INFLATION REPORT

2020
DECEMBER

'... 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 10 December 2020.

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

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

Following a decline in the second quarter of 2020, the performance of the world's large economies showed a significant correction in the third quarter. However, due to the second wave of the pandemic and the increasingly tighter pandemic restrictions introduced, the economic recovery has been delayed. As a result, there remains an exceptionally high degree of uncertainty surrounding the pace of global economic recovery.

In the third quarter of 2020, the US economy contracted by 2.9 percent. Of the major economies, China is the only one that grew year on year (4.9 percent). The performance of European economies generally exceeded expectations, with a significant correction taking place in many cases compared to the previous quarter. In the third quarter, the performance of the euro area declined by 4.3 percent, while that of Germany, Hungary's largest trading partner, was down by 4.0 percent year on year. An improvement in economic activity was observed in the countries of the CEE region compared to the previous quarter.

According to real-time activity indicators, the reintroduction of the restrictions led to declines in economic activity in several countries. The pace of recovery in the global economy is still extremely uncertain, as it significantly depends on the second wave of the pandemic as well as on government decisions related to the restrictions.

Global inflation declined slightly further in the past months. Inflation rates were below central bank targets in most of the developed economies in the third quarter of 2020, while the consumer price index sank into negative territory in the euro area. Inflation was slightly down in the majority of the countries of the region in the autumn months.

Due to the second wave of coronavirus, the world's leading central banks expect a 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 left the target range for its key policy rate unchanged at close to zero and continued its asset purchases. The balance sheet of the central bank increased further, nearly reaching a level around USD 7,300 billion by early December. At its policy meeting in December, the European Central Bank (ECB) left policy rates unchanged, but further easing measures were announced. The ECB decided to increase the envelope of the Pandemic Emergency Purchase Programme (PEPP) by EUR 500 billion to a total of EUR 1,850 billion and eased the conditions of its TLTRO III programme. In addition, the ECB will also conduct additional longer-term refinancing tenders to provide the banking system with the necessary amount of liquidity. The ECB indicated that it would maintain its loose monetary policy stance until inflation converges to the central bank inflation target in a sustainable/persistent manner. The balance sheet of the ECB rose close to EUR 7,000 billion by the beginning of December.

In our region, the Czech, the Polish and the Romanian central banks held their policy rates unchanged at low levels.

Money and capital market sentiment deteriorated until early November, due to the second wave of the coronavirus pandemic and uncertainty related to the US presidential election. Then it improved as a result of a reduction in uncertainty surrounding the presidential election and favourable news about vaccine development.

In view of the restriction measures, investor sentiment deteriorated in global money markets in the first half of the period, then, from end-October, uncertainty related to the US presidential election increased risk aversion further. International investor sentiment improved with the decline in uncertainty related to the elections and in response to favourable news about the vaccine development and the prior adoption of the European budget and the recovery fund. Nevertheless, risk indicators remain at high levels. During the period under review, money market volatility declined, and the majority of developed and emerging market stock indices were up. In developed markets, German long-term yields decreased, and US ones increased. The price of gold fell.

Pricing decisions are expected to continue to exhibit high volatility in the coming quarters, while in terms of underlying inflation, a prolonged economic recovery is likely to cause disinflationary effects to be persistent. At the same time, the time profile of the pandemic and the expected economic recovery may continue to result in volatile pricing patterns.

Following higher repricing in the summer months, disinflationary effects strengthened from September. More subdued price growth primarily reflected changes in market services, fuel and food prices. Based on incoming data, the inflation rate is likely to be somewhat lower, at 3.4 percent, in 2020 relative to the September projection.

Pricing decisions are expected to continue to exhibit high volatility in the coming quarters. As a result of an increase in excise taxes on tobacco products at the beginning of 2021 and base effects, the consumer price index is expected to stand at around 4 percent temporarily in the spring months of 2021. Tax effects resulting from the new administrative measures are expected to raise inflation by 0.4 percentage point in 2021 and by 0.1 percentage point in 2022. In terms of underlying inflation, a prolonged economic recovery is likely to cause disinflationary effects to be persistent. In addition to the moderate external inflation environment, weak domestic demand also points to a slowdown in price growth. Overall, inflation is likely to be 3.5-3.6 percent in 2021 before returning to around the central bank target in 2022. The time profile of the pandemic and the expected economic recovery may continue to result in volatile pricing patterns; therefore, an exceptionally cautious approach is warranted in assessing more persistent inflationary effects.

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 pandemic was successful. However, due to the second wave of the pandemic, the economic recovery is taking longer than earlier expected.

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. The general government deficit will increase, and the current account balance will deteriorate due to expenditures on health and economic protection measures, but the country's net lending will remain persistently positive. In parallel with the decline in the impacts of the pandemic and with the restoration of sustainable economic growth, public debt will take a declining path again following a temporary rise.

The central bank balance sheet has contracted in recent years, creating sufficient potential to address economic challenges in a sustainable manner. In response to the adverse economic effects arising from the coronavirus pandemic, the MNB expanded significantly the central bank balance sheet, thereby supporting the recovery of economic growth as well. Government securities purchases by the central bank contributed to maintaining the stable liquidity position of the government securities market and strengthened the effectiveness of monetary policy transmission. In addition, with the help of the Funding for Growth Scheme Go!, the MNB provides funds to ensure the continuous operation of SMEs and the implementation of their investment projects.

After reaching a low point in April and May, domestic economic activity underwent a significant correction. In the third quarter of 2020, Hungary's GDP rose by 11.4 percent relative to the previous quarter but fell by 4.6 percent from its level a year earlier.

With the restrictive measures, Hungary's economic activity is likely to weaken again in the fourth quarter of 2020. As a result, overall GDP is expected to decline by 6.0-6.5 percent in 2020. Economic activity may begin to normalise from the second quarter of 2021 as the coronavirus vaccine becomes widely available.

Household consumption will decline again around the end of the year and demand for services will be reduced by the population's self-restraining behaviour, in addition to the restrictive measures. At the same time, the decline in consumption this year was decelerated on the income side by the labour market adjustment, which was smaller compared to that seen during the 2009 global economic crisis, with contributions from the Government's job protection measures, the continued functioning of the credit market as well as the moratorium on instalment payments. The consumption rate, which fell to a low level as a result of increased savings due to precautionary motives, will rise again from the middle of next year as the recovery in consumption begins.

Due to the uncertain global economic environment, companies postpone or do not implement some of their investment projects. From next year, however, investment activity will increase again in the household, corporate and government sectors as well. In addition to a major expansion in corporate loans, making up for a significant portion of postponed corporate investment and the already announced large investment projects will also contribute to the recovery in the investment rate. Public home creation programmes will also support the pick-up in household investment from 2021.

There remains a high degree of uncertainty surrounding developments in external economic activity, and therefore the economic recovery is affected by the pace of the recovery in Hungary's export markets as well. Net exports will be negative this year, in line with subdued external demand. However, from 2021, the contribution of net exports to growth will be positive again as a result of the expected increasingly wide application of the vaccine against the coronavirus as well as the ensuing economic expansion in Hungary's export markets.

The second wave of the pandemic and the expected date of the widely available vaccine result in a major uncertainty around the time profile of the economic recovery. The Hungarian economy is expected to contract by 6.0–6.5 percent this year, before growing by 3.5–6.0 percent in 2021, by 5.0–5.5 percent in 2022 and by 3.0–3.5 percent in 2023.

The moratorium on instalment payments and the subsidised credit schemes support the continuation of earlier trends in lending during the pandemic situation as well.

The corporate loan portfolio of the financial intermediary system increased by HUF 305 billion in the third quarter of 2020, and thus the annual growth rate of corporate loans outstanding decelerated to 7.9 percent in September, declining by 0.5 percentage points. A nearly 11 percent year-on-year increase was observed in the case of the SME segment. The FGS Go! played a major role in supporting corporate lending in the past months: around half of loans granted since April were within the framework of this scheme. Following a slower start of other state loan and guarantee programmes, a significant increase in utilisation was observed from August. The annual growth rate of the corporate loan portfolio will decelerate to 6 percent by early 2022, before gradually returning to a level around 10 percent.

In the third quarter of 2020, household loans outstanding vis-à-vis the entire financial intermediary system expanded by HUF 298 billion, corresponding to an annual increase of 14.2 percent. The market of household loans partly normalised with the easing of the restrictions: lending for house purchase exceeded its level in the third quarter of 2019 by 9 percent, and personal lending was down by 47 percent. In addition to the payment moratorium, contracts for prenatal loans amounting to HUF 152 billion in the third quarter also significantly contributed to dynamic growth in the stock of loans. Looking ahead, prenatal baby support loans may support household lending until the end of the programme. As a result of the expiration of the general moratorium and due to the protracted pandemic situation, household loan dynamics will decelerate to around 10 percent until the second half of 2021 but will rise again to 13 percent by end-2022.

The current account balance will improve gradually from 2021, while the country's net lending position will remain stable as a result of the surplus on the capital account. Consequently, the country's net external debt will decline further in the coming years.

The current account balance has been influenced by opposing trends in 2020. In addition to the decline in external demand due to the pandemic, the fall in tourism revenues in view of the lockdowns also reduces net exports. Moreover, expenditures related to health defence against the pandemic as well as to development projects in the defence sector also point to a deterioration in the trade balance. However, this is partly offset by the decrease in import demand due to lower domestic absorption as well as by an improvement in the terms of trade. As a result of the fall in external and domestic demand, the decline in foreign-owned companies' profits reduces the income account deficit and improves the current account balance. Over the forecast horizon, the current account surplus widens and the country's net lending position is maintained, due to the improvement in external demand and the recovery in economic growth, with contribution by the surplus on the transfer balance as well. As a result, external debt ratios will continue to decline in the coming years.

In 2020, the government deficit is likely to rise to 8-9 percent of GDP, due to the costs of protection against the coronavirus pandemic, the measures taken under the Economy Protection Action Plan and declining tax revenue resulting from the slowdown in economic growth. However, the government deficit in 2020 is likely to be around the international average. From 2021 the government deficit is likely to decrease. After falling steadily since 2011, the government debt-to-GDP ratio is expected to rise temporarily in 2020; however, it is likely to shift to a downward path from 2021 as the economy recovers and the deficit declines.

Long-term yields have declined since September.

On the whole, the middle section and the long end of the government securities yield curve shifted downwards to lesser and greater degrees, respectively. Government securities purchases by the central bank contributed significantly to the decline in long-term yields. Of the currencies of the region, the forint was moving practically together with the Polish zloty and, overall, appreciated against the euro.

The macroeconomic outlook continues to be surrounded by both upside and downside risks.

The Monetary Council highlighted two alternative scenarios around the baseline projection in the December Inflation Report. The alternative scenario presuming a global protraction of the coronavirus pandemic and the economic recovery points to a domestic inflation path that is slightly lower than the baseline scenario and to a much more subdued growth path. 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 the highlighted scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume a strong domestic labour market adjustment, the implementation of competitiveness reforms and a permanent rise in food prices.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2019	2020	2021	2022	2023
	Actual	Projection			
Inflation (annual average)[1]					
Core inflation	3.8	4.2	3.8 - 4.0	2.9 - 3.0	3.0
Core inflation excluding indirect tax effects	3.4	3.7	2.8 - 3.0	2.7 - 2.8	3.0
Inflation	3.4	3.4	3.5 - 3.6	2.9 - 3.0	3.0
Economic growth					
Household consumption expenditure	4.6	(-4.1) - (-3.7)	2.4 - 4.9	4.6 - 5.0	3.0 - 3.3
Government final consumption expenditure[6]	3.5	0.9 - 1.2	1.0 - 1.7	2.1 - 2.2	1.3 - 1.8
Gross fixed capital formation	12.2	(-13.7) - (-11.8)	6.4 - 8.8	6.8 - 8.6	3.0 - 3.5
Domestic absorption	6.0	(-4.6) - (-4.0)	2.9 - 5.1	4.7 - 5.1	2.7 - 2.9
Exports	5.8	(-9.7) - (-9.3)	6.1 - 8.8	6.6 - 7.7	4.0 - 4.9
Imports	7.5	(-7.5) - (-7.0)	5.3 - 7.9	6.2 - 7.1	3.7 - 4.3
GDP	4.6	(-6.5) - (-6.0)	3.5 - 6.0	5.0 - 5.5	3.0 - 3.5
Labour productivity[5]	3.3	(-3.2) - (-3.0)	4.2 - 5.8	3.3 - 4.5	2.4 - 3.2
External balance[2]					
Current account balance	-0.2	(-0.7) - (-0.6)	(-0.4) - (-0.2)	(-0.3) - (-0.1)	(-0.2) - 0.1
Net lending	1.5	1.7 - 1.8	2.0 - 2.1	1.8 - 1.9	2.3 - 2.6
Government balance					
ESA balance	-2.1	(-9.0) - (-8.0)	(-6.5) - (-6.0)	(-4.0) - (-3.0)	(-3.5) - (-2.5)
Labour market					
Whole-economy gross average earnings[3]	11.4	9.4 - 9.6	6.6 - 7.3	6.9 - 7.4	6.6 - 7.2
Whole-economy employment	1.0	(-1.5) - (-1.3)	(-1.1) - (-0.2)	0.9 - 1.5	0.4 - 0.7
Private sector gross average earnings[3]	11.6	8.9 - 9.2	5.6 - 6.5	6.2 - 6.9	7.0 - 7.8
Private sector employment	1.4	(-1.3) - (-1.0)	(-1.3) - (-0.2)	1.2 - 2.0	0.4 - 0.7
Unemployment rate	3.4	4.3 - 4.5	4.6 - 5.4	3.9 - 4.3	3.5 - 3.6
Private sector nominal unit labour costs	6.7	10.9 - 11.0	-1.0 - (-0.3)	0.6 - 1.4	3.2 - 3.4
Household real income[4]	4.2	(-2.7) - (-2.2)	3.2 - 5.0	3.9 - 4.3	3.0 - 3.3

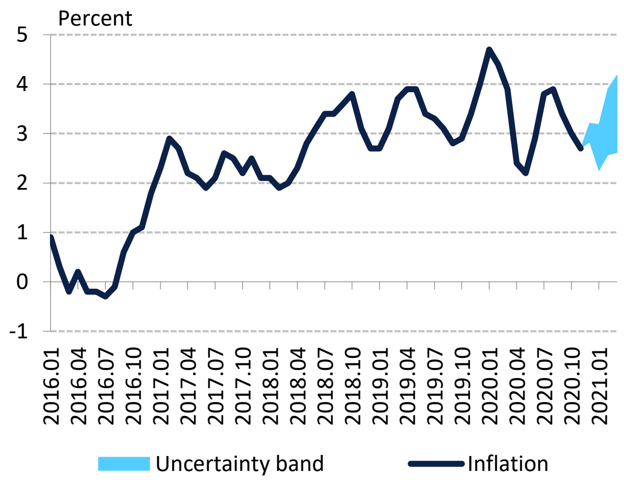
[1] Based on seasonally unadjusted data.
[2] GDP-proportionate values, partly based on forecast.
[3] For full-time employees.
[4] MNB estimate.
[5] Whole economy, based on national accounts data.
[6] Includes government consumption and the transfers from government and non-profit institutions.

1 Inflation and real economy outlook

1.1 Inflation forecast

Pricing decisions have shown higher volatility and an unusual seasonal pattern following the coronavirus outbreak. This volatility will continue in the coming quarters. Due to the increase in excise duty on tobacco products at the start of the year and base effects, the consumer price index is expected to be temporarily around 4 percent in the spring months of 2021. The tax effects of the new measures will lift inflation by an additional 0.4 percentage point in 2021 and by 0.1 percentage point in 2022. In the case of underlying inflationary processes, the protracted economic recovery will cause disinflationary effects to persist. In addition to the moderate external inflation environment, weak domestic demand is also leading to a slowdown in price growth. In line with this, core inflation excluding indirect taxes will be below 3 percent for a significant part of the forecast horizon. As a unique effect, the temporarily soaring inflation of tobacco products – due to the increase in excise duty and market price increases – will significantly increase both inflation and core inflation in 2021. Inflation will be 3.4 percent this year, in the range of 3.5 to 3.6 percent in 2021, and be around the central bank target again from 2022. According to our forecast, core inflation excluding indirect taxes will amount to 3.7 percent in 2020, 2.8-3.0 percent in 2021, 2.7–2.8 percent in 2022 and 3.0 percent in 2023. The course of the epidemic situation over time and the expected recovery of the economy may continue to result in volatile pricing patterns, and thus greater caution than usual is warranted in assessing more lasting inflationary effects.

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

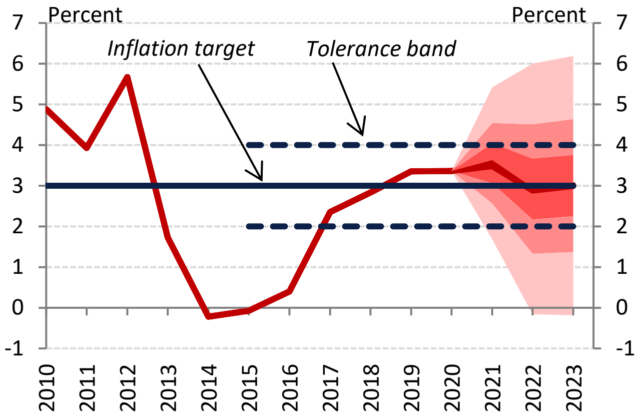


Note: Annual change. The uncertainty band shows the forecast range with regard to the root mean squared error of previous years' near-term forecasts.
Source: HCSO, MNB

The growth rate of consumer prices fell short of our September expectation, and inflation fell to 2.7 percent year on year by November. Pricing decisions have shown higher volatility and an unusual seasonal pattern following the coronavirus outbreak, but strengthening disinflationary effects were observed in autumn. Looking ahead, the second wave of the pandemic may once again amplify the measuring biases in inflation (for more details, see Special topic 6.2 in the June 2020 Inflation Report), and may also exert an effect on repricing at the beginning of the year and on its seasonality. Based on historical experiences, in the case of market services repricing by companies typically appears in consumer prices at the beginning of the year, but the impacts of the pandemic may elevate uncertainty in relation to repricing early in the year. Inflation developments will remain highly volatile in the coming quarters.

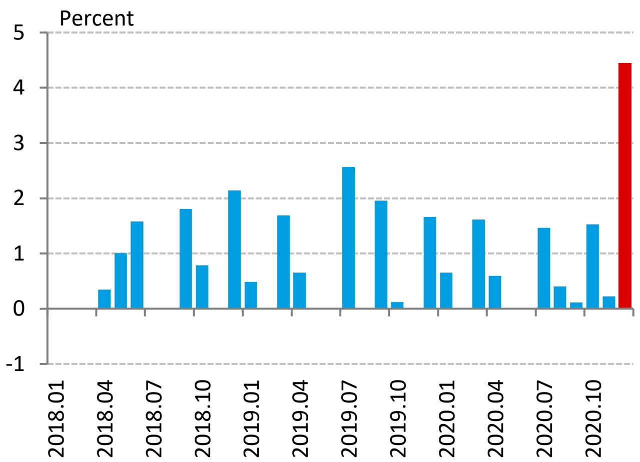
According to our forecast, in the coming months inflation will be around the central bank's 3 percent target, consistent with price stability (Chart 1-1). Thereafter, due to the increase in excise duty on tobacco products at the start of the year and base effects, the consumer price index is expected to temporarily hover around 4 percent in the second quarter of 2021. In the short run, the course of the epidemic situation over time and the expected recovery of the economy may continue to result in volatile pricing patterns. In terms of underlying inflation, a protracted economic recovery could lead to lasting disinflationary effects. In the medium term, the disinflationary effects of moderate domestic demand and external economic activity may be the decisive factors in

Chart 1-2: Fan chart of the inflation forecast



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

Chart 1-3: Monthly change in retail sales prices of tobacco products published by NTCA



Source: NTCA, MNB calculation

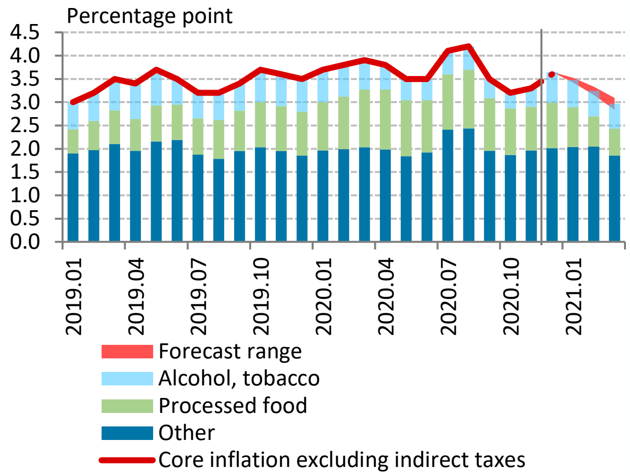
terms of changes in prices. In line with this, core inflation excluding indirect taxes will be below 3 percent for a significant part of the forecast horizon. Inflation will be 3.4 percent this year, in the range of 3.5 to 3.6 percent in 2021, and around the central bank target again from 2022 (Chart 1-2). According to our forecast, core inflation excluding indirect taxes will amount to 3.7 percent in 2020, 2.8–3.0 percent in 2021, 2.7–2.8 percent in 2022 and 3.0 percent in 2023.

The external inflationary environment continues to have a mitigating effect on the rate of domestic price increases. Disinflationary effects are supported by the subdued external inflation environment as well, since in the medium term, in view of the negative economic developments due to the coronavirus, based on its current forecast the ECB is projecting euro area price dynamics to fall significantly short of its inflation target over the entire forecast horizon. It carried out a downwards revision of its expectations for euro area inflation and core inflation, the latter of which has a more significant impact on domestic price dynamics. Nevertheless, the underlying euro area indicator will only exceed 1.0 percent in 2023.

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 lead to lower pricing behaviour in relation to market services. Looking ahead, 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 underlying inflation developments as well. In the case of services, domestic economic developments exert their effect through the labour market 4–6 quarters later on average (for more details, see 6.1 Special topic in the September 2020 Inflation Report). In addition, the second wave of the pandemic, which is more intensive than expected, may prompt people to behave more cautiously and restrict their activities more. As a result, weaker domestic demand for certain services may restrain the significant price increases of services observed in the past period.

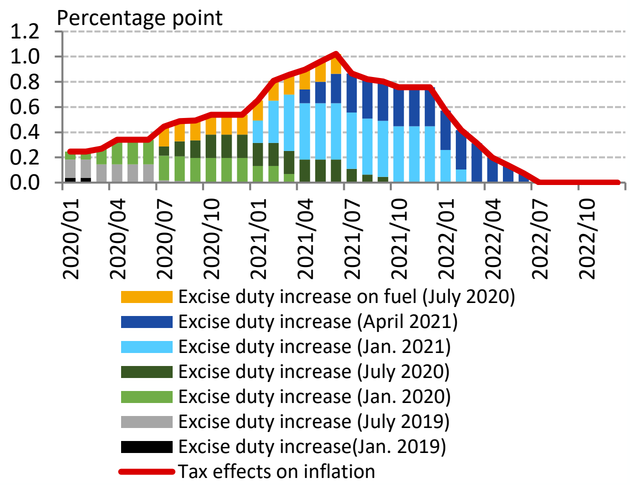
As a unique effect, the temporarily soaring inflation of tobacco products – due to the increase in excise duty and market price increases – will significantly increase both inflation and core inflation in 2021. Based on the retail sales prices of tobacco products published by the National Tax and Customs Administration of Hungary (NTCA), a more significant increase in market prices can be forecast in December than in previous years (Chart 1-3). The

Chart 1-4: Decomposition of our short term forecast for core inflation excluding indirect taxes



Note: The decomposition is based on the middle of the forecast range. Source: HCSO, MNB forecast

Chart 1-5: Changes in the tax content of inflation as a result of excise duty increases



Note: The excise duty other than fuel is linked to tobacco products.
Source: Act LXVIII of 2016 on Excise Duties, MNB

majority of the resulting inflationary effects may occur in 2021, due to the carry-over effect (Chart 1-4). Filtering out this effect, a more moderate development of the underlying processes can be forecast in the coming quarters. **Excluding the alcohol and tobacco product group, both core inflation and core inflation excluding indirect taxes would increase by 2.6–2.8 percent in 2021.**

Changes in indirect taxes point to an increase in inflation over the forecast horizon (Chart 1-5). One of the underlying reasons is that – in line with the harmonisation with EU legislation – a three-stage series of excise tax hikes for tobacco products started in January 2020, followed by another increase this year. The second stage of increases began in July 2020, and the final phase of would have taken place in January 2021. However, according to next year's tax package adopted by the Government, raising the excise duty on tobacco products will be expanded and at the same time terminated with a further step in April 2021, with which Hungary will meet the relevant EU requirements. Moreover, compared to previous information, the January 2021 tax rates will also be higher. The tax effects of the new measures will lift inflation another 0.4 percentage point in 2021 and 0.1 percentage point in 2022. Overall, changes in indirect taxes will raise inflation by 0.4 percentage point in 2020, by 0.8 percentage point in 2021 and by 0.1 percentage point in 2022, while having a neutral effect on inflation in 2023.

Prices of non-core inflation items are expected to rise to a lesser degree compared to the September forecast. As in the September 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. This is attributable to the combined effect of several factors. On the one hand, as a result of unfavourable weather conditions (more frosty nights in the spring than the average in previous years and more rain than needed in the summer), fresh vegetables and fruits suffered serious losses. The lower global swine population due to African swine fever caused a significant rise in domestic pork prices in the first months of the year. On the other, border closures due to the coronavirus outbreak made several countries lose seasonal workers employed in agriculture in recent months, and this made harvesting produce very difficult. In the case of fuels, in line with the changes in futures prices, prices are projected to drop this year, while in 2021 the increase in prices is expected to be lower than our September forecast as a joint result of base effects and corrections in futures prices.

Table 1-1: Details of the inflation forecast

		2020	2021	2022	2023
Core inflation excluding indirect tax effects		3.7	2.8 - 3.0	2.7 - 2.8	3.0
Core inflation		4.2	3.8 - 4.0	2.9 - 3.0	3.0
Non-core inflation	Unprocessed food	11.8	4.7	4.2	4.2
	Fuel and market energy	-4.7	4.1	3.2	3.6
	Regulated prices	0.4	1.1	2.0	2.1
	Total	1.5	2.7	2.8	3.0
Inflation		**3.4**	**3.5 - 3.6**	**2.9 - 3.0**	**3.0**

Note: Based on seasonally unadjusted data.
Source: MNB

Regulated energy prices will not change until the end of the forecast horizon, whereas the price dynamics of non-energy regulated prices are expected to be more subdued than in our September forecast. Free parking introduced in view of the second wave of the pandemic, the cancellation of sports events and the temporary closure of museums result in lower price dynamics of regulated-price products this year. In addition, compared to our previous projection, we expect lower regulated-price dynamics in 2021 as well in view of the carry-over effect stemming from the extending of the granting of free schoolbooks to all classes. On the whole, after the cost effects have faded out, the price dynamics of non-core inflation items will be at 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		2023	Change		
	Previous	Current	Previous	Current	Previous	Current	Current	2020	2021	2022
EUR/USD	1.14	1.14	1.19	1.21	1.19	1.21	1.21	-0.2%	1.1%	1.1%
Oil (USD/barrel)	42.2	42.2	46.4	48.0	47.4	47.8	47.8	-0.1%	3.5%	0.8%
Oil (EUR/barrel)	36.9	36.9	38.9	39.8	39.7	39.6	39.6	0.1%	2.4%	-0.2%
Euro area inflation* (%)	0.3	0.2	0.7 - 1.0 - 1.2	0.7 - 1.0 - 1.1	0.7 - 1.3 - 1.8	0.6 - 1.1 - 1.3	0.8 - 1.4 - 1.5	-0.1 pp.	(-0.1) - 0.0 pp.	(-0.5) - (-0.2) - (-0.1) pp.
Euro area core inflation (%)	0.8	0.7	0.9	0.8	1.1	1.0	1.2	-0.1 pp.	-0.1 pp.	-0.1 pp.
Euro area real GDP* (%)	(-10.0) - (-8.0) - (-7.2)	(-7.6) - (-7.3) - (-7.2)	0.5 - 5.0 - 8.9	0.4 - 3.9 - 6.0	3.2 - 3.4 - 3.5	3.0 - 4.2 - 4.3	2.1 - 2.9	0.0 - 0.7 - 2.4 pp.	(-2.9) - (-1.1) - (-0.1) pp.	(-0.2) - 0.8 pp.
GDP growth of Hungary's main export partners** (%)	(-8.6) - (-7.1)	(-6.5) - (-6.0)	3.7 - 6.4	2.8 - 5.7	3.1 - 4.3	3.7 - 4.8	1.3 - 1.6	(1.1) - (2.1) pp.	(-0.7) - (-0.9) pp.	0.5 - 0.6 pp.

Note: Annual average in the case of oil prices. *ECB's December forecast band. **Growth rate of Hungary's 21 most important export partners weighted by share in exports. Sources: Bloomberg, Consensus Economics, MNB, ECB

Global economic developments continue to be primarily affected by the coronavirus pandemic and the political, economic and social reactions to it. Following the worst months (March, April and May), a slow but steady recovery began as the economies of Hungary's main trading partners were restarted. The United States, the world's largest economy, improved strongly compared to Q2, contracting by 2.9 percent in Q3 year on year. The performance of European economies typically exceeded expectations in Q3. The euro area fell 4.3 percent short of the level recorded in the same period of the previous year, while Germany's economic performance shrank by 4.0 percent in Q3. Expectations concerning the future performance of Hungary's trading partners are uncertain and depend strongly on developments in the second wave of the pandemic as well as on further government decisions regarding restrictions. According to the November analysis by Consensus Economics, which comprises the opinions of the majority of economic analysts, the repeated lockdowns add to the chance of a recurring economic downturn in Western Europe. At the same time, mass vaccination significantly influences next year's recovery. 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, in line with the September forecast, the forecast for real GDP growth in the euro area lies in a wide range. The ECB expects contraction between 7.6 and 7.2 percent in 2020, followed by growth of 0.4–6.0 percent in 2021, 3.0–4.3 percent in 2022 and 2.1–2.9 percent for 2023. According to the latest projection, euro area inflation in 2020 will be 0.2 percent, down slightly compared to the previous forecast. Compared to the September forecast, the projection for 2021 remained practically unchanged, whereas it decreased for 2022. In 2023, euro area inflation will continue to fall short of the inflation target of the European Central Bank.

The world market price of Brent crude fell to USD 37 per barrel by end-October, before rising to 50 dollars by December. The price of Brent crude dropped to a five-month low of USD 37 per barrel at end-October, as a result of multiple factors. Libya increased its production, and in parallel with the strengthening of the second wave of the coronavirus, more and more countries across Europe announced lockdowns and the tightening of restrictions on travelling. Following that, the world market price of Brent crude rose to USD 40 per barrel as a result of the news regarding the US presidential elections and the potential outcome of the OPEC+ meeting. At end-November, the world market price of Brent crude rose to an eight-month high of nearly USD 47 per barrel, as US oil reserve data showed an unexpected decline. Following 5 days of debate, at the OPEC+ meeting held on 3 December the participants came to an agreement concerning a gradual easing of output restrictions. Pursuant to the agreement, from January 2021 the OPEC+ will raise the quantity taken to the market by one half million barrels a day. In addition, they will agree upon the next month's quota every month. As a result of the agreement, the world market price of Brent crude increased. Looking ahead, the oil market may remain volatile in view of the tensions within the OPEC as well as the asymmetry of demand for oil. The latter stems from the different recovery paths of the Asian, European and US economies.

EUR-denominated oil prices, **which determine changes in fuel prices in Hungary, were lower than our assumption in September**. Our assumption for the EUR/USD cross rate is lower compared to the September projection.

The course of the Covid-19 pandemic may have a significant effect on Hungary's public budget. The fiscal deficit may rise to 8–9 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 planned (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 amount to 9.8 percent of GDP. The government may cover a significant share of these measures with reallocations, the use of reserves, increases in taxes (retail tax, contributions by financial organisations) and reallocation of EU funds. Thus, according to our calculations, the net balance effect of the measures announced to date may correspond to roughly 5.7 percent of GDP. 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 decline to some extent in 2021, and according to our forecast it may be around 6-6.5 percent. The budget deficit increase above the previous expectations is attributable to the government measures taken. The National Assembly adopted a proposal regarding a significant wage rise in multiple steps for doctors, according to which by 2023 the base salary of doctors will be 2–3 times higher than it currently is. The gross fiscal impact of the wage rises may correspond to 0.5 percent of GDP in 2021. In addition, in several steps the Government announced a Home Creation Programme, within which – inter alia – the VAT on newly built homes will be reduced to 5 percent, and in the case of newly built properties purchased using the Home Purchase Subsidy Scheme for Families it will be possible to apply for a refund of the 5- percent VAT on residential properties. Additionally, new or pre-owned homes purchased using the Home Purchase Subsidy Scheme for Families will be exempt from duty, and a home renovation programme will be launched, within the framework of which the state will assume half of the home renovation costs (up to HUF 3 million) of families raising at least one child. The fiscal impact of the home creation supporting measures may correspond to 0.3–0.4 percent of GDP in 2021. At the same time, the impact of the measures on the fiscal balance are partly offset by the rise in tax revenues as a result of the recovery of the economy.

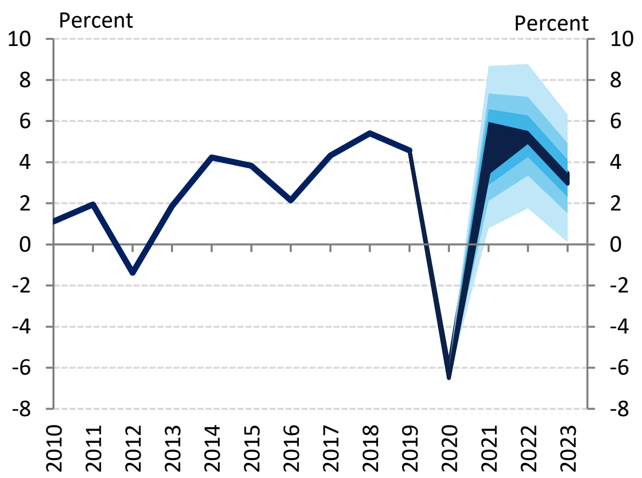
The excise duty on tobacco products rose on 1 January and 1 July this year again, in order to comply with EU legislation; this will be followed by further steps in January and April 2021. Pursuant to the provision regarding the minimum excise duty of Council Directive 2011/64/EU on the structure and rates of excise duty applied to manufactured tobacco, the excise duty shall not be less than EUR 90 per 1,000 cigarettes, reaching 60 percent of the weighted average retail selling price, or should be at least EUR 115 per 1,000 cigarettes, irrespective of its ratio to the price. According to the changes adopted as part of the autumn tax package, as of January the tax increase will be larger than previously envisaged. Instead of HUF 22,800, the excise duty will increase to HUF 24,000 per one thousand cigarettes from January and to HUF 26,000 in April. At the same time, the duty concerning the minimum price will first grow to HUF 37,300 and then to HUF 39,300 from 1 April, compared to the current levy of HUF 34,500. The roughly 20 percent tax increase may improve the fiscal balance by HUF 35–40 billion next year.

1.2 Real economy forecast

Following the low point seen in Q2, a correction of 11.4 percent took place in Hungarian GDP in 2020 Q3, but value added was still 4.6 percent lower than in the same period of the previous year. Recovery from the crisis started and then stalled during the summer; due to the arrival of the second wave of the coronavirus pandemic and the restrictive measures that were introduced, economic activity is expected to decline again at the end of the year. The decrease in services' value added may be the main contributor to the downturn, while the performance of industry will be more favourable than in the period of the spring lockdown. The domestic economy may contract by 6.0–6.5 percent in 2020. The second wave of the pandemic, maintaining of restrictive measures and the expected date of the wide availability of a vaccine result in major uncertainty about next year's economic performance as well. The Hungarian economy may expand between 3.5-6.0 percent in 2021, 5.0–5.5 percent in 2022 and 3.0–3.5 percent in 2023. Hungary's growth surplus compared to the euro area will average around 1.5 percentage points over the entire forecast horizon.

In 2020, the measures related to the pandemic and the population's self-restraint and caution is leading to a high level of household savings. The recovery of consumption may start from the middle of next year, and in response to this, the consumption rate – which has fallen to a low level – will increase again. Following this year's downturn, positive annual consumption dynamics are expected starting from the second half of next year, provided that households' cautiousness fades as restrictions are eased, and some deferred consumption may also materialize. The economic decline induced by Covid-19 primarily undermined the profitability of companies, while the labour market adjustment has remained mild so far. The lower level of corporate profits and the uncertain global economic environment result in a significant drop in investments this year. Increasing uncertainty, however, may have resulted in more intensive stockpiling which might have dampened the economic decline. Both public development projects and households' (housing) investment decline this year. Starting from next year, whole-economy investment activity is expected to rise again over the forecast horizon in line with the rebound in private investment and a renewed upturn in public investment. Most of the postponed corporate projects may materialise in the coming years, with contributions from a major expansion in corporate lending and the already announced large investment projects. The pickup in household investment activity will be supported by the Government's home creation programmes starting from next year. Following declines in 2020 Q2, the performance of most of Hungary's export markets corrected considerably in Q3. With the arrival of the second wave of the pandemic and the introduction of increasingly strict containment measures, external market recovery is projected to be slower than previously expected, and thus the uncertainty about the pace of revival in the global economy remains extremely high. In parallel with the long, protracted recovery in international tourism, Hungary's services exports may recover much more slowly than its goods exports. On the whole, the unfavourable performance of Hungary's external markets and the weakening of domestic demand in Hungary result in temporarily negative net exports and a decline in Hungary's market share in 2020. Nevertheless, from 2021 foreign direct investments will start operations, and thus we expect Hungary's market share to increase, and the contribution of net exports to growth to be positive again from 2021.

Chart 1-6: Fan chart of the GDP forecast

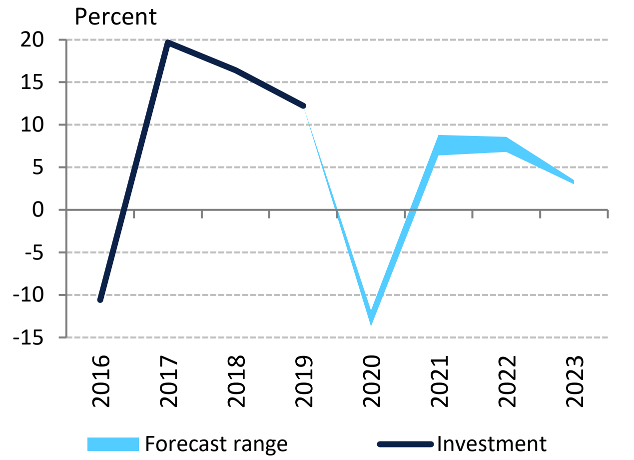


Note: Based on seasonally unadjusted data.
Source: HCSO, MNB

Hungary's GDP corrected by 11.4 percent in 2020 Q3, following the low point seen in Q2. In line with the easing of restrictive measures, the recovery from the economic crisis caused by the coronavirus pandemic started, but the performance of the Hungarian economy in Q3 was still 4.6 percent below last year's level.

Developments in economic activity are affected by various factors, which continue to result in exceptional uncertainty over the forecast horizon. Depending on the extent and persistence of the pandemic, it may be necessary to maintain and further tighten restrictive measures in Hungary and in our export markets, which will have a negative affect on next year's economic performance. Nevertheless, government programmes can effectively dampen the decline and support the sectors most exposed to the pandemic and restrictive measures.

Chart 1-7: Annual change in investments



Source: HCSO, MNB

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

	2019	2020	2021	2022	2023
	Actual	Projection			
Gross fixed capital formation	12.2	(-13.7) - (-11.8)	6.4 - 8.8	6.8 - 8.6	3.0 - 3.5
Corporate investments	15.9	(-15.1) - (-13.4)	5.1 - 7.7	10.3 - 13.2	5.9 - 6.5
Investment rate	27.2	25.5 - 25.9	26.4 - 26.8	27.0 - 27.7	27.0 - 27.8

Note: Year on year growth for gross fixed capital formation and corporate investments and investment rate as proportion of GDP.
Source: HCSO, MNB

Moreover, developments in economic activity are strongly affected by labour market processes as well. At the bottom of the forecast range, we expect the scaling back of the pandemic and in line with that an easing of the restrictive measures and self restraint later in 2021.

According to our high-frequency data, recovery in the domestic economy came to a halt in the middle of Q3, and economic activity declines again in Q4 as a result of the second wave of the pandemic and the containment measures. Therefore, according to our forecast, Hungarian GDP may contract by 6.0–6.5 percent this year. The developments in the second wave of the pandemic, the maintaining of restrictive measures as well as the expected date of the wide availability of a vaccine result in major uncertainty about next year's economic performance as well. Through the negative carry-over effects, the major downturn in Q4 will reduce next year's GDP as well. Accordingly, looking ahead, the projected recovery will be slower than previously expected. In our baseline scenario, we expect the vaccine to become widely available in the spring of 2021 and in 2021 H2, resulting in the fading away of the pandemic and thus restrictions and social distancing also easing. The Hungarian economy may expand by 3.5-6.0 percent in 2021. Growth is expected to be between 5.0-5.5 percent in 2022 and between 3.0–3.5 percent in 2023 (Chart 1-6).

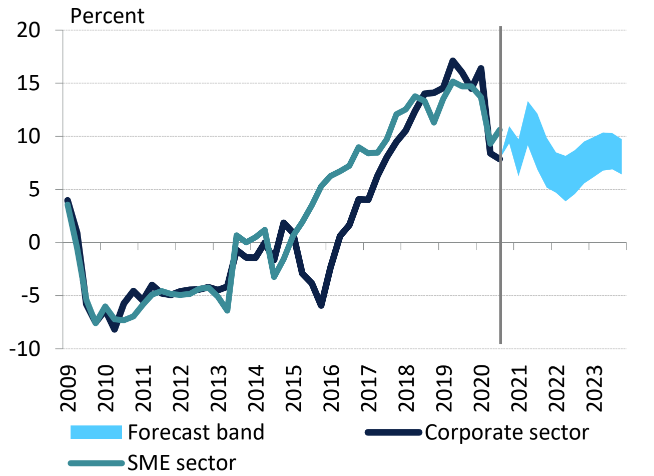
Hungary's economic convergence to the euro area will continue, despite the unfavourable conditions. In contrast to earlier crisis periods, Hungary's growth surplus compared to the euro area will remain in place. The Hungarian economy's growth surplus compared to the euro area will be average around 1.5 percentage points over the entire horizon.

Whole-economy investment is expected to decline considerably this year (Chart 1-7). Both the public and private sectors will contribute to the decline. Starting from next year, whole-economy investment activity is projected to increase again over the forecast horizon, in line with the rebound in private investment and a renewed upturn in public investment.

Similar to the situation in the private sector, investment in the public sector declines this year. Most of this year's key public investment projects were paid off, but actual investment activity may take place next year in some cases. Government developments will contribute to economic recovery in 2021, but then decline again from 2022.

The lower level of corporate profits and the uncertain global economic environment result in a significant

Chart 1-8: 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.

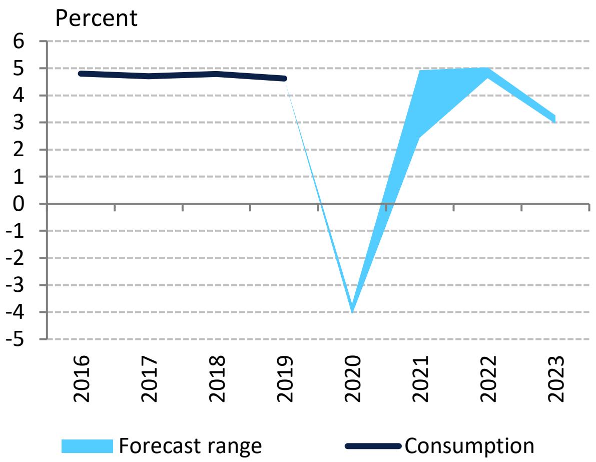
Source: MNB

decline in investments this year. The economic decline induced by the coronavirus primarily undermined the profitability of companies, while the labour market adjustment has remained mild so far. Companies adapted to this by curbing their investments significantly: some projects will materialise at a later time, while others have been cancelled. In Q4, the decline in corporate profits is expected to be similar to the large drop seen in Q2, which once again hinders investment activity. Firms are revising their previous investment plans, while 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 from next year (Table 1-3). The advantage of the Central and Eastern European economies, including Hungary, in terms of the cost level of production remains significant, and thus Hungary continues to be an attractive target for foreign investors, which is also corroborated by the new investment projects announced in recent months (for more details, see Box 3-2).

The recovery of corporate investment is supported by the upturn in corporate lending. Compared to our earlier expectations, the growth rate of the corporate loan portfolio may be more favourable this year, whereas in 2021 H1 the targeted extension of the moratorium and expansions in public and central bank credit programmes may contribute to sustaining the buoyant corporate loan dynamics (Chart 1-8). The upswing in corporate lending and investment is supported by state loan and guarantee programmes as well as by FGS Go! and the Bond Funding for Growth Scheme.

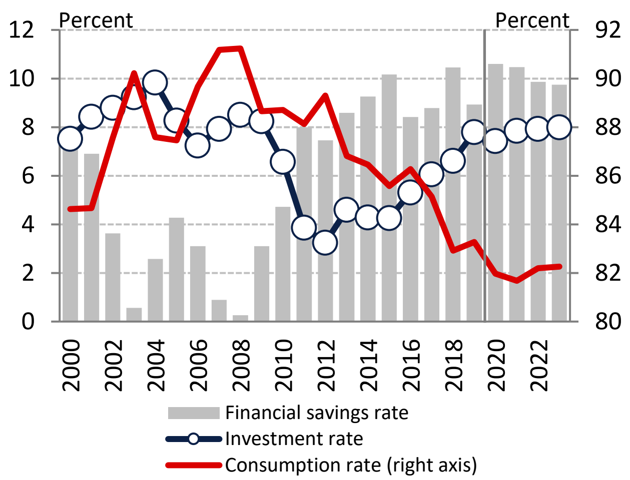
Household investment will increase starting from next year as a result of the public home creation programmes. The cautious attitude that has appeared among households and the temporary worsening in the income position result in more subdued investment activity this year. At the same time, in October the Government announced various measures that facilitate families' home creation (for more details, see Box 1-2), and these measures will provide considerable support for an upswing in households' investment activity in the coming years. The home renovation programme may already contribute to the expansion in household investment from 2021 H1, whereas in the second half of the forecast horizon an increase in home construction will also support growth. In addition to the home creation measures, favourable household loan dynamics also contribute to the upturn in household investment.

Chart 1-9: Annual change in consumption



Source: HCSO, MNB

Chart 1-10: Evolution of households' consumption, investment and financial savings rates as a percentage of disposable income



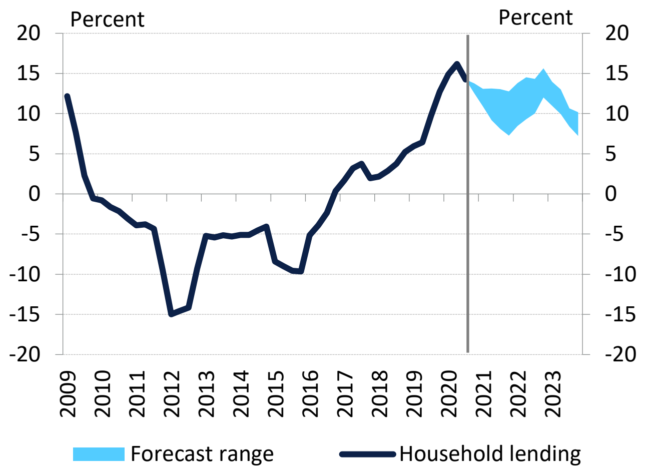
Source: HCSO, MNB

In line with the major decline in whole-economy investment, the investment rate falls below 26 percent this year in our forecast, before rising gradually from next year and – coming close to its pre-pandemic level – stabilising above 27 percent in the second half of the forecast period, (Table 1-3).

The prolonged pandemic has resulted in a high savings rate and a 3.7–4.1 percent decline in household consumption this year (Chart 1-9). In contrast to our previous expectations, consumption may fall considerably again in Q4 as a result of the measures implemented in order to contain the second wave as well as the population's self-restraining behaviour. The restrictive measures had a particularly unfavourable impact on the consumption of services, which is expected to decline immediately. In addition, the falling demand for durable products may only recover later, with an improvement in income conditions. Similarly to our September assumptions, household savings are expected to reach a high level, as consumer behaviour may continue to be dominated by caution in view of the second wave of the pandemic. However, the decline in consumption this year may have been mitigated from the income side thanks to the modest labour market adjustment, which was more moderate than during the financial crisis, as well as by the slight decrease in households' real income. In view of the second wave of the pandemic, other incomes (e.g. incomes of the self-employed) may decline to a greater extent compared to our previous expectations, which cannot be offset by the net wage bill (employees' wages), which may slightly expand this year as a result of the subdued labour market adjustment.

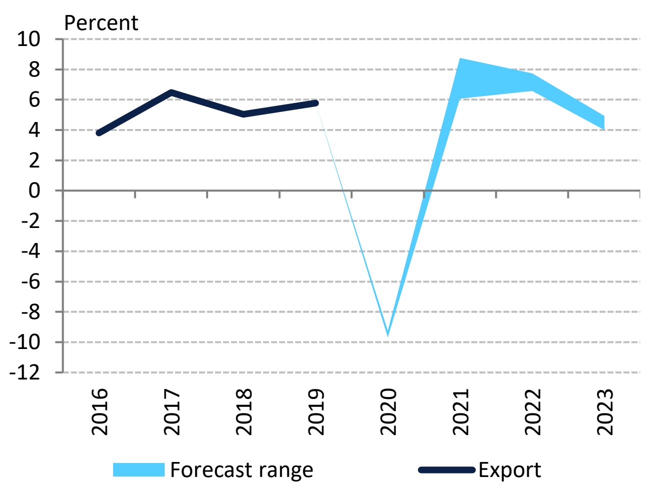
Following this year's downswing, precaution will ease and forced savings may decline as of early next year, as containment measures are eased (Chart 1-10). Consumption may start to bounce back as of the middle of next year, with the consumption rate rising again from its low level. Household consumption is expected to once again support economic growth from 2021 Q2 and may reach its pre-crisis level between 2021 H2 and 2022 H1, depending on the epidemiological situation next year and the labour market adjustment. In addition, we can expect the appearance of previously postponed consumption starting from the second half of 2021. The recovery of household consumption is supported by the Government's job protection measures, the continued functioning of the credit market as well as the moratorium on instalment payments.

Chart 1-11: Annual changes in lending to households



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

Chart 1-12: Evolution of exports



Source: HCSO, MNB

The growth rate of household lending may remain relatively high despite the phasing out of the moratorium and the negative effects of the coronavirus on the real economy (Chart 1-11). The deceleration in the growth rate falls short of our previous expectations, lending conditions were not tightened any more in Q3, and the pickup in demand in view of the state-subsidised credit programmes as well as the moratorium on instalment payments support household lending. Demand for prenatal baby support loans remains brisk, despite the weakening economic environment. The developments in lending expected over the forecast horizon may contribute to a slower decline in household consumption.

The second wave of the pandemic and the introduction of increasingly strict containment measures are expected to result in a protracted global economic recovery. With the spread of the pandemic, growth prospects in Hungary's trading partners quickly deteriorated to a large degree. Following the successful containment of the first wave of the pandemic, most of restrictions were typically phased out during the summer period, resulting in major adjustments in the economies compared to the low seen in Q2. Nevertheless, the second wave of the pandemic and the increasingly strict containment measures that were introduced are resulting in further economic downturn in Hungary's markets at the end of the year and in a protracted recovery of the economy. Accordingly, the uncertainty around the pace of the recovery of the global economy is still extremely high.

In our forecast, there is a large drop (9.3–9.7 percent) in Hungary's export performance this year, temporarily resulting in a decline in Hungary's market share and in negative net exports (Chart 1-12). Following the significant adjustment in Q3, as a result of the reintroduction containment measures and the deteriorating international economic situation, the recovery of exports is expected to slow down in the fourth quarter, and the volume of Hungary's exports will once again decrease to a greater extent. The duality of the performances of services and industry will be reflected in Hungary's exports as well, and in parallel with the protracted recovery of international tourism, Hungary's services exports may recover much more slowly than its exports of goods. The trajectory of industrial performance is more favourable compared to the period of the lockdowns in spring. The contribution of net exports to 2020 economic performance is negative, which is primarily attributable to the performance of services exports. The coronavirus vaccine is expected to become more and more widely available during next year, and growth in Hungary's export partners may also restart in 2021; accordingly, an upturn in Hungary's exports may also begin next year. Nevertheless, from 2021, as foreign direct investments will start to production, we expect Hungary's market share to increase, and project the growth contribution of net exports to be positive again from 2021.

Box 1-2: Economic impacts of the home creation measures

In October 2020, the Government announced various measures that facilitate families' home creation. We expect these measures to result in a strong increase in demand in the housing market, in housing development activity as well as in renovation in the years to come. This box provides an overview of the measures on the basis of the information available upon compiling the Report, and examines their potential impacts on the domestic housing market. The details of the measures announced:[1]

- From the beginning of 2021 until 31 December 2026, a 5 percent VAT rate can be applied once again in the case of newly built residential properties, provided that the building permit has become final before 31 December 2022, or the building activity linked to simple reporting has been reported by 31 December 2022 at the latest. Following the designation of brownfield areas, there will be no time limit for the 5 percent VAT rate for the homes sold in these areas. The VAT reduction does not apply to flats with a useful area of more than 150 square metres and houses larger than 300 square metres.
- Starting from January 2021, families with children or ones that undertake to have children and use the Home Purchase Subsidy Scheme for Families (HPS) will be exempt from duty payment regardless of whether or not the home they purchase is new or pre-owned.
- Those who use the HPS to buy newly built property may also request a refund of the 5 percent VAT content starting from January 2021.
- From the beginning of next year, until 31 December 2022, the state assumes half of the home renovation costs verified with invoices of families that are raising at least one child, up to three million forints. Families may apply for this support if they have at least one child below the age of 25 years. 50 percent of the subsidy may be used for material costs and 50 percent for contractor's fee, and reimbursement can be applied for subsequently, by submitting the relevant invoices to the State Treasury.
- Supporting the creation of multi-generational homes, the Government is making available the use of the HPS for loft conversions in family houses as well.
- The Government will cap the notary fees to be paid on home purchases.

As a result of the measures to support home creation, demand for newly built residential properties may pick up considerably in the coming years, although until early 2021 a wait-and-see attitude may be typical of home buyers who apply for the subsidy. In addition to the existing subsidies, the home creation benefits announced by the Government may significantly support housing market demand from the beginning of next year, but the expansion in demand may take place following the launch of the measures on 1 January 2021; until then the housing market may be characterised by a wait-and-see attitude. On the whole, home purchasing activity is expected to be subdued in 2020 Q4, but – as the market is

[1] The decree on supporting the renovation costs was published in the issue no. 259 of 2020 of Magyar Közlöny (Official Gazette). Reintroduction of the 5-percent VAT rate and the exemption from duty of those who make purchases using the Home Purchase Subsidy Scheme for Families (HPS) were submitted to parliament as a bill. For the time being, the HPS available for loft conversion, the 5 percent VAT refund to those who make purchases using the HPS and the cap on notary fees were only announced at the time of preparing the Report. If the announcements and the bills are adopted, the measures are expected to enter into force from 1 January 2021.

gradual running out of new homes with a 5 percent VAT rate – brought-forward, speculative demand for the homes still involved in the VAT benefit may also evolve in some years, which may then have a price-increasing effect. The market of pre-owned homes may be stimulated by the exemption from the payment of duty among the families that make use of the HPS in their purchases, while in general by the supporting renovation activities by those with a family.

As a result of the renovation subsidy, a strong increase is expected in demand for skilled construction work as well as for basic materials and consumer durables that can be used or installed during renovation, which – in conjunction with a narrowing of construction capacities – will affect the cost and scheduling of home building as well as the prices of the goods concerned. In view of the subsequent application for the renovation subsidy, families must have the total amount available in advance, which may result in a rise in demand for consumer loans.

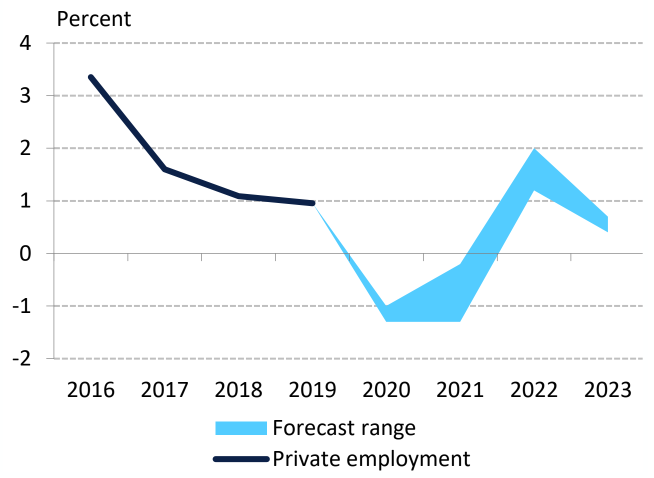
Looking at the supply side, because of the announced general VAT cut, additional new housing development projects are expected to materialise until end-2026, increasing the renewal rate of the housing stock. Eligibility for the lower VAT rate requires having an already final building permit prior to 31 December 2022, and thus building site acquisition as well as designing and permitting capacities in the next two years will determine how many additional new homes may be built with a lower VAT rate by end-2026. As a result of the two-year period available for using the benefit, in the short run, from 2021 to 2026, home construction may stand at a higher level. In 2021, the VAT cut may exert its positive effects on the real economy via the higher number of construction projects starting, and via completions as well from 2022 already.

In addition to its positive effects, the general VAT reduction, which is for a transitional period, may result in a concentrated use of construction capacities in the coming years. The high number of simultaneously launched housing development projects may result in concentrated use of construction capacities, which may lead to repeated delays in completions as well as in rises in costs (labour, base materials), and may even jeopardise the quality of the outcome. By contrast, a preferential VAT rate introduced permanently for a longer period could facilitate the development of new construction capacities, which could reduce the cyclical capacity problems of the sector as well as its reliance upon imports. Due to the deadline of end-December 2022, there may be a major administrative burden on permitting and control works in the next two years.

1.3 Labour market forecast

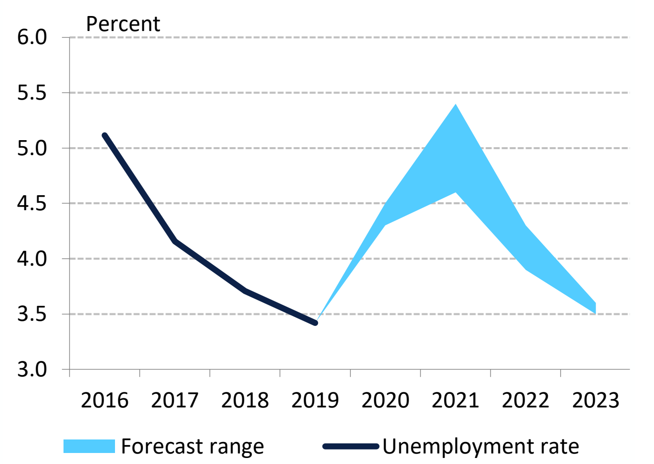
Unfavourable employment effects may strengthen again during the second wave of the pandemic, but the number of lay-offs may be much lower compared to what was seen in the previous crisis. The number of employed in the private sector is expected to fall by 1.0–1.3 percent in 2020, and by another 0.2–1.3 percent in 2021. Recovery in the labour market will also be protracted, in line with the recovery of the economy, which will be slower than previously expected, and the end of the job protection measures introduced earlier. The unemployment rate will start to decline as of 2021 Q2, sinking to below 4 percent in 2022 and approaching full employment again. The coronavirus pandemic may exert the largest impact on next year's pay rises. Following that, wage dynamics will continue to fall short of the pre-crisis level.

Chart 1-13: Annual change in employment in the private sector



Source: HCSO, MNB

Chart 1-14: Evolution of the unemployment rate



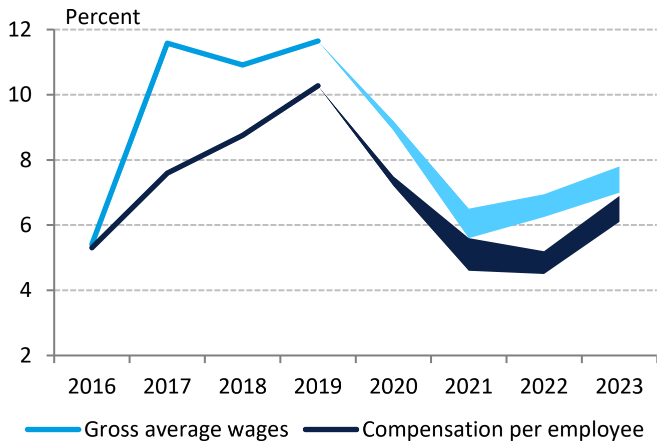
Source: HCSO, MNB

Unfavourable employment effects may strengthen again during the second wave of the pandemic, but the number of lay-offs may be much lower compared to what was seen in the previous crisis. In Q2, expecting a rapid economic recovery, many firms reacted by shortening working hours, instead of reducing headcount. Compared to the previous crisis, the labour market has so far proved to be more resistant to economic impacts, with support from government wage subsidies, targeted central bank credit programmes and the moratorium on instalment payments. Nevertheless, with the worsening economic outlook, jobs may be in jeopardy again, as more firms may decide on lay-offs due to their weakened profit situation. At the same time, we expect the degree of lay-offs to remain well below what was seen in the previous crisis (see Special topic 6-2).

Private sector employment will decline in the coming quarters, before starting to rise from 2021 Q2. According to our forecast, 55–110 thousand jobs may cease to exist due to the second wave of the pandemic compared to 2020 Q3 by the low expected for 2021 Q1. The upturn in the labour market will be protracted in line with the economic recovery, which will be slower than previously anticipated, and the end of the job protection measures introduced earlier (Chart 1-13). The new measures supporting the retention of labour can be utilised in a targeted manner, and for a narrower range of sectors. The number of private sector employees is expected to decline by 1.0–1.3 percent in 2020, and by another 0.2-1.3 percent in 2021.

As a result of the lengthy recovery on the labour market, full employment may be approached again in 2022. The number of active people may remain volatile in the short run, and some job losers may become inactive as in the past period, before returning to the labour market as restrictions are lifted. Further expansion in labour supply is limited by demographic developments in the remaining part of the forecast period. The unemployment rate is expected to rise to 4.9–5.7 percent in 2021 Q1. With the impacts of the coronavirus on the economy expected to

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



Source: HCSO, MNB

fade, the unemployment rate will start to decline from 2021 Q2 and will fall below 4 percent in 2022, with the onset of full employment again (Chart 1-14).

The coronavirus pandemic may have the biggest impact on next year's pay rises. Following that, wage dynamics will still fall short of the pre-crisis level. With regard to wages, companies adjust to the changed economic situation with a delay: first, they may reduce the bonuses to be paid at the end of this year. Private sector gross average earnings are expected to increase by 8.9–9.2 percent in 2020, which, however, may be a result of statistical effects as well, distorting the statistics upwards. According to our forecast, annual wage growth in the private sector will decelerate to 5.6–6.5 percent in 2021 and then gradually accelerate in the second half of the forecast period, in parallel with strengthening demand for labour (Chart 1-15). As a result of the substantial pay rises for doctors, in 2021 and 2022, whole-economy wages will increase to a greater degree than what is expected in the private sector.

The contribution cuts set forth in the November 2016 wage agreement, which reduce the average labour cost, will be completed by the end of the forecast period. From 1 July 2020, the rate of the social contribution tax was reduced by 2 percentage points to 15.5 percent by the Hungarian Government, and the agreement foresees two further cuts.

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

	2019	2020		2021		2022		2023
	Actual	Forecast						
		Previous	Current	Previous	Current	Previous	Current	Current
Inflation (annual average)[1]								
Core inflation	3.8	4.2 - 4.3	4.2	3.3 - 3.5	3.8 - 4.0	2.9	2.9 - 3.0	3.0
Core inflation excluding indirect tax effects	3.4	3.7 - 3.8	3.7	2.9 - 3.1	2.8 - 3.0	2.9	2.7 - 2.8	3.0
Inflation	3.4	3.5 - 3.6	3.4	3.4 - 3.6	3.5 - 3.6	3.0	2.9 - 3.0	3.0
Economic growth								
Household consumer expenditure	4.6	(-4.0) - (-2.2)	(-4.1) - (-3.7)	4.1 - 5.5	2.4 - 4.9	3.4 - 4.4	4.6 - 5.0	3.0 - 3.3
Government final consumption expenditure[6]	3.5	0.9 - 1.1	0.9 - 1.2	0.8 - 2.4	1.0 - 1.7	2.2 - 2.4	2.1 - 2.2	1.3 - 1.8
Gross fixed capital formation	12.2	(-11.2) - (-9.2)	(-13.7) - (-11.8)	5.1 - 10.3	6.4 - 8.8	6.7 - 8.4	6.8 - 8.6	3.0 - 3.5
Domestic absorption	6.0	(-4.1) - (-2.9)	(-4.6) - (-4.0)	3.5 - 6.0	2.9 - 5.1	4.1 - 5.1	4.7 - 5.1	2.7 - 2.9
Exports	5.8	(-13.3) - (-10.4)	(-9.7) - (-9.3)	7.3 - 10.2	6.1 - 8.8	5.7 - 8.0	6.6 - 7.7	4.0 - 4.9
Imports	7.5	(-10.4) - (-7.9)	(-7.5) - (-7.0)	6.1 - 9.2	5.3 - 7.9	5.4 - 7.3	6.2 - 7.1	3.7 - 4.3
GDP	4.6	(-6.8) - (-5.1)	(-6.5) - (-6.0)	4.4 - 6.8	3.5 - 6.0	4.5 - 5.7	5.0 - 5.5	3.0 - 3.5
Labour productivity[5]	3.3	(-3.2) - (-1.8)	(-3.2) - (-3.0)	3.5 - 5.0	4.2 - 5.8	3.4 - 3.9	3.3 - 4.5	2.4 - 3.2
External balance[2]								
Current account balance	-0.2	(-1.3) - (-0.9)	(-0.7) - (-0.6)	(-1.0) - (-0.5)	(-0.4) - (-0.2)	(-0.9) - (-0.6)	(-0.3) - (-0.1)	(-0.2) - 0.1
Net lending	1.5	1.3 - 1.7	1.7 - 1.8	1.7 - 2.1	2.0 - 2.1	1.2 - 1.5	1.8 - 1.9	2.3 - 2.6
Government balance								
ESA balance	-2.1	(-7.5) - (-7.0)	(-9.0) - (-8.0)	(-3.4) - (-2.9)	(-6.5) - (-6.0)	(-2.9) - (-2.2)	(-4.0) - (-3.0)	(-3.5) - (-2.5)
Labour market								
Whole-economy gross average earnings[3]	11.4	8.7 - 9.2	9.4 - 9.6	6.6 - 7.1	6.6 - 7.3	6.1 - 6.6	6.9 - 7.4	6.6 - 7.2
Whole-economy employment	1.0	(-2.1) - (-1.8)	(-1.5) - (-1.3)	(-1.0) - (-0.1)	(-1.1) - (-0.2)	1.1 - 1.7	0.9 - 1.5	0.4 - 0.7
Private sector gross average earnings[3]	11.6	7.8 - 8.5	8.9 - 9.2	6.6 - 7.3	5.6 - 6.5	6.2 - 6.9	6.2 - 6.9	7.0 - 7.8
Private sector employment	1.4	(-1.9) - (-1.5)	(-1.3) - (-1.0)	(-1.2) - (0.0)	(-1.3) - (-0.2)	1.4 - 2.2	1.2 - 2.0	0.4 - 0.7
Unemployment rate	3.4	4.4 - 4.7	4.3 - 4.5	4.8 - 5.8	4.6 - 5.4	4.1 - 4.6	3.9 - 4.3	3.5 - 3.6
Private sector nominal unit labour cost	6.7	8.9 - 10.2	10.9 - 11.0	1.8 - 3.3	-1.0 - (-0.3)	0.4 - 0.7	0.6 - 1.4	3.2 - 3.4
Household real income[4]	4.2	(-3.3) - (-1.5)	(-2.7) - (-2.2)	3.9 - 5.0	3.2 - 5.0	3.9 - 4.3	3.9 - 4.3	3.0 - 3.3

[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

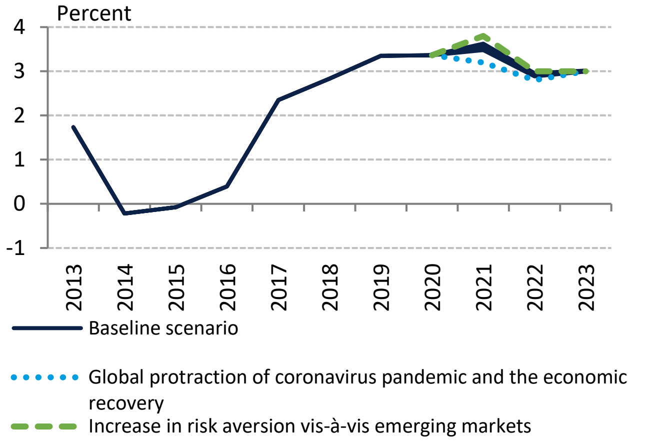
	2020	2021	2022	2023
Consumer Price Index (annual average growth rate, %)				
MNB (December 2020)	3.4	3.5 - 3.6	2.9 - 3.0	3.0
Consensus Economics (November 2020)[1]	3.2 - 3.4 - 3.6	0.8 - 3.0 - 3.8		
European Commission (November 2020)	3.4	3.3	3.0	
IMF (October 2020)	3.7	3.4	3.0	3.0
OECD (December 2020)	3.5	3.3	3.6	
Reuters survey (December 2020)[1]	3.0 - 3.3 - 3.7	2.8 - 3.2 - 3.8	3.0 - 3.2 - 3.5	3.0 - 3.2 - 3.5
GDP (annual growth rate, %)				
MNB (December 2020)	(-6.5) - (-6.0)	3.5 - 6.0	5.0 - 5.5	3.0 - 3.5
Consensus Economics (November 2020)[1]	(-6.9) - (-6.0) - (-4.1)	3.0 - 4.7 - 7.2		
European Commission (November 2020)	-6.4	4.0	4.5	
IMF (October 2020)	-6.1	3.9	4.0	3.8
OECD (December 2020)	-5.7	2.6	3.4	
Reuters survey (December 2020)[1]	(-6.6) - (-5.9) - (-4.5)	3.5 - 4.5 - 7.1	3.6 - 4.7 - 6.0	3.0 - 3.6 - 4.0
Current account balance[3]				
MNB (December 2020)	(-0.7) - (-0.6)	(-0.4) - (-0.2)	(-0.3) - (-0.1)	(-0.2) - 0.1
European Commission (November 2020)	-1.1	-0.3	-0.3	
IMF (October 2020)	-1.6	-0.9	-0.6	-0.5
OECD (December 2020)	-2.5	-2.0	-1.3	
Budget balance (ESA 2010 method)[3]				
MNB (December 2020)	(-9.0) - (-8.0)	(-6.5) - (-6.0)	(-4.0) - (-3.0)	(-3.5) - (-2.5)
Consensus Economics (November 2020)[1]	(-9.0) - (-7.6) - (-5.1)	(-6.5) - (-4.5) - (-3.0)		
European Commission (November 2020)	-8.4	-5.4	-4.3	
IMF (October 2020)	-8.3	-3.9	-2.3	-1.3
OECD (December 2020)	-8.0	-7.5	-6.0	
Reuters survey (December 2020)[1]	(-9.0) - (-8.2) - (-5.9)	(-7.0) - (-5.2) - (-3.8)	(-4.5) - (-3.3) - (-1.5)	(-3.0) - (-2.6) - (-1.5)
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)				
MNB (December 2020)	(-6.5) - (-6.0)	2.8 - 5.7	3.7 - 4.8	1.3 - 1.6
ECB (December 2020)	(-7.6) - (-7.3) - (-7.2)	0.4 - 3.9 - 6.0	3.0 - 4.2 - 4.3	2.1 - 2.9
Consensus Economics (November 2020)[2]	-6.0	4.0		
European Commission (November 2020)[2]	-6.4	3.9	3.1	
IMF (October 2020)[2]	-6.2	4.6	3.2	2.4

[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

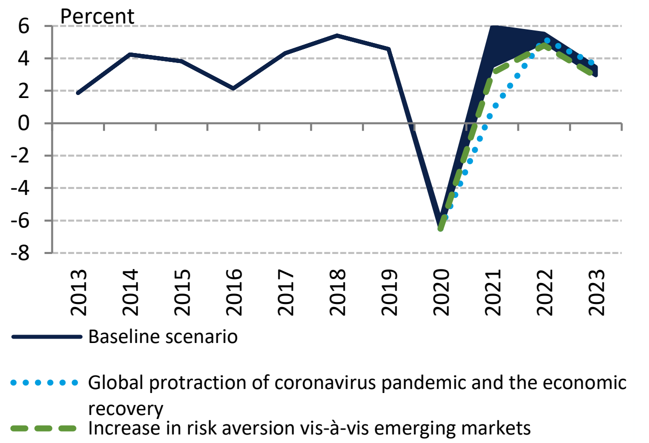
The Monetary Council highlighted two alternative scenarios around the baseline projection in the December Inflation Report. The alternative scenario presuming a global protraction of the coronavirus pandemic and the economic recovery points to a domestic inflation path that is slightly lower than the baseline scenario and to a much more subdued growth path. 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 the highlighted scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume a strong domestic labour market adjustment, the implementation of competitiveness reforms and a permanent rise in food prices.

Chart 2-1: Impact of alternative scenarios on the 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

Global protraction of the coronavirus pandemic and the economic recovery

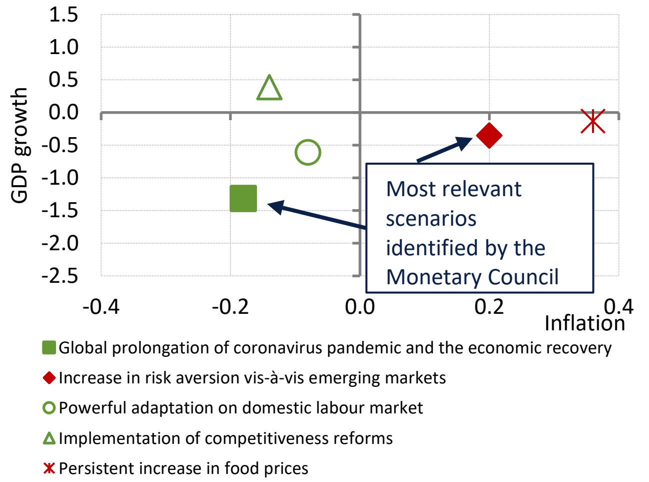
The baseline projection presumes that the Hungarian economy will contract this year. Looking ahead, however, as a result of efficient measures related to the pandemic, economic performance will expand again starting from mid-2021.

In the alternative scenario, the pandemic and its strong negative impact on the real economy persist, resulting in major downturns both globally and in the Hungarian economy. In the case of EU Member States, particular risks are posed – inter alia – by the high level of debt and structural weaknesses, which narrow the leeway for reducing the negative economic effects. External demand, which is weaker than the expectation in the baseline scenario, and the more subdued inflation environment exert a permanent and significant effect on growth, and to a smaller extent on inflationary trends in Hungary.

Increase in risk aversion vis-à-vis emerging markets

From September, in line with weakening financial market sentiment, investors gradually turned to safe-haven assets from riskier ones. A rise in the indices measuring stock market risks was observed in October, while the price of gold, which is considered a safe-haven asset, remained close to its historical high. The exchange rate of the US dollar, which is one of the safer currencies, also appreciated. Subsequently, the price of gold has dropped and the currencies of the region strengthened again from the October low as a result of an improvement in international investor sentiment. Looking ahead, we do not expect global risk attitude to worsen, while the relative risk assessment of emerging markets is expected to stabilise around its current level. 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 to a greater degree, volatility in the money and capital markets may increase. Accordingly, the FX and bond markets of the emerging economies deemed to be riskier may come under selling pressure, entailing a rise in long-term yields and a decline in domestic asset prices in the more vulnerable regions. This suggests a higher inflation path via increases in the prices of imported products.

Other risks

In addition to the scenarios highlighted above, the Monetary Council considered three other alternative scenarios. In the risk scenario presuming a strong labour market adjustment, weakened companies may adapt by significant downsizing as a result of the subdued external and domestic economic activity, following the end of the government measures. Many firms depleted their reserves during the pandemic, and thus the second wave of the pandemic may entail not only lay-offs, but also a rise in the number of corporate bankruptcies, persistently and significantly hindering the performance of the economy. In the risk scenario that presumes the implementation of further competitiveness reforms, the improvement in competitiveness provides further stimulation to the domestic economy in terms of productivity and investment, which is in line with a higher potential performance of the economy. Under higher potential growth, GDP growth above the baseline projection will not raise inflation. In the risk scenario presuming a permanent 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 terms of domestic GDP growth it essentially does not deviate from the baseline projection.

Box 2-1: Results of COVID-19 vaccine development so far

Despite the time constraints, vaccine development reached an advanced stage in early December 2020: the development of 300 registered vaccine candidates is in progress in more than 20 countries worldwide, of which 1 vaccine has been approved for use and another 6 vaccines have been authorised for early / limited use. Since the first cases of COVID-19 appeared at the beginning of 2020, many pharmaceutical companies have started development to create a safe, effective vaccine and thus prevent the spread of the pandemic. In total, 300 vaccine candidates have been registered by the World Health Organization (WHO), of which over a dozen have reached the final, third phase of clinical trials comprising large-scale testing, and one has already been officially approved in the United Kingdom. Moreover, vaccines have been approved for limited use by the local authorities in Russia and China as well.

Table 2-1: Number of vaccines in various phases of development

Phase I.	Phase II.	Phase III.	Total
41	17	14	72

Note: based on data available as of 9 December 2020
Source: Financial Times: Covid vaccine tracker

The vaccine developed by BioNTech/Pfizer is among the most promising and was the first to be officially approved for use in the United Kingdom on 1 December 2020. The vaccine is a joint development of the German company BioNTech and the American company Pfizer. Based on phase III trials, the vaccine was 95 percent effective, but delivery and storage present a challenge due to ultra-low temperature requirements. After the UK, the vaccine is likely to be approved in the USA in the middle of December and in the EU in late December. In 2021, 1.3 billion doses are expected to be produced primarily in Germany, Belgium and the United States.

Moderna's vaccine also proved successful based on phase III trials, with 94.1 percent efficacy according to test data. The vaccine has been developed and is expected to be approved in the United States in mid to late December. Approval in the EU is anticipated in early January 2021. Manufacturing will take place in Spain, Switzerland and the United States in 2021, with approximately 500 million to 1 billion doses to be produced next year.

AstraZeneca's vaccine has been developed jointly with the University of Oxford in the UK, and its efficiency is estimated at 70 percent, i.e. lower than the above two based on the results of phase III clinical trials. On the plus side, although it is less efficient, it has more favourable temperature requirements. The vaccine is awaiting approval in the United Kingdom in December and in the European Union and the United States in 2021. In 2021, 3 billion doses are expected to be produced in the UK, India and Brazil, among others.

Russia approved its Sputnik V vaccine developed by the Gamaleya research institute for limited use in August 2020. The trials proved 92 percent efficiency, but the approval process was criticised due to the fact that the vaccine was approved before the commencement of the phase III clinical trials. The vaccine developer is planning capacity extension due to the number of orders reaching 1.2 billion doses, and an expected demand of 2.4 billion doses globally.

Several vaccines have been approved for limited use in China, but no information is yet available on their effectiveness. Two of the approved vaccines are being developed by Sinophram and, like the Russian vaccine, they were approved before the phase III clinical trials was completed. In November, the head of Sinophram said nearly a million people in China had already received one of the vaccines. A total of more than 1 billion doses of the two vaccines will be produced in 2021.

Large-scale vaccination programmes are not expected in 2020, only next year. The professional groups selected for the first round of vaccination upon launching the programmes include those most vulnerable to COVID-19 (e.g. healthcare professionals, teachers). Vaccine availability on a large scale could finally put an end to the coronavirus pandemic.

3 Macroeconomic overview

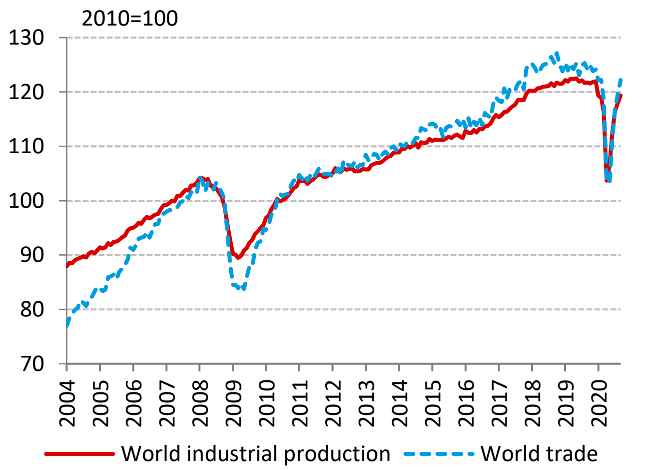
3.1 Evaluation of international macroeconomic developments

Global economic developments continue to be primarily affected by the coronavirus pandemic and the political, economic and social reactions to it. After the first wave of the pandemic was contained, reopening the economies resulted in a sharp rise in performance, but the recovery soon came to a halt in most countries. As opposed to the gradual pick-up in goods trade, the recovery of tourism related services seems to be lengthy, which is also attributable to the second wave of the virus and the containment measures. In Q3, the performance of the world's major economies was typically better than expected, and the data showed considerable correction compared to Q2. Nevertheless, of the large economies in the world, only China was able to grow in Q3 in year-on-year terms. The latest, high-frequency data indicate another decline in economic activity in Q4, due to the reintroduction of curbs. Expectations concerning the future performance of the global economy are uncertain, and depend strongly on developments in the second wave as well as on further government decisions regarding the containment restrictions. Global inflation declined slightly further in recent months. Inflation rates were below central bank targets in most developed economies in Q3, while inflation dropped into negative territory in the euro area. Inflation rates in the regional countries showed a mixed picture during the autumn months. In the past period, the central banks continued their supportive monetary policies. Of the world's leading central banks, the Fed left its policy rate unchanged at around zero and indicated that it would maintain the current pace of its asset purchases. The European Central Bank also left its policy rates unchanged, but increased and extended the asset purchase programmes. Looking at the region, neither the Czech, nor the Polish and Romanian central banks amended their respective policy rates.

3.1.1. International activity trends

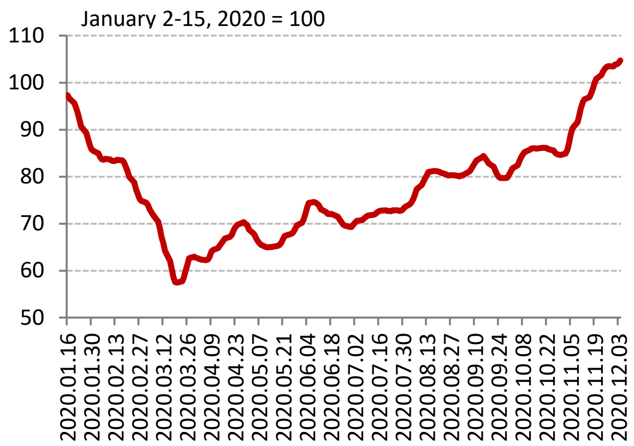
Global economic developments continue to be mainly affected by the coronavirus pandemic and the related political, economic and social responses. March, April and May were the deepest period of the crisis that evolved due to the pandemic situation. In 2020 Q2, European states experienced the deepest economic recession in their history. Following the worst months, reopening the economies resulted in a sharp rise in performance, but the recovery soon came to a halt. Nevertheless, on the whole, Q3 data showed a major adjustment compared to the previous quarter. The improvement is primarily attributable to the rebound in industrial production, as after the turmoil in supply chains was overcome, major adjustment also took place in global trade, compared to the low observed in May (Chart 3-1). By September, global industrial production and global trade exceeded their January levels. By contrast, the services sector is still weakened, and recovery may be a lengthy process in view of the impacts of the second wave. In the case of freight forwarding, the period since the low in April and May has been characterised by gradual adjustment as a result of the relative stability of supply chains and the upswing in industrial activity. The index measuring overall transportation by land, air and sea in North America hit a 10-year low in April, but already rose to above the January level by mid-November (Chart 3-2). By contrast, international tourism did not show any significant adjustment between the two waves,

Chart 3-1: Development of world industrial production and world trade



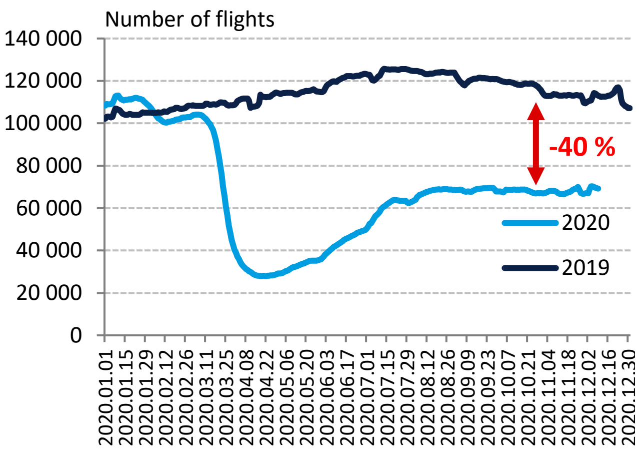
Source: CPB

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



Source: S&P Global

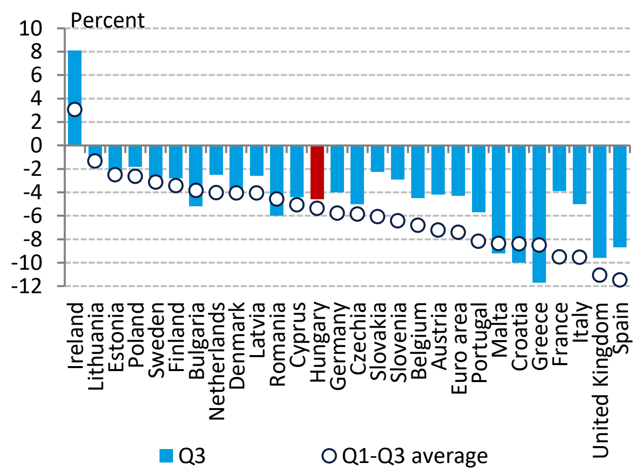
Chart 3-3: Total number of global commercial flights



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

Source: Flightradar24

Chart 3-4: Annual changes in GDP growth in 2020 Q3, and Q1-Q3 average change



Note: Based on seasonally and working day adjusted data.

Source: Eurostat

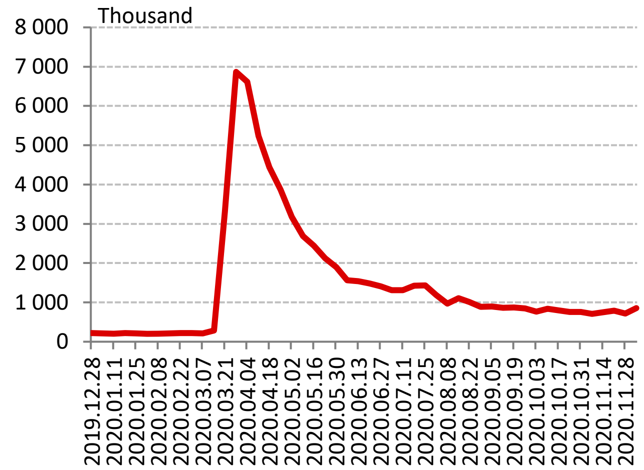
which is corroborated by the changes in the number of flights as well. Following the wide-ranging introduction of the restrictions on travel, from a figure of nearly 110,000 observed early in the year, the daily number of commercial flights declined to a mere 30,000, and then, following a slow rise, traffic was stagnant around 65,000–70,000 from August (Chart 3-3).

The performance of European economies typically exceeded expectations in Q3 (Chart 3-4). In spite of the dynamic quarterly growth, euro area economic output fell 4.3 percent short of the level recorded in the same prior-year period. The economic performance of Germany, Hungary's main trading partner, increased by 8.5 percent compared to Q2, corresponding to a 4.0- percent decline in Q3 on an annual basis. Of the countries where the downturn was the most severe in Q2 and which were strongly affected by the first wave of the pandemic, the countries in which the restrictions were looser between the two waves of the virus performed better (in France and Italy the economy contracted by 3.9 percent and 5.0 percent, respectively, year-on-year). Where stricter measures had to be maintained for a longer period, economic output was also further below the levels seen prior to the pandemic (Spain and the United Kingdom suffered contractions of 8.7 percent and 9.6 percent, respectively, on an annual basis), in spite of the fact that on a quarterly basis all the countries mentioned as well as the euro area were able to achieve double-digit growth.

Changes in GDP varied across the countries of the Central and East European region. Adjusted for seasonal and calendar effects, Hungary's economic output declined by 4.6 percent, as in the euro area, while compared to the European average the annual index of economic performance was much more favourable in Poland (-1.8 percent) and Slovakia (-2.3 percent), and worse in the Czech Republic (-5.0 percent), Bulgaria (-5.2 percent) and Romania (-6.0 percent) (Chart 3-4). Recovery of the vehicle industry, which has a significant weight in several of the region's countries, continued, but the weakness of international tourism still significantly restrains growth. For the year to date, the Hungary's economic performance ranks in the middle of the field. Most of Hungary's trading partners are still below the 2019 Q4 level.

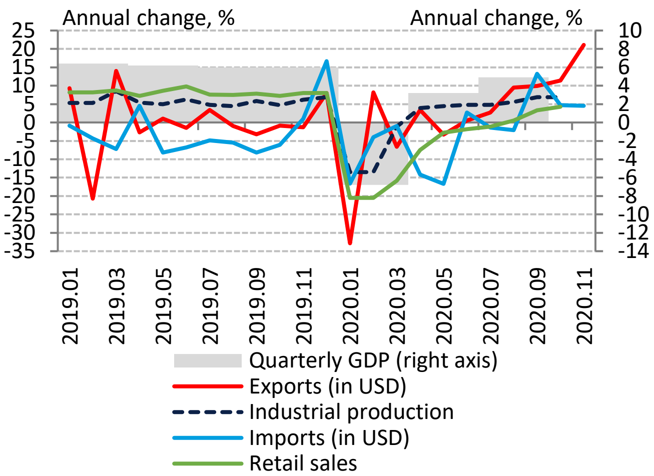
The largest economy in the world, i.e. the United States, contracted by 2.9 percent in Q3 compared to the same period of the previous year. The robust improvement versus Q2 is mainly due to the adjustment of household consumption, which had plunged in the previous period.

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



Source: Fred

Chart 3-6: Development of some macroindicators in China



Note: Based on seasonally adjusted data.

Source: National Bureau of Statistics of China, Tradingeconomics

This is also corroborated by the changes in new applications for unemployment benefits, which declined to below 800,000 by November. Looking ahead, however, it may be a warning that the persistent decrease in the number of newly submitted applications may have stopped and for the week ending on 5 December applications increased to over 850,000 (Chart 3-5).

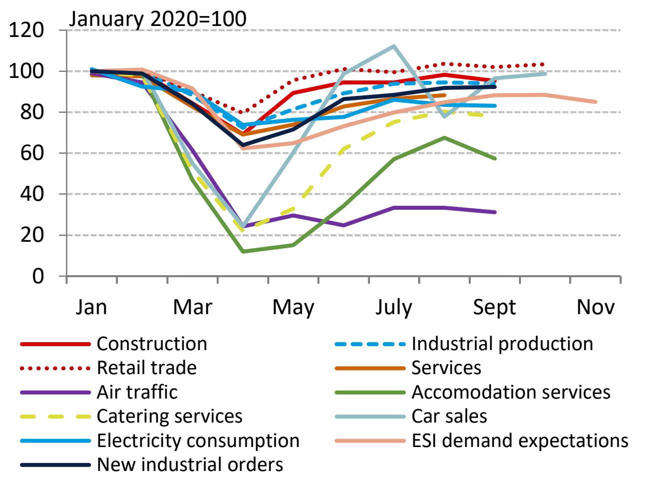
Of the major economies of the world, only China was able to achieve year-on-year growth (4.9 percent) again in Q3. Production indicators in China are typically in the growth range; in October retail trade turnover and the volume of industrial production rose by 4.3 percent and 6.9 percent, respectively, while in November imports increased by 21 percent in year-on-year terms (Chart 3-6), and the number of infections is still extremely low according to official statistics.

The latest monthly indicators for the euro area show that the recovery stopped (Chart 3-7). Following four months of growth, the currency union's industrial production fell by 0.4 percent in September, and remains below the January level. Following monthly growth also since May, construction output declined by 2.8 percent in September, reaching only 95 percent of the January level. In October, retail sales expanded by 4.1 percent year on year, but recovery slowed down in this sector as well. Nevertheless, retail sales still exceed the January level.

In parallel with the deepening severity of the autumn wave of Covid-19, the reintroduction of lockdowns led to a decline in economic activity in several countries according to the real-time activity indicator created by Bloomberg Economics for large European economies. Macro data show that economies started to contract again as a result of the lockdowns, and – as opposed to the Chinese economy – economic recovery did not occur in Europe. Up until the decrease that was caused by the second wave of the pandemic and started in mid-October, activity levels in the German, French, Italian, Spanish and British economies were 15–40 percent lower than prior to the crisis (Chart 3-8). The difference between the two waves of the crisis is presented in detail in Box 3-1.

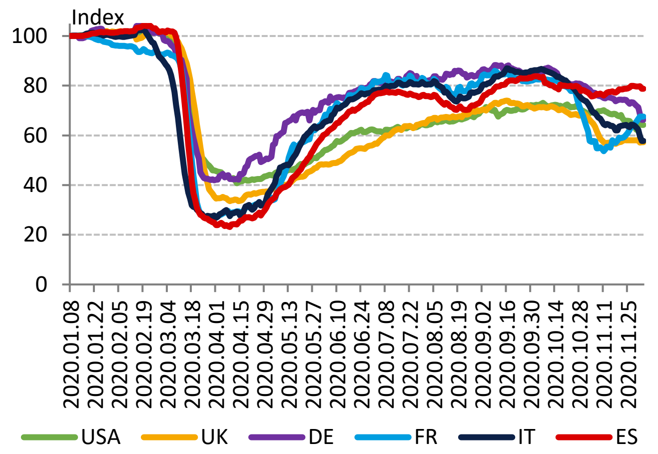
Economic recovery soon came to a halt in most countries. Expectations concerning the future performance of the global economy are uncertain, and depend strongly on the developments in the second wave as well as on further government decisions regarding containment measures.

Chart 3-7: Development of some macroindicators in the euro area



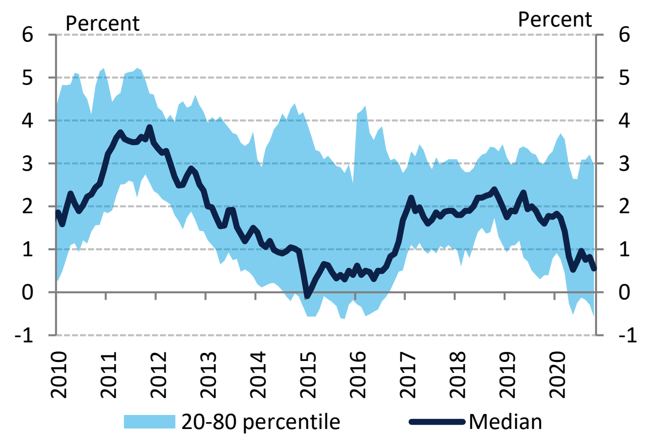
Note: Based on seasonally adjusted data. Source: Eurostat, EC, ECB

Chart 3-8: Developments in the real time economic activity index by Bloomberg



Source: Bloomberg Intelligence

Chart 3-9: 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

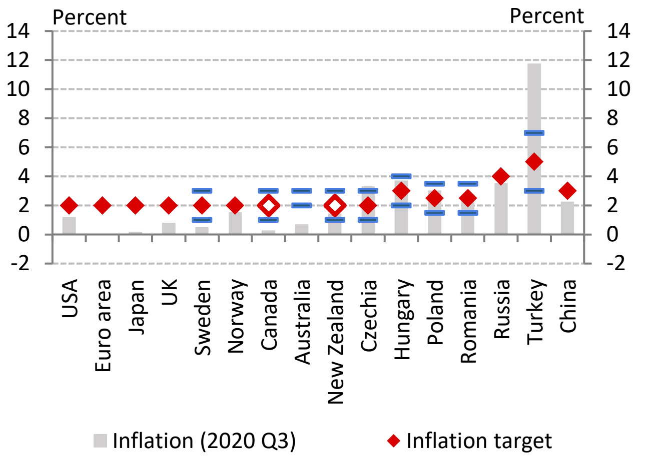
3.1.2. International monetary policy, inflation and financial market trends

Global inflation has fallen slightly in recent months (Chart 3-9). Inflation rates in most developed economies were lower than the central bank targets in Q3. The inflation rate sank into negative territory in the euro area, while the rate of price increase was below 1 percent in the United Kingdom, Sweden, Canada, Japan and Australia. By contrast, inflation in Turkey continues to significantly exceed the inflation target of the central bank. In other developed and emerging economies, inflation was still around the central bank targets (Chart 3-10).

At the November rate-setting meeting, by unanimous decision, the decision-makers of the Federal Reserve left the target band of the policy rate unchanged at a level of 0–0.25 percent. According to the central bank, financial conditions remained loose, but the purchases of government securities and mortgage-backed securities will continue at least at the rate seen to date. The balance sheet total of the central bank increased to around USD 7,300 billion (34 percent of GDP) in the past months (Chart 3-11). Policymakers believe that the employment situation in the USA has also improved, but the performance of the economy will still depend on the spread of the virus and the related government reactions. According to the forward guidance, the central bank will not change its monetary policy stance until labour market conditions reach the maximum employment level presumed by the Board of Governors and until inflation persistently remains above 2 percent. As indicated by the Treasury, at end-2020 the Fed will have to stop the corporate asset purchase and lending programmes where risk taking is shared.

At Bank of Japan's rate-setting meeting in October, the decision-makers did not change 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 balance sheet total of the central bank rose to 127 percent of GDP. 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, 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

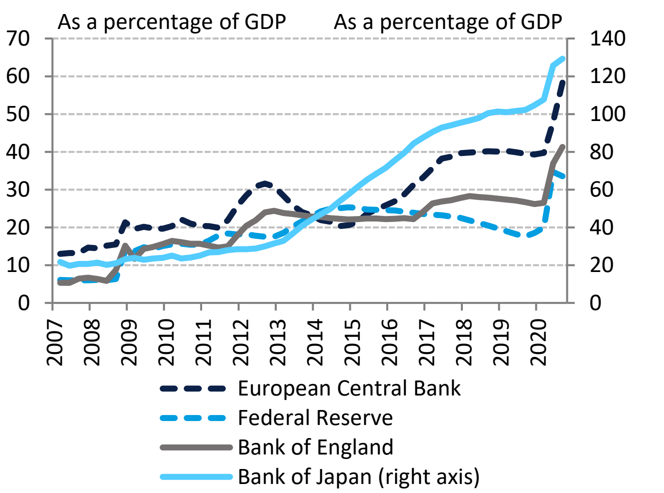
Chart 3-10: Inflation targets of central banks and actual inflation



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

Source: OECD, FRED, National Institute of Statistics Romania

Chart 3-11: Central bank balance sheet totals in developed countries



Source: Databases of central banks, Eurostat, Fred

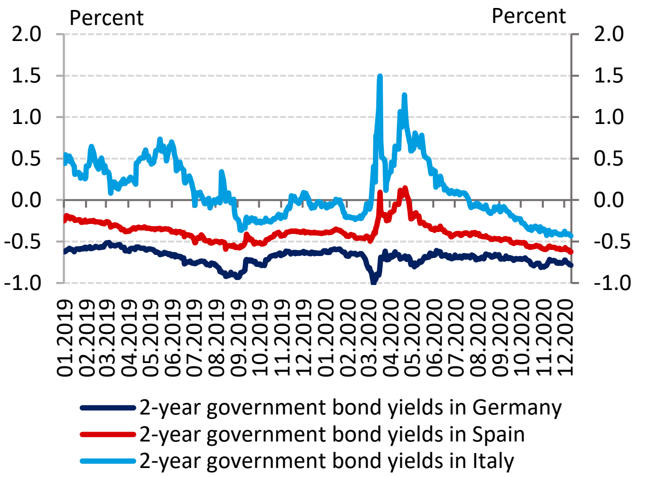
central bank expects inflation to be below 0 percent this year and below 1.0 percent in 2021 and 2022.

At the November rate-setting meeting, the decision-makers of the Bank of England left the Bank Rate unchanged, and expanded the BoE's government securities purchase programme by GBP 150 billion. The purchases will continue until total holdings of government securities reach the limit amount of GBP 875 billion. In addition, the BoE also maintains the corporate bond holdings purchased in an amount of GBP 20 billion. Inflation rose from 0.5 percent in September to 0.7 percent in October, which is still below the 2 percent central bank target. According to the BoE, the level of inflation for the rest of the year may be around or slightly above 0.5 percent, which may be followed by a sharp increase. The BoE indicated that it does not intend to tighten monetary conditions until surplus capacity is eliminated and inflation stabilises sustainably around the 2- percent inflation target.

in China, the loan prime rate (LPR), which is the benchmark interest rate for the pricing of bank loans, remained unchanged in the past period. Accordingly, since 20 April the one-year LPR and the five-year LPR have been at 3.85 percent and 4.65 percent, respectively.

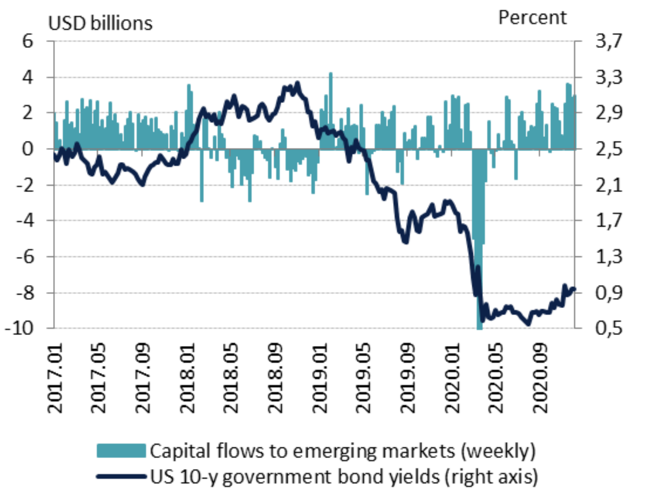
Investor sentiment weakened until early November, in parallel with the deepening of the autumn wave of the pandemic. It then improved again as a result of favourable news related to vaccine development, while volatility on the financial markets declined. In addition, risk avoidance in international markets in Q4 was also boosted by the uncertainty related to the US presidential elections in November. From the second half of October, containment measures taken because of the pandemic were reintroduced in a number of countries. In view of that, market participants' expectations regarding economic activity took a turn for the worse again, resulting in a tangible deterioration in sentiment in global financial markets. In addition, from end-October, uncertainty related to the US presidential elections also resulted in elevated risk avoidance. International investor sentiment improved, and market volatility declined following the US presidential elections and in view of the favourable news related to vaccine research published in November. Most of the developed and emerging market stock exchange price indices rose during the period. US and European indices advanced by some 13 percent and 5–28 percent, respectively. The US dollar weakened against both developed and emerging currencies during the period. In the past quarter, on the whole, the US

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



Source: Bloomberg

Chart 3-13: Capital flows to emerging markets (weekly) and US 10y-government bond yields



Source: EPFR, Bloomberg

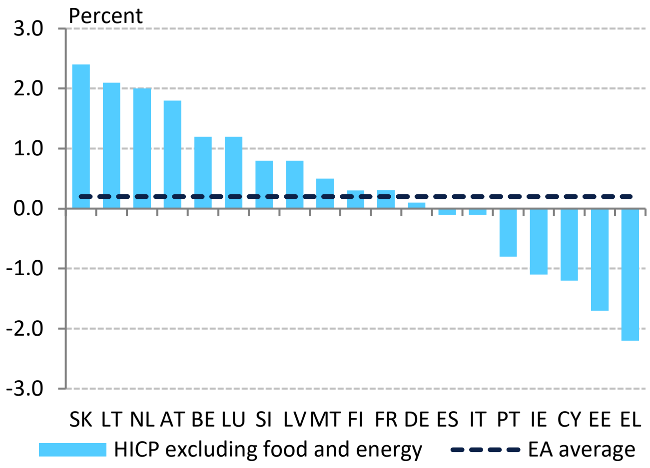
currency depreciated by some 0.8 percent against the Japanese yen and 4.3 against the Swiss franc, 4.4 percent against the British pound as well as 3.6 percent against the euro. Developed long-term bond market yields showed a mixed picture in the past quarter (Chart 3-12): German yields dropped 11 basis points, while US yields rose 25 basis points, and Japanese yields remained unchanged. Emerging market bond yields also varied in parallel with the changing investor sentiment. In the local region, Hungarian and Romanian long-term yields declined; while the Czech and Poland long-term yields rose. Two-year German, Italian and Spanish bond yields decreased by 8–20 basis points. Demand for risky assets was also stronger in the past period, the result of which was that emerging market bond funds recorded capital inflows in Q4 (Chart 3-13).

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 two years and will start increasing interest rates only after that. Accordingly, it is pricing in the first interest rate hike for a slightly earlier point in time compared to the mid-September expectations. Expectations related to the ECB are similar: based on market pricing, the present interest rate conditions may persist until mid-2024, which corresponds to the mid-September expectations.

Inflation in the euro area has been in negative territory since August. Following a slight increase early in the summer, inflation fell to -0.2 percent in August, before dropping to -0.3 percent in September, October and November for the area as a whole. In October, the inflation rate was below the 2 percent central bank target in all euro area Member States, sinking to negative territory in eleven countries. From 1.2 percent seen in July, core inflation declined to 0.4 percent by August, and then to 0.2 percent by September and October (Chart 3-14). At the level of individual Member States, core inflation was varied in November as it remained in negative territory in Italy, Spain, Ireland, Portugal, Estonia, Cyprus and Greece.

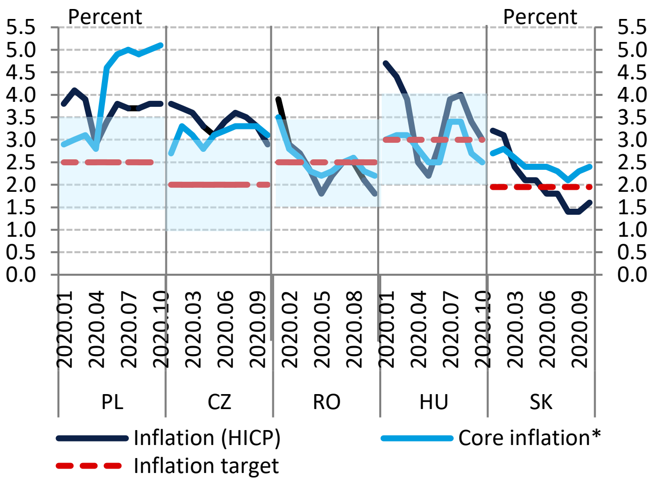
At its December rate-setting meeting, the Governing Council of the ECB left policy rates unchanged, but increased and extended the asset purchase programmes. The ECB decided to increase the pandemic emergency purchase programme (PEPP) by EUR 500 billion to a total of EUR 1,850 billion. It also extended the horizon for net purchases under the PEPP to at least the end of March 2022. Principal payments from maturing

Chart 3-14: HICP excluding energy, food, alcohol and tobacco in the euro area members (October 2020)



Source: Eurostat

Chart 3-15: Inflation and core inflation in the region



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

securities will be reinvested until at least the end of 2023, instead of end-2022. Swap and repo lines will also be extended until March 2022 and the favorable terms of the TLTRO-III bank lending program will be extended by 12 months to June 2022. Purchases under the previously introduced asset purchase programme (APP) did not change. The balance sheet total of the ECB rose to EUR 6,923 billion (60.2 percent of GDP) by the start of December. The ECB will maintain its loose monetary policy stance until inflation consistently converges with the central bank inflation target. In addition, the ECB is ready to amend its instruments again, if necessary.

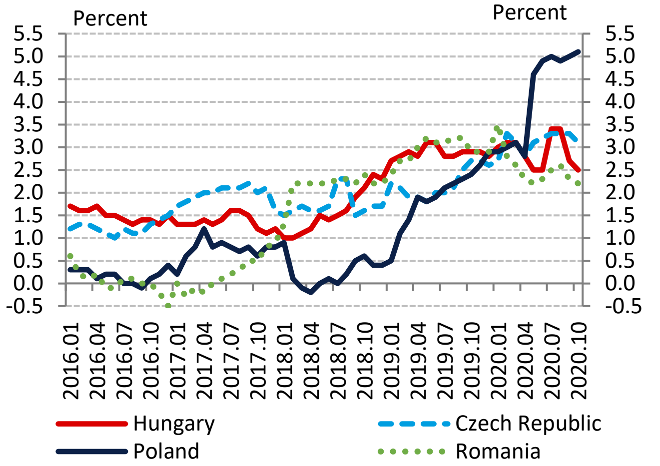
Inflation rates in the countries of the region showed a mixed picture during the autumn months (Chart 3-15). The inflation rate rose to 3.2 percent in Poland in September, and then the rate of increase in consumer prices decelerated to 3.1 percent in October and 2.9 percent in November. Inflation in the Czech Republic fell from 3.3 percent in August to 2.7 percent in November. Following a temporary rise in the summer, the inflation rate in Romania moved on a downward path again, dropping to 2.5 percent in September and 2.2 percent in October. Core inflation fell in Romania, while in the Czech Republic and Poland it was around the levels observed in the past months (Chart 3-16).

At their September and November rate-setting meetings, the policymakers of the Czech central bank left the policy rate at 0.25 percent. According to the new forecast, at the end of this year, inflation may decline to within the tolerance band and gradually approximate the 2- percent target in the coming quarters.

At its December rate-setting meeting, the Polish central bank did not change the 0.1- percent policy rate; both the overnight lending rate and the deposit rate also remained unchanged. According to its announcement, the central bank is continuing its government securities purchases with the objective of modifying the long-term liquidity structure of the banking sector, ensuring the liquidity of the secondary market of government securities. According to its November forecast, inflation may be higher than expected before over the entire forecast horizon, but is still expected to be within the tolerance band this year and next year as well.

Decision-makers at the Romanian central bank left the policy rate at 1.5 percent in November. At the same time, they reduced the required reserve ratio for commercial banks' liabilities denominated in foreign currency from 6 percent to 5 percent. A further change is that in the announcement the central bank did not indicate the

Chart 3-16: Developments of inflation excluding energy, food, alcohol and tobacco in the countries of the region



Source: Eurostat

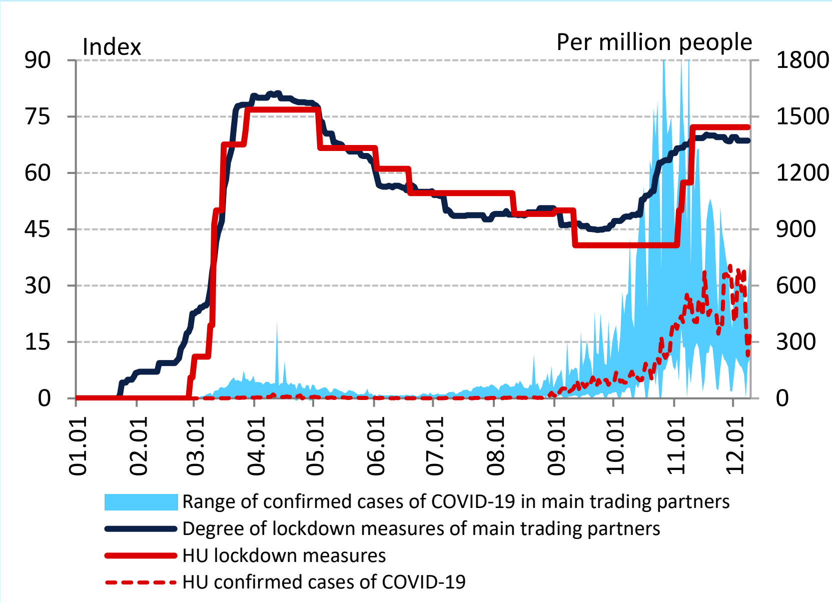
continuation of the repo operations introduced due to the adverse economic effects of the coronavirus and the continuation of secondary market government securities purchases. Compared to the previous forecast, in its new projections the central bank carried out a significant downward revision of the expected short-term inflation path. The rate is now expected to be close to the target over the forecast horizon.

Box 3-1: Differences between the two waves of the coronavirus pandemic

The current, second wave of the pandemic has different characteristics compared to the first, spring wave. Significant differences are observed in terms of the number of cases as well as economic effects. The box below provides a comparison of the impacts of two waves of the virus on the basis of currently available, actual figures.

The confirmed number of cases is much higher in the second wave, although the strictness of lockdowns has not yet reached the degree applied spring (Chart 3-17). This year, March, April and May constituted the most severe period of the crisis that evolved due to the pandemic situation. On the news of an increase in the number of cases, governments started to apply immediate, significant restrictions. As a result of a nearly complete shutdown of economies, the number of confirmed infections remained low. However, the lifting of most containment measures at the beginning of summer increased the mobility of population, facilitating the spread of the virus. At the end of the summer and beginning of the autumn, the daily number of new cases started to increase sharply both and Western Europe and North America. The second wave significantly exceeds the number of cases (and deaths) in West European and regional markets as well. In order to contain the spread of the virus and to avoid any excessive burdening of the healthcare system, several countries have decided to tighten the restrictions since October. Nevertheless, the restrictions introduced to date have been milder than in the spring in the case of Hungary's main trading partners and in Hungary as well.

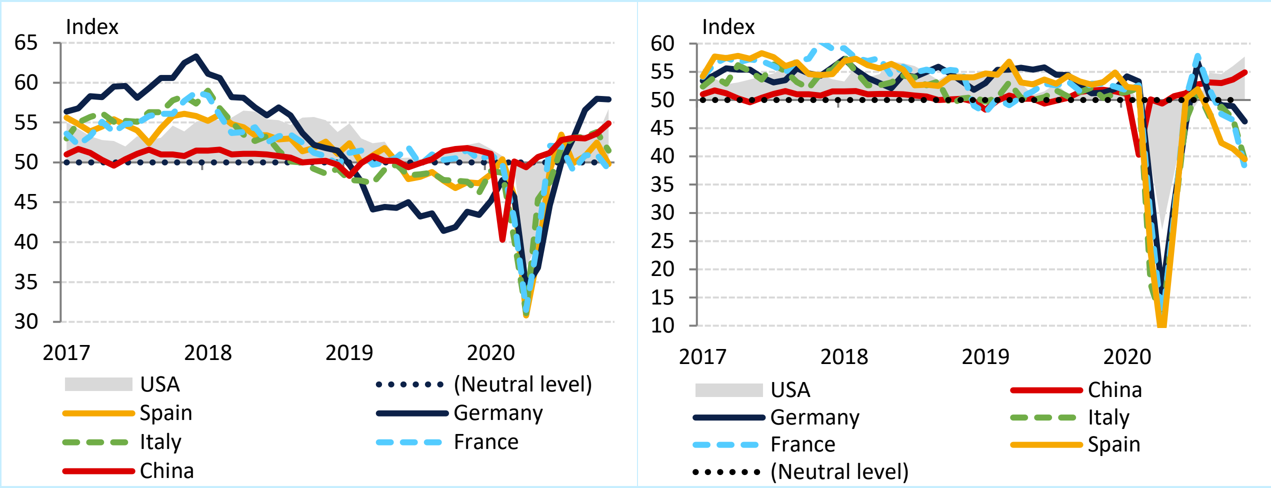
Chart 3-17: Changes in the number of daily confirmed cases of COVID-19 and in the degree of lockdowns



Note: Weighted with the export market share of Hungary's 10 largest trading partners.
Source: Our World in Data

Similarly to the first wave, the performance of services may show a major drop during the second wave again, while the downturn in economic performance may be mitigated by the fact that for the time being no signs of the supply side frictions observed during the first wave can be seen in manufacturing. In spring, as a result of the nearly complete lockdowns, European states experienced the deepest economic downturn in their history. Households' cautious behaviour as well as the immediate, significant administrative restrictions jointly resulted in a drastic fall in the performance of services. In addition, industrial production also declined considerably with the freezing of production chains. Following the worst months, the initial rapid recovery resulting from the reopening of the economies came to a halt at the end of the summer. With the arrival of the second wave, a significant contraction is expected again in the Q4 economic performances, although the impacts may be milder, which is explained by the difference in involvement of the various sectors. As in the first wave, the prospects of the services sector started to worsen (Chart 3-18, right panel). Business sentiment in manufacturing remains more favourable (Chart 3-18, left panel). During the stoppages in the spring, manufacturing companies were mostly able to develop the infrastructure to prevent the spread of the virus, and thus – unlike the first wave – the second wave of the pandemic has not yet resulted in any major disruptions in supply chains.

Chart 3-18: Changes in purchasing manager indices in manufacturing (left panel) and in the services sector (right panel)

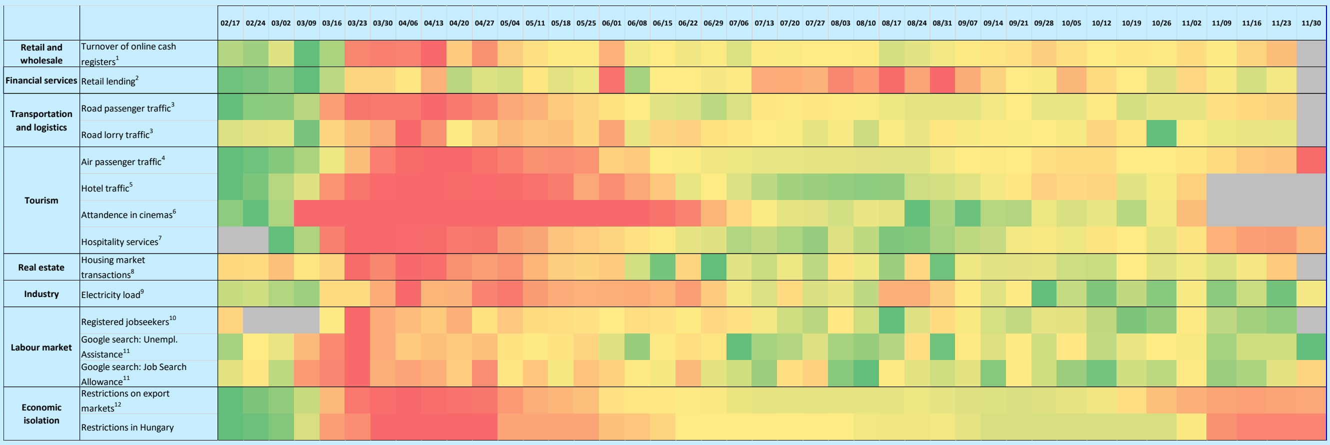


Note: Seasonally adjusted data.

Source: Bloomberg

Compared to the first wave, the year-end performance of the domestic economy may be more favourable as a result of the good performance of manufacturing, which is also corroborated by the presently available high-frequency data (Chart 3-19). Electricity load, which shows close correlation with industrial production, has typically exceeded the previous year's level since end-September. In addition, goods transport by road is also better than during the first wave in the spring, suggesting a relatively more favourable manufacturing performance for 2020 Q4. By contrast, due to the lockdowns, significant economic sacrifice is expected in the services sector (mainly in the subsectors linked to tourism) during the second wave as well. This duality is reflected in Hungary's foreign trade as well: services exports in Q3 were down 29.2 percent on the same period of 2019, while goods exports managed to increase by 2.7 percent. In the case of services exports, no improvement similar to industrial exports is expected in Q4 either, as the stoppage in global tourism and the related sectors is similar to that observed in the spring.

Chart 3-19: Heat map of weekly indicators monitoring economic activity



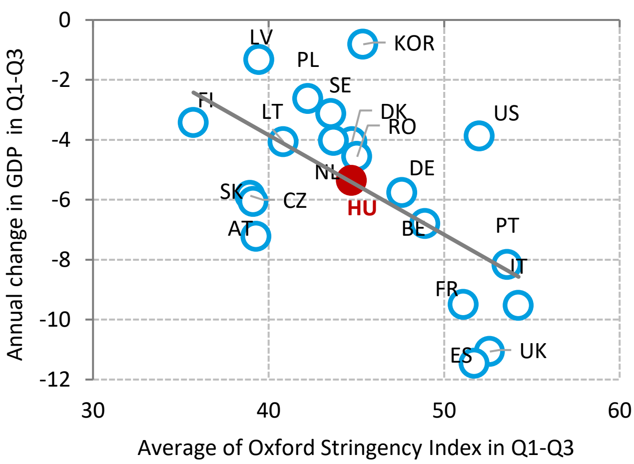
Note: Data for the week commencing on the respective calendar day; for the purposes of comparison calculation compared to the same week of 2019. In the colour scale, green indicates increasingly good, while red indicates increasingly poor values. Units of measurement: 1: real annual change, 2: nominal annual change, 3: annual change based on the number of road transits, 4-7: annual change, 8: annual change based on number of transactions, 9: annual change, excluding temperature change, 10: thousand persons, 11: frequency of online searches based on Google Trends, 12: government response stringency index of the 10 largest trading partners weighted with their export market share based on Oxford University.

Source: MNB calculation based on data from Ministry of Finance/NTCA, Central Credit Information System, NÚSZ Zrt. Business Intelligence, Hungarian Petroleum Association, Budapest Airport, National Tourism Data Supply Centre, Housing brokerage database, ENTSO-E, National Employment Service, Google-trends and Hale et al. (2020)

3.2 Analysis of the production and expenditure side of GDP

In 2020 Q3, the Hungarian economy contracted by 4.6 percent compared to the same period of the previous year. The decline in gross domestic product in Hungary was close to the European average in year-on-year terms (with the euro area and the European Union contracted by 4.3 percent and 4.2 percent, respectively). Recovery from the crisis caused by the pandemic started in Q3: following its low seen in Q2, economic activity showed significant adjustment. Compared to Q2, output expanded by 11.4 percent, supported primarily by the rapid recovery of the manufacturing sector and the initial quick recovery in domestic tourism, the weight of which is high in regional comparison. By contrast, construction output came to a halt and thus had a negative impact on the performance of the economy. On the expenditure side, household consumption in Q3 was relatively favourable in an international comparison, while investment and services exports fell considerably. Based on the high-frequency data, economic performance may have reached its peak during the recovery in August, followed by gradual decline in economic activity. Economic recovery decelerated with the arrival of the second wave of the coronavirus pandemic, and the introduced latest significant containment measures may result in a protraction of the restoration of economic growth.

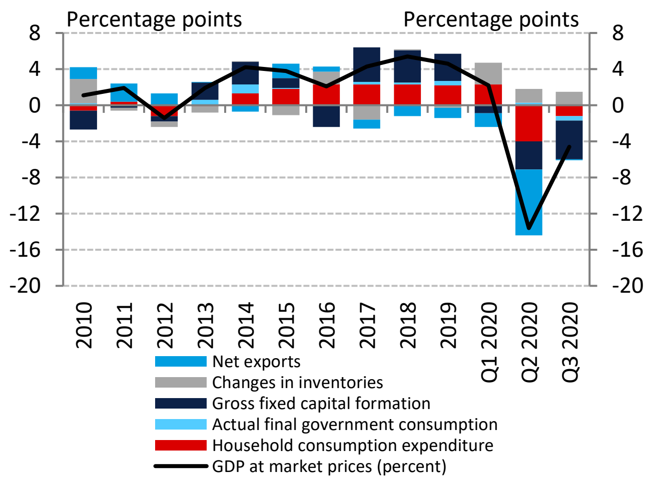
Chart 3-20: Change in Q1-Q3 GDP and level of government stringency



Note: Countries of the European Union, South Korea and the United States.
Source: Oxford University, Eurostat

In 2020 Q3, based on seasonally unadjusted data, gross domestic product declined by 4.6 percent year-on-year, while compared to the previous quarter GDP expanded by 11.4 percent, with seasonal adjustment. The strong adjustment was supported by the quick recovery in the significant vehicle industry, whereas construction and the transportation and warehousing sector did not yet show signs of recovery. After the spring containment measures were lifted, temporary improvement was observed in tourism, catering and entertainment as well, but this came to a halt by September. On an annual basis, the performance of the Hungarian economy declined to a slightly greater degree than the European average. The coronavirus pandemic forced European countries to apply restrictions at different points in time. Looking at the first three quarters as a whole, compared to the countries in the region and the developed countries, output in Hungary fell in proportion to the restrictive measures taken (Chart 3-20).

Chart 3-21: Contribution to annual change in GDP

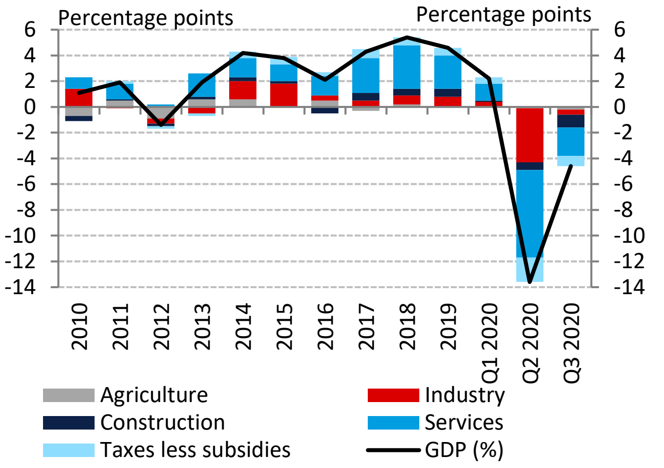


Note: Actual final government consumption includes social transfers in kind from government and NPISHs.
Source: HCSO

From the expenditure side, the performance of the economy was weaker than last year mainly as a result of a decline in investment. This decline in investment was broadly based, with all three sectors (corporations, households, government) contributing to the downturn. By contrast, the positive change in inventories attenuated the contraction of the economy. The decline in services trade continued to played a major role in the decrease in net exports, as the balance of goods exports made a positive contribution to output (Chart 3-21).

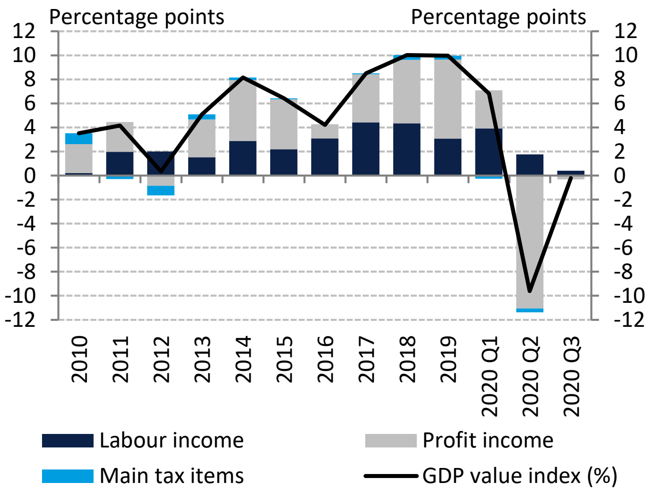
Household consumption expenditures only declined to a small degree in a European comparison. The comparatively favourable performance in consumption was supported by the relatively mild labour market reaction to the first wave of the crisis, with support coming from the Government's job protection measures,

Chart 3-22: Decomposition of change in production side GDP



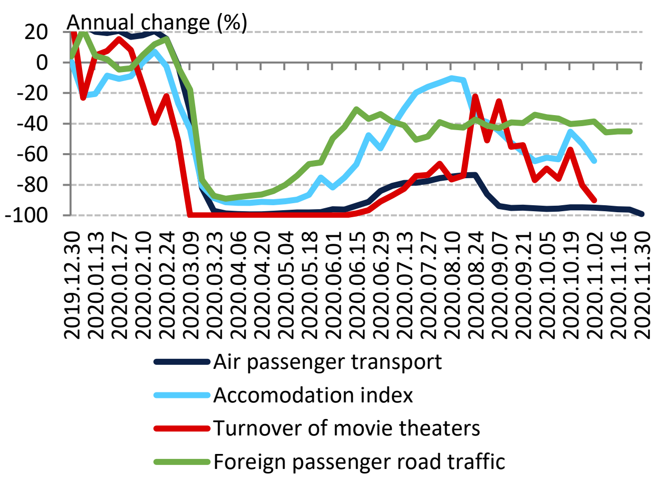
Source: HCSO

Chart 3-23: Decomposition of change in income side GDP



Source: HCSO

Chart 3-24: Indicators of tourism demand



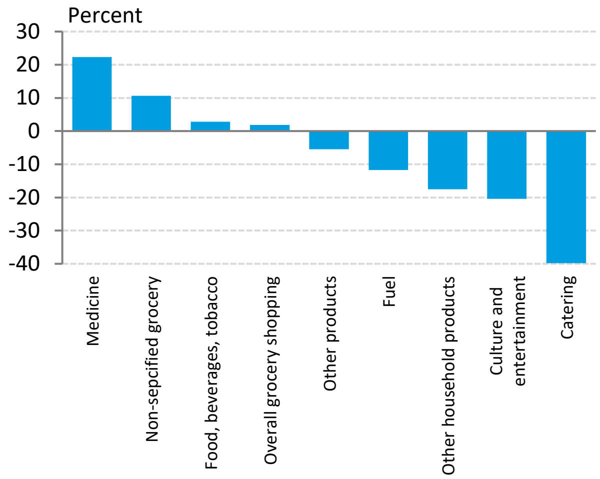
Source: Budapest Airport, Association of Movie Distributors, NTPS Plc. Business Intelligence, MNB estimation based on HCSO and Hungarian Tourism Agency

the continued functioning of the credit market and the loan repayment moratorium.

With the lifting of restrictions, lending for housing picked up again during the quarter. In 2020 Q3, household loans outstanding vis-à-vis the financial intermediary system expanded by HUF 298 billion as a result of transactions, corresponding to an annual increase of 14 percent. Amortisation, which declined due to the payment moratorium, and the still-high volume of prenatal loans granted contributed significantly to the expansion in the stock. During the quarter, young married couples concluded prenatal loan contracts amounting to HUF 154 billion, and thus this product already accounts for some 12 percent of the household loans outstanding of the credit institutions sector. Following the lifting of the isolation measures, the housing loan market gradually picked up, with the quarterly issue exceeding the level of the same period of the previous year by 9 percent, whereas the personal loan market still falls significantly short of its size observed prior to the coronavirus. In line with the normalisation of the housing market, in 2020 Q3 84 percent of the banks in net terms reported an increase in demand for housing loans within the framework of the Lending Survey, and a net 10 percent of them expect further strengthening in the next half year. On the whole, responding institutions did not perceive any change in demand for consumer loans, but looking ahead to the next 6 months, a net 29 percent of banks already expect an upturn. State-subsidised credit programmes (Home Purchase Subsidy Scheme for Families, Prenatal Baby Support Loan) may support household lending in the coming period as well.

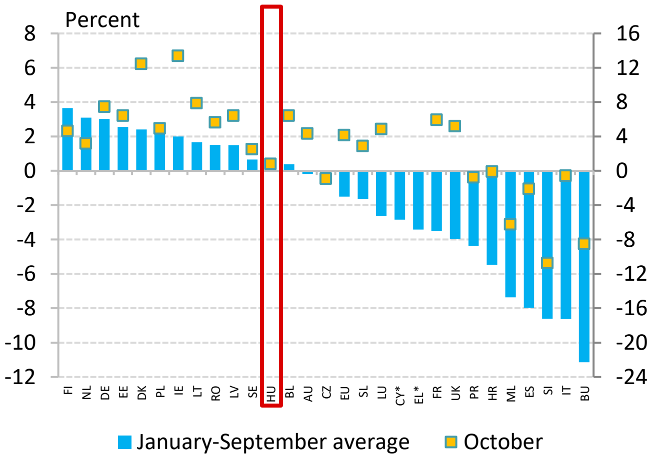
On the production side, construction, transportation, warehousing as well as accommodation and food services performed especially weakly, while the downturn was mainly moderated by the growth in information and communication as well as financial services (Chart 3-22). Of the sectors that suffered the largest downturn in Q2, the recovery in industry and public services was especially spectacular. In the case of industry, this was attributable to the recovery in the supply chains that were disrupted in the first, acute phase of the pandemic and of the vehicle industry, while public services were supported by the restarting of state healthcare services. In addition, the performance of accommodation and catering services, which are linked to tourism, as well as of art, entertainment and other services sectors also improved considerably. By contrast, the performance of construction declined further in parallel with the decrease in construction investment,

Chart 3-25: Evolution of turnover in retail trade and catering in November 1-20



Note: Compared to the same period of last year.
Source: HCSO

Chart 3-26: Retail sales volume in the European Union 2020 Q1-Q3 and October



Note: Seasonally adjusted data, annual change. *No data for October.
Source: MNB based on Eurostat

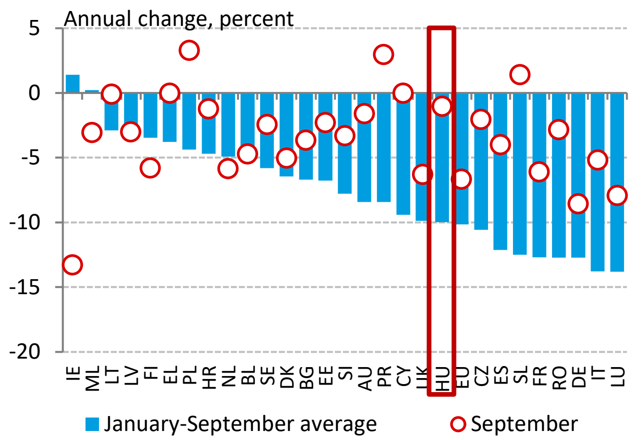
while the transportation and warehousing sector was also unable to achieve significant improvement compared to Q2. In view of the considerable increase in working at home, unlike the majority of sectors, the information and communication sector was able to expand (+5.3 percent).

In Q3, GDP was close to its nominal level seen a year earlier, which was mainly attributable to the adjustment that took place in profit incomes. Employee compensations increased slightly year-on-year, also supported by the mild labour market reaction to the crisis, the rise in wages and the job protection measures (Chart 3-23).

Partial adjustment of the tourism sector and the entertainment industry was observed in the summer months as a result of the easing of the restrictions, but the performance of these sectors reversed with the second wave of the pandemic (Chart 3-24). In terms of the number of overnight stays, two thirds of the turnover lost in the April low was recovered by July, but in Q3 turnover was still 42 percent below its level from a year earlier. By August, demand of domestic origin for accommodation rebounded to 98 percent of its turnover level from last year, but only a slight correction was observed in the number of foreigners' overnight stays. With the return of restrictions on travel, the number of guests fell again in September. With easing of the restrictive measures, domestic demand in tourism may recover quickly again after the second wave, but the recovery of international tourism might even last for years, which may also be influenced by the changes in consumption and travelling habits due to the coronavirus pandemic. The utilisation of cultural spaces can be approximated by attendance at cinemas, where sales revenue already reached 80 percent of last year's level at end-August, falling again to 10 percent of their last year's turnover level by November. According to the traffic statistics of the Budapest Airport, by August the number of international passengers rose to 25 percent of last year's level, and then in late August and early September, practically in two weeks, the turnover dropped to levels observed during the first, acute phase of the pandemic. The number of foreigners arriving on public roads was around 50–60 percent of last year's figure in Q3 until the beginning of November. As a result of the border closures from 1 September, the recovery of tourism demand may be even slower than previously expected.

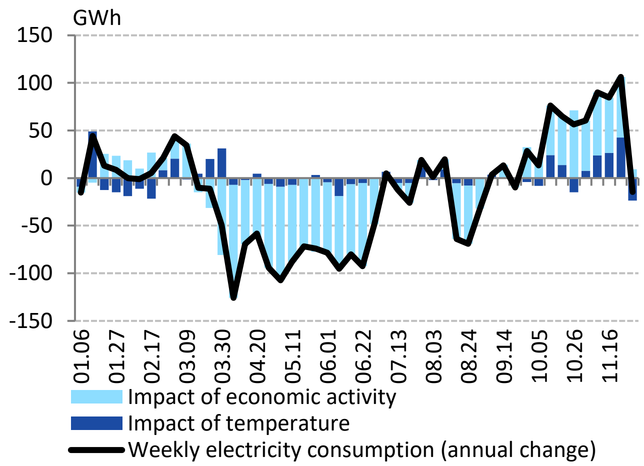
Retail sales reached last year's level by the summer months, but have fallen slightly short of that since then. Negative dynamics have been seen again in the turnover of durables since July, and the growth rate of the sales of

Chart 3-27: Development of industrial production in the European Union in 2020 Q1-Q3 and September



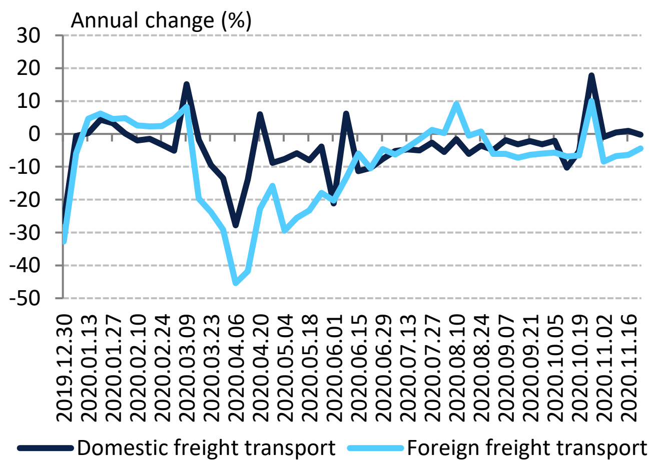
Note: Seasonally and calendar adjusted data.
Source: MNB based on Eurostat

Chart 3-28: Annual change in weekly electricity consumption



Source: MNB estimation based on ENTSO-E

Chart 3-29: Road traffic changes



Source: NTPS Plc. Business Intelligence, MNB calculation

non-durable and semi-durable products also declined. Mail order and retail sales dynamics declined considerably after lifting spring lockdowns, and then started to rise again in August and September. In view of the second wave of the pandemic, a restructuring in retail sales similar to the spring period is expected for the last months of the year, with greater emphasis on the online space. In October, the volume of retail trade was down by 2.4 percent (-1.6 percent in September) compared to the same period of 2019. At the same time, vehicle and vehicle parts sales shrank again in October (-18.2 percent) and the impact of the second wave of the coronavirus is already reflected in the sales in catering as well (-39.8 percent until 27 November) (Chart 3-25).

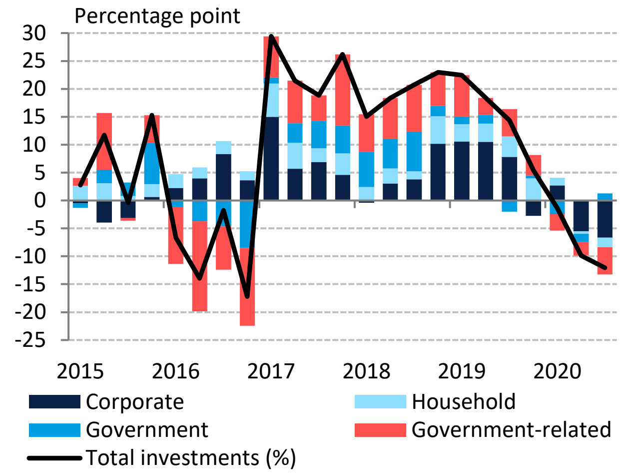
According to available international data, the change in Hungarian retail sales ranks in the middle of the field of European countries for the year to date. On the whole, in the first three quarters of 2020, retail sales in Hungary expanded slightly, edging up 0.5 percent year-on-year, and thus Hungary is situated in the middle of the range of European countries (Chart 3-26).

In industrial production, following the shutdowns of the largest domestic vehicle manufacturing plants in April and the significant deterioration in global economic prospects, a major adjustment occurred and the volume of production in Q3 was only 2.6 percent below its level seen one year ago (Chart 3-27). The improvement in industrial performance across Europe was typically attributable to the adjustment of the sectors that produce for external markets. Vehicle manufacturing, which has a high weight, was also able to expand from August, and in September it exceeded the level observed one year earlier by 7.8 percent. Hungarian export sales were already slightly above last year's level in September, and export orders also rebounded. Based on the preliminary raw data, industrial production exceeded last year's level by 0.6 percent in October.

Energy consumption data suggest that industrial capacities were not impaired during the first wave of the pandemic, and energy consumption has mostly exceeded last year's level since end-September (Chart 3-28). In spite of the adjustment observed in industrial output, nearly one third of the largest export companies perceived a lack of demand, which may hinder an increase in their production. In the longer run, the recovery of industrial production is essentially determined by the pattern and rate of the recovery of the global economy, manufacturing companies' position within the supplier chains and the changing consumer trends.

The volume of goods transport by road may be indicative of domestic industrial performance as well as changes in logistics (forwarding, warehousing), reflecting a protracted recovery of the sectors (Chart 3-29). Goods transport of foreign origin, which had declined considerably due to the pandemic, adjusted by August, but in the autumn months the activity observed in forwarding was once again weaker than in the previous year. The downturn in domestic goods transport by road was more moderate, but adjustment was also more restrained in the summer months. The surge in goods and passenger traffic at end-October was a result of a calendar effect (All Saints' Day fell on a weekend). During the autumn months, traffic of foreign origin and domestic origin fell short of last year's performance by 5 percent and 1 percent on average, respectively. The recovery of the sector took place in line with the upswing in industrial production, but the autumn traffic, which is lower than last year's levels, may indicate a disruption in the recovery.

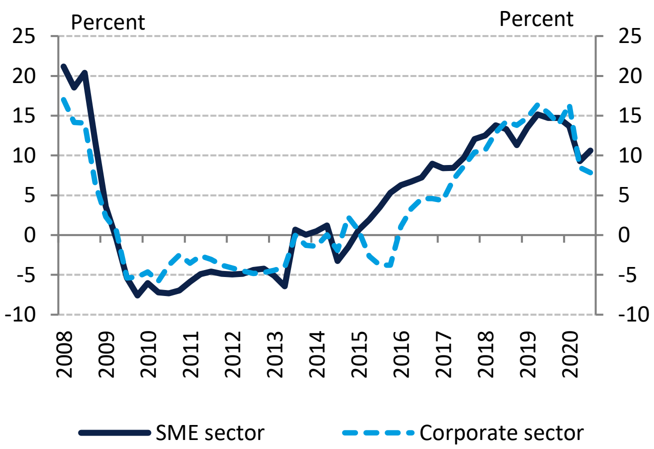
Chart 3-30: Decomposition of the annual change in investments



Source: HCSO

The decline in the volume of whole-economy investment that started in Q2 continued in Q3 as well. Investment activity declined by 12 percent year-on-year (Chart 3-30). The downswing was mainly attributable to the drop in construction investment, while investment in machinery and equipment decreased moderately. In 2020 Q3, investment by the state and by companies related to the state continued to decline in year-on-year terms, whereas households' investment activity may have decreased to a lesser extent.

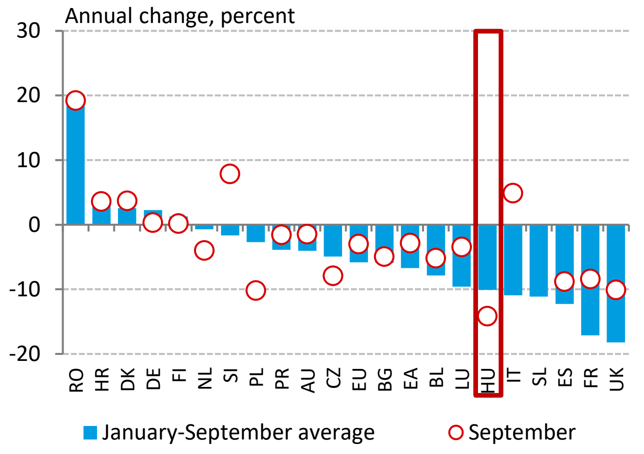
Chart 3-31: Annual changes in lending to non-financial corporates and SMEs



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

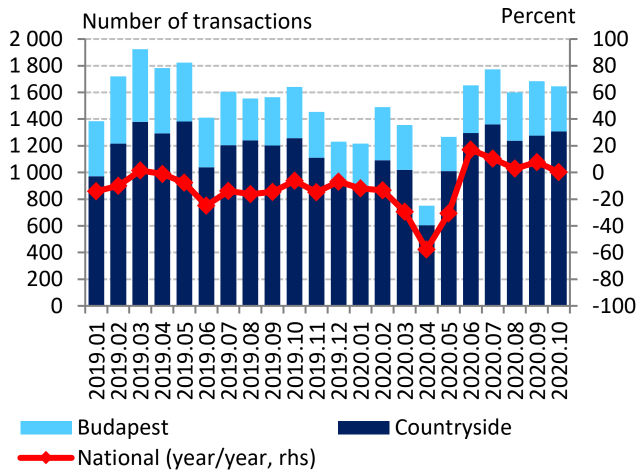
Corporate loan dynamics reached nearly 8 percent in Q3. In the balance sheet of the entire financial intermediary system, corporate loans outstanding increased by HUF 305 billion in 2020 Q3, and thus the annual growth rate amounted to 7.9 percent (Chart 3-31). Within corporate lending, based on preliminary data, the annual growth rate of SME loans outstanding was 10.6 percent in September, significantly supported by the contracts amounting to some HUF 570 billion concluded during the quarter within the framework of the FGS Go! In 2020 Q3, broad-based growth took place, with the largest increase in stock in the real estate, trade and vehicle repair sectors. In net terms, half of the banks participating in the Lending Survey reported rising demand in the quarter. In all company size categories as well as in the case of shorter- and longer-term loans, they experienced an upswing in demand, and looking ahead to the next half year banks expect a further upturn in demand. At the same time, a fall in the demand for commercial real estate loans was indicated by 15 percent of the banks in net terms in the

Chart 3-32: Development of production in construction in the European Union in 2020 Q1-Q3 and September



Note: Seasonally and calendar adjusted data.
Source: MNB based on Eurostat

Chart 3-33: Monthly number of transactions completed by housing market intermediaries



Source: MNB, Housing intermediary database

quarter, and they also do not expect any major change in demand in this market segment in the future.

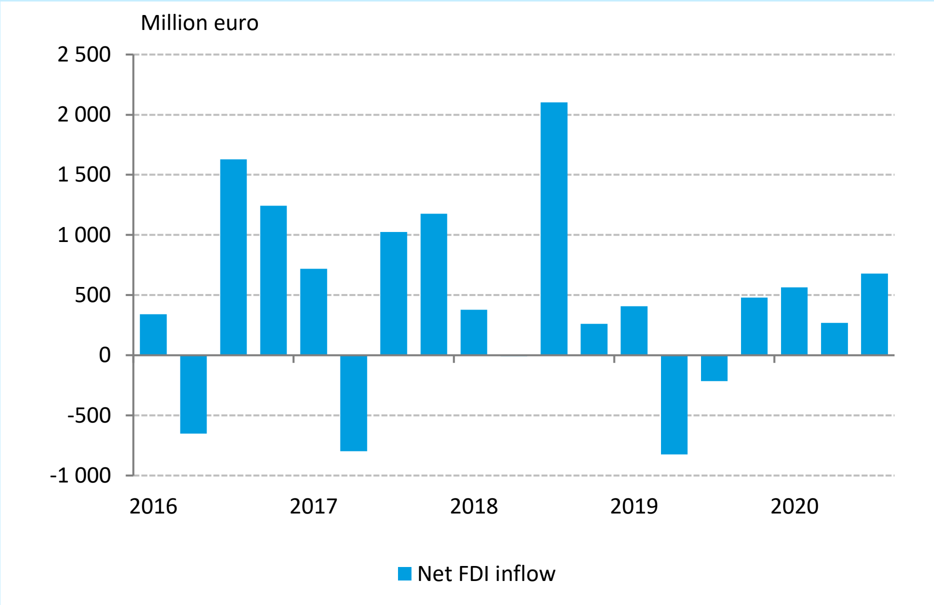
In 2020 Q3, the volume of construction output declined by 16.5 percent year-on-year, exceeding the drop in Q2. Within the two main construction groups, the construction of buildings fell by 15.0 percent, while other construction dropped by 17.5 percent. Based on available European data, construction output growth in Hungary between January and September was below the European average (Chart 3-32). In September, the volume of output contracted by 14.7 percent year-on-year, while the construction contract portfolio at the end of the month was 16 percent below its level from a year earlier. The construction contract portfolio has been steadily declining since April of last year: this is primarily attributable to the fall in the volume of contracts for other structures mainly related to the state.

The number of housing market transactions increased considerably in the summer, but in October the upswing in the housing market came to a stop in the capital. The spread of the first wave of the coronavirus pandemic and the related containment measures resulted in a sudden, drastic fall in market activity; far fewer transactions occurred in April compared to the same period of 2019. Following the April trough, the domestic housing market gradually picked up, and in the summer months the number of sales contracts concluded by housing market intermediaries already exceeded the values seen a year earlier (Chart 3-33). In October 2020, however, the upswing in the housing market experienced in the previous months came to a stop in the capital. In October, the number of transactions fell by 11.9 percent year-on-year in Budapest, while it increased by 4.0 percent in the country. The decline in sales and purchases in the capital may already have been attributable to the wait-and-see attitude due to the home creation measures announced in October. In 2020 Q2, according to the values of the MNB housing price index, domestic housing prices were up by 2.3 percent in nominal terms on a national average, whereas a major decline of 5.6 percent was observed in Budapest. According to preliminary data, the increase in housing prices continued in Q3 by some 2.2 percent on a national average, while a slight decline of 0.3 percent was observed in the capital.

Box 3-2: New FDI announcements of the past period

In spite of the uncertainty caused by the pandemic, FDI inflows to Hungary continued in recent quarters as well. The coronavirus pandemic and the ensuing economic crisis resulted in significant uncertainty for economic agents. Many companies' revenue declined in the unfavourable environment, and thus planned investment projects may be postponed or even cancelled. Nevertheless, Hungary has remained an attractive destination for foreign investors: net FDI inflows were positive in all the three quarters of 2020 (Chart 3-34).

Chart 3-34: Net FDI inflows



Source: MNB

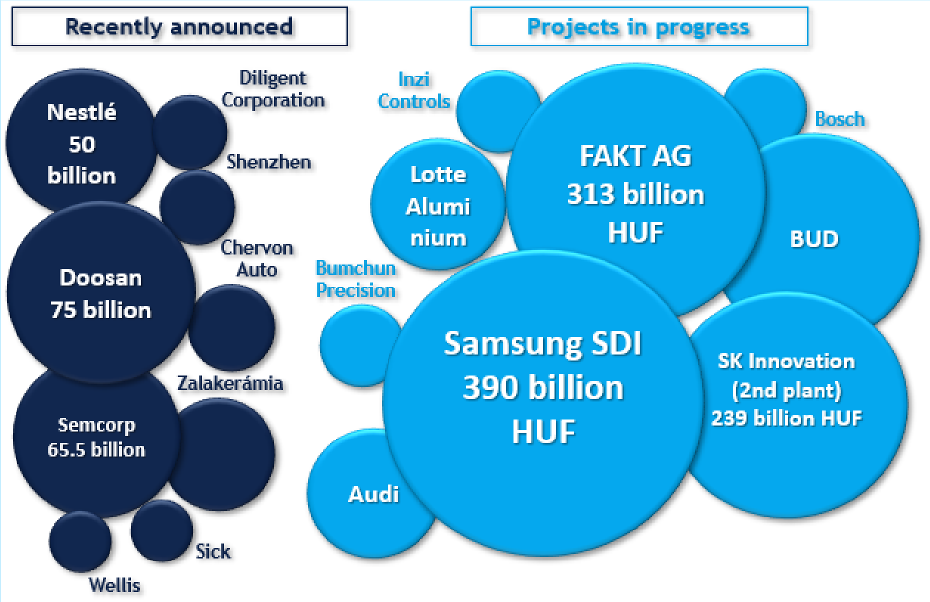
Various new large investment projects were announced in the past months that will contribute to the expansion in corporate investment from next year. There are several high-volume developments underway right now in the vehicle industry, especially in the field of electromobility. In addition to the battery factories (SK Innovation, Samsung SDI, GS Yuasa, Inzi Controls) that are being built in Hungary, there is an increasing number of investment projects allowing the manufacturing of parts needed for batteries or for the manufacture of electric cars.

The value of new investments announced in Q4 exceeded HUF 280 billion, more than 60 percent of which is for development projects in the vehicle industry (Chart 3-35). The South Korean company Doosan opened its first European factory in Hungary this year. Reacting to the increasing demand for electric vehicles and batteries, the leaders of the company decided to build another factory in Europe, choosing Hungary again as its location. This project, worth HUF 75 billion and to be implemented by 2022, creates 200 new jobs and results in a two and a half times increase in the capacity to produce red copper foil needed for battery production.

The new development projects related to the vehicle industry further strengthen Hungary's position in the field of electromobility. Semcorp, based in Shanghai, is establishing its first factory outside China, investing HUF 65.5 billion in Hungary. Separator foils for batteries of electric cars will be produced in Debrecen. This investment will create 440 new jobs. Similarly to Semcorp, Chervon Auto also chose Hungary to be the location of its first plant outside China. Parts for traditional as well as electric and hybrid vehicles will be manufactured in this factory that will be built for HUF 17.5 billion in Miskolc. The project will create 150 new jobs. Another Chinese company, Shenzhen Kedali Industry will spend HUF 11 billion on the construction of its plant in Hungary, where battery components will be produced. In view of the increasingly strict environmental regulations, the automotive industry will change significantly in the future, with alternative technologies becoming more and more important as opposed to traditional drive systems. In addition to the already implemented and ongoing investment projects in the vehicle industry, these new projects will further strengthen Hungary's position in the field of electromobility.

Not only vehicle industry companies decided on development projects in the past period. Nestlé Hungária announced in October that it expand its pet food production centre in Bük, investing HUF 50 billion. The project will be the largest investment of the company, creating 160 new jobs. In addition to factory constructions and capacity expansions, a significant project is being brought to the services sector as well. The US Diligent Corporation, which deals with corporate governance systems, is setting up a new global product innovation centre in Budapest, spending HUF 11.3 billion. The project creates 300 new jobs that require a higher education qualification, supporting Hungary's effort that new investment projects should represent an increasingly high added value.

Chart 3-35: Recently announced large investment projects



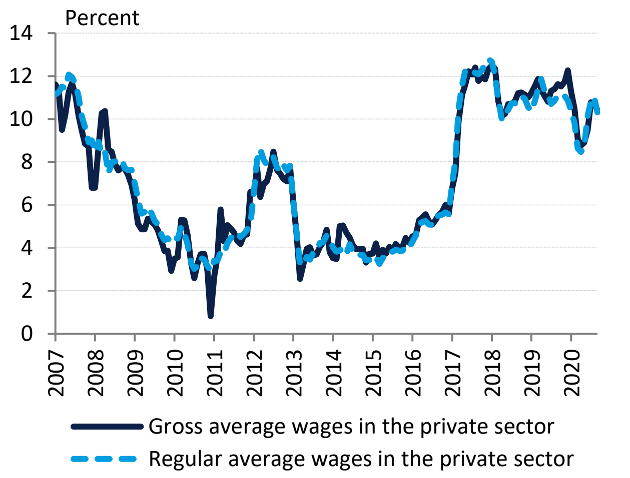
Note: The size of the bubbles expresses the size of the total value of the projects.
Sources: HIPA, press information

In addition to the ongoing investment projects, the announced new projects will contribute to the expansion in corporate investment starting from next year. Factory constructions and capacity expansions not only contribute to the increase in investment, but Hungary's export capacities will also increase following the completion of the developments. The rise in exports may result in an increase in Hungary's export market share as well. Accordingly, investment projects contribute to economic growth over the longer term as well.

3.3 Labour market

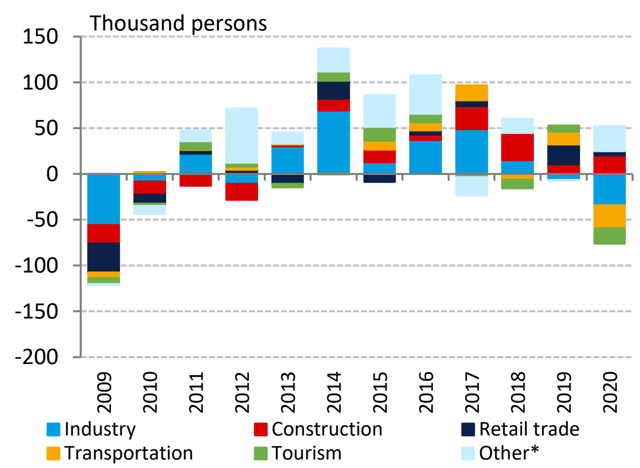
In 2020 Q3, gross average earnings in the private sector rose 10.4 percent year-on-year. Developments in waging continue to be affected by statistical distorting effects, although their degree declined compared to Q2. In Q3, the average number of those employed in the whole economy amounted to 4.486 million, which was only 35 thousand people less than in the same period of last year. The negative economic impact of the second wave is already reflected in the decline in the number of employees in October. In November, especially the expectations concerning employment in the services sector worsened.

Chart 3-36: Annual change in gross average wages in the private sector



Note: Quarterly moving averages.
Source: HCSO

Chart 3-37: Decomposition of annual changes in private sector employment



Note: *Agriculture, other industry and market sector branches. For 2020, data for are available Q1 – Q3.
Source: HCSO

3.3.1. Wages

In 2020 Q3, gross average earnings in the private sector rose 10.4 percent year-on-year, slightly exceeding the Q2 average (Chart 3-36). Regular average earnings rose 10.3 percent year-on-year, and thus bonus disbursements were not much different from the degree recorded in the previous year.

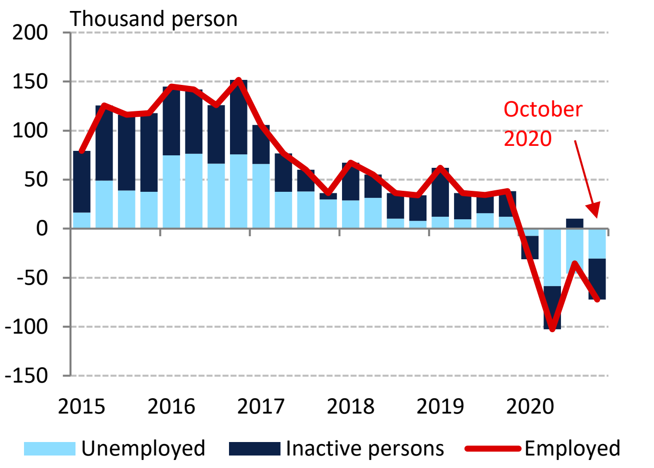
Within the private sector, wage growth accelerated in the processing industry and slowed in the market services sector compared to the first quarter. On an annual basis, wages rose 9.6 percent in the processing industry and 11.2 percent in the market services sector in 2020 Q3. Annual wage growth in the services sectors most impacted by the pandemic (accommodation and food service activities; other services) declined to below 6 percent.

3.3.2. Employment and unemployment

Companies adjusted to the changing economic circumstances due to the first wave of the coronavirus mainly by reducing their employees' working time (number of hours worked), but with layoffs as well (for more details, see Box 3-3). In Q3, however, the number of hours worked already showed a significant correction, and the adjustment eased both in terms of working hours and headcount.

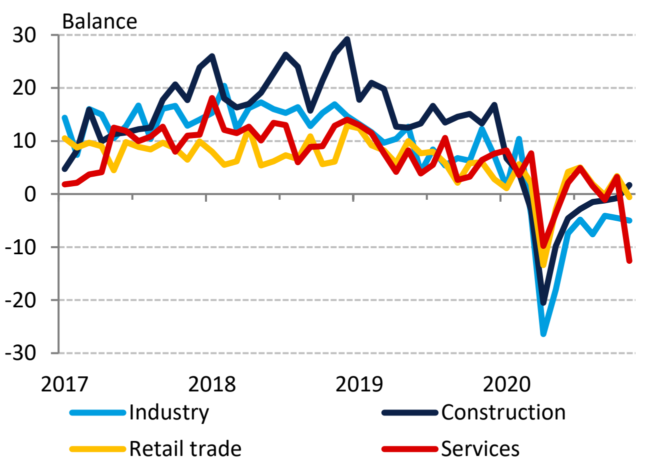
According to the Labour Force Survey, employment in 2020 Q3 was only 35 thousand lower than in the same period of last year. The average number of whole-economy employees was 4.486 million in these months. The number of fostered workers and those employed at places of business abroad declined by 16 thousand and 21 thousand, respectively, in year-on-year terms. Private sector employment was down 0.4 percent year-on-year, but increased by 2 percent compared to the previous quarter. Within the private sector, the headcount increased in construction, trade and the IT and communications sector year-on-year, while it declined in manufacturing and certain market services (tourism, transportation) (Chart 3-37). In Q3, the number of employees in construction, trade, manufacturing and the transportation sector amounted to 368 thousand,

Chart 3-38: Decomposition of annual changes in whole-economy employment



Note: Instead of 2020 Q4, monthly data for October is available. Changes in the number of unemployed and economically inactive have the opposite sign. Source: HCSO

Chart 3-39: Employment expectations in the ESI business survey



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

585 thousand, 962 thousand and 267 thousand people, respectively.

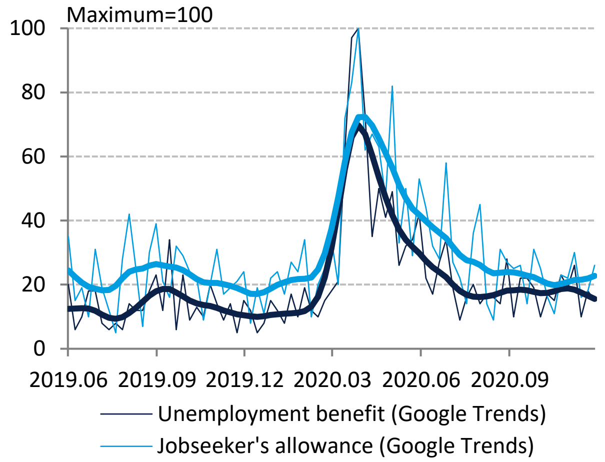
In October 2020, total employment fell to 4.451 million, representing a year-on-year decrease of 72 thousand (Chart 3-38). The seasonally adjusted unemployment rate declined from 4.4 percent in Q3 to 4.3 percent in October. Unemployment in Hungary is still considered low in an international comparison.

As in the case of the first wave of the pandemic, the decline in employment did not entail a rise in unemployment. As a result of the statistical methodology applied, job losers temporarily increased the number of inactive and not the unemployed (see Box 3-3). 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 start work within 2 weeks.

The ESI business survey – which monitors economic sentiment – also projects a decline in employment in Q4. In October, employment expectations for the next 3 months still showed a mixed picture of the sectors, but prospects already worsened significantly in November, especially in the services sector (Chart 3-39). Companies are planning minor downsizing in manufacturing and trade.

As opposed to the previous indicators, the negative impacts of the second wave have not yet been reflected in the Google searches related to unemployment and in the number of jobseekers (Chart 3-40). The Google Trends indicators (unemployment benefit and jobseeker's allowance) peaked at the end of March and the beginning of April, currently standing close to the historical average. Following the peak in June, the number of registered jobseekers declined steadily, although in November it was still 57 thousand higher than a year earlier.

Chart 3-40: 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

Box 3-3: Labour market adjustment during the first wave of the pandemic

With the emergence of the coronavirus pandemic, the economic situation changed quickly and thus companies also had to adapt in the labour market within a short time. There are various channels of adjustment. A more permanent deterioration in profitability is expected in the case of reducing the headcount, whereas cutting working hours tends to indicate a shorter-term, temporary fall in corporate profits. Based on data from the past period, we provide an overview of the changes in the labour market which were triggered by the first wave. **The sudden stoppage of the economy forced some of the companies to dismiss employees, with employment reaching its low in April.** According to the Labour Force Survey, the number of employed in the whole economy decreased to 4.368 million people, down 136 thousand fewer than compared to one year earlier. The majority of job losers qualified as inactive in statistical terms, and not as unemployed, because due to the restrictions on movement they were not able to seek jobs in an active manner. During the subsequent months, with the return of the inactive to the labour market, employment quickly adjusted, and thus only declined by a 103 thousand people on average in Q2, in year-on-year terms.

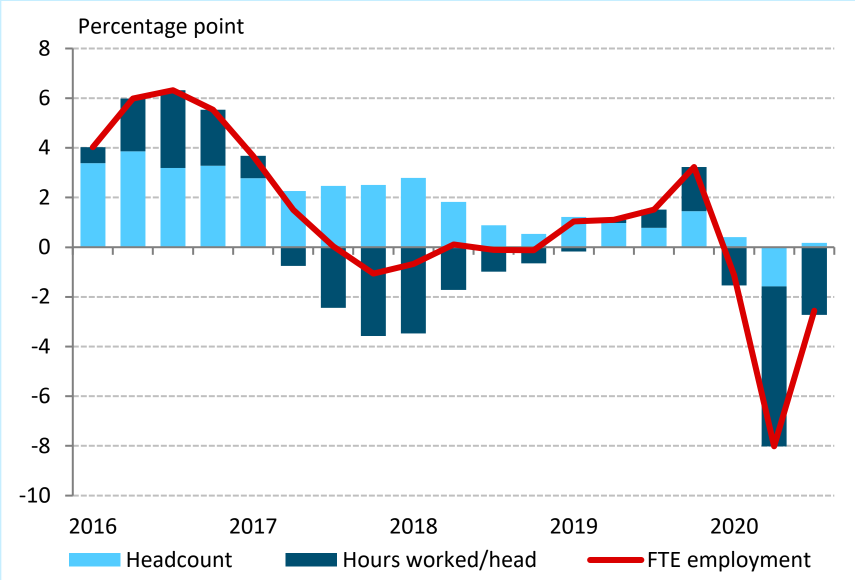
The employment impacts were mitigated by the Government's labour market programmes, with wage subsidies providing support for the employment of nearly 280 thousand people in total. Applications to the programmes were closed at end-August, and companies could apply for subsidy for a maximum of 3 months to preserve jobs and for up to 6 months to create new jobs. The highest demand was seen for the job protection subsidy for reduced working time: companies applied for support for roughly 207 thousand employees between April and August. During times of economic downturn, it is of paramount importance not to let the labour market suffer permanent employment losses, which would hinder a recovery going forward. By supporting the preservation of jobs, economic policy directed the private sector towards the reduction of working hours.

Labour market adjustment was mostly reflected in shortening the working time during the first wave. Depending on their profit situation, companies strived to retain their employees, preferring to reduce the number of hours worked. In Q2, many stayed away from their jobs, i.e. did not work at all (worked 0 hours) in the reference week. According to the Labour Force Survey, they qualify as employed, as they were only temporarily absent from work. Examining the reasons for absence, for economic or other, unknown reasons their number was 168 thousand greater than one year before. In addition, the number of part-time workers also increased by some 49 thousand people.

Full-time equivalent (FTE) employment for the domestic private sector declined by 8 percent in Q2, of which the fall in working hours per person and the decline in headcount accounted for 6.4 percentage points and a mere 1.6 percentage

points, respectively (Chart 3-41). As a consequence of employment for fewer working hours, the number of employed – expressed as a number of persons – does not provide a full picture of labour utilisation of the private sector. By contrast, the FTE employment figure shows how many full-time employees' work (40 hours per week) was performed by those employed on the basis of the hours worked. A considerable difference between headcount and FTE employment can evolve if the number of working hours per person changes significantly.

Chart 3-41: Decomposition of the annual change in full-time equivalent (FTE) employment



Note: Private sector, excluding cross-border workers.
Source: MNB estimation based on HCSO data

As the first wave of the pandemic faded, labour market adjustment also eased significantly, but the second wave is resulting in the stoppage of the recovery. Following -8 percent in Q2, the annual change in FTE employment amounted to -2.6 percent in Q3. The labour market situation was characterised by rapid improvements both in terms of working hours and headcount. Nevertheless, companies whose profit situation weakened in the spring period face weakening demand for services and consumer durables once again, which may entail renewed intensification of labour market adjustment as government measures are phased out. The new measures supporting the retention of labour announced to date can be utilised in a targeted manner, only for a narrower range of sectors.

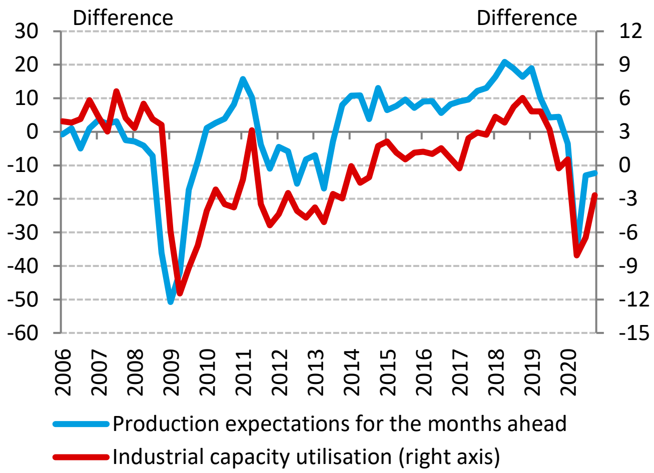
3.4 Cyclical position of the economy

The fading of the first wave of the coronavirus pandemic resulted in a major correction in domestic GDP in 2020 Q3. In line with this, the cyclical position of the economy is estimated to have improved, although it remains in negative territory. Changes in the cyclical position are surrounded by even greater uncertainty than usual, and the quantification and separation of supply and demand effects poses a major challenge. The capacity utilisation of manufacturing companies improved slightly in Q3. We expect a disruption in the recovery of the domestic economy in Q4, followed by a sustained upturn next year.

Significant adjustment in gross value added was observed in 2020 Q3. In our forecast, we expect GDP to decline again in Q4, but then the recovery of the economy may subsequently continue.

According to our estimation, the cyclical position of the economy improved in Q3, but it is still in negative territory. With the adjustment in demand, the output gap may have declined considerably compared to the previous quarter. Developments in the 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. Deteriorating income prospects and the decline in global demand typically influence developments in GDP from the demand side, while factors such as the closure of cinemas and theatres due to the lockdown and social distancing measures exert supply type effects.

Chart 3-42: Capacity utilisation and production expectations in manufacturing



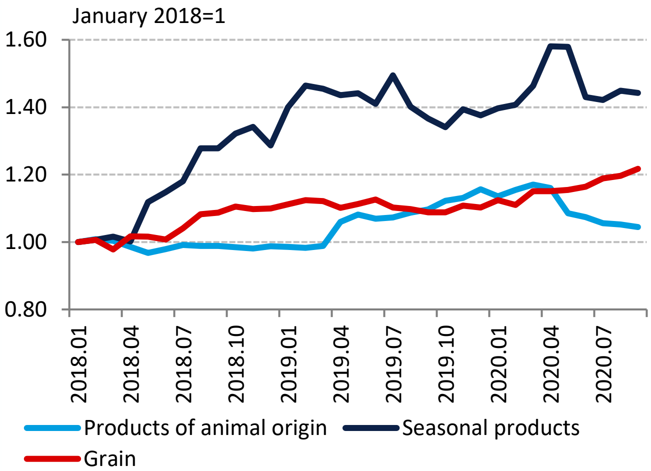
Note: Deviation from historical average
Source: MNB based on ESI

According to questionnaire-based surveys, capacity utilisation at manufacturing companies improved slightly in 2020 Q3, but remains at a low level in Q4 as well, in line with part-time operations and the decline in global demand (Chart 3-42). Despite the favourable Q3 data, the prospects for global economic performance weakened somewhat owing to the pandemic. Moreover, the related uncertainty also rose sharply. In line with this, domestic manufacturing companies' future production expectations rose in Q3, whereas adjustment is already seen in Q4. The recovery of the economy is expected to be disrupted, and activity will temporarily weaken again in the coming months. 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

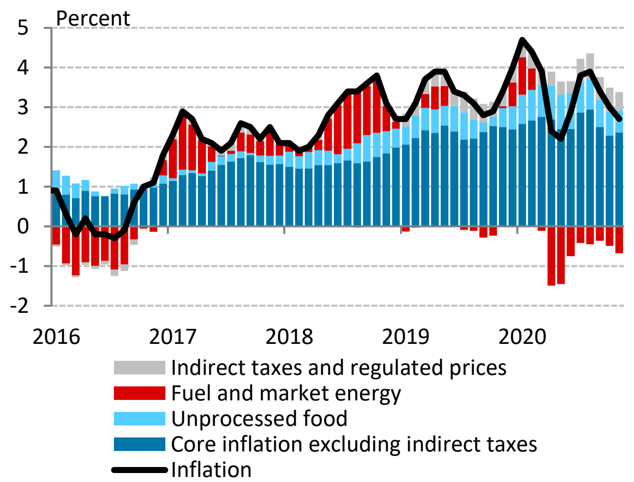
From an average of 3.7 percent in Q3, the rate of price increases fell to 2.7 percent year-on-year in November. Pricing decisions have shown higher volatility and an unusual seasonal pattern since the outbreak of the coronavirus. After the higher repricing in the summer months, disinflationary effects strengthened from September. In line with this, the autumn months were characterised by generally lower price dynamics. Following a rate of 4.2 percent in August, core inflation excluding indirect taxes fell to nearly 3 percent in the autumn months. On the whole, the indicators capturing longer-term inflationary trends (the inflation of demand sensitive products as well as sticky-price products and services) also declined in the past months.

Chart 3-43: Development of agricultural producer prices



Note: Based on seasonally adjusted data.
Source: HCSO

Chart 3-44: 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 Q3. In the case of fruits, in Q3 the average producer price increase was around 40 percent year-on-year, which is attributable to the effects of this year's unfavourable weather conditions (frost in the spring followed by rainy weather in the summer). At the same time, this price increase was offset by a large fall in the price of potatoes, and thus, on the whole, the producer prices of seasonal vegetables and fruits rose at a rate below 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 19.1 percent in September. In 2020 Q3, cereal prices increased by nearly 10 percent year-on-year (Chart 3-43).

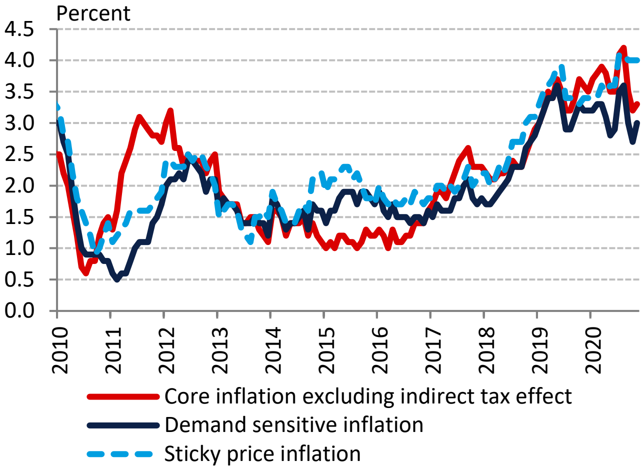
In the case of consumer goods, compared to the same period of the previous year, the rise in domestic industrial producer prices exceeded the historical average until October. However, on a year-on-year basis, domestic sales prices in industry as a whole have risen at a rate lower than the historical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

3.5.2. Consumer prices

From the average 3.7 percent in Q3, the rate of increase in prices declined to 2.7 percent year-on-year in November. Pricing decisions have shown higher volatility and an unusual seasonal pattern since the outbreak of the coronavirus. After the higher repricing in the summer months, disinflationary effects strengthened from September. In line with this, the autumn months were characterised by generally lower price dynamics (Chart 3-44).

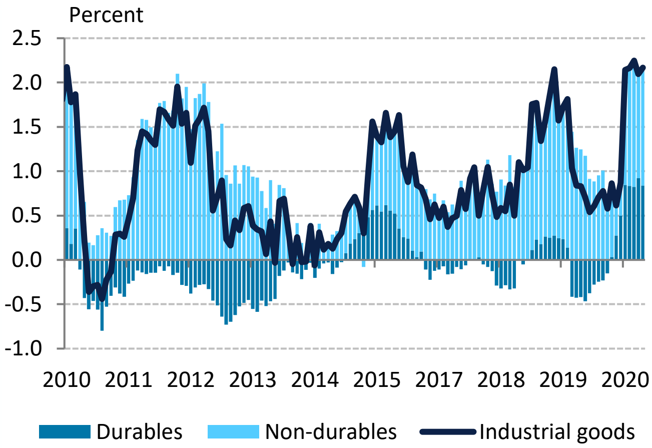
Following 4.2 percent in August, core inflation excluding indirect taxes fell to nearly 3 percent in the autumn months. The decline in the indicator was mainly attributable to lower prices for market services (primarily mobile phone, Internet and domestic vacation services).

Chart 3-45: Underlying inflation indicators



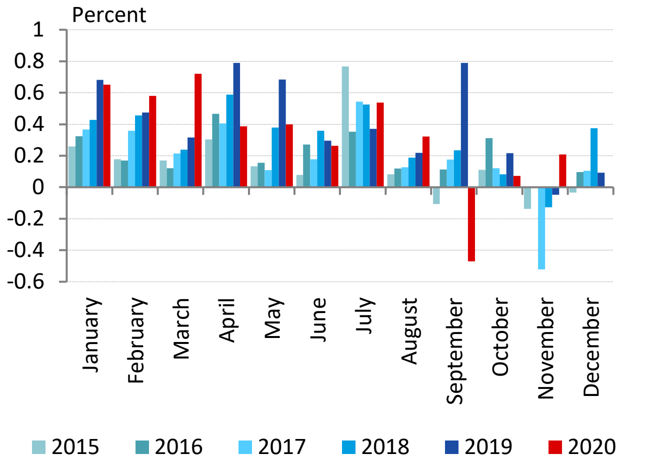
Source: MNB calculation based on HCSO data

Chart 3-46: Inflation of industrial goods



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

Chart 3-47: Monthly price change of market services



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

On the whole, the indicators capturing longer-term inflationary trends (the inflation of demand sensitive products as well as sticky-price products and services) also declined in the past months (Chart 3-45). 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's inflation target in the Czech Republic and Poland, it is within the tolerance band and close to the inflation target in Hungary and Romania (see Subchapter 3-1).

The annual inflation of industrial goods was practically unchanged in the past months. Within this product group, both the inflation of durable and non-durable goods did not show significant changes (Chart 3-46).

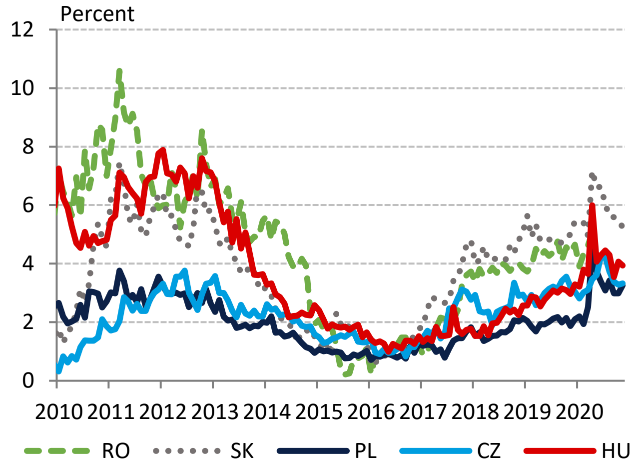
Market services inflation declined significantly in the past months, reaching 3.7 percent on average. The monthly price increase, which was lower than the average of the previous years or was declining, was attributable to the decline in the prices of mobile phone, Internet and domestic vacation services (Chart 3-47). However, in the case of the former product group, we experienced a correction in prices in November. At the same time, the containment measures introduced during the second wave of the coronavirus pandemic reduced the availability of and demand for services as well, the effect of which was also reflected in the prices.

The prices of alcohol and tobacco products rose in the autumn 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 continued to be higher than the historical average, but declining price indices were observed in the case of both processed and unprocessed food. In the case of pork as well as fresh vegetables and fruits, the trends typical of the developments in agricultural producer prices were also reflected in the changes in the consumer prices of unprocessed food. The decline in processed food prices was mainly related to changes in the prices of milk and dairy products.

On the whole, fuel prices declined in the past period. In the past months, the world market price of Brent crude oil was significantly influenced by the fact that – in parallel with the strengthening of the second wave of the coronavirus pandemic – more and more countries

Chart 3-48: Inflation expectations in the region



Note: No data available for Romania since May 2020.
Source: MNB calculations based on European Commission data

announced tighter curbs on travelling. This was only modestly offset by the US presidential elections, the market expectations regarding the outcome of the OPEC+ meeting and news on vaccine development. In addition, inflation in this product group was also lowered by the base effect of last October's fuel price increase.

Regulated prices fell considerably in the autumn months. This was partly attributable in September to the last phase of the extension of free textbooks to all primary and secondary school grades. In addition, free parking was reintroduced in November, and its price-reducing effect was reflected in the development of regulated prices.

Based on data from recent months, inflation was lower than the forecast in the September Inflation Report. This is mainly attributable to a fall in the prices of market services as well as to the lower-than-expected price indices of food and fuels.

3.5.3. Inflation expectations

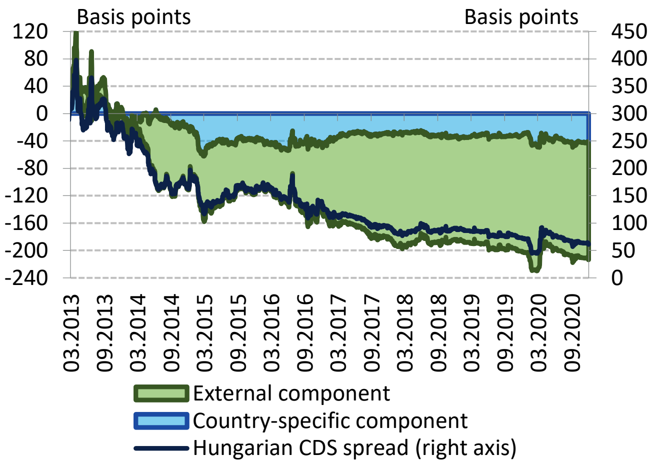
Households' inflation expectations remained practically unchanged in the past period. At the same time, similarly to the consumer price index, indicators that measure households' inflation expectations are more volatile than usual. As observed in Hungary as well, on the whole, households' inflation expectations remained practically unchanged in the countries of the region in recent months (Chart 3-48).

4 Financial markets and interest rates

4.1 Domestic financial market developments

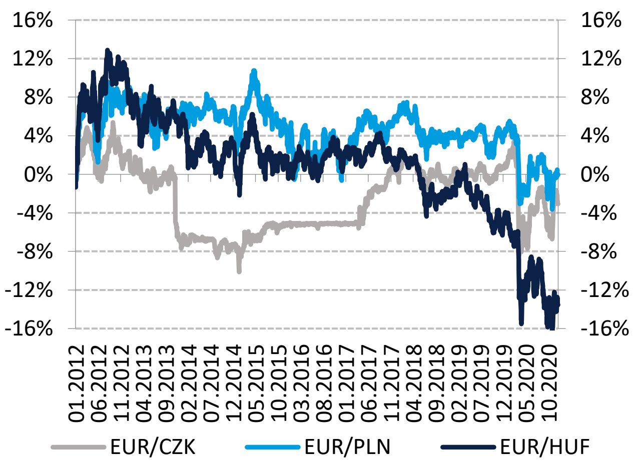
Global investor sentiment was impaired by the autumn wave of the coronavirus pandemic and the uncertainty around the US presidential elections until early November, after which it improved thanks to favourable news regarding the development of vaccines. From a level of 28.5 percent at the beginning of the period, the VIX index rose to nearly 40 percent by end-October, before dropping to 20 percent by the end of the period. The majority of both developed and emerging market stock exchange price indices rose during the period. In spite of the changing international sentiment, the Hungarian credit risk spread fluctuated within a narrow band, declining by 1 basis point on the whole. The 3-month government securities market yield decreased by some 20 basis points, while the 10-year yield dropped 30 basis points. Interbank and government securities market yield curves also shifted downwards over the entire range. Regional currencies weakened further in the uncertain atmosphere at end-October, before adjusting from early November and appreciating on the whole against the euro and the US dollar as well.

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



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

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

Despite variable international investor sentiment, Hungary's credit risk spread fluctuated within a narrow band in the past quarter and declined slightly by the end of the period (Chart 4-1). The CDS spread declined by 1 basis point during the period, with a contribution from the international factor. Thus, the CDS spread is currently around 61 basis points.

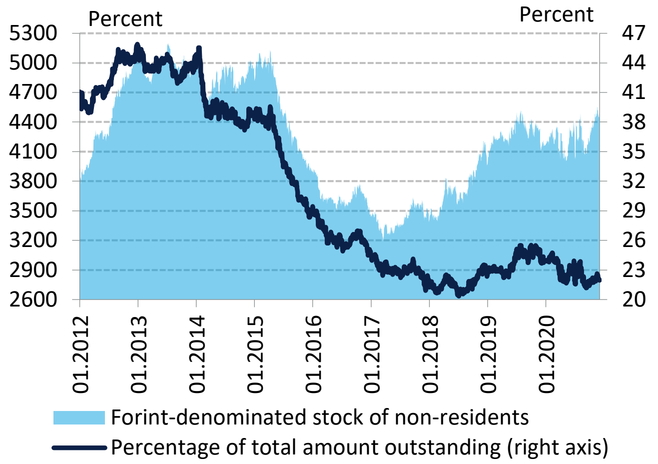
4.1.2. Developments in foreign exchange markets

The forint appreciated by nearly 2 percent against the euro, i.e. to a slightly lesser degree than other currencies in the region. Within the CEE region, the Czech koruna and the Polish zloty appreciated by 3 percent and 2.9 percent, respectively (Chart 4-2). Until end-October, in parallel with the worsening in international sentiment, the forint and the zloty depreciated by 1.7 percent, while the koruna weakened by 1.3 percent. Nevertheless, these currencies adjusted in the second half of the period, and, on the whole, appreciated during the quarter. The forint appreciated by 5.9 percent against the US dollar, while among the regional currencies, it was the zloty and the koruna that appreciated to a greater degree, strengthening by 6.6 percent.

4.1.3. Government securities market and changes in yields

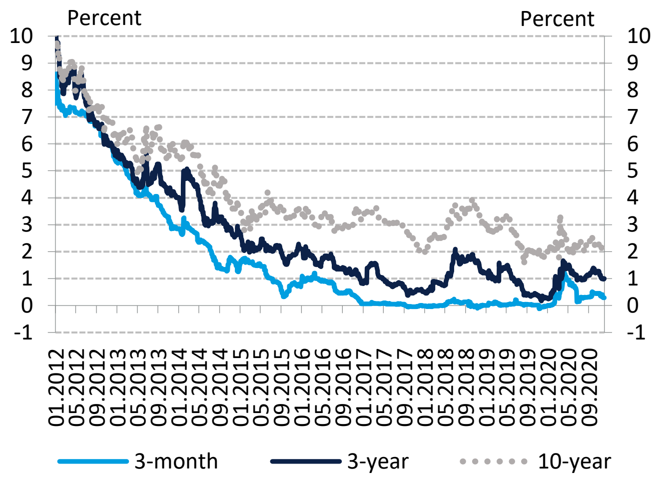
The HUF-denominated government securities holdings of non-residents rose in last quarter (Chart 4-3). Following a decline since 2015, non-residents' HUF-denominated government securities holdings first stabilised and then started to rise in early 2018. Starting from mid-2019, however, they declined, and then, following a rise early this year, they fell sharply as of mid-March. Nevertheless, starting from May 2020, they tended to increase again,

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



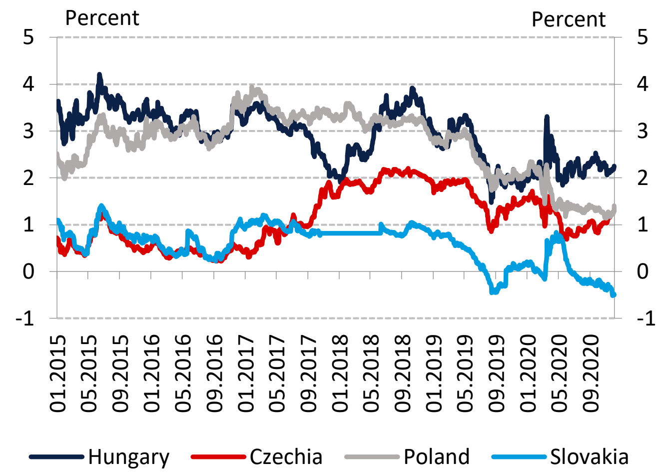
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

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

rising by HUF 312 billion in the past three months. The ownership share within HUF-denominated government securities also rose, reaching roughly 22.1 percent.

At the government bond auctions, the ÁKK mostly accepted offers corresponding to or exceeding the announced volumes. Average auction yields at longer maturities fell in the past quarter. The average yield rose slightly at the three-month auctions and fell to a greater degree at the ten-year ones, thus amounting to 0.39 percent and 2.24 percent, respectively, at the end of the period.

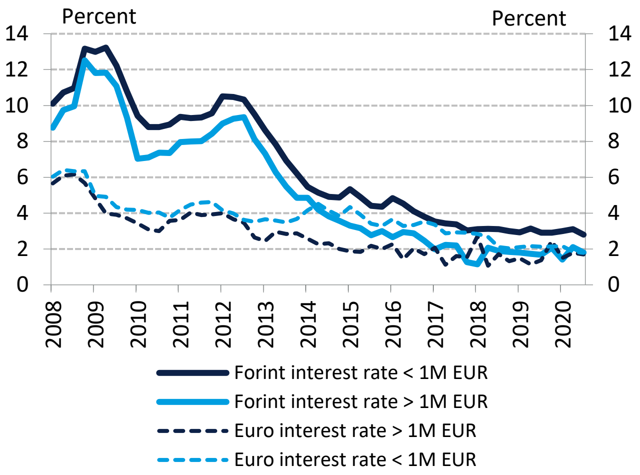
Yields declined on both the shorter and longer sections of the government securities market yield curve (Chart 4-4). The short end of the yield curve declined to a greater degree in mid-November, before decreasing slightly further. Yields declined more strongly at longer maturities at the beginning of November, followed by a slight increase until the end of the period. As a result, yields fell by 22 basis points on the whole. Compared to end-September, the 10-year benchmark yield declined by 30 basis points overall. In the case of interbank yields, the BUBOR stabilised around the level of 75 basis points during the period.

Movements in long-term reference yields were mixed in the region during the period (Chart 4-5). As opposed to the 30-basis point fall in the 10-year forint yield, Czech and Polish long-term yields rose 48 and 3 basis points, respectively. At the same time, the Slovak long-term yield declined by 25 basis points.

4.2 Credit conditions of the financial intermediary system

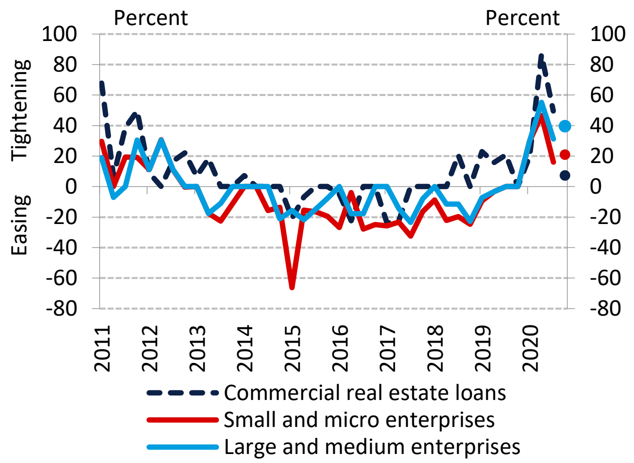
In view of the deteriorating economic outlook caused by the coronavirus pandemic, banks tightened their corporate credit conditions further during Q3, while in line with the normalisation in the housing market the institutions participating in the Lending Survey eased the conditions of housing loans. The average cost of funds of corporate forint and euro loans declined in the period under review, as did that of personal loans, complying with the limit concerning the required APR level. Two thirds of the housing loan contracts concluded during the quarter with interest rate fixation of at least 5 years were certified consumer-friendly housing loans (CCHL), ensuring long-term predictability of the instalments. The real interest rate level declined during the quarter, which is explained by a rise in inflation expectations and a decrease in 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 corporate sub-segments



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for 2020 Q4 and 2021 Q1.
Source: MNB, based on banks' responses

4.2.1. Corporate credit conditions

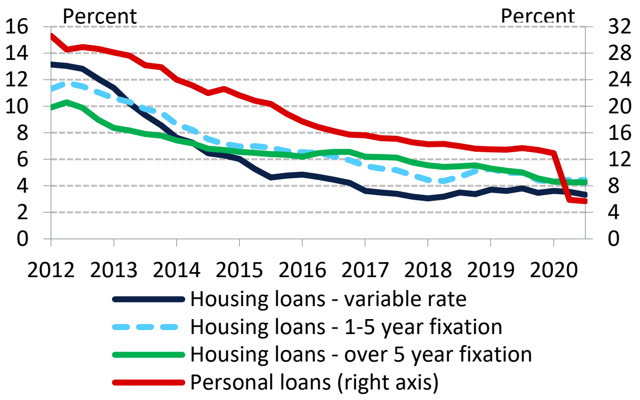
The costs of funds of corporate forint and euro loans decreased slightly in 2020 Q3. The smoothed average interest rate level on new corporate HUF loans – excluding money market transactions – declined by 0.3 percentage point in the case of both low- and high-amount loans compared to the previous quarter (Chart 4-6). As a result, the average interest rate on forint loans was 2.1 percent in September. The interest rate level on low- and high-amount euro loans also declined to the same degree, by 0.1 percentage point, during the quarter. Accordingly, the average cost of funds of euro loans was 1.7 percent at end-September. The larger decline in forint interest rates compared to euro loans is explained by the stronger decrease in forint costs of funds.

Corporate credit conditions tightened further in Q3. In net terms, 31 percent of the banks participating in the Lending Survey tightened the conditions of access to loans in the corporate segment during the quarter, mentioning industry-specific problems and the deterioration in economic prospects as the main underlying factors. Looking ahead to the next half year, a similar proportion of them indicated further tightening, mostly in non-price conditions, such as the minimum required credit score and the maximum size of loan. The highest proportion of them – 50 percent – tightened the standards of commercial real estate loans, but looking ahead to 2020 Q4 and 2021 Q1 already a mere 7 percent of them plan further tightening steps in this segment (Chart 4-7).

4.2.2. Household credit conditions

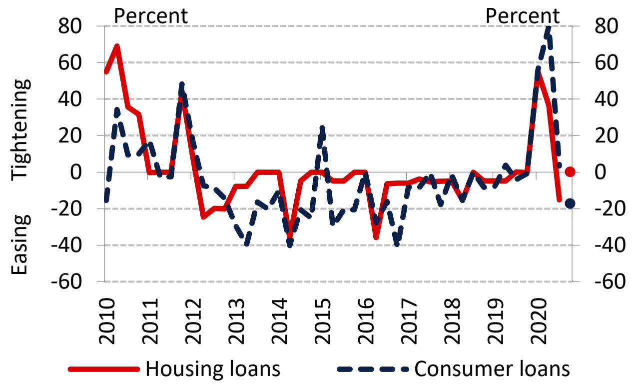
The average APR on housing loans remained unchanged during the quarter. Compared to the previous quarter, the average APR level on housing loans granted in 2020 Q3 remained unchanged in the case of loans with interest rate fixation for both short and long terms, and thus the average APR on housing loans with 1–5 years of interest rate fixation and in the case of loans fixed for more than 5 years amounted to 4.4 percent and 4.3 percent, respectively (Chart 4-8). In Q3, certified consumer-friendly housing loans

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



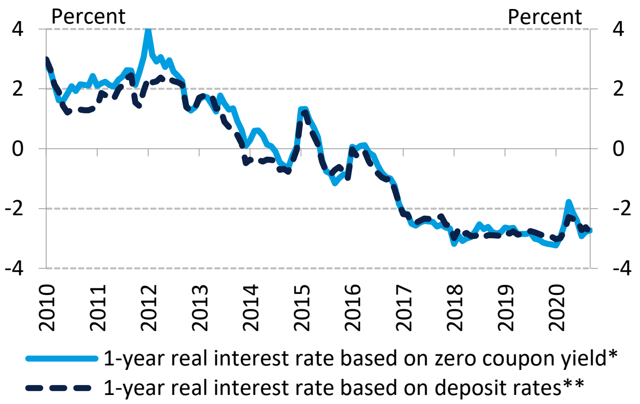
Note: Quarterly average of lending rates on newly disbursed loans. Source: MNB

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 Q4 and 2021 Q1. 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

accounted for 66 percent of the housing loan contracts with interest rates fixed for at least 5 years. In the case of personal loans, complying with the limit concerning the required APR level, banks reduced the average APR to 5.7 percent, and thus the average spread stood at 5 percentage points at the end of the quarter.

Banks eased conditions on housing loans during the quarter. According to responses to the Lending Survey, in net terms 15 percent of the banks eased their housing loan standards, which primarily affected the price conditions and served the achievement of market share goals. At the same time, looking ahead to 2020 Q4 and 2021 Q1, they do not plan to change their respective housing loan standards (Chart 4-9). Banks did not change conditions on consumer loans during the quarter, but looking ahead to the next half year a net 17 percent foresaw easing in line with market share goals.

4.2.3. Changes in real interest rates

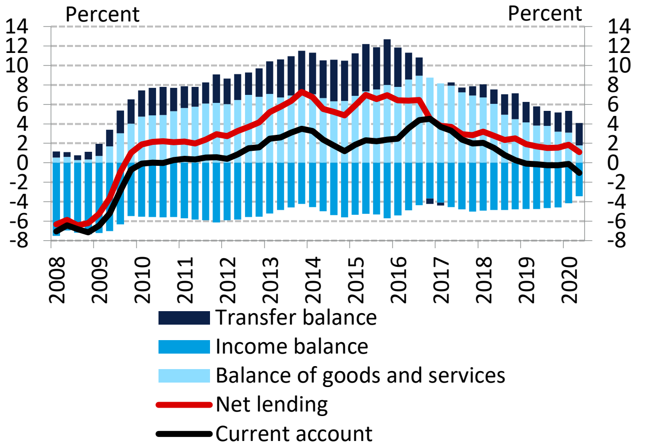
Real interest rates declined during the quarter. In 2020 Q3, the real interest rate level reduced by inflation expectations dropped by 0.3 percentage points estimated based on government securities market yields, and by 0.5 percentage points estimated based on deposit rates. As a result, in September the former and latter real interest rate levels stood at -2.7 percent and -2.8 percent, respectively (Chart 4-10). The quarterly fall in the level of real interest rates is explained by both the higher inflation expectations and falling deposit rates.

5 Balance position of the economy

5.1 External balance and financing

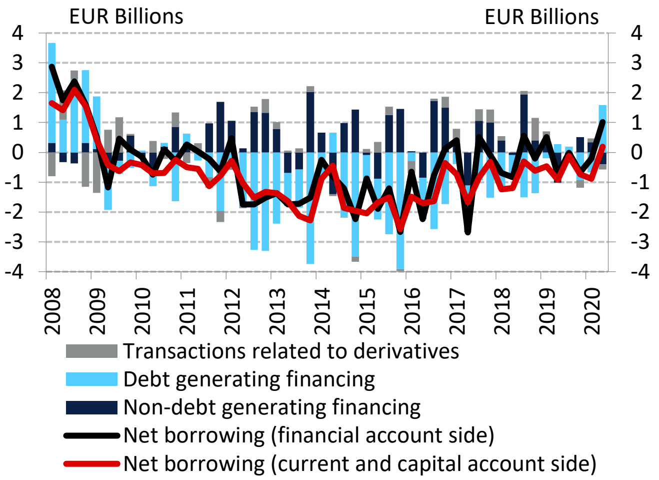
In 2020 Q2, the net lending of the economy fell to 1.1 percent of GDP, and the current account deficit amounted to 1.1 percent of GDP. Developments in the external balance were already significantly affected by the impacts of the pandemic in Q2: the drop in net exports was attributable to declining industrial production, the import-increasing effect of the costs of containment measures and a decrease in the services balance, while improvement in the terms of trade mitigated the fall in net exports. The decline in the income account deficit was related to the decrease in foreign-owned companies' income, while the surplus on the transfer balance was still high. According to financing data, net FDI inflows continued, while the net external debt-to-GDP ratio rose slightly from its historical low registered at the end of March. Based on preliminary data, both the net lending of the economy and the current account balance improved in Q3, while significant outflows of debt liabilities took place in parallel with that.

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

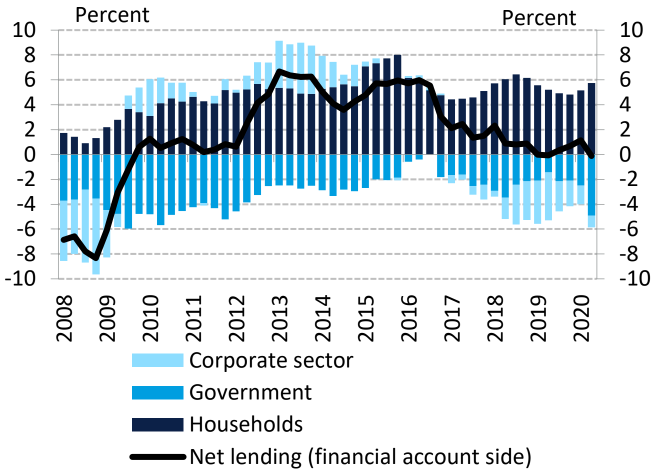
5.1.1. Developments in Hungary's external balance position

The net lending of the economy declined to 1.1 percent of GDP in Q2, while in parallel with that the current account deficit rose to 1.1 percent of GDP (Chart 5-1). Developments in the external balance were determined by the pandemic in Q2. The decline in the trade balance was mainly attributable to the fall in the services balance, which was related to the developments in tourism, but the rising deficit of the goods balance also contributed to it. The latter was a result of weakening external demand, shutdowns at vehicle factories in the spring, the lower industrial production as well as the increase in imports, with the latter explained by containment measures. However, the improvement in the terms of trade stemming from lower energy prices had a contrasting effect. The lower profit of foreign-owned companies was reflected in a declining income account deficit, while the transfer balance stabilised at a high level. According to preliminary data, both the current account balance and net lending improved significantly in Q3, with contributions from the decline in the income account deficit and the expansion in the transfer balance. The decrease in the four-quarter value of the trade balance stopped, and stood close to the previous quarter's value.

5.1.2. Developments in financing

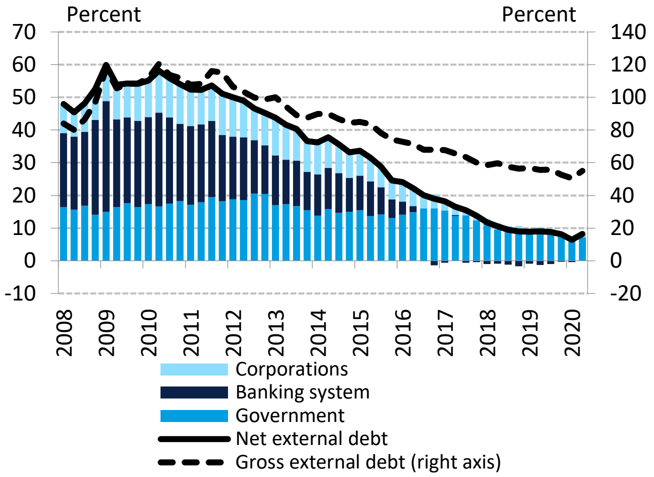
In 2020 Q2, net FDI rose slightly, while debt liabilities increased substantially (Chart 5-2). In Q2, in spite of the usual dividend disbursements, there was a slight increase in foreign direct investment, with a contribution from the rise in intercompany loans. The debt liabilities of the economy increased considerably, with contributions from all the three sectors. The expansion in the net external debt of the state was a result of an increase in external liabilities exceeding the FX reserves. Banks' foreign assets

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

fell considerably, which was reflected in the rise in the net debt of the sector, in spite of a decrease in liabilities. The increase in the net external debt of companies was also attributable to the decrease in foreign assets. According to preliminary data, net FDI rose considerably in Q3, while debt liabilities fell as a result of transactions. The decline in net debt liabilities was related to the banking sector, while the net external debt of the state increased in relation to the rise in foreign liabilities.

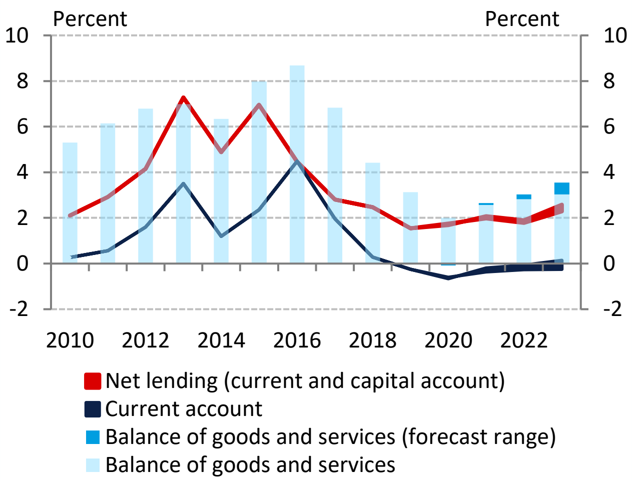
According to the sectors' savings developments, in Q2 the improving position of the private sector was unable to offset the higher net borrowing of the state, which resulted in a decline in net lending (Chart 5-3). The pandemic situation affected savings developments as well: in parallel with a slowdown in consumption, households' net financial savings expanded considerably, while the corporate borrowing requirement narrowed as a result of subdued investment activity. By contrast, government net borrowing rose significantly, which was attributable to the decline in tax revenue due to the contraction of the economy as well as to the increasing costs of containment measures and economy protection measures. According to preliminary data, savings developments were practically unchanged in Q3: government net borrowing increased further, while the net savings of the private sector continued to expand.

At end-June 2020, net external debt amounted to around 8 percent of GDP (Chart 5-4). Following the historical low in Q1, net external debt rose to the year-end level as a result of the debt inflow. In addition to the transactions, to a lesser degree, the impacts related to revaluation and the changes in nominal GDP resulted in a rise in the indicator. In Q2, gross external debt rose primarily as a result of FX bond issues. The debt outflow seen in Q3 points to a decline in the net external debt ratio.

5.2 Forecast for Hungary's net lending position

The impacts of the pandemic significantly affect developments in the external balance of the Hungarian economy. The current account balance will temporarily decline this year, before moving on a gradually upward path in the coming years, against the background of a high level of net lending. The temporary decrease in the current account is mainly attributable to a decline in the trade surplus, which is offset to some extent by an improvement in the income balance. This year's current account deficit, which is less than 1 percent, will gradually improve in the coming years as a result of a rise in the trade balance. In parallel with that, the net lending of the economy will remain high in view of the EU transfers. According to the savings of sectors, as a result of increasing expenditures and missing tax revenues, the general government deficit will grow considerably this year, before gradually declining. The high borrowing requirement of the state is offset by the private sector's expanding net lending: households' net financial savings may be around 6 percent of GDP, while the fall in corporate investment results in a major improvement in companies' net lending.

Chart 5-5: Evolution of net lending



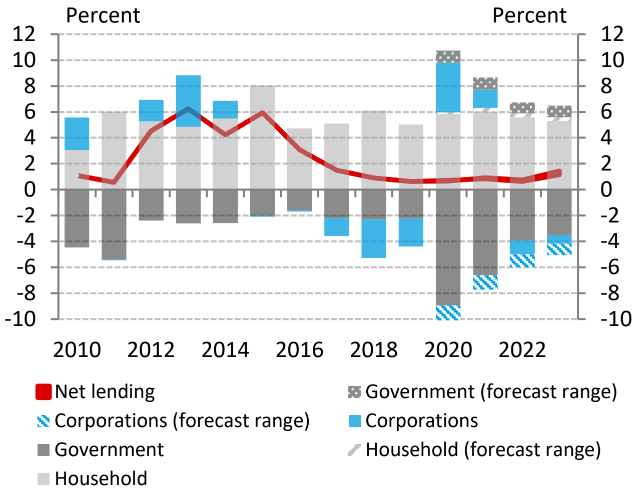
Note: As a percentage of GDP.
Source: MNB

The current account balance will temporarily decline in 2020, after which a gradual improvement is expected over the forecast horizon (Chart 5-5). The trade balance will contract in 2020, explained by the slack external demand, imports related to containment measures and defence purchases, as well as by the lower services balance due to the downturn in tourism. These factors were offset by the net export-increasing effect of the improvement in the terms of trade as a result of more subdued domestic absorption and lower energy prices. Weaker demand reduced foreign-owned companies' profits as well, which is reflected in the decline in the income account deficit, thus improving the current account balance. As a result, the current account deficit in 2020 is around 1 percent of GDP. The current account balance will improve in the coming years, with the decline in the impacts of the pandemic and the recovery of the economy and external demand. At the end of the horizon, net lending will rise to around 2 percent of GDP, as a result of the high level of EU transfer absorption.

The uncertainty of the forecast of the external balance indicators is depicted by a forecast band. Stronger domestic absorption due to higher growth will result in higher imports, but export dynamics will also accelerate with the faster recovery in external demand. In addition, the increase in foreign-owned companies' profits due to stronger economic growth adds to the income account deficit. As a result of the above effects, the net lending of the economy remains stable over the forecast horizon.

Based on the savings of sectors, the temporary rise in the budget deficit this year is financed by the expanding net lending of the private sector (Chart 5-6). Expenditures on containment and economy protection measures as well as a drop in tax revenues will result in a temporary increase in the budget deficit. From 2021 a decrease in government expenditures and a rise in tax revenues based on economic growth will improve the state's financing position. This

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 return to the historical average.
Source: MNB

year, as a result of the disruption in investment, companies became net savers, but their net borrowing may grow again at the end of the forecast period due to an expansion in investment activity. The decline in consumption is reflected in households' increasing net financial savings, which may amount to around 6 percent of GDP in the years to come.

5.3 Fiscal developments

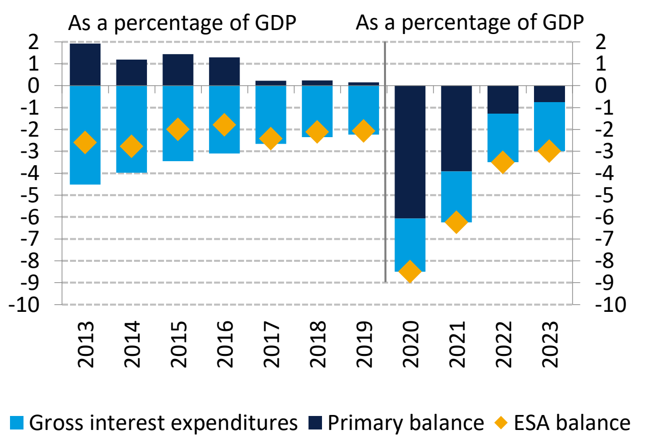
As a result of the measures to control the coronavirus pandemic and the Economy Protection Action Plan, as well as declining tax revenues, the budget deficit may rise to 8–9 percent of GDP in 2020. In view of the second wave of the pandemic and the government measures taken in the past period (home creation programme, pay rise for doctors, one-off government decisions), the decline in the deficit may be slower than expected, and it may decrease to below 3 percent again at the end of the forecast horizon. According to our forecast, in 2021 the budget deficit may be around 6–6.5 percent of GDP, depending on economic growth and further measures. Our technical forecast indicates a gradually declining deficit path for 2022–2023, supported by rising tax revenues stemming from favourable macroeconomic developments and a decrease in government expenditures as a proportion of GDP. Due to the higher budget deficit and the slowdown in economic growth, the government debt-to-GDP ratio will temporarily rise in 2020, but from 2021 the government debt will return to a downward path. Future uncertainties are significantly reduced and post-pandemic economic recovery may strongly be supported across Europe by the agreement reached at the December meeting of Member States' leaders on the next Multiannual Financial Framework (MFF) of the European Union and the post-pandemic recovery fund. The 2021-2027 MFF totals EUR 1,074 billion at 2018 prices, while the Next Generation EU fund, aiming recovery, stands at EUR 750 billion, of which more than EUR 40 billion in non-refundable grants and EUR 10 billion in loans will be available to Hungary.

Table 5-1: General government balance indicators

	2020	2021	2022	2023
ESA balance	(-9.0) - (-8.0)	(-6.5) - (-6.0)	(-4.0) - (-3.0)	(-3.5) - (-2.5)
Primary ESA balance (point estimate)	-6.1	-3.9	-1.3	-0.8
Fiscal impulse (point estimate)*	6.1	-2.0	-2.8	-0.6

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

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



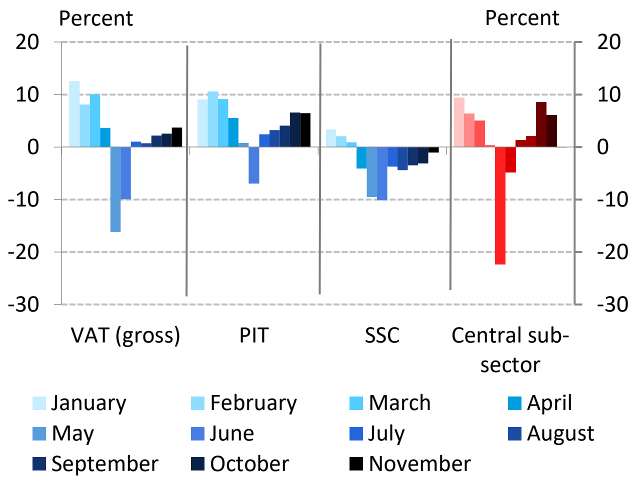
Note: The point estimate on the graph shows the midpoint of the deficit forecast bands.
Source: HCSO, MNB

5.3.1. Main balance indicators

According to our forecast, the government sector's accrual-based deficit as a percentage of GDP may amount to 8–9 percent in 2020 and 6–6.5 percent in 2021 (Table 5-1). The high deficit in 2020 is the result of the deceleration in the economy, the costs of containment measures and the already announced measures of the Economy Protection Action Plan, based on which the budget deficit may amount to 8 percent of GDP. If the leeway available in addition to the Government's expectation is also utilised, the budget deficit-to-GDP ratio may amount to 9 percent. 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 countercyclical fiscal policy. In 2020, the expected deficit is considered average by regional and international standards. According to the European Commission's autumn forecast, the deficit may amount to 8.4 percent on average for the European Union and 8.2 percent for the countries of the region in 2020.

The budget deficit may reach 6–6.5 percent of GDP in 2021. In view of the second wave of the pandemic as well as the government measures taken in the past period (home creation programme, pay rise for doctors, one-off government decisions affecting expenditures in 2021), the deficit may decline more slowly in 2021 compared to previous expectations. Depending on the growth rate of the economy and further measures, the deficit may be between 6–6.5 percent of GDP (Chart 5-7). At the same time, the impact of the measures on the fiscal balance is partly offset by rising tax revenues as a result of the recovery of the economy. According to the forecast of the

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	**9.8**
1. Tax cuts and family support measures	0.9
2. Job protection	0.7
3. Economy protection programmes	6.4
4. Expenditure on disease control	1.8
Fundraising measures	**4.1**
1. Revenue-raising measures	0.3
2. Budgetary reallocation	3.1
3. Reallocation of EU funds	0.7
Impact on the budget balance	**-5.7**

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

Source: Ministry of Finance, MNB

European Commission, the average budget deficit of the member countries will decline to 6.1 percent in 2021, i.e. the deficit in most member countries may exceed the Maastricht 3 percent in 2021 as well.

5.3.2. Budget balance in 2020

The budget deficit-to-GDP ratio may reach 8–9 percent in 2020, which is in line with the Ministry of Finance's expectations. Following a sharp drop in H1, tax and contribution revenues gradually increased in Q3, but stabilised at lower levels compared to previous dynamics (Chart 5-8). The measures addressing the medical and economic effects of the pandemic with direct budgetary effects amount to 9.8 percent of GDP. The government may cover a significant share of these measures with reallocations, the utilisation 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 of the measures may amount to 5.7 percent of GDP (Table 5-2).

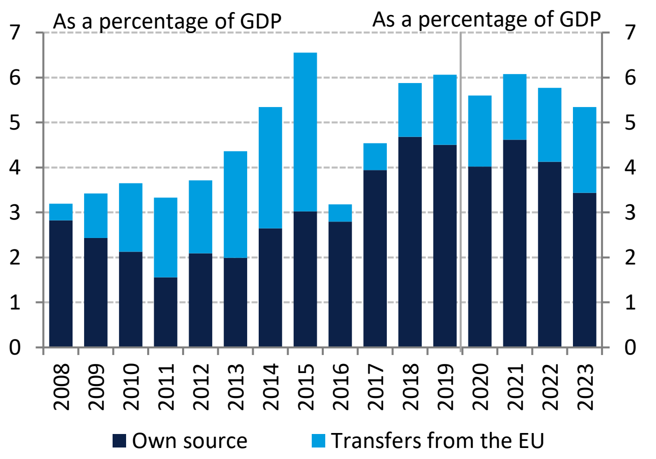
5.3.3. Budget balance in 2021

The accrual-based 2021 budget deficit may reach 6-6.5 percent of GDP, thus exceeding the 2.9 percent deficit target set in the Budget Act. The budget deficit increase that exceeds previous expectations is attributable to the government measures taken. On 6 October 2020, the National Assembly adopted a bill implementing a significant pay rise in multiple steps for doctors, according to which the base salary of doctors will be 2–3 times higher by 2023 compared to current levels. The gross fiscal impact of the pay rises may amount to 0.5 percent of GDP in 2021.

In addition, in several steps the Government announced a Home Creation Programme, within which – inter alia – the VAT on newly built homes will be reduced to 5 percent, in the case of newly built properties purchased with the help of the Home Purchase Subsidy Scheme for Families the refund of the 5 percent VAT on residential properties will be possible, new or pre-owned homes purchased with the help of the Home Purchase Subsidy Scheme for Families will be exempt from duty, and a home renovation programme will be launched, within the framework of which the state will assume half of the home renovation costs (up to HUF 3 million) of families raising at least one child. The fiscal impact of the measures may correspond to 0.3–0.4 percent of GDP in 2021.

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. In the more favourable

Chart 5-9: Development of government investment



Source: HCSO, MNB

economic environment, higher revenues resulting from the cyclical developments and lower expenditures both result in a decline in the deficit.

According to our forecast, in 2021 the deficit will exceed the deficit target set forth in the Budget Act. The revenues of the central government may fall short of the appropriation, while the expenditures of central budgetary institutions may be higher than projected in the Budget Act.

5.3.4. Balances in 2022 and 2023

In the absence of statutory appropriations, technical forecasts were prepared for 2022 and 2023, which indicate a gradually declining deficit path. The increase in tax revenues as a result of favourable macroeconomic developments and the decrease in government expenditures (investment, material expenditures and financial transfers) as a percentage of GDP also contribute to reducing the general government deficit.

5.3.5. Risks surrounding the baseline scenario

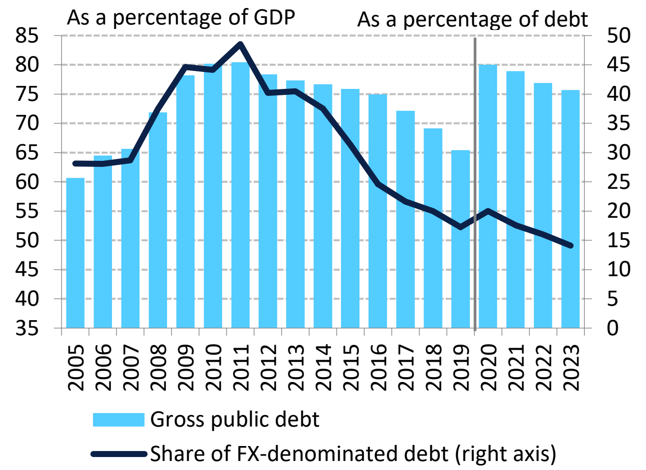
The greatest risk is related to the impact of the second wave of the coronavirus pandemic on the economy. A protracted second wave may result in a further decline in tax revenues and would make additional fiscal measures necessary. In our baseline scenario, the investment expenditures of the government sector in 2020 fall slightly short of their 6 percent level as a percent of GDP reached in 2019, although they may exceed it to some extent in 2021 (Chart 5-9). Government investments are increased by certain expenses related to the containment 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.

Changes in our forecast are influenced by the uncertainties regarding the amount of fund inflows from the European Union. The absorption of transfers affects the accrual-based balance and real economy developments, while the advance subsidies and their receipt influence the changes in government debt. According to our projection, the actual absorption of EU funding will decline slightly after 2020.

5.3.6. Expected developments in public debt

According to preliminary data, at the end of 2020 Q3 the gross government debt-to-GDP ratio rose to 73.8 percent.

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

The debt ratio rose by 6.8 percentage points year-on-year, while compared to the value registered at the end of 2019 it increased by 8.4 percentage points. In addition to net debt issuance, other factors contributing to the rise in the debt ratio included 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 65.4 percent registered at end-2019 to around 80 percent in 2020 (Chart 5-10). Government deposits held with the MNB amounted to some HUF 2,900 billion at end-October and are expected to remain higher than the level observed last year at the end of the year as well, since financing reserves are accumulated in order to cover the expected risks. These reserves increase the debt this year, but next year their utilisation may contribute to a faster reduction of debt. The 14.6 percentage point increase in the debt ratio is considered average in an international comparison. According to the latest projection of the European Commission, the public debt-to-GDP ratio in the countries of the European Union may grow by 14.7 percentage points on average in 2020 compared to the previous year, while a somewhat larger increase of 15.8 percentage points is expected in the euro area. However, in 2021, as a result of the recovery in economic growth and the expected decrease in the deficit, government debt will return to a declining path, and the debt ratio may drop steadily over the forecast horizon. According to our projection, following the temporary increase, the government debt ratio will decrease annually by 1-1.5 percentage points on average, and thus by the end of 2023 it may fall below 76 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 20 percent, and then, over the forecast horizon it may decline again.

6 Special topics

6.1 Market stabilising and economy stimulating effects of the 2020 Hungarian central bank programmes in the light of the coronavirus pandemic[2]

The innovative steps of the Magyar Nemzeti Bank contributed significantly to reinforcing the fundamentals of the Hungarian economy and mitigating the unfavourable economic impacts of the coronavirus pandemic. While the 2008 global financial crisis hit Hungary in an extremely weakened state, in 2020 Hungary is facing the coronavirus pandemic and its unfavourable impacts on the economy in a sufficiently prepared condition, with strong fundamental positions, significant reserves and adequate leeway for economic policy. Even in the current extraordinary macroeconomic environment, the primary objective of the MNB is to achieve and maintain price stability. Without prejudice to the primary objective, the Magyar Nemzeti Bank preserves financial stability and supports the Government's economic policy. In line with that, mitigating the negative real economy and financial market consequences caused by the coronavirus, ensuring that the liquidity needed by the banking sector and other economic agents is available and laying the foundations for relaunching the economy became crucial tasks. In the past period, the central bank reacted to the challenges that arose by taking a series of coordinated steps and targeted measures, including the transformation and expansion of its monetary policy instruments. As opposed to the 2008 crisis, which resulted in a credit crunch for Hungary, at present, in view of the measures of the central bank, the necessary liquidity is available in the banking sector, and the SME sector has access to sustainable, stable and long-term financing. In the MNB's opinion, similarly to the situation that evolved with the outbreak of the 2008 crisis, the current difficulties faced also require targeted solutions. While maintaining price stability, these solutions are served by the MNB's toolkit, which contains expanded and targeted measures, as well by the size and structure of the central bank balance sheet, which provide considerable leeway in terms of the responses to future challenges. Hungarian monetary policy has sufficient firepower, and if necessary, it can deploy all of the weapons it has available.

6.1.1. Amendment of the central bank toolkit to enable broader, more flexible intervention

In the spring of 2020, the emergence of the coronavirus pandemic posed major challenges to domestic economic agents in Hungary as well. In the spring of 2020, the disease caused by the SARS-CoV-2 virus escalated into a pandemic impacting the whole world, triggering a public health crisis not seen for decades. Soon it became apparent that the healthcare measures based on minimising social contacts result in a significant, sudden seizure in the economy at the international level. The negative economic and financial impacts stemming from the pandemic spilled over to the entire global economy. Although Hungary was adequately prepared, with strong fundamentals, significant reserves and sufficient economic policy leeway, the pandemic, which reached Hungary as well in 2020 Q1, posed a number of new challenges to domestic economic agents. The financial market turbulence caused by the strengthening of risk avoidance vis-à-vis emerging markets due to the coronavirus pandemic also had unfavourable effects on domestic financial markets as early as mid-March 2020.

The MNB reacted to the financial market and real economy challenges stemming from the pandemic with a series of coordinated and targeted measures. As part of these measures, it transformed and expanded its monetary policy instruments (Table 6-1). The renewal of the toolkit was driven by various objectives: (1) maintaining price stability and – in line with preserving financial stability – providing sufficient liquidity for the banking sector and the financial markets; (2) making the operational framework more efficient, enabling short-term yield levels to be shaped in a more flexible manner; (3) the MNB should be able to directly (and in as many markets as possible) shape and influence long-term yields, the role of which appreciated in recent years; and (4) mitigating the unfavourable economic effects of the coronavirus pandemic as well as supporting the revival of economic growth. Consequently, in addition to the instruments that have an impact on short-term yields, the changed and expanded monetary policy toolkit also contains various instruments that affect long-term yields. It allows the shaping of the yield curve as a whole, in line with monetary policy objectives, and facilitates the access of the domestic corporate sector to sustainable, stable and long-term financing.

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[2] A detailed study on the amendments of the central bank's set of instruments is available at the following link: https://www.mnb.hu/letoltes/jegybanki-eszkoztar-2020-covid19-en.pdf

6.1.2. New central bank instruments and measures to provide liquidity

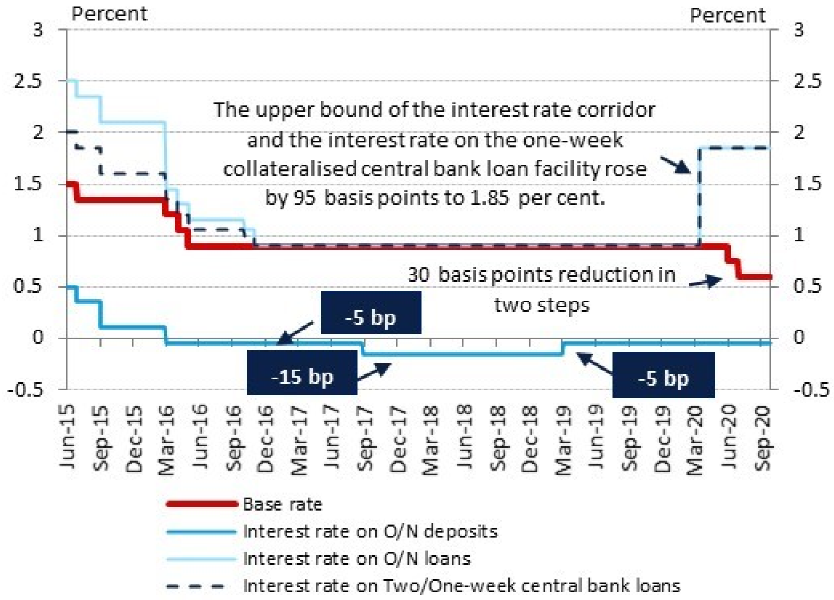
Providing sufficient liquidity is crucial to maintain the functioning of various market segments and for the avoidance of the narrowing of credit channels. The financial market turbulence that evolved in the initial stage of the coronavirus pandemic required the MNB to be able to provide liquidity to the banking sector and other financial market participants both at short (up to one year) and long maturities. Accordingly, to provide interbank liquidity over the long term, in line with the practice of the European Central Bank, the MNB decided to extend the scope of eligible collateral to include corporate loans. In addition, the scope of central bank counterparties was expanded with investment funds in a targeted manner. Public open-ended securities funds were included among the counterparties of the central bank government securities purchase programme and the Bond Funding for Growth Scheme, secured central bank loans became available for investment funds, and the MNB expanded the range of eligible collateral by adding the mutual fund shares of securities and property funds. The central bank granted temporary exemption from the legal consequences of not complying with the reserve requirement for domestic counterparty credit institutions subject to reserve requirements. In addition, in order to permanently support bank liquidity management and ensure the stable operation of the relevant financial markets, the MNB introduced a fixed-rate collateralised central bank credit facility with a maximum 5-year maturity.

6.1.3. Central bank instruments allowing a more flexible shaping of short-term yields

The negative impacts of the coronavirus pandemic on the financial markets and on the economy justified the MNB's measures to make the shaping of short-term yields more flexible. In connection with the negative effects of the spread of the pandemic, a rise in the volatility of yield levels was seen at all maturities in March 2020. It is a priority aspect for the MNB that short-term interest rates in each market segment and at all times should be in line with the interest rate level considered optimal by the Monetary Council, and they should be at a safe distance from the close-to-zero range even in a rapidly changing environment. The money market turbulences that evolved and the increase in uncertainties around the prospects served as reasons for the MNB to create greater flexibility and leeway, also rendering necessary a revision of the operational framework that affects short-term yields. The steps taken on the short end of the yield curve, such as the activation of the one-week deposit facility and widening the interest rate corridor, contributed significantly to preserving the stability of monetary conditions and, through that, to maintaining price stability.

In April 2020, the decision was taken to make the interest rate corridor symmetrical and to activate the one-week central bank deposit facility; these measures allow greater flexibility for the MNB in maintaining the efficiency of monetary transmission. As a result of multiple changes of the interest rate corridor, the base rate represented the top of the interest rate corridor in the MNB's monetary policy framework applied prior to the coronavirus pandemic. However, the altered financial market environment required greater leeway for the MNB in terms of its ability to shape short-term interest rates. While the O/N deposit rate remained unchanged, the central bank raised the overnight and one-week collateralised lending rates to 1.85 percent from the level corresponding to the previous base rate (Chart 6-1). Since its introduction in the autumn of 2016, the one-week deposit had been a part of the central bank toolkit, but it was not applied until April 2020. The instrument was activated to support banks' liquidity management and then became an important sterilisation instrument of the banking sector. Following activation of the instrument, banks can place one-week deposits with the central bank at interest rates determined within the framework of weekly tenders.

Chart 6-1: Changes in the policy instruments of the Magyar Nemzeti Bank

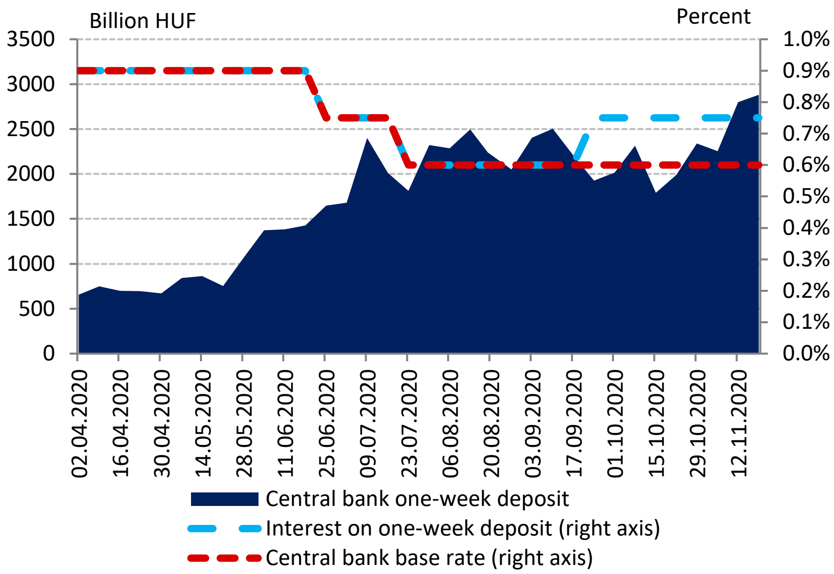


Source: MNB

By shaping the base rate and one-week deposit facility, the MNB's objective is to manage the risks arising in connection with the inflation outlook and to support the restoration of economic growth. Following successful financial stabilisation in the spring, in the second phase of protecting the economy against the pandemic, in parallel with ensuring price stability, the restoration of economic growth was brought into focus. In line with that, the Monetary Council cut the central bank base rate by 15 basis points in both June and July. In the Monetary Council's assessment, the 0.60 percent level of the base rate supports price stability, the preservation of financial stability and the restoration of economic growth in a sustainable manner. The effect of the rate cut was reflected in market interest rates extensively and in a predictable manner. The base rate plays a coordinating role, and due to its constancy for four years the rate cut carried a valuable message for economic agents. In addition to that, the preservation of stability continues to be a crucial aspect, and thus even with the new level of the base rate the appropriate safety distance from the close-to-zero range remains. In line with the change in the base rate, in June and July the interest rate on the one-week deposit declined by 30 basis points in total. Nevertheless, stronger risk avoidance vis-à-vis emerging markets is a major risk in terms of the developments in the inflation outlook. The MNB's clear intention is to avoid that the uncertain global market environment causes an increase in inflation risks. In line with the main risk scenario of the September Inflation Report, in September 2020 the central bank amended the one-week deposit rate from 0.60 percent to 0.75 percent (Chart 6-2). If inflation risks justify it, the MNB may maintain a difference between the base rate and the rate on the one-week deposit facility.

In the domestic FX swap market, the MNB is ensuring a major reduction in the end-of-quarter volatility of market yields via the repeated application of the FX liquidity providing swap facility. In the FX swap market, which is of key importance in terms of changes in short-term yields and interbank liquidity management, at the end of the past quarters, in the periods of commercial banks' balance sheet adjustments, high volatility evolved, which strengthened considerably amid the market turbulence caused by the coronavirus pandemic. Based on the decision of the Magyar Nemzeti Bank in September 2020, in the cases when the strengthening of monetary transmission was necessary, FX liquidity providing swap tenders were applied by the central bank. With these tenders, the MNB's intention is to achieve – even in these special periods – the adjustment of short-term financial market yields to the level deemed optimal by the Monetary Council, and a significant decline in their volatility. As a result of the active central bank presence, at the end of the third quarter the MNB's FX swap tenders successfully smoothed the end-of-quarter swap market developments, and thus no tensions arose in the swap market. The steps taken on the short side of the yield curve contribute to preserving the stability of monetary conditions and through that to maintaining price stability.

Chart 6-2: Changes in the holdings of and interest rate on the one-week central bank deposit



Source: MNB

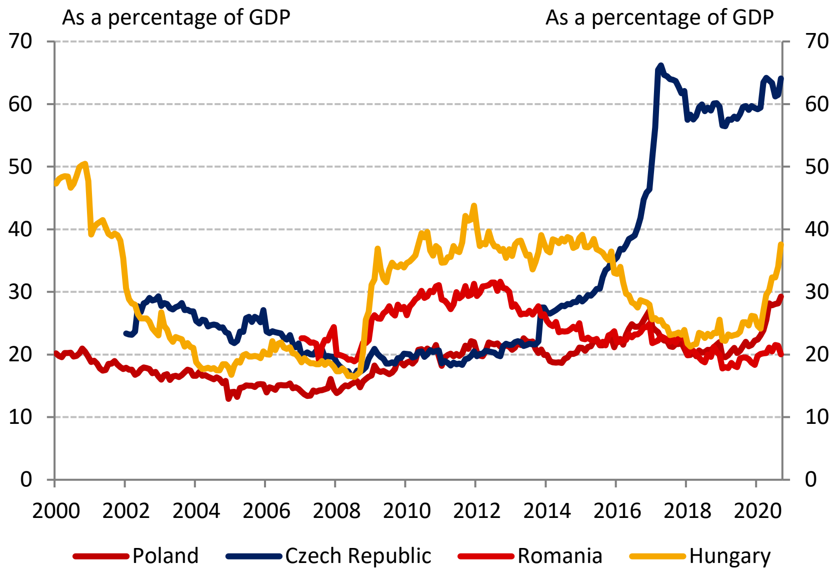
6.1.4. Introduction of instruments affecting long-term yields and expansion in the central bank balance sheet

The MNB responded to the negative economic impacts of the coronavirus pandemic with a major expansion of the central bank balance sheet, for which the central bank's previously implemented strategy provides sufficient space for manoeuvre. Previously, the central bank was able to ease monetary conditions considerably, to stimulate lending by targeted steps and to reduce the vulnerability of the economy simultaneously with the narrowing of the central bank balance sheet. As opposed to global trends, in lieu of a general increase, the MNB had focused on the efficient restructuring of the balance sheet since 2013. Accordingly, unlike other central banks' balance sheets, the MNB's balance sheet did not expand in the previous years. It means that the MNB had a much greater space for manoeuvre in terms of increasing the size of the balance sheet in connection with the negative economic effects caused by the coronavirus pandemic. In addition to expanding the central bank's room for manoeuvre, the balance sheet, the structure of which also changed as a result of the targeted instruments applied by the MNB in the past years, also contributed to the reduction of Hungary's external vulnerability.

Looking ahead, the significant expansion in the central bank balance sheet contributes to the recovery of economic growth as well. At present, the balance sheet total of the MNB corresponds to 37.5 percent of Hungary's GDP. The expansion in the central bank balance sheet in the past period was primarily attributable to economic recovery programmes, which provide predictable funds available with favourable conditions for a wide range of economic participants. As a result of the targeted programmes and a rise in foreign exchange reserves, the balance sheet total has increased by approximately 13.6 percent of GDP since the beginning of the year. In spite of the balance sheet expansion in 2020, which is outstanding in an international comparison as well, the size of the balance sheet is considered average in the region (Chart 6-3). Looking at international practices, similarly to the central banks of developed countries, the central banks of several emerging countries also launched asset purchase programmes and/or introduced new credit facilities. As a result, the size of central bank balance sheets increased considerably in the majority of the countries in the region, and this is expected to be a persistent phenomenon.

In renewing its toolkit, the government securities purchase programme, which affects long-term yields and was decided on by the Monetary Council in April 2020, became part of the toolkit. The objective of the programme was to maintain the stable liquidity position of the government securities market and to strengthen the efficiency of monetary transmission. Upon starting the programme, the MNB did not determine any limit amount, but declared that it would continue the purchases as long as justified by the economic and monetary developments due to the coronavirus pandemic. The purchases take place in the secondary market; they can also occur at purchasing auctions organised by the central bank and within the framework of one-off secondary market transactions as well. Counterparties in the programme include banks and non-bank actors that are particularly important in terms of the government securities market. The central bank successfully stabilised government securities market developments and reduced long-term yields with the targeted purchases carried out in May.

Chart 6-3: Balance sheet total to GDP ratio of central banks in the region



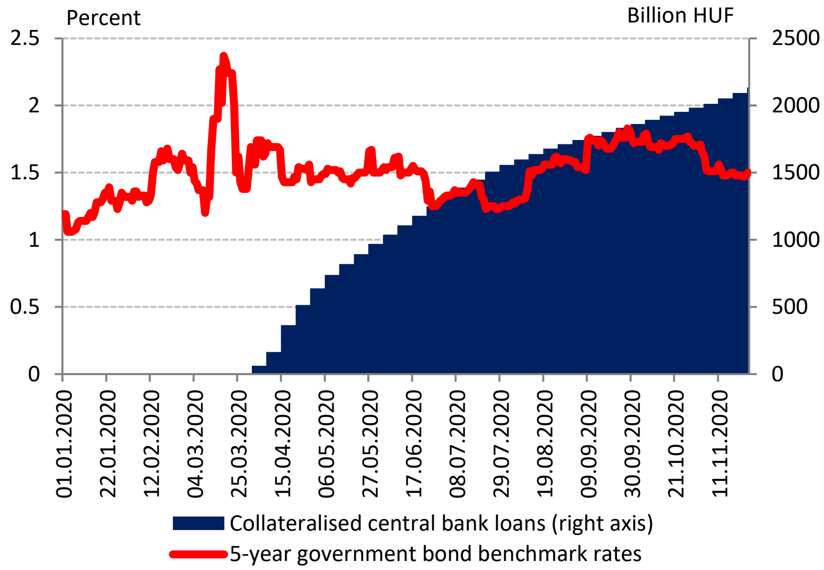
Source: MNB

After a temporary break, from July 2020 the MNB carried out targeted government securities purchases on the long end of the maturity curve again, to allow the June and July base rate cuts to exert their effects on the longer section of the yield curve as well. Following that, in order to facilitate efficient monetary transmission and support the liquidity of the government securities market, from August 2020 the Monetary Council raised the amounts of weekly purchases several times, and in early October it amended the strategic parameters of the securities purchase programme. The Monetary Council still uses the government securities purchase programme continuously, to the necessary degree, remaining present in the market. The MNB changes the amount of its weekly purchases in a flexible manner. As a result of the central bank measures, the forint government securities market became stable, and long-term government securities yields declined. The MNB's measures supported the issuance of longer-term government securities and thus the extension of the maturity structure of public debt, and are of crucial importance in terms of market building as well.

At its November meeting, the Monetary Council carried out a technical revision of the government securities purchase programme, and the MNB is making preparations for permanent presence in the government securities market. Since May 2020, the central bank has purchased more than HUF 820 billion worth of government bonds and HUF 36 billion worth of government-guaranteed securities under the government securities purchase programme until the end of November. The central bank continues to flexibly determine the amount of its weekly purchases, concentrating the purchases on longer maturities. While continuously monitoring implementation of the asset purchase programme, the Monetary Council will perform its next technical revision when the holdings reach HUF 2,000 billion.

In order to mitigate the financial market tensions that evolved in early 2020, at end-March the MNB introduced a fixed-rate collateralised central bank credit facility with maturity up to 5 years. In addition to the forint liquidity providing swap facility, which had been actively applied before as well, the MNB introduced a fixed-rate collateralised credit facility with a maximum 5-year maturity, which helps banks' liquidity management permanently, at longer maturities as well, and also contributes to the stable operation of the relevant financial markets. Initially, the credit facility was introduced with maturities of 3, 6 and 12 months as well as 3 and 5 years, and then in 2020 H2 the central bank decided to announce only 3- and 5-year maturities at the tenders, while the maturities up to one year (3, 6 and 12 months) also remain parts of the instruments. Banks can utilise the central bank funds obtained at the credit tender in two ways: firstly, they can invest it in long-term, fixed-rate instruments, and secondly, they can improve their liabilities structure with the fixed-rate loan. The provision of collateralised loans has greatly contributed to the fact that domestic banks have increased their holdings of government securities with a maturity of more than 3 years by about HUF 2,000 billion since the beginning of April. Accordingly, the credit facility may support the balance sheet of the banking sector in various respects, while through the asset purchases this facility not only contributes to the liquidity of the banking sector, but also has a favourable impact on the efficiency of monetary policy transmission, as it allows for influence over the middle section of the yield curve. Since its introduction, most of the collateralised loans were granted with a maturity of 5 years; until end-November, the central bank provided long-term funds amounting to more than HUF 2,100 billion for the banking sector (Chart 6-4).

Chart 6-4: Changes in collateralised central bank loans and the 5-year government securities reference yields



Source: MNB

In April 2020, the MNB decided to modify the terms the Bond Funding for Growth Scheme and to launch the Funding for Growth Scheme Go!. These two targeted programmes provide a widely used resource for domestic companies, with favourable, predictable interest rates.

The central bank launched the Funding for Growth Scheme Go! with the resources they need to operate and grow in line with the changing needs of micro, small and medium-sized enterprises. In the current economic environment, the role of low-interest, predictable (fixed-rate) financing is appreciating. Since the start of April, there has been considerable interest in the FGS Go! programme from the side of enterprises, utilisation of the programme approached HUF 1,200 billion at the beginning of December, and more than 17,000 enterprises were able to access favourable financing within the framework of the scheme. With the keen interest shown by economic agents, the HUF 1,500 billion budget would have run out in the first quarter of next year, and accordingly the Monetary Council decided to increase the budget by HUF 1,000 billion at its meeting on 17 November. The programme will thus be able to help the operation, modernisation and growth of many businesses in 2021 as well.

The Bond Funding for Growth Scheme, which was launched in the summer of 2019, contributed significantly to the expansion of liquidity in the corporate bond market, and thus to strengthening the efficiency of monetary policy transmission. As a result of the scheme, in addition to bank loans, the domestic corporate sector can now also rely on bond issues as well, which represent a reasonable, competitive funding alternative, and through which the structure of domestic firms' debts may become sounder and more diversified. Healthy competition between the markets that provide funds for companies may have a favourable impact on domestic firms' borrowing costs as well. Expanding the liquidity of the domestic corporate bond market may contribute significantly to a more efficient functioning of monetary transmission mechanisms, may increase financial stability, and in times of economic turbulence as well it may prove to be an efficient tool in attenuating the negative effects. By end-October 2020, more than 260 companies were registered in the Bond Funding for Growth Scheme. Until the end of the period, 35 companies successfully issued 40 bond series, thus obtaining funds in excess of HUF 680 billion, as a result of which the domestic bond market started to grow significantly. Amendments to some parameters of the programme and the raising of the limit amount to HUF 750 billion may allow the domestic corporate bond market to continue its convergence to the average of the markets of countries in Western Europe and the region as a proportion of GDP.

The additional amount of money issued within the frameworks of the FGS Go! and the BGS is completely neutralised by the MNB using the preferential deposit facility, and thus the impact of the programmes is neutral from a monetary policy perspective. In order to encourage banks to participate in the FGS Go! and the BGS, the MNB's preferential deposit facility was replaced by a tiered interest rate. Encouraging the provision of investment loans with the largest growth impact and the purchase of corporate bonds, the MNB will pay a higher, 4-percent preferential deposit interest rate until the end of 2021 in connection with investment loans and bond issues concluded after 7 July this year. Loans for purposes other than investment are associated with a lower level of incentive.

Table 6-1: Decisions on monetary policy instruments in a chronological order (from March 2020)

Date of decision	MEASURE
16 March 2020	Flexible restructuring option and end-of-year payment moratorium for FGS loans
17 March 2020	Announcement of the 1-week FX swap tender
17 March 2020	Expansion of the scope of eligible collateral with large corporate loans
24 March 2020	New, collateralised credit facility, from 3 months to 5 years
24 March 2020	Temporary suspension of sanctions on reserve requirement
1 April 2020	Activation of the 1-week deposit facility
7 April 2020	Making the interest rate corridor symmetrical
7 April 2020	Announcement of government securities purchase programme
7 April 2020	Announcement of mortgage bond purchase programme
7 April 2020	Announcement of Funding for Growth Scheme Go!
7 April 2020	Making some conditions of the Bond Funding for Growth Scheme more flexible
7 April 2020	Making conditions of the preferential deposit more favourable
23 June 2020	Base rate cut to 0.75 percent
2 July 2020	Broadening the availability of the Funding for Growth Scheme
21 July 2020	Base rate cut to 0.60 percent
25 August 2020	Increasing the quantity of weekly government securities purchases
8 September 2020	Announcement of the FX liquidity providing swap facility
23 September 2020	Increasing the budget of the Bond Funding for Growth Scheme from HUF 450 billion to HUF 750 billion
24 September 2020	Amending the 1-week deposit rate to 0.75 percent
6 October 2020	Expand and make asset purchase programme more flexible
17 November 2020	Technical revision of the government securities purchase programme
17 November 2020	Increasing the budget of the Funding for Growth Scheme Go! by HUF 1,000 billion

Source: MNB

6.2 Comparing the domestic economic impacts of the COVID-19 induced crisis and the 2008/2009 global financial crisis

After the 2009 financial and economic crisis, most countries in the world are faced with another major economic recession in 2020. No two crises are the same: indeed, not only the causes, but also the nature and the management of these crisis situations differ significantly. Based on our current forecast, the economy is expected to shrink by 6–6.5 percent this year, on a scale similar to 2009 when the economy contracted by 6.7 percent. The financial crisis in 2008/2009 hit the Hungarian economy in very vulnerable state; by contrast, in 2020 Hungary is equipped with stable fundamentals, significant reserves and adequate room for manoeuvre in terms of economic policy to face with the crisis caused by the coronavirus epidemic, which provides an opportunity for more successful crisis management. The evolution of the two crises differs from each other significantly: compared to the crisis in 2008/2009, the decline in economic performance and the accommodation of the labour market happened at a faster pace – almost immediately – and the instant effects were followed by a sharp bounce back in the following quarter. Because of the country's more favourable situation, the crisis year may be followed by a fast restoration of economic and labour market performance. Compared to the 2008/2009 crisis which resulted in a credit crunch in Hungary, the necessary liquidity of the banking system and sustainable, stable long-term financing for the SME sector are adequately ensured, thanks to the central bank's measures. The targeted temporary fiscal policy measures are capable of reducing the labour market response to the sudden economic shutdown, which may result in lower unemployment rates.

Table 6-2: Comparison of key macroeconomic variables during the crises in 2008/2009 and 2020

	2009	2010-12	2020	2021-23
Change in annual GDP	-6.7	0.6	(-6.5) - (-6.0)	3.8 - 5.0
Investment rate	22.7	19.6	25.5 - 25.9	26.8 - 27.4
Change in consumption	-6.9	-0.9	(-4.1) - (-3.7)	3.6 - 4.2
Unemployment rate	10,0	11,1	4,3 - 4,5	4,0 - 4,4
Change in real wages	-3.5	-1.0	5.8 - 6.0	3.5 - 4.0
Inflation	4.2	4.8	3.4	3.1 - 3.2
Change stock of loans to non-financial corporations*	-5.3	-4.8	9.3 - 11.0	5.7 - 9.7
Change stock of loans to households*	-0.6	-8.5	12.5 - 13.8	8.8 - 12.7
Government balance as percentage of GDP	-4.8	-4.0	(-9.0) - (-8.0)	(-6.5) - (-2.5)
Growth in Hungary's export markets	-4.6	2.2	(-6.5) - (-6.0)	3.0 - 3.5

Note: In case of the government debt we used the minimum and maximum values of the range, for the other variables the values represents the average of 2021-23* The average annual growth rates of 2010-2012 and 2021-2023 can be seen, it is estimated on the basis of loan portfolio in 2009 Q4 and 2020 Q4 and the following 12 quarters' transaction data.
Source: KSH, MNB, Eurostat

The subprime mortgage crisis started in the United States in the late 2000s and rapidly escalated to a global level. It hit Hungary in a very vulnerable state, deepening the domestic depression and constraining recovery. Its real economic impact led to a delayed, prolonged recession worldwide. The crisis spread to Hungary at the end of 2008 and mostly impacted growth in 2009 as GDP contracted by 6.7 percent at that time. Hungary faced the crisis in a vulnerable state, as the growth rate had already declined noticeably before 2009, with structural problems adding to the difficulties of effective crisis management. The impact of the crisis was exacerbated by sectoral indebtedness, the high exchange rate exposure of the government budget and domestic households, and liquidity problems in the financial intermediary system. The massive recession was followed by a slow recovery in Hungary, further aggravated by the sovereign debt crisis that evolved in Europe, which resulted in a period of subdued growth until 2012.

In 2020, Hungary is equipped with stable fundamentals, significant reserves and adequate room for manoeuvre in terms of economic policy, with the potential to reduce the negative economic impacts of the coronavirus pandemic and to support an early recovery through active monetary and fiscal policy measures.[3] Hungary's vulnerability has been considerably reduced over the past ten years, supported by the conversion of household loans into HUF, the self-financing

[3] For a detailed overview of the 2008/2009 financial crisis and the general macroeconomic environment, see the MNB publication 'Trianon 100: 10 x 10 Years in Numbers – The Economic History of Hungary for the Last 100 Years'.

programme, as well as the restoration of economic equilibria since 2013. The stable fundamentals of the domestic economy were indicated by the low unemployment rate, robust growth, the significant decrease of the net foreign debt and the public debt, the positive financing ability and low government deficit and the stable, well-capitalized banking system. The immune system of the Hungarian economy was strong at the breakout of the coronavirus pandemic. To dampen the negative economic effects of the pandemic, the government, and the central bank implemented significant policies, which contributed to protecting jobs and supporting aggregate demand. With its extended and targeted measures (see 6.1. Special topic), the central bank's toolkit supports the continued, frictionless functioning of the financial- and credit markets.

In the current crisis, economic activity declined partly due to the domestic restrictive measures adopted in response to the pandemic, while disruptions in the supply chains, the collapse of international tourism and reduced demand in Hungary's trade partners also contributed. The present crisis and the 2009 recession are on a comparable scale, with the important difference that in the latter case the economy required significant balance sheet adjustments, while presently the underlying developments are more favourable, and the restrictions are likely to be lifted in the coming quarters, in parallel with the release of the COVID-19 vaccine. Accordingly, most of the production capacities may remain intact in the economy, in contrast to the prolonged post-2009 recovery which eroded growth opportunities.

Looking ahead, the duration of the present crisis will be influenced by the pandemic control measures that are taken and the level of caution exercised by the population, while the rate of recovery mostly depends on the large-scale availability and effectiveness of the coronavirus vaccines. The negative economic effects of the intensifying second wave of COVID-19 and the related pandemic control measures dampened global expectations for a swift recovery. After a rather favourable third quarter, domestic growth declined once more at the end of 2020. Looking ahead, the rate of recovery is determined by the large-scale release and use of the COVID-19 vaccine and the phase-out of the related pandemic control measures (for the current results of vaccine development, see Box 2-1).

Based on figures from recent months, industrial production may clearly be a driving factor behind a revival in growth in the next quarters. The manufacturing sector appeared to be in less favourable condition during the springtime first wave of the pandemic due to factory shutdowns and loss of production, which disrupted processes around the world through the global value chains. Industrial actors adapted quickly to the changing environment, and thus the earlier disruptions to the supply chains did not occur again in the second wave of the pandemic. Industry clearly appears to be in better shape than it was in 2009: 11 years ago the massive downturn in industrial production lasted for several quarters and was followed by a slow recovery, while this year Q2 was followed by significant positive adjustment in Q3 and a positive outlook is projected ahead.

External demand may also affect the domestic recovery rate to a significant degree. In terms of production, positive signs are seen mostly by the industrial sectors, and therefore external demand is highly important. Compared to 2009, external demand appears less favourable in the short term, which – in our opinion – is partly attributable to demand for services, with a more positive picture shown by the industrial sector. Therefore, over the forecast horizon, external demand for Hungarian products is expected to recover from a lower level, but at a more dynamic rate.

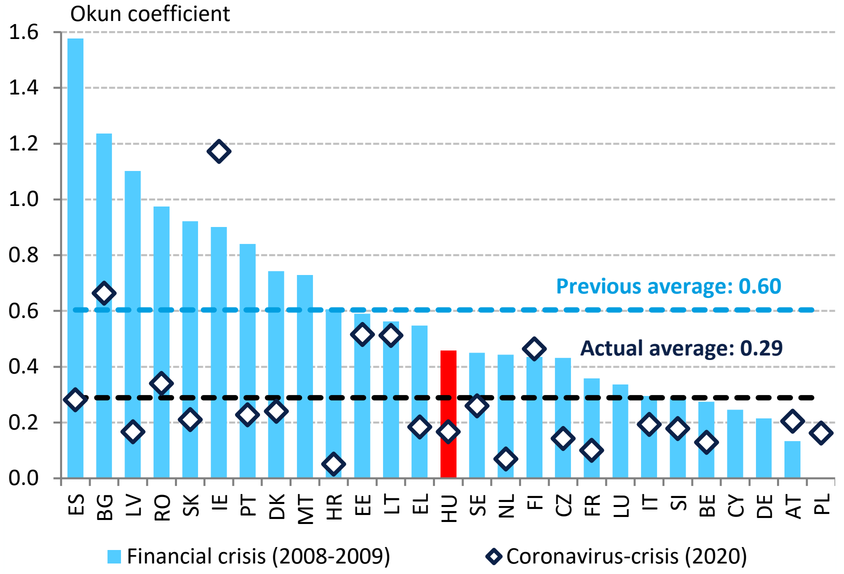
The recovery in services is strongly influenced by the pandemic situation and the introduced restrictive measures and it will be a prolonged period based our expectations. Wide-scale travel restrictions led to a drastic decline in global tourism which could only be partially compensated by domestic tourism in the summer. Due to travel-related consumer confidence and regulations varying across countries, international passenger traffic is expected to be among the sectors with slowest recovery prospects. As for other services, domestic restrictions cause a significant, temporary decline in certain sub-sectors, which the alternative sales channels are only able to compensate partially. Compared to the 2009 crisis, a different picture is emerging: back then the services sector declined moderately, while the current short-term decline induced by the pandemic control measures is much stronger.

In contrast to the prolonged recovery in domestic demand after the 2008/2009 financial and economic crisis, economic recovery in the coming years could be primarily driven by domestic demand through investments and consumption dynamics. The investment rate has increased gradually in recent years (reaching 27 percent in 2019). In line with the significant fall in domestic gross fixed capital formation, this indicator will drop below 26 percent, which will still be higher than the figure of 22.7 percent registered in 2009. Looking ahead, we expect the continuous dynamisation of the investment processes in all three sectors, also supported by economic policy. As a result, the investment rate will increase again from 2022 to reach the pre-crisis value and stabilise around 27 percent in the coming years. The high investment rate has crucial importance in the recovery process and a rate higher than 25 percent is a necessary requirement for solid economic convergence. As for businesses, most of the projects postponed this year may be realised in the coming period, largely supported by bank lending and central bank schemes. At the state level, increasing investment activity may facilitate economic recovery in the year ahead. The recent strong investment activity of the household segment has been temporarily interrupted, but the newly announced government measures (preferential VAT rate for residential properties, home improvement programme, targeted duty exemption on purchase of housing property, reclaimable VAT) will give a substantial boost to household investments in the years to come.

The household consumption trend may be more favourable than in 2008/2009, with a significant expansion anticipated after the pandemic. The post-2009 period involved significant deleveraging in every sector of the Hungarian economy, and foreign currency loan repayment proved to be a challenge for many households. The overall result was an increase in precautionary household savings even after 2009, restraining retail consumption growth to a significant degree. By contrast, households are in a much better position at present, with less labour market adjustment, targeted government measures to protect jobs, sustained credit market functioning, and an extended moratorium on loan repayments until the middle of 2021, albeit with somewhat limited availability. In 2020, the current financial wealth of the households is much higher than it was during the 2009 crisis, and the favourable consumption path could be given an extra boost, thanks to larger reserves.

The labour market processes appear to be much more favourable than in 2009: the significantly higher employment rate coupled with a moderate increase in unemployment could also support the positive consumption trend of the households. Compared to the previous crisis, the change in employment rate per one unit of GDP decrease was less than half during the first wave of the pandemic (Chart 6-5). In addition, the youth unemployment rate which was critical in 2009 did not show a similar increase. In an international comparison, Hungary's unemployment rate remains highly favourable. The favourable employment trends are partly due to the government's job retention schemes (see Box 3-3), as well as the quick adaptability of the industrial sector to the pandemic situation with part time employment and the utilisation of atypical forms of employment. Businesses are further supported by the central bank's FGS Go! Scheme, available for financing operating expenses on a temporary basis. The central bank's lending schemes assist firms in adapting to the extraordinary situation and retaining jobs in an intensive manner (number of working hours, part-time employment). Problems with the recovery in services could further increase unemployment in late 2020 and early 2021, possibly alleviated by the Government's targeted measures.

Chart 6-5: Change in employment rate per unit of GDP



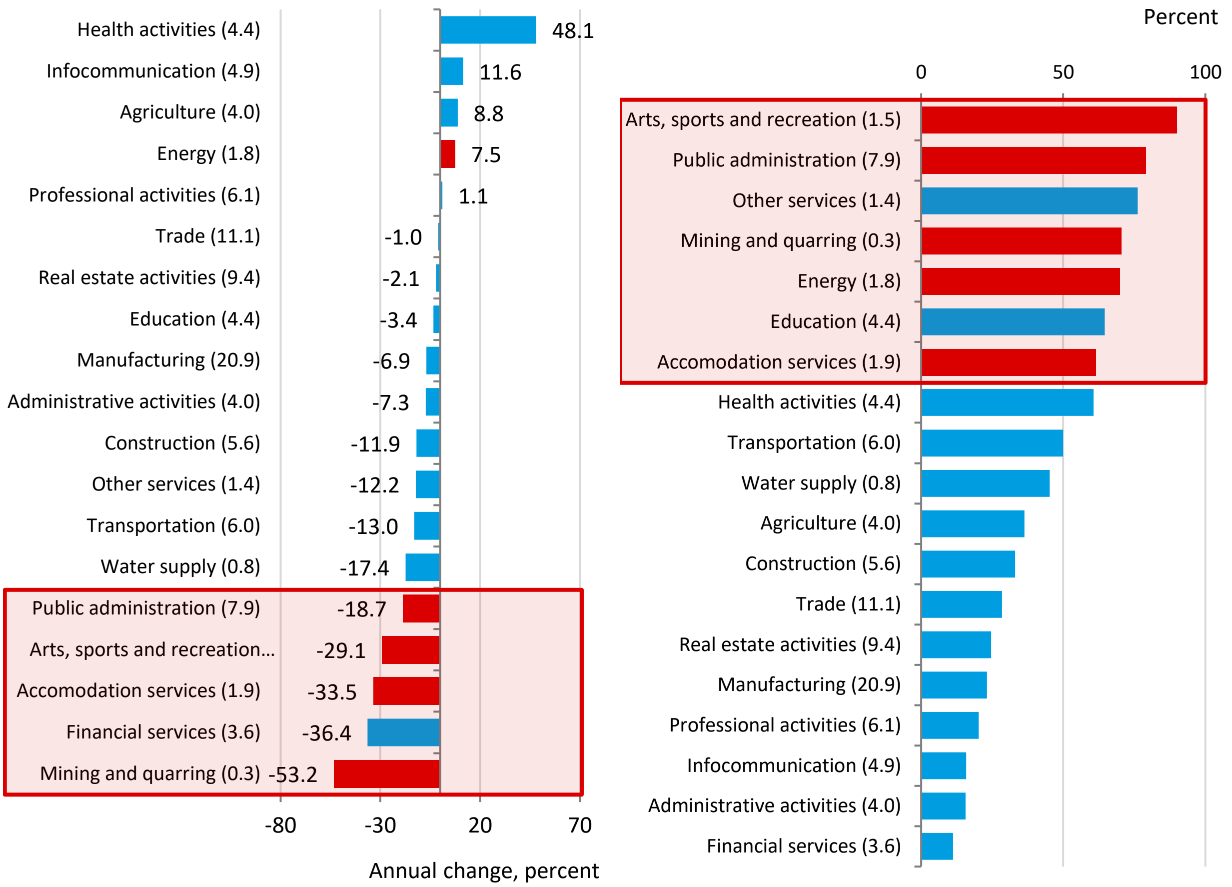
Note: Okun parameter (annual change in employment rate/annual change in GDP) calculated based on the lowest points of the 2008/2009 crisis and 2020 Q2 data. Some country parameters are missing due to lack of data of negative figures.
Source: MNB based on Eurostat

In line with the anchored inflation expectations, in recent years monetary policy has created the conditions for price stability, which helps preserve the purchasing power of wages and thereby support the recovery of Hungary's economy. During the previous crisis, real wages decreased, which continued in the years beyond 2009 as well. In recent years, however, real wages increased dynamically, with further moderate progress in 2020 and possibly in the years to come. This wage development, along with the favourable labour market processes, supports a more modest decline in consumption this year and faster growth in the recovery phase. As for underlying inflation developments, the rate of inflation may be lower than in 2009 and thereafter, both this year and in the years to come. The primary goal of monetary policy is to ensure price stability.

Unlike during the previous crisis, the banks' balance sheets appear to be much more favourable, with active lending supported by the central bank's schemes as well. Increased lending can strongly underpin economic recovery. The 2008/2009 financial crisis rapidly triggered a credit crunch with significantly narrowed borrowing possibilities. Furthermore, most economic actors were keen to gradually deleverage former portfolios. All of this resulted in a prolonged, essentially creditless recovery process. This time, however, no such severe credit supply and demand problems are being experienced. Credit demand from both households and businesses is noticeably higher than during the previous crisis, supporting a more dynamic economic recovery. Corporate lending is mainly attributable to the strong investment activity of companies, partly financing the investments postponed this year but to be realised in the next quarters. Households' credit demand may also increase significantly in 2020 and the years to come, which can support renewed growth in home construction, which is also flanked by the government policies announced in the past couple of months (see Box 1.2).

In 2009. the budgetary situation was a primary source of economic vulnerability, while in 2020 it contributes to stability and economic recovery. During the first years of the previous crisis, the high debt and deficit required procyclical, debt-decreasing policies, which strengthened the effects of the economic downturn. By contrast, in the past decade the disciplined fiscal policy made it possible to finance the anti-pandemic measures, and to protect jobs and the economy in a targeted manner as a response to COVID-19, along with a budget deficit temporarily increased to around 8–9 percent. The increased level of government investment could seriously underpin economic recovery primarily in sectors with low import ratios and high investment multipliers. Investments were temporarily halted in many public and quasi fiscal sectors in the first three quarters, with a reduced level of investment activity (Chart 6-6). In this respect there will be significant potential for investment expansion in 2021, providing additional boost to economic activity.

Chart 6-6: Annual change in investment per sector in 2020 Q1-Q3 (left panel), and weight of building investment per sector in 2019 (right panel)



Note: The 2019 weight of each sector within value added is indicated in brackets. Left panel: figures based on investment statistics data. Right panel: figures based on national accounts data.
Source: HCSO, MNB

Overall, the 2008/2009 financial crisis and the current COVID-19 induced crisis show significant differences, which altogether points toward a faster economic recovery. The 2008/2009 financial crisis hit Hungary in an extremely vulnerably state with no real fiscal room for manoeuvre, and – both in terms of targeting and volume – the central bank's intervention proved inadequate to stabilise inflation at the targeted level and to prevent a credit market freeze. This resulted in a prolonged recovery period, during which it took five years to return to the pre-crisis level in terms of economic performance. In 2020, the current recession is on a similar scale, but the crisis hit Hungary in a more favourable position to start with. There is significant fiscal room for manoeuvre which is well exploited, and the central bank's changed toolkit is able to support the economy in a targeted manner, while fulfilling its primary mandate. With its healthy balance sheet, the banking sector has the potential to underpin economic recovery through lending. As a result, the low level of labour market adjustment and the significantly better income and financial situation of the households, along with a pick-up in investment activity, can support a domestic demand-driven recovery. Compared to the crisis a decade ago, all the conditions are in place to ensure a much faster and more dynamic economic recovery in Hungary and to reach a higher level in terms of economic performance in 2022 than pre-crisis.

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	-0.1	0.3	0.2
Market prices	1.3	1.6	2.9	1.0	1.5 - 1.6	2.5 - 2.6
Indirect taxes and government measures	0.1	0.3	0.4	0.2	0.6	0.8
CPI	**1.4**	**2.0**	**3.4**	**1.1**	**2.4 - 2.5**	**3.5 - 3.6**

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

Table 7-2: Detailed decomposition of our inflation forecast into carry-over and incoming effects (percentage 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	5.7	0.0	8.0	0.2	0.0	4.4 - 4.6	0.0	4.6 - 4.8
non-processed	2.5	0.0	9.3	0.0	11.8	-1.6	0.0	6.3	0.0	4.7
processed	2.2	0.0	3.9	0.0	6.1	1.2	0.0	3.3 - 3.6	0.0	4.5 - 4.8
Tradable goods	0.3	0.0	1.2	0.0	1.5	1.1	0.0	(-0.2) - 0.1	0.0	0.9 - 1.2
durables	-0.1	0.0	1.3	0.0	1.2	(-1.0) - (-0.9)	0.0	(-0.7)-(-0.3)	0.0	(-1.7) - (-1.2)
non-durables	0.4	0.0	1.2	0.0	1.6	2.0 - 2.1	0.0	0.2 - 0.3	0.0	2.2 - 2.4
Market services	1.7	0.0	2.9	0.0	4.6	0.9 - 1.0	0.0	2.3 - 2.6	0.0	3.2 - 3.6
Market energy	2.4	0.0	-0.2	0.0	2.2	1.0	0.0	0.0	0.0	1.0
Alcohol and Tobacco	2.0	0.8	1.7	2.4	6.9	3.0	1.3	0.9 - 1.0	6.0	11.2 - 11.3
Fuel	1.8	0.0	-8.6	1.2	-5.6	2.4	1.2	1.0	0.0	4.6
Administered prices	0.2	0.0	0.2	0.0	0.4	-1.0	0.0	2.1	0.0	1.1
Inflation	**1.3**	**0.1**	**1.7**	**0.3**	**3.4**	**0.9**	**0.2**	**1.8 - 1.9**	**0.6**	**3.5 - 3.6**
Core inflation	1.4	0.1	2.3	0.4	4.2	1.4	0.2	1.4 - 1.6	0.8	3.8 - 4.0

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.
Source: MNB

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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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