) | (-1.0) - (-0.1) | 1.1 - 1.7 |
| Private sector gross average earnings ³ | 11.6 | 7.8 - 8.5 | 6.6 - 7.3 | 6.2 - 6.9 |
| Private sector employment | 1.4 | (-1.9) - (-1.5) | (-1.2) - (0.0) | 1.4 - 2.2 |
| Unemployment rate | 3.4 | 4.4 - 4.7 | 4.8 - 5.8 | 4.1 - 4.6 |
| Private sector nominal unit labour costs | 6.4 | 8.9 - 10.2 | 1.8 - 3.3 | 0.4 - 0.7 |
| Household real income ⁴ | 4.9 | (-3.3) - (-1.5) | 3.9 - 5.0 | 3.9 - 4.3 |

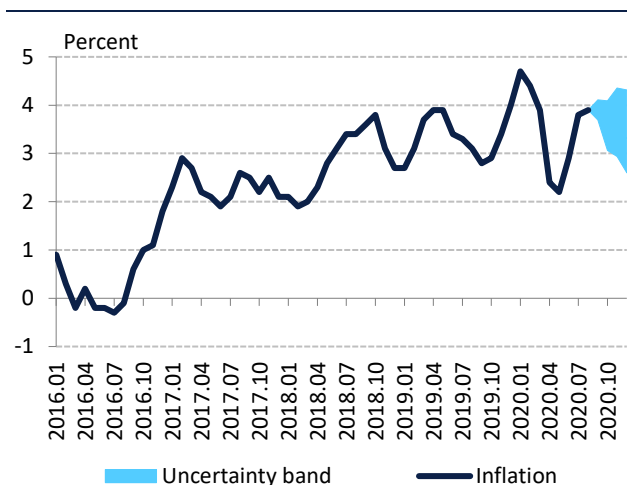
¹ Based on seasonally unadjusted data.² GDP proportionate values, partly based on forecast.³ For full-time employees.⁴ MNB estimate.⁵ Whole economy, based on national accounts data.⁶ Includes government consumption and the transfers from government and non-profit institutions.

1 Inflation and real economy outlook

1.1 Inflation forecast

In the past months, the coronavirus has resulted in a major restructuring of the supply and demand conditions of some markets, which has increased inflation. At the same time, based on past crisis experiences, the disinflationary effects of the weak demand are appearing and reflected in the underlying inflation developments with a delay of 5–6 quarters according to our calculations. Accordingly, our inflation forecast is determined by the joint result of supply and demand frictions as well as the disinflationary effect of the weak demand. There is still considerable uncertainty in the forecasts, due to the economic impacts of the coronavirus pandemic, and therefore the prognosis we present is range-based. Inflation will be 3.5–3.6 percent this year and 3.4–3.6 percent in 2021, before stabilising at the 3 percent central bank target from 2022 as the volatile, cost-sensitive items fade. Core inflation excluding indirect taxes will be 3.7–3.8 percent in 2020, 2.9–3.1 percent in 2021 and 2.9 percent in 2022.

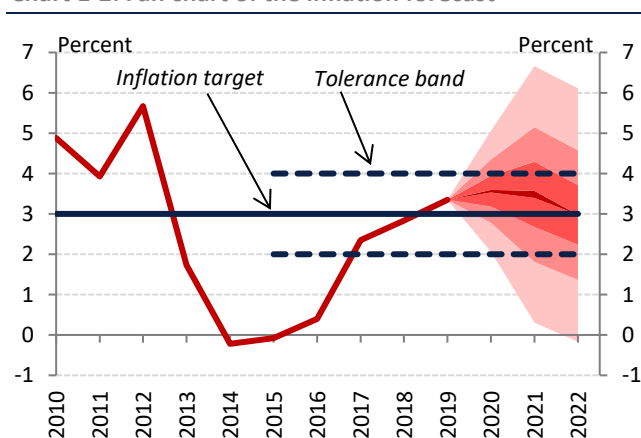
Chart 1-1: Monthly evolution of the near-term inflation forecast



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

Source: HCSO, MNB

Chart 1-2: Fan chart of the inflation forecast



Note: Based on seasonally unadjusted data.

Source: HCSO, MNB

According to our current forecast, annual average inflation will be around 3.5 percent in 2020–2021, before falling to 3 percent in 2022. Exceeding our June expectations, the rate of increase in prices accelerated to 3.9 percent by August year on year. The annual inflation figure was strongly affected by the repricing related to the restarting of the economy, stemming from the abrupt restructuring of supply and demand conditions. In the coming months, inflation will decline as a result of a decrease in fuel prices and because of the base effect, but on the whole it will be above the 3 percent central bank target (Chart 1-1). At the same time, based on past crisis experiences, disinflationary effects of the weak demand are expected to appear, which are reflected in the underlying inflation developments with a delay of 5–6 quarters (for more details see Special topic 6-1). Inflation will be 3.5–3.6 percent this year and 3.4–3.6 percent in 2021, before stabilising at the 3 percent central bank target from 2022 as the volatile, cost-sensitive items fade. (Chart 1-2). According to our forecast, core inflation excluding indirect taxes will be 3.7–3.8 percent in 2020, 2.9–3.1 percent in 2021 and 2.9 percent in 2022.

The external inflationary environment continues to have a strong mitigating effect on the rate of domestic price increases. Its importance is growing as the price-increasing effects of the coronavirus fade out in the medium term, and disinflationary effects materialise in line with previous crisis experiences. These effects are supported by the subdued external inflation environment as well, since in the medium term, in view of the unfavourable economic developments due to the coronavirus, the ECB projects euro area price dynamics will fall short of its inflation target over the entire forecast horizon. At the same time, in view of supply constraints, it carried out a slight upwards revision of the euro area core inflation expectation, which has a more significant impact on inflation and domestic price dynamics.

Table 1-1: Details of the inflation forecast

| | | 2020 | 2021 | 2022 |
|---|------------------------|----------------|----------------|------------|
| Core inflation excluding indirect tax effects | | 3.7–3.8 | 2.9–3.1 | 2.9 |
| Core inflation | | 4.2–4.3 | 3.3–3.5 | 2.9 |
| Non-core inflation | Unprocessed food | 12.6–12.7 | 5.5–5.7 | 4.2 |
| | Fuel and market energy | -4.5 | 6.9 | 3.8 |
| | Regulated prices | 0.7 | 1.6 | 2.3 |
| | Total | 1.9 | 3.7–3.8 | 3.1 |
| Inflation | | 3.5–3.6 | 3.4–3.6 | 3.0 |

Note: Based on seasonally unadjusted data.

Source: MNB

Nevertheless, the underlying euro area indicator will only exceed 1.0 percent in 2022.

In the case of core inflation excluding indirect taxes, the external inflation environment attenuates the price changes of industrial goods in the medium term, whereas more moderate domestic demand and decelerating wage dynamics may result in lower pricing behaviour in relation to market services. In past years, double-digit wage dynamics played an important role in the acceleration of underlying inflation, the impact of which was mostly reflected in the price increase of market services. At the same time, the impact of private sector wage-setting was attenuated by the reduction of the social contribution tax payable by companies. Looking ahead, however, in view of the pandemic, companies are adapting on the wage side as well, and thus the impact of the slowdown in wage costs will be reflected in the underlying inflation developments as well. In addition, the significant price increases of services observed in the past period may be restrained by the persistently lower demand that is possible in the services sector in view of the permanent downturn in foreign tourism as well as households' more cautious behaviour and higher savings.

Changes in indirect taxes point to an increase in inflation over the forecast horizon. One of the underlying reasons is that in line with the harmonisation with EU legislation, a three-stage series of excise tax increases concerning tobacco products started in January 2020. The second stage began in July 2020, and the last increase will take place in January 2021. Overall, changes in indirect taxes will raise inflation by 0.4 percentage points in 2020 and 2021, and have a neutral effect on inflation in 2022.

Prices of non-core inflation items are expected to change essentially in line with the June forecast. As in the June projection, the inflation of unprocessed food is expected to significantly exceed the historical average this year and – due to the carry-over effect – to a lesser degree next year, which is explained by the joint effect of various factors. On the one hand, the closure of borders because of the coronavirus outbreak made several countries lose seasonal workers employed in agriculture in recent months, and this made the harvesting of produce very difficult. Secondly, as a result of unfavourable weather conditions (more frosty nights in the spring than the average of previous years and more rain than necessary in the summer), fresh vegetables and fruits suffered serious losses. In the case of fuels, in line with the changes in futures prices, prices are projected to drop this year, while in 2021 an increase in prices is expected as a joint result of base effects and corrections in

futures prices. Following that, the inflation of fuels will gradually decline to near the historical average over the forecast horizon. Regulated energy prices will not change until the end of the forecast horizon, while the price dynamics of non-energy regulated prices are expected to be more moderate than in our June assumption. On the whole, 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 horizon (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 and changes in the assumptions related to such. 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 | 2020 | | 2021 | | 2022 | | Change | | |
|--|---------------------------|---------------------------|-----------------|-----------------|-----------------|-----------------|------------------------|---------------------------|------------------------|
| | Previous | Current | Previous | Current | Previous | Current | 2020 | 2021 | 2022 |
| EUR/USD | 1.11 | 1.14 | 1.12 | 1.19 | 1.12 | 1.19 | 2.7% | 6.1% | 6.1% |
| Oil (USD/barrel) | 40.8 | 42.2 | 43.0 | 46.3 | 43.6 | 47.4 | 3.4% | 7.8% | 8.8% |
| Oil (EUR/barrel) | 36.6 | 36.9 | 38.2 | 38.8 | 38.7 | 39.7 | 0.7% | 1.5% | 2.5% |
| Euro area inflation* (%) | 0.2 - 0.3 - 0.4 | 0.3 | 0.4 - 0.8 - 1.1 | 0.7 - 1.0 - 1.2 | 0.9 - 1.3 - 1.7 | 0.7 - 1.3 - 1.8 | -0.1 - 0 - 0.1 pp. | 0.1 - 0.2 - 0.3 pp. | (-0.2) - 0 - 0.1 pp. |
| Euro area core inflation (%) | 0.8 | 0.8 | 0.7 | 0.9 | 0.9 | 1.1 | 0.0 pp. | 0.2 pp. | 0.2 pp. |
| Euro area real GDP* (%) | (-12.6) - (-8.7) - (-5.9) | (-10.0) - (-8.0) - (-7.2) | 3.3 - 5.2 - 6.8 | 0.5 - 5.0 - 8.9 | 2.2 - 3.3 - 3.8 | 3.2 - 3.4 - 3.5 | (-1.3) - 0.7 - 2.6 pp. | (-2.8) - (-0.2) - 2.1 pp. | (-0.3) - 0.1 - 1.0 pp. |
| GDP growth of Hungary's main export partners** (%) | (-7.0) - (-3.0) | (-8.6) - (-7.1) | 1.0 - 4.5 | 3.7 - 6.4 | 0.5 - 3.0 | 3.1 - 4.3 | (-4.1) - (-1.6) pp. | 1.9 - 2.7 pp. | 1.3 - 2.6 pp. |

Note: Annual average in the case of oil prices. *ECB projections. **Growth rate of Hungary's 21 most important export partners weighted by share in exports.

Sources: Bloomberg, Consensus Economics, MNB, ECB

Q2 growth figures show that the measures taken to contain the spread of the coronavirus brought drastic consequences for the performance of the majority of Hungary's trading partners. Growth prospects in Hungary's important trading partners deteriorated abruptly and to a large degree. The United States, the largest economy in the world, experienced a record downturn, as the euro area also went through the greatest downswing in its history. The economy of Germany, Hungary's main trading partner, contracted by 11.3 percent in Q2. Following Q2, which brought historical downswings for other countries as well, the recovery during H2 is projected to be slower than previously expected. According to the latest assessments by analysts, Hungary's trading partners may reach their pre-crisis production levels only by 2022 at the earliest. According to the August analysis by Consensus Economics, which comprises the opinions of most economic analysts, the United States may exceed its 2019 level by 2 percentage points by 2022. The recovery of the euro area will be much slower; the output of large Western European economies may fall short of the pre-crisis levels by some 1–3 percentage points even in 2022. The countries that depend most on the developments in external demand are particularly affected by the pandemic, and thus the renewed deceleration in global trade may have a negative impact on Hungary's recovery as well.

In line with the weak growth outlook in Europe, the European Central Bank continues to project that price dynamics will fall short of its inflation target over the entire forecast horizon. Illustrating the high degree of uncertainty and the various pandemic scenarios, the projection for real GDP growth in the euro area lies in a wide range, similarly to the June forecast. The European Central Bank expects a contraction between 10 and 7.2 percent in 2020, followed by growth of 0.5–8.9 percent in 2021 and 3.2–3.5 percent in 2022. According to the latest projection, euro area inflation in 2020 will be 0.3 percent, remaining practically unchanged compared to the previous forecast. The projection rose slightly for 2021, while remaining unchanged for 2022 compared to the June forecast.

The weakening economic performance and prospects due to the coronavirus pandemic, then the gradual lifting of the restrictions in the past months had a major impact on the price developments for the most important commodities. Parallel to the gradual lifting of the lockdown measures and border closures introduced in order to contain the spread of the pandemic, road and air traffic resumed, resulting in a rise in the demand for crude oil. Global production – including

automotive manufacturing with its high demand for industrial metals – also started to recover. On the whole, the increase in demand for both crude oil and industrial metals caused price rises in the case of these commodities in the summer months.

The world market price of Brent crude oil was around USD 43/barrel in the past period. From 1 August, the production cut of OPEC+ countries declined from 9.7 million barrels per day to 7.7 million barrels per day, according to the previous agreement. The world market price of crude oil dropped below 40 USD/barrel in the past week, due to the overall effect of several factors. Saudi Arabia lowered the premium on October's futures sales, furthermore, China's oil imports in August decreased compared to July, which was interpreted by the market as a sign of a weak demand. The USA's crude oil stock increased to its highest level since May according to the report of the US Energy Information Administration (EIA), which contributed to the decrease in the global price of crude oil as well. Looking ahead, price movements in oil are surrounded by downside risks, as market concerns regarding global oil demand have been strengthened by the second wave of the coronavirus pandemic.

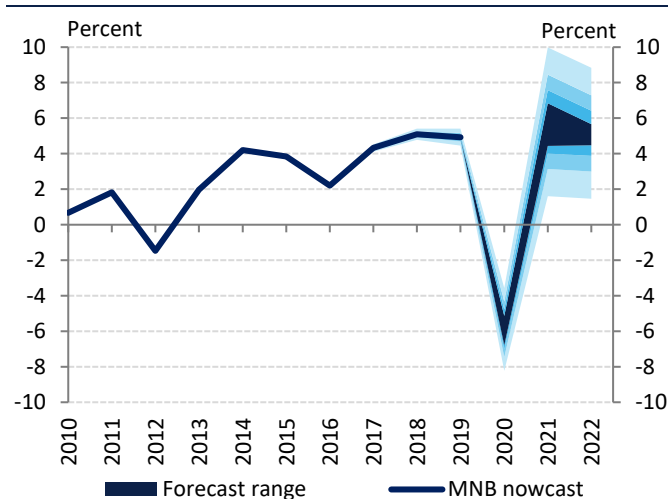
EUR-denominated oil prices, which determine changes in fuel prices in Hungary, are slightly higher than our June assumption. Our assumption for the EUR/USD cross rate is higher compared to the June projection.

The course of the coronavirus pandemic may have a significant effect on Hungary's public budget. The budget deficit may rise to 7-7.5 percent in 2020. The increase in the deficit will be caused on the one hand by the slowdown in economic growth, and on the other hand by government measures for health purposes and economic protection. The slowdown in economic growth reduces tax revenues (automatic stabiliser). According to the government's plans, the measures announced so far addressing the medical and economic effects of the pandemic with direct budgetary effects total close to 7 percent of GDP. The government may cover a significant portion of these measures with reallocations, the utilisation of reserves, increases in taxes (retail tax, contributions by financial organisations) and the regrouping of EU funds. According to our calculations, the net balance effect of the measures announced so far may amount to 2.8 percent of GDP. However, the fiscal impact of the measures may be greater than this if the amount of the funds used from the Economy Protection Fund exceeds the originally planned limit in a way that it is not covered by reallocations. The increase in fiscal expenditures as a result of economy protection measures entails a major upswing in demand, contributing to the restoration of economic growth. The budget deficit is expected to decrease in 2021, and considering the programmes already known, we estimate it may come in at 2.9 – 3.4 percent of GDP, but our forecast does not include the economy-stimulating measures planned, though not yet announced, by the government for 2021.

1.2 Real economy forecast

The coronavirus pandemic primarily had an unfavourable impact on the factors that constituted the basis of domestic economic growth in recent years. Buoyant growth in exports – primarily in the vehicle industry and services exports related to tourism – as well as in investment contributed to the rapid catching up of the economy from 2013, but these factors suffered the greatest losses due to the pandemic. Domestic GDP may have reached its low in 2020 Q2, but economic performance may be subdued in the remaining part of the year as well. Therefore, the recovery from the crisis may be slower compared to our previous expectations. The level of domestic GDP shows some adjustment in Q3, but the second wave of the pandemic is stopping these developments, resulting in a contraction of domestic economic performance this year. The domestic economy may contract by 5.1–6.8 percent in 2020. Nevertheless, economic performance may expand by 4.4–6.8 percent in 2021 and by 4.5–5.7 percent in 2022. Hungary's growth surplus compared to the euro area is around 2–3 percentage points over the entire forecast horizon. In 2020, households are accumulating precautionary reserves amidst the uncertain environment, therefore they are postponing consumption and increasing savings. Following this year's downturn, we expect positive annual consumption dynamics starting from the beginning of next year, as the precautionary motives will be dissolved in line with the easing of restrictions. Companies are also adjusting to the slower than expected recovery through various channels. Due to the rethinking of business plans, corporate investment is declining considerably this year. There will be an upswing in whole-economy investment activity again as of next year, in line with the recovery in private investment. The containment measures entailed drastic consequences for the performance of most of Hungary's export markets. Therefore, the recovery in foreign markets is projected to be slower than previously expected. Very open economies are particularly affected by the pandemic, and thus the repeated deceleration in global trade may have a negative impact on Hungary's recovery as well.

Chart 1-3: Fan chart of the GDP forecast



Note: Based on seasonally unadjusted data.

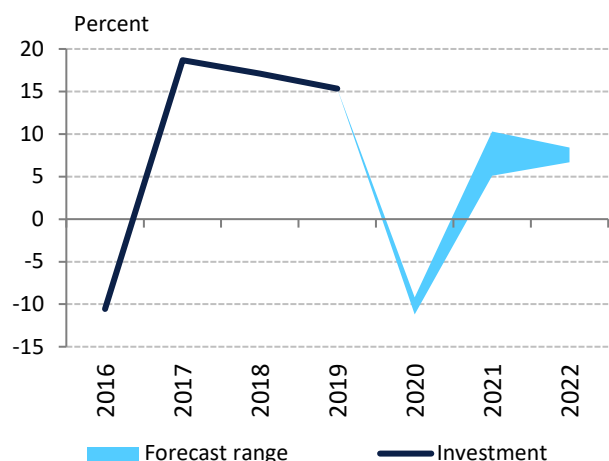
Source: HCSO, MNB

Hungarian GDP declined significantly in 2020 Q2 by 13.6 percent year on year. The economic impacts of the coronavirus pandemic became apparent in Hungary's macroeconomic figures from the middle of March. Due to the containment measures which were introduced and the global economic slowdown, Hungary's economic performance may have bottomed out in 2020 Q2.

Some of the most important factors affecting the development of economic activity are the continuation of the pandemic, the degree and scope of the second wave of the pandemic, and the reactions of our main trading partners, domestic consumers and corporations to this. Our forecast is based on maintaining the partial restrictive measures and social distancing already announced. At the top of the forecast range we do not expect any restrictions similar to the spring measures and affecting most of the economy, whereas at the bottom of the range we presume further restrictions in the case of our main trading partners and Hungary, in line with the spread of the pandemic in Q4, which may affect foreign demand and consumer decisions even in the longer run. We anticipate that the coronavirus vaccine could be available in the first half of 2021. Looking ahead, at the bottom of the forecast range we expect the scaling back of the pandemic, and so the gradual easing of restrictions and social distancing later in 2021.

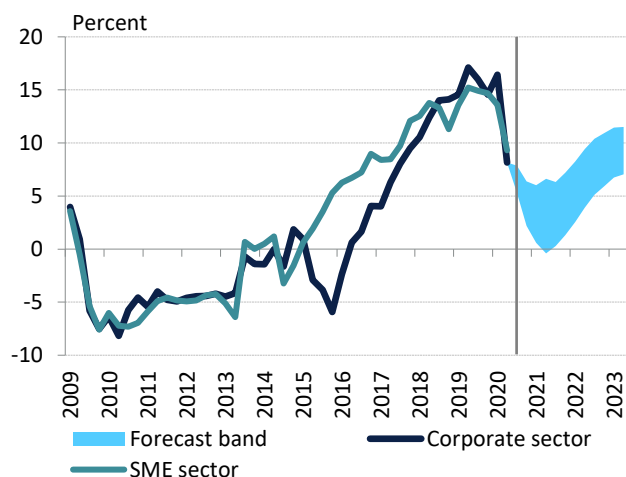
The second important question is how great the permanent losses caused to economies by the current impacts of the virus will be. As a result of the successes of

Chart 1-4: Annual change in investments



Source: HCSO, MNB

Chart 1-5: 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

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

| | 2019 Actual | 2020 Actual | 2021 Projection | 2022 Projection |
|-------------------------------|----------------|-------------------|--------------------|--------------------|
| Gross fixed capital formation | 15.3 | (-11.2) – (-9.2) | 5.1 – 10.3 | 6.7 – 8.4 |
| Government investments | 7.9 | -2.6 | -0.5 | -3.8 |
| Private investments | 17.6 | (-13.5) – (-11.0) | 6.7 – 9.3 | 9.3 – 11.6 |
| Investment rate | 28.6 | 27.3 – 27.5 | 27.8 – 28.6 | 28.6 – 29.3 |

Source: HCSO, MNB

government programmes to date as well as the decisions of monetary policy contributing to both household and corporate liquidity, in our forecast – for the time being – we do not expect the crisis to cause permanent losses to the Hungarian economy.

According to the high frequency data available, the economy started to recover in May, but the trend came to a halt in July. Economic performance may be subdued in the remaining part of the year as well. Therefore, the recovery from the crisis may be slower than we previously expected. The level of domestic GDP may change for the better by the end of the year, but on the whole, the economy may contract by 5.1–6.8 percent in 2020. Economic performance is forecast to expand by 4.4–6.8 percent in 2021 and by 4.5–5.7 percent in 2022 (Chart 1-3). Economic performance may recover to its pre-crisis level by the turn of 2022.

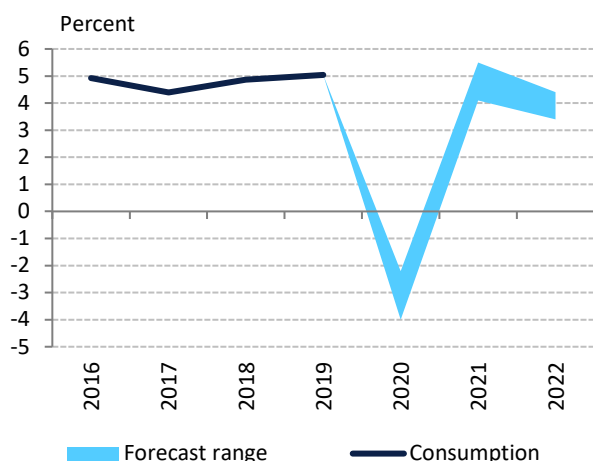
Hungary's economic convergence to the euro area will continue, in spite of the unfavourable conditions. Contrary to former crisis periods, Hungary's growth surplus compared to the euro area will remain in place. The Hungarian economy's growth surplus compared to the euro area is around an average of 2–3 percentage points over the entire horizon.

Investment is expected to decline considerably this year, by 9.2–11.2 percent. (Chart 1-4). The household, corporate and government sectors are all contributing to the decline. This year's decrease may be followed by a major adjustment in the coming years.

The private sector's risk aversion becomes stronger in an uncertain environment, and companies postpone previously planned investments. Businesses revise their previous plans, the timing of capacity expansions in progress becomes uncertain, and many decide to postpone their development projects. Some of the postponed projects will be implemented in the coming years, and thus corporate investment will expand again as of next year in line with the growing demand and the supportive financing environment. The advantage of Central and Eastern European economies, including Hungary, in the cost level of production remains significant, resulting in a delay and not postponement of foreign investment.

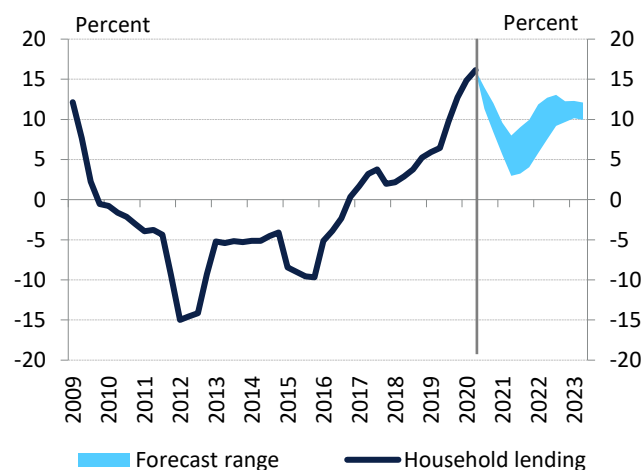
The recovery of corporate investment is supported by corporate lending; according to our projection, the annual growth rate of corporate loans outstanding will remain in positive territory in the remaining part of the year (Chart 1-5). The pick-up in corporate lending and investment is supported by state loan and guarantee

Chart 1-6: Annual change in consumption



Source: HCSO, MNB

Chart 1-7: Annual changes in lending to households



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

Source: MNB

programmes as well as by FGS Go! and the Bond Funding for Growth Scheme.

The end of the housing market cycle is contributing to the decline in household investment. The rise in the VAT rate on housing to its previous level, the precautionary motive that has appeared among households and the temporary worsening in the income position project a more subdued investment activity. At the same time, the state-subsidised schemes (HPS, Prenatal Baby Support Loan) may promote household lending, which may curb the decline in the pace of household investment.

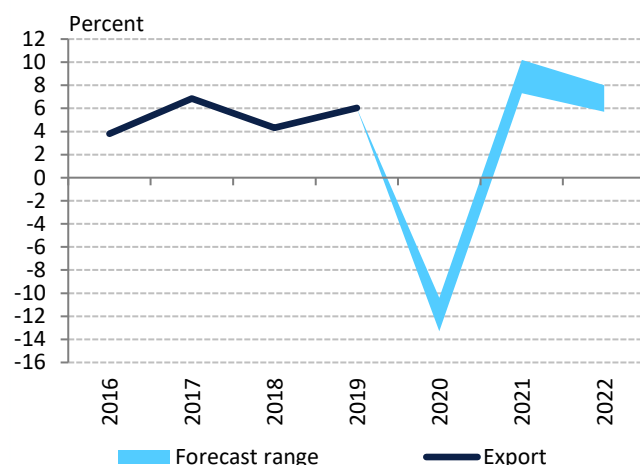
In our forecast, in line with the major decrease in whole-economy investment, the investment rate will decline this year before rising again as of next year (Table 1-3). In crisis periods the role of government investment appreciates, but it was below our expectations in H1, which may affect the whole year.

The fall in disposable income and the high savings rate result in a 2.2–4.0 percent decline in household consumption this year. In an uncertain environment, households postpone their consumption, their savings increase, and in addition to that, forced savings due to the pandemic also restrain consumption expenditures (Chart 1-6). The restrictive measures had a particularly unfavourable impact on the consumption of services, which is expected to decline temporarily, whereas the falling demand for durable products may only recover later, with an improvement in income conditions. Compared to our previous assumptions, household savings are expected to reach a higher level as consumer behaviour may continue to be dominated by precautionary motives. Households' real income is expected to decline this year, with a smaller contribution from a decrease in the net wage bill (employees' wages) and a greater contribution by a fall in other incomes (e.g. sole proprietors' earnings).

Following this year's downturn, positive annual consumption dynamics will be observed starting from the beginning of next year, with precautionary motives and forced savings dissolved in line with the easing of restrictions. Household consumption is expected to support economic growth again as of 2021 Q2, and the latter may reach its pre-crisis level in 2021 H2, depending on the second wave of the pandemic and the degree of labour market adjustment.

Following dynamic expansion in recent years, the growth rate of household lending may decrease in line with weakening credit demand and the fading of the moratorium (Chart 1-7). The deteriorating economic

Chart 1-8: Evolution of exports



Source: HCSO, MNB

outlook led to reduced risk tolerance and tighter credit conditions. In addition to the state-subsidised loan schemes, however, the moratorium on loan repayments may also support household lending. Demand for prenatal baby support loans remains high, despite the weakening economic environment. The developments in lending expected over the forecast horizon may contribute to a slower decline in household consumption.

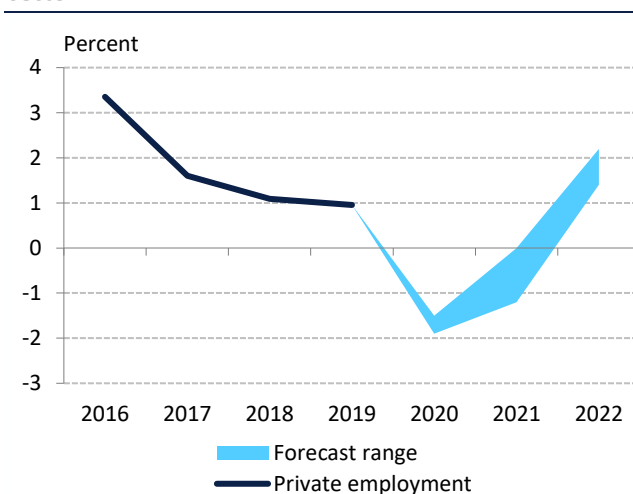
The renewed deceleration in global trade may have a negative impact on Hungary's recovery as well. Growth prospects of Hungary's trading partners deteriorated abruptly and to a large degree in the recent period. According to the latest assessments by analysts, Hungary's trading partners may reach their pre-crisis production levels only in 2022 at the earliest, thus the recovery during H2 is projected to be slower than expected earlier.

According to our forecast, Hungary's export performance will fall considerably this year, contracting by some 10.4-13.3 percent, and will only recover more slowly than domestic demand (Chart 1-8). Imports will also be down in 2020 as a result of the decline in exports and the postponement of corporate investment in view of the uncertainty. Parallel to the slow recovery of production, companies will only partly make up for the lost exports this year. The growth of Hungary's export partners may resume in 2021. Accordingly, a lasting recovery in Hungary's exports is expected only for the second half of next year. Imports will grow again in the second half of the forecast period parallel to expansions in exports and domestic demand items (household consumption, investments). As a result of moderate external demand and falling domestic demand items, net exports will considerably restrain growth this year, but their contribution to growth may be positive again in 2021 and 2022.

1.3 Labour market forecast

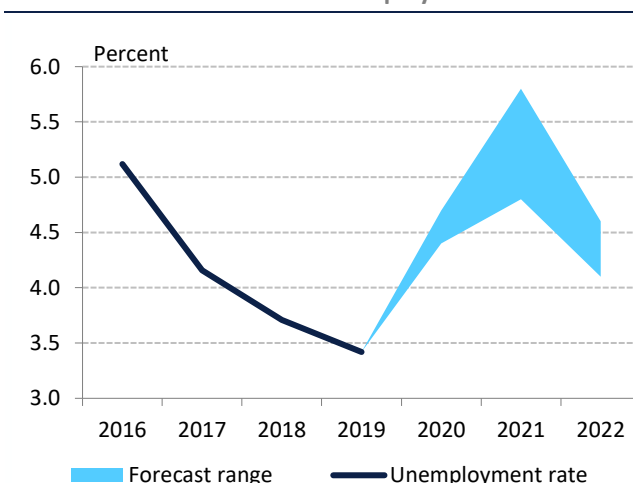
From the second quarter, the impacts of the coronavirus pandemic on the economy were reflected in the labour market as well. Depending on their respective capital positions, companies strived to retain most of their labour force during the spring and summer months and adjusted to the changing circumstances by reducing working hours, increasing the number of part-time employees, and with other intensive-side changes. The job protection and job creation subsidies also contributed to this process. Nevertheless, the coronavirus pandemic may be more protracted than expected before, and so in addition to corporate adjustments concerning working hours, businesses may start further lay-offs. With the impacts of the coronavirus on the economy expected to fade, the unemployment rate will start to decline as of 2021 Q2 and may fall below 4 percent by end-2022, with the onset of full employment again. In view of the fall in economic performance due to the coronavirus pandemic, we expect companies' adjustments in H2 may be gradual in terms of both regular earnings and bonuses, which may result in decelerating wage dynamics in 2020 compared to 2019.

Chart 1-9: Annual change in employment in the private sector



Source: HCSO, MNB

Chart 1-10: Evolution of the unemployment rate



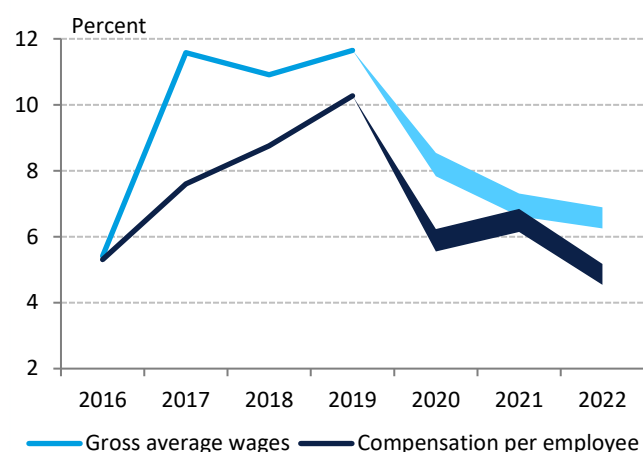
Source: HCSO, MNB

From the second quarter, the impacts of the coronavirus pandemic on the economy were reflected on the labour market as well. Depending on their respective capital positions, companies strived to retain most of their labour during the spring and summer months and adjusted to the changing circumstances mainly by reducing working hours, increasing the number of part-time employees, and with other intensive-side changes. The job protection and job creation subsidies also contributed to this process. Hungarian employment data indicated the beginning of a recovery in the labour market in June and July, with the new credit facilities (FGS Go!) for SMEs and the job protection and job creation measures among the contributors to it.

Compared to previous expectations the domestic economic performance may be persistently more subdued and therefore, in addition to corporate adjustments concerning working hours, businesses may start laying people off. As a result of the protracted pandemic, the number of employees in the private sector may reach its low in 2021 Q1 or mid-2021, corresponding to a decline of more than 100 thousand people compared to the same period of the previous year. In line with the slower recovery of the economy and the ending of the job protection measures previously introduced, the restoration of the labour market may be more protracted (Chart 1-10), and thus employment in the private sector will decline by 1.5-1.9 percent on average this year and by 0.0-1.2 percent in 2021.

Achieving full employment again will take longer to achieve. With the ending of the job protection wage subsidy programme in December, the 3+1 employment period will end for all remaining employees. The unemployment rate may rise to 5.2-6.3 percent in 2021 Q1 as a result of the termination of the programme and the protraction of the pandemic. With the impacts of the coronavirus on the economy expected to fade, the unemployment rate will start to decline as of 2021 Q2, and

Chart 1-11: Annual changes in gross average wages and average labour cost in the private sector



Source: HCSO, MNB

may fall below 4 percent by end-2022, with the onset of full employment again (Chart 1-11).

We expect companies may make gradual adjustments in terms of both regular earnings and bonuses in H2, resulting in slower wage dynamics compared to previous years. Private sector wages may rise by 7.8–8.5 percent this year, with statistical effects as contributors. The latter are discussed in more detail in Box 3-3 (Chart 1-12). Private sector wages are expected to rise by 6.6–7.3 percent in 2021 and by 6.2–6.9 percent in 2022.

The average labour cost is reduced by tax cuts. In certain sectors, employers were relieved of their contribution payment obligations between March and June 2020, and the Hungarian government lowered the social contribution tax by 2 percentage points from 1 July 2020. The social contribution tax is expected to decrease by another 2 percentage points over the forecast horizon, at the beginning of 2022.

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

| | 2019 | 2020 | | 2021 | | 2022 | |
|---|--------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|
| | Actual | Projection | | | | | |
| | | Previous | Current | Previous | Current | Previous | Current |
| Inflation (annual average) | | | | | | | |
| Core inflation ¹ | 3.8 | 3.8 - 4.0 | 4.2 - 4.3 | 3.0 - 3.1 | 3.3 - 3.5 | 2.9 | 2.9 |
| Core inflation excluding indirect tax effects | 3.4 | 3.3 - 3.5 | 3.7 - 3.8 | 2.6 - 2.7 | 2.9 - 3.1 | 2.9 | 2.9 |
| Inflation | 3.4 | 3.2 - 3.3 | 3.5 - 3.6 | 3.2 - 3.3 | 3.4 - 3.6 | 3.0 | 3.0 |
| Economic growth | | | | | | | |
| Household consumer expenditure | 5.0 | 0.3 - 1.8 | (-4.0) - (-2.2) | 2.8 - 3.8 | 4.1 - 5.5 | 3.1 - 3.2 | 3.4 - 4.4 |
| Government final consumption expenditure ⁶ | 2.1 | 1.3 - 1.8 | 0.9 - 1.1 | 1.0 - 1.4 | 0.8 - 2.4 | 1.2 - 1.3 | 2.2 - 2.4 |
| Gross fixed capital formation | 15.3 | 1.7 - 2.9 | (-11.2) - (-9.2) | 6.2 - 7.2 | 5.1 - 10.3 | 3.7 - 4.1 | 6.7 - 8.4 |
| Domestic absorption | 5.6 | 2.8 - 4.0 | (-4.1) - (-2.9) | 3.3 - 3.9 | 3.5 - 6.0 | 2.8 - 3.0 | 4.1 - 5.1 |
| Exports | 6.0 | (-8.1) - (-5.1) | (-13.3) - (-10.4) | 5.8 - 8.4 | 7.3 - 10.2 | 5.2 - 5.6 | 5.7 - 8.0 |
| Imports | 6.9 | (-5.4) - (-3.0) | (-10.4) - (-7.9) | 5.2 - 6.9 | 6.1 - 9.2 | 4.5 - 4.8 | 5.4 - 7.3 |
| GDP | 4.9 | 0.3 - 2.0 | (-6.8) - (-5.1) | 3.8 - 5.1 | 4.4 - 6.8 | 3.5 - 3.7 | 4.5 - 5.7 |
| Labour productivity ⁵ | 3.2 | 2.5 - 3.5 | (-3.2) - (-1.8) | 2.1 - 3.2 | 3.5 - 5.0 | 2.8 - 3.3 | 3.4 - 3.9 |
| External balance ² | | | | | | | |
| Current account balance | -0.3 | (-1.9) - (-1.5) | (-1.3) - (-0.9) | (-1.1) - (-0.9) | (-1.0) - (-0.5) | (-0.8) - (-0.5) | (-0.9) - (-0.6) |
| Net lending | 1.6 | 0.3 - 0.7 | 1.3 - 1.7 | 1.2 - 1.3 | 1.7 - 2.1 | 1 - 1.2 | 1.2 - 1.5 |
| Government balance ² | | | | | | | |
| ESA balance | -2.0 | -3.8 | (-7.5) - (-7.0) | -2.9 | (-3.4) - (-2.9) | (-2.2) - (-2.1) | (-2.9) - (-2.2) |
| Labour market | | | | | | | |
| Whole-economy gross average earnings ³ | 11.4 | 6.5 - 7.5 | 8.7 - 9.2 | 7.9 - 8.6 | 6.6 - 7.1 | 7.1 - 7.5 | 6.1 - 6.6 |
| Whole-economy employment | 1.0 | (-2.5) - (-1.7) | (-2.1) - (-1.8) | 1.6 - 1.9 | (-1.0) - (-0.1) | 0.4 - 0.6 | 1.1 - 1.7 |
| Private sector gross average earnings ³ | 11.6 | 5.3 - 6.4 | 7.8 - 8.5 | 9.1 - 9.7 | 6.6 - 7.3 | 7.8 - 8.3 | 6.2 - 6.9 |
| Private sector employment | 1.4 | (-2.5) - (-1.5) | (-1.9) - (-1.5) | 2.1 - 2.5 | (-1.2) - (0.0) | 0.4 - 0.8 | 1.4 - 2.2 |
| Unemployment rate | 3.4 | 4.8 - 5.5 | 4.4 - 4.7 | 3.8 - 4.3 | 4.8 - 5.8 | 3.4 - 3.7 | 4.1 - 4.6 |
| Private sector nominal unit labour cost | 6.4 | 0.9 - 1.2 | 8.9 - 10.2 | 4.0 - 4.6 | 1.8 - 3.3 | 3.1 - 3.4 | 0.4 - 0.7 |
| Household real income ⁴ | 4.9 | (-0.7) - 0.4 | (-3.3) - (-1.5) | 3.3 - 4.1 | 3.9 - 5.0 | 3.3 - 3.5 | 3.9 - 4.3 |

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.

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

| | 2020 | 2021 | 2022 |
|---|---------------------------|--------------------------|--------------------------|
| Consumer Price Index (annual average growth rate, %) | | | |
| MNB (September 2020) | 3.5 - 3.6 | 3.4 - 3.6 | 3.0 |
| Consensus Economics (August 2020) ¹ | 2.5 - 3.2 - 3.9 | 1.4 - 3.0 - 4.0 | |
| European Commission (July 2020) | 3.5 | 2.8 | |
| IMF (April 2020) | 3.3 | 3.2 | |
| OECD (June 2020) | 3.5 | 1.8 - 2.1 | |
| Reuters survey (September 2020) ¹ | 2.8 - 3.4 - 3.7 | 2.6 - 3.3 - 4.1 | 3.0 - 3.3 - 4.0 |
| GDP (annual growth rate, %) | | | |
| MNB (September 2020) | (-6.8) - (-5.1) | 4.4 - 6.8 | 4.5 - 5.7 |
| Consensus Economics (August 2020) ¹ | (-8.0) - (-5.2) - (-3.0) | 3.2 - 4.7 - 7.6 | |
| European Commission (July 2020) | -7.0 | 6.0 | |
| IMF (April 2020) | -3.1 | 4.2 | |
| OECD (June 2020) | (-10.0) - (-8.0) | 1.5 - 4.6 | |
| Reuters survey (September 2020) ¹ | (-6.7) - (-5.5) - (-4.1) | 3.5 - 4.8 - 7.2 | 3.0 - 4.0 - 5.4 |
| Current account balance³ | | | |
| MNB (September 2020) | (-1.3) - (-0.9) | (-1.0) - (-0.5) | (-0.9) - (-0.6) |
| European Commission (May 2020) | 1.3 | 1.5 | |
| IMF (April 2020) | -0.1 | -0.6 | |
| OECD (June 2020) | (-1.3) - (-1.2) | (-1.3) - (-0.4) | |
| Budget balance (ESA 2010 method)³ | | | |
| MNB (September 2020) | (-7.5) - (-7.0) | (-3.4) - (-2.9) | (-2.9) - (-2.2) |
| Consensus Economics (August 2020) ¹ | (-6.1) - (-5.0) - (-3.9) | (-4.8) - (-3.4) - (-1.9) | |
| European Commission (May 2020) | -5.2 | -4.0 | |
| IMF (April 2020) | -3.0 | -1.6 | |
| OECD (June 2020) | (-9.9) - (-8.8) | (-9.0) - (-7.3) | |
| Reuters survey (September 2020) ¹ | (-8.0) - (-6.8) - (-5.0) | (-5.0) - (-3.9) - (-3.2) | (-3.0) - (-2.7) - (-2.0) |
| Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %) | | | |
| MNB (September 2020) | (-8.6) - (-7.1) | 3.7 - 6.4 | 3.1 - 4.3 |
| ECB (September 2020) | (-10.0) - (-8.0) - (-7.2) | 0.5 - 5.0 - 8.9 | 3.2 - 3.4 - 3.5 |
| Consensus Economics (August 2020) ² | -6.4 | 4.8 | |
| European Commission (July 2020) ² | -7.3 | 5.6 | |
| IMF (June 2020) ² | -7.3 | 5.1 | |
| OECD (September 2020) ² | (-7.0) | 5.3 | |

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.

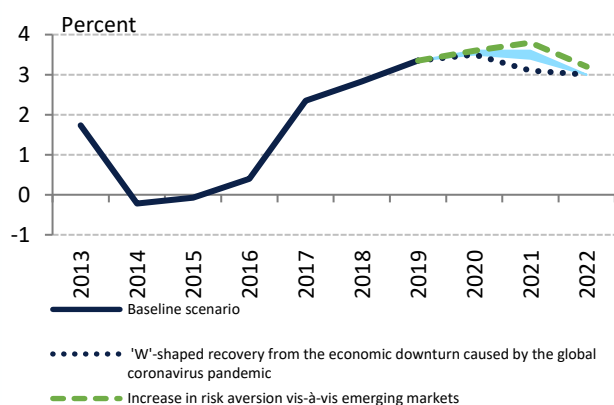
³ As a percentage of GDP.

Source: Consensus Economics, ECB, European Commission, IMF, OECD, Reuters poll, MNB

2 Effects of alternative scenarios on our forecast

The Monetary Council highlighted two alternative scenarios around the baseline projection in the September Inflation Report. The alternative scenario that presumes a 'W'-shaped recovery from the economic downturn caused by the global coronavirus pandemic points towards slightly lower domestic inflation and considerably more subdued growth paths compared to the baseline scenario. In the alternative scenario featuring an increase in risk aversion vis-à-vis emerging markets, inflation is higher than in the baseline forecast. In addition to these scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume a permanent rise in food prices and the implementation of competitiveness reforms.

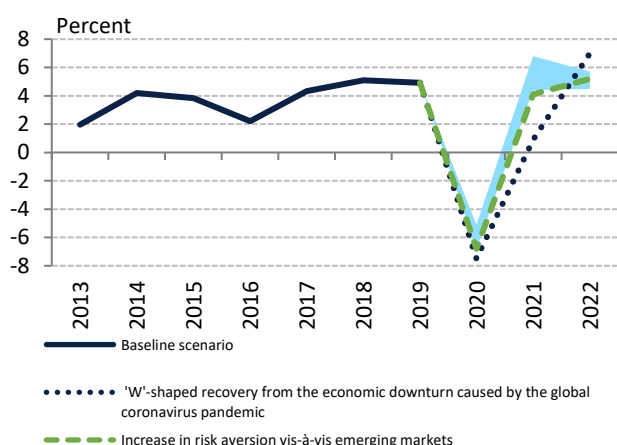
Chart 2-1: Impact of alternative scenarios on the annual inflation forecast



Note: We applied a forecast range in the baseline scenario over the forecast horizon.

Source: MNB

Chart 2-2: Impact of alternative scenarios on the GDP forecast



Note: We applied a forecast range in the baseline scenario over the forecast horizon.

Source: MNB

'W'-shaped recovery from the economic downturn caused by the global coronavirus pandemic

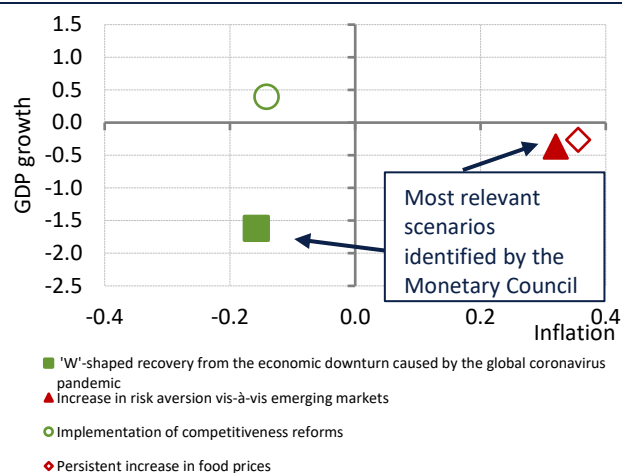
The baseline scenario presumes that the Hungarian economy will contract this year. Looking ahead, however, it will expand again in 2021 as a result of a pick-up in domestic demand.

In the alternative scenario, the coronavirus results in a permanent and strong negative impact on the real economy, entailing a material downturn both globally and in the Hungarian economy. In this scenario, we anticipate that the coronavirus vaccine may be available later than in our baseline assumption. As a result of all this, EU countries, which are already exhibiting subdued growth, may find themselves in an even more difficult situation, and Europe may again be one of the weakest links as a result of the high level of debt, structural weaknesses, recurring tensions in the euro area, the rigid institutional system and the vulnerable banking system. Compared to the euro area Hungary still has a growth surplus, but domestic growth is dropping significantly in 2020. Slower than expected external economic activity and more subdued developments in inflation in the euro area point to slightly lower domestic inflation and a much more subdued growth path than in the baseline scenario.

Increase in risk aversion vis-à-vis emerging markets

On the whole, investor sentiment improved in the global money and capital markets during the past quarter. Volatility declined amid the improving market sentiment, while the dollar, which is considered to be a safer currency, depreciated. Looking ahead, we do not expect the relative risk assessment of emerging markets will worsen. Consequently, there will be no major capital withdrawals from emerging markets, and thus the impact on financial markets will not be significant either.

Chart 2-3: Risk map: effect of alternative scenarios on the baseline forecast



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

Source: MNB

If risk aversion vis-à-vis emerging markets strengthens, volatility in the money and capital markets may increase.

Accordingly, FX and bond markets of the emerging economies that are deemed to be riskier may come under sales pressure, entailing a rise in long-term yields and a decline in domestic asset prices in the more vulnerable regions, which projects a higher inflation path through increases in the prices of imported products.

Other risks

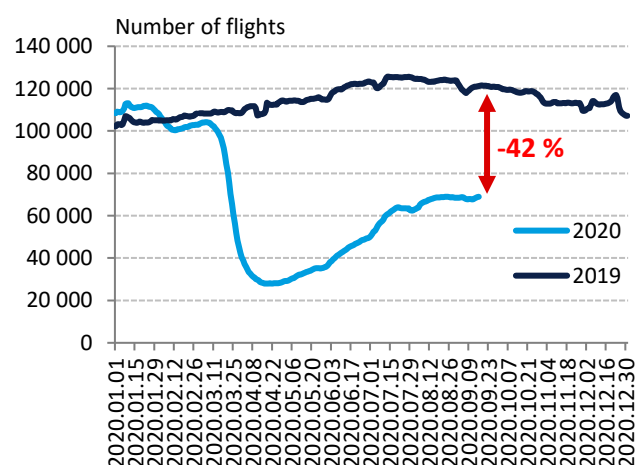
In addition to the scenarios highlighted above, the Monetary Council considered two other alternative scenarios. The scenario featuring the implementation of competitiveness reforms also involves higher aggregate productivity, and thus higher potential activity in the economy, which would materialise in the second half of the forecast period. Under greater potential growth, GDP growth higher than assumed in the baseline scenario will not raise inflation. In the scenario with a prolonged increase in food prices, food prices grow to a greater degree than in the baseline scenario due to unfavourable weather conditions. The stronger rise in prices is consistent with a higher inflation path, while in domestic GDP it essentially does not deviate from the baseline projection.

3 Macroeconomic overview

3.1 Evaluation of international macroeconomic developments

In previous months, trends in world economic performance have been dominated by the coronavirus pandemic and the related containment measures. The pandemic hit the global economy in an already weakened state, and its negative economic effects appeared quickly in a wide range of countries. In 2020 Q2, European states experienced the deepest economic recession of their history. Parallel to the flattening of the epidemic curves, the large European economies started to gradually ease restrictions in the middle of Q2, as a result of which signs of recovery appeared in the month-on-month indices. Nevertheless, the gradual adjustment that had started after bottoming out in April and May decelerated considerably during Q3. Expectations concerning the performance of the global economy in H2 declined. The pattern of real-time activity indicators for large European economies increasingly tends to indicate a scenario of a protracted 'bird wing'- or 'pipe'-shaped recovery instead of a V-shaped one. The economic situation at the end of the year significantly depends on the strength of the second wave of the pandemic as well. In the past period, the central banks continued their supportive monetary policies, and typically maintained the measures introduced during the first wave of the coronavirus. Of the world's leading central banks, the Fed left its policy rate unchanged around zero, and indicated that it would maintain the current pace of its asset purchases. In addition, it announced the modification of its monetary strategy framework. The European Central Bank also left its policy rates unchanged, and did not change the parameters of the asset purchase programmes either. Looking at the region, the Czech and Polish central banks did not amend their monetary conditions, while the Romanian central bank carried out a further, 25 basis-point interest rate cut.

Chart 3-1: Total number of global commercial flights



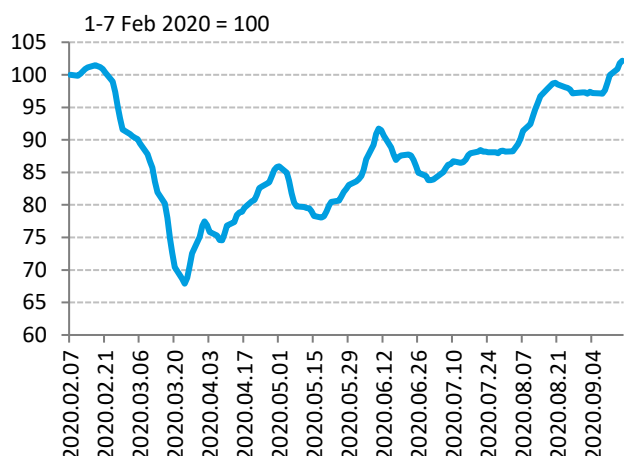
Note: The index is based on 7-day moving averages

Source: Flightradar24

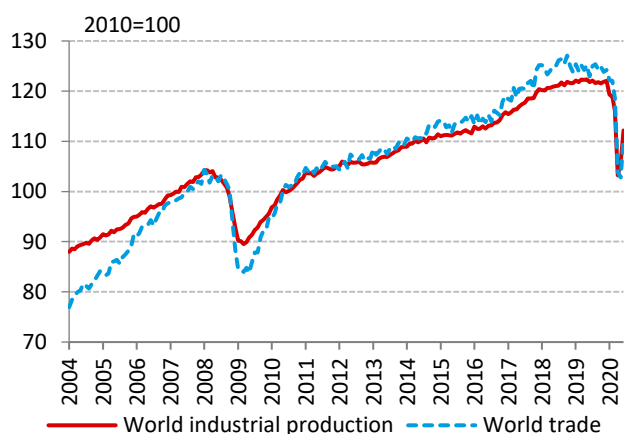
3.1.1. Global macroeconomic developments

In the past months, the trends in world economic performance have been dominated by the coronavirus pandemic and the related containment measures. The pandemic hit the global economy in a weakened state, and its negative economic impacts rapidly appeared in numerous countries. All the countries in the world introduced significant restrictions, completely stopping the circulation of the economy for shorter or longer periods, as a result of which – according to the data already available – a major economic downturn took place in the developed countries of Western Europe, Central and Eastern Europe as well as in Asia in 2020 Q2. Global tourism essentially came to a standstill in mid-March, which was also corroborated by the sharp fall in the number of commercial flights (Chart 3-1). There was a major deceleration in international marine transport as well due to supply constraints in the Far East and the fall in the demand of western economies (Chart 3-2). Industrial facilities stopped working, and, as a result of containment measures taken by governments, global trade as well as global industrial production fell to levels last seen in 2011 (Chart 3-3).

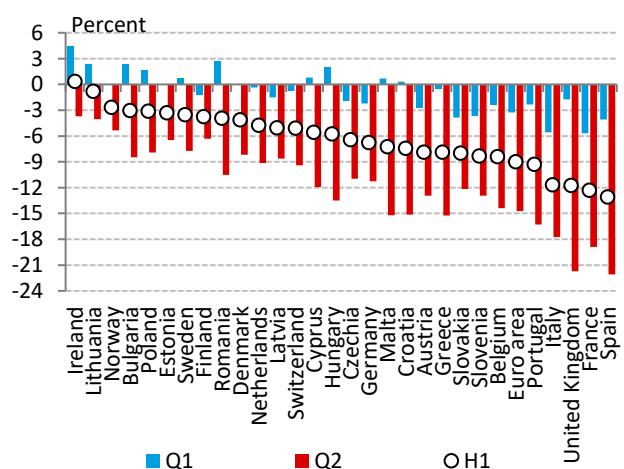
In 2020 Q2, European states experienced the deepest economic recession of their history: the economic performance of the euro area declined by 14.7 percent year on year (Chart 3-4). The economy of Germany, Hungary's main trading partner, contracted by 11.3 percent in Q2. The pandemic reached the Western and Southern

Chart 3-2: Development of the Dow Jones Global Shipping Index

Source: Bloomberg

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

Source: CPB

Chart 3-4: Annual changes in GDP growth in 2020 Q1, 2020 Q2 and 2020 H1

Note: Based on seasonally and working day adjusted data.

Source: Eurostat

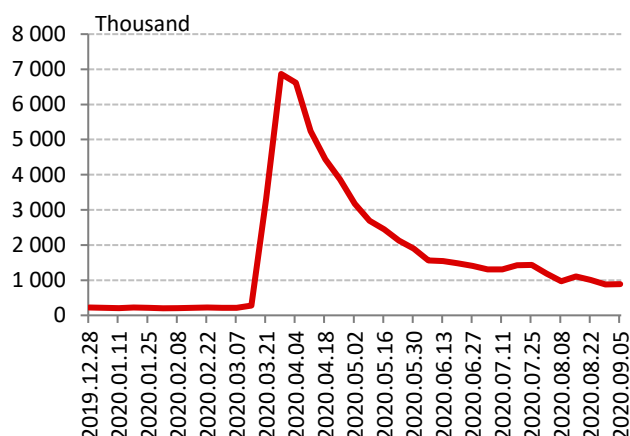
European states in an already weakened state both in macroeconomic and financing terms, and thus the negative economic impacts appeared almost immediately in a number of countries. The second, third and fourth largest economies of the European Union are among the countries hit hardest by the pandemic, and their downturn was particularly significant due to their exposure to tourism. The downturns observed in France (-18.9 percent), Italy (-17.7 percent) and Spain (-22.1 percent) were attributable to the impact on household consumption of the especially strict restrictions in view of the late government reaction and to the complete shutdown of services. The United Kingdom experienced one of the greatest downswings of its history in Q2: British GDP contracted by 21.7 percent year on year. Historically significant annual declines were recorded in Belgium (-14.4 percent) and Austria (-12.9 percent).

In Q2, the decline in economic performance in the CEE region was less severe than in the bigger European countries. The seasonally and calendar-adjusted annual index of economic performance was down by 13.6 percent in Hungary, 12.2 percent in Slovakia, 11 percent in the Czech Republic, 10.5 percent in Romania, 8.2 percent in Bulgaria and 7.9 percent in Poland. The deep economic downturn is particularly attributable to the fact that in Hungary and Slovakia the weight of the vehicle industry within value added is high by European comparison. Another important factor is the role of international tourism, which in Hungary exceeds the exposure of other countries in the region, although in European terms it falls behind the southern states, where the contraction was especially significant. Looking at H1 as a whole, the Hungarian economy is in the middle in terms of its downturn (Chart 3-4).

Dynamics of the United States and China, the two largest economies in the world, were different in Q2. In Q2, US GDP declined by 9.5 percent year on year, some three quarters of which was the result of a drastic fall in consumption in line with the rise in unemployment. In the acute period of the pandemic, in the week ending on 28 April, 6.867 million new applications for unemployment benefit were submitted in the USA, whereas this figure fell below 1 million by the beginning of September (Chart 3-5).

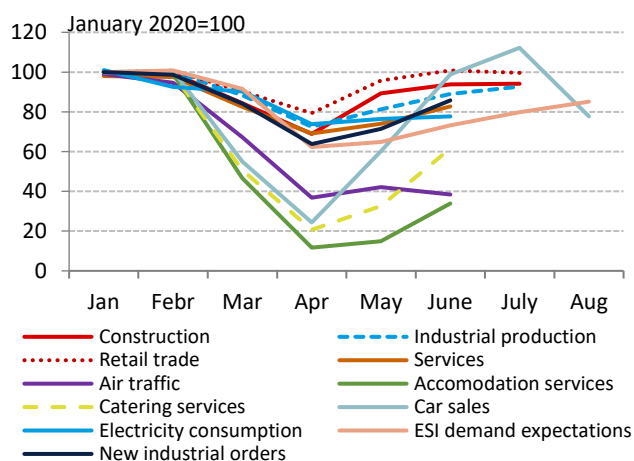
As a result of the different time profile of the pandemic, in Q2, GDP already grew by 3.2 percent year-on-year in China. Industrial production has been growing since April: it expanded by 4.8 percent year on year in June, reaching its highest rate in the past half year. In line with the gradual easing of the restrictive measures, further better figures are expected in Q3.

Chart 3-5: Evolution of initial unemployment claims in the United States



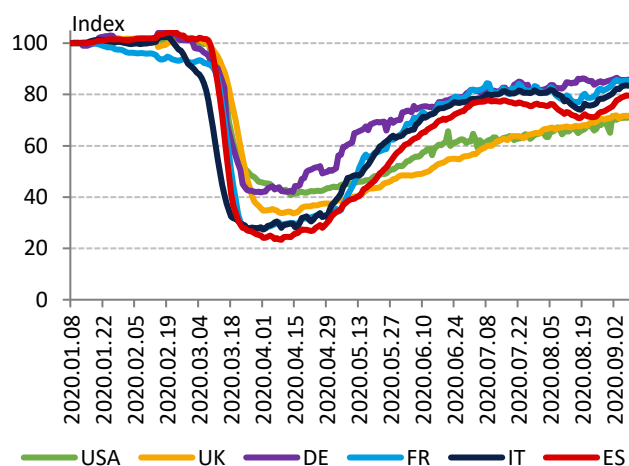
Source: Fred

Chart 3-6: Development of some macroindicators in the euro area



Note: Based on seasonally adjusted data. Source: Eurostat

Chart 3-7: Developments in the real time economic activity index by Bloomberg



Source: Bloomberg Intelligence

Since the low in April and May, a gradual adjustment has been typical for air traffic and forwarding, reflecting a continuous restart of the economies. The index measuring overall transportation by land, air and sea in North America was at a 10-year low in April, but recovered from its previous fall by the end of August. Following the wide-ranging introduction of the restrictions on travelling, from nearly 110 thousand observed early in the year, the daily number of commercial flights declined to a mere 46 thousand, rising only to 70 thousand flights even in early September.

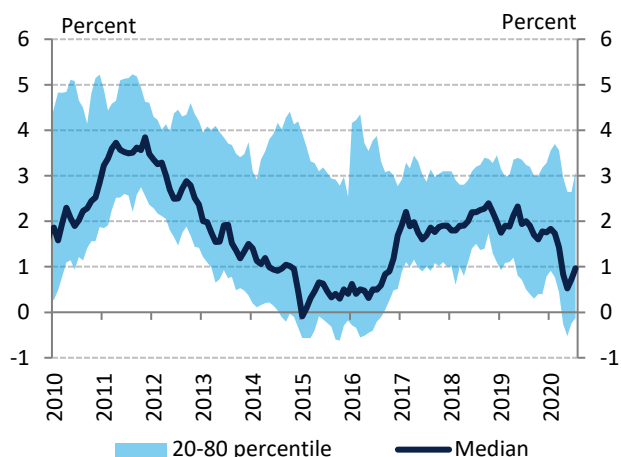
Signs of economic recovery were reflected in the latest monthly indicators of the euro area as well (Chart 3-6). Following 12.2 percent and 9.5 percent monthly growth in May and June, respectively, the industrial production of the currency union expanded by a positive 4.1 percent again in July. The monthly dynamics of construction output improved by 29.6 percent in May, 5.1 percent in June, and 0.2 percent in July, but this is still only 95 percent of the January level. Retail turnover expanded by 1.5 percent year on year in June and 0.6 percent in July, reaching its January level.

Expectations concerning the performance of the global economy in H2 and the signs of recovery patterns in the individual economies are especially uncertain, and they depend heavily on the appearance of the second wave of the pandemic as well as on the relevant government reactions.

As a result of the gradual easing, the epidemic curves of numerous European countries started to rise again, which may entail renewed tightening measures. The number of deaths, however, is growing more slowly than during the first wave, as the wider-ranging testing allows a faster identification of the sources of the pandemic. The increase in the number of cases is typical of several CEE countries as well. Moreover, in many emerging economies (e.g. Brazil, India) the pandemic is peaking for the first time now, projecting that global risks will remain in place.

As opposed to the V-shaped recovery theory, the pattern of the real-time activity indicator created by Bloomberg Economics for large European economies increasingly tends to indicate a scenario of a protracted 'bird wing'- or 'pipe'-shaped recovery. Macro data show that economies started to grow following the easing of the restrictions, but the initial dynamics slowed down, and the output of the German, French, Italian and Spanish economies settled 10-20 percent lower than the levels seen prior to the crisis. Falling behind as a result of the slow and delayed reaction

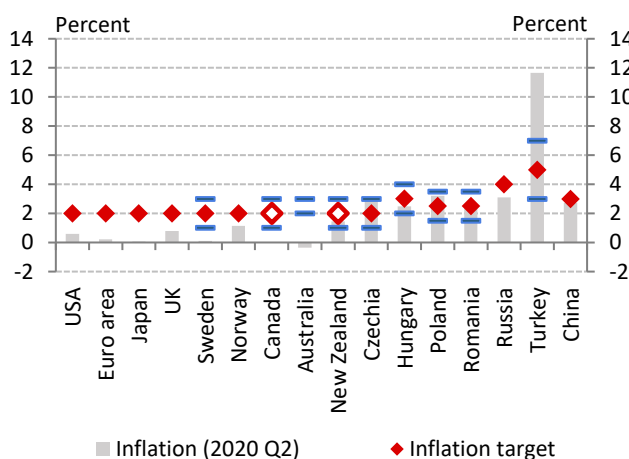
Chart 3-8: Global inflation developments



Note: Percentage change on the same period of the previous year, based on data from 43 developed and emerging countries.

Source: OECD

Chart 3-9: Inflation targets of central banks and actual inflation



Note: The blue lines represent the inflation control range in Australia, Canada and New Zealand, while in other countries they mark a permissible fluctuation band. In Canada and New Zealand, the mid-point of the target band is accentuated, which is marked by empty diamond.

Source: OECD, FRED, National Institute of Statistics Romania

of the country to the pandemic, economic activity in Britain may only reach 65 percent of the pre-crisis level (Chart 3-7).

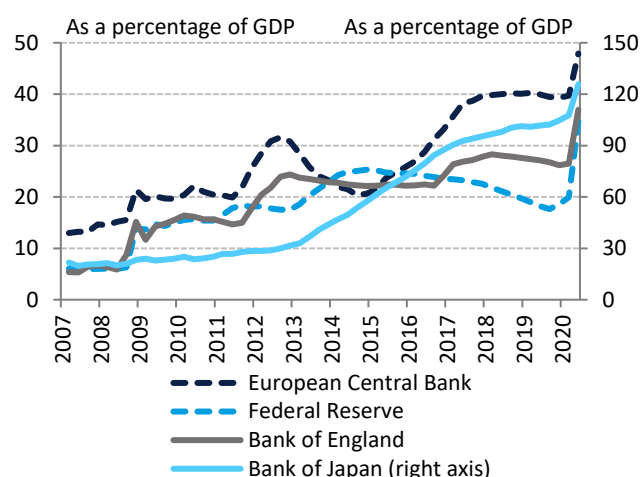
A slower than expected economic recovery is corroborated by the sectoral forecasts of certain institutions as well. According to the latest survey carried out by the German Ifo Institute, German companies in the services sector expect the negative effects of the coronavirus pandemic to remain perceptible until April 2021, or even longer in some sectors. The International Air Transport Association (IATA) foresees that the frequency of flights will reach the level seen before the coronavirus pandemic by 2024. According to experts of Oxford Economics, global tourism is also expected to return to last year's, pre-crisis level only in 2024, and even global industrial output may only recover by 2022.

3.1.2. International monetary policy, inflation and financial market trends

Following a gradual decline in the previous months, **global inflation increased slightly in July** (Chart 3-8). Nevertheless, inflation rates in most developed economies fell short of central bank targets in Q2. The inflation rate sank into negative territory in Australia, while inflation in Turkey continues to significantly exceed the inflation target of the central bank. In other developed and emerging economies, inflation remained around the central bank targets (Chart 3-9).

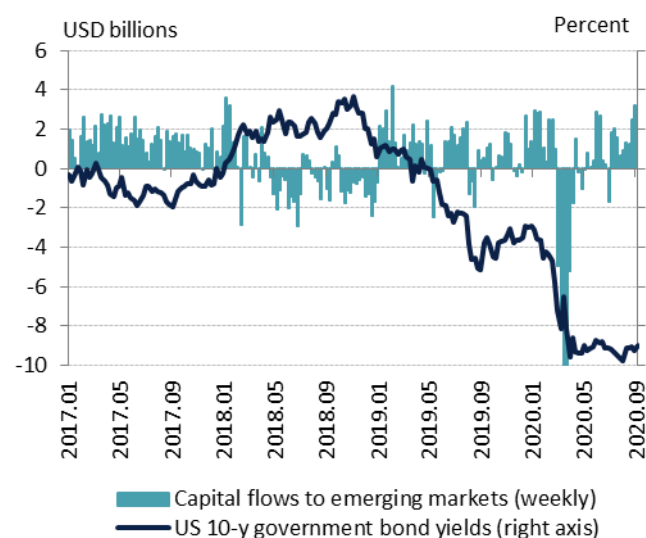
In July and September, the policymakers of the Federal Reserve left the target band of the policy rate unchanged at a level of 0–0.25 percent. The central bank indicated that it would maintain the current pace of its asset purchases, and it also extended its liquidity providing programmes until the end of the year. The balance sheet total of the central bank was around USD 7000 billion in the past months. Financial conditions have improved in the central bank's opinion, and thus they support the flow of loans to US households and companies. The policymakers believe that the employment situation in the USA has also improved in the past months, but the performance of the economy will still depend on the spread of the virus and the related government reactions. Based on the forward guidance, the central bank will not change its key policy rate until labour market conditions have reached levels consistent with the committee's assessments of maximum employment and until inflation moderately exceeds 2 percent for some time. The Fed's September economic forecasts suggest that interest rates will remain near zero at least through 2023.

Chart 3-10: Central bank balance sheet totals in developed countries



Source: Databases of central banks, Eurostat, FRED

Chart 3-11: Capital flows to emerging markets (weekly) and US 10y-government bond yields



Source: EPFR, Bloomberg

Jerome Powell, Chair of the FOMC announced amendments to the monetary policy framework of the Fed at this year's Jackson Hole Conference. As a result of the revision, from now on the central bank intends to reach the 2 percent inflation target as an average, thus looking ahead, it might let inflation exceed 2 percent for a certain period. In addition, the central bank will interpret its maximum employment objective in an asymmetrical manner in the future (for more details see Box 3-1).

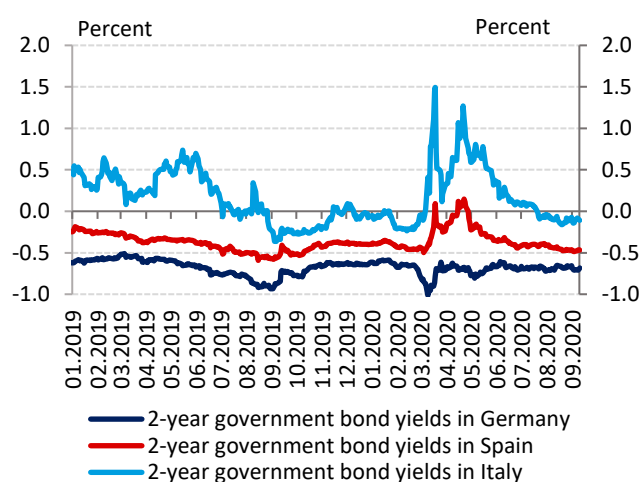
At their rate-setting meeting in July and September, the policymakers of the Bank of Japan did not change the interest rate conditions. The Bank of Japan is also continuing the lending stimulus programme launched in April and the asset purchase programme in an unchanged form. The forward guidance has not changed compared to June; the Bank of Japan is closely monitoring the impact of the coronavirus pandemic, and, if necessary, it is ready to take further easing steps in addition to the measures already implemented. Short- and long-term policy rates will remain at the present or lower levels. Based on the central bank's forecast, inflation may be well below the central bank target over the entire forecast period. The central bank expects inflation to be below 0 percent this year and below 1.0 percent in 2021 and 2022.

At their August and September meeting, the policymakers of the Bank of England kept the Bank Rate at 0.1 percent, and also left the parameters of the asset purchase programme unchanged. The purchases of corporate and government bonds will continue until the total holding of bonds reaches the level of GBP 745 billion previously determined by the BoE. The BoE indicated that it does not intend to tighten monetary conditions until spare capacity eliminates and inflation stabilizes sustainably around the 2 percent inflation target.

In the past period, the loan prime rate (LPR), which is the benchmark interest rate in the pricing of bank loans, remained unchanged in China. Accordingly, since 20 April the one-year LPR and the five-year LPR have been 3.85 percent and 4.65 percent, respectively. Nevertheless, in July the central bank reduced the interest rates on several of its lending instruments, as a result of which it became cheaper for small enterprises and agricultural enterprises as well as for financial institutions in a crisis situation to obtain funds.

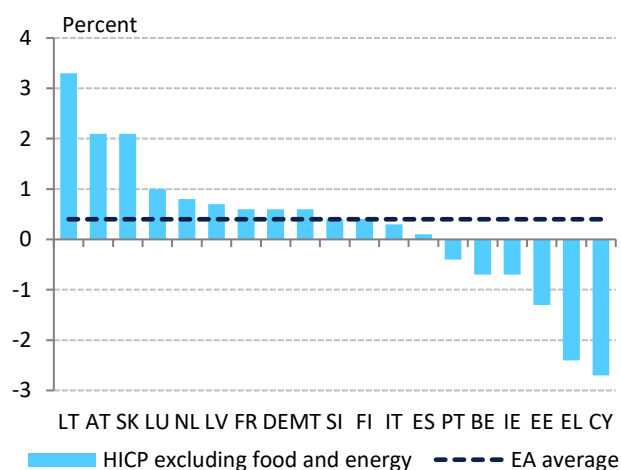
Parallel to the restart of economic activity, investor sentiment improved and financial market volatility decreased in the past quarter; however, the acceleration of the spread of the coronavirus pandemic over recent weeks points to rising uncertainty. At the beginning of the

Chart 3-12: 2-year government bond yields in Germany, Italy and Spain



Source: Bloomberg

Chart 3-13: HICP excluding energy, food, alcohol and tobacco in the euro area members (August 2020)



Source: Eurostat

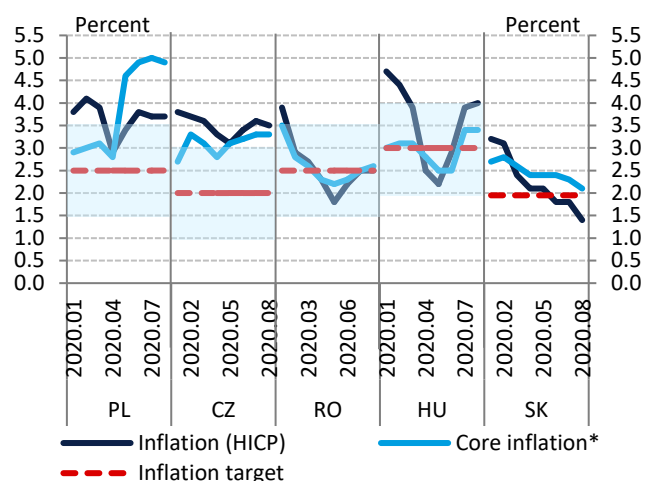
period under review, the restrictive measures taken because of the coronavirus pandemic were lifted, and economic activity restarted, resulting in a perceptible improvement in sentiment in the global money markets, however in the recent weeks, in parallel with the spread of the coronavirus, the sentiment has deteriorated again. The majority of both developed and emerging market stock exchange price indices increased during the period. US and European indices were up by some 6-11 percent and 1-6 percent, respectively, but the British stock exchange price index declined by 3 percent as a result of negative news related to Brexit. The dollar weakened against both developed and emerging currencies during the period. In the past quarter, on the whole, the US currency depreciated by some 2 percent against the Japanese yen, around 4 percent against the Swiss franc, 3 percent against the British pound, and 5 percent against the euro. Developed bond market yields mostly declined by 2-7 basis points (Chart 3-12). Emerging market bond yields shifted to a greater degree than that, by 5-45 basis points, but most of them declined.

The market expects developed central banks to maintain their loose monetary policy due to the unfavourable economic prospects. Market pricing suggests that the Fed will maintain the present level of interest rates for about three years and will start increasing interest rates only after that, which corresponds to the mid-June expectations. Expectations related to the ECB are similar: based on market pricing, the present interest rate conditions may persist until mid-2024, which also corresponds to the mid-June expectations.

Inflation in the euro area increased slightly in June and July, but declined into negative territory in August. Following a slight increase in the previous months, inflation in the euro area as a whole fell to -0.2 percent in August, which exceeded expectations. In recent months, the inflation rate was below the 2 percent central bank target in all euro area Member States, sinking to negative territory in twelve countries in August. Core inflation increased from 0.8 percent in June to 1.2 percent in July, before falling to 0.4 percent in August (Chart 3-13). Looking at the Member States, core inflation decrease in the majority of countries, while it remained in negative territory in Belgium, Ireland, Portugal, Estonia, Cyprus and Greece.

In July and September, the Governing Council of the ECB left the policy rates unchanged and did not change the parameters of the asset purchase programmes either. The ECB is continuing the asset purchases under the Pandemic Emergency Purchase Programme (PEPP). The balance sheet

Chart 3-14: Inflation and core inflation in the region



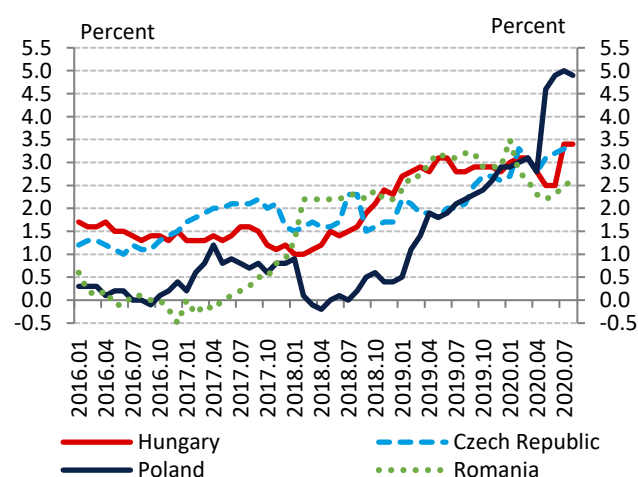
Note: Annual change, percent. *In the case of core inflation, we use the Eurostat definition (inflation excluding energy, food, alcohol and tobacco). The blue area indicates the tolerance band around the inflation targets.

Source: Eurostat

total of the ECB rose to EUR 6470 billion by the middle of September. Purchases continue to take place in a flexible manner, and will continue at least until June 2021 or as long as the negative effects of the coronavirus persist. The maturing securities purchased under the PEPP will be reinvested until at least the end of 2022. The purchases under the previously introduced asset purchase programme (APP) did not change either. The ECB will continue the purchases as long as they are necessary, but at least until the date of the first interest rate hike. The drawdown of funds was very high at the tender of the targeted longer-term refinancing operations (TLTRO III) of the ECB in June, supporting corporate and household lending. The ECB will maintain its loose monetary policy stance until inflation converges persistently on the central bank inflation target. In addition, the ECB is ready to alter its instruments again, if necessary. **The central bank also indicated that the review of the monetary policy strategic framework will continue after the temporary break due to the coronavirus.**

According to the ECB's September projection, the inflation rate in the euro area is expected to be 0.3 percent this year. In 2021, the central bank expects a 1 percent inflation rate, slightly higher than assumed in the July projection. Thereafter, the inflation rate will rise to 1.3 percent in 2022 but at the end of the forecast horizon it will still not reach the ECB's target.

Chart 3-15: Developments of inflation excluding energy, food, alcohol and tobacco in the countries of the region



Source: Eurostat

In the summer months, the rates of increase in consumer prices accelerated in most countries of the region, and thus the inflation rates were somewhat above the central bank targets (Chart 3-14). The inflation rate rose to 3.8 percent in Poland in June, then the rate of increase in consumer prices decelerated to 3.7 percent in July and August. The consumer price index rose in June and July as well in the Czech Republic, with inflation rates corresponding to 3.4 percent and 3.6 percent, respectively. Inflation dropped to 3.5 percent in August. Breaking the declining trend that had lasted since January, the inflation rate in Romania increased to 2.2 percent in June and 2.5 percent in July, but remained unchanged in August. In Slovakia, inflation was 1.8 percent in both June and July, falling to 1.4 percent in August. Core inflation has mostly risen in recent months in Poland, the Czech Republic and Romania, while declining slightly in Slovakia. (Chart 3-15).

At their June and August rate-setting meetings the policymakers of the Czech central bank kept the policy rate at 0.25 percent. In the new forecast, the expected path of inflation was revised upwards. Accordingly, inflation may

be above the tolerance band in the remaining part of the year.

At its July and September rate-setting meeting, the Polish central bank did not change the 0.1 percent policy rate, and the overnight lending rate as well as the deposit rate also remained unchanged. According to its announcement, the central bank is continuing its government securities purchases with the objective of changing the long-term liquidity structure of the banking sector, ensuring the liquidity of the secondary market of government securities. Inflation in the central bank's July forecast was revised downwards over the entire forecast period.

In August, the policymakers of the Romanian central bank carried out a further 25 basis point interest rate cut, resulting in the decline of the policy rate to 1.5 percent. In addition, the policymakers also reduced the lending facility rate, which represents the upper bound of the interest rate corridor, and the deposit facility rate, which is at the bottom of the interest rate corridor, by 25 basis points each. The central bank indicated that it would continue the repo operations and the government securities purchases in the secondary market introduced because of the harmful impacts of the coronavirus on the economy. According to the central bank, inflation will remain in the upper part of the tolerance band until the end of the year, and then it will remain around the inflation target until the end of the forecast period.

Box 3-1: New monetary policy framework in the United States

In August 2020, the Federal Reserve announced the review of its monetary strategy framework. The latest change in the strategy of the US central bank was made in January 2012. At that time, under the framework determined by the dual mandate, the central bank announced a 2 percent inflation target in order to adequately anchor inflation expectations. The dual mandate, i.e. the goal to achieve price stability and maximum employment, will remain in place even with the current changes. In the future, however, the Fed will approach labour market developments in an asymmetrical manner, and contrary to previous practice the central bank intends to achieve inflation that averages 2 percent over time.

Jerome Powell, Chair of the Federal Reserve, announced amendments to the monetary policy framework of the Fed at this year's Jackson Hole Conference. The Chair of the FOMC said that the review of the monetary policy framework was closed and outlined the most important changes. He explained the changing of the framework with reference to the decline in the equilibrium interest rate and the challenge posed by the zero lower bound. In addition, he mentioned the major decline in the long-term growth rate of the economy.

The strategy statement that summarises the Fed's monetary policy underlines the risks stemming from the low interest rate environment. The new strategy statement presents the current challenges of monetary policy, which are attributable to the persistently low interest rate environment. Jerome Powell emphasised that monetary policies both in the United States and globally are restricted by the effective lower bound of the nominal interest rate to a greater degree than ever before. The governor of the central bank indicated that the Fed is prepared to counter the risks and to use its full range of tools to support the economy.

In the present situation the objective of the Federal Reserve is to raise inflation in order to avoid the continued decline in inflation expectations and the evolution of a disinflationary spiral. The governor of the Fed emphasised that persistently low inflation may pose a serious risk to the economy. Namely, inflation that runs below its desired level can lead to an unwelcome fall in long-term inflation expectations, which, in turn, can decrease actual inflation, resulting in a disinflationary spiral.

In order to achieve the long-term 2 percent inflation target, the FOMC is changing its inflation targeting strategy. Jerome Powell said that in the opinion of the FOMC an inflation rate of 2 percent is most consistent with the mandate of the Fed to achieve maximum employment and maintain price stability. At the same time, the FOMC changed its strategy concerning price stability in order to achieve the longer-run 2 percent inflation target, and in the future the central bank intends to achieve inflation that averages 2 percent over time. In the new framework, if inflation is persistently below 2 percent, monetary policy will seek to achieve inflation above 2 percent for some time. The Fed has not determined any specific time horizon for calculating the average, and thus the average inflation targeting should be interpreted in a flexible manner. This possibility provides more leeway for the central bank decision makers.

Average inflation targeting is a regime between inflation targeting and price level targeting. Which strategy the new regime is closer to depends on the number of averaging years of the inflation rates. The essence of the strategy is that if the inflation rate has been below the target for years, in the next period the central bank will deliberately seek to raise inflation above the target. The degree of the overshoot depends on the number of years to be averaged.

In light of the experiences of the Fed Listens programme, the central bank decided to reinterpret the labour market objectives. The feedback from the public to the Fed was that tight labour market circumstances significantly support job taking, and make it possible to find jobs even for those who had not worked for years or decades. Maintaining the tight labour market is supported by the flattening of the Phillips curve as well. As a result of that, inflation remained low in the United States in parallel with the historically low unemployment. This may actually mean some sort of high-pressure economy realisation in the United States. The theoretical considerations of the high-pressure economy were presented in the 2016 Growth Report of the Magyar Nemzeti Bank.

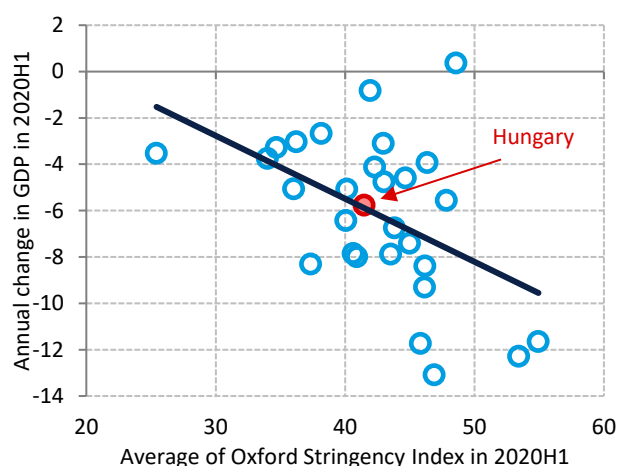
As a result of the review, the Fed's relations to the labour market are becoming asymmetrical. The FOMC still does not consider it justified to set a numerical objective for employment as the maximum level of employment cannot be measured directly, and it changes over time due to factors that are independent of monetary policy. Powell emphasised that maximum employment is a broad-based and inclusive goal, and therefore in the future the monetary policy framework will interpret a deviation from maximum employment in an asymmetrical manner. Accordingly, the central bank will only react to actual unemployment that is higher than structural unemployment, while if it is lower than that, it will not necessarily tighten the monetary conditions, if inflation developments allow.

From the amendments to the Fed's monetary strategy framework, both the changes affecting inflation and the ones concerning employment suggest that in the present low inflation environment the loose monetary conditions in the United States may remain for an even longer time than previously expected.

3.2 Analysis of the production and expenditure side of GDP

In 2020 Q2, the Hungarian economy shrank by 13.6 percent. Following the relatively favourable first quarter in a European comparison, the decrease in the domestic economy was close to the EU average on an annual basis in 2020 Q2. This is explained by the appearance of the pandemic, the significant vehicle industry exposure and the weight of tourism, which is high in a regional comparison. Economic activity in Hungary was also decelerated by the slump in construction output. An analysis of the H1 performance reveals that the change in economic activity in Hungary corresponded to the regional average and the decline was 3.2 percentage points milder than in the euro area. On the expenditure side, household consumption in Q2 was relatively favourable in an international comparison, while exports and investment fell considerably. According to high-frequency data, economic performance may have bottomed out in April; the economic recovery started gradually, but decelerated during Q3. Only a slower than expected correction may take place in Q3.

Chart 3-16: Changes to H1 GDP and level of government stringency



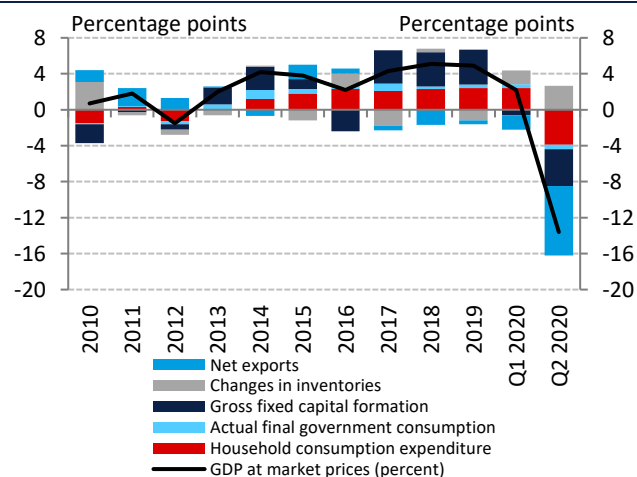
Note: Countries of the European Union and the United States.

Source: Oxford University, Eurostat

In 2020 Q2, Hungary's gross domestic product declined by 13.6 percent year on year, while on a quarter-on-quarter basis GDP contracted by 14.5 percent. The decrease in the Hungarian economy was close to the EU average on an annual basis, which is explained by the appearance of the pandemic, the significant vehicle industry exposure and the heavy weight of tourism by regional standards. Hungary had a growth surplus in Q2 as well; the decline in GDP was 1.2 percentage points milder than in euro area Member States. The impacts of coronavirus reached the countries of the region at different points in time, many European countries adopted strict tightening measures as early as March (Chart 3-16), thus the GDP of numerous states declined as early as Q1.

From the expenditure side, net exports and investment contributed most to the economic downturn. The decline in investment was broadly based; all three sectors (corporations, households, government) may have contributed to the downswing. The decline in services trade played a major role in the fall in net exports, but the significant vehicle industry exposure also contributed to the decrease in exports (Chart 3-17).

Chart 3-17: Contribution to annual changes in GDP

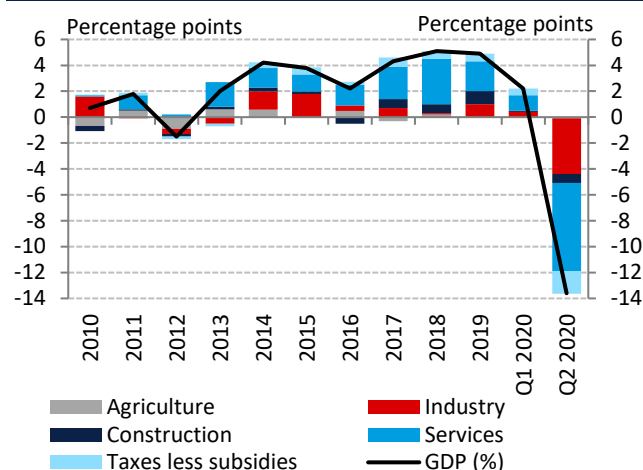


Note: Actual final government consumption includes social transfers in kind from government and NPISHs.

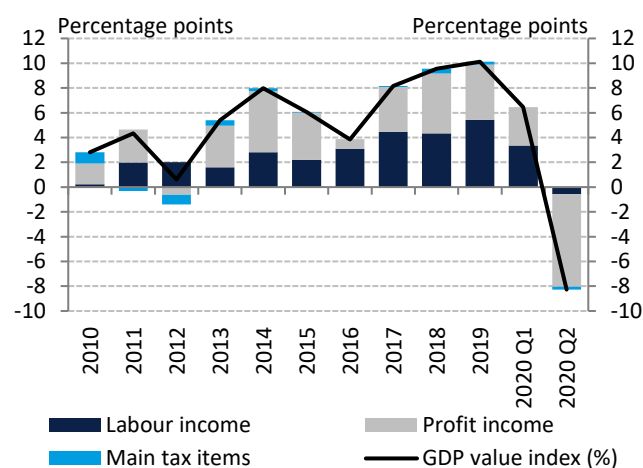
Source: HCSO

Household consumption expenditure declined only slightly even in a European comparison, which, overall, together with the positive change in inventories, attenuated the contraction of the economy. The moratorium as well as the relatively weak labour market reaction contributed to the relatively favourable performance of consumption.

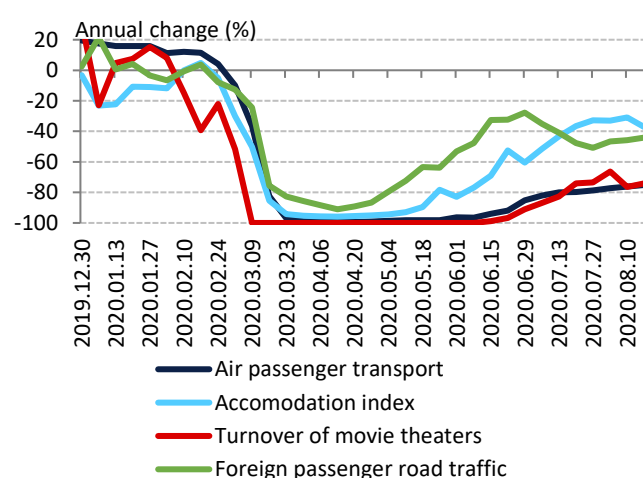
Household loans outstanding rose by an annual 15 percent. In 2020 Q2, as a result of transactions, household loans outstanding expanded by HUF 230 billion, and thus the annual growth rate amounted to 15 percent. The growth was primarily attributable to the dynamic disbursement of prenatal baby support loans and to the decline in amortisation due to the moratorium on repayments. Credit institutions concluded contracts for prenatal baby support loans with a volume of HUF 142 billion in Q2. As a result, at end-June this product already accounted for about

Chart 3-18: Decomposition of change in production side GDP

Source: HCSO

Chart 3-19: Decomposition of change in income side GDP

Source: HCSO

Chart 3-20: Indicators of tourism demand

Source: Budapest Airport, Association of Movie Distributors, NTPS Plc. Business Intelligence, MNB estimation based on HCSO and Hungarian Tourism Agency

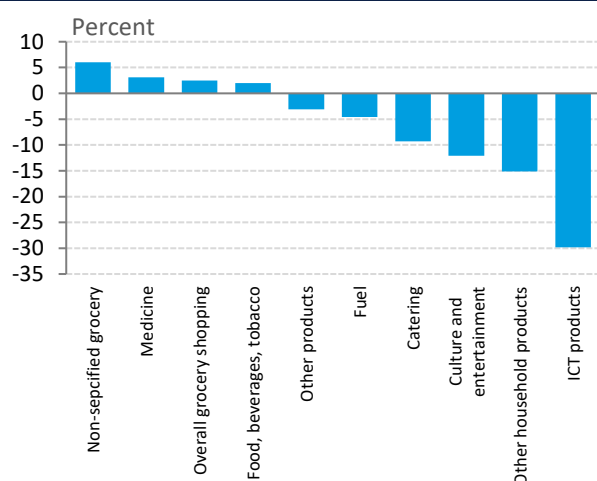
10 percent of household loans outstanding in the credit institutions sector, and based on our questionnaire survey, three quarters of the debtors use the product for some kind of housing purpose. The volume of new loans declined during the quarter; the most significant fall was observed in the case of personal loans, where the disbursement was lower than the level of the same period of the previous year by 63 percent. A net 81 percent of the banks responding to the Lending Survey reported falling demand in the market of housing loans during the quarter, and even more of them perceived declines in the demand for consumer loans. For H2, however, the market prospects are more favourable, and one half and one fifth of the banks again expect an upswing in demand for housing loans and consumer loans, respectively. State-subsidised credit programmes (Home Purchase Subsidy Scheme for Families, Prenatal Baby Support Loan) may support household lending in the coming period as well.

On the production side, the performance of industry, construction and public services was especially weak, while the contraction in market services corresponded to the European average (Chart 3-18). In Hungary, sectors that had been successful before (vehicle industry, tourism) turned into weaknesses as a result of the special effects of the coronavirus pandemic. Vehicle manufacturing had been one of the driving forces in the Hungarian economy in previous years, but its performance fell by nearly 50 percent in Q2. Further major roles in the downturn were played by the contraction in the trade, vehicle repair, accommodation services and catering sectors, which are most exposed to the restrictive measures; the acute period of their lost turnover may have lasted from mid-March until end-April. As a result of the containment measures, health care services were limited, and thus the value added of the services provided by the state also fell considerably (-13 percent) in Q2. In view of the increase in working from home and digital education, the downturn in the information and communication sector (-1.8 percent) was smaller than in other sectors. Value added could only expand in the financial and insurance sector (3.4 percent).

On the income side, the reduction of profit incomes contributed decisively to the decline in GDP, presumably due to the significant drop in entrepreneurial income. The reduction of labour income was attenuated by the employment protection measures (Chart 3-19).

In spite of the easing of the restrictions, only very moderate adjustments were observed in the tourism sector and the entertainment industry in Q2 and Q3 (Chart 3-20). In Q2, the number of overnight stays was 87 percent lower than a

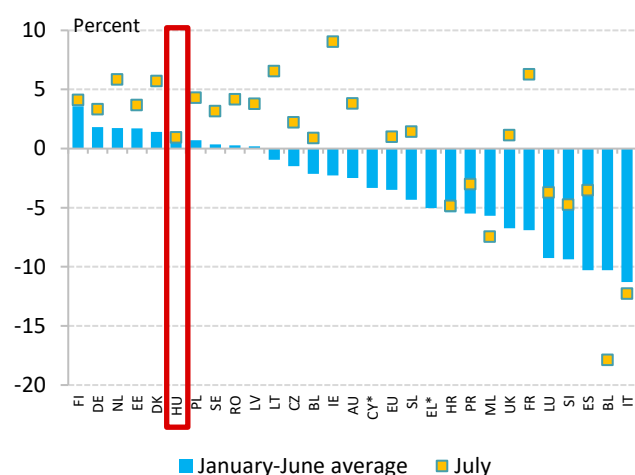
Chart 3-21: Evolution of turnover in retail trade and catering in August



Note: Compared to the same period of last year.

Source: HCSO

Chart 3-22: Retail sales volume in the European Union 2020 H1 and July



Note: Seasonally adjusted data, annual change. *No data for July.

Source: MNB based on Eurostat

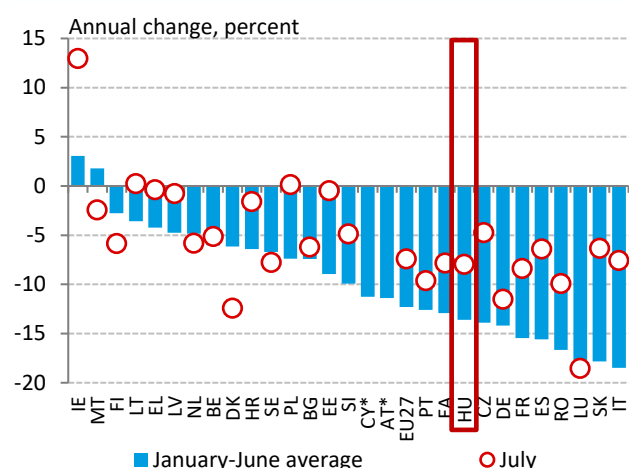
year earlier. By July, the domestic demand for accommodation reached 82 percent of last year's turnover. The utilisation of cultural spaces can be approximated by the turnover of cinemas, whose sales revenue at end-August reached just 30 percent of last year's level. In contrast to domestic developments, the recovery of international tourism may take years and may also be influenced by the changing consumption and travelling habits triggered by COVID-19. Based on traffic statistics of Budapest Airport, the number of international passengers reached 25 percent of last year's level in August, while the number of foreigners arriving on public roads is around 50–60 percent of last year's level. As a result of closing of the borders as of 1 September, the recovery of tourism demand may be even slower than previously expected.

Following the entry into force of the restrictive measures, retail turnover fell considerably, affecting textile, wearing apparel and footwear as well as cultural and other articles the most, and food stores the least (Chart 3-21). Retail turnover practically returned to last year's level by July, and the turnover of semi-durable and durable products was also able to expand. Mail order and retail sales through the internet achieved outstanding results during the lockdown, while after the easing of restrictions their growth rate was close to their dynamics observed in past years. Accordingly, it is presumed that the turnover on the market of furniture and consumer durables as well as wearing apparel temporarily moved online, which may partly explain the temporary decline in the sales of these product groups. In July, the total retail sales volume was 0.4 percent higher (+0.3 percent in June) than in the same period in 2019. Moreover, vehicle and vehicle parts sales also recovered by July (+4.5 percent). Nevertheless, the recovery is expected to be slower in the food service activities sector (-9.3 percent in August) and in the market of IT products (-29.8 percent in August).

According to international data available, the decline in retail turnover in Hungary was lower than the average during the most intensive months of the first wave of the pandemic. Overall, retail sales in Hungary in 2020 H1 increased slightly – in contrast to the majority of EU Member States – compared to the same period of the previous year (+1.3 percent) (Chart 3-22).

As a result of the April stoppages of the largest vehicle plants in Hungary and the significant deterioration in the global economic outlook, industrial production declined substantially (-25.4 percent) in Q2 (Chart 3-23). The pan-European decline in industrial performance typically occurred in the sectors producing for external markets. In

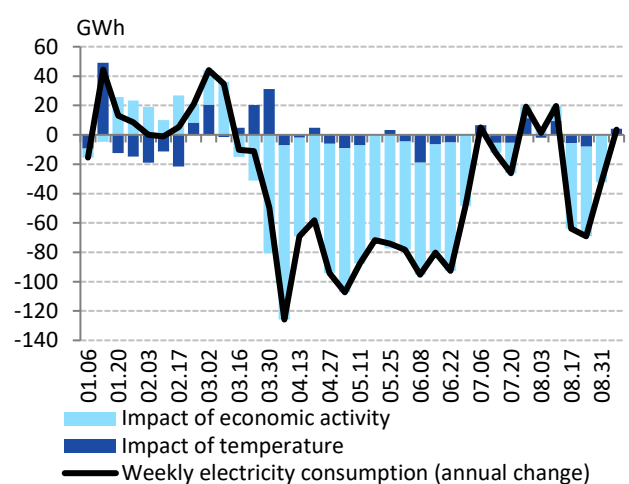
Chart 3-23: Development of industrial production in the European Union in 2020 H1 and July



Note: Seasonally and calendar adjusted data. *No data for July.

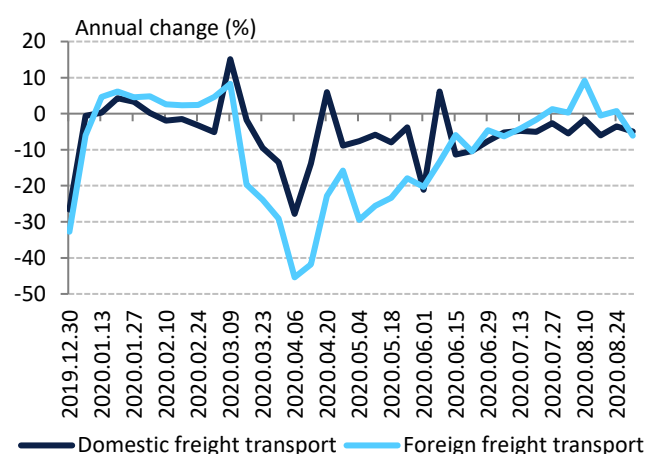
Source: MNB based on Eurostat

Chart 3-24: Annual change in weekly electricity consumption



Source: MNB estimation based on ENTSO-E

Chart 3-25: Road traffic changes



Source: NTPS Plc. Business Intelligence, MNB calculation

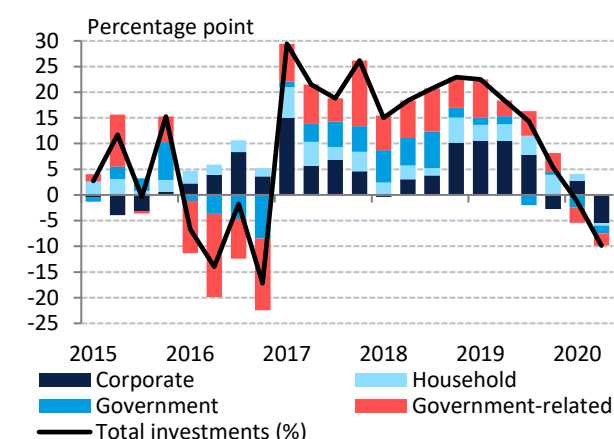
July, Hungarian export sales were still below last year's levels, while export orders dropped again after the adjustment in June. Based on raw data, industrial production in July was 8.1 percent below last year's level.

Energy consumption data suggest that industrial activity gradually approached last year's level by the end of the summer, although the adjustment was curbed as a result of the usual factory stoppages in the summer (Chart 3-24). According to market information, the major automotive manufacturers (Mercedes, Suzuki, Audi) suspended their production (or part of it) for a week or two during the summer. Actors in the sector continue to report subdued demand, falling short of pre-pandemic levels. In the longer run, the recovery of industrial production is essentially determined by the pattern and pace of the global economic recovery, the position within the supplier chains and the changing consumer trends.

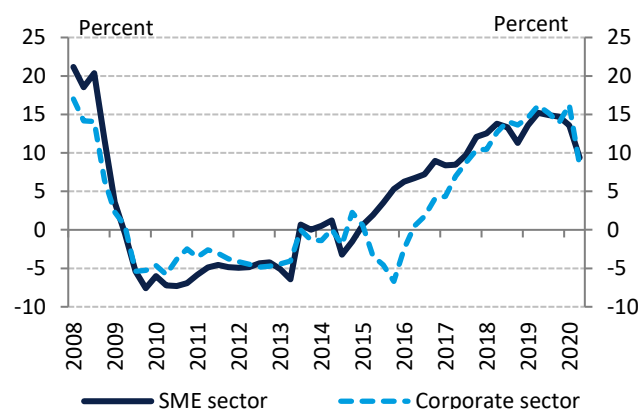
The volume of goods transport by road may depict domestic industrial performance as well as the developments in logistics (transportation, storage), indicating a protracted recovery of the sectors (Chart 3-25). At the beginning of the pandemic, due to interruptions in international transportation, the impact on foreign goods transport was much stronger, and its decline was close to 50 percent. The downturn in domestic goods transport by road was more moderate. It may have hit bottom in April, when it was at 70 percent of last year's level. The turnover increased steadily as of the beginning of May, with outliers caused by the moving holidays (Easter, Pentecost). At the same time, the recovery patterns are different: while foreign transportation reached and exceeded last year's level by end-July, the recovery of domestic transportation stalled, and has stabilised at 95 percent of last year's level for 2 months now. The recovery of the sector is expected to take place only gradually, in line with an upswing in industrial production, but the dynamics, which are lower than last year, may indicate a protracted recovery.

The expansion in the volume of whole-economy investment, which had lasted since the beginning of 2017, stopped in Q1, and the decrease continued in Q2 as well. Investment activity declined by 9.9 percent year on year (Chart 3-26). Construction investment as well as investment in machinery and equipment were down considerably. In 2020 Q2, investment by the government and by companies related to the state continued to decline year on year, whereas households' investment activity decreased only slightly.

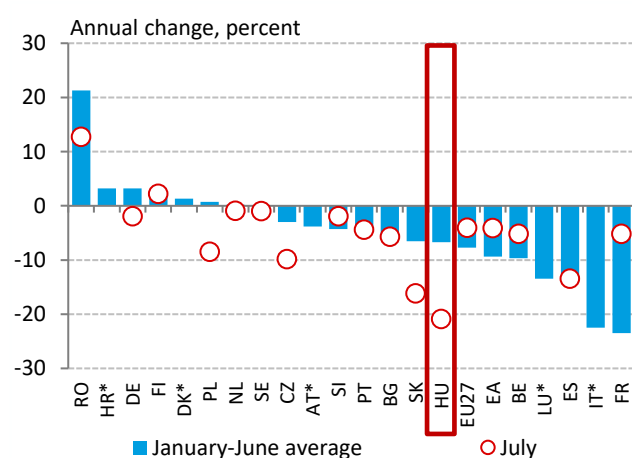
Corporate loan dynamics decelerated to 8 percent in Q2. In the balance sheet of the entire financial intermediary

Chart 3-26: Decomposition of the annual change in investments

Source: HCSO

Chart 3-27: 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 3-28: Development of production in construction in the European Union in 2020 H1 and July

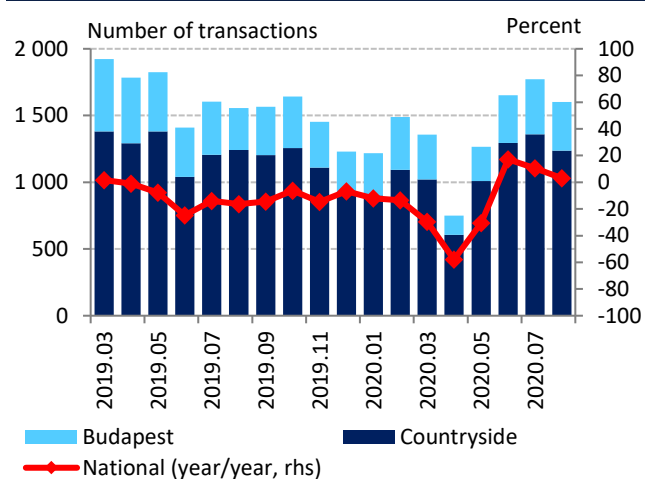
Note: Seasonally and calendar adjusted data. *No data for July.
Source: MNB based on Eurostat

system, corporate loans outstanding declined by HUF 130 billion in 2020 Q2, and thus the annual growth rate decelerated to 8.2 percent (Chart 3-27). Within corporate lending, the annual growth rate of SME loans outstanding was 9 percent in June, significantly supported by the contracts amounting to some HUF 160 billion concluded during the quarter within the framework of the FGS Go! In 2020 Q2, the greatest portfolio decline took place in the financial and insurance activities sector, which incorporates holding companies, as well as in the trade and vehicle repair sectors. The banks participating in the Lending Survey perceived an upswing in demand for loans in the case of larger companies and for HUF-denominated loans. Nevertheless, in net terms, 60 percent of the banks indicated a fall in demand for commercial real estate loans. At the same time, institutions expect an upturn in lending again in H2.

In 2020 Q2, the volume of construction output decreased by 12.4 percent year on year. Within the two main construction groups, the construction of buildings fell by 12.9 percent, while other construction dropped by 11.8 percent. Based on available European data, domestic construction output was around the European average between January and June. By July, however, production slumped (by 21 percent). The month-end construction contract portfolio was 21 percent below its level observed one year earlier. The construction contract portfolio has been declining steadily since April last year, and the decline is primarily attributable to the fall in the volume of contracts for other structures mainly related to the state.

In 2020 Q2, 3922 new homes were completed, representing year-on-year growth of 40 percent. House price indices based on data¹ from housing market intermediaries have been trending sideways since the end of 2019/beginning of 2020, which was not substantially changed by the housing market drop caused by the coronavirus pandemic and then by the return of demand. At the same time, in Budapest, house prices have already declined on an annual basis in the last three months, by 3 percent year on year in August. The annual growth rate of house prices slowed to 3.2 percent in the countryside and to 2.0 percent as a national average in August. The spread of the coronavirus pandemic and the containment measures resulted in an abrupt and drastic fall in market activity. In April, the number of completed transactions was significantly lower year on year, which was in line with the lockdown measures and the increased uncertainty surrounding households' income position. After the low point in April, the domestic housing market gradually recovered, the number of transactions made by housing market intermediaries already exceeded the value of the

Chart 3-29: Monthly number of transactions completed by housing market intermediaries



Source: MNB, Housing intermediary database

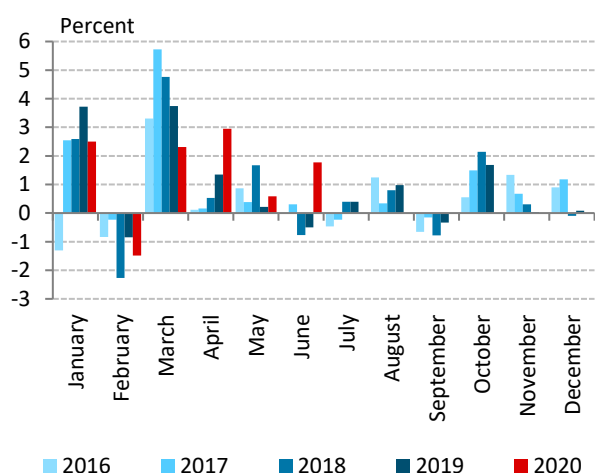
previous year during the summer months (Chart 3-29). The recovery was presumably supported to a great extent by the appearance of previously postponed house purchases on the market, after the easing of restrictive measures.

¹ Based on data for 2019, the number of transactions concluded by housing agents covered 12.3 and 17.4 percent of housing market transactions nationwide and in Budapest, respectively.

3.3 Labour market

Following the low point in April, employment in Hungary increased in both July and August. In August 2020, the number of people employed in the national economy rose to 4.514 million, representing a year-on-year decrease of 18 thousand. Following the lifting of the restrictions, more and more of those who had become inactive in the period of the pandemic actively started to seek employment, but in spite of this, the number of the unemployed started to decrease again from July (seasonally adjusted data). Companies adjusted to the changing economic conditions primarily on the intensive side, by raising the number of part-time employees and reducing working hours. Apparently, the annual dynamics of wages were not affected by the economic impacts of the coronavirus, but during Q2 more than half of the increase in average earnings was due to statistical effects. At the same time, the short-term forgiving of the obligation to pay employer's contributions in some sectors as well as the 2 percentage point reduction in the social contribution tax as of 1 July 2020 contributed to the deceleration in the average labour cost increase of companies. With the exception of construction, following an improvement in the previous two months the expectations regarding employment deteriorated again in August.

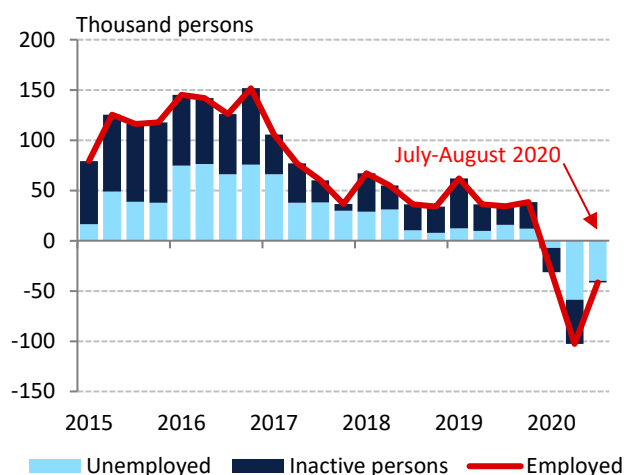
Chart 3-30: Monthly changes in regular average earnings in the private sector



Note: HCSO estimate from 2019.

Source: HCSO

Chart 3-31: Decomposition of the annual changes in the whole-economy employment



Note: Instead of 2020 Q3, monthly data for July is available. Changes in the number of unemployed and economically inactive have the opposite sign.

Source: HCSO

3.3.1. Wages

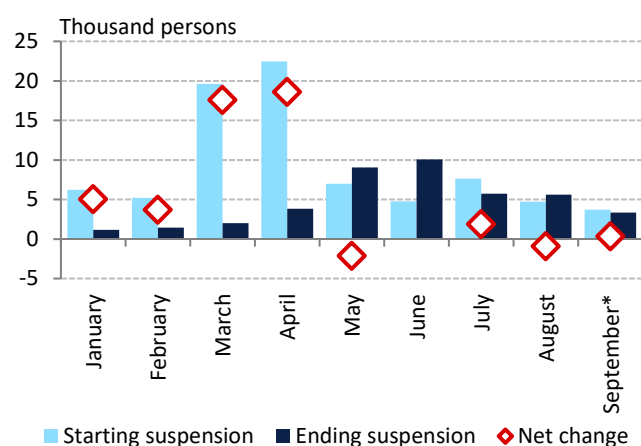
Gross average earnings in the private sector rose by 9.5 percent year on year, which is still high by historical and regional comparison (for more details on wage developments see Box 3.3). Examining the industries linked to the private sector, wage dynamics in certain service sectors and in manufacturing was already accelerating in June, following the spring months. At the same time, annual wage growth fell below 7 percent in the sectors most affected by the pandemic (accommodation and food service activities; information and communication; administrative and service-supporting activities; art, entertainment and other services).

In Q2, the monthly increase in regular average earnings exceeded the values recorded in the previous years (Chart 3-30), while bonus payments fell short of the previous years. On the whole, regular earnings in the private sector in June accelerated to 12 percent year on year.

3.3.2. Employment and unemployment

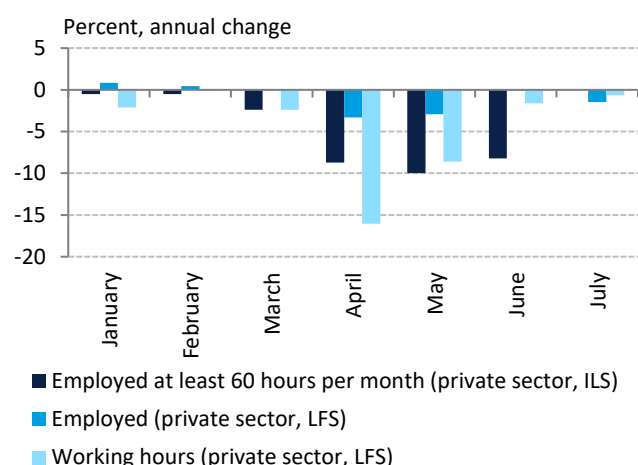
According to the Labour Force Survey, following the April low, Hungarian employment data indicated the beginning of a recovery in the labour market in June and July. In August 2020, the number of people employed in the Hungarian economy rose to 4.514 million, still corresponding to a year-on-year decrease of 18 thousand (Chart 3-31).

As a result of the gradual lifting of the restrictive measures, starting from May (with the exception of July) the number of those ending the suspension exceeded the number of people starting it (Chart 3-32). Total employment includes employees and the self-employed together. The latter group includes private entrepreneurs, many of whom temporarily suspended their activities in the spring months due to the state of emergency related to the coronavirus pandemic. According to the records of individual entrepreneurs of the

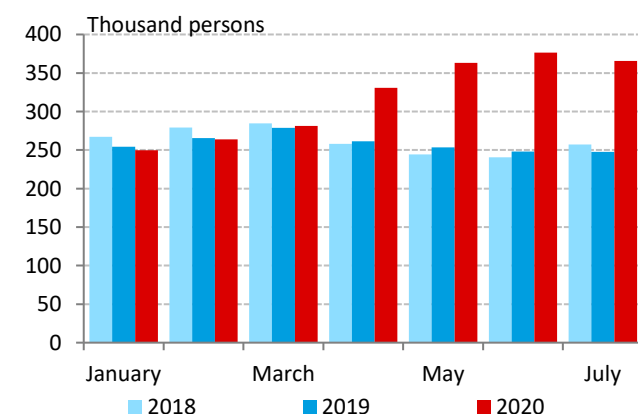
Chart 3-32: Suspensions among private entrepreneurs (2020)

Note: * Data is available until 10 September.

Source: HCSO based on EVNY

Chart 3-33: Adjustment of labour market in the number of employees and worked hours

Note: For institutional-labour statistics (ILS), data available until June 2020. Source: HCSO, MNB

Chart 3-34: Monthly number of registered job seekers

Note: The closing date of the statistics is the 20th day of the month. Source: NES

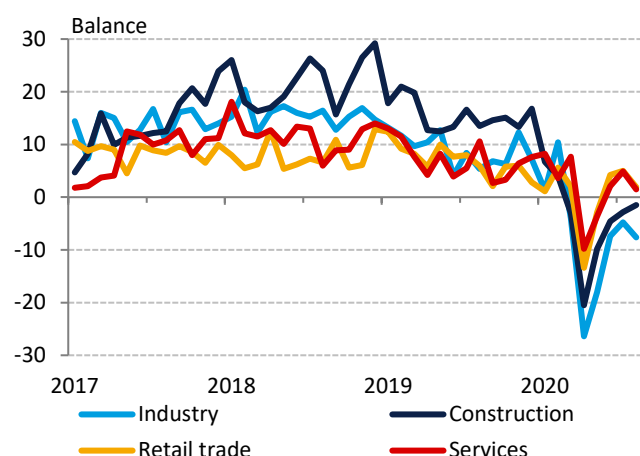
NTCA, it was in March and April when the highest number of individual entrepreneurs decided to suspend their activities.

In line with the pandemic and the lockdown, the decline in employment did not entail an immediate, large increase in the unemployment rate. As a result of statistical methodology, many of those who lost their jobs increased the number of temporarily inactive people and not the number of unemployed. This is because the definition used by the Labour Force Survey – harmonised with international standards – regards those as unemployed who have no job and in the past 4 weeks actively sought employment and if they found a job they would be able to take up work within 2 weeks. However, following the lifting of the restrictions, with the gradual restarting of the economy more and more people who had lost their jobs during the pandemic and had become inactive began to actively seek employment, resulting in a rise in the unemployment rate in the spring and summer months. Accordingly, the seasonally adjusted unemployment rate reached its peak at 5.1 percent in May. In spite of the rise, unemployment in Hungary is still considered low by international comparison. The unemployment rate has been declining since June, indicating that the recovery of the economy has already started.

Companies adjusted to the changing economic circumstances with lay-offs as well as reducing the working hours (number of hours worked) of employees. According to monthly data, based on both institutional statistics and the Labour Force Survey, the number of employed declined (Chart 3-33). Nevertheless, the labour market adjustment mostly materialised with the fall in the number of working hours.

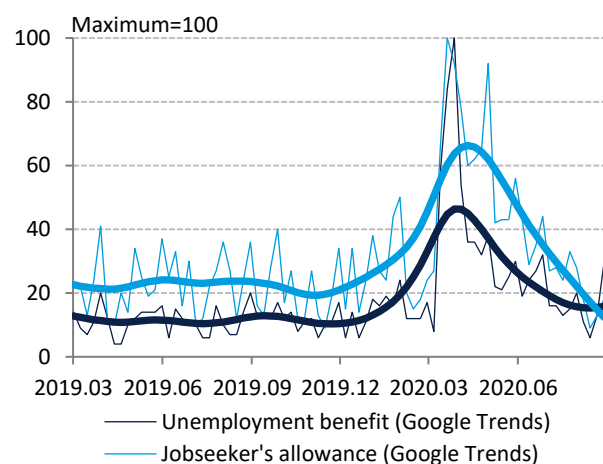
According to monthly data of the NES (National Employment Service), following the peak in June the number of registered jobseekers was only 365.8 thousand in July (Chart 3-34), exceeding the figure for the same period of the previous year by 118 thousand. In the data release of the NES, those who have no registered employment relationship and have registered themselves as jobseekers with the employment office are regarded as unemployed. The number of those that are not registered any longer (due to finding a job, public work, lack of cooperation or other reasons) already significantly exceeded the number of newly registered jobseekers.

Job losses hit both manufacturing and service sector employees. Within services, the hardest hit sectors included trade, tourism, administrative and service-support activities (e.g. temporary employment agencies) and other (personal) services.

Chart 3-35: Employment expectations in the ESI business survey

Note: The balance is positive (negative) if the majority of companies plan to hire (lay off). Seasonally adjusted data.

Source: European Commission

Chart 3-36: Google searches for terms related to unemployment

Note: Google publishes the relative popularity of search requests, where the highest value is 100. The thicker lines show trends filtered by volatility.

Source: Google

The ESI business survey – monitoring economic sentiment – also evidences the improvement in employment in Q3.

Following their low in April, employment expectations for the next 3 months stayed in positive territory in the trade and services sectors in June and July, whereas in manufacturing and construction the majority of companies were still planning reductions in the number of employees. In August, however, with the exception of construction, expectations regarding employment deteriorated again, following an improvement in the previous two months (Chart 3-35).

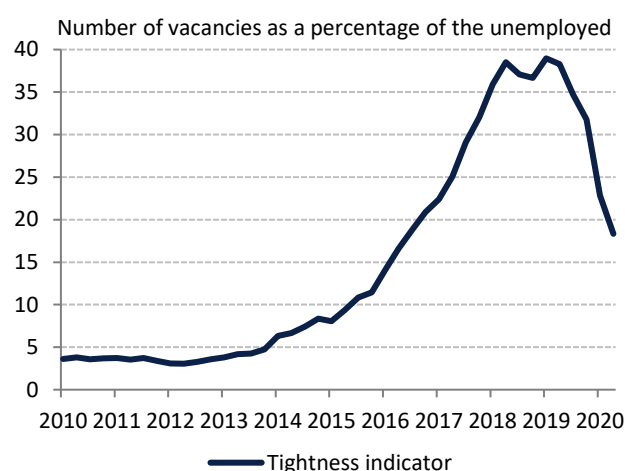
Labour market trends also show a similar pattern in the ESI household survey. Households' unemployment expectations for the next 12 months were at a historical level in August, which is a significant decline compared to the previous months.

After peaking at end-March and early April, Google searches related to unemployment showed a significant decline during the summer months (Chart 3-36), approaching the level of the historical average by August. The analysis of Google searches (Google Trends) allows labour market changes to be observed in real time. High-frequency internet searches contain information primarily on short-term unemployment (new job losers), for example, information on how frequently users searched for the phrases 'unemployment benefit' or 'jobseeker's allowance'.

3.4 The cyclical position of the economy

As a result of the economic impacts of the coronavirus, Hungary's GDP may have reached its low in 2020 Q2, and in line with this – according to our estimate – the cyclical position of the economy entered negative territory. Changes in the cyclical position are surrounded by even greater uncertainty than usual; the quantification and separation of supply and demand effects pose a major challenge. Capacity utilisation at manufacturing companies has declined significantly. According to our expectations, the Hungarian economy may have started to recover in Q3, but according to current forecasts, the economic performance of the euro area, Hungary's main export partner, will weaken substantially this year.

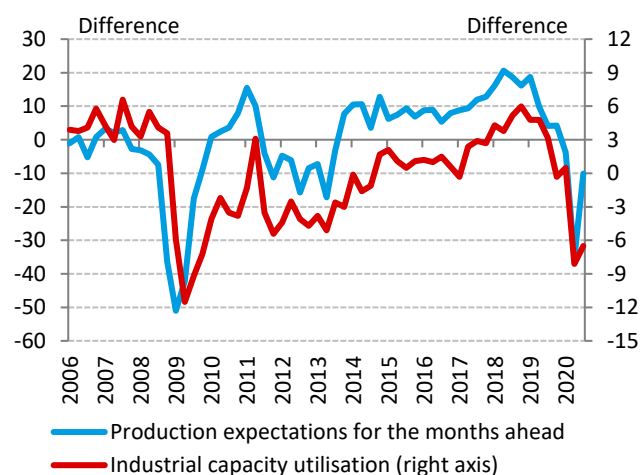
Chart 3-37: Development of labour market tightness



Note: Based on seasonally adjusted, quarterly data.

Source: HCSO

Chart 3-38: Capacity utilisation and production expectations in manufacturing



Note: Deviation from historical average

Source: MNB based on ESI

In 2020 Q2, as a result of the impacts of the coronavirus pandemic, gross value added declined considerably. According to our forecast, GDP may have reached its low in Q2, due to factors such as the temporary stoppage of key players in the vehicle industry, the loss of demand in tourism and catering and the general effect of the lockdown.

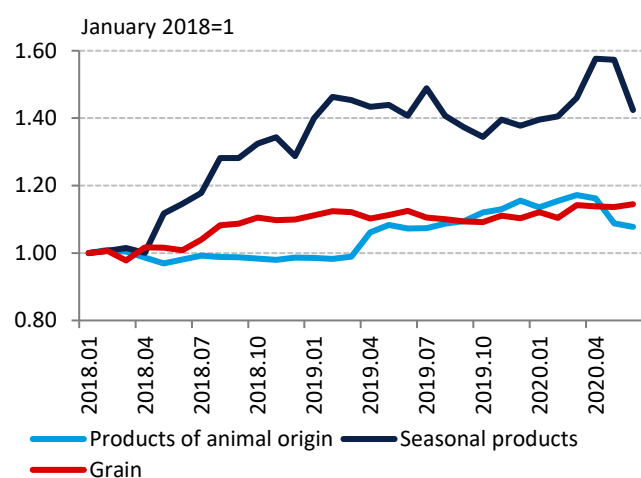
According to our estimate, the cyclical position of the economy entered negative territory in Q2, and the output gap may have narrowed significantly compared to the previous quarters. The developments in cyclical position are surrounded by even greater uncertainty than usual. Due to the pandemic, estimating the duration of impacts on economic agents and identifying the nature of such impacts (supply or demand) represents a challenge. The deteriorating income prospects and the decline in global demand typically influence GDP from the demand side, while the closures of cinemas and theatres due to the lockdown and social distancing measures as well as the lower capacity utilisation as a result of the measures adopted to protect the health of workers at production lines tends to be of a supply nature.

The impact of the coronavirus pandemic was also felt in the Hungarian labour market, labour market tightness sank to its mid-2016 level in Q2 (Chart 3-37). According to questionnaire-based surveys, capacity utilisation at manufacturing companies fell sharply in 2020 Q2 and stood at a low level in Q3 as well, in line with part-time operations and the decline in global demand (Chart 3-38). In view of the pandemic, the prospects for global economic performance have weakened considerably, accompanied by a sharp rise in the related uncertainty. In line with this, future output expectations for domestic manufacturing companies declined significantly in Q2. Nevertheless, an adjustment is already seen in Q3. According to our expectations, the economic recovery may have started in the past months. At the same time, the economic performance in the euro area may drop sharply in 2020 – or, according to certain forecast scenarios, it may be persistently weak.

3.5 Costs and inflation

From the average 2.5 percent in Q2, by August the growth rate of prices had accelerated to 3.9 percent year on year. The annual inflation data have been strongly affected by re-pricings due to the sudden shift in supply and demand conditions in the context of the economic restart. As a result of the gradual lifting of the restrictions, a surge in demand was typical on some market segments, while availability was limited in the case of certain products due to the gradual recovery of production chains. Core inflation excluding indirect taxes rose to above 4 percent in the past period, standing at 4.2 percent in August. In the past months, the indicators capturing longer-term inflationary trends (inflation of demand-sensitive products as well as sticky-price products and services) were also up.

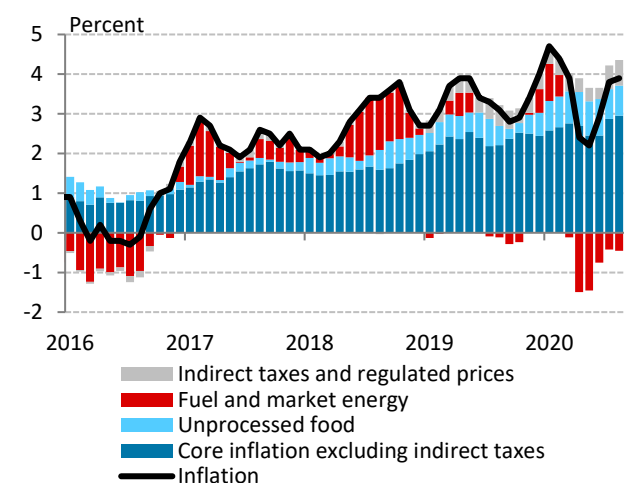
Chart 3-39: Development of agricultural prices



Note: Based on seasonally adjusted data.

Source: HCSO

Chart 3-40: Decomposition of inflation



Source: MNB calculation

3.5.1. Producer prices

Compared to the previous quarters, the year-on-year increase in agricultural producer prices in Hungary decelerated considerably in 2020 Q2. In the case of fruits, in Q2 the average producer price increase exceeded 50 percent year on year, which was attributable to unfavourable weather conditions (frost in the spring followed by rains in the summer). At the same time, this price increase was offset by a major fall in the price of potatoes, and thus, on the whole, the producer prices of seasonal vegetables and fruits rose practically in line with the historical average. In the case of products of animal origin, following the fading out of the price-increasing effects of swine fever and after the sharp price rise of 55.1 percent in March, the producer price of pork declined by 5.8 percent in June. Cereal prices rose moderately in 2020 Q2 compared to the previous year (Chart 3-39).

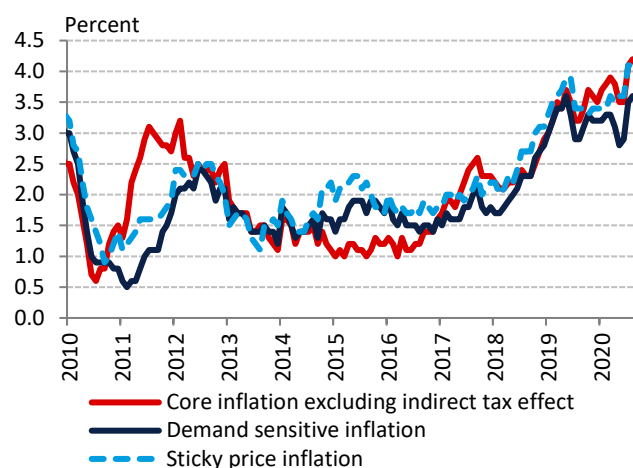
In the case of consumer goods, compared to the same period of the previous year, the rise in domestic producer prices exceeded the historical average until July. At the same time, on a year-on-year basis, domestic sales prices in industry as a whole have risen at a rate lower than the historical average in recent months.

3.5.2. Consumer prices

From the average 2.5 percent in Q2, by August the rate of the increase in prices accelerated to 3.9 percent year on year. In the past period the coronavirus pandemic exerted inflation-increasing special effects stemming from supply and demand frictions, which are discussed in more detail in Box 3-2. The increase in inflation is also attributable to the excise tax changes that came into force as of July concerning fuels and tobacco products. According to our calculations, their effect amounted to 0.4 percentage points in July, and 0.5 percentage points in August at the level of overall inflation (Chart 3-40).

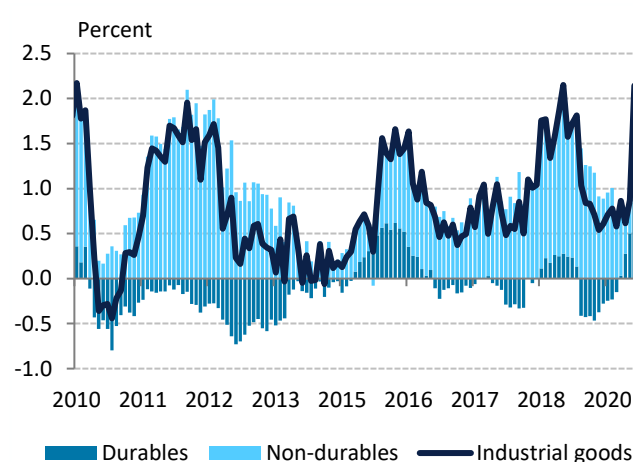
Core inflation excluding indirect taxes rose above 4 percent recently, standing at 4.2 percent in August. The rise in the indicator is primarily attributable to the price increase of industrial goods and services exposed most to

Chart 3-41: Underlying inflation indicators



Source: MNB calculation based on HCSO data

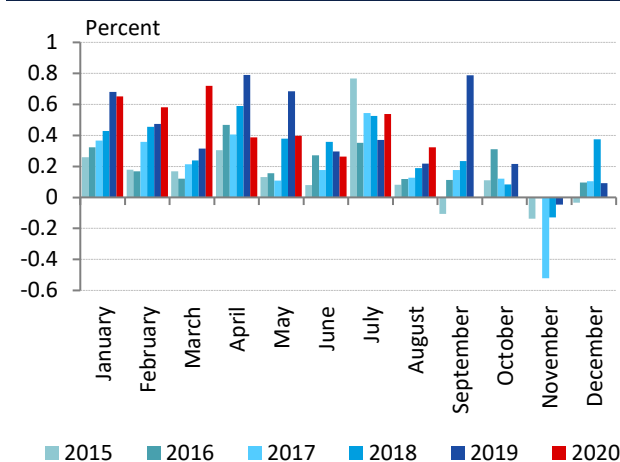
Chart 3-42: Inflation of industrial goods



Note: Annual change, excluding the effect of indirect taxes.

Source: MNB calculation based on HCSO data

Chart 3-43: Monthly price change of market services



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

Source: HCSO, MNB

the pandemic-related restrictions (restaurant services, domestic holidays). In the past months, the indicators capturing longer-term inflationary trends (the inflation of demand-sensitive products as well as sticky-price products and services) were also up (Chart 3-41). The core inflation indicator calculated according to Eurostat methodology (inflation excluding volatile energy, food, alcohol and tobacco products) shows a mixed picture: while it exceeds the tolerance band around the central bank inflation target in the Czech Republic and Poland, it is within the tolerance band and close to the inflation targets in Hungary and Romania (see Subchapter 3.1).

In spite of the persistently subdued external inflation environment, the annual inflation of industrial goods increased considerably in the past months, which is primarily attributable to the price dynamics of passenger cars. Within the product group, the inflation of both durable and non-durable goods increased (Chart 3-42).

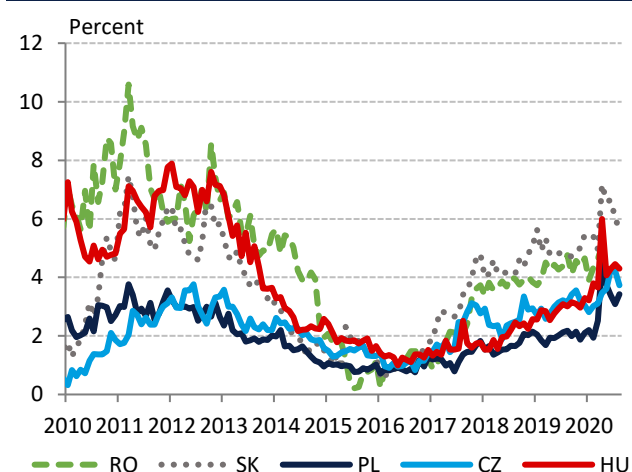
On average, market services inflation was 4.9 percent in the past months. Following the gradual easing of the containment measures related to the coronavirus pandemic, services like restaurant services or domestic holiday services became available again from July. Compared to the previous period, higher price rises were observed in their case, which may also have been attributable to the demand-stimulating – and thus price-increasing – effect of the extreme increase in the Széchenyi Recreation Card allowances as well (Chart 3-43).

The prices of alcohol and tobacco products rose in the summer months, which was caused by the price-increasing effect of the excise duty increase for tobacco products in July. In the case of the increase in excise duty on tobacco products, we have seen a pass-through characteristic of previous tax changes.

On the whole, food price dynamics in the past months were higher than in the previous period, but declining price indices were observed in the case of both processed and unprocessed food compared to the spring months. The trends typical of the developments in agricultural producer prices also appeared in the changes in the consumer prices of pork as well as fresh vegetables and fruits.

Fuel prices rose in the past period. As the world market price of Brent crude oil in 2020 Q2 was lower on average than USD 50 per barrel (the average price determined by the National Tax and Customs Administration was USD 29.928 per barrel), according to the prevailing regulations, the excise duty on fuel increased as of 1 July 2020 (by HUF 5 per litre on petrol and by HUF 10 per litre on diesel). In

Chart 3-44: Inflation expectations in the region



Note: No data available for Romania since May 2020.

Source: MNB calculations based on European Commission data

addition, the world market price of Brent crude increased from USD 40 per barrel in mid-June to around USD 45 per barrel in August, which also contributed to the rise in fuel prices in Hungary.

Based on data from recent months, inflation was higher than the forecast in the June Inflation Report. As a result of price developments in industrial goods and market services, core inflation and core inflation excluding indirect taxes also exceeded the June projection. In the case of non-core inflation items, the rise in fuel prices also contributed to the higher-than-expected increase in the price index.

3.5.3. Inflation expectations

Households' inflation expectations declined in May following a temporary rise in April, then remained practically unchanged until August. In the period under review, as a result of the coronavirus pandemic both statistical and behavioural effects shaped the expectations (for more details see Special topic 6.2 in the June 2020 Inflation Report). On the whole, households' inflation expectations in the countries of the region in the past months declined, similarly to what was observed in Hungary (Chart 3-44).

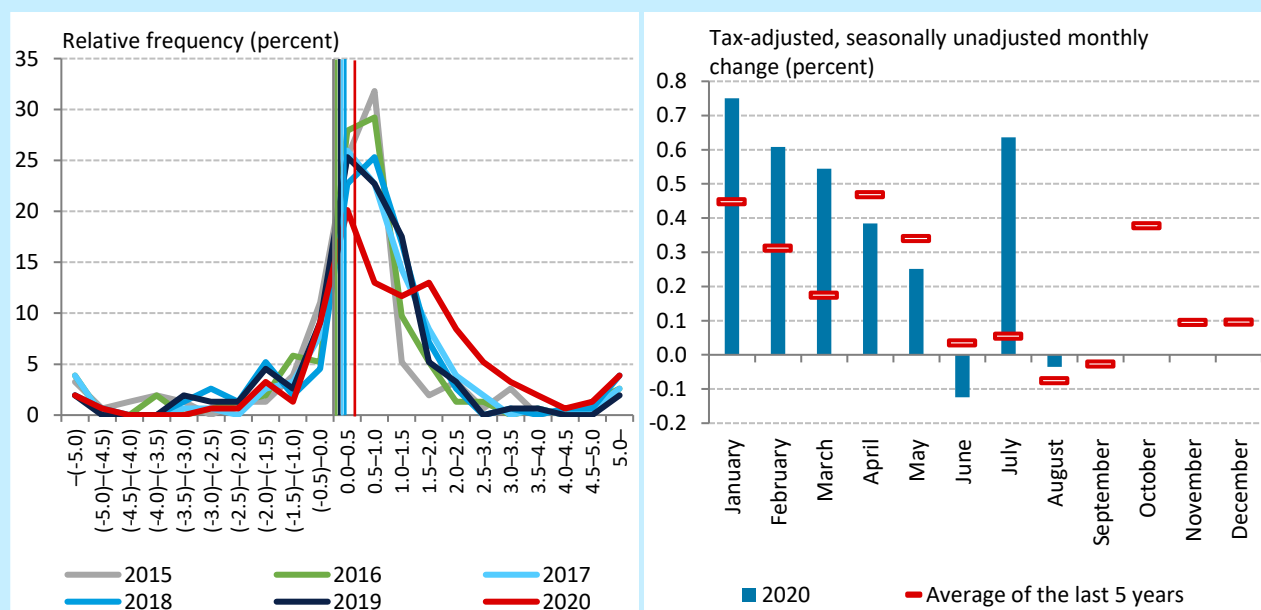
Box 3-2: Analysis of the impacts of the coronavirus on inflation

The coronavirus pandemic affects not only economic growth and labour market developments, but also the changes in inflation, and in measuring the latter it may lead to greater than usual distortion. In the past period, the coronavirus pandemic exerted inflation-increasing special effects stemming from supply and demand frictions, and may also have influenced the seasonality of prices, as a result of which, after the March–June period which was affected most by the restrictions, the rate of price increases accelerated to 3.9 percent year on year by August. Accordingly, it is worth examining how significant a role was played by the coronavirus pandemic in the rise in inflation in Hungary in July–August.

In terms of pricing decisions, the first months of restarting the economy are characterised by higher than usual volatility, which is attributable to the joint effect of various factors, statistical and economic in nature. Firstly, compared to the months more affected by the pandemic and the related restrictions (March–June), in July the HCSO recorded the prices in a wider range (the statistical effects of the coronavirus pandemic were discussed in more detail in Special topic 6.2 of the June Inflation Report). Secondly, as a result of the gradual lifting of the restrictions, a surge in demand was typical of some market segments, while availability was limited in the case of certain products due to the gradual recovery of production chains. These impacts mainly affected domestic holiday services, some durable items (e.g. passenger cars) and basic food (bread, milk, pasta etc.).

In order to identify the pricing distortions of the coronavirus, if we examine the distribution of monthly product-level price changes in the July–August period of the past 5 years, this year is different from the previous pattern (Chart 3-45, left panel). During the analysis we eliminated the effects of the excise tax increases affecting tobacco products and fuels as of July 2020, as they are considered exogenous factors in terms of monetary policy. According to our findings, compared to the previous years the ratio of products and services where the monthly price dynamics are 1.0–3.5 percent increased considerably (by 5–10 percentage points). This category includes certain food products (such as milk and dairy products, eggs, rice, bread, cooking oil), some industrial goods (e.g. new passenger cars, washing machines, household appliances) and services (e.g. cleaning, laundering, photography services or buffet items, a category that includes certain catering services). By contrast, the ratio of products with monthly dynamics around 0 percent declined. The seasonality of inflation excluding fuel prices is also different from the pricing practice observed in the past 5 years, suggesting a change in companies' price-setting behaviour. Namely, major price changes were not typical of the June–July months before (Chart 3-45, right panel). However, the August re-pricing was essentially in line with the average of previous years.

Chart 3-45: Distribution of July–August price dynamics of inflation items (2015–2020, left panel) and monthly changes in consumer prices excluding fuel prices (right panel)



Note: Seasonally unadjusted monthly changes excluding indirect tax effects. In the period July–August 2020 for the figure on the left.

Sources: HCSO, MNB

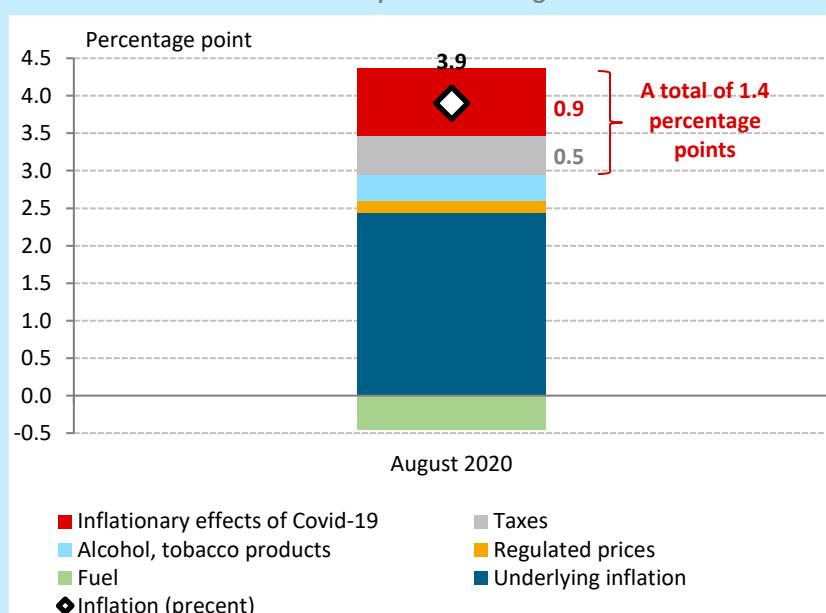
We examined the components of the surge in the July–August inflation and core inflation in more detail based on supply/demand dimensions, depending on whether there was any supply/demand distortion in the case of the given product or service. We estimate that the existing supply/demand frictions may have raised inflation by 0.9 percentage points, whereas in the case of core inflation excluding indirect taxes this effect may amount to 0.6 percentage points. The excise duty changes had a further 0.5 percentage point price-increasing effect in August (Chart 3-46). The underlying reason for the distortions and the price-increasing effects is that the demand among product groups fluctuated strongly in the months affected by the coronavirus, and it significantly exceeded the usual level in a concentrated manner, for short periods. By contrast, supply was unable to adapt in a flexible manner, and in some cases it even declined due to interruptions in production chains. There are some well-identifiable developments behind all this:

Industrial goods, domestic holiday and restaurant services: prices of certain industrial goods increased more than in previous years after the lifting of restrictions. In parallel with the resumption of domestic holidays and catering – by terminating the quarantine situation and lifting the restrictions on travelling – the repricing of these services that had not taken place in the previous months could be realised, possibly stimulated by the expanded Széchenyi Recreation Card allowances as well as by the relative and concentrated increase in the demand for these services.

Wearing apparel and food: although no significant increase in the demand for wearing apparel was seen, the closing of shops meant supply constraints for consumers. In the case of some food products, in certain periods shops had temporary shortages of goods, and as a result of interruptions in production chains, making up for the shortage was not only more time-consuming, but the new products delivered to shops may have had higher prices as well.

Administered prices, tobacco products and basic services: in the past months, these services were able to operate smoothly even despite the pandemic, and there were no major discontinuities in supply.

Chart 3-46: Decomposition of August inflation



Source: MNB calculation based on HCSO data

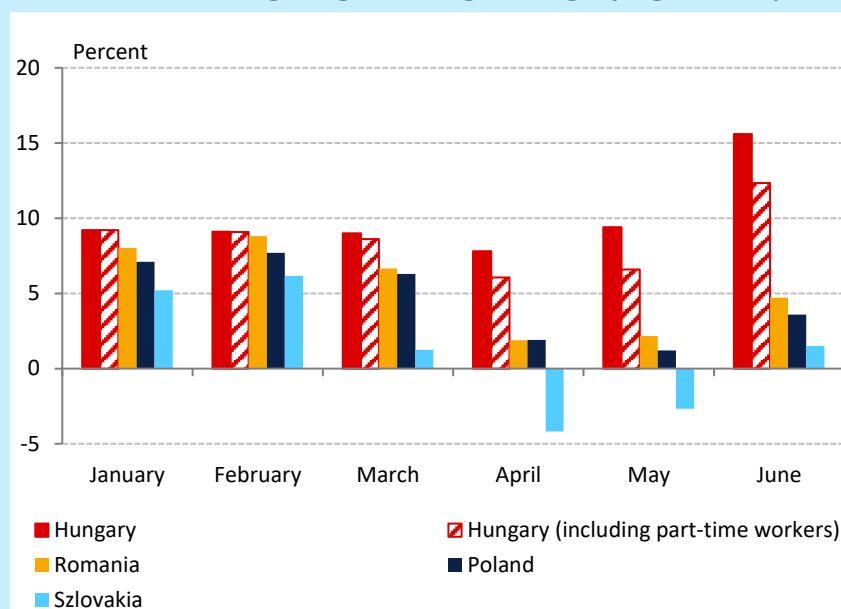
Looking ahead, in the acute phase of the coronavirus the result of supply/demand frictions and the disinflationary effect of weak demand determines the development of inflationary processes. In the medium term, in line with previous crisis experiences, the short-term price-increasing effects of the coronavirus will disappear.

Box 3-3: In-depth analysis of the impact of the coronavirus pandemic on corporate labour cost

The annual domestic wage dynamics typical of the past months did not seem to be affected by the impact of the coronavirus pandemic, but in Q2 more than half of the rise in average earnings was explained by statistical effects. In 2020 Q2, whole-economy gross average earnings rose by 10.9 percent year on year, which means an acceleration compared to the Q1 wage dynamics (9.1 percent). The reduction of the basic wage in proportion to working hours and the related job protection wage subsidy that can be applied for affected the statistically evidenced wage to a lesser degree. The underlying reason is that the HCSO calculates the indicator for full-time employees. Moreover, the wage index published by the HCSO does not cover part-time employees, whose ratio increased considerably in the past months. In addition, in the changed economic situation, companies primarily laid off those with lower earnings, which also results in an upward distortion of the official wage index (effect of the change in headcount).

In terms of wage increases, Hungary stands out among the countries of the region (Chart 3-47). Regional wage data are quantified including part-time employees, and according to that, the wage increase in Hungary amounted to 8.7 percent on average in H1. In the meantime, wages rose by an average of 5.4 percent in Romania and 4.6 percent in Poland in H1. Earnings in Slovakia increased by a mere 1.2 percent year on year. Following the spring months, the countries of the region were characterised by accelerating wage dynamics in June.

Chart 3-47: Annual changes in gross average earnings by regional comparison

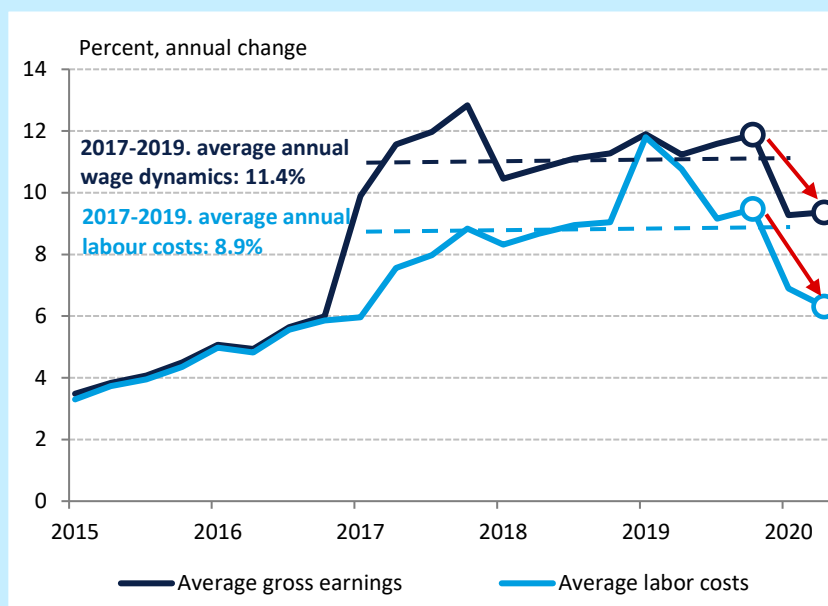


Note: No monthly data available for the Czech Republic, whereas the Polish wage data only refer to the private sector at a monthly frequency.

Source: MNB compilation on the basis of national statistical offices

At the time of the coronavirus pandemic, the average labour cost decreased from the higher values of 2018 – 2019 to the level seen in early 2017. Therefore, companies faced a lower wage cost increase, which remains below the annual growth rate of gross average earnings (Chart 3-48). As of January 2017 (pursuant to the wage agreement concluded for 6 years in 2016), the Hungarian Government cut the social contribution tax rate in multiple steps, as a result of which the tax burdens on companies, and the average labour costs, declined. In order to mitigate the impact of the coronavirus pandemic on the economy and on the labour market, the Hungarian Government released some sectors from their obligation to pay employer's contributions for a short time in 2020 and reduced the social contribution tax by 2 percentage points as of 1 July 2020. As a result, similarly to previous social contribution tax cuts, in 2020 Q2 companies already faced a lower average labour cost increase compared to previous years.

Chart 3-48: Annual changes in gross average earnings and average labour cost in the private sector



Note: Seasonally adjusted data.

Sources: HCSO, MNB

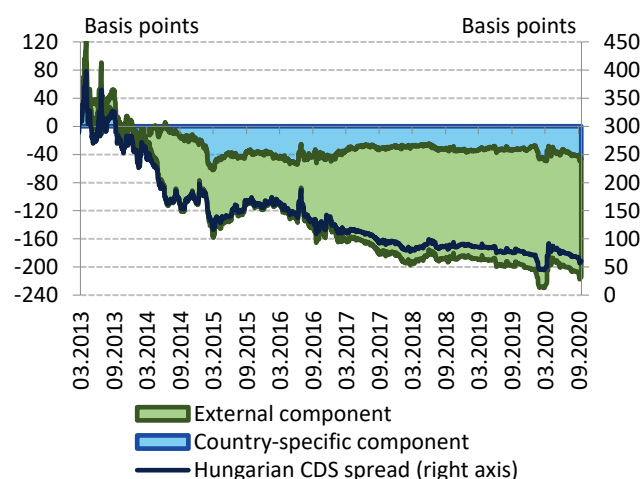
The impact of the coronavirus pandemic was reflected to a lesser degree in domestic wage data, but in addition to lay-offs, on the intensive side (Chart 3-33 in Chapter 3.3), companies adjusted themselves to the changing economic circumstances by reducing employees' working time (number of hours worked), which entailed a rapid increase in the ratio of part-time workers. In spite of the declining economic activity, companies strived to retain labour, otherwise they would later face significant costs in finding and training suitable employees. A frequent form of reduced working time for employees was sending them on mandatory leave or into part-time employment.

4 Financial markets and interest rates

4.1 Domestic financial market developments

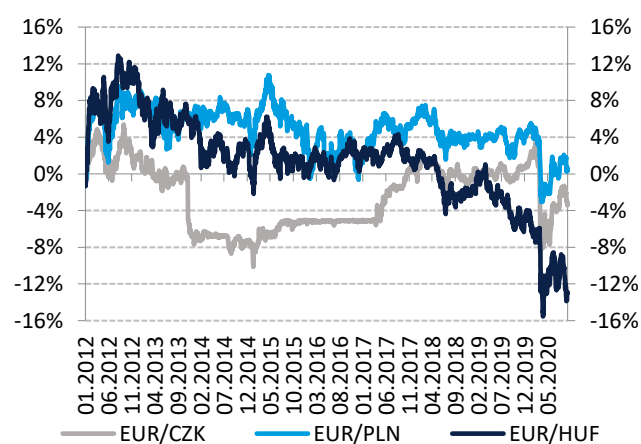
Parallel to the restart of economic activity, investor sentiment improved and financial market volatility decreased in the past quarter; however, the acceleration of the spread of the coronavirus pandemic over recent weeks points to rising uncertainty. The main stock markets had mostly risen since mid-June, and the VIX index – which measures stock market volatility – fell to nearly 28 percent from the roughly 33 percent observed at the beginning of the period. US, German and UK long-term government securities yields continued to decline slightly during the quarter. Spreads on emerging market bonds also declined. The Hungarian credit risk premium declined as international sentiment improved. Short-term government securities and interbank yields also declined, with the 3-month BUBOR falling by 27 basis points. At the same time, the interbank yield curve shifted upwards, while the short and the long section of the government securities market yield curve shifted downwards, and the middle section shifted upwards. As of mid-August, as a result of unfavourable macroeconomic news, the depreciation of the domestic currency, which had still been temporary at the beginning of the period, was followed – in contrast to the region – by a roughly 3 percent depreciation of the forint and then by a minor adjustment.

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 an appreciation of the currency. Source: Bloomberg

4.1.1. Risk assessment of Hungary

Hungary's credit risk premium decreased gradually in the past quarter (Chart 4-1). The CDS spread declined considerably, by 15 basis points during the period, with a greater contribution from the country-specific factor than from international impacts. Thus, the CDS spread is currently around 60 basis points.

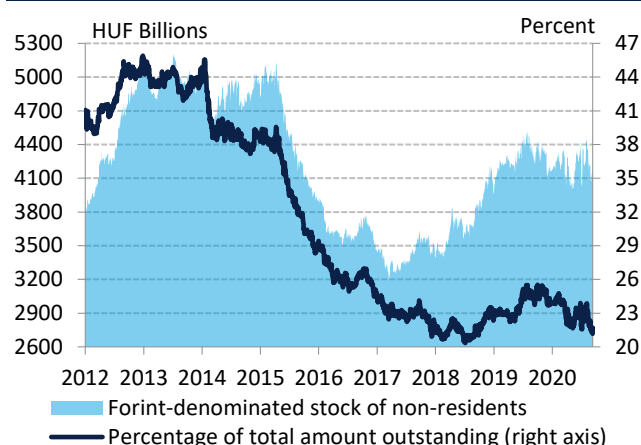
4.1.2. Developments in foreign exchange markets

The forint depreciated by 4,5 percent against the euro.

Looking at the regional currencies, the Romanian leu and the Czech koruna depreciated against the euro by 0.4 and 0.5 percent, respectively, while the Polish Zloty appreciated by 0.2 percent (Chart 4-2). At the beginning of the period, the forint weakened by nearly 3 percent before gradually appreciating again at the end of July to close to its initial level. Following that, it depreciated again until the end of the period, before slightly appreciating. The forint appreciated by 0.8 percent against the US dollar, while currencies of the region strengthened to a greater degree: the Czech koruna, the Romanian leu and the Polish zloty appreciated by 4.6 percent, 4.7 percent and 5.3 percent, respectively.

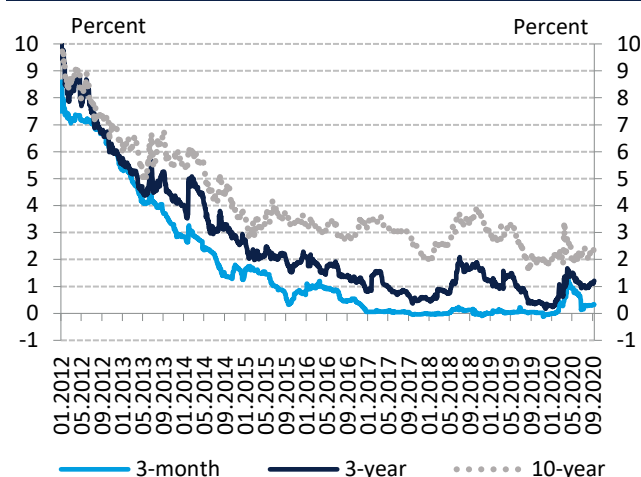
4.1.3. Government securities market and changes in yields

Non-residents' HUF-denominated government securities holdings dropped in the past quarter (Chart 4-3). Following a practically continuous decline since 2015, non-residents' HUF-denominated government securities holdings first stabilised and then started to rise in early 2018. The rise stopped by mid-2019, after which holdings started to decline gradually. Following an increase at the beginning of this year, non-residents' forint-denominated government securities holdings declined sharply as of mid-March before slightly

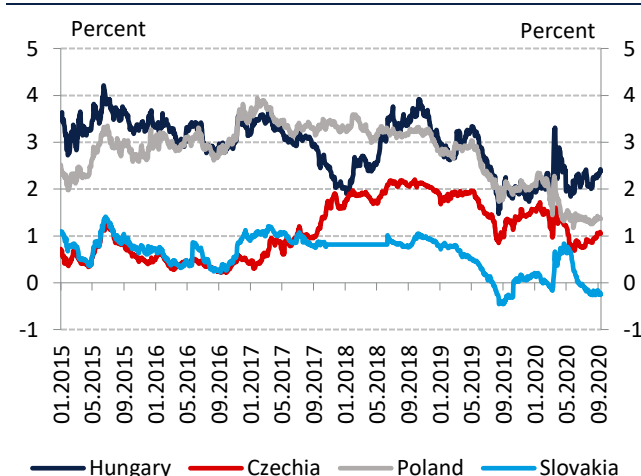
Chart 4-3: HUF-denominated government securities held by non-residents

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

increasing from May until early August, followed by a decline again. As a result, they decreased by some HUF 75 billion in the past three months. The ownership share within HUF-denominated government securities also declined slightly, sitting close to 21,5 percent.

At the government bond auctions the ÁKK accepted offers corresponding to or exceeding the announced volumes. Average auction yields were mixed in the past quarter. Average yields declined at the three-month auctions and increased at the ten-year ones, corresponding to 33 basis points and 2.41 percent, respectively, at the end of the period.

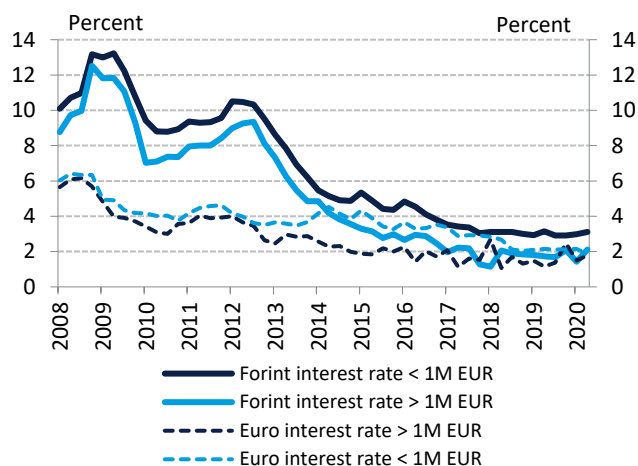
Yields declined on the shorter section of the government securities market yield curve and rose on its longer section (Chart 4-4). The short section of the yield curve declined considerably at the beginning of the period, before increasing slightly. At the longer maturities, a decline was observed around the June and July interest rate decisions, but that was followed by a rise in yields. Compared to mid-June, the 10-year benchmark yield rose by 5 basis points overall. In the case of interbank yields, by the end of the period the 3-month BUBOR was down by 27 basis points to 0.63 percent, whereas longer-term interbank yields increased by 15–22 basis points.

Long-term reference yields in the region varied during the period (Chart 4-5). From 2.3 percent in mid-June, the 10-year forint yield increased to 2.4 percent. The Czech long-term yield rose to a smaller degree, by 8 basis points. By contrast, the Polish and Slovak 10-year yields were down by 8 and 31 basis points, respectively.

4.2 Credit conditions of the financial intermediary system

In view of the negative impacts of the coronavirus pandemic on the economy, many banks tightened both corporate and household credit conditions. Looking ahead to 2020 H2, the banks participating in the Lending Survey held out the prospect of further tightening in corporate credit standards and easing in the case of household loans. The average financing cost of high-amount corporate forint and euro loans increased in the period under review. By contrast, as a result of the regulation concerning the maximum APR level, the average APR on personal loans sank to 5.9 percent following a 7-percentage-point decline. The interest rate risk of granting housing loans is low; 74 percent of the housing loan contracts concluded during the quarter have an interest rate fixation for at least 10 years or until maturity. The level of real interest rates rose during the quarter, explained by lower inflation expectations and higher deposit rates.

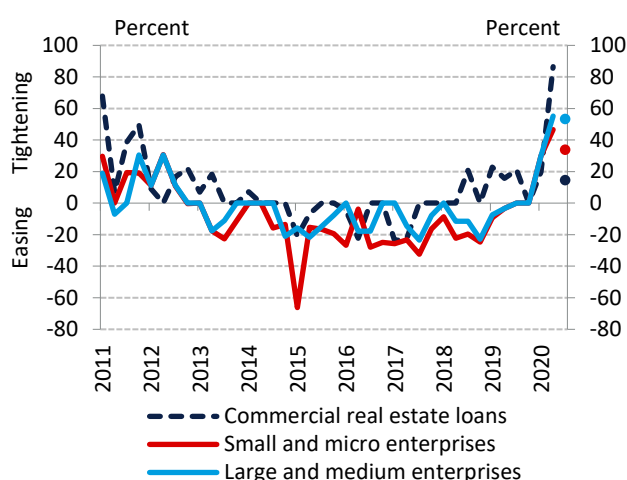
Chart 4-6: Interest rates on new corporate loans



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 the corporate sub-segments



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for 2020 H2.

Source: MNB, based on banks' responses

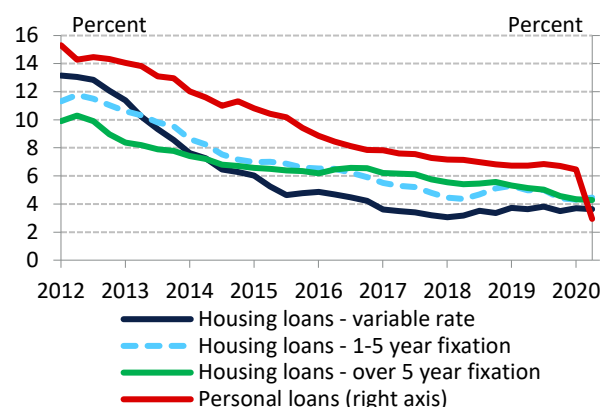
4.2.1. Corporate credit conditions

The financing costs of corporate forint loans increased during the quarter. The smoothed average interest rate level of new corporate HUF loans – excluding money market transactions – rose by 0.1 percentage points in the case of low-amount loans and by 0.7 percentage points in the case of high-amount HUF loans compared to the previous quarter. As a result, the average interest rate on forint loans was 2.4 percent in June. The interest rate on low-amount EUR loans declined by 0.3 percentage points, and the same degree of increase was observed in the interest rate level of high-amount EUR loans during the quarter (Chart 4-6). By the end of the quarter, the average financing cost of EUR loans increased to 1.8 percent. The greater rise in forint interest rates compared to euro loans is explained by a composition effect.

Corporate credit conditions tightened in an environment that became uncertain due to the pandemic. In net terms, 47 percent of the banks participating in the Lending Survey tightened the conditions of access to loans in the corporate segment during the quarter, mentioning the deterioration in economic prospects and industry-specific problems as the main underlying reasons. Looking ahead to the next half year, the ratio of those who indicated further tightening measures was similar, with the changing of banks' risk tolerance as a significant underlying reason. The ratio of those who tightened the conditions of commercial real estate loans was the highest (86 percent), although for H2 a mere 14 percent of them plan further tightening steps in the case of this segment (Chart 4-7).

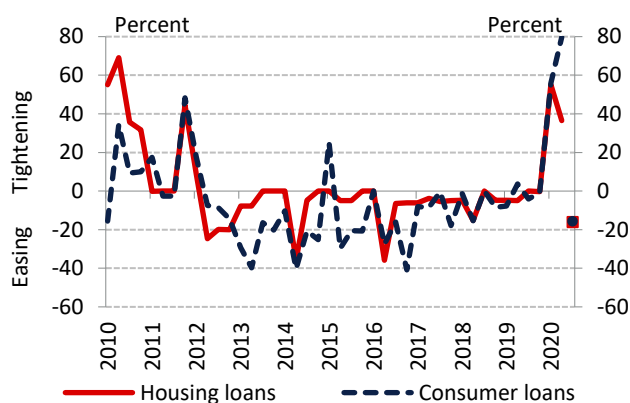
4.2.2. Household credit conditions

The average APR on housing loans with interest rates fixed for a longer period declined further. The average APR on housing loans granted during the quarter rose by 0.2 percentage points to 4.5 percent in the case of housing loans with a 1–5 year interest rate fixation, while following a decline of 0.1 percentage point the average APR on loans fixed for more than 5 years was down to 4.3 percent (Chart 4-8). Parallel to the rise in the BUBOR, the spread on

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

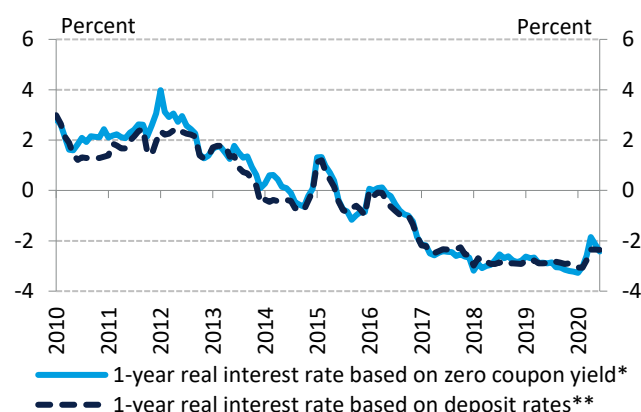
Note: Quarterly average of lending rates on newly disbursed loans.

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 2020 H2.

Source: MNB, based on banks' responses

Chart 4-10: Forward-looking real interest rates

Note: * Based on the one-year forward-looking inflation expectations of analysts calculated by the MNB using the 1-year zero coupon yield and the Reuters poll. **Based on the one-year forward-looking inflation expectations of analysts calculated by the MNB using deposit rates with maturity up to 1 year and the Reuters poll. Source: MNB, Reuters poll

variable rate housing loans decreased by 0.6 percentage points, and with the relevant IRSs remaining unchanged, the spread on loans with an interest rate fixation over 5 years remained at 2.8 percentage points. Within new loans less affected by the interest rate risk, 74 percent of the housing loan volume contracted during the quarter had an interest rate fixation period of at least 10 years or until maturity, and 73 percent of them were concluded as Certified Consumer-friendly Housing Loans. Banks complied with the limit concerning the APR level set forth for unsecured consumer loans, and thus following a 7 percentage points decline, the APR on personal loans stood at 5.9 percent at the end of the quarter, whereas the average spread fell to 4.9 percentage points.

Banks tightened the standards of housing and consumer loans further during the quarter. Based on responses to the Lending Survey, 37 percent of the banks tightened the conditions on housing loans, primarily by raising the minimum required credit score, which they justified with the deterioration in customers' creditworthiness and the worsening economic prospects (Chart 4-9). An even greater ratio, 80 percent of the banks in net terms, tightened the standards of unsecured consumer loans, for reasons similar to those in the case of housing loans. Nevertheless, looking ahead to 2020 H2, 16 percent of the banks held out the prospect of easing in both product categories to reach market share objectives.

4.2.3. Changes in real interest rates

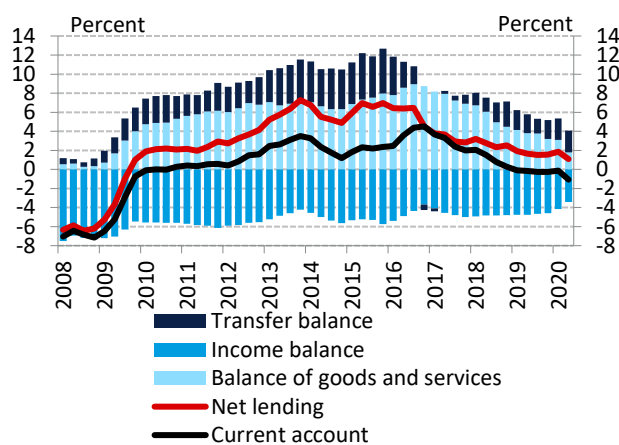
Real interest rates rose during the quarter. In the period under review, the real interest rate level reduced by inflation expectations rose by 0.2 percentage points estimated based on government securities market yields and by 0.4 percentage points estimated based on deposit rates. As a result, both real interest rate levels corresponded to -2.4 percent at the end of the quarter (Chart 4-10). The quarterly rise in the level of real interest rates is explained by both the lower inflation expectations and the rising deposit rates.

5 Balance position of the economy

5.1 External balance and financing

In 2020 Q2, both the net lending of the economy and the current account deficit amounted to 1.1 percent of GDP. In Q2, the coronavirus pandemic already significantly affected developments in the external balance. The fall in net exports was primarily attributable to the declining industrial production, the import-increasing effect of the costs of the containment measures and the decrease in the services balance, the impact of which was attenuated by an improvement in the terms of trade. At the same time, the decline in the income balance deficit, which was related to a fall in foreign-owned companies' income, contributed to the improvement in the current account balance. Against the background of continued EU fund absorption, the transfer balance remained stable at a high level. According to financing data, net FDI inflows continued, while the net external debt-to-GDP ratio increased slightly from its end-March historical low.

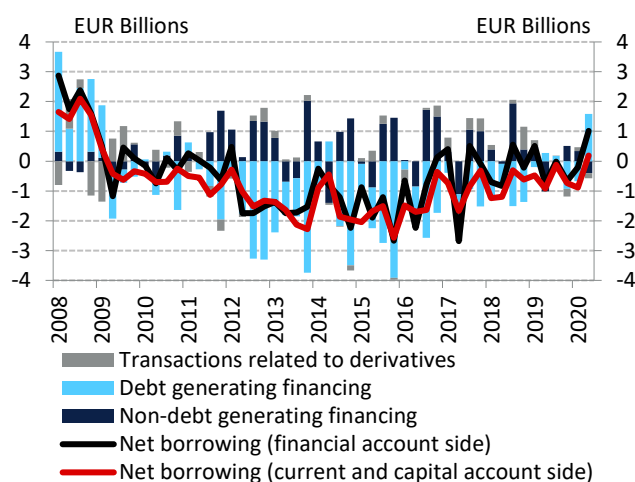
Chart 5-1: Changes in net lending and its components



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

Source: MNB

Chart 5-2: Structure of net lending



Note: The net lending from the financial account side corresponds to the sum of current account, capital account and the BOP balance of statistical errors and omissions.

Source: MNB

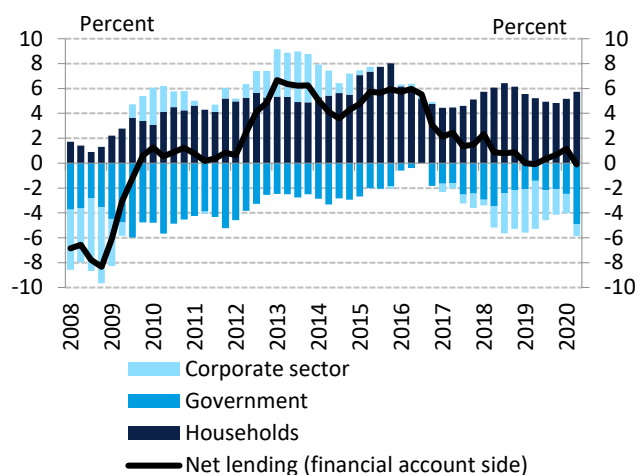
5.1.1. Developments in Hungary's external balance position

In 2020 Q2, the net lending of the economy declined to 1.1 percent of GDP as a result of the current account deficit rising to 1.1 percent (Chart 5-1). The impact of the coronavirus pandemic was reflected in the developments in external balance indicators. The decline in the current account balance was the result of a fall in net exports and an improvement in the income balance. The main contributor to the decline in the trade balance was the deterioration in the services balance (related to the downturn in tourism), but the goods deficit also rose. The deterioration in the goods balance was attributable to a decline in external demand, the decelerating industrial production as a result of the shutdown of vehicle factories in April as well as the import-increasing effect of the costs of the containment measures. All this was offset by the improvement in the terms of trade parallel to the fall in the prices of energy. The income balance deficit decreased due to lower profit of foreign-owned companies, whereas the surplus on the transfer balance remained practically unchanged as a result of the stable and high absorption of EU funds.

5.1.2. Developments in financing

Further FDI inflows took place in 2020 H1, while debt liabilities also increased (Chart 5-2). FDI inflows expanded despite the seasonally usual dividend disbursements, which reflected the impact of the increase in intercompany loans. On the whole, debt liabilities of the economy increased slightly in H1: debt outflows in Q1 were followed by a major rise in debt liabilities in Q2. As a result of transactions, the net external debt of the banking sector increased due to the decline in foreign assets exceeding that of liabilities. Net external debt of the government increased as the rise in FX reserves fell short of the increase in external liabilities due to the costs of containment measures and a decline in FX

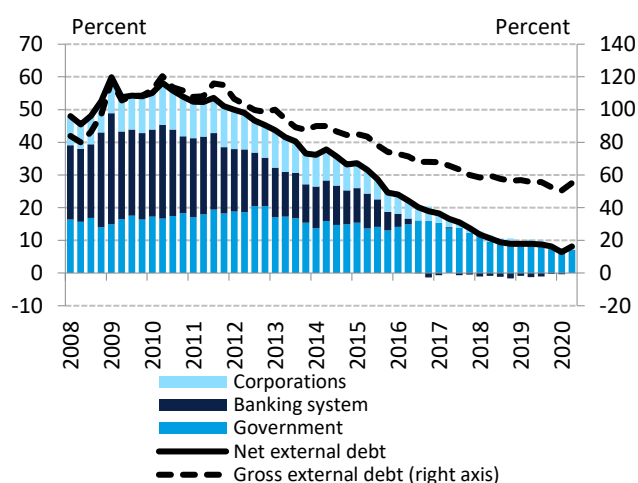
Chart 5-3: Decomposition of net lending by sectors



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

Source: MNB

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



Note: Excluding intercompany loans, as a percentage of GDP.

Source: MNB

swap instruments providing forint liquidity. Both the maturity and issuance of government FX bonds affected the levels of FX reserves and foreign liabilities, and thus they did not change the level of net external debt. Corporations' foreign assets and loans declined to a similar degree, and thus, on the whole, the sector's debt liabilities remained practically unchanged in H1.

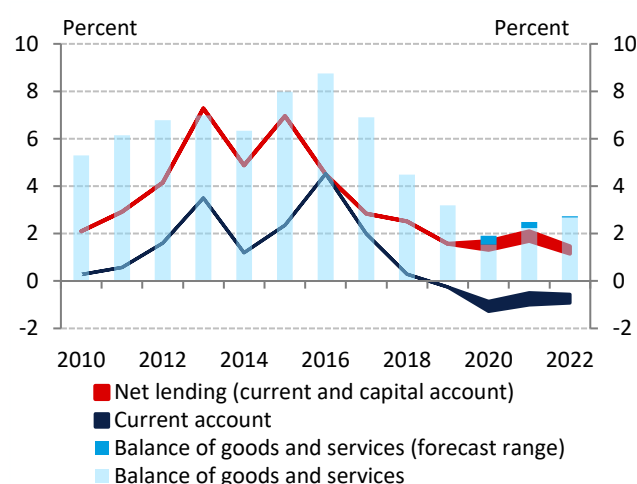
Looking at sectors' savings developments, the decline in net lending was related to the government, which was only partly offset by the improving position of the private sector (Chart 5-3). Parallel to decelerating consumption dynamics, financial asset accumulation reached a high level. As a result, households' net financial savings increased further. The decline in corporate net borrowing primarily reflected a decrease in investment activity. The impacts of the coronavirus on the economy, the costs of the containment measures and the economy protection measures resulted in considerable growth in the net borrowing of the government in Q2.

Net external debt at end-June was close to 8 percent of GDP, i.e. the end-2019 level (Chart 5-4). The indicator, which sank to a historical low by end-March, rose back to the level seen at the end of the year as a result of the debt inflow in Q2. In Q2, in addition to transactions, the developments in nominal GDP and revaluation effects also contributed to the increase in the debt indicator. Gross external debt was up slightly, primarily as a result of FX bond issues.

5.2 Forecast for Hungary's net lending position

This year, developments in the external balance are strongly affected by the impacts of the pandemic. In 2020, the current account balance is temporarily declining; it will gradually rise in the coming years, while the net lending of the economy persists. This year's decrease in the trade balance is partly offset by an improvement in the income balance. Accordingly, the current account deficit will remain at around 1 percent of GDP, and –parallel to an increase in the trade surplus – it will improve slightly in the coming years. Meanwhile, the net lending of the country will persist as a result of the developments in EU transfers. In terms of sector savings, the fall in tax revenues as well as the spending on the containment measures will significantly increase the net borrowing of the state this year, but the budget deficit will gradually decline starting from 2021. The greater deficit is offset by a rise in the private sector's net lending: due to investment coming to a halt, there will be a temporary, significant improvement in corporations' net position, while high net household savings in excess of 5 percent of GDP will continue to support the stable external balance position.

Chart 5-5: Evolution of net lending



Note: As a percentage of GDP.

Source: MNB

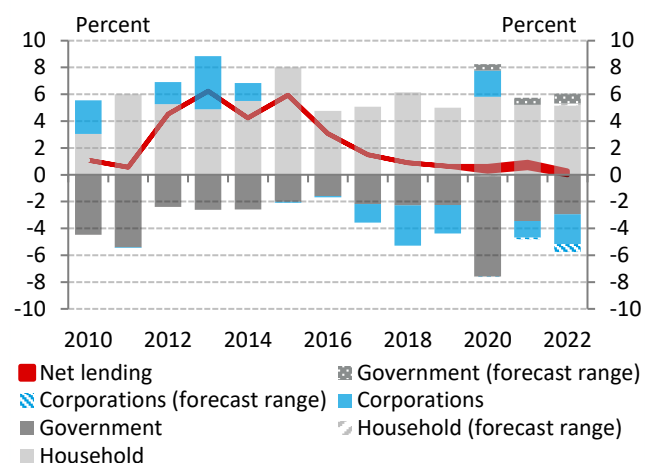
The current account balance will temporarily decline then gradually improve over the forecast horizon (Chart 5-5).

The trade balance will decline further during 2020, with the falling external demand, the imports related to the containment measures and defence purchases as well as the low services balance due to the slow recovery of tourism as contributors. At the same time, the impact of these factors is partly offset by the more subdued domestic absorption and the improvement in the terms of trade related to the decline in the price of energy, which contribute to the growth in net exports. The impact of the lower demand is seen in the changes in the income of foreign-owned companies as well: lower profits result in a lower income account deficit, which improves the current account balance. As a result of the joint impact of these factors, this year's current account deficit continues to be moderate, around 1 percent of GDP. Following the low in 2020, the current account balance will improve parallel to the weakening impacts of the pandemic and to the recovery of the economy and external demand. Together with lower EU transfer absorption, the result of all this will be the prolonged stabilisation of the net lending position.

The uncertainty of the forecast of the external balance indicators is depicted by the band between the two scenarios. Along the two different growth paths the trade balances are similar: investment and consumption may be higher in the case of higher growth, entailing higher imports, whereas in the case of a faster recovery in external demand, export dynamics also accelerate. In addition, the profit balance presumed along the two paths has a smaller impact on the current account balance: the increase in foreign-owned companies' profits as a result of higher economic growth adds to the income account deficit. As a result of the above effects, the net lending of the economy remains stable in both paths over the forecast horizon.

In view of the savings of sectors, the temporary rise in the budget deficit is financed by the rising net lending of the private sector (Chart 5-6). This year the budget deficit will

Chart 5-6: 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 gradually return to the historical average.

Source: MNB

increase due to declining tax revenues as well as the costs of the containment and economy protection measures, but following the temporary rise, as of 2021 a decrease in government expenditures and a rise in tax revenues in line with economic growth will improve the financing position of the state. In view of investment coming to a halt, companies' net position will temporarily turn into net savings. Then, as of 2021, the net borrowing of the sector will grow again with an increase in investment activity. Households' financial asset accumulation is increasing in accordance with the decline in consumption, with net financial savings reaching a high level and exceeding 5 percent of GDP.

5.3 Fiscal developments

As a result of the measures to control the coronavirus pandemic and the Economy Protection Action Plan, as well as declining tax revenues, in 2020 the budget deficit may rise to 7–7.5 of GDP and thus fiscal policy is countercyclical in 2020. From 2021, in the more favourable economic environment, the higher revenues stemming from the cyclical processes on the one hand, and the lower expenditures on the other, will once again reduce the deficit. Accordingly, the deficit may be close to the target set by the Budget Act, and may reach 2.9–3.4 percent of GDP. Nevertheless, our forecast does not take the potential fiscal impact of the new, but yet to be announced economy-stimulating measures planned by the Government for 2021 into account. Due to the higher budget deficit and the slowdown of economic growth, the government debt-to-GDP ratio will temporarily rise significantly in 2020, but from 2021 government debt will return to a downwards path.

Table 5-1: General government balance indicators

| | 2019 | 2020 | 2021 | 2022 |
|--------------------------------------|------|-----------------|-----------------|-----------------|
| ESA balance | -2.0 | (-7.5) - (-7.0) | (-3.4) - (-2.9) | (-2.9) - (-2.2) |
| Primary ESA balance (point estimate) | 0.1 | -5.0 | -0.9 | -0.4 |
| Fiscal impulse (point estimate)* | 0.0 | 5.1 | -3.7 | -0.4 |

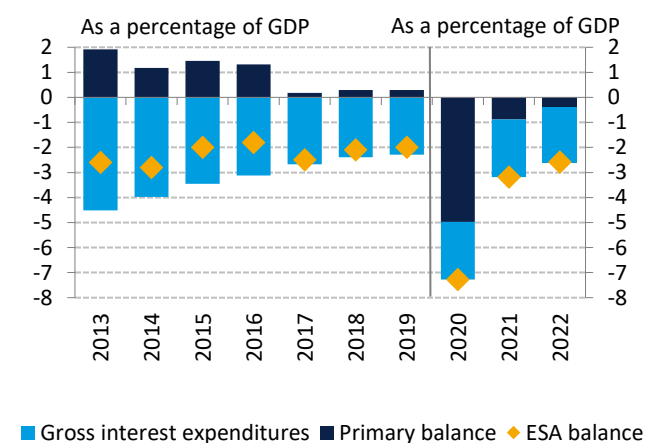
Note: As a percentage of GDP. The point estimates of the primary ESA balance and the fiscal impulse are consistent with the midpoint of the deficit forecast bands. * Change in the augmented (SNA) primary balance.

Source: HCSO, MNB

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 7-7.5 percent in 2020 and 2.9-3.4 percent in 2021 (Table 5-1). The increase in the deficit is caused stems on the one hand from the economic slowdown, and on the other hand from government measures for health purposes and economic protection. The economic slowdown reduces planned tax revenues (automatic stabiliser). While, fiscal measures provide the economy with additional funding, thereby stimulating the decelerating growth and resulting in a countercyclical fiscal policy. The expected deficit is considered average by regional and international comparison. According to market analysts' expectations, the deficit may amount to 7.5 percent on average in the European Union and 7.9 percent in the countries of the region in 2020.

Chart 5-7: Changes in the fiscal balance and government interest expenditures



Note: The point estimate on the graph shows the midpoint of the deficit forecast bands.

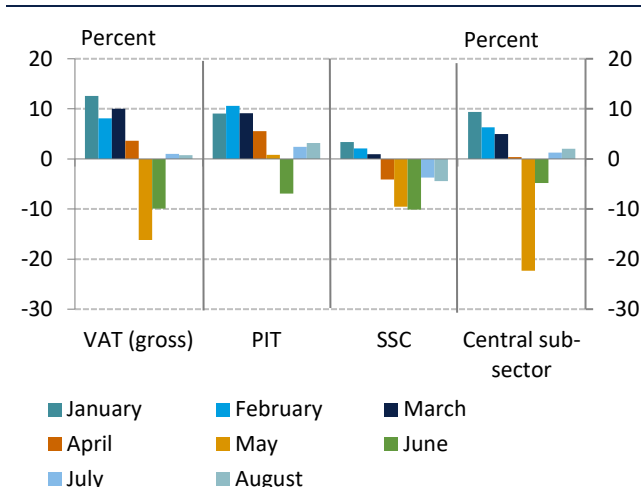
Source: HCSO, MNB

5.3.2. Budget balance in 2020

The budget deficit in 2021 may be close to the deficit target of the 2021 Budget Act, reaching 2.9–3.4 percent of GDP. In the more favourable economic environment, higher revenues resulting from the cyclical processes and lower expenditures may both reduce the deficit. In our technical projection related to 2022 the deficit declines further compared to the previous years (Chart 5-7).

The budget deficit-to-GDP ratio may reach 7–7.5 percent in 2020. At the end of August, the Ministry of Finance reported an expected 2020 deficit of 7–9 percent for 2020, which is feasible according to our forecast. Following the nadir in May, there was a major correction and increase in tax revenues, but they stabilised at a value lower than the previous dynamics. The tax and contribution revenues of the central sub-sector of the budget expanded by 1.3 percent in July and 2.1 percent in August year on year (Chart 5-8). The most significant falls were observed in consumption taxes as well as taxes and contributions on labour. The economic slowdown and tax cuts considerably reduce annual tax revenues compared to the previous estimates. Payments by economic organisations,

Chart 5-8: Year-on-year change in some important tax revenues and the total revenue of the central sub-sector in 2020



Source: Hungarian State Treasury

Table 5-2: Budgetary implications of government measures (as a percentage of GDP)

| | |
|--|-------------|
| Measures with budgetary implications | 6.9 |
| 1. Tax cuts and family support measures | 0.9 |
| 2. Job protection | 0.7 |
| 3. Restarting the economy | 3.6 |
| 4. Expenditures of disease control | 1.7 |
| Fundraising measures | 4.1 |
| 1. Revenue-raising measures | 3.1 |
| 2. Budgetary reallocation of the 2020 budget | 0.3 |
| 3. Reallocation of EU funds | 0.7 |
| Impact on the budget balance | -2.8 |

Note: The sum of partial data may differ from the aggregated values due to rounding.

Source: Ministry of Finance, MNB

consumption taxes as well as tax and contribution revenues on labour may fall significantly short of the statutory appropriation, altogether by HUF 1150–1250 billion (2.5–2.7 percent of GDP). The measures addressing the medical and economic effects of the pandemic with direct budgetary effects amount to 6.9 percent of GDP. The government may cover a significant share of these measures with reallocations, the use up of reserves, increases in taxes (retail surtax, contributions by financial organisations) and the reallocation of EU funds. According to our calculations, the net balance effect may amount to 2.8 percent of GDP (Table 5-2).

5.3.3. Balances in 2021 and 2022

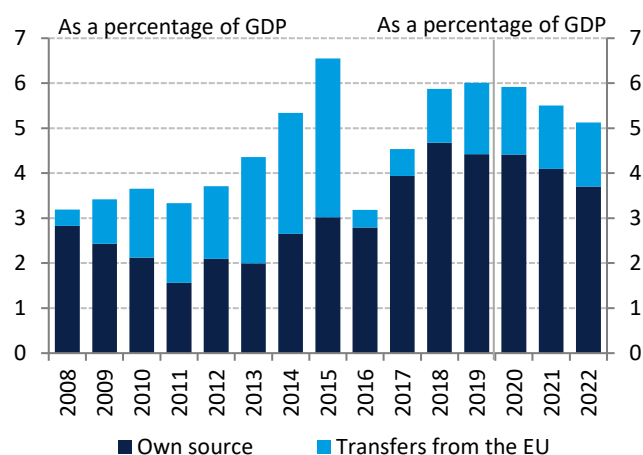
In 2021, the budget deficit on an accrual basis may be around the 2.9 percent deficit target of the 2021 Budget Act. Based on the impacts of the pandemic on the economy and the Government's economy protection and other measures, we have slightly increased our expectation for the 2021 deficit compared to our projection published in June, but we still deem the deficit target to be achievable. Nevertheless, our forecast does not take the potential fiscal impact of the new economy-stimulating measures planned by the Government for 2021 into account.

The decrease in the budget deficit compared to 2020 is realised primarily by curbing the expenditures of budgetary organisations and institutions, which have reached extremely high levels. The fall in the deficit is also supported by the rise in tax and contribution revenues, which were moderate in 2020 due to the measures adopted to mitigate the slowdown of economic growth and to restart the economy.

According to our forecast, the deficit target included in the Budget Act is achievable. We expect lower wage indices compared to the Budget Act, and thus, according to our forecast, the taxes on labour may fall short of the appropriation. According to our forecast, on the expenditure side the expenditures of budgetary organisations may exceed those assumed in the Budget Act, while housing subsidies may fall short of the appropriation. In addition, according to the plans, the amount of the central reserves of the budget will be HUF 210 billion, i.e. 0.4 percent of GDP in 2021, which – should the revenues fall short of the appropriation – may ensure the feasibility of the deficit target.

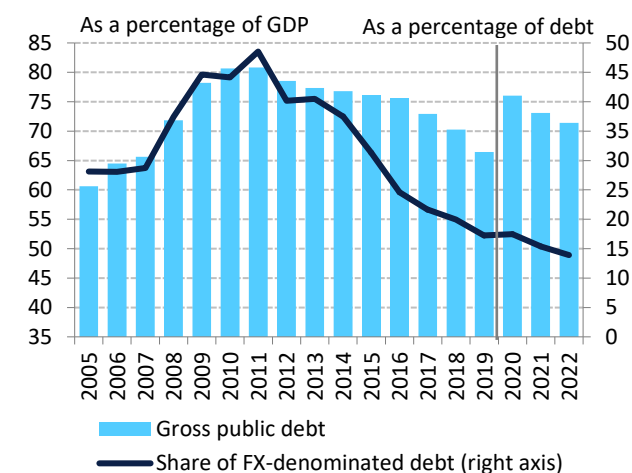
In the absence of an available Budget Act, for 2022 we prepare technical forecasts, according to which the deficit will decline further compared to the previous years.

Chart 5-9: Development of government investment



Source: HCSO, MNB

Chart 5-10: Gross public debt forecast



Note: Assuming that the budget deficit and the nominal GDP will meet the forecast band's midpoints in the forthcoming years.

Source: MNB, GDMA

5.3.4. Risks surrounding the baseline scenario

The greatest risk is related to the impact of the return of the coronavirus pandemic on the economy. A strong second wave may result in a further decline in tax revenues and would make it necessary to take further fiscal measures. In our baseline scenario, the investment expenditures of the government sector in 2020 fall slightly short of their 6 percent level as a percent of GDP reached in 2019 (Chart 5-9). Government investments are increased by certain expenses related to the prevention of the pandemic and also by the investment measures of the Economy Protection Action Plan. However, the actual economic effect may be reduced by the fact that – due to the existing capacity constraints – additional investment resources are not utilised in full. In addition, the reallocations providing funding for the Economy Protection Fund may also have affected investment items.

5.3.5. Expected developments in public debt

According to preliminary data, at the end of 2020 H1, the gross government debt-to-GDP ratio rose to 71.9 percent. The debt ratio rose by 3.7 percentage points year on year, while compared to the value registered at the end of 2019 it increased by 5.5 percentage points. In H1, in addition to net debt issuance, the debt ratio was also raised by revaluation and the slowdown in economic growth.

According to our forecast, due to the deteriorating economic environment stemming from the coronavirus pandemic, the measures necessary to mitigate the economic effects of the pandemic and the higher expenditures, the gross government debt-to-GDP ratio will temporarily rise from 66.4 percent registered at the end of 2019 to 76 percent in 2020 (Chart 5-10). The 9.7 percentage point rise in the ratio is considered low by international comparison. According to the latest forecast of the European Commission, the government debt-to-GDP ratio in the countries of the European Union may increase by an average 12.5 percent in 2020 compared to the previous year. However, in 2021, as a result of the recovery in economic growth and the decline in the expected deficit, government debt will return to a declining trajectory. According to our projection, following the temporary rise, the government debt ratio will decline annually by 2.8 percentage points on average, and thus by the end of 2022 it may fall to around 70 percent. As a result of the foreign currency bond issuances, by the end of 2020 the share of foreign currency-denominated debt may rise from 17.3 percent to 17.6 percent, and then, over the forecast horizon the negative net foreign currency issuance will reduce the ratio, which may fall to around 14 percent by 2022.

Box 5-1: Plans related to the 2021–2027 EU budget cycle

Pursuant to the agreement of 21 July of the European Council, comprising heads of state or government of EU Member States, the multiannual financial framework (MFF) of the 2021–2027 budget period is EUR 1074 billion, while the Next Generation EU instrument created to manage the economic crisis caused by the coronavirus pandemic will amount to EUR 750 billion calculated at 2018 prices. The largest Next Generation EU fund is the Recovery and Resilience Facility (RRF) amounting to EUR 673 billion, some 53 percent of which is constituted by loans with a preferential interest rate. Member States can secure the grants amounting to EUR 313 billion and accounting for nearly half of the RRF in two stages, until 2023. In the first stage, between 2021 and 2022, decisions would be made about allocating 70 percent of the grants, i.e. EUR 219 billion, and the macroeconomic indicators of the period between 2015 and 2019 would be taken into account for the allocation of the grants. In the second stage, until the end of 2023, EUR 94 billion will be allocated, also taking account of the macroeconomic developments in 2020 and 2021. To draw the RRF funds, and following the Commission's country-specific recommendations, Member States have to prepare recovery plans before 30 April 2021, and the Commission will evaluate them by 30 June 2021 at the latest. According to the current plans, the grants would be disbursed before end-2026. The approval of the European Parliament is also required to close the legislative procedure concerning the seven-year fiscal framework.

Hungary may receive funds totalling more than EUR 50 billion at 2018 prices in the next seven-year period. Hungary may be entitled to receive support amounting to some EUR 32.9 billion at 2018 prices from the multiannual financial framework, which comprises the cohesion and agricultural policy funds, grants of a further HUF 7.7 billion from the funds of Next Generation EU as well as preferential loans amounting to EUR 10 billion (Table 5-1). At current prices, the amount of all funds available for Hungary is estimated to exceed EUR 56 billion.

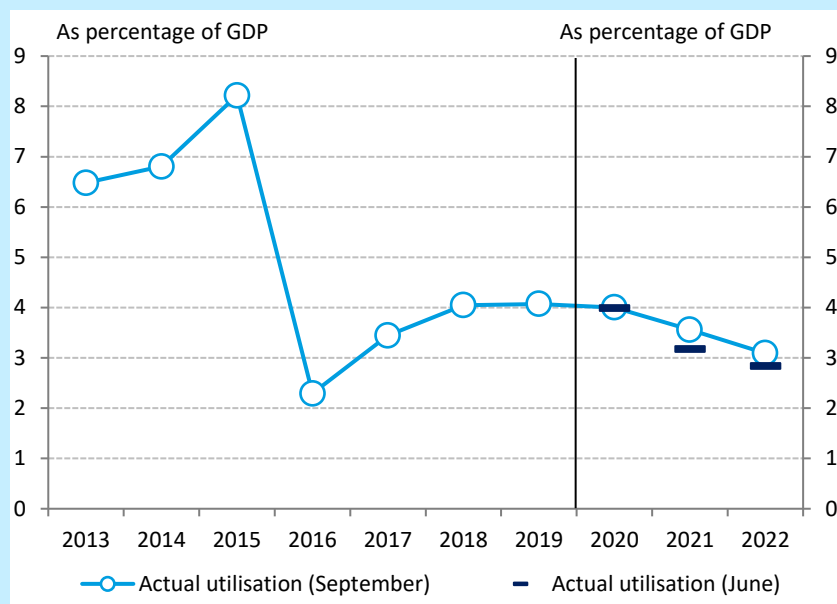
Table 5-3: EU funds available for Hungary at 2018 prices

| <i>billion euro, 2018 prices</i> | | 2014-2020 | 2021-2027 est. |
|----------------------------------|---------------------------|------------------|-----------------------|
| Multiannual Financial Framework | Cohesion grants | 23.6 | 20.0 |
| | Agricultural policy (CAP) | 12.7 | 10.6 |
| | CEF, other funds | 1.4 | 2.3 |
| Next Generation EU | RRF grants | - | 6.3 |
| | REACT-EU | - | 1.0 |
| | Other funds | - | 0.4 |
| | RRF loans | - | 10.0 |
| Total available funds | | 37.7 | 50.6 |

Sources: MNB estimate

According to our projection the actual utilisation of EU funding will begin to decrease slightly after 2020 (Chart 5-11). In 2021 and 2022, the drawing of the funds of Next Generation EU as well may already contribute to the actual absorption of EU funding. Nevertheless, in view of the crisis, the absorption of funds related to the cohesion and recovery programmes as well as the amount of funds in the 2021–2027 programming period are surrounded by greater risks than normal. We estimate that the actual absorption of EU funds in the first eight months may have been above HUF 1000 billion, and we think that it may reach HUF 1900 billion in 2020 as a result of a significant upswing typical of the last quarters.

Chart 5-11: Actual utilisation of EU funds



Sources: MNB, Ministry for Finance

6 Special topic

6.1 Medium-term reflection of disinflationary effects in the underlying developments

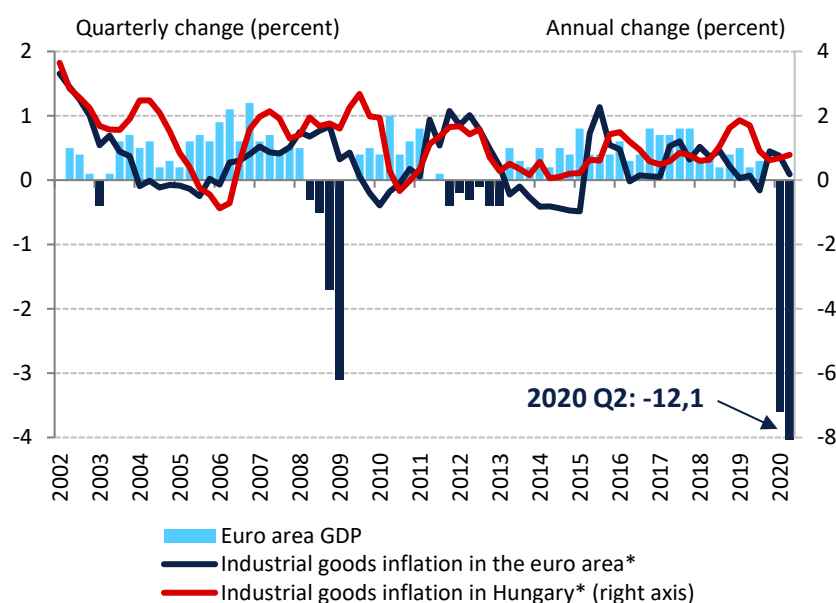
A more detailed analysis of previous crisis experiences may facilitate the examination of the impacts of the coronavirus pandemic on the economy and prices. Accordingly, we examined what impacts the economic downturn during the 2008-2009 crisis had on the changes in inflation. Namely, we expect the impacts of the coronavirus pandemic on inflation to ease over the medium term, and disinflationary effects supported also by the subdued inflation environment will appear in the medium term in line with previous crisis experiences. In our special topic we analyse the developments in the prices of industrial goods and market services in light of previous crisis experiences, which are likely to play a major role in the changes of underlying trends in the medium term.

6.1.1. Impact of the European economic and inflationary environment on the prices of industrial goods in Hungary

Hungary is a small, open economy, and thus global developments may exert a significant impact on the changes in consumer prices. International economic activity may be reflected in persistent domestic inflation developments via import prices and its impact on domestic growth. Considering that Hungary's most important trading partner is the euro area, more specifically Germany, the growth of this country (group of countries) as well as the price dynamics of industrial goods within Germany are key in terms of inflationary processes in Hungary. In the first part of our special topic we update our earlier analysis presented in Box 1-1 of the June 2019 Inflation Report.

The slowdown in euro area economic activity is reflected in the price dynamics of industrial goods in the euro area and Hungary with different degrees of delay. In the period following the turn of the millennium, expansion in the economic performance of the euro area came to a halt on several times (four times in total), or declined, which was reflected in the inflation developments as well (Chart 6-1). Parallel to the euro area deceleration as of 2002 Q2, industrial goods' inflation declined, although in Hungary the related disinflationary effects were concealed by other effects. For the second time, there was a major downturn in the performance of the euro area during the 2008–2009 economic crisis. In the euro area a slowdown in the inflation of industrial goods was observed in the 4th quarter following the recession, while in Hungary, the price index decreased in the 6th quarter following the external recession. The euro area debt crisis restrained the growth dynamics of the group of countries as of mid-2011. The slowdown was reflected in industrial goods' inflation 6 quarters later both in the euro area and Hungary.

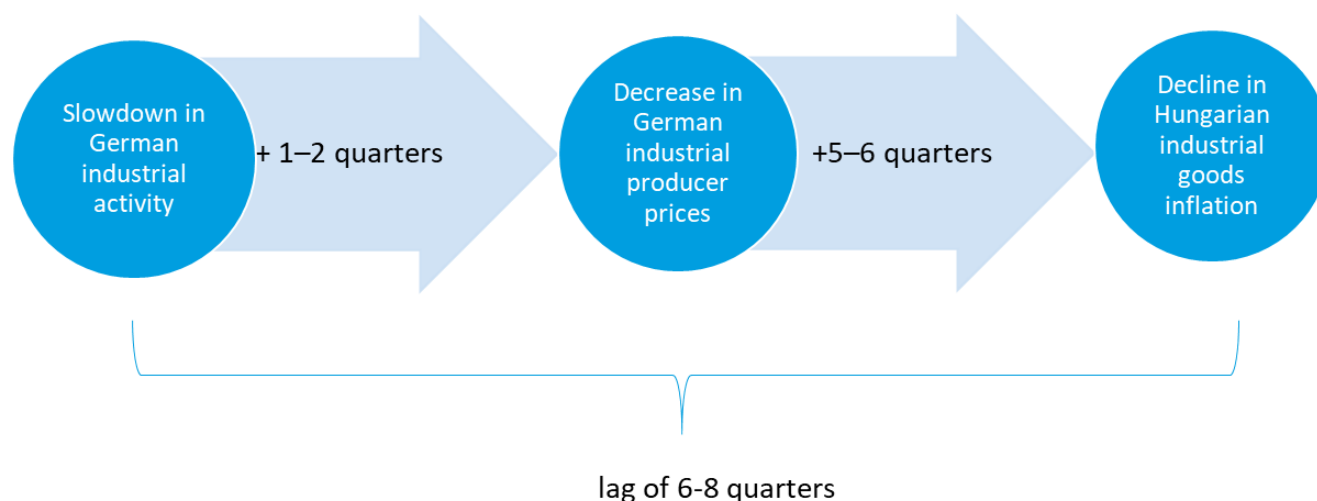
Chart 6-1: Euro area GDP growth and industrial goods inflation in the euro area and Hungary



Note: *Based on data excluding indirect taxes. Calculated using HICP data in the case of the euro area. Sources: Eurostat, HCSO, MNB-calculations

Taking past experiences into account regarding Hungary and the euro area, approximately 6 quarters after the recession caused by the coronavirus, we can expect disinflationary effects stemming from the deterioration of the external economic activity to come through the prices of domestic industrial goods, from the second half of 2021.

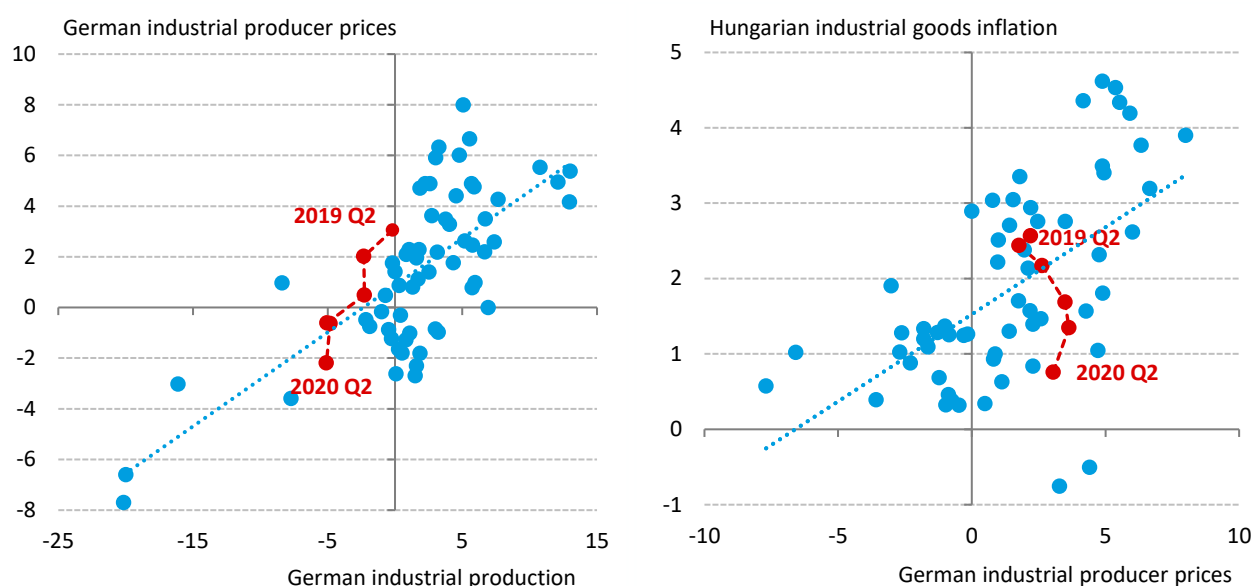
Chart 6-2: Flow chart of the effect of slowdown of German industrial production on Hungarian inflation



Source: MNB

The coronavirus pandemic and the unfavourable economic impacts as a result hit the countries of the world in a period when growth was restrained not only by a general deceleration in global economic activity, but in past quarters also by an increase in trade tensions and challenges posed to the automotive industry (fall in car sales in China and the USA, changing trends in the global automotive industry). As a consequence, developments in the industry of Germany, Hungary's most important trading partner, and their impacts on pricing were also affected by unfavourable developments. The dynamics of German industrial production have been declining since early 2018, and in view of the stricter regulations affecting the automotive industry (Worldwide Harmonized Light-Duty Vehicles Test Procedure as well as potential restrictions on diesel cars) it sank into negative territory as of mid-2018. Following that, in April and May 2020, as a result of declining demand due to the coronavirus pandemic, disrupted supply chains and restrictive measures, German industrial production reached a historical low with a more than 20 percent fall year on year. Our analysis suggests that the slowdown in industrial activity reduces German producer prices with a delay of roughly half a year, and their average pass-through – through import prices – into the inflation of Hungarian industrial goods takes 5–6 quarters (Charts 6-2 and 6-3).

Chart 6-3: Connection between German industrial production and producer prices (left panel) and German producer prices and Hungarian industrial goods inflation (right panel)



Note: Quarterly data. On the left hand side graph German industrial producer prices are presented with a 2-quarters lag and on the right hand side graph Hungarian industrial goods inflation data with a 5-quarters lag.

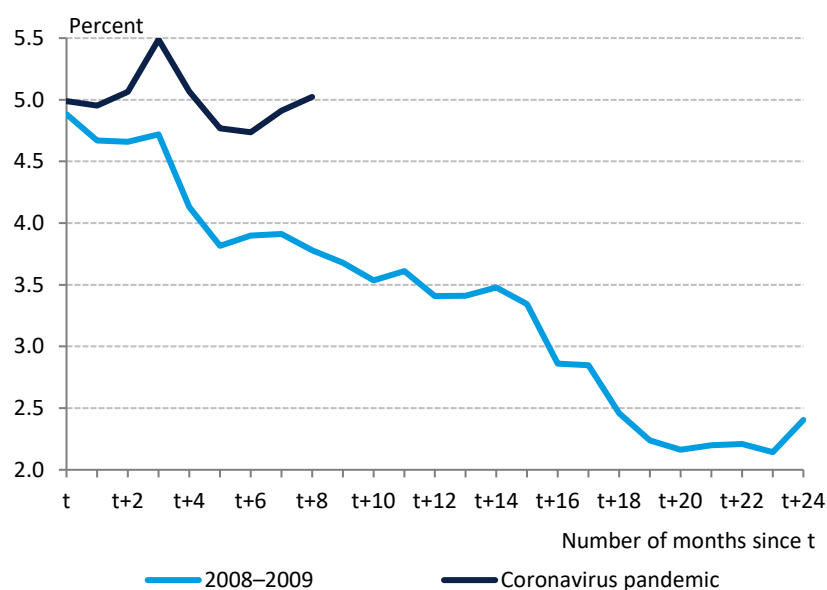
Sources: Eurostat, HCSO, MNB-calculations

6.1.2. Medium-term developments in market services inflation in light of previous crisis experiences

In addition to the developments in the inflation of industrial goods, price changes of market services are of key importance in terms of medium-term domestic underlying developments. In the case of market services, price dynamics are mostly related to domestic economic developments. In the second half of our special topic, market services inflation is analysed in more detail in light of previous crisis experiences.

The inflation of market services has declined in recent months following its peak in March, and was 4.9 percent on average (Chart 6-4). Taking into account the price changes in the last 7 months, due to the short time that has elapsed since the beginning of the year, it is still difficult to compare the current situation with the prolonged pricing effects of the 2008-2009 crisis. During the economic crisis, from a level close to 5.0 percent observed in September 2008, the inflation of services declined to close to 2.0 percent 24 months later, by September 2010, and then to 1.8 percent by early 2011.

Chart 6-4: Market services inflation in times of crisis

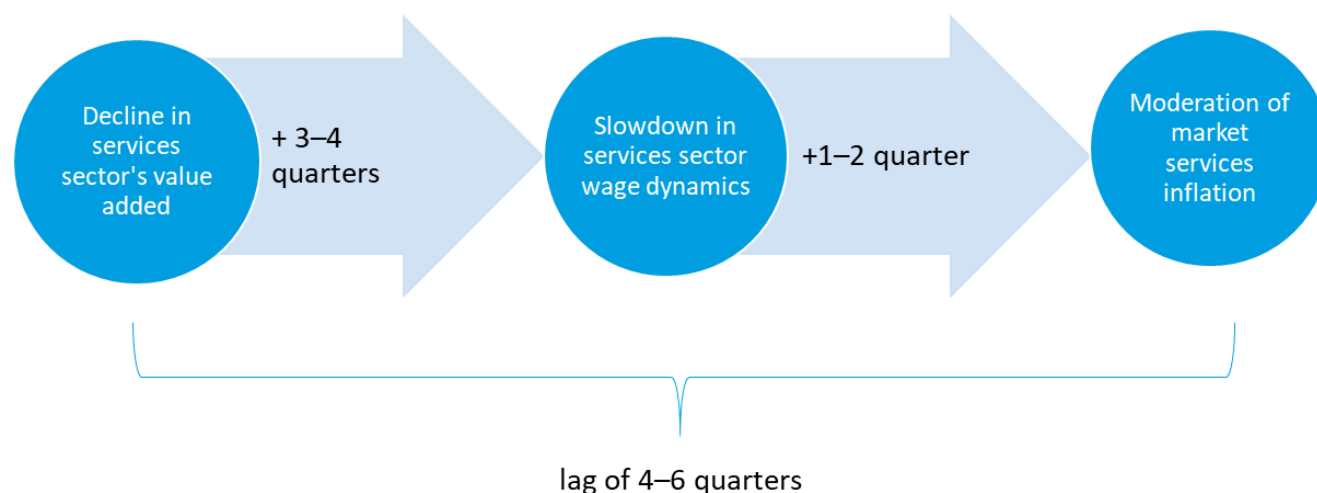


Note: Date t denotes September 2008 and December 2019. Tax-adjusted annual change.

Sources: HCSO, MNB

In the case of market services, domestic economic activity and the labour market situation have a major impact on developments in pricing. However, these impacts appear only with some delay. In a crisis situation, like the one in 2008-2009, economic growth was the first to suffer a downturn, followed by a spill-over to the labour market as companies first made adjustments in wage-setting processes, and finally, by changing their pricing decisions, the impact was reflected in consumer price developments as well. Looking ahead, we expect similar developments in the current pandemic situation. Therefore, we analysed the experiences of the economic crisis that took place more than a decade ago in more detail.

Chart 6-5: Flow chart of the impact of the slowdown in services value added on the prices of domestic services

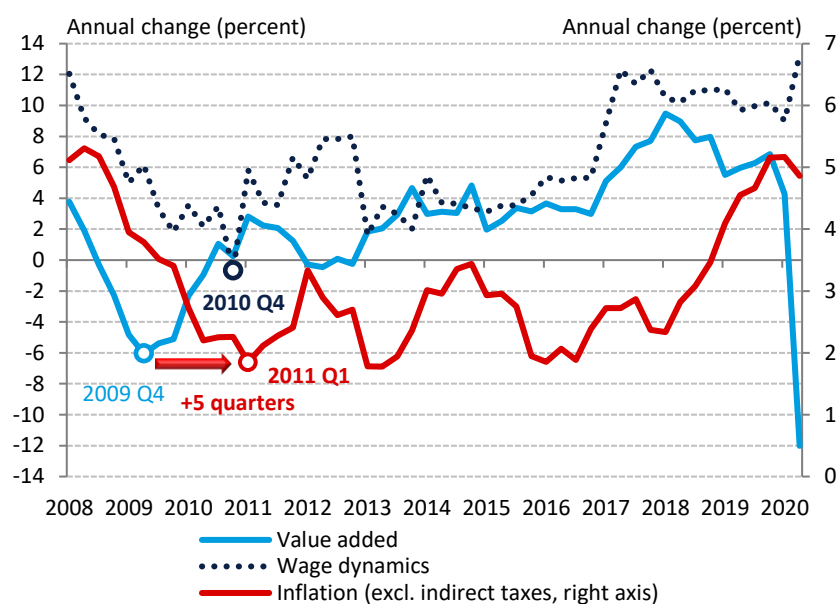


Source: MNB

During the 2008-2009 crisis, within the services sector, there was a significant decline in value added in trade, vehicle repair, accommodation services and catering. The downturn in the services sector bottomed out in 2009 Q4. As far as labour market developments are concerned, the decline in wage dynamics continued until 2010 Q4 in the majority of the services subsectors, corresponding to a delay of 4 quarters compared to the low of value added. In the case of services, the price adjustment took place 5 quarters after the fall in value added and only 1 quarter later compared to the changes in wages (Charts 6-5 and 6-6). To corroborate our findings, we carried out regression estimates and cross-correlation analyses

as well. According to the estimation results, changes in the value added of the services sector exert an impact on wage dynamics only 3–4 quarters later. The corresponding delay in the case of services inflation is 4–6 quarters, whereas prices react to changes in wages with a delay of 1–2 quarters.

Chart 6-6: Relationship between value added, wage dynamics and inflation of market services



Note Value added at constant (2015) prices, excluding product taxes and subsidies.

Sources: HCSO, MNB

On the whole, experiences of the past nearly two decades suggest that the impact of decelerating external economic activity becomes reflected in the prices of domestic industrial goods 5–6 quarters later, on average. In the case of services, domestic economic developments exert their effect through the labour market 4–6 quarters later, on average. Looking ahead and based on all this, external and domestic cyclical effects, potentially resulting in a decline in price dynamics, may prevail from 2021 H2 in the development of domestic underlying processes via the inflation of industrial goods and market services, as the inflationary effects of specific supply/demand frictions due to the coronavirus epidemic fade away with the resumption of normal economic activity.

7 Breakdown of the average consumer price index for 2020 and 2021

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

| | Effect on CPI in 2020 | | | Effect on CPI in 2021 | | |
|--|-----------------------|------------------|------------------|-----------------------|------------------|------------------|
| | Carry-over effect | Incoming effect | Yearly index | Carry-over effect | Incoming effect | Yearly index |
| Administered prices | 0.0 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 |
| Market prices | 1.3 | 1.7 – 1.8 | 3.0 – 3.1 | 0.9 – 1.2 | 1.8 – 1.9 | 2.8 – 3.0 |
| Indirect taxes and government measures | 0.1 | 0.3 | 0.4 | 0.2 | 0.2 | 0.4 |
| CPI | 1.4 | 2.1 – 2.2 | 3.5 – 3.6 | 1.1 – 1.4 | 2.2 – 2.3 | 3.4 – 3.6 |

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 (not 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 points and percent respectively)

| | 2020 | | | | | 2021 | | | | |
|---------------------|---------------------------|--------------------------------|-------------------------|------------------------------|------------------|---------------------------|--------------------------------|-------------------------|------------------------------|------------------|
| | Average carry-over effect | Carry-over indirect tax effect | Average incoming effect | Incoming indirect tax effect | Yearly index | Average carry-over effect | Carry-over indirect tax effect | Average incoming effect | Incoming indirect tax effect | Yearly index |
| Food | 2.3 | 0.0 | 6.2 - 6.3 | 0.0 | 8.5 - 8.6 | 1.3 - 1.5 | 0.0 | 4.2 | 0.0 | 5.5 - 5.7 |
| non-processed | 2.5 | 0.0 | 10.1 - 10.2 | 0.0 | 12.6 - 12.7 | (-0.1) - 0.1 | 0.0 | 5.6 | 0.0 | 5.5 - 5.7 |
| processed | 2.2 | 0.0 | 4.3 | 0.0 | 6.5 | 2.1 - 2.2 | 0.0 | 3.4 - 3.5 | 0.0 | 5.5 - 5.7 |
| Tradable goods | 0.3 | 0.0 | 1.1 - 1.2 | 0.0 | 1.4 - 1.5 | 0.8 - 1.2 | 0.0 | 0.3 - 0.4 | 0.0 | 1.1 - 1.6 |
| durables | -0.1 | 0.0 | 1.0 - 1.1 | 0.0 | 0.9 - 1.0 | (-0.7) - (-0.3) | 0.0 | 0.2 - 0.3 | 0.0 | (-0.5) - 0.0 |
| non-durables | 0.4 | 0.0 | 1.2 - 1.3 | 0.0 | 1.6 - 1.7 | 1.5 - 1.9 | 0.0 | 0.4 - 0.5 | 0.0 | 1.9 - 2.4 |
| Market services | 1.7 | 0.0 | 3.1 | 0.0 | 4.8 | 1.1 - 1.4 | 0.0 | 2.6 - 2.8 | 0.0 | 3.9 - 4.0 |
| Market energy | 2.4 | 0.0 | -0.7 | 0.0 | 1.7 | -0.2 | 0.0 | 0.0 | 0.0 | -0.2 |
| Alcohol and Tobacco | 2.0 | 0.8 | 1.4 - 1.5 | 2.4 | 6.7 | 0.5 - 0.7 | 1.3 | 0.6 - 1.0 | 1.5 | 4.1 - 4.3 |
| Fuel | 1.8 | 0.0 | -8.3 | 1.2 | -5.3 | 2.8 | 1.2 | 3.9 | 0.0 | 7.9 |
| Administered prices | 0.2 | 0.0 | 0.5 | 0.0 | 0.7 | 0.3 | 0.0 | 1.3 | 0.0 | 1.6 |
| Inflation | 1.3 | 0.1 | 1.8 - 1.9 | 0.3 | 3.5 - 3.6 | 0.9 - 1.2 | 0.2 | 2.0 - 2.1 | 0.2 | 3.4 - 3.6 |
| Core inflation | 1.4 | 0.1 | 2.4 - 2.5 | 0.3 | 4.2 - 4.3 | 1.1 - 1.4 | 0.2 | 1.7 - 1.8 | 0.2 | 3.3 - 3.5 |

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 their inflationary effects. The subgroups may not sum to the aggregate figure due to rounding.

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Mátyás Hunyadi

(23 February 1443 – 6 April 1490)

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

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

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

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

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

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