INFLATION REPORT

2021
MARCH

'... 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 18 March 2021.

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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.

In the fourth quarter of 2020, the global economy performed better than expected. Countries around the world proved to be more economically resilient to the second wave of the pandemic. As a result, growth projections and inflation expectations typically shifted upwards. Rising inflation expectations were also supported by news about the approval of US fiscal stimulus measures and rising commodity prices. The third wave of the pandemic has caused a further deterioration in economic activity and an increase in risks. As a result, the uncertainty surrounding the pace of recovery in the world economy remains exceptionally high. The timing of the reopening of economies depends largely on the population's vaccination coverage; however, the vaccination process is slower than expected in most countries around the world.

Data for economic growth in the fourth quarter of 2020 turned out to be more favourable than expected. The world economy proved to be resilient to the second wave of the pandemic. Industrial production was favourable, while the performance of the services sector, which is more exposed to the effects of the pandemic, remained subdued. There continued to be differences in the economic performance of larger regions. The Chinese economy expanded by 6.5 percent year on year in the fourth quarter, while the economic performance of the United States and the euro area declined by 2.4 percent and 4.9 percent, respectively, relative to a year earlier. The economic performance of our main trading partner, Germany, was more favourable than the euro area average. The German economy contracted by 5.3 percent in 2020 and by 3.6 percent in the fourth quarter in annual terms. Countries in the region faced a smaller decline, as economic activity in most Central and Eastern European countries rose at a moderate pace in the last quarter of 2020.

Based on higher-than-expected growth in 2020, economies around the world proved to be more resilient to the second wave of the pandemic; however, the onset of the third wave has resulted in a deterioration in the economic outlook. Based on real-time indicators, economic activity slowed internationally in early 2021. The savings rate of Hungary's external markets increased significantly in 2020, which may partly explain the lower activity and, looking ahead, translates into a significant buffer for growth. Nevertheless, uncertainty surrounding the pace of recovery in the world economy remains exceptionally high, as it depends largely on the vaccination process, the course of the third wave of the pandemic and the Government's decision on restrictive measures.

The external inflation environment was moderate at the end of 2020, with inflation rates being below central bank targets in the majority of developed economies. However, inflation in the United States rose to 1.4 percent in January, while in the euro area it increased to 0.9 percent from negative territory at the end of 2020, mainly due to temporary effects. In January, long-term inflation expectations rose to a two-year high in the US, and they also shifted upwards in the euro area, while still falling short of the European Central Bank's target. After a significant increase, oil prices have risen temporarily above USD 70 in recent months. In the majority of countries in the CEE region, inflation rates remained close to central bank targets.

In the assessment of the world's leading central banks, spikes in inflation can be considered temporary. Due to unfavourable developments in the pandemic situation, central banks maintained loose monetary conditions and continued their economic stimulus programmes.

Over the past quarter, among the world's leading central banks, the Federal Reserve has left the benchmark rate band close to zero and continued its asset purchases. According to its statement , no interest rate hikes are expected through 2023. As a result of the liquidity providing programmes, the Fed's balance sheet continued to grow. The European Central Bank also kept interest rates unchanged and continued its asset purchase programmes. Decision-makers have indicated that purchases under the Pandemic Emergency Purchase Programme (PEPP) may be higher in the second quarter.

In the CEE region, the Czech and the Polish central bank maintained policy rates at a low level, while the Romanian central bank eased interest rates in January. The Polish central bank continued its government securities purchase programme.

Money and capital market sentiment has been volatile. In the first half of the period since December, investor sentiment improved due to favourable news about vaccines; however, risk aversion increased at the end of January and February on account of the uncertainty around the approval of the US budget stimulus package and a sharp rise in developed market yields.

Over the past three months, investor sentiment in global money markets improved initially due to optimistic expectations regarding vaccine developments, which was also supported by the dissipation of uncertainty around the composition of the US Senate. At the end of January and February, risk aversion increased temporarily, due in part to the uncertainty surrounding the US budget stimulus package, which has been subsiding since. Since January, long-term yields have risen primarily in the United States as a result of favourable news on vaccines and positive growth expectations related to the reopening of the economy. Additionally, there was a general rise in long-term yields, which contributed to the increase in risk aversion. Overall, financial market sentiment has been volatile in the past quarter; however, risk indicators remained at high levels. Currently, money market volatility is similar to that seen in December. Developed and emerging market stock indices have largely risen.

The coronavirus pandemic hit the Hungarian economy when its fundamentals were stable, and growth was strong. Hungary's economy proved to be more resilient to the second wave of coronavirus; the pandemic situation has been managed while maintaining economic stability.

The economic policy pursued over the past decade has maintained the country's macroeconomic balance and reduced its external and internal vulnerabilities. The negative real economic and money market consequences of the coronavirus pandemic were mitigated by the quick and effective measures of the Hungarian Government and the Magyar Nemzeti Bank. Due to expenditures on health and economic protection, the government deficit has risen, while the current account balance has improved, leaving Hungary's net lending position persistently positive. As the effects of the pandemic fade and sustainable economic growth is restored, the government debt will return to a declining path after a temporary rise.

From the spring of 2020, the MNB responded to the negative economic effects caused by the coronavirus pandemic by significantly expanding its balance sheet. By the end of 2020, the Bank has provided funds to economic agents amounting to HUF 5,900 billion in total. The Bank's government securities purchases contributed to maintaining the stable liquidity position of the government securities market and improved the effectiveness of monetary transmission. In addition, the MNB provides funding to ensure the continuous operation of SMEs and for their investments under the Funding for Growth Scheme Go!. Furthermore, through the Bond Funding for Growth Scheme, businesses have access to long-term reliable funding while diversifying their debt structure.

As it was also confirmed by the latest credit ratings by S&P and Fitch, Hungary has a relatively strong economic performance and recovery potential, as well as a solid debt repayment capacity. The Hungarian economy proved to be resilient in the second wave of the pandemic, and as a result the economic recovery continued in the fourth quarter of 2020.

In the second quarter of 2021, spikes in inflation may occur due to base effects, rising fuel prices, further increase in excise duties and demand-supply frictions arising from the restart of the economy. However, with inflation expectations remaining anchored, second-round effects are unlikely according to the baseline scenario. In line with the economic recovery and a moderate external inflationary environment, inflation will stabilise again around the 3 percent target from the first quarter of 2022.

The consumer price index will temporarily approach 5 percent in the second quarter of 2021 due to base effects primarily linked to fuel prices, changes in excise duties, repricing related to the restart of the economy and sharply rising demand. Overall, changes in fuel prices and taxes will account for about half of Hungary's consumer prices index in the second quarter. Based on incoming data and the current assumptions, annual average inflation in 2021 may be higher than projected in the December forecast, at 3.8–3.9 percent, while core inflation excluding indirect tax effects will be around the 3 percent level.

Spikes in inflation, indicated in the projection, are mainly caused by supply-side and cost-side factors, and are expected to be temporary. Therefore, with inflation expectations remaining anchored, we do not expect second-round effects according to the baseline scenario. Due to the fading temporary effects of these factors, unused capacity in the economy and a disinflationary external environment, inflation is expected to stabilise again around the central bank target from the first quarter of 2022.

Economic performance in 2020 outstripped expectations, indicating a capability of rapid recovery inherent in the Hungarian economy. However, due to the spread of new coronavirus mutations, a third wave of the pandemic has emerged, leading to a decline in GDP in the first quarter of 2021 due to the extension of restrictive measures and disruptions in production chains. Depending on the population's vaccination and thus the timing of the restart of the economy, strong economic growth is expected from the second or third quarter. The potential for a rapid recovery in the Hungarian economy is also supported by structural and demand-related factors. Despite last year's recession, the investment rate has remained high partly due to the inflow of foreign capital, the unemployment rate has been low in international comparison and the healthy functioning of credit markets has been maintained. On the demand side, the recovery is also supported by a rise in household incomes and a pick-up in public and private investment. In 2021, GDP may increase by between 4.0 and 6.0 percent.

Hungary's GDP grew by 1.4 percent in the fourth quarter of 2020 relative to the previous quarter, while declining by 3.6 percent year on year. Looking ahead, domestic demand from households is expected to increase from the second or third quarter of 2021, depending on the lifting of restrictions. Real income of households is expected to increase this year. The expansion is supported by the fact that labour market adjustment has been less pronounced than during the global financial crisis in 2009. Other factors contributing to the less pronounced adjustment are the moratorium on debt repayments, the continued functioning of credit markets and the Government's job protection measures (e.g. wage subsidies).

The investment rate will continue to rise, and it will stabilise near 29 percent in the next two years. Both public and private investment will contribute to this development. The increase in corporate investment is also supported by new development projects financed by foreign direct investment, as well as the expansion in corporate lending and the favourable financing environment. The FGS Go! plays an important role in the healthy lending dynamics, under which 28,000 enterprises have received over HUF 1,800 billion in funding. Household investment is also supported by the Government's housing allowance programmes.

In line with industrial production, exports of goods proved to be much more resilient during the second wave of the pandemic at the end of last year than in the first wave. However, at the beginning of the year, production chains were interrupted again. Although considered temporary, these will act as a drag on growth in the short term but will not affect the longer-term outlook. Developments in external activity remain uncertain. A recovery in tourism-related sectors can only begin once an appropriate level of vaccination has been achieved and restrictions have been lifted. Starting this year, net exports could once again make a positive contribution to economic performance owing to a good performance of exports of goods during successive waves of the pandemic and the incipient recovery in services exports. The Hungarian economy is expected to grow by 4.0–6.0 percent this year. Growth is expected to be 5.0–6.0 percent in 2022 and 3.5 percent in 2023.

Due to the moratorium on debt repayments and subsidised credit facilities, credit expansion in Hungary was at the forefront of Europe.

The stock of corporate lending by the financial intermediary sector increased by HUF 273 billion in the fourth quarter. As a result, annual growth in corporate lending accelerated by 1.4 percentage points to 9.3 percent in December, while credit growth to the SME sector rose at an annual rate of 13 percent. Loan contracts concluded under the FGS Go! over recent months have played a significant role in supporting corporate lending. Since last April, loans issued under the Scheme have accounted for more than half of new lending and around 90 percent of lending to SMEs. The credit programmes introduced by the Government and the MNB have provided substantial support for investment expansion and job retention. Annual growth in the stock of corporate lending is expected to slow to 6 percent by the early 2022, and then to return gradually to around 10 percent.

The stock of household lending by the intermediary system rose by HUF 282 billion due to transactions in the fourth quarter of 2020, resulting in an annual growth of 14.2 percent. Despite the imposition of stricter restrictions in November, the household credit market did not deviate substantially from that of the previous quarter: the housing loan market normalised, with the issuance of loans returning to the same level as in the previous year, while personal loan issuance fell 44 percent short relative to the fourth quarter of 2019. The moratorium on repayments has significantly supported the expansion in household lending by curbing the depreciation of the stock of loans. In addition, contracts concluded for prenatal baby support loans amounting to HUF 146 billion in the fourth quarter have also contributed significantly to the dynamic growth, which may provide support to household lending until the programme ends in 2022. At the same time, contracts concluded in January 2021 were 32 percent lower than in the same period of the previous year. The decline affected all types of loans, in which a wait-and-see approach taken due to the housing measures in effect from 2021 may also have played a role. Due to the termination of the repayment moratorium in July 2021 and the protracted epidemiological situation, household lending dynamics are expected to slow to around 10 percent by the beginning of 2022 before rising to 12–13 percent by the end of 2022.

Developments in the current account balance outperformed earlier expectations, showing a surplus in 2020. With the recovery in external demand and the gradual increase in the output of new production capacities, the current account balance is expected to improve further. Together with a significant capital account surplus, net lending of the economy will increase significantly, while the country's net external debt will continue to decline.

The current account balance outperformed earlier expectations and registered a surplus in 2020. Looking ahead, the current account balance will be boosted by a rising surplus in the balance of goods and services, in line with a faster growth in Hungary’s export markets. This effect will be enhanced by industrial production rising above previous years’ levels by the end of 2020 and the fact that expenditures related to protective measures taken against the pandemic will have less of an impact on the 2021 balance. The improvement in the balance will be slowed by the fact that the profits of foreign companies will increase the income account deficit as external and domestic demand recovers. Overall, these effects will lead to an increase in the current account balance to 2 percent of GDP on the forecast horizon. The use of EU transfer will also contribute to the improvement in Hungary’s net lending. External debt ratios will continue to decline in the coming years.

According to preliminary financial accounts data, the accrual-based deficit of the budget rose to 8.0 percent of GDP in 2020, due to expenditures related to the protective measures taken against the pandemic, the measures of the Economy Protection Action Plan and declining tax revenues resulting from the economic slowdown. Preliminary deficit data for 2020 are considered to be average in regional and international comparisons. As a result of measures taken to mitigate the health and economic effects of the coronavirus pandemic in early 2021 and to restart economic growth, the budget deficit-to-GDP ratio will be 6.5–7.0 percent this year according to our forecast. Then, from 2022, the deficit is expected to fall further. Gross government debt rose temporarily above 80 percent of GDP in 2020; however, according to our forecast, it will return to a downward path again from 2021 onwards as economic growth recovers and the deficit declines.

Domestic long-term yields have risen since December.

Overall, the government securities market yield curve has shifted upwards in Hungary. Yields rose most in the middle of the curve. The rise in long-term yields mainly reflected increases in developed market yields, driven to a large extent by global concerns about reflation and expectations related to US economic policy. In addition, country-specific factors also have contributed to the increase in long-term yields in Hungary, arising mainly from the liquidity conditions prevailing in the long segment. Among regional currencies, the forint practically moved together with the Polish zloty during the period, while it depreciated against the euro overall.

The macroeconomic outlook remains subject to two-way risks.

The Monetary Council highlighted three alternative scenarios around the baseline projection in the March Inflation Report. The alternative scenario which presumes a global protraction of the coronavirus pandemic and the economic recovery points to a domestic inflation path that is lower than the baseline scenario and to a much more subdued growth path. The alternative scenario which presents global reflation and the resulting second-round inflationary effects presumes higher inflation and GDP growth than the baseline scenario. Compared to the baseline forecast, inflation is higher, whereas growth is more subdued in the alternative scenario depicting an increase in risk aversion vis-à-vis emerging markets. In addition to these scenarios, as a further alternative, the Monetary Council also discussed a scenario that assumes the implementation of competitiveness reforms.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2020	2021	2022	2023
	Actual		Projection	
Inflation (annual average)[1]				
Core inflation	4.1	3.9 - 4.1	2.9 - 3.0	3.0
Core inflation excluding indirect tax effects	3.7	2.9 - 3.1	2.7 - 2.8	3.0
Inflation	3.3	3.8 - 3.9	2.9 - 3.0	3.0
Economic growth				
Household consumption expenditure	-2.5	2.6 - 4.5	3.8 - 4.9	3.0
Government final consumption expenditure[6]	-0.8	2.7 - 3.6	1.5 - 2.6	1.5
Gross fixed capital formation	-7.3	5.0 - 7.2	6.4 - 6.6	2.8
Domestic absorption	-2.7	3.0 - 4.8	4.1 - 4.9	2.6
Exports	-6.7	8.1 - 9.7	7.4 - 8.0	5.1
Imports	-3.9	6.8 - 8.3	6.4 - 6.9	4.1
GDP	-5.0	4.0 - 6.0	5.0 - 6.0	3.5
Labour productivity[5]	-2.8	4.1 - 5.1	4.2 - 4.7	3.0 - 3.2
External balance[2]				
Current account balance	0.1	0.5 - 0.6	1.2 - 1.3	1.9 - 2.0
Net lending	2.4	3.1 - 3.2	3.5 - 3.6	4.7 - 4.8
Government balance				
ESA balance	-8.0	(-7.0) - (-6.5)	(-5.0) - (-4.5)	(-3.5) - (-3.0)
Labour market				
Whole-economy gross average earnings[3]	9.9	6.4 - 7.1	7.1 - 7.5	6.9 - 7.1
Whole-economy employment	-0.9	(-0.7) - (0.2)	0.7 - 1.1	0.3 - 0.6
Private sector gross average earnings[3]	9.8	5.2 - 6.2	6.7 - 7.2	7.3 - 7.6
Private sector employment	-0.5	(-1.1) - (0.1)	1.0 - 1.5	0.4 - 0.7
Unemployment rate	4.1	4.2 - 5.0	3.6 - 4.0	3.4 - 3.5
Private sector nominal unit labour costs	11.0	(-0.7) - (-0.3)	0.1 - 1.3	2.9
Household real income[4]	-0.7	2.7 - 3.9	3.5 - 4.5	3.0

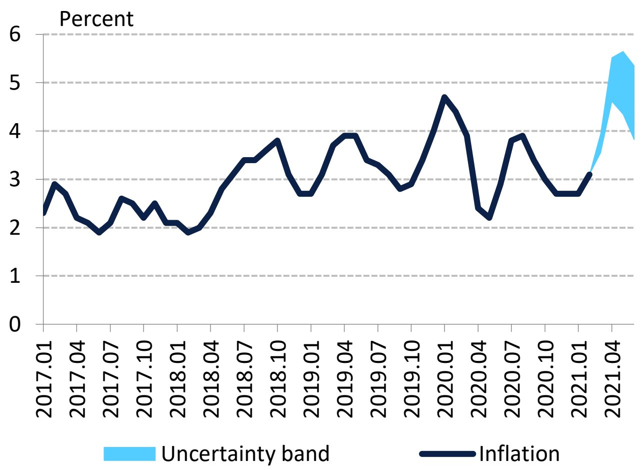
[1] Based on seasonally unadjusted data.
[2] GDP proportionate values, partly based on forecast.
[3] For full-time employees.
[4] MNB estimate.
[5] Whole economy, based on national accounts data.
[6] Includes government consumption and the transfers from government and non-profit institutions.

1 Inflation and real economy outlook

1.1 Inflation forecast

Since the start of the pandemic, pricing decisions have shown higher volatility and an unusual seasonal pattern. This volatility will continue in the coming quarters. Supply- and cost-side effects, as well as tax measures are the factors playing a role in the increase in inflation in the second quarter, after which price dynamics are expected to moderate again in the second half of the year. The rise in inflation is primarily caused by further increases in fuel prices and the excise duty on tobacco products, but – similar to what was seen last summer – the inflationary effect from reopening the economy is also a contributing factor. This year, inflation may be in the range of 3.8–3.9 percent. Despite temporary volatility in the coming quarters, domestic prices may be reduced by the structure of the spikes in inflation, slower wage growth and the disinflationary effect of the external environment. Therefore, the price index is expected to stabilise around the central bank target from 2022 Q1. According to our forecast, core inflation excluding indirect taxes will be 2.9–3.1 percent in 2021, 2.7–2.8 percent in 2022 and 3.0 percent in 2023.

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

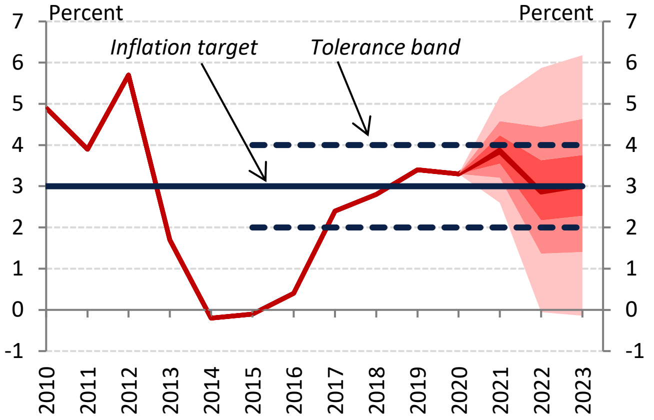


Note: Annual change. The uncertainty band shows the forecast range with regard to the root mean squared error of previous years' near-term forecasts.
Source: HCSO, MNB

On the whole, the growth rate in consumer prices registered in recent months was in line with our December expectations. Following a rate of 2.7 percent in the previous months, inflation in February rose to 3.1 percent year on year. Pricing decisions have shown higher volatility and an unusual seasonal pattern since the start of the pandemic. However, repricing in the first months of this year was lower than last year. The restrictive measures introduced to contain the third 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 and the seasonality of such.

Supply- and cost-side effects, as well as tax measures are the factors playing a role in the increase in inflation in the second quarter, after which price dynamics are expected to moderate again in the second half of the year. The spike is the combined result of several factors: the increase is primarily caused by the further rise in fuel prices and the excise duty on tobacco products, but – similar to what was seen last summer – the inflationary effect resulting from reopening the economy also contributes to it (Chart 1-1). In the first wave of the pandemic, fuel prices plunged to an extremely low level (see Box 1-1, Chart 1-5). Over the short term, the rise in the petrol price is expected to reach 30 percent compared to the low base registered a year ago; accordingly, in April and May it alone contributes to the increase in inflation by roughly 2 percentage points. The excise duty changes raise inflation in April and May by 0.8 percentage point on average. According to our estimates, in summer 2020 the impacts of restarting the economy raised inflation by 0.9 percentage point (see Box 3-2 in the September 2020 Inflation Report); however, by the end of the year this impact had fully disappeared. Based on last year's

Chart 1-2: Fan chart of the inflation forecast



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

Table 1-1: Details of the inflation forecast

		2021	2022	2023
Core inflation excluding indirect tax effects		2.9 - 3.1	2.7 - 2.8	3.0
Core inflation		3.9 - 4.1	2.9 - 3.0	3.0
Non-core inflation	Unprocessed food	0.5	4.2	4.2
	Fuel and market energy	13.8	3.0	3.6
	Regulated prices	0.4	2.1	2.1
	Total	3.4	2.8	3.0
Inflation		**3.8 - 3.9**	**3.8 - 3.9**	**2.9 - 3.0**

Note: Based on seasonally unadjusted data.
Source: MNB

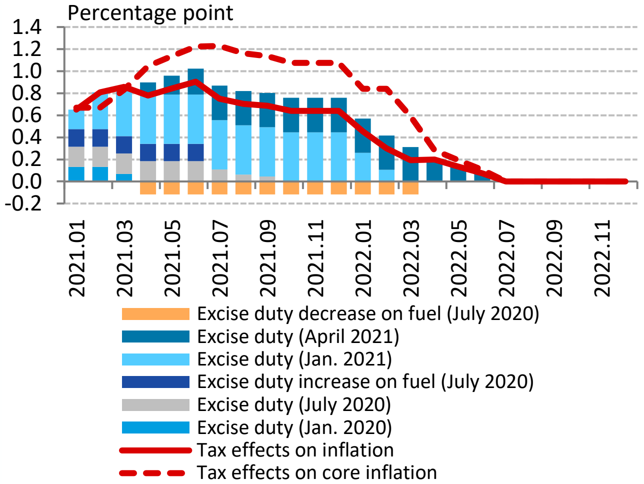
experiences, in 2021 we expect price rises to be temporary in nature (see Box 3-4). Inflation will be 3.8-3.9 percent this year and around the central bank target from 2022 (Chart 1-2).

Despite the volatility in the quarters ahead, the structure of the spikes in inflation, the slowdown in wages and the disinflationary effect of the external environment may reduce domestic prices in the medium run. According to its March projection, the ECB continues to forecast price dynamics falling short of its 2-percent inflation target over the forecast horizon, despite having revised both its inflation and core inflation projection upwards (see Box 1-2). The revision primarily related to rising oil prices and the data registered at the beginning of the year. In January, euro area inflation rose to 0.9 percent and then stagnated at this level in February as well; in addition to the surprise observed in core inflation, the fading out of the temporary VAT cut in Germany made a major contribution in this regard. Between 1 July 2020 and 31 December 2020, Germany implemented a general, temporary VAT cut as part of the pandemic measures. However, from January 2021, with the exception of restaurant and catering services, it was reinstated to its previous level. In the quarters to come, the ECB expects significant volatility in inflation, but in the medium run underlying developments in the euro area may remain moderate due to slack domestic demand, followed by a gradual rise in parallel with economic recovery. However, euro area core inflation may be merely 1.3 percent even in 2023.

Core inflation excluding indirect tax effects will lag substantially behind inflation, indicating the temporary nature of the increase in inflation. Supply-side inflationary effects, stemming from repricing by enterprises and their efforts to restore profitability, may increase the price index. At the same time, the expected slowdown in wage growth will have a disinflationary effect, along with the external environment. Due to the temporary effects we do not expect any second-round effects in the labour market and in economic agents' expectations in our baseline scenario, which also supports lower inflation in the second half of the year. On the whole, core inflation excluding indirect taxes will be 3 percent on average over the forecast horizon. According to our forecast, core inflation excluding indirect taxes will be 2.9–3.1 percent in 2021, 2.7–2.8 percent in 2022 and 3.0 percent in 2023.

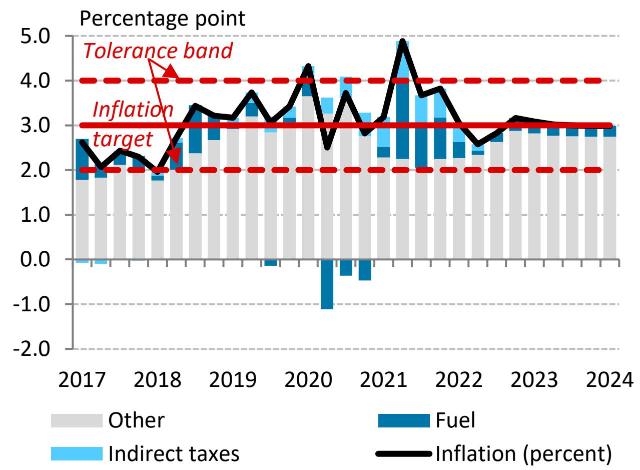
Changes in indirect taxes point to an increase in inflation and core inflation over the forecast horizon. In January

Chart 1-3: Inflation contribution of tax changes



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

Chart 1-4: Decomposition of our inflation forecast



Note: The graph shows the average of the band forecast.
Source: HCSO, MNB

2021, the excise duty on tobacco products increased again (Chart 1-3). In line with the approximation of EU laws, the series of excise duty increases related to tobacco products will continue in April 2021; however, according to our current information, no further increases are expected after that. The tax content of inflation is somewhat reduced by the fact that – based on the announcement by NTCA – starting from 1 April 2021 the excise duty on fuels will decline (by HUF 5/litre for petrol and HUF 10/litre for diesel), because the average world market price of Brent crude oil in 2021 Q1 exceeded the level of USD 50/barrel, and stood at USD 60.381/barrel. This year, the excise duty cut on fuels will reduce the tax content of inflation by 0.1 percentage point. On the whole, indirect tax effects will raise inflation in 2021 and 2022 by 0.7 percentage point and 0.1 percentage point, respectively, while having a neutral effect in 2023.

As regards non-core inflation items, due to the significant rise in fuel prices, we expect price developments to exceed the December forecast this year and correspond to the forecast next year and in 2023. Based on the incoming data showing a major decline, unprocessed food inflation may fall substantially short of the December projection, and subsequently return to its historical average next year. In the case of fuels, in line with the changes in futures quotes, prices are projected to increase significantly this year (see Box 1-2), while in 2022 the increase in prices is expected to be lower than our December forecast, due to the combined result of base effects and corrections in futures prices.

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 December forecast. In addition to lower-than-expected incoming data, this is attributable to the effect of the later phase-out of free parking than assumed in December. 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).

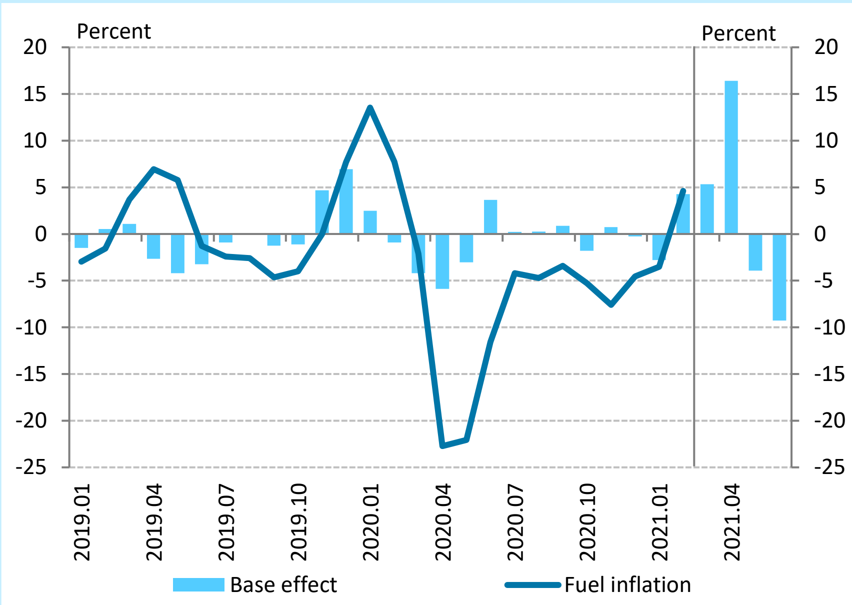
Box 1-1: Factors behind the spikes in inflation in 2021 Q2

In the Inflation Reports released in the past quarters (September 2020 and December 2020), we called attention to expected temporary spikes in inflation amid higher-than-usual volatility at the beginning of 2021 and in the spring months. Following the start of the pandemic, pricing decisions in 2020 were characterised by higher volatility and an unusual seasonal pattern, which may continue in the future with the third wave of the pandemic as well. This box elaborates on the factors behind the temporary spikes in inflation in 2021 Q2.

According to our current forecast, inflation may fluctuate in the coming period. Supply- and cost-side effects, as well as tax measures are the factors playing a role in the increase in inflation in the second quarter, after which price dynamics are expected to moderate again in the second half of the year.

Fuel prices sank to a very low level during the first wave of the pandemic, but the price level is now well above last year's average (Chart 1-5). In the short run, fuel price changes constitute the most important inflationary factor, as global oil prices have been rising significantly recently. This effect is amplified by the fact that one year ago global oil prices – and thus fuel prices in Hungary as well – were at a low. The rise in fuel prices is expected to reach 30 percent in the short run compared to the low base of one year ago, and according to our forecast this alone contributes to the increase in inflation by some 2 percentage points in April and May.

Chart 1-5: Annual changes in fuel prices and developments in base effects related to fuel prices



Note: Based on seasonally unadjusted data.
Source: MNB calculation based on HCSO data

In addition, in line with harmonisation with EU legislation, following the rise in January, the series of increases in the excise duty on tobacco products will continue in April 2021. At the same time, as a result of the increase in oil prices to above USD 50 per barrel on average in Q1, the excise duty on fuels will decline to the level seen in June of last year, sightly offsetting the inflationary effect of the rise related to tobacco. Overall, the changes in excise duty will contribute 0.9 percentage point to inflation on average in June (Chart 1-3). This tax effect is twice as much as the average tax content of inflation in 2020: the tax content of inflation last year was 0.4 percentage point, of which last year's tobacco and fuel excise duty rises accounted for 0.3 percentage point.

Finally, in 2021 companies may adjust the usual repricing (typical of the beginning of the year) to the restart of the economy (for more details see Box 3-4). It is a question of timing whether repricing will take place already from April, or only later, starting from May or June. According to our calculations, in the summer of 2020 the effects stemming from restarting the economy boosted inflation by 0.9 percentage point, but this effect disappeared completely by the end of the year. According to our expectations, price rises will be of a temporary nature in 2021 as well.

Following temporary spikes in inflation, inflation is already expected to be around the central bank target from 2022, as the price-reducing impact of the external inflation environment comes to bear, fuel price inflation declines to a level corresponding to the historical average, and the inflationary indirect tax effects gradually ease off. In addition, a decline in price dynamics over the medium term is suggested by the assumption that core inflation excluding indirect taxes will be much lower than inflation in 2021, which indicates the presence of short-term cost effects in the overall price index. While inflation is forecast to be in the range of 4.8–4.9 percent in 2021 Q2, core inflation excluding taxes may be more than one percentage point lower, i.e. at 3.2–3.3 percent.

Box 1-2: Assumptions applied in our forecast

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

Table 1-2: Main external assumptions of our forecast

Technical assumptions	2021		2022		2023		Change		
	Previous	Current	Previous	Current	Previous	Current	2021	2022	2023
EUR/USD	1.21	1.20	1.21	1.20	1.21	1.20	-0.5%	-0.8%	-0.8%
Oil (USD/barrel)	48.0	63.5	47.8	60.9	47.8	60.7	32.2%	27.5%	27.1%
Oil (EUR/barrel)	39.8	52.9	39.6	50.9	39.6	50.7	32.9%	28.4%	28.1%
Euro area inflation* (%)	0.7 - 1.0 - 1.1	1.5 - 1.5 - 1.6	0.6 - 1.1 - 1.3	1.0 - 1.2 - 1.5	0.8 - 1.4 - 1.5	1.1 - 1.4 - 1.7	0.5 - 0.5 - 0.8 pp.	0.0 - 0.1 - 0.4 pp.	0.0 - 0.2 - 0.3 pp.
Euro area core inflation (%)	0.8	1.0	1.0	1.1	1.2	1.3	-0.2 pp.	0.1 pp.	0.1 pp.
Euro area real GDP* (%)	0.4 - 3.9 - 6.0	2.0 - 4.0 - 6.4	3.0 - 4.2 - 4.3	2.2 - 4.1 - 4.5	2.1 - 2.1 - 2.9	2.1 - 2.2 - 2.5	0.1 - 0.4 - 1.6 pp.	(-0.8) - (-0.1) - 0.2 pp.	(-0.4) - 0.0 - 0.1 pp.
GDP growth of Hungary's main export partners** (%)	2.8 - 5.7	3.7 - 5.7	3.7 - 4.8	3.6 - 4.4	1.3 - 1.6	2.2 - 2.4	(0.0) - (0.9) pp.	(-0.4) - (-0.1) pp.	0.8 - 0.9 pp.

Note: Annual average in the case of oil prices.

*ECB March projections. **Growth rate of Hungary's 21 most important export partners weighted by share in exports.

Source: Bloomberg, Consensus Economics, MNB, ECB

The international economic environment continues to be determined by the evolution of the coronavirus pandemic. The second wave had milder-than-expected economic effects, but the arrival of the third wave resulted in a deterioration in the economic outlook. On the whole, growth in Hungary's external markets exceeded expectations in 2020 Q4. Developments in industrial production were favourable, while the performance of the services sector, which is more exposed to the impacts of the pandemic, remained subdued. There continued to be differences in economic performance across the main regions. In Q4, the Chinese economy expanded by 6.5 percent year on year, while the economic output of the United States declined by 2.4 percent. Germany's economic output contracted by 3.6 percent in Q4 and was thus better than the euro area average (4.9 percent). The start of the third wave resulted in a deterioration in the economic outlook. According to real-time indicators, declines were observed in international economic activity in early 2021. At present, maintaining and/or potentially tightening the containment measures point to a protracted economic recovery. Expectations regarding the future performance of Hungary's trading partners remain uncertain.

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, similarly to the December forecast, the projection for real GDP growth in the euro area features a wide range. The European Central Bank forecasts growth to be between 2.0 and 6.4 percent in 2021, between 2.2 and 4.5 percent in 2022, and between 2.1 and 2.5 percent in 2023. According to the current projection, euro area inflation will rise temporarily in 2021, mainly due to the increase in oil prices. Moreover, the end of the temporary VAT reduction in Germany and the surprise regarding January inflation data contributed to the upward revision in the projection for 2021 and 2022 as well. At the same time, euro area headline inflation will remain moderate in line with weak domestic demand. In 2023, euro area inflation will still fall short of the ECB's 2- percent target.

Rising from USD 50 per barrel in mid-December, the world market price of Brent crude reached USD 70 per barrel by mid-March, a level unseen since January 2020. The 40- percent price increase is attributable to the combined effect of several factors. At their meeting on 4 January, the OPEC+ member countries agreed that instead of the previously planned production increase of 500,000 barrels per day, they will raise their production only by 75,000 barrels a day in February and by a further 120,000 barrels in March. The price of oil was further increased by the fact that following the meeting Saudi

Arabia volunteered to reduce production by another 1 million barrels a day in February and March, and thus the price of oil rose to USD 55.

In February, the good economic performance of Asian countries, the entry into the market of the vaccines against the coronavirus as well as the surge in fuel sales in China, which significantly influences global demand, contributed to the rise in prices to above USD 60 per barrel. Oil imports of China were up by 4.1 percent in the first two months of the year compared to the same period of the previous year. At the same time, in its updated February forecast the International Energy Agency (IEA) made a downward revision to its oil demand figures for this year. According to the Agency, the global oil market is still fragile, as the pandemic limits the global volume of travelling and business activity.

Nevertheless, global oil prices did not stop rising, and from the average level of USD 62 per barrel in February the per barrel world market price of Brent crude rose to nearly USD 70 by mid-March. There were three main contributors to the price increase: in mid-February, the middle part of the United States and the oil-producing state of Texas were hit by extremely cold weather and an energy crisis, resulting in serious shutdowns in both oil production and refining. The cold front in Texas turned into a global oil market shock, as a result of which US oil supply declined by more than 4 million barrels a day (corresponding to nearly 40 percent of US oil production). The drastic fall in supply from the Permian Basin, one of the largest oil refining areas in the world and the centre of US shale oil production, caused a major price hike in global oil markets. As a result of the extreme cold, some US waterways for oil transportation became unusable, causing difficulties in transport and other problems, including in the supply chain. The OPEC+ countries held another meeting on 4 March. As opposed to expectations (500,000 barrels a day), they did not decide to increase production from April. They only extended the currently valid production cap by one month, also including the voluntary reduction of 1 million barrels a day by Saudi Arabia. Starting from April, only Russia and Kazakhstan will increase production: they may raise production by 130,000 and 20,000 barrels a day, respectively. Futures prices rose to above USD 65 per barrel following the meeting. Finally, on 7 March one of the most well protected oil industry facilities in the world was attacked by missiles in Saudi Arabia. The attack did not affect the production as the Saudi forces succeeded in neutralising the missiles and drones, but the price of oil surged to nearly USD 70 per barrel as a result of the geopolitical tension.

Oil prices in euro, which determine changes in fuel prices in Hungary, are much higher compared to our December assumption, as a result of developments in global markets. Our assumption for the EUR/USD cross rate is slightly lower compared to the December projection.

According to our forecast, the budget deficit may be around 6.5–7 percent in 2021, gradually declining to 3 percent by the end of the forecast period. The increase in budget deficit compared to our December expectation is primarily caused by the government measures taken. The temporary reduction in the local business tax rate for small and medium-sized enterprises increases these businesses' disposable income by 0.3 percent of GDP in 2021. The scope of sectors entitled to receive sectoral wage subsidies was expanded to the sectors affected by the latest restrictions, and the eligibility period was extended. As of 2022, employees under the age of 25 will be exempted from paying personal income tax up to the degree of the average wage. This measure will leave an amount corresponding to 0.2 percent of GDP for young employees both in 2022 and 2023.

At current prices, EU funding amounting to some HUF 20,000 billion may be available for Hungary between 2021 and 2027. Of this amount, the seven-year cohesion policy envelope and the two pillars of the common agricultural policy (EAGF, EAFRD) may account for around HUF 8,000 billion and more than HUF 4,300 billion, respectively. In addition, the funds of the Recovery and Resilience Facility (RRF), the backbone of Next Generation EU, which aims at crisis management, may exceed HUF 6,000 billion. For drawing the RRF envelope, nearly 60 percent of the funds of which are refundable, following the Commission's country-specific recommendations, member countries have to prepare recovery plans before 30 April 2021, which will be evaluated by the Commission by 30 June 2021 at the latest. According to the relevant EU regulation, the funds should be disbursed before end-2026.

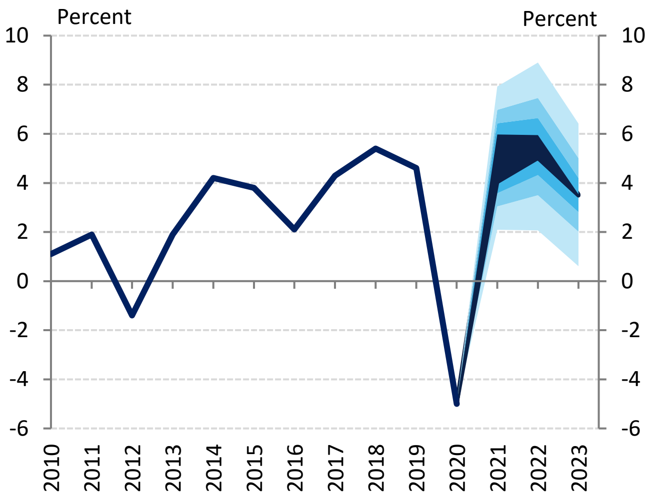
As per our projection, in view of the RRF, the actual absorption of EU funding will slightly increase after 2021. At the same time, the distribution across years of the amount of the absorption of funds related to the cohesion and recovery programmes involves major uncertainty.

Following a rise on 1 January this year, the excise duty on tobacco products will increase again on 1 April, in order to comply with EU rules. 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. From HUF 22,800 per thousand pieces in 2020, the excise duty rose to HUF 24,000 as of January, and will increase to HUF 26,000 in April. At the same time, the duty concerning the minimum price increased to HUF 37,300, and then will grow to HUF 39,300 as of 1 April, from HUF 34,500 in force at the end of 2020. This tax increase of around 20 percent may improve the fiscal balance by HUF 35–40 billion this year.

1.2 Real economy forecast

In 2020 Q4, Hungary's GDP declined to a lesser degree than expected, by 3.6 percent, year on year. Due to the timing of reopening the economy, our forecast is still surrounded by uncertainties, and thus we prepare a range estimation for domestic growth. The better-than-expected 2020 performance, as well as structural and demand factors, demonstrate the Hungarian economy's ability to recover rapidly. However, due to the spread of the new coronavirus variants, the third wave of the pandemic has arrived. Accordingly, the restrictive measures have been prolonged and tightened, which – together with the renewed difficulties in production chains – will result in declining GDP in 2021 Q1. Depending on the rate of vaccination and the timing of economic reopening, more dynamic growth can be expected from the second or third quarter. Accordingly, GDP may expand by 4.0–6.0 percent this year. The Hungarian economy may expand by 5.0–6.0 percent in 2022 and 3.5 percent in 2023. Hungary's growth surplus compared to the euro area will average around 1.2 percentage points over the entire forecast horizon. As per our projection, in addition to domestic demand, net exports will also make positive contribution to economic growth. Consumption growth this year will be supported by the fact that labour market adjustment was more moderate compared to the 2009 global economic crisis, thanks in part to the moratorium on loan repayments, the sustained functioning of credit markets and the government's job protection measures (wage subsidies). Public and private investments are both expected to grow in 2021. In addition to current capacity expansions, growth in corporate investments is also supported by new development projects. Recovery is also assisted by growth in corporate lending, the moratorium on loan repayments and the favourable financing environment. The government's home creation measures also support the anticipated rise in household investments from this year onward. The investment ratio will continue to increase, stabilising around 29 percent in the second half of the forecast horizon. The divergent performance of services and industry is also reflected in Hungary's exports. Industrial production and goods exports developed more favourably during the new waves of the pandemic, but the short-term outlook is hampered by the disruptions observed in supply chains. A recovery in services, however, may only commence after the desired rate of vaccination is reached and restrictions are lifted.

Chart 1-6: Fan chart of the GDP forecast



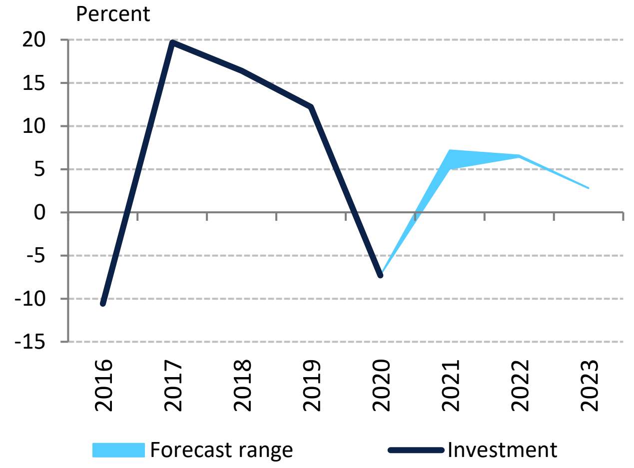
Note: Based on seasonally unadjusted data.
Source: HCSO, MNB

In 2020 Q4, Hungary's economy shrank to a lesser degree than expected, by 3.6 percent in year-on-year terms. GDP grew at a quarter-on-quarter rate of 1.4 percent and thus the Hungarian economy proved to be more resilient in the second wave of the pandemic.

Due to the spread of the new coronavirus variants, the third wave of the pandemic has arrived. Our high-frequency data indicate declining economic activity. Together with the renewed disruptions in production chains, the prolongation and tightening of containment measures result in declining GDP in 2021 Q1.

The evolution of the third wave of the pandemic and developments in the rate of vaccination continue to generate uncertainties. Depending on the timing of economic reopening, more dynamic growth can be expected from the second or third quarter of 2021. Last year's better-than-expected economic performance, together with structural and demand factors, demonstrate that the Hungarian economy is able to recover rapidly. Despite last year's recession, the domestic investment ratio remained high. Hungary's unemployment rate was also low by international standards and the sound operation of credit markets was sustained. From the demand side, recovery is also supported by the rise in households' disposable income, their high financial

Chart 1-7: Annual change in investments



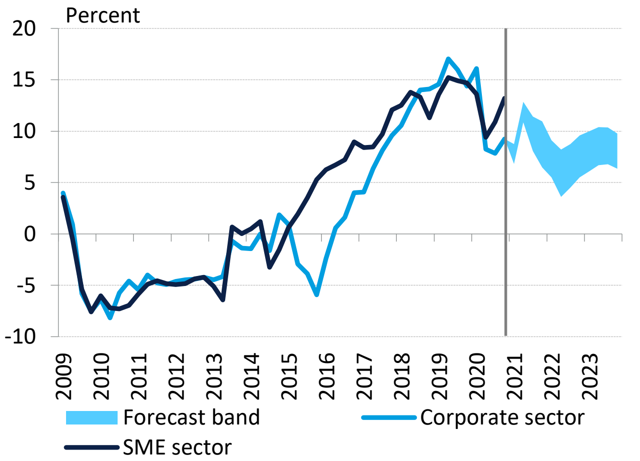
Source: HCSO, MNB

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

	2020 Actual	2021	2022 Projection	2023
Gross fixed capital formation	-7.3	5.0 - 7.2	6.4 - 6.6	2.8
Government investments	-	9.4 - 13.3	(-2.0) - (-1.2)	(-8.6) - (-7.6)
Private investments	-	3.8 - 5.5	8.8 - 8.9	5.6 - 5.8
Investment rate	27.5	28.3	28.8 - 29.2	28.7 - 29.1

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

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

savings rate, their previously accumulated wealth and the high public investments. Due to the timing of economic reopening, our forecast is still surrounded by uncertainties and thus we prepare a range estimation for domestic growth. The Hungarian economy may expand by 4.0-6.0 percent in 2021. Growth in 2022 and 2023 may be between 5.0–6.0 and 3.5 percent respectively (Chart 1-6).

The convergence of the Hungarian economy to the euro area will continue in the coming years. The Hungarian economy's growth surplus compared to the euro area will average around 1.2 percentage points over the entire horizon.

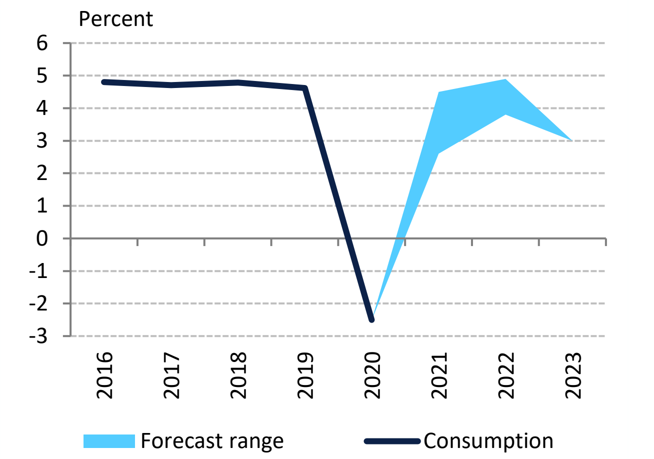
Growth in investments will support economic growth from this year (Chart 1-7). According to our expectations, public and private investments will both rise in 2021 (Table 1-3). Household investment will increase starting from this year as a result of the government’s home creation programmes. In addition to the current capacity expansions, growth in corporate investments is also supported by new development projects. Growth in investments is supported by the favourable investment environment, buoyant lending activity, the prolongation of the moratorium on payments as well as by the public and central bank schemes (see Box 1-3).

The upturn in corporate lending stimulates corporate investment. The annual growth rate of outstanding corporate loans may develop slightly more positively in 2021 than previously expected, as the six-month extension of the moratorium and the expansion of subsidised credit schemes help maintain the high corporate credit dynamics (Chart 1-8) The upswing in corporate borrowing and investment is supported by expanding state loan and guarantee programmes as well as by the FGS Go! and the Bond Funding for Growth Scheme. Within the framework of FGS Go!, some 28,000 enterprises have been able to access funding in excess of HUF 1,800 billion so far.

The investment ratio will continue to increase, stabilising around 29 percent in the second half of the forecast horizon (Table 1-3).

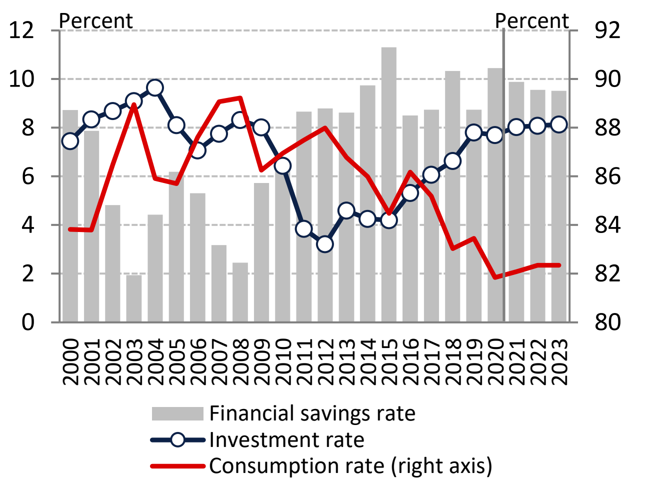
According to our forecast, the expected path of household consumption in the quarters ahead primarily depends on the lifting of restrictions and the rate of vaccination (Chart 1-9). Household consumption grew in 2020 Q4. However, due to the epidemiological measures introduced to contain the third wave of the pandemic, household consumption is expected to shrink in the first quarter of this year. The restrictive measures have a particularly unfavourable impact on the consumption of

Chart 1-9: Annual change in consumption



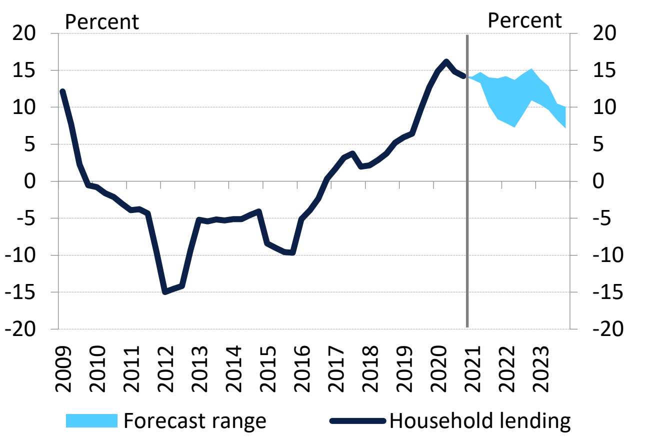
Source: HCSO, MNB

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



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

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

services, which may recover after restrictions are lifted. Growth in consumption this year is supported by the fact that labour market adjustment was more moderate compared to the 2009 global economic crisis, thanks in part to the moratorium on loan repayments, the sustained functioning of credit markets and the government's job protection measures (wage subsidies).

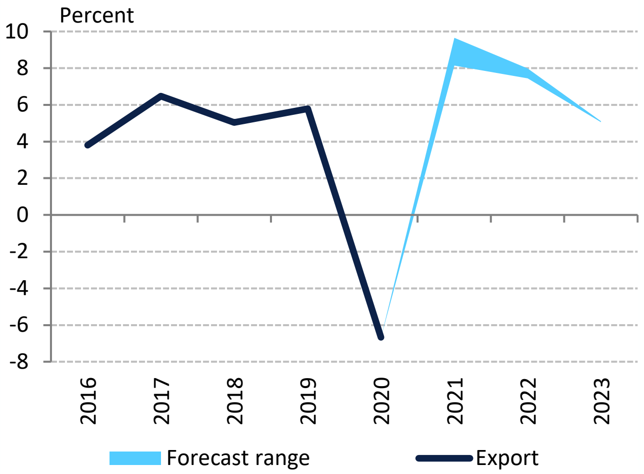
Households' savings rate rose significantly in 2020. After the easing of restrictions, it may decline moderately in line with rising consumption, but it will remain high over the forecast horizon (Chart 1-10).

Household lending may continue to grow at double-digit rates, despite the negative impacts of the pandemic on the real economy (Chart 1-11). The growth rate may slightly exceed our previous expectations. In addition to the moratorium on payments, which was extended by six months, and the state-subsidised credit programmes, the recovery in demand may also 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 global economy proved to be more resilient to the second wave of the pandemic, but the start of the third wave has resulted in a deterioration in economic outlooks. In the final quarter of 2020, Hungary's trading partners usually registered more moderate declines compared to expectations, resulting in favourable carry-over effects in 2021. On the other hand, the spread of the new virus variants and the surge in the third wave do not permit the lifting of the restrictions for the time being. The rate of vaccination in European countries is still low. Expectations regarding the future performance of Hungary's trading partners are uncertain.

Based on our forecast, Hungary's export performance shows significant improvement this year, and thus net exports support economic growth (Chart 1-12). In 2020 Q4, Hungary's exports exceeded expectations, primarily due to the favourable industrial performance. The difference in the performance of services and industry is still reflected in Hungary's exports. The short-term performance of Hungary's exports of goods may be influenced by the shortage of semiconductors in the automotive industry (for more details, see Box 1-4). According to information from the sector's players, manufacturers will be able to make up for lost production in the second quarter, and thus Hungary's exports will also

Chart 1-12: Evolution of exports



Source: HCSO, MNB

rise. In parallel with the prolonged downturn in international tourism, Hungary's services exports may fall short of pre-pandemic levels for a longer time, in contrast to the exports of goods. Net exports may support economic growth in 2021, due to the favourable developments in goods exports and resurgent services exports in H2. From this year, as a result of the dynamic growth in domestic demand and exports, imports may also adjust. In our forecast, the dynamics of exports consistently exceed that of imports, and thus net exports will support growth over the entire horizon.

Box 1-3: Determinants of developments in investment, which plays a key role in economic recovery

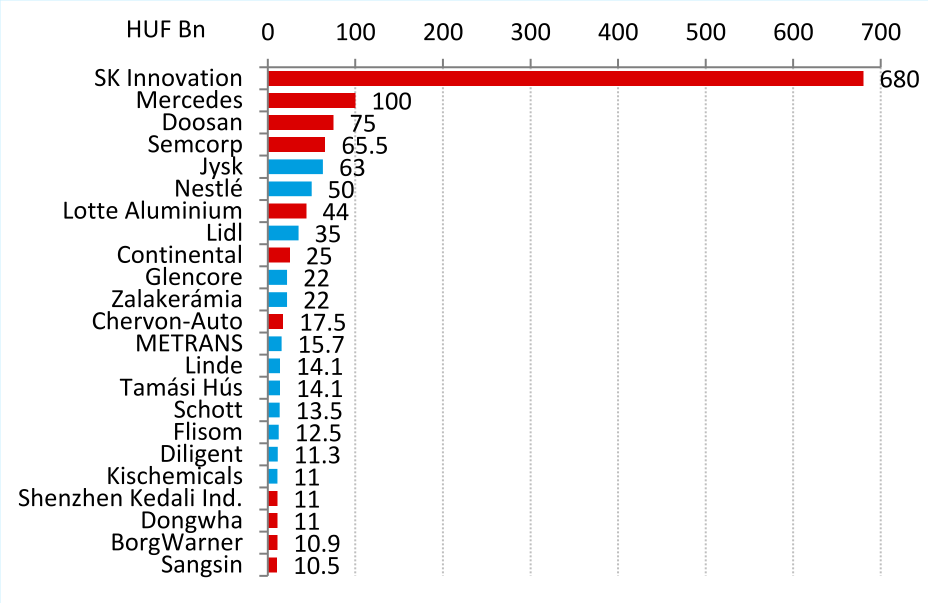
Investment projects play a key role in recovery from the crisis as they raise GDP not only in the short run, but also contribute to economic growth in the longer run as well. This box provides a detailed presentation of the factors that may determine future developments in investment.

In the period prior to the pandemic, gross fixed capital formation accounted for nearly two thirds of economic growth, and sustainable economic convergence also requires a persistently high investment rate. After the 2009 crisis, the contribution of domestic demand items (investment, household consumption) to growth remained negative; recovery was mainly supported by industrial exports and the stock-building associated with it. Based on crisis experiences, the replenishment of corporate stocks and the recovery of manufacturing exports take place practically 'automatically', whereas the recovery in investments (and the labour market) may proceed slowly, unless active economy policy steps are taken. Capital formation constitutes the basis for economic growth, and it is thus essential to ensure the necessary financing in a sound structure.

In contrast to the recovery period after the 2008–2009 economic crisis, gross fixed capital formation is expected to make positive contribution to economic growth between 2021 and 2023. Expansion in investments is supported by the favourable interest rate environment, the buoyant lending activity, the extension of the payment moratorium as well as by government and central bank programmes (FGS Go!, BGS). The investment rate will continue to rise, stabilising at close to 29 in the second half of the forecast period.

The recovery in corporate investment is supported by various large-volume, newly announced development projects and the potential launch or continuation of projects which were postponed in 2020. A firm basis for favourable developments in the corporate investment rate is provided by the expected changes in corporate lending dynamics, which may remain high as a result of the extension of the moratorium by one half a year and the expansion of the subsidised credit programmes. In addition, Hungary's advantage in terms of the cost level of production is still considered to be significant, and thus Hungary remains an attractive destination for foreign investors, which is also corroborated by the new investment projects announced in recent months. In spite of the high degree of uncertainty, many corporate investment projects exceeding the value of HUF 10 billion were announced last year, followed by more in the first months of this year, including the largest greenfield investment ever (Chart 1-13): within the framework of a HUF 680 billion project, South Korean firm SK Innovation is building its third battery factory in Hungary.

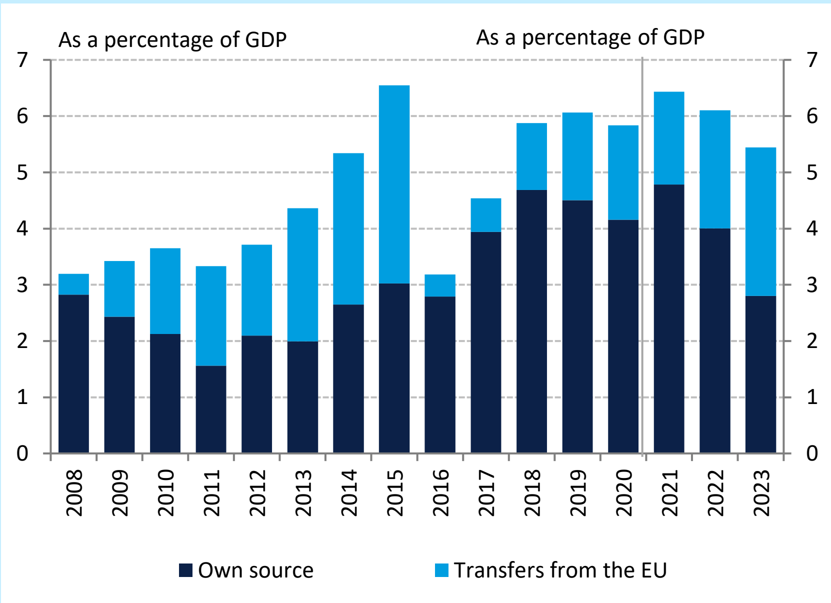
Chart 1-13: Large corporate investment projects announced in 2020 and 2021



Note: The chart only depicts announced corporate investment projects that exceed HUF 10 billion. Vehicle industry projects are marked with red.
Source: MoF, MNB, press information

The public sector will also contribute to the rapid expansion in whole-economy investment this year. Public investment is expected to expand considerably this year. In 2020, the downturn in public investment was significant by international standards as well. Looking ahead, performance in 2021 may be improved by the fact that at end-2020 some HUF 1,285 billion was disbursed for investment purposes to the government sector, state-owned companies and the private sector, most of which can materialise as investments this year. The high level of public investment in 2021 is mainly explained by the upturn in investment from domestic funds compared to 2020. Public development projects are expected to decline from 2022. The traditional funds of the new EU cycle and the funds of Next Generation EU may only partly offset the fall in investment from domestic funds in 2022 and 2023 (Chart 1-14). Hungary may receive more than EUR 6 billion of grants from the EU's Recovery and Resilience Facility (RRF) until 2026.

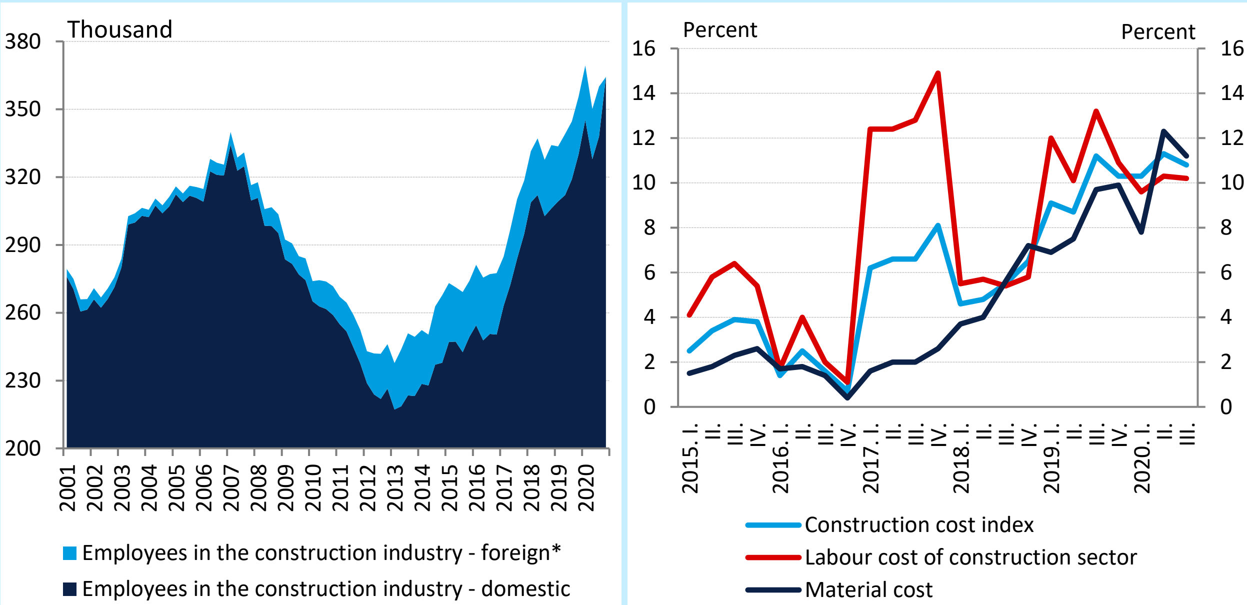
Chart 1-14: Development of government investment



Source: HCSO, MNB

The dynamic expansion in public home creation programmes and lending to households contribute to the rise in household investment expected to emerge this year. In October, the Government announced various measures that facilitate families' home creation (preferential VAT rate for residential properties, home improvement programme, duty exemption on the purchase of residential properties, reclaimable VAT on residential properties), which will contribute to boosting 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. However, limited construction capacities may result in price increases and a more restrained expansion in households' investment. Orders in the construction industry fell considerably last year, but there were double-digit increases in both labour and material costs (Chart 1-15, right panel). Following a temporary downturn, the number of employees in construction has also been increasing since 2020 Q3 and already exceeds the level observed prior to the 2008 crisis (Chart 1-15, left panel). Home creation measures provide significant help to families, but the expected shortage of specialists in view of the elevated demand and further price increases may have a negative impact on the dynamics of household investment.

Chart 1-15: Number of employees in construction (left panel)
and annual changes in construction costs (right panel)



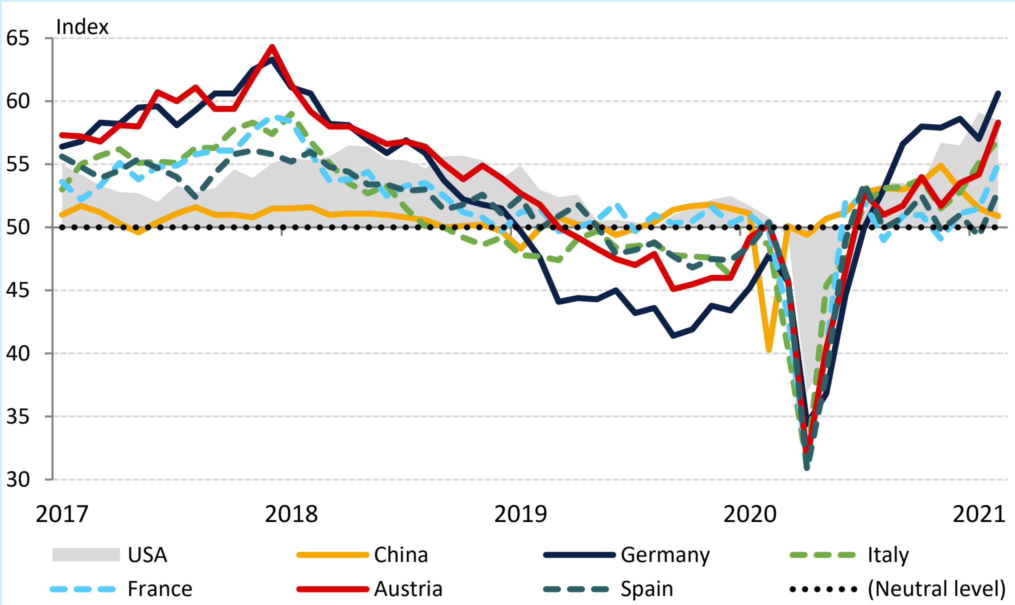
Note: *Based on employees with households in Hungary.
Source: HCSO, MNB

Companies' investment decisions are still surrounded by uncertainty created by the pandemic. In view of the deterioration in companies' financial position, the extension of economic restrictions may increase the number of corporate bankruptcies. Possible failures to implement developments may have a negative impact on the long-term growth potential as well through the erosion of the capital stock.

Box 1-4: Temporary disruptions in manufacturing supply chains

In early 2021, further disruptions occurred in supply chains, which also has a negative impact on economic performance in Q1. With the start of the first wave of the pandemic, the global vehicle industry came to a complete standstill for weeks in the spring of 2020. As a result, in line with the so-called '*just-in-time*' manufacturing processes, where inventory levels are low, automotive manufacturers ordered less from their suppliers. In Q3, however, the demand for cars increased sharply and unexpectedly, and manufacturers strived to meet this demand by scaling up their production. As a result of the stronger demand, a global semiconductor shortage evolved in the automotive industry by early 2021, affecting the manufacturing of some 1 million cars in Q1, according to market analyses. The shortage resulted in a deterioration in manufacturing sentiment in a number of countries in January (Chart 1-16). Nevertheless, the business environment already adjusted in February, corroborating the temporary nature of the problem.

Chart 1-16: Purchasing manager indices in manufacturing



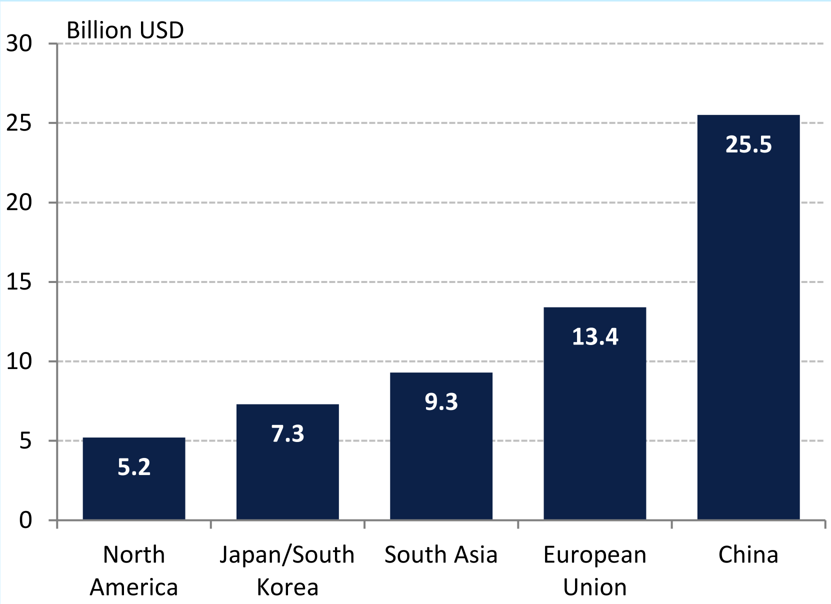
Source: Bloomberg.

The global shortage in microchips was a result of the joint impact of various factors, which may be felt not only in the automotive sector, but in other sectors as well. Chip production has become a very concentrated sector during the recent years, with manufacturing in the hands of only a few companies. The installation of new capacities is extremely costly and requires adequate technology. Last year, in view of the increase in online sales, a large portion of production capacities was reserved by the orders of firms specialising in electronic products, where demand was growing dynamically (the automotive industry accounted for just 3 percent of the 2020 sales of the largest chip manufacturer, the Taiwanese firm TSMC, while chips manufactured for smartphones accounted for 48 percent). In parallel with the decline in orders for chips for the automotive industry, orders from the electronics industry increased considerably. Although it changed the structure of manufacturing while the manufacturing capacity remained unchanged, the market for electronic products may also be affected. In view of the concentration of the market, both the United States and European countries took steps to set up their own manufacturing capacities. TMSC also announced capacity increases, on which they are planning to spend roughly USD 28 billion in 2022.

In addition to the shortage in chips, the significantly increased costs of sea transport may also hinder trade in goods. As a result of the uneven recovery, imbalances evolved in the maritime supply chains. A shortage of containers developed in the dynamically expanding Chinese economy, while in other parts of the world empty container ships are stranded due to the decline in trade turnover. This phenomenon may lead to further disruptions in supply chains, thus increasing the uncertainty already present in the global economy.

Hungary is a small, open economy which is deeply integrated in the European (German) automotive value chain, and thus the global supply chain problems were quickly reflected in the Hungarian economy. According to estimations, due to the global chip shortage, the European Union's loss of income in 2021 Q1 may have been the second largest following China (Chart 1-17). German vehicle industry production contracted by 15.5 percent in January. The international shortage led to lower automotive production in Hungary as well. Compared to the same period of the previous year, in the first month of 2021, industrial production in Hungary declined by 2.8 percent according to working day adjusted data, with the stoppages affecting the vehicle industry as the main contributors. **Nevertheless, according to sectoral information, the impact of the semiconductor shortage on the Hungarian economy will only be temporary. Car manufacturers in Hungary expect that in Q2 they will be able to make up for the production lost in January.**

Chart 1-17: Auto industry expected revenue losses by region in 2021



Note: Expectations based on current lost volumes.
Source: AlixPartners, Portfolio

1.3 Labour market forecast

As a result of the latest waves of the pandemic, unfavourable employment effects are expected to strengthen again but their degree is expected to be lower than during the first wave. The number of employed in the private sector may change by (-1.1)–0.1 percent in 2021 and then increase by 1.0–1.5 percent in 2022. The unemployment rate will peak in 2021 Q1, before starting to decline from Q2. Unemployment will fall to below 4 percent in 2022 and thus approach full employment again. The pandemic may have the biggest impact on this year's pay rises. Following that, wage growth may strengthen again in parallel with economic reopening, but it will still fall short of its pre-crisis level.

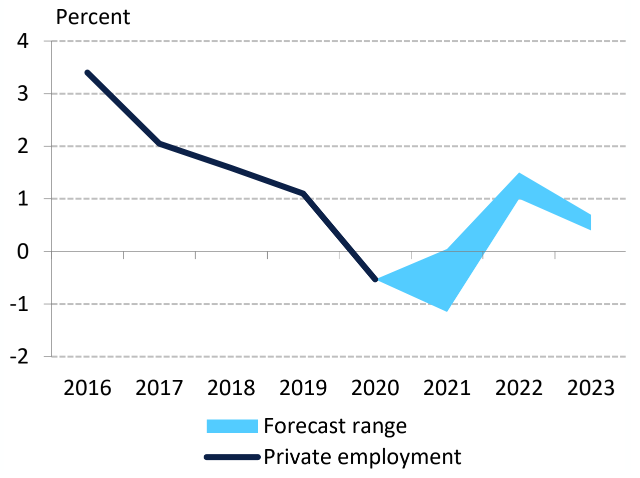
As a result of the latest waves of the pandemic, unfavourable employment effects may strengthen again. The protracted pandemic situation is unfavourable for the companies operating in the services sector: financial reserves decreased in labour-intensive sectors (tourism, transportation), and the number of layoffs may increase due to the weakened profit situation. Measures supporting labour retention, such as the corporate moratorium and sectoral wage subsidies, continue to contribute to mitigating the unfavourable effects, and thus the number of layoffs is expected to be lower compared to the previous crisis.

Private sector employment is declining in 2021 Q1 and may start to increase from Q2 or Q3, depending on the lifting of restrictions. According to our forecast, compared to 2020 Q3, 35–70 thousand jobs may cease to exist due to the new waves of the pandemic before reaching the low expected for 2021 Q1. The number of employed in the private sector is expected to change by (-1.1)–0.1 percent in 2021, before increasing by 1.0-1.5 percent in 2022 (Chart 1-18).

With the recovery in the labour market, full employment may be approached again in 2022. In parallel with the decline in employment, the unemployment rate may rise to 4.6–5.4 percent in 2021 Q1. In line with economic reopening, the unemployment rate will start to decline from 2021 Q2 and will fall to below 4 percent in 2022, as full employment is approached again (Chart 1-19). Demographic developments play a limiting role in the changes in the number of active people, but activity is expected to increase as a result of young people's PIT exemption from 2022 (for details, see Box 1-5).

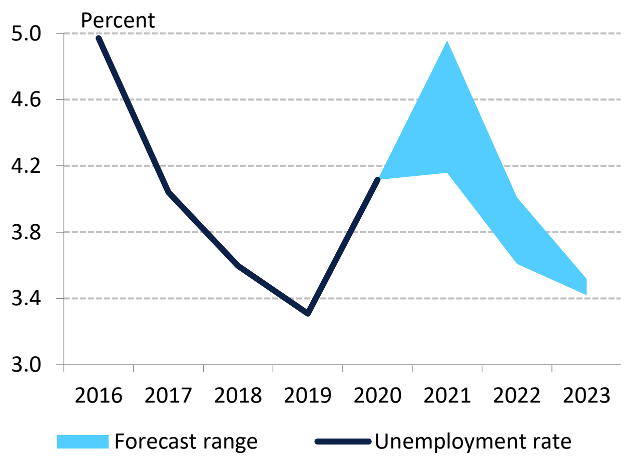
The pandemic may affect this year's pay rises to the greatest degree. Following that, wage dynamics may strengthen in parallel with economic reopening but will still fall short of the degree observed prior to the crisis. Companies adjust wages to the changed economic situation with a delay, and therefore we expect slower wage dynamics in 2021 compared to previous years. Falling short of previous years' figures, the minimum wage and the guaranteed wage minimum rose by 4 percent in

Chart 1-18: Annual change in employment in the private sector



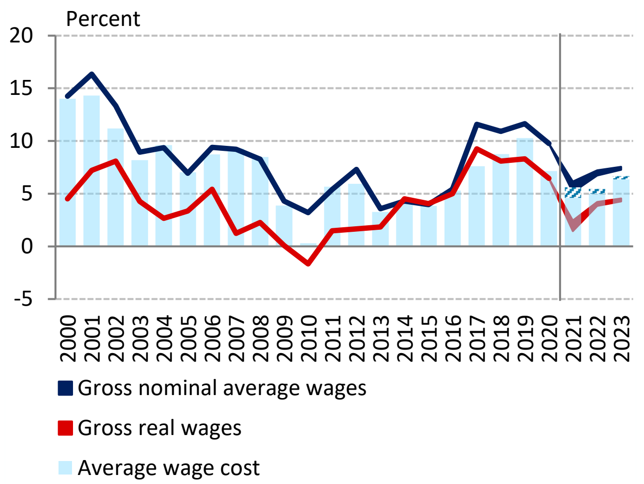
Source: HCSO, MNB

Chart 1-19: Evolution of the unemployment rate



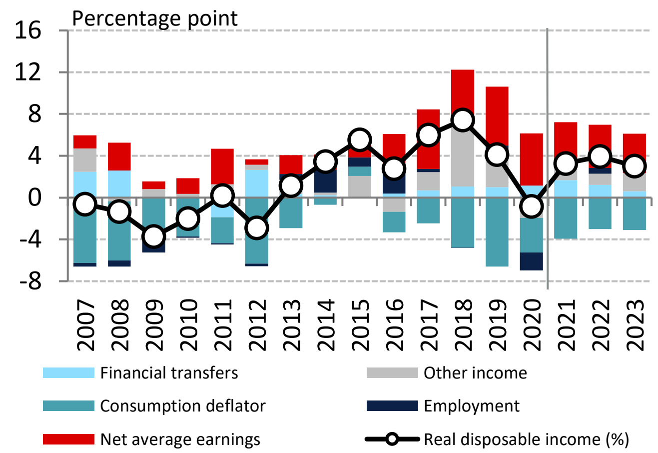
Source: HCSO, MNB

Chart 1-20: Annual changes in gross average wages and average labour cost in the private sector



Source: HCSO, MNB

Chart 1-21: Evolution of household disposable income



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

February, also pointing to lower wage dynamics for this year.

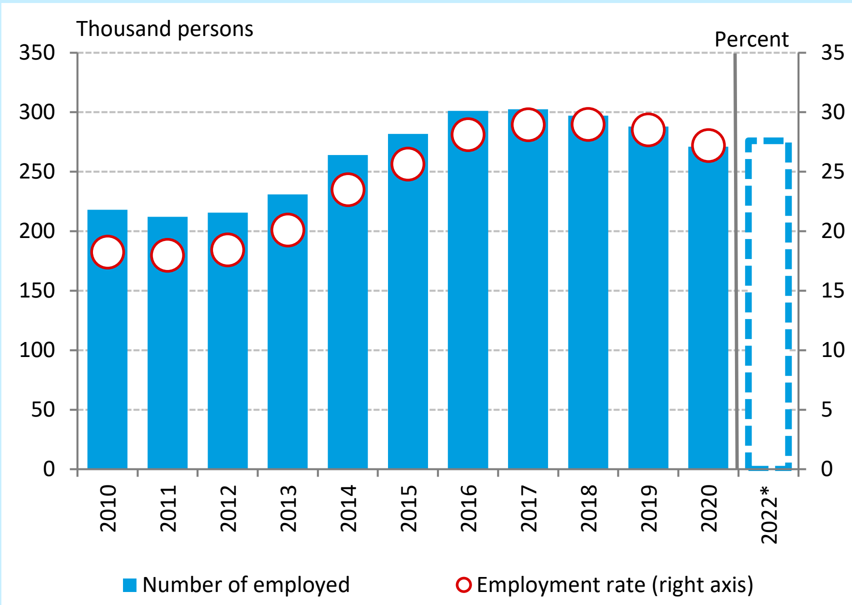
Our projection suggests that annual wage growth in the private sector will slow to 5.2–6.2 percent in 2021, and then wage dynamics may move on an accelerating path again from 2022, rising gradually with strengthening demand for labour (Chart 1-20). The growth rate of real wages was lowered by the coronavirus crisis, but real wages are expected to grow this year as well, in spite of the crisis. However, the labour cost dynamics will decrease significantly. As a result of the substantial pay rises for doctors, whole-economy wages may increase to a greater degree in 2021 and 2022 than what is expected in the private sector (Chart 1-21).

Box 1-5: Effects on the real economy of the under-25 PIT exemption

As part of the economic recovery action plan, the Government announced that those under the age of 25 will be exempt from personal income tax starting from 2022. According to the announcement, the exemption from the personal income tax will apply to the part of the earnings of young people who have not reached the age of 25 that is below the whole-economy average income. According to international experiences, young people who enter the labour market in times of crises suffer negative consequences in terms of income, living standards or even health in the long run. The new measure may be able to offset these effects.

The under-25 PIT exemption may concern close to 280,000 people in total in 2022. Employment in younger age groups rose dynamically during the previous decade, but this growth already came to a halt in the years prior to the crisis. As a result of demographic trends, in 2020 the total number of people in the 15–24 age group fell below 1 million, of whom 271,000 worked. The continued decline in this age group mostly offsets the positive effects of the expected recovery in labour demand, and thus the number of employees under the age of 25 is estimated to be nearly 280,000 in 2022 (Chart 1-22).

Chart 1-22: Employment in the 15–24 age group



Note: People receiving childcare benefits (GYED, GYESE) are not included if they are not active workers. *Taking demographic trends into account, assuming an employment rate corresponding to that in 2019.
Source: MNB calculation based on HCSO data

The income of young people is typically lower than the whole-economy average. In 2020, the average gross earnings in the whole-economy were HUF 403.6 thousand, while those under the age of 25 were HUF 292.1 thousand. Based on the estimated wage bill of the affected age group by 2022, the tax exemption will increase disposable income by about HUF 130 billion and consumption by about HUF 110 billion.

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

	2020	2021		2022		2023	
	Actual	Forecast					
		Previous	Current	Previous	Current	Previous	Current
Inflation (annual average)[1]							
Core inflation	4.1	3.8 - 4.0	3.9 - 4.1	2.9 - 3.0	2.9 - 3.0	3.0	3.0
Core inflation excluding indirect tax effects	3.7	2.8 - 3.0	2.9 - 3.1	2.7 - 2.8	2.7 - 2.8	3.0	3.0
Inflation	3.3	3.5 - 3.6	3.8 - 3.9	2.9 - 3.0	2.9 - 3.0	3.0	3.0
Economic growth							
Household consumer expenditure	-2.5	2.4 - 4.9	2.6 - 4.5	4.6 - 5.0	3.8 - 4.9	3.0 - 3.3	3.0
Government final consumption expenditure[6]	-0.8	1.0 - 1.7	2.7 - 3.6	2.1 - 2.2	1.5 - 2.6	1.3 - 1.8	1.5
Gross fixed capital formation	-7.3	6.4 - 8.8	5.0 - 7.2	6.8 - 8.6	6.4 - 6.6	3.0 - 3.5	2.8
Domestic absorption	-2.7	2.9 - 5.1	3.0 - 4.8	4.7 - 5.1	4.1 - 4.9	2.7 - 2.9	2.6
Exports	-6.7	6.1 - 8.8	8.1 - 9.7	6.6 - 7.7	7.4 - 8.0	4.0 - 4.9	5.1
Imports	-3.9	5.3 - 7.9	6.8 - 8.3	6.2 - 7.1	6.4 - 6.9	3.7 - 4.3	4.1
GDP	-5.0	3.5 - 6.0	4.0 - 6.0	5.0 - 5.5	5.0 - 6.0	3.0 - 3.5	3.5
Labour productivity[5]	-2.8	4.2 - 5.8	4.6 - 5.1	3.3 - 4.5	3.8 - 4.2	2.4 - 3.2	3.0 - 3.2
External balance[2]							
Current account balance	0.1	(-0.4) - (-0.2)	0.5 - 0.6	(-0.3) - (-0.1)	1.2 - 1.3	(-0.2) - 0.1	1.9 - 2.0
Net lending	2.4	2.0 - 2.1	3.1 - 3.2	1.8 - 1.9	3.5 - 3.6	2.3 - 2.6	4.7 - 4.8
Government balance[2]							
ESA balance	-8.0	(-6.5) - (-6.0)	(-7.0) - (-6.5)	(-4.0) - (-3.0)	(-5.0) - (-4.5)	(-3.5) - (-2.5)	(-3.5) - (-3.0)
Labour market							
Whole-economy gross average earnings[3]	9.9	6.6 - 7.3	6.4 - 7.1	6.9 - 7.4	7.1 - 7.5	6.6 - 7.2	6.9 - 7.1
Whole-economy employment	-0.9	(-1.1) - (-0.2)	(-0.7) - (0.2)	0.9 - 1.5	0.7 - 1.1	0.4 - 0.7	0.3 - 0.6
Private sector gross average earnings[3]	9.8	5.6 - 6.5	5.2 - 6.2	6.2 - 6.9	6.7 - 7.2	7.0 - 7.8	7.3 - 7.6
Private sector employment	-0.5	(-1.3) - (-0.2)	(-1.1) - (0.1)	1.2 - 2.0	1.0 - 1.5	0.4 - 0.7	0.4 - 0.7
Unemployment rate	4.1	4.6 - 5.4	4.2 - 5.0	3.9 - 4.3	3.6 - 4.0	3.5 - 3.6	3.4 - 3.5
Private sector nominal unit labour cost	11.0	-1.0 - (-0.3)	(-0.7) - (-0.3)	0.6 - 1.4	0.1 - 1.3	3.2 - 3.4	2.9
Household real income[4]	-0.7	3.2 - 5.0	2.7 - 3.9	3.9 - 4.3	3.5 - 4.5	3.0 - 3.3	3.0

[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

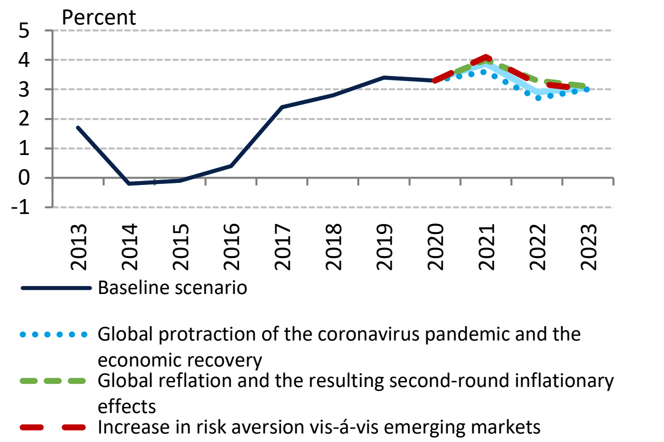
	2021	2022	2023
Consumer Price Index (annual average growth rate, %)			
MNB (March 2021)	3.8 - 3.9	2.9 - 3.0	3.0
Consensus Economics (March 2021)[1]	2.8 - 3.6 - 4.4	1.9 - 3.2 - 4.2	
European Commission (February 2021)	3.5	2.9	
IMF (October 2020)	3.4	3.0	3.0
OECD (December 2020)	3.3	3.6	
Reuters survey (March 2021)[1]	3.1 - 3.6 - 4.1	2.8 - 3.2 - 3.6	3.1 - 3.2 - 3.3
GDP (annual growth rate, %)			
MNB (March 2021)	4.0 - 6.0	5.0 - 6.0	3.5
Consensus Economics (March 2021)[1]	3.9 - 4.7 - 7.4	3.4 - 5.1 - 6.7	
European Commission (February 2021)	4.0	5.0	
IMF (October 2020)	3.9	4.0	3.8
OECD (December 2020)	2.6	3.4	
Reuters survey (March 2021)[1]	3.5 - 4.6 - 6.6	3.8 - 5.0 - 6.7	3.3 - 3.9 - 4.5
Current account balance[3]			
MNB (March 2021)	0.5 - 0.6	1.2 - 1.3	1.9 - 2.0
European Commission (November 2020)	-0.3	-0.3	
IMF (October 2020)	-0.9	-0.6	-0.5
OECD (December 2020)	-2.0	-1.3	
Budget balance (ESA 2010 method)[3]			
MNB (March 2021)	(-7.0) - (-6.5)	(-5.0) - (-4.5)	(-3.5) - (-3.0)
Consensus Economics (March 2021)[1]	(-7.5) - (-6.2) - (-4.5)	(-5.6) - (-4.3) - (-2.7)	
European Commission (November 2020)	-5.4	-4.3	
IMF (October 2020)	-3.9	-2.3	-1.3
OECD (December 2020)	-7.5	-6.0	
Reuters survey (March 2021)[1]	(-7.3) - (-6.5) - (-4.8)	(-8.0) - (-4.8) - (-2.7)	(-8.0) - (-4.0) - (-2.7)
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (March 2021)	4.0 - 5.9	3.6 - 4.4	2.2 - 2.4
ECB (March 2021)	2.0 - 4.0 - 6.4	2.2 - 4.1 - 4.5	2.1 - 2.2 - 2.5
Consensus Economics (March 2021)[2]	3.8	3.9	
European Commission (February 2021)[2]	3.5	3.8	
IMF (January 2021)[2]	4.1	3.5	2.4
OECD (March 2021)[2]	3.3	3.6	

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

2 Effects of alternative scenarios on our forecast

The Monetary Council highlighted three alternative scenarios around the baseline projection in the March Inflation Report. The alternative scenario which presumes a global protraction of the coronavirus pandemic and the economy recovery points to a domestic inflation path that is lower than the baseline scenario and to a much more subdued growth path. The alternative scenario which presents global reflation and the resulting second-round inflationary effects presumes a higher inflation path and GDP growth than the baseline scenario. Compared to the baseline forecast, inflation is higher, whereas growth is more subdued in the alternative scenario depicting an increase in risk aversion vis-à-vis emerging markets. In addition to these scenarios, as a further alternative, the Monetary Council also discussed a scenario that assumes the implementation of competitiveness reforms.

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

Global protraction of the coronavirus pandemic and the economic recovery

Our baseline scenario presumes that – in view of the restrictions introduced due to the second wave of the pandemic, which were then extended and tightened due to the third wave – Hungary's economic performance may decline in 2021 Q1, before starting to increase from Q2 or Q3. With the increase in vaccine coverage, following the reopening of economies, this year's economic growth will be supported by a recovery in household consumption, a rise in public and private investment and an upturn in foreign trade.

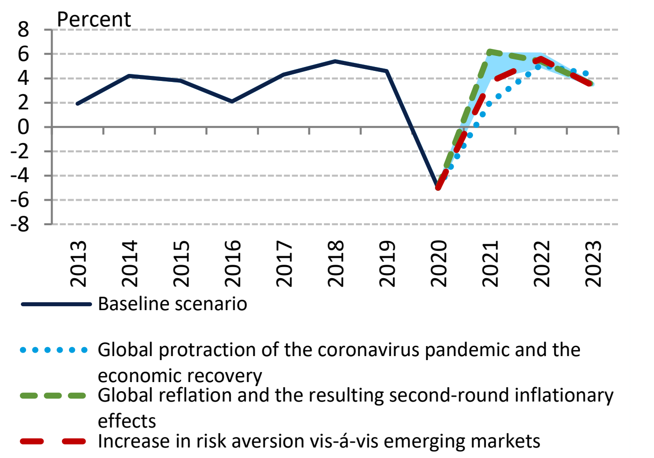
In the alternative scenario, the strong negative impact of the pandemic on the real economy persists, thus significantly slowing down the pace of recovery both in the global and Hungarian economy. In the case of EU Member States, particular risks are posed, *inter alia,* by the high level of debt and structural weaknesses, which narrow the leeway for reducing the negative economic effects. External demand in services, which is recovering more slowly than expected, and the more subdued inflation environment exert a lasting, significant effect on inflation and growth in Hungary.

Global reflation and the resulting second-round inflationary effects

As a result of incoming positive macroeconomic news and rising oil prices, the risk of reflation increased in the developed economies, contributing to a rise in developed long-term yields. In view of the improving financial market sentiment and the changes evolving in developed bond markets, long-term yields rose in the region.

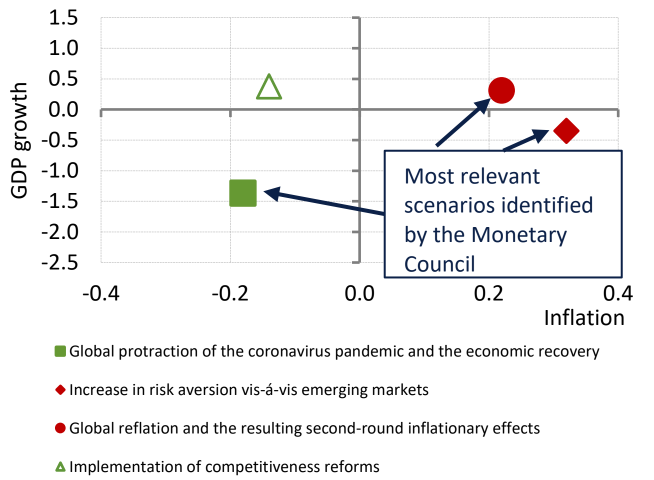
In the short run, in parallel with the demand and supply effects arising with the changes in fuel prices and the restarting of the economy, temporary spikes in inflation

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

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

are occurring. The rapid increase in vaccine coverage and declining savings may further support economic growth. At the same time, the steady rise in inflation expectations in the developed economies may result in a higher external inflation environment over the medium and long term.

In the alternative scenario, the higher-than-expected external inflation environment spills over into domestic prices as well. The spikes in inflation taking place with economic recovery are temporary, but if second-round effects occur in domestic wages and inflation expectations, inflation may rise persistently.

Increase in risk aversion vis-à-vis emerging markets

Global investor sentiment improved moderately since end-2020. Risk indicators improved, and the price of gold fell slightly. The strengthening of the US dollar was decisive in the global FX market. Oil prices have increased significantly since end-2020. The news on the start of vaccinations, better-than-expected macroeconomic data, as well as positive expectations related to the adoption of the US fiscal stimulus measures and the strengthening of regulation, contributed to the favourable sentiment.

At the same time, the upturn seen in the epidemic curves, the deceleration in the pace of vaccine coverage and the appearing of new virus variants result in strengthening risks. Materialisation of these risks may delay economic reopening and financial market sentiment may deteriorate.

In our alternative scenario, the increase in risk aversion may lead to higher capital outflows from emerging economies, resulting in higher volatility on the financial and capital markets and thus further USD appreciation. 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 weakening of the exchange rate. The weakening exchange rate 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 another alternative scenario. In the risk scenario which 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.

3 Macroeconomic overview

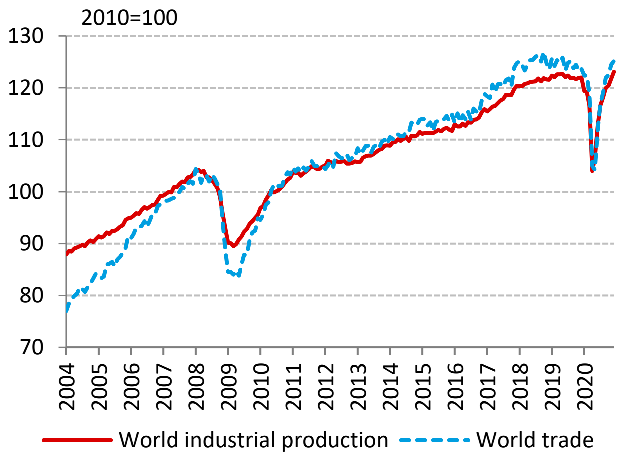
3.1 Assessment of macroeconomic trends

The measures to contain the next wave of the pandemic tended to restrain industrial production to a lesser degree than in the spring months. Therefore, compared to the expectations, more favourable economic output was recorded in the fourth quarter of 2020. In view of the low level of vaccine coverage and the upswing in the third wave, the containment measures are being maintained or – in some places – even tightened. Accordingly, there is significant uncertainty surrounding the prospects for international tourism and services. Global air traffic remains well below previous levels, while further disruptions evolved in industrial supply chains in early 2021. Global inflation has not changed significantly in recent months. Inflation rates in most of the developed economies continue to fall short of the central bank targets. Looking at the countries of the region, the consumer price index was well above the central bank target in Poland, and close to the target in Romania and the Czech Republic. 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 and the parameters of its asset purchase and lending programmes unchanged. Looking at the region, the Czech and Polish central banks did not amend their respective policy rates, while the Romanian central bank carried out a further interest rate cut. At the end of last year, the Polish central bank carried out an FX market intervention, and indicated that – depending on market conditions – another intervention may take place if necessary.

3.1.1. International activity trends

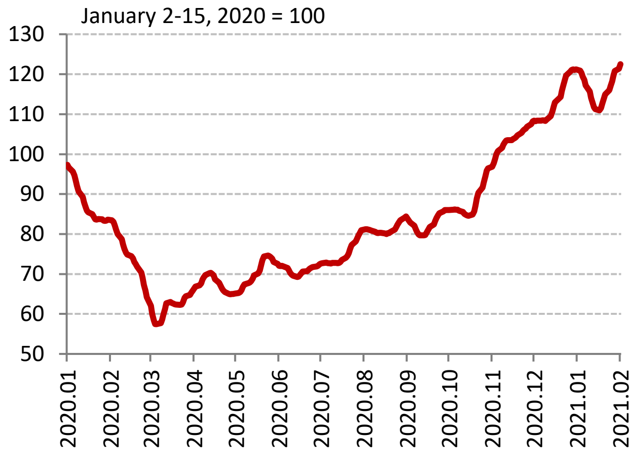
Recently, trends in economic performance have primarily been determined by the pandemic and the measures implemented to control it. Industrial production was typically less restrained by the next waves of the pandemic, but the services sector is still significantly exposed to the containment measures. Global trade and global industrial production already exceed the January 2020 levels; following the lows in March and April, both indicators were rising continuously until end-2020 (Chart 3-1). At the end of last year, the Dow Jones Global Shipping Index hit a multi-annual peak. In early 2021, however, the indicator declined temporarily, presumably as a result of the global shortage of microchips (see Box 1-4) and the logistics difficulties concerning containers, which are indispensable for maritime transport (Chart 3-2). The index already adjusted in February, corroborating the temporary nature of the problem. However, the future performance of international tourism, which has been essentially stagnating since mid-August 2020, is surrounded by significant uncertainty. From the figure of 110,000 recorded at the beginning of 2020, the daily number of commercial flights declined to 30,000 during the most critical period of the first wave. After the nadir, the number of flights gradually increased to around 65,000–70,000 by August 2020 and stagnated at about the same level for the remainder of the year, and then began to increase at the end of February 2021 after a slight decline lasting about six weeks (Chart 3-3). Looking ahead,

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



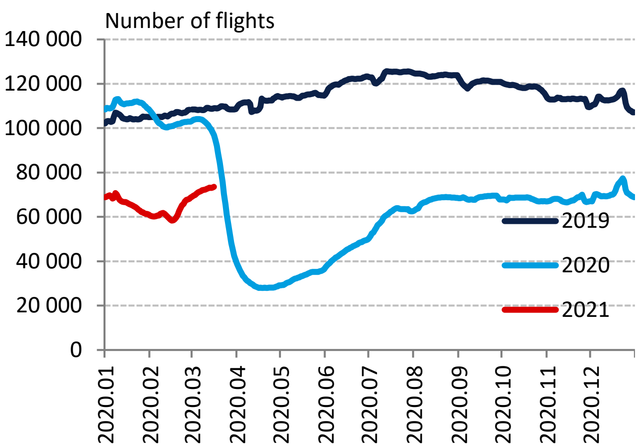
Note: Based on seasonally adjusted data.
Source: CPB

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



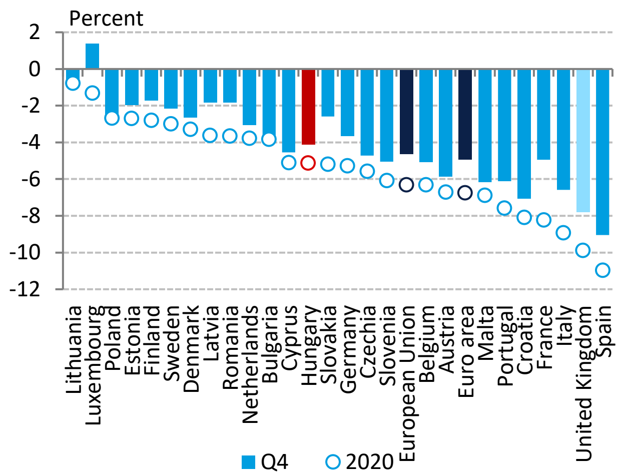
Note: 7-day moving average Source: S&P Global

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 change in GDP



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

the sector's global prospects may remain uncertain until the necessary level of vaccine coverage is reached.

Developments in economic output varied across European countries during 2020. In Q4, euro area output declined by 4.9 percent year on year, while a decrease of 0.7 percent was recorded according to seasonally and working day adjusted data compared to the previous quarter. Overall, the euro area economy contracted by 6.8 percent in 2020. The countries where the weight of tourism is greater within gross domestic product (e.g. Austria, Croatia, Spain, Portugal and Italy) typically experienced sharper downturns. Mainly Baltic and northern countries lead the European ranking. In Q4, the economy of Germany, which is Hungary's main trading partner, fell short of its level by 3.6 percent year on year, contracting by a total 5.3 percent in 2020 (Chart 3-4).

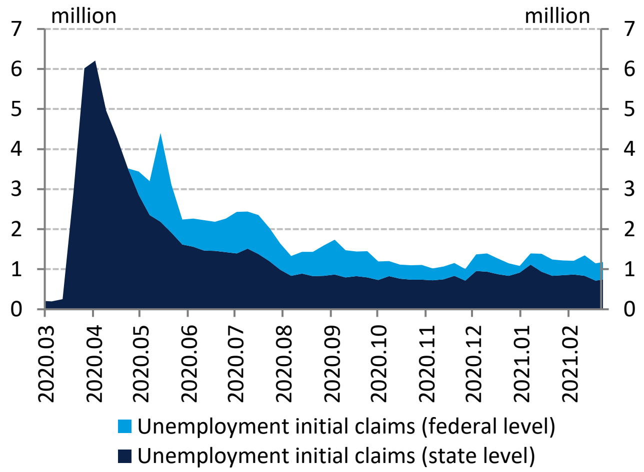
In 2020, the countries in the Central and Eastern European region finished in the upper half of the European growth ranking, with typically better performances than those of the EU or the euro area. Within the region, it was Romania (-3.7 percent) and Bulgaria (-3.8 percent) that showed the smallest contractions, while the largest downturn was recorded in Croatia (-8.1 percent), based on seasonally adjusted data. Hungary is ranked third in the regional comparison (-5.1 percent).

The United States recorded a downturn of 3.5 percent in 2020. In the last quarter of last year, economic output was 2.4 percent below that of the same period of 2019. Compared to the previous period, the economy was able to grow in Q4, mainly supported by investment (and investment in machinery within that). Household consumption also had a positive impact on performance, although the developments in net exports were negative. Economic recovery continued slowly, and adjustment in the labour market during the latest waves of the pandemic is not of the same degree as it was during the first wave (Chart 3-5).

The Chinese economy expanded significantly, growing by 6.5 percent in Q4, and by 2.3 percent on the whole in 2020, with contraction only recorded in 2020 Q1. Production indicators showed gradual rises until the end of the year (Chart 3-6). Nevertheless, the protracted pandemic situation around the world may be coupled with lower demand in Chinese markets as well.

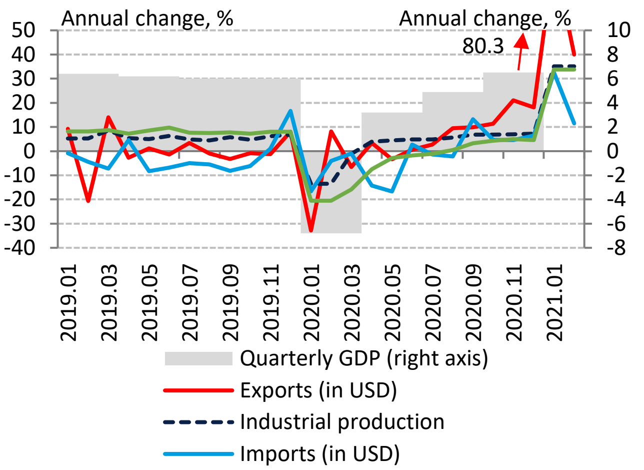
On the whole, growth in Hungary's external markets in 2020 Q4 exceeded expectations, but activity still falls short of the level seen in 2019 Q4 (Chart 3-7). The

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



Source: Fred

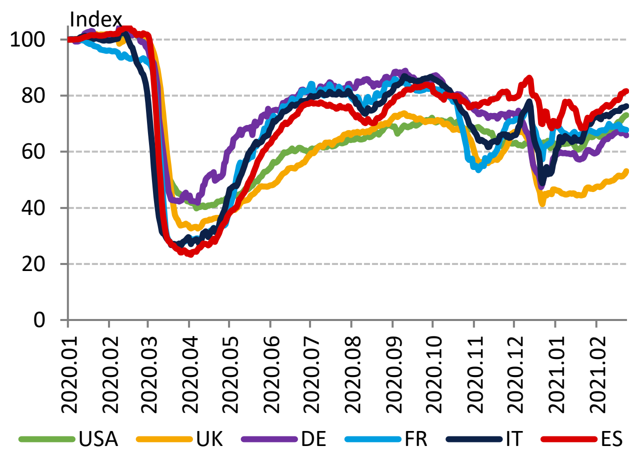
Chart 3-6: Development of some macroindicators in China



Note: Based on seasonally adjusted data.

Source: National Bureau of Statistics of China, Trading Economics

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



Source: Bloomberg Intelligence

recovery scenarios are fundamentally determined by the date of reaching the desired level of vaccine coverage, but the vaccine coverage of EU countries is still low. The savings rate of Hungary's external markets rose considerably in 2020, representing a significant growth reserve for the future.

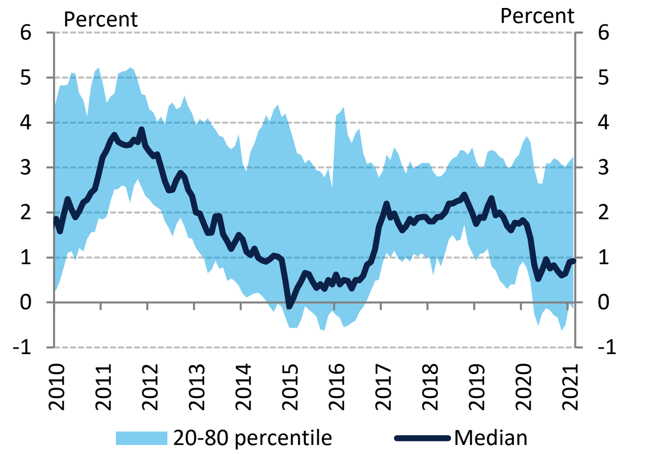
3.1.2. International monetary policy, inflation and financial market trends

Global inflation has not changed significantly in the past months (Chart 3-8). Inflation rates in most of the developed economies were lower than the central bank targets in Q4. Consumer price indices sank into negative territory in the euro area and Japan, while the rate of price increases was below 1 percent in the United Kingdom, Sweden, Canada, Australia and China. By contrast, inflation in Turkey continues to significantly exceed the central bank's inflation target. In other developed and emerging economies, inflation remained around the central bank targets (Chart 3-9).

At their March 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 7,639 billion (i.e. 36 percent of GDP) in the past months (see Box 3-1 for more details). Policymakers believe that the employment situation in the USA has also improved, but the performance of the economy depends 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 remains above 2 percent for some time. Inflation expectations increased in the United States in the past period. Answering the questions that arose at his Congress hearing in February, Jerome Powell said that they expected a temporary increase in inflation during the spring months, but the central bank did not foresee any lasting change in inflation dynamics.

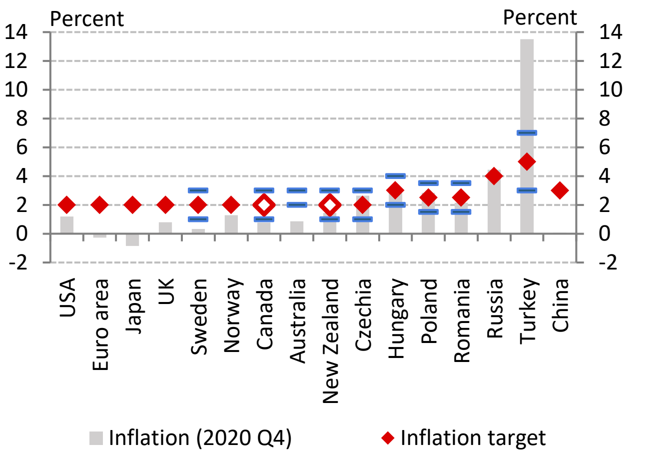
At the Bank of Japan's rate-setting meeting in January, the decision-makers did not change interest rate conditions. The Bank of Japan extended the lending stimulus programme launched in April 2020 and the asset purchase programme by 6 months. The balance sheet total of the central bank rose to 133 percent of

Chart 3-8: Global inflation developments



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

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



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

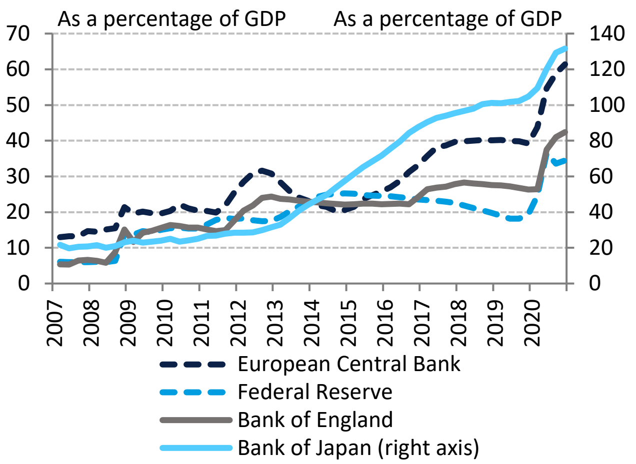
(Chart 3-10). The forward guidance has not changed; the Bank of Japan is closely monitoring the impact of the pandemic, and, if necessary, is ready to take further easing steps in addition to the measures already implemented. Short- and long-term policy rates will remain at the present or lower levels. According to the central bank's forecast, inflation may fall significantly short of the inflation target over the entire forecast horizon, and come in below 1.0 percent in 2021 and 2022 as well. The central bank announced a framework revision, within which it would review what further steps it could apply to ease the monetary conditions.

At their March rate-setting meeting, the decision-makers of the Bank of England left monetary conditions unchanged. According to the Bank's announcement, government securities purchases will continue until the 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. As a result of the central bank operations, the balance sheet total of the Bank of England rose to 43 percent of GDP. Annual inflation rose from 0.3 percent in November to 0.7 percent in January, which is still below the central bank's 2-percent target. According to the Bank's forecast, inflation in 2021 may be at 2 percent, i.e. around the level of the inflation target. The BoE indicated that it does not intend to tighten monetary conditions until spare capacity is eliminated and inflation stabilises sustainably around the 2-percent inflation target.

The Chinese central bank did not change the level of the loan prime rate (LPR), which is the benchmark interest rate for the pricing of bank loans. Accordingly, since 20 April the one-year LPR and the five-year LPR have been at 3.85 percent and 4.65 percent, respectively. From 0.2 percent in December, inflation fell into negative territory in February again, dropping to -0.2 percent. The central bank indicated that the monetary policy will support the economy in the future as well, while still keeping macroeconomic and financial risks in mind.

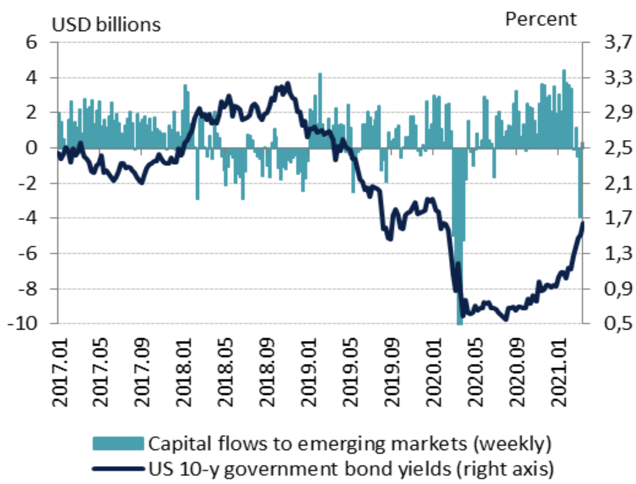
As a result of the favourable news related to the vaccines against the coronavirus, financial market sentiment continued to improve, also supported in January by the end of the uncertainty about the composition of the US Senate. Nevertheless, risk aversion temporarily increased at end-January and end-February as well, which may have been caused by the uncertainty concerning the US fiscal stimulus and the surge in developed market yields. Favourable expectations

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



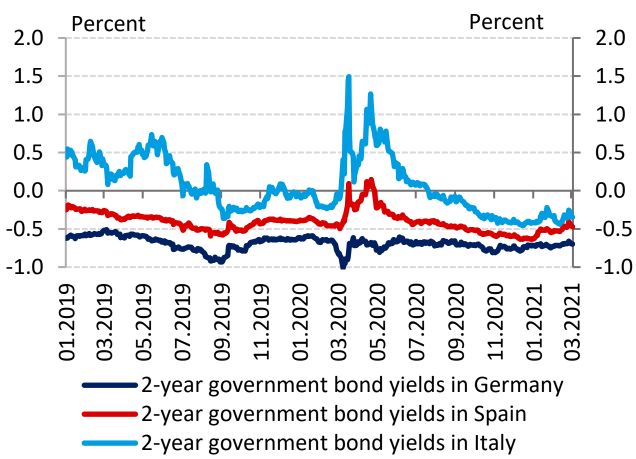
Source: Databases of central banks, Eurostat, FRED

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



Source: EPFR, Bloomberg

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



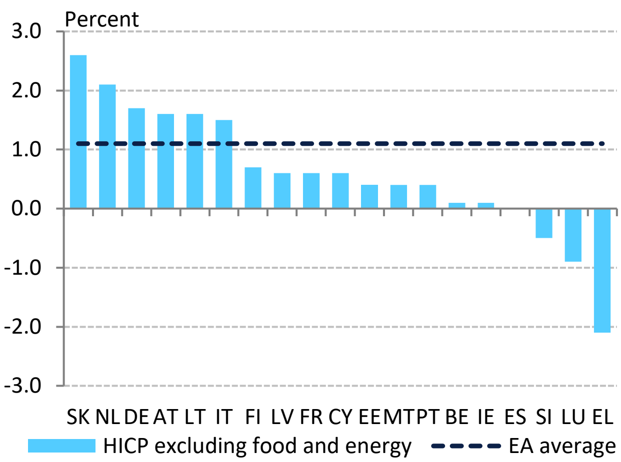
Source: Bloomberg

related to the development of vaccines against the coronavirus increased in December, resulting in an improvement in financial market sentiment until early January. Volatility increased temporarily in the markets at the beginning of January, which was attributable to negative news related to the coronavirus and uncertainties about the final composition of the US Senate. Following that, risk aversion declined first, and then temporarily increased again at end-January due to the uncertainty about the size and scheduling of the US fiscal stimulus. Risk aversion was down in early February, before increasing again as a result of the uncertainty about the easing of the containment measures and in view of the rises in yields in developed markets. On the whole, however, money market sentiment improved (Chart 3-11). The majority of both developed and emerging market stock exchange price indices rose. Leading US and European stock exchange price indices advanced some 6–11 percent, reaching new historical highs. The US dollar strengthened against both the developed and emerging currencies, including the majority of the currencies of the region in the narrow sense, thus appreciating by 1.9 and 4.5 percent against the euro and the Japanese yen, respectively. At the same time, developed market long-term bond yields rose considerably, with the US, the German and the Japanese yields advancing 80, 34 and 10 basis points, respectively (Chart 3-12). Most emerging market bond yields also increased, including typically the long-term yields of the region.

Although the market continues to expect steadily loose monetary policies from the developed central banks, the expected time of the first interest rate hike shifted to a slightly earlier date. Based on market pricing, the Fed may start raising its interest rate level in two years, i.e. slightly earlier compared to the mid-December expectations. According to market pricing, the ECB's current interest rate conditions will remain unchanged until 2024 Q1, and thus market participants are pricing in the first possible interest rate hike at a slightly earlier date compared to the mid-December expectation in this case as well.

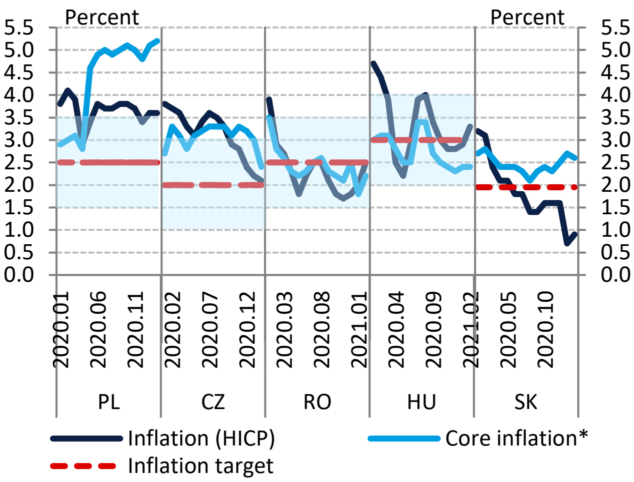
Inflation in the euro area is once again in positive territory. Following the deflation typical of 2020 H2, the annual inflation rate rose to 0.9 percent in January and February for the area as a whole. In February, the inflation rate was below the 2-percent central bank target in all euro area Member States, sinking to negative territory in six countries. Until end-2020, core inflation remained at the level of 0.2 percent observed in October, before rising

Chart 3-13: HICP excluding energy, food, alcohol and tobacco in the euro area members (February 2021)



Source: Eurostat

Chart 3-14: 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

to 1.1 percent in February (Chart 3-13). Core inflation in February varied across Member States, staying in negative territory in Greece, Luxembourg and Slovenia, while rising to levels nearly twice as high as the area average in Slovakia and Netherlands.

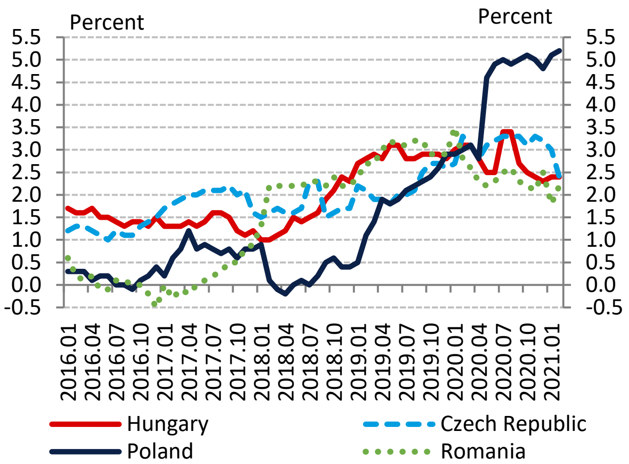
At its March rate-setting meeting, the Governing Council of the ECB left the policy rates and the parameters of the asset purchase programmes unchanged. The ECB is continuing its asset purchases under the Pandemic Emergency Purchase Programme (PEPP). Purchases continue to take place in a flexible manner, and will continue at least until March 2022 or as long as the negative effects of the coronavirus persist. The maturing securities purchased under the PEPP will be reinvested until at least the end of 2023. The balance sheet total of the ECB rose to EUR 7,102 billion (62 percent of GDP) by the end of February. 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. The ECB announced the continuation of its PEPP purchases at a significantly higher pace in the next quarter than in the first months of the year.

Developments in consumer prices varied in the regional countries at end-2020 and in early 2021 (Chart 3-14). The inflation rate in Poland fell to 3.4 percent in December, before rising again to 3.6 percent in February, exceeding the inflation target by some 1.1 percentage points. The rate of increase in consumer prices in the Czech Republic dropped from 2.8 percent in November to 2.1 percent by February. Starting from November, the inflation rate moved on a rising path in Romania, advancing to 2.0 percent in January and then to 2.5 percent in February. Core inflation in Romania and the Czech Republic declined, while in Poland it was around the levels observed in the previous months (Chart 3-15).

At their December and February rate-setting meetings, the policymakers of the Czech central bank left the policy rate at 0.25 percent. The central bank expects a further decline in the consumer price index, which may approach the 2-percent target by end-2021. The central bank confirmed its previous indication, which suggests that the base rate may gradually increase during 2021.

At its March 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

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



Source: Eurostat

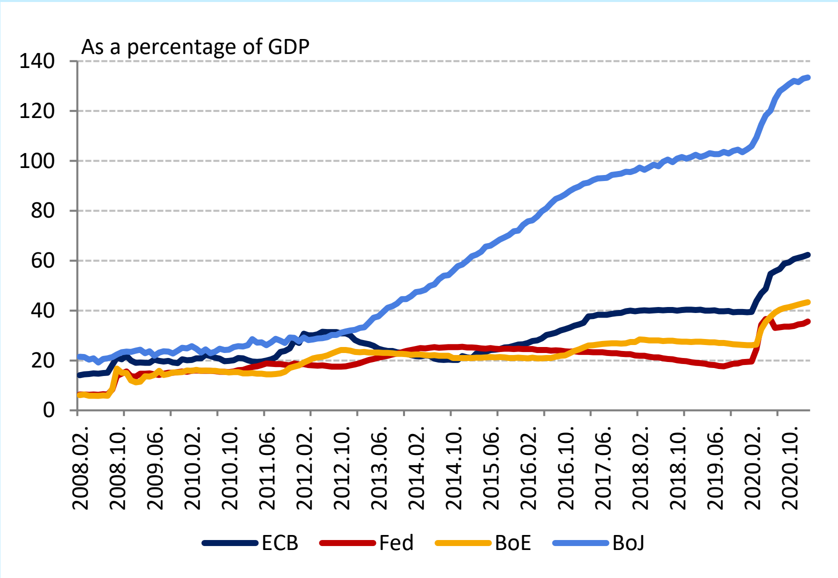
liquidity structure of the banking sector, ensuring the liquidity of the secondary market of government securities, and emphasises that, if necessary, it may carry out further intervention in the foreign exchange market. Following the downturn in 2020, the central bank expects the economy to recover in 2021, but it feels prospects are still overshadowed by major uncertainties due to COVID-19.

The decision-makers of the Romanian central bank reduced the policy rate by 25 basis points to 1.25 percent during the past period. In addition, the central bankers cut the lending rate, which represents the upper bound of the interest rate corridor, from 2 percent to 1.75 percent and the deposit rate, which is at the bottom of the interest rate corridor, from 1 percent to 0.75 percent. The 5-percent level of the required reserve ratio concerning liabilities denominated in foreign currency and leu were left unchanged by the decision-makers. According to the related announcement, changes in fiscal and income policies, the liberalisation of the electricity market as well as risks stemming from the external environment and the pandemic may entail uncertainties.

Box 3-1: Changes in the balance sheets of the world's leading central banks

As a result of the crisis caused by the pandemic, the world's leading central banks introduced various support measures, which expanded central banks' balance sheets to higher levels than before. As a response to the pandemic crisis, central banks typically reduced their respective policy rates, increased the volumes of their repo operations, expanded their ongoing asset purchase and lending programmes, or decided to launch new programmes. These support measures triggered major expansions in central bank balance sheets, corresponding to increases of 16–26 percentage points as a proportion of GDP in the case of the world's leading central banks under review (European Central Bank, Federal Reserve, Bank of England, Bank of Japan) (Chart 3-16). Central banks' balance sheet total-to-GDP ratio was lower prior to the pandemic crisis. In early 2020, in the case of the Bank of Japan it amounted to 105 percent of GDP, while for the other central banks under review this indicator was between 20–40 percent. The largest balance sheet expansion was observed in the case of the Bank of Japan, where the balance sheet total has increased by nearly 26 percentage points since January 2020. The support measures resulted in a significant, 21 percentage point expansion in the ECB's balance sheet as well. The balance sheet of the Bank of England increased by 17 percentage points, while an increase of 16 percentage points was observed in the case of the Fed.

Chart 3-16: Development of central bank balance sheet in proportion to GDP



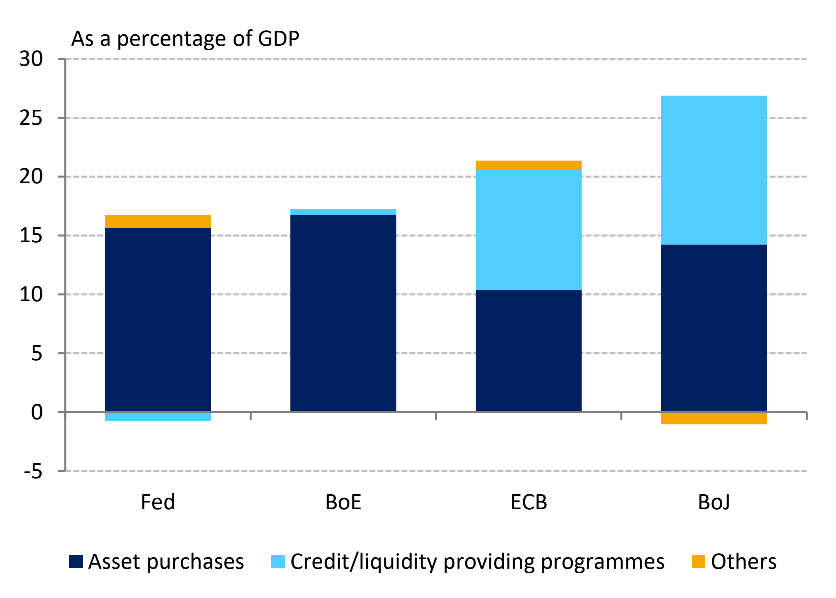
Note: The balance sheet total-to-GDP ratios were determined on the basis of quarterly rolling GDP.
Source: ECB, Fed, BoE, BoJ

The expansion of central bank balance sheets was primarily attributable to the high-volume asset purchase and lending programmes as well as other liquidity providing instruments. In response to the coronavirus crisis, central banks deployed a wide range of monetary policy instruments. It was primarily the asset purchase as well as the loan and liquidity providing schemes that caused the balance sheet expansions, while the impact of 'other' items was mostly marginal (Chart 3-17). Although in the case of the world's leading central banks under review the individual programmes contributed to the balance sheet expansions to various degrees, it is generally true that the asset purchase programmes were the key factor for each central bank.

In addition to asset purchase programmes, loan and liquidity providing schemes also made significant contributions to the balance sheet expansions in the case of the ECB and the Bank of Japan. In March 2020, the ECB expanded its asset purchase programme (APP), which had been applied prior to the start of the pandemic as well, by EUR 120 billion (1 percent of GDP), and also launched a new pandemic emergency purchase programme (PEPP), the current envelope of which amounts to EUR 1,850 billion (16 percent of GDP). The ECB decided on launching and easing the conditions of various liquidity providing (3-month LTRO) and refinancing operations (TLTRO III, PELTRO). The Bank of Japan also expanded its asset purchase programme, purchasing unlimited quantities of Japanese government bonds as well as exchange-traded funds (ETF) and Japanese real estate investment trusts (J-REIT) up to upper limits of JPY 12,000 billion (2 percent of GDP) and JPY 180 billion (EUR 1.5 billion), respectively. In addition, the Bank of Japan set up a new refinancing loan programme to support small and medium-sized enterprises. By February 2021, the balance sheets of the ECB and the Bank of Japan had risen to EUR 7,102 billion (62 percent of GDP) and JPY 712,000 billion (133 percent of GDP), respectively.

The balance sheet of the Bank of England was primarily expanded by the asset purchase programme. Last year, the Bank of England expanded its ongoing asset purchase programme by GBP 450 billion (21 percent of GDP), purchasing smaller amounts of corporate bonds and larger amounts of government securities. In addition, the Bank of England has been operating its TFSME programme since the spring of 2020, which primarily facilitates lending to small and medium-sized enterprises and added nearly GBP 70 billion (3 percent of GDP) to the BoE's balance sheet. At the same time, the balance sheet expansion caused by the TFSME was offset by the phase-out of the previous funding scheme (TFS), and thus, as a cumulative result of the two funding schemes, the item of loan and liquidity providing schemes only slightly increased the central bank balance sheet, which reached GBP 919 billion (43 percent of GDP) by mid-February 2021 (Chart 3-17).

Chart 3-17: Change in balance sheet total as a share of GDP between January 2020 and January 2021



Source: ECB, Fed, BoE, BoJ

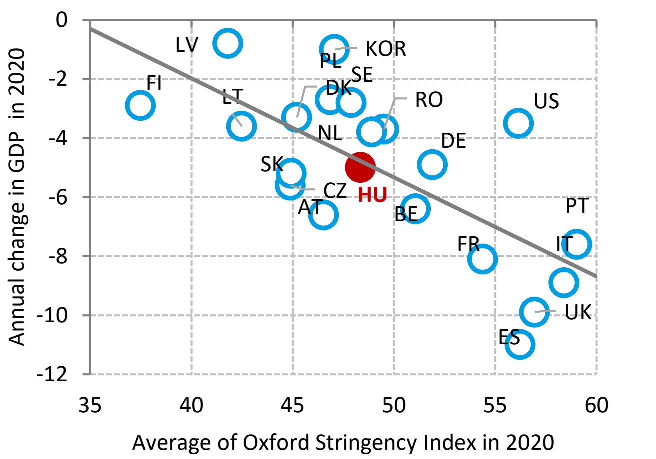
The asset purchase programme was the key factor in the case of the Fed as well. Last year, the Fed terminated the upper limit of its government securities and mortgage-backed securities purchase programme, and also launched another five new indirect asset purchase programmes. In addition, the Fed introduced two direct and three indirect instruments as well to ensure and support lending. The balance sheet increasing effect of the lending programmes was offset by the Fed's gradual reduction of its repo operations from March 2020, which had been applied in a more intensive manner following the repo market turmoil in 2019. On the whole, the loan and liquidity providing schemes (Chart 3-17) slightly tightened the central bank balance sheet. The balance sheet total of the Fed rose to USD 7,639 billion (36 percent of GDP) in February 2021.

Initially, the central bank measures adopted in view of the first wave of the pandemic resulted in sharp increases in the balance sheets, whereas later it was maintaining and expanding the support measures that contributed to the further balance sheet expansions. Asset purchase programmes were the main determinant of monetary policy measures, complemented by various loan and liquidity providing schemes. Some of the central bank programmes launched last spring have already been phased out, but central banks still maintain the majority of their support measures, which may result in a further increase in central bank balance sheets in the future.

3.2 Analysis of the production and expenditure side of GDP

In 2020 Q4, the output of the Hungarian economy was 3.6 percent lower compared to the same period of the previous year. For the year as a whole, the degree of the downturn (5.0 percent) was smaller than expected, and thus Hungary ranked in the middle of the field in Europe in this respect. The Hungarian economy proved to be resistant to the second wave of the pandemic: in spite of the containment measures introduced in November, the economy was able to expand compared to the previous quarter, and the level of output excluding calendar effects and adjusted seasonally was 1.4 percent higher than in Q3. Economic output was supported by the recovery in manufacturing, while there was a downturn in tourism again following the November containment measures. Following stagnation in Q3, construction output improved significantly at the end of last year. On the expenditure side, year-on-year growth was registered in net exports and investment in Q4, while the contribution of the changes in inventories and household consumption to economic performance was negative. High-frequency data corroborate the duality observed in economic performance. Although at a slowing pace, the recovery of the production sectors continued. At the same time, the recovery in market services that are affected by the containment measures depends on reopening. Economic recovery decelerated with the arrival of the third wave of the pandemic, and the latest significant containment measures that were introduced may still affect the various sectors to different degrees.

Chart 3-18: Changes to 2020 GDP and level of government stringency



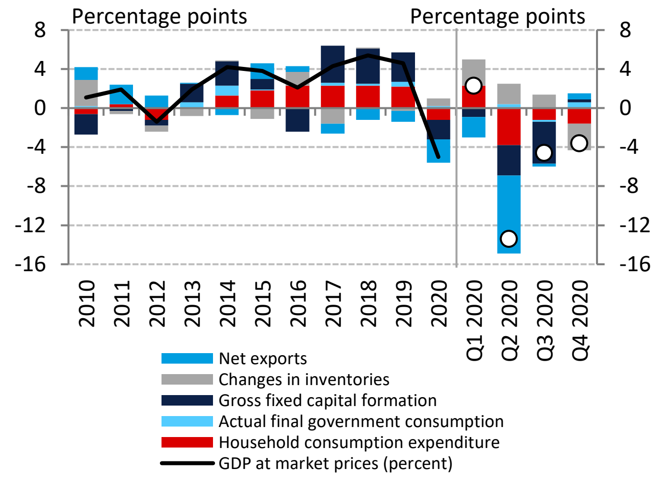
Note: Countries of the European Union, South Korea, United Kingdom and the United States.
Source: Oxford University, Eurostat

In 2020 Q4, gross domestic product declined by 3.6 percent year-on-year terms, while GDP grew by 1.4 percent compared to the previous quarter, after seasonal adjustment. The Hungarian economy proved to be resistant in the second wave of the pandemic. Economic output increased on a quarterly basis, despite the introduction of new containment measures in mid-November. The adjustment was supported by the vehicle industry, which has a significant weight, whereas tourism, food services and the transportation and storage sectors did not yet show signs of recovery.

Domestic economic output declined to a lesser degree than the euro area average (-5.0 percent) and European Union average (-4.8 percent), and thus real economic convergence continued in 2020 Q4 as well. The COVID-19 pandemic forced European economies to apply restrictions at different points in time. Looking at the year as a whole, output in Hungary fell in proportion to the restrictive measures taken (Chart 3-18).

From the expenditure side, household consumption and changes in inventories were the main contributors to the weaker economic performance versus the previous year, while net exports and investment mitigated the decline in 2020 Q4. The rise in investment was attributable to the household and government sectors, whereas the development projects of the private sector declined on a yearly basis. After positive contributions to the economic performance in the first three quarters, the impact of the changes in inventories was strongly negative in Q4. The major improvement in goods trade played an important part in the increase in net exports, whereas the balance of services trade remained negative (Chart 3-19).

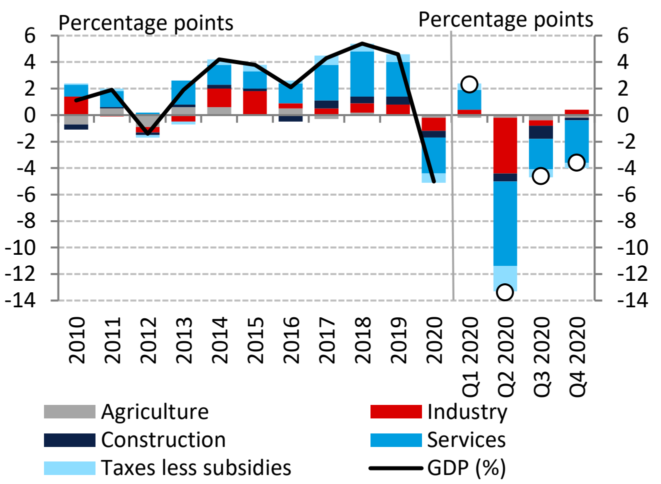
Chart 3-19: Contribution to annual changes in GDP



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

Source: HCSO

Chart 3-20: Decomposition of change in production-side GDP



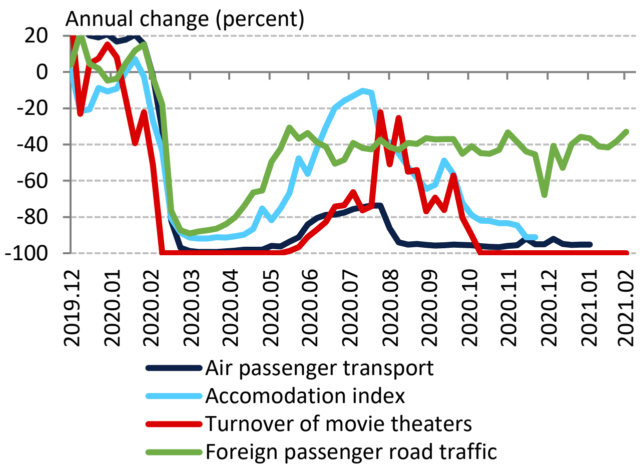
Source: HCSO

Household consumption expenditures only declined to a small degree in a European comparison. The relatively favourable performance of consumption was attributable to the fact that the labour market adjustment was smaller compared to the 2009 global economic crisis, with contributions from the sustained functioning of loan markets, the loan repayment moratorium as well as the Government's job protection measures (wage subsidies).

Despite the reintroduced containment measures, an upswing in housing lending was observed in Q4. In 2020 Q4, household loans outstanding vis-à-vis the financial intermediary system expanded by HUF 282 billion as a result of transactions, corresponding to an annual increase of 14.2 percent. Amortisation, which declined due to the payment moratorium, and the still-high volume of prenatal loans granted contributed significantly to the expansion in loans outstanding. During the quarter, young married couples concluded prenatal loan contracts amounting to HUF 146 billion, and thus this product already accounts for some 13 percent of the household loans outstanding of the credit institutions sector. The market of personal loans still falls significantly short of its pre-pandemic size, whereas new issuances in the housing loan market in Q4 were 1 percent higher than in the same period of 2019. In line with the normalisation in the housing market, according to the Lending Survey, a slight upswing was observed in demand for housing loans in 2020 Q4, while 54 percent of banks in net terms expect further strengthening in the next half year, presumably due to the new support measures launched in 2021 concerning the housing market (e.g. home renovation grant and loan, 5 percent VAT content of new homes, VAT benefit related to the Home Purchase Subsidy Scheme for Families). 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 27 percent of banks already expect an upturn. According to the January data, household lending expanded only slightly, reaching HUF 37 billion, falling 30 percent short of the same period of the previous year.

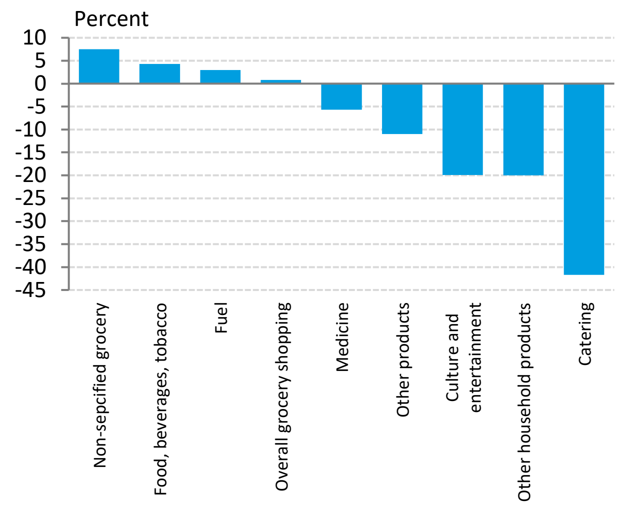
On the production side, transportation, storage, and accommodation and food services performed weakly, while the downturn was mainly moderated by the growth in industry as well as certain services sectors (information and communication as well as financial services) (Chart 3-20). After suffering a sharp drop during the first wave of the pandemic and following a rebound in Q3, industry exceeded its performance observed one year earlier in Q4 as well. The recovery of accommodation and food services, which are related to tourism, was disrupted

Chart 3-21: Indicators of tourism demand



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

Chart 3-22: Evolution of turnover in retail trade and catering in January 29 – February 26



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

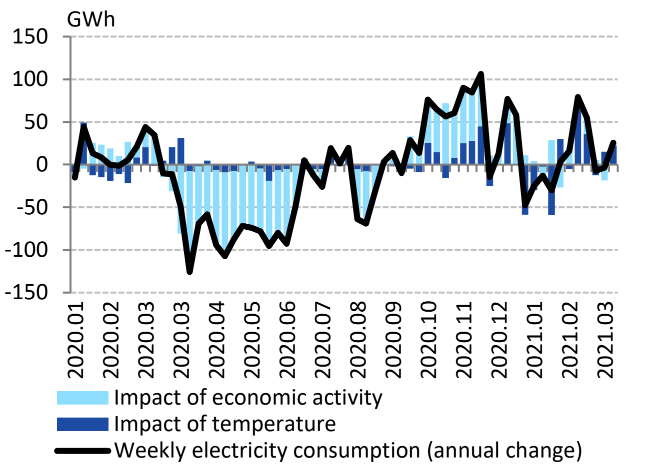
by the containment measures that entered into force in November. At the same time, construction output started to improve, expanding significantly compared to Q3. Recovery in the transportation and warehousing sector still did not start after the spring downturn. The information and communication sector continued its dynamic growth typical of the previous quarters (+6.3 percent).

Following the partial adjustment seen in the tourism sector and the entertainment industry in Q3, a downturn was observed again as a result of the containment measures introduced in November (Chart 3-21). The number of overnight stays in December was once again around the low seen in April, with the volume of turnover falling by 92.4 percent year on year. Looking at fourth quarter as a whole, turnover was 80 percent below its level one year earlier. Similar to the last months of 2020, in January a 90 percent decline was seen in the number of tourism nights. By January, demand of domestic origin for accommodation reached 14 percent of its previous year's turnover, while the number of foreigners' overnight stays dropped to 6 percent of its level from last year. With the easing of restrictive measures, domestic demand in tourism may recover quickly again after the third wave, but the recovery of international tourism might even last for years, which may also be influenced by changes in consumption and travelling habits due to the pandemic. The utilisation of cultural spaces can be approximated by attendance at cinemas, the sales revenue of which still reached 27 percent of the previous year's level in October, but the lockdown measures introduced in November banned the operation of cinemas, and thus the sector remained without income in a major part of the last quarter. According to the traffic statistics of the Budapest Airport, following a correction in the summer, as a result of the closing of borders in September, the number of international passengers reached 4–6 percent of the previous year's level in Q4. For the time being, the January 2021 data do not show any signs of a rebound in traffic. The number of foreigners arriving on public roads was at 50–60 percent of the previous year' level in H2 as a whole, and the introduction of the containment measures in November did not bring any material change.

With the arrival of the third wave, in view of the tightened containment measures, the recovery in tourism demand may be even slower than previously expected.

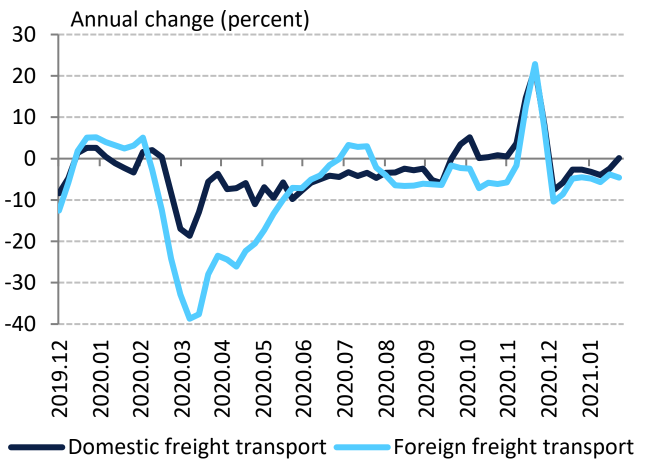
Retail sales have remained slightly below last year's level since the November lockdowns. Negative dynamics have been observed in the sales of durables since August again, and sales of non-durable products have also declined since

Chart 3-23: Annual change in weekly electricity consumption



Source: MNB estimation based on ENTSO-E

Chart 3-24: Road traffic changes



Source: NTPS Plc. Business Intelligence, MNB calculation

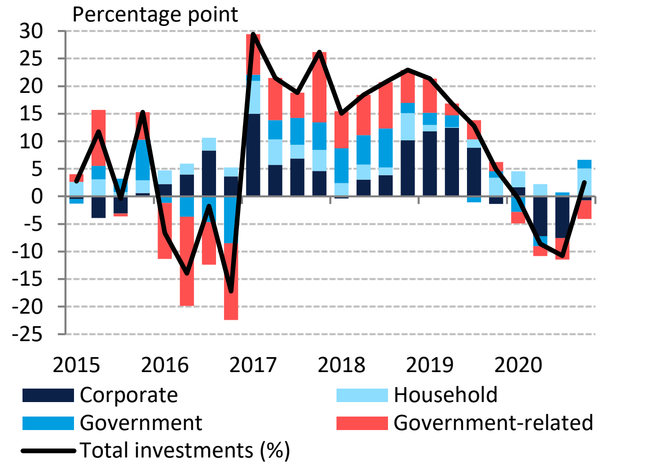
December on an annual basis. The dynamics of mail order and online retail sales increased again in parallel with the autumn lockdowns: the sales of this type of business expanded by 39 percent in Q4. In view of the second wave of the pandemic, in the final months of the year a rearrangement in retail sales similar to the one in the spring period was observed, with a greater weight of the online space (for details, see Box 3-2). In January, the volume of retail trade fell 2.6 percent compared to the same period of 2019. Vehicle and vehicle parts sales remain well below last year's figure (-25.5 per cent in January), and the impact of the latest wave of the pandemic is seen in the turnover of catering as well (-41.7 percent between 29 January and 26 February) (Chart 3-22).

The adjustment in industrial production continued in Q4 as well, with output exceeding its level one year earlier by 2.9 percent in Q4. The improvement in industrial output across Europe was typically attributable to the adjustment of the sectors that produce for external markets. Vehicle manufacturing, which has a high weight, also contributed to the recovery from August, with the output of the subsector exceeding the level observed one year earlier by 13.8 percent in December. Hungary's export sales had been above the previous year's levels since September, exceeding their level from the previous year by 9.4 percent in December. Export orders also adjusted in the autumn months, but a year-on-year decline was observed again in December.

According to energy consumption data, similarly to the first wave of the pandemic, industrial capacities were also not impaired during the second wave, and energy consumption has typically exceeded the previous year's level since end-September (Chart 3-23). In early 2021, the global shortage in the market of semiconductors affected a number of actors in the automotive industry as well, forcing them to limit their production (for details, see Box 1-3). According to a survey conducted in early February, the largest exporting companies expect an increase in capacity utilisation in the coming months, despite the frictions observed in supply chains.

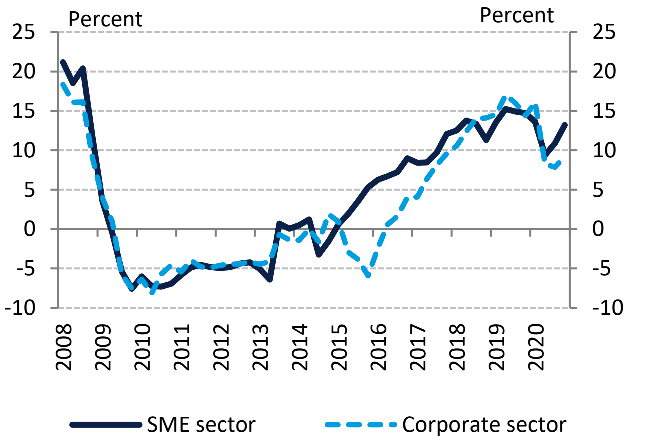
The volume of goods transport by road may depict domestic industrial performance as well as the changes in logistics (forwarding, warehousing), reflecting a sluggish recovery in the sectors (Chart 3-24). Goods transport of foreign origin, which had declined considerably due to the pandemic, adjusted temporarily in December, but in January the activity observed in forwarding was once again

Chart 3-25: Decomposition of the annual change in investments



Source: HCSO

Chart 3-26: 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

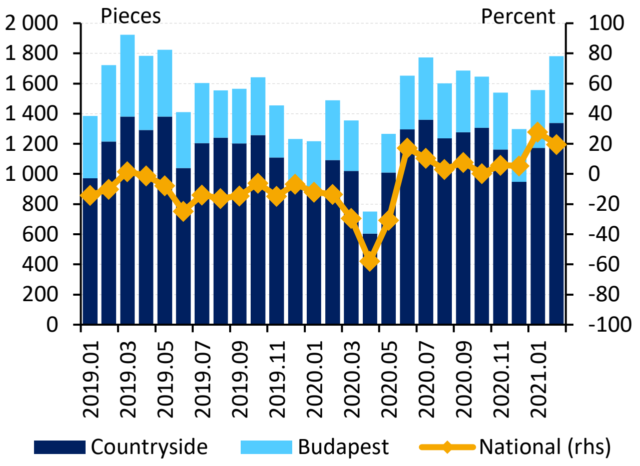
weaker than last year. Similar trends have also been observed recently in domestic goods transport by road.

Unlike in the previous quarters, the volume of whole-economy investment expanded in Q4. Investment activity rose by 2.5 percent year on year (Chart 3-25). Investment in machinery and equipment was the main contributor to the expansion, but construction investment also increased year on year. In 2020 Q4, investment by the state and by companies related to the state showed a mixed picture. Investment by budgetary organisations increased considerably, but investment in the (quasi fiscal) sectors indirectly linked to the state was down in year-on-year terms, while households' investment activity expanded significantly, in parallel with a significant rise in the number of new homes completed.

Corporate loan dynamics reached nearly double-digit growth in Q4. In the balance sheet of the entire financial intermediary system, corporate loans outstanding increased by HUF 273 billion in 2020 Q4, and thus the annual growth rate amounted to 9.3 percent (Chart 3-26). Within corporate lending, the annual growth rate of SME loans outstanding was 13.2 percent in December, significantly supported by contracts amounting to some HUF 660 billion concluded within the framework of the FGS Go! programme during the quarter. In 2020 Q4, broad-based growth took place, with the largest increase in loans outstanding in the trade service activities and real estate sectors. In net terms, 34 percent 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 demand for commercial real estate loans was indicated by 12 percent of the banks in net terms in the quarter. Looking ahead, however, they no longer expect a further decline in demand in this market segment.

Construction output in 2020 Q4 declined by 4.2 percent year on year, falling to a lesser degree than in Q3. Within the two main construction groups, the construction of buildings increased by 6.0 percent, while other construction continued to decline, shrinking 14.7 percent. Based on available European data, the dynamics of construction output in Hungary were below the European average in 2020 Q4. In January, the volume of output grew by 11.0 percent year on year, and the construction contract portfolio at the end of the month was 11.5 percent higher than its level seen a year earlier. The declining trend in the construction contract portfolio broke at the end of last

Chart 3-27: Monthly number of transactions completed by housing market intermediaries



Source: Housing intermediary database

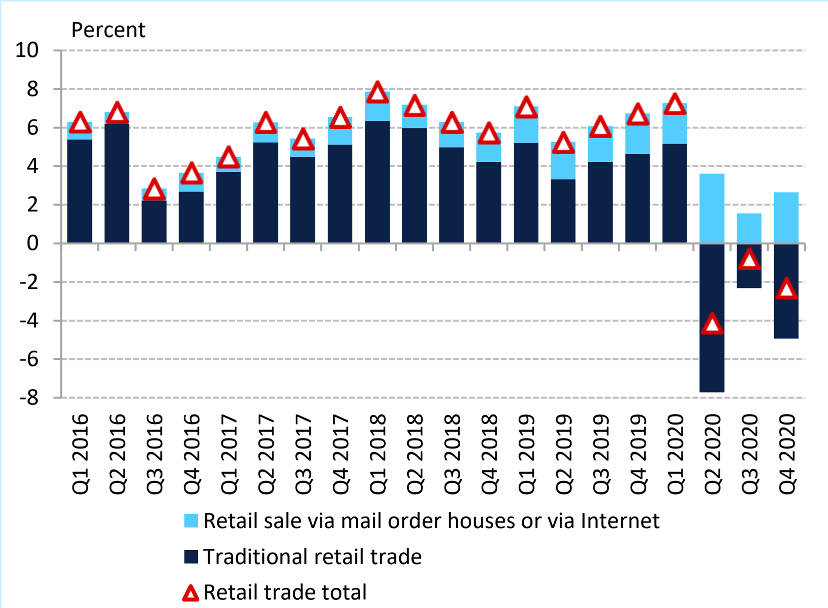
year, with a rise observed in the volume of contracts. The expansion covered the contract portfolio of buildings as well as of other structures typically related to the state.

According to agents' data, in Q4 the number of transactions increased slightly year on year both in the countryside and in Budapest. Year on year, the number of transactions was up by 4.3 percent in Budapest, 1.4 percent in the countryside and 3.6 percent at the national level (Chart 3-27). The number of transactions fell on a quarter-on-quarter basis, reflecting the seasonal nature of sales and purchases in the case of pre-owned homes. In the case of new properties, however, the larger-than-usual quarterly downturn of some 17 percent may have been attributable to the wait-and-see attitude due to the home creation benefits applied starting from 2021. In 2020 Q3, according to the values of the MNB housing price index, domestic housing prices were up by 1.6 percent in nominal terms on a national average, whereas housing prices in Budapest increased by 2.0 percent in Q3, following a decline in Q2. Preliminary data suggest that the price increase continued in Q4 on a national average and in the capital as well. In nominal terms, housing prices rose by 2.4 percent in the countryside as a whole and by 1 percent in Budapest in Q4.

Box 3-2: The situation in online trading

The pandemic resulted in significant additional demand in retail trade through the Internet in Hungary, moderating the downturn in retail trade as a whole. The market share of this segment was already on a rising trend in the pre-pandemic period: its share within total retail sales was somewhere above 5 and 6 percent in 2018 and 2019, respectively. This figure was close to 9 percent in 2020, and well above 10 percent at the time of the lockdowns due to the pandemic. As a result of the significant contribution of this segment, the downturn in retail trade remained moderate in 2020 (Chart 3-28). Home-delivery of meals, which is indirectly related to e-commerce, also started to grow rapidly in that period.

Chart 3-28: Changes in retail trade volumes by groups of business

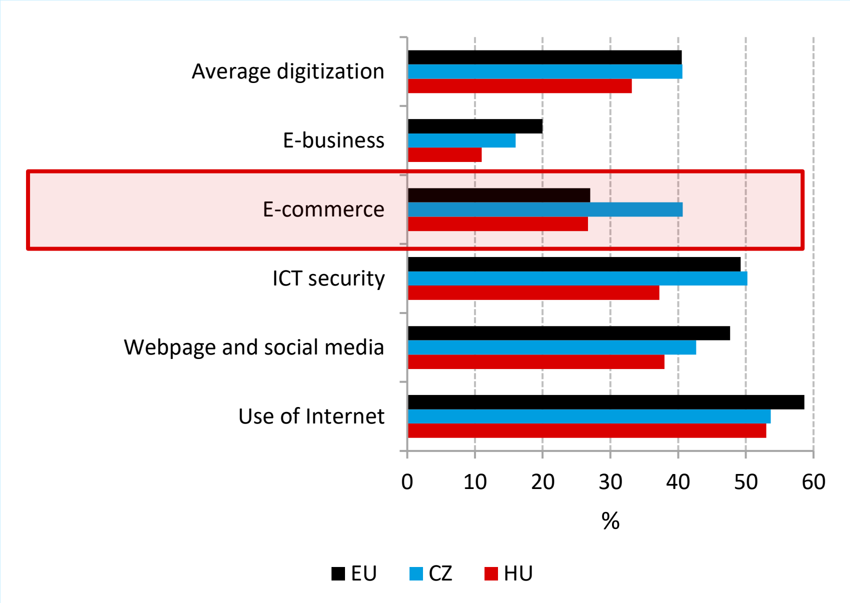


Note: Based on seasonally and calendar adjusted data.
Source: MNB calculations based on HCSO data

In an international comparison, the share of retail e-commerce in Hungary is still below the averages of the EU and the Visegrád countries. The weight of online retail trade was around 11 percent on average in the EU prior to the pandemic, while the corresponding share was around 13 percent in the Czech Republic (McKinsey, 2020). As a result of the pandemic, the share of electronic retail trade rose to around 14 percent on average in the EU and to above 16 percent in Czech Republic. Accordingly, Hungary's lag is estimated to amount to 5–7 percentage points. The share in Poland and Slovakia is higher than in Hungary, but lower than in the EU.

The shortfall seen in retail e-commerce compared to the other regional countries is also observed in sectors other than retail trade. There is considerable development potential in the digitalisation of Hungarian companies in general as well, but it is especially true for the use of the channels of e-commerce (Chart 3-29). According to a survey conducted in 2020, 14 percent of Hungarian companies used the opportunities provided by e-commerce channels, which is less than half of the ratio observed in the Czech Republic and Croatia (leaders in the region), while digital trade is increasingly becoming a key area of economy. In the large corporations segment, every second Czech company performed online sales activities, while the corresponding ratio is only 35 percent in Hungary. 30 percent of the sales revenue of Czech companies originated from online channels, compared to 23 percent in Hungary (the EU average is 20 percent).

Chart 3-29: Digitisation of companies in 5 aspects



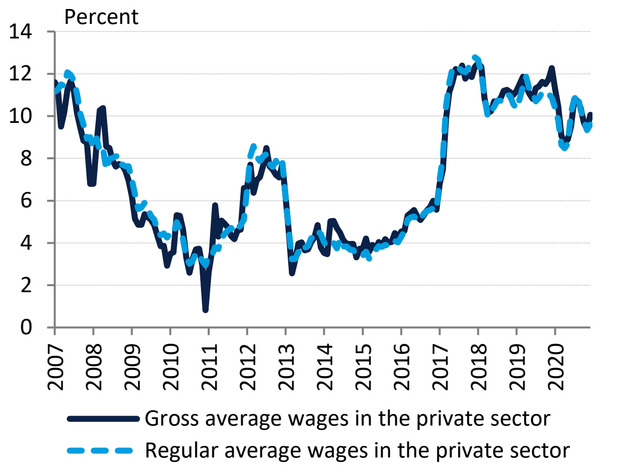
Note: Based on 20 indicators. The data were requested in 2018, 2019 or 2020.
The latest data were taken into account in each case.
Source: MNB calculations based on Eurostat

The spread of online retail trade can be facilitated by improving households' digital literacy. According to the sub-index measuring Internet skills of the Digital Economy and Society Index (DESI) prepared for the European Commission, in 2019 the digital skills of the Hungarian population were more than 20 percent below the EU average (European Commission 2020). The pandemic and the new digital obligations concerning companies (e-invoice) significantly increased interactions with digital technologies, which presumably had a favourable impact on people's openness to such technologies.

3.3 Labour market

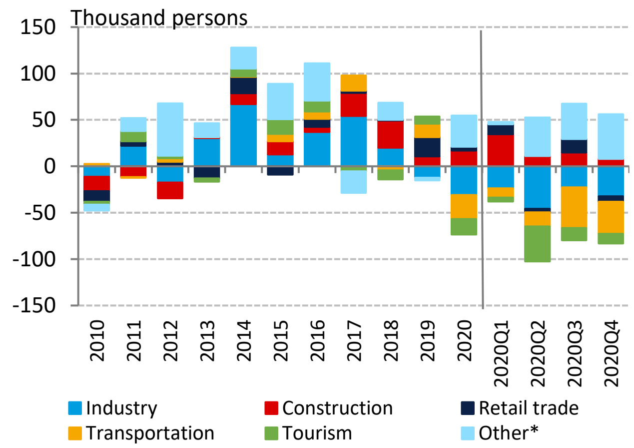
In 2020 Q4, gross average earnings in the private sector rose 10.1 percent in year-on-year terms. The degree of the statistical effects that distort the wage index declined further compared to Q2 and Q3. In view of the new methodology of the Labour Force Survey, the level of employment shifted significantly upwards. In Q4, the average number of those employed in the whole economy amounted to 4.623 million, which was 27 thousand people less than in the same period of last year. The negative impact of the new waves of the pandemic on the economy was mainly reflected in the decline in the number of employed in January. In February, however, employment expectations improved, with the exception of manufacturing.

Chart 3-30: Annual change in gross average wages in the private sector



Note: Quarterly moving averages.
Source: HCSO

Chart 3-31: Decomposition of annual changes in private sector employment



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

3.3.1. Wages

In 2020 Q4, gross average earnings in the private sector rose 10.1 percent year on year, falling slightly short of the average of Q3. Regular average earnings increased 9.6 percent year on year, and thus bonus payments exceeded the degree recorded in the previous year (Chart 3-30). Annual wage growth in the services sectors most affected by the pandemic (accommodation and food service activities; other services) declined to below 2 percent.

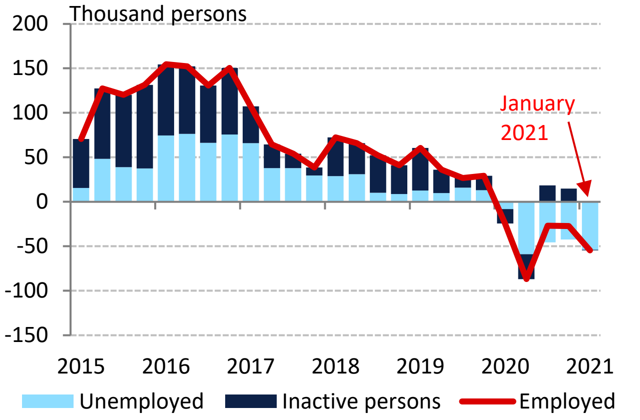
The degree of the statistical effects that distort the full-time wage index declined further compared to Q2 and Q3. With the return of the ratio of part-time workers to the pre-crisis level, the effect of part-time workers faded out by the end of the year.

3.3.2. Employment and unemployment

During the latest waves of the pandemic, the labour market has so far proven to be more resistant than during the first wave. Central bank and government measures (loan repayment moratorium, wage subsidies) also contributed to this. According to 9 March 2021 data, the sectoral wage subsidy was used for 117,000 employees in total; three quarters of them work in the area of accommodation and catering services.

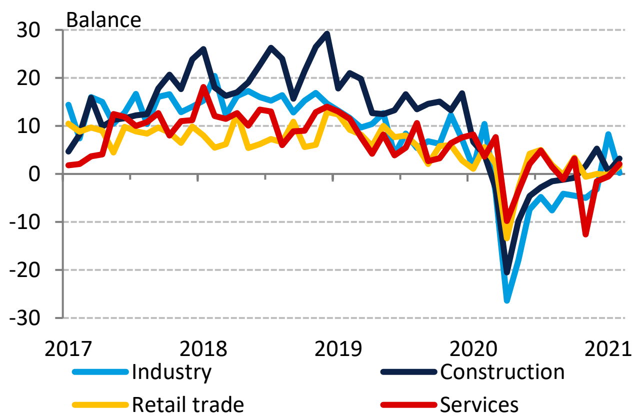
According to the Labour Force Survey, employment in 2020 Q4 was only 27 thousand lower than in the same period of last year. The average number of whole economy employees amounted to 4.623 million in these months. Private sector employment fell 0.8 percent in year-on-year terms and 0.2 percent compared to the previous quarter. Within the private sector, the headcount increased year on year in construction, in the IT and communications sector as well as in the case of financial and insurance activities, while it declined in trade, manufacturing and certain market services (tourism, transportation) (Chart 3-31). Since January, the HCSO has calculated the number of employed using a new methodology, which has raised the

Chart 3-32: Decomposition of annual changes in the whole-economy employment



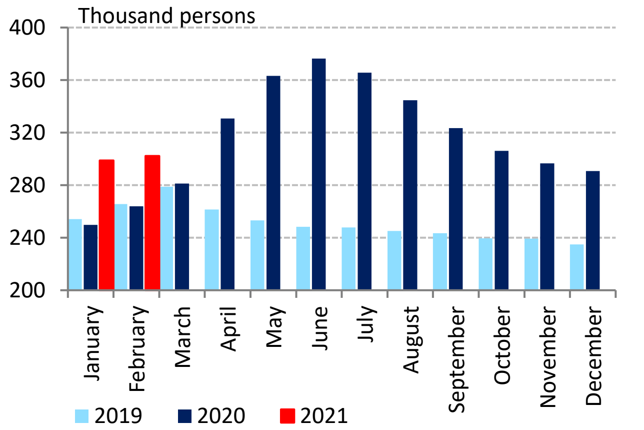
Note: Instead of Q1 2021, monthly data for January is available. Changes in the number of unemployed and economically inactive have the opposite sign. Source: HCSO

Chart 3-33: Employment expectations in the ESI business survey



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

Chart 3-34: Monthly number of registered job seekers



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

level of employment considerably (the new methodology is discussed in more detail in Box 3.3).

In January 2021, total employment fell to 4.537 million, representing a year-on-year decrease of 55 thousand (Chart 3-32). The decline was caused by the fall in the number of those working at places of business abroad; their number was 72 thousand lower than a year before. The seasonally adjusted unemployment rate rose from 4.2 percent in Q4 to 4.6 percent in January. Unemployment in Hungary is still considered low in an international comparison.

For the time being, the ESI business survey – which monitors economic sentiment – does not indicate any further decline in the number of employed. In January, employment expectations for the next 3 months still showed a mixed picture of the sectors, but prospects improved in February, except for manufacturing (Chart 3-33). Companies plan to increase the headcount in construction, trade and the services sectors as well.

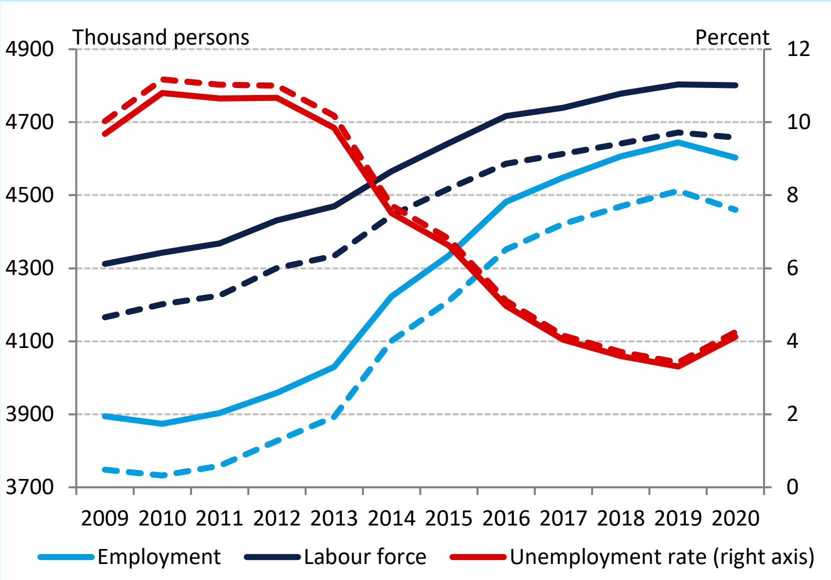
A slight increase was observed in the number of registered unemployed (Chart 3-34). Following the peak in June, the number of registered jobseekers declined steadily, before starting to increase again from the beginning of the year – mainly as a result of seasonal effects. The number of jobseekers was 38 thousand higher in February than a year earlier.

Box 3-3: Effects of the methodological changes in the Labour Force Survey

The HCSO has been publishing the data from the Labour Force Survey according to new methodology since January 2021. The change is warranted by the amendment of EU regulations. As a result of the methodological changes, in addition to those who work while receiving child care benefits, even those persons qualify as employed who worked last before having recourse to the benefit, receive monetary grants while absent and then can return to their previous workplace. There were also other methodological changes in relation to the recording of students, helping family members and seasonal workers, but these essentially led to no changes in the employment data.

The number of employed and active people rose by 120,000–150,000 compared to the previous methodology, which also slightly affected the annual change. In 2020, the number of active people and the number of employed exceeded the previous figures by 142.4 thousand and 142.8 thousand, respectively (Chart 3-35). Employment declined by a mere 0.9 percent (41.3 thousand people) compared to the previous year, whereas the decline was 1.1 percent (51.7 thousand people) according to the previous methodology. The number of unemployed remained practically unchanged, but due to the higher number of active people the unemployment rate was revised downwards. Instead of 4.3 percent, the unemployment rate amounted to 4.1 percent last year according to the new methodology.

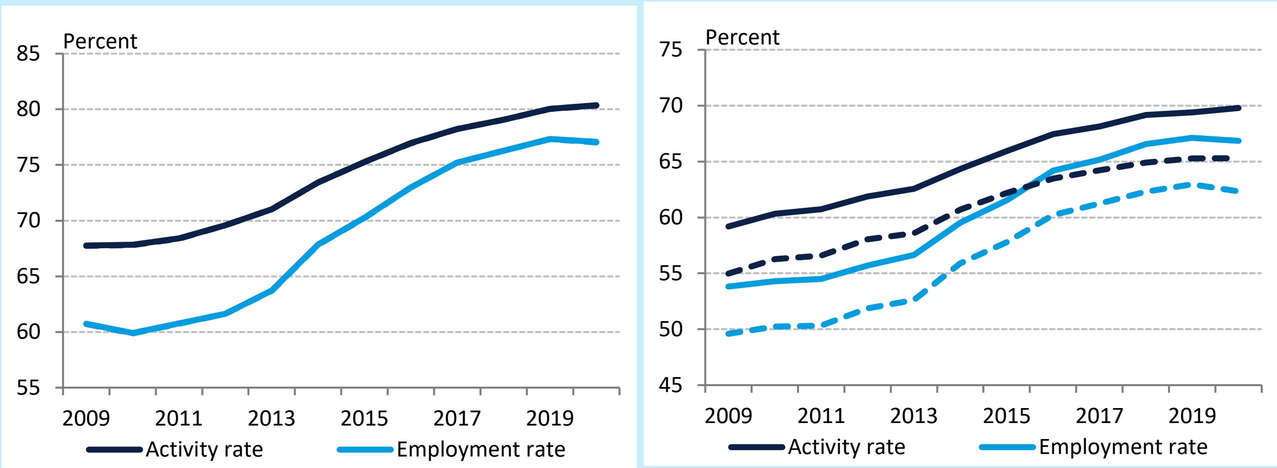
Chart 3-35: Main labour market indicators in the Labour Force Survey



Note: The values according to the previous methodology are shown by the broken lines.
Source: HCSO

Stemming from the nature of the methodological change, women's labour market indicators increased, while there were no significant changes in the case of men. In 2020, 69.8 percent of women between 15–64 were economically active, and the HCSO considered 66.8 percent of them as employed according to the new methodology of the Labour Force Survey (Chart 3-36). Compared to the previous methodology, this represents a change of +4.5 percentage points in both indicators. Men's activity rate and employment rate increased to 80.4 percent and 77.1 percent, respectively; apart from the rounding, the effect of the amendment does not even reach 0.1 percentage point.

Chart 3-36: Activity and employment rates by gender (men – left panel, women – right panel)



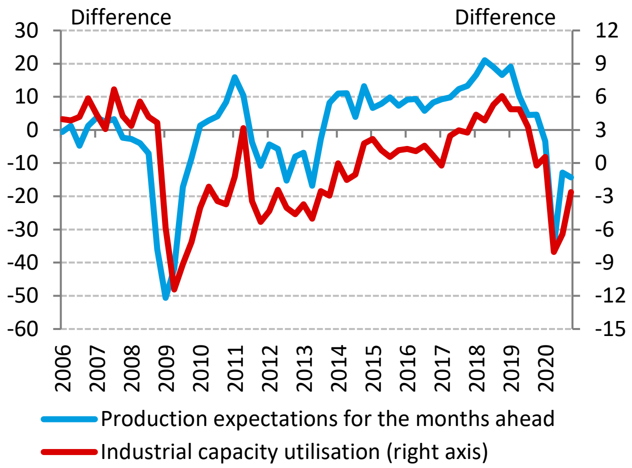
Note: Aged 15–64. The values according to the previous methodology are shown by the broken lines.
Source: HCSO

3.4 The cyclical position of the economy

The Hungarian economy continued to recover during the fourth quarter of 2020. In line with this, the cyclical position of the economy is estimated to have improved, but 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. Due to restarting the economy, the constraint on the supply side temporarily contributes to the rise in inflation. However, as in the autumn of 2020, this situation may ease in the short term, and the disinflationary effects of the economic cycle come to the fore. The capacity utilisation at manufacturing companies has improved in the second half of 2020.

According to our estimation, the cyclical position of the economy improved in Q4, but it remains in negative territory. With the adjustment in demand, the output gap may have narrowed in the past 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. The deteriorating income prospects and the decline in global demand typically influence GDP from the demand side, while as a result of the closure of services due to the restrictions on movement and social distancing, the lower capacity utilisation is more supply-side in nature. Due to restarting the economy, the constraint on the supply side temporarily contributes to the rise in inflation. However, as in the autumn of 2020, this situation may ease in the short term, and the disinflationary effects of the economic cycle come to the fore.

Chart 3-37: 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 in 2020 Q4, but still remains at a low level (Chart 3-37). In spite of the favourable Q4 data and in view of the pandemic, the uncertainty around global economic performance remained high. Future production expectations for domestic manufacturing companies declined slightly in Q4. Economic recovery is expected to be temporarily disrupted, and activity will weaken again in the coming months. The economic performance in the euro area dropped sharply in 2020, or – in certain forecast scenarios – it may be persistently weak.

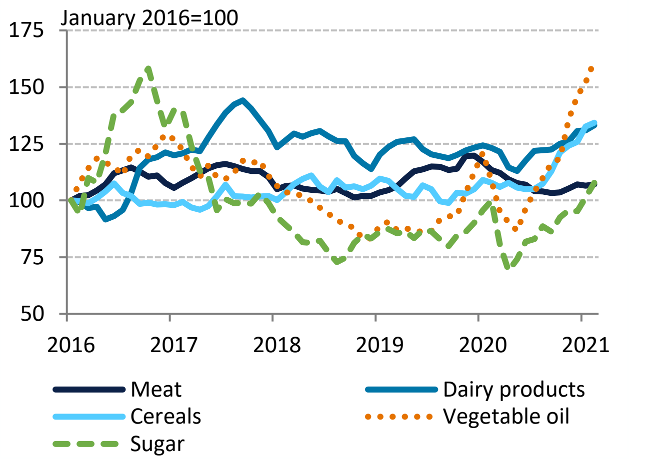
3.5 Costs and inflation

The year-on-year rate of increase in prices remained unchanged at 2.7 percent from November, before rising to 3.1 percent in February. The higher price dynamics of fuels contributed to the increase in prices in February. Pricing decisions have reflected higher volatility and an unusual seasonal pattern since the start of the pandemic. In parallel with strengthening disinflationary effects since September 2020, generally lower price dynamics were observed in the last months of the year. On average, core inflation excluding indirect taxes was 3.4 percent in the past months. In recent months, the indicators capturing longer-term inflationary trends (inflation of demand-sensitive products as well as sticky-price products and services) have not changed significantly.

3.5.1. Producer prices

Global food prices tended to rise in the past period. The increase was primarily related to the prices of oil crops, cereals and sugar, as well as dairy products. In the case of cereals (wheat, corn) and sugar, the increase was caused by the prospects of lower-than-expected crop yields in the 2020/2021 agricultural year as well as by a decrease in supply, whereas prices of dairy products were raised by a surge in global demand. Only meat product prices declined because, as a result of the recurrence of the swine fever epidemic, exports of leading European producers (mainly Germany) to Asian markets were suspended (Chart 3-38).

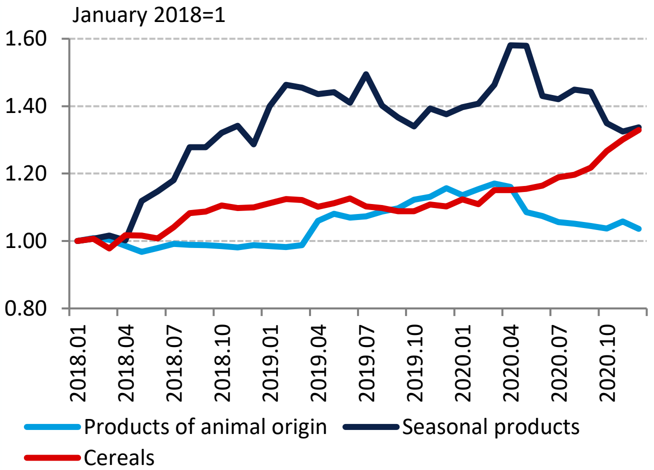
Chart 3-38: Development of world market prices of food



Note: Real price indices.
Source: FAO

Compared to previous quarters, the aggregate year-on-year increase in agricultural producer prices decelerated considerably in Hungary in 2020 Q4. In the case of fruits, in Q4 the average producer price increase was around 25 percent year on year, which is nearly half of the 40-percent price rise seen in Q3. This price increase was offset by a large drop in the price of potatoes, and thus, on the whole, the producer prices of seasonal vegetables and fruits declined. 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 33.6 percent at the end of last year. In 2020 Q4, cereal prices increased by nearly 20 percent year on year (Chart 3-39).

Chart 3-39: Development of agricultural producer prices



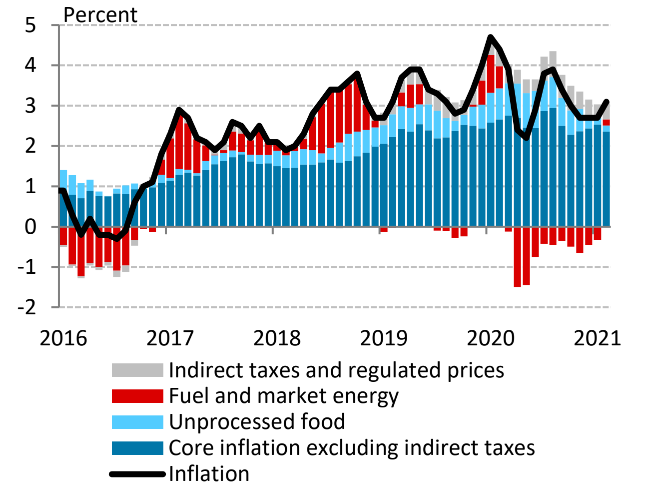
Note: Based on seasonally adjusted data.
Source: HCSO

In the case of consumer goods, compared to the same prior-year period, the rise in domestic producer prices fell short of the historical average until January 2021. On a year-on-year basis, domestic sales prices in industry as a whole have also risen at a rate lower than the historical average in recent months.

3.5.2. Consumer prices

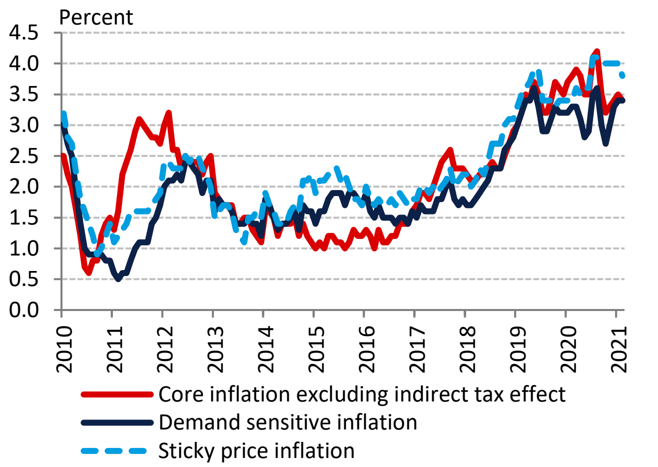
The rate of increase in prices remained unchanged at 2.7 percent from November to January, before rising to 3.1 percent in February. The higher price dynamics of fuels contributed to the increase in prices in February. Pricing decisions have shown higher volatility and an unusual

Chart 3-40: Decomposition of inflation



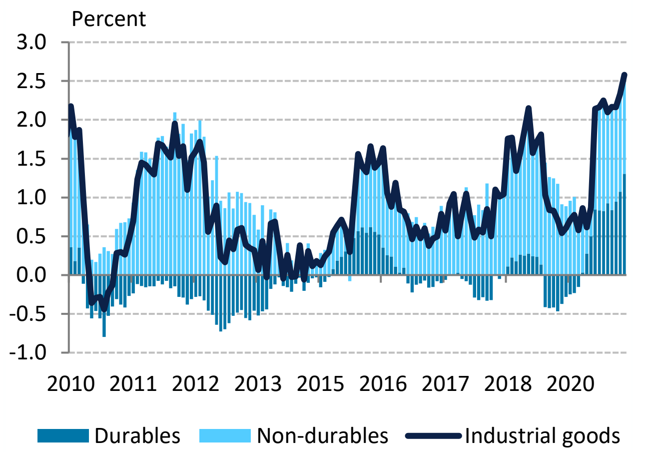
Source: MNB calculation

Chart 3-41: Underlying inflation indicators



Source: MNB calculation based on HCSO data

Chart 3-42: Inflation of industrial goods



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

seasonal pattern since the start of the pandemic. In parallel with strengthening disinflationary effects since September 2020, generally lower price dynamics were observed in the final months of the year. The repricing that took place in the first months of this year was lower than last year (Chart 3-40).

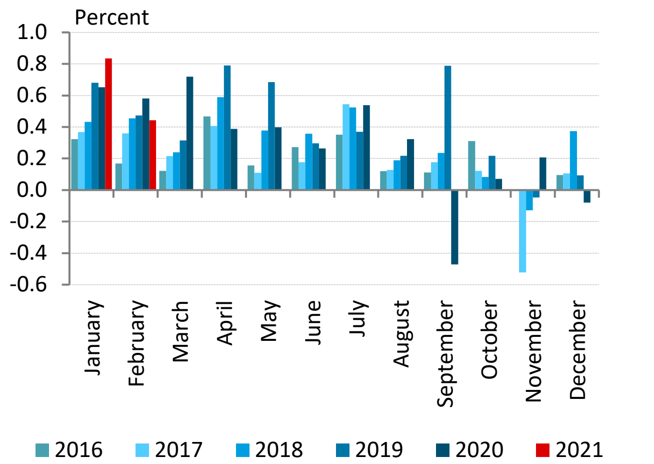
On average, core inflation excluding indirect taxes was 3.4 percent in the past months. The rise in this indicator was attributable to a significant market price increase for tobacco products in December and the adjustment in the prices of mobile phone and Internet services in January. In recent months, the indicators capturing longer-term inflationary trends (inflation of demand-sensitive products as well as sticky-price products and services) have not changed significantly (Chart 3-41). The core inflation indicator calculated according to Eurostat methodology (inflation excluding volatile energy, food, alcohol and tobacco products) shows a mixed picture: while it exceeds the tolerance band around the central bank's inflation target in Poland, it is within the tolerance band, slightly below the inflation target in Hungary and Romania, and slightly above the inflation target in the Czech Republic (see subsection 3-1).

The annual inflation of industrial goods rose in recent months. Within this product group, the inflation of durables was up, while the inflation of non-durables remained practically unchanged (Chart 3-42). The price rise of durables in January was mainly related to the increase in the price index of new passenger cars. In February, the rise in durables inflation was partly caused by a general price increase in the product group and partly by the base effect of last year's fall in the prices of pre-owned passenger cars.

Market services inflation declined 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 and Internet services (see Box 3-4 for more details) (Chart 3-43). However, in the case of the former product group, we saw a correction in prices in January. At the same time, the public health measures to contain the pandemic reduced the availability of and demand for services as well, the effect of which was also reflected in prices.

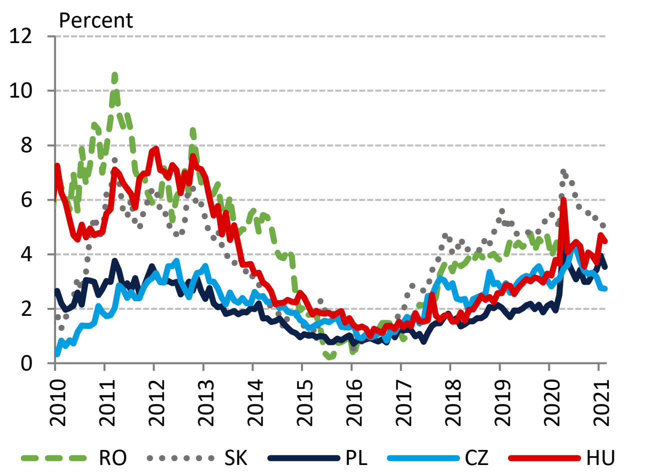
Prices of alcohol and tobacco products have risen nearly 10 percent on average since November. This is partly attributable to the market price increase in December, which was larger than in previous years. In addition, the excise duty on tobacco products was raised again in

Chart 3-43: Monthly price change of market services



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

Chart 3-44: Inflation expectations in the region



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

January. In the case of the increase in excise duty on tobacco products, we saw a pass-through characteristic of previous tax changes.

On the whole, food price dynamics in recent months were lower than the historical average, and gradually declining price indices were observed for 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 the prices of processed food was attributable to a wide range of products.

Fuel prices rose in line with the changes in global oil prices in the past period. In the past months, changes in the world market price of Brent crude were significantly affected by the launch of the coronavirus vaccines and the tightening of global supply (as a result of the regular OPEC+ agreements), in parallel with which – according to analyses – fuel sales in China, a key determinant of global demand, returned to the growth phase seen previously.

Regulated prices fell considerably in the winter months. Regulated prices were kept low by the price reducing effect of the reintroduction of free parking in November 2020.

Looking at recent months' data, inflation was in line overall with the forecast in the December Inflation Report. In view of the lower-than-expected food price dynamics, the December inflation figure was below our projection, but in January this was offset by the increase in fuel prices taking place in accordance with changes in global crude oil prices.

3.5.3. Inflation expectations

On the whole, households' inflation expectations rose in the past period. At the same time, similarly to the consumer price index, measures of households' inflation expectations were more volatile than usual. Households' inflation expectations in the countries of the region showed a mixed picture in the past months: they increased in the Czech Republic, declined in Slovakia, and remained practically unchanged in Poland (Chart 3-44).

Box 3-4: Evaluation of inflation trends at the beginning of the year

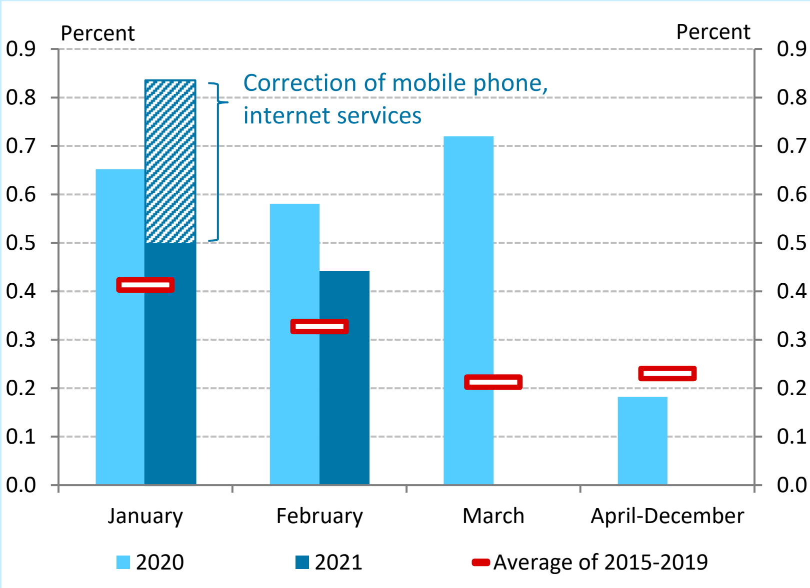
In a normal period, the most important information on the price dynamics of a given year is the data from the first months of the year. This is particularly true in the case of core inflation excluding indirect taxes, which captures longer-term inflation trends, and within that in the case of market services, which account for one third of core inflation excluding indirect taxes. Based on historical experiences, in the case of market services repricing by companies typically appears in consumer prices at the start of the year. This typically affects the period January–February, and in general it can be stated that higher (lower) January–February price increases are often followed by higher (lower) price dynamics throughout the year. In the remaining part of the year, only one-off factors may result in major price rises or price declines (as, for example, several times in the case of mobile phone and Internet services in the past years).

Pricing decisions have shown higher volatility and an unusual seasonal pattern since the start of the pandemic in 2020, and thus there have been significant changes in the previous repricing practices. In the case of market services, even the price changes in March were especially high (Chart 3-45). Inflation rose over the summer months, advancing to 3.9 percent by August. While price changes in the summer months were less typical in the previous years, the ratio of products and services whose prices increased to a greater degree rose significantly last year. As a result of the gradual lifting of restrictions, a surge in demand was typical in some market segments, while availability was limited in the case of certain products due to the gradual recovery of production chains. The higher price dynamics following the restart of the economy after the first wave may have been attributable to the implementation of repricing that had not taken place in the previous months and – in some cases – to price hikes brought forward, mainly in the case of certain market services (such as restaurant and holiday services). Following that, since September, strengthening disinflationary effects were observed: inflation in October was already at the 3-percent central bank target, before stagnating at 2.7 percent starting from November.

Inflation developments in 2021 will also be influenced by changes in consumer habits in view of the pandemic. For the Central Statistical Office, the pandemic resulted in changes in the calculation of the 2021 consumer price index weights compared to the previous practice. Normally, the composition of the current consumer basket reflects the consumption structure observed two years earlier. However, in determining the weights for this year, in addition to taking into account the 2019 consumption data, following the recommendation of Eurostat's international practice, the HCSO applied adjustments in the case of products and services where the pandemic had major impacts. In line with the changed consumer habits, the weight of food and industrial goods increased significantly in the 2021 consumer price index, while the weight of market services, fuels and regulated-price products declined considerably. Within market services, the weight of services related to restaurants and catering declined only slightly, while the largest decrease was observed in the case of holiday services.

Due to the measures introduced in order to contain the pandemic, economic operations are not starting as usual this year. As a result, the pattern that was once typical of the beginning of the year may be changed by the reopening of the economy in such a way that companies may adjust their usual repricing to reopening and the lifting of restrictions in 2021. Compared to the previous month, prices of market services rose 0.8 percentage point in January. The monthly price dynamics were higher than the average of previous years, which was caused by the rise in the prices of mobile phone and Internet services. Apart from that, the price changes of services would have been lower than last year but in line with the historical average, as was also observed in the data for February (Chart 3-45).

Chart 3-45: Monthly price change of market services

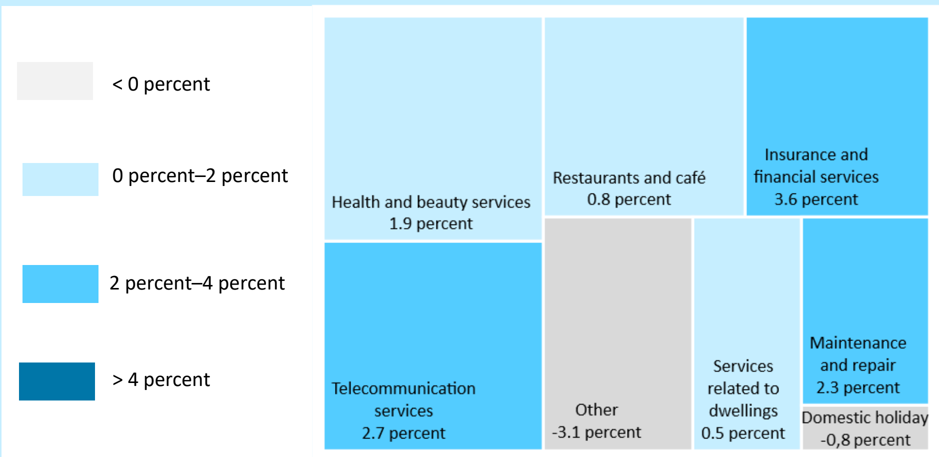


Note: Seasonally unadjusted monthly changes excluding indirect tax effects.
Source: MNB calculation based on HCSO data

The price changes of market services depend on several factors: the evolution of costs, the profitability of businesses and the cyclical position of the economy. The importance of these factors was significantly amplified by the pandemic, as companies had to deviate from the usual economic operations. The measures that were implemented mainly affected restaurant and holiday services. As a result of these measures, the availability of catering services became limited (lockdowns and change-over to take-away services), while domestic holiday services practically ceased to exist from mid-November 2020. Restaurant services are especially important as their weight exceeds 15 percent within market services, and they also play an important role in the repricing of this product group at the beginning of the year.

Overall, market services inflation fell significantly in the past months, reaching 3.7 percent on average. Looking at the details of repricing at the beginning of the year, it can be established that price increases were subdued in a wide range of services. The highest repricing was seen in the case of insurance and financial services (3.6 percent), which is attributable to the fact that the insurance premium of the majority of the compulsory motor third-party liability insurances changes at the beginning of the year when they reach their insurance anniversary (Chart 3-46).

Chart 3-46: Inflation of different market services in February 2021



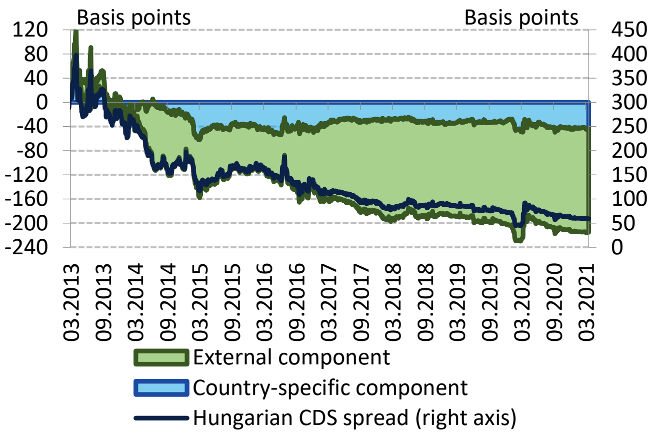
Note: Price change excluding indirect tax effects. The size of the rectangles denote the weight of the specified service within the main product group. The colour of the rectangles denote the magnitude of the price change: grey indicates a decrease in prices, whereas darker shades of blue indicates higher price increases.
Source: MNB calculation based on HCSO data

4 Financial markets and interest rates

4.1 Domestic financial market developments

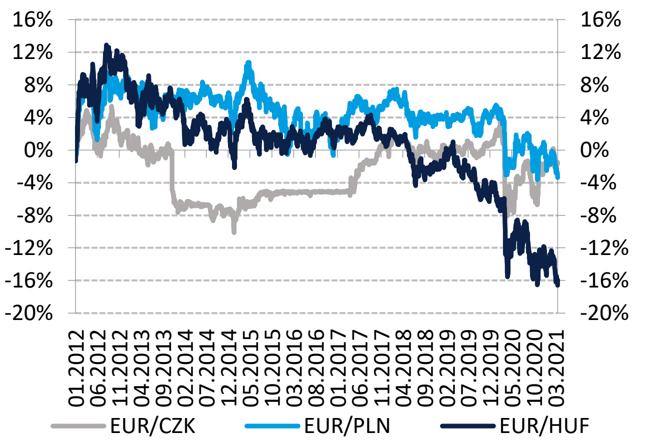
At the beginning of the period, global investor sentiment was improved by favourable news related to the vaccines and the fact that the composition of the US Senate became final, but at the same time it was impaired by uncertainty about US fiscal stimulus and the surge in developed market yields at end-January and end-February. The VIX index temporarily increased from the level of 22 percent observed at the beginning of the period to 37 percent and 29 percent at end-January and end-February, respectively, before falling to 21.6 percent by the end of the period. Developed stock market indices and most emerging ones rose during the period. Developed market bond yields increased significantly due to fears of reflation. Despite the changing international sentiment, the Hungarian credit risk spread fluctuated within a narrow band, declining by 2 basis points on the whole. Government securities yields in the region also rose as a result of the yield increase in developed markets, but country-specific factors also played a role in the nearly 60-basis point rise in the domestic 10-year yield. The interbank yield curve also shifted upwards. The forint moved closely together with the Polish zloty during the period under review. Both weakened until end-December and then subsequently strengthened but depreciated again by the end of the period. Thus, on the whole – with the exception of the Czech koruna – the currencies of the region weakened against the euro.

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 the changing international investor sentiment, Hungary's credit risk spread fluctuated within a narrow band in the past quarter and declined by the end of the period (Chart 4-1). The 5-year CDS spread declined by 2 basis points during the period, with a contribution from the international factor. Thus, the CDS spread is currently around 59 basis points.

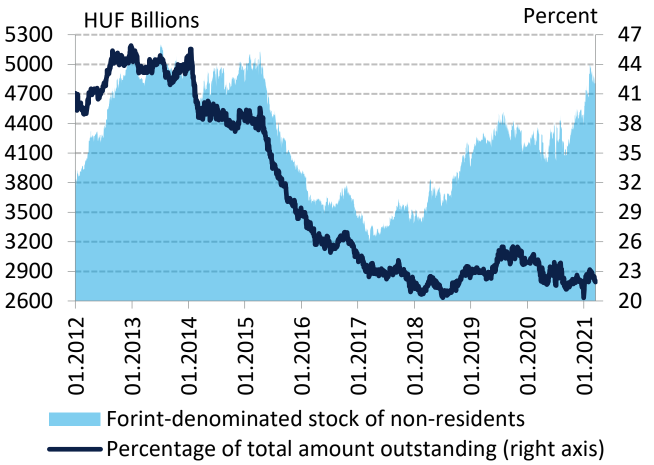
4.1.2. Developments in foreign exchange markets

Compared to the currencies in the region, the forint depreciated to a slightly greater degree, i.e. by 4.8 percent, against the euro. Within the region, the Polish zloty moved closely together with the forint, and weakened by 4.4 percent during the period, while the Czech koruna appreciated by 0.7 percent (Chart 4-2). Until end-December, the forint and the zloty weakened by 3–3.5 percent, while the Czech koruna remained practically unchanged against the euro. Following that, the currencies in the region strengthened in parallel with the improving international sentiment, before weakening again in the second half of the period and depreciating on the whole during the quarter – except for the Czech koruna. The forint depreciated by 6 percent against the US dollar, while of the currencies in the region the weakening of the zloty was similar (6.3 percent). The Czech koruna, however, weakened to a lesser degree, by 1 percent.

4.1.3. Government securities market and changes in yields

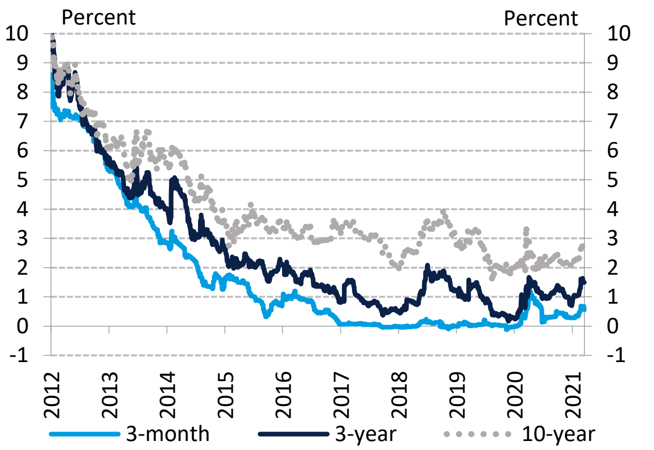
The HUF-denominated government securities holdings of non-residents expanded in the last quarter (Chart 4-3).

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



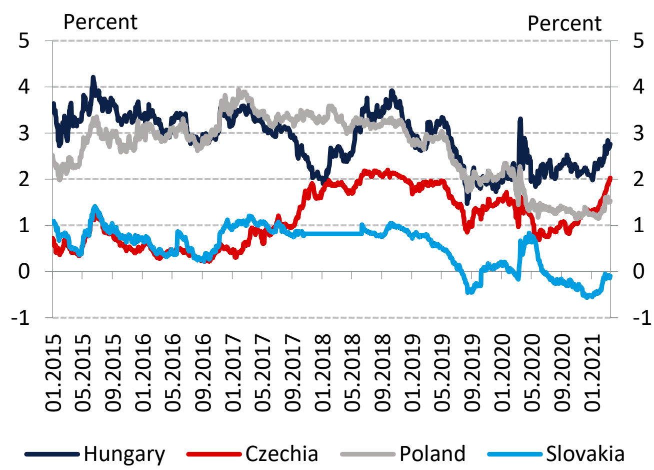
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

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

Following a rise in early 2020, non-residents' forint government securities holdings decreased strongly starting from mid-March of last year. From May, however, they tended to increase, and in the past three months they rose by another HUF 247 billion. The ownership share within HUF-denominated government securities decreased slightly, reaching roughly 21.9 percent.

In some cases, the ÁKK accepted offers below the announced amount at its discount treasury bill auctions, but for the announced or higher quantities at the government bond auctions. Average auction yields rose at all maturities in the past quarter. The average yield increased by nearly 20 basis points at the 3-month discount treasury bill auction and to a greater degree, i.e. by around 55 basis points at the 10-year auction, and thus the average auction yields were at 0.59 percent and 2.75 percent, respectively, at the end of the period.

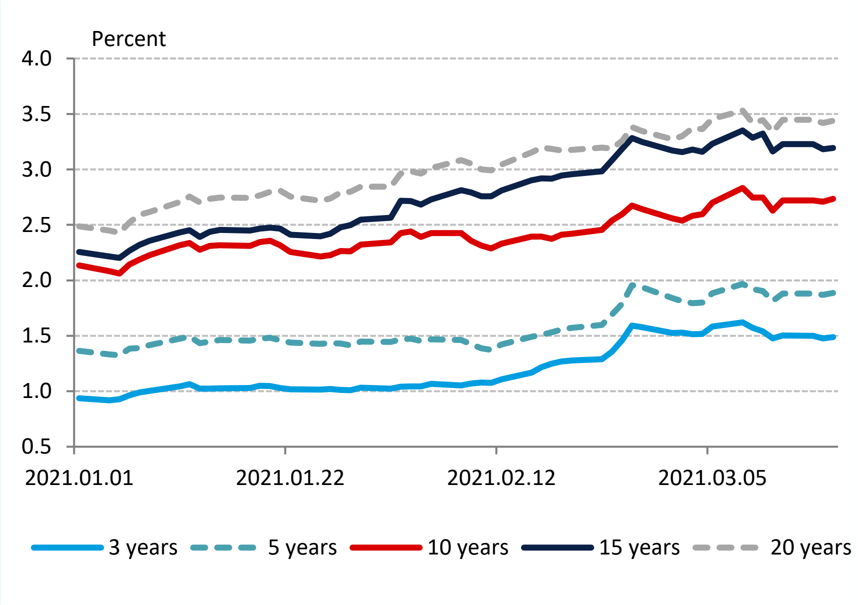
Yields increased along the entire government securities market yield curve (Chart 4-4). Yields already rose slightly starting from early January on the short end, with a stronger increase seen from the second half of February. The increase was stronger on the middle section at the beginning of January, followed only by slight movement until mid-February and finally by a major rise in yields. At longer maturities, the decline in yields that had started in December continued in early January. Following that, however, long-term yields showed a stronger rise, and thus, on the whole, the long end of the yield curve shifted 45 basis points upwards (for details, see Box 4-1). The 10-year benchmark yield rose by a total of 58 basis points during the period, which was also attributable to the changing of the benchmark in mid-January. Of the interbank yields, the 3-month BUBOR rose only moderately, moving 2 basis points higher to 77 basis points.

Long-term reference yields in the region increased during the period (Chart 4-5). The 10-year forint yield increased by nearly 60 basis points. At the same time, Czech, Polish and Slovak long-term yields rose by 70, 15 and 45 basis points, respectively.

Box 4-1: Changes in long-term HUF-denominated government bond yields this year

In line with international trends, government bond yields have been rising since the start of the year. Nevertheless, the degree and background of the increases varied, depending on maturity and the given government securities market series. While increases of 50–60 basis points were observed for shorter maturities (3–10 years), 90–100 basis point rises were seen for longer ones (15–20 years). The yield on the 5-year domestic government security rose to 1.89 percent from a level of 1.37 percent observed early in the year. Yields on 10-year securities rose to above 2.7 percent, while yields on 15-year and 20-year bonds advanced to over 3 percent. The longer end of the yield curve rose more strongly in recent weeks (Chart 4-6).

Chart 4-6: Shift in Hungarian government securities market yields



Source: Bloomberg

The primary reason for the rise in yields in Hungary was the increase in developed yields, which is mainly attributable to global reflation trends. Inflation expectations have recently risen in the developed economies, while the leading central banks have maintained a low-key attitude for the time being. The Fed is communicating toleration for inflation higher than before, while the Reserve Bank of Australia increased the amount of securities purchased. In the case of market participants, this may result in a further increase in inflation expectations as well as in inflation-related uncertainty. Both factors raise the risk premium component of long-term yields. This was also reflected in the rise in the yield spread of US fixed-rate and inflation-indexed bonds.

At the same time, domestic yields not only followed the rise in developed and regional yields, but even exceeded their growth in the case of some maturities, i.e. the increase was attributable to country-specific factors as well. Spreads in Hungary have increased significantly in the over-10-year segment and to a lesser degree at shorter maturities since the beginning of the year. In the case of the 15-year maturity, the spreads over the Polish and German yields were up by 50 basis points, while Czech spreads grew by 21 basis points. At the 10-year maturity, compared to the Polish and German yields, spreads increased by 17 and 28 basis points, respectively, while the Romanian spread rose by 36 basis points. However, at the 10-year maturity, the spreads compared to the Czech and US yields declined by 14 and 21 basis points, respectively. Spreads also rose in some cases for the 5-year maturity, to the greatest degree compared to the German and Romanian yields (Table 4-1).

Table 4-1: Changes in domestic zero-coupon yield spreads

	5 years				10 years				15 years			
	01.01.	25.02.	16.03.	change	01.01.	25.02.	16.03.	change	01.01.	25.02.	16.03.	change
Poland	82	114	99	16	85	97	102	17	70	121	121	51
Czech Republic	53	70	30	-23	82	93	68	-14	82	139	104	21
Romania	-135	-78	-83	52	-103	-97	-68	36	-130	-109	-86	44
USA	97	110	95	-2	114	102	93	-21	96	110	95	-1
Germany	208	247	245	37	264	280	292	28	265	314	314	50

Source: Bloomberg

At the same time, Hungary's risk assessment remained stable, and thus it did not result in any increase in yield spreads. Hungarian CDS spreads continue to be stable, and the spreads on Hungarian FX bonds also tended to decrease, suggesting that the risk assessment of Hungarian sovereign debt has not changed. Moreover, macroeconomic forecasts for this year paint a favourable picture of Hungary, and according to Bloomberg's analyst consensus, Hungarian GDP growth may be the highest in the region, while the expected deficit corresponds to the regional average. In addition, the forecasts of S&P and Fitch published on 12 February also projected a rapid economic recovery and growth of 4.6 and 4.9 percent, respectively, for this year.

At the same time, however, the Debt Management Agency has issued a significant amount of bonds since the beginning of the year. Of its gross bond issuance of some HUF 3,000 billion planned for this year, the ÁKK has already issued more than HUF 1,200 billion to date. This means that around 40 percent of the planned bond issue took place in two and a half months. In addition, continuing the prolongation strategy that was launched last year, some 40 percent of the issuances concentrated on the over-10 segment, which is advantageous in terms of extending the maturity of the government debt, but may have resulted in temporary supply pressure on the longest section of the curve. This oversupply may be adjusted in the remaining part of the year, which may result in a decline in yields.

The outstanding amount of the series is lower, and the investor structure is more concentrated in the domestic long-term segment. Of the over-10-year series, the 33/A, 34/A and 41/A series have not been included in the main emerging market bond indices (although this is expected to happen soon, as 33/A has already reached the series size of USD 1 billion). Firstly, this reduces the demand for the series, and secondly, the liquidity of the security may be less favourable due to the lower holdings. The ownership structure is also concentrated in the case of these securities. The central bank and the rest of the world together own some 60–80 percent, while the holdings of domestic sectors are low.

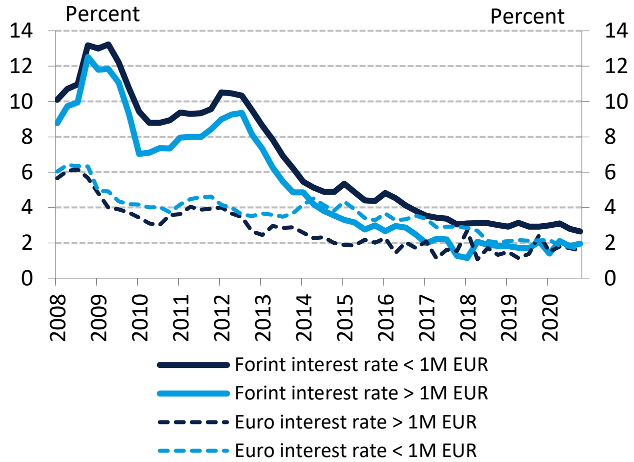
It may have weakened the demand side that – in view of the faster rise in interbank yields – the spreads compared to rates on interest rate swaps declined, making the purchasing of secured government securities less attractive in the case of maturities below 15 years. Spreads on government securities yields compared to interbank yields declined gradually for maturities below 10 years, while they first increased in the longest segment before decreasing in recent weeks. In mid-February, the spread over interbank yields became negative for maturities of around 5 years, which may have resulted in a sharp fall in market participants' demand for government securities in this segment. In addition, another demand factor is that the liquidity provided through the MNB's collateralised credit facility also declined during the past weeks, which may have reduced demand for government securities at the 5-year maturity. It may also have contributed to the growth seen in the 5-year yield that the largest increase in US yield also occurred in this segment, and according to our analysis, developments in the Hungarian market are sensitive to this.

According to the decision of the Monetary Council of 9 March, the purchase of government securities by the Magyar Nemzeti Bank may exceed the 50-percent share in individual series, if warranted by the stability and liquidity situation of the government securities market. In its statement, the MC indicated that its decision did not affect the weekly amounts of purchases, only the structure of such purchases. After the decision, Hungarian government bond yields and spreads declined.

4.2 Credit conditions of the financial intermediary system

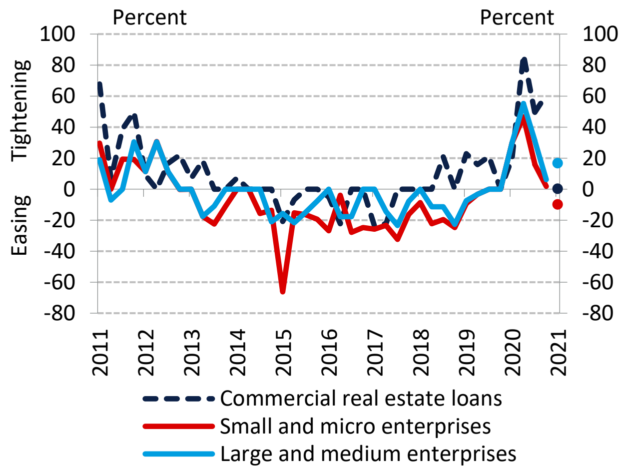
Apart from the tightening conditions on commercial real estate loans due to sector-specific reasons, there were no major changes in corporate credit conditions in Q4, whereas looking ahead to 2021 H1, banks foresaw limited tightening. There were no changes in conditions on housing loans at the end of 2020, while conditions on consumer loans, which also remained unchanged in Q4, may be eased by many banks in H1. The average cost of funds for corporate euro loans and low-amount forint loans decreased in the period under review, as did the average APR on long-term fixed-rate housing loans. 71 percent 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 remained practically unchanged during the quarter, which is explained by the simultaneous decline in inflation expectations and interest rates.

Chart 4-7: 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 4-8: 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

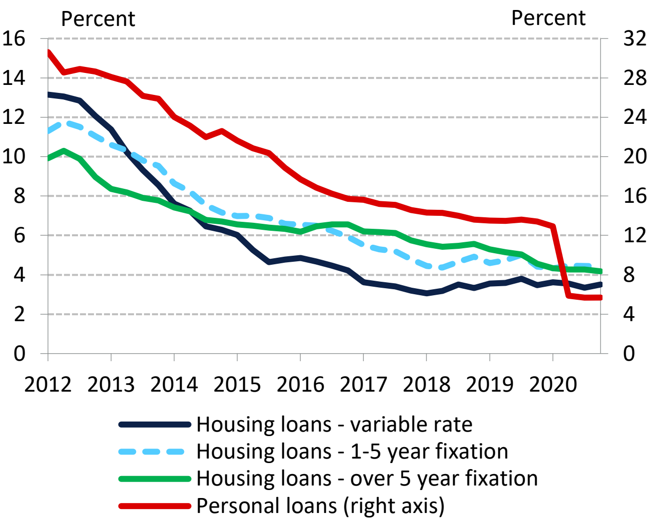
The costs of funds for corporate forint and euro loans remained practically unchanged in 2020 Q4. The smoothed average interest rate level on new corporate HUF loans – excluding money market transactions – declined by 15 basis points in the case of low-amount loans, while an increase of 15 basis points was observed in the case of high-amount loans compared to the previous quarter (Chart 4-8). As a result, the average interest rate on forint loans was 2.2 percent in December. During the quarter, the interest rate level on low- and high-amount euro loans also declined slightly, by 17 and 13 basis points, respectively, and thus the average cost of funds for euro loans stood at 1.6 percent at the end of December. The rise in high-amount forint interest rates is primarily attributable to the increase in the 3-month BUBOR, whereas the decline in low-amount forint interest rates and euro rates was mainly caused by a decrease in interest rate spreads.

Lending conditions on commercial real estate loans tightened during the quarter. In net terms, 6 percent of the banks participating in the Lending Survey tightened the conditions of access to loans during the quarter, and looking ahead to the next half year 17 percent in net terms plan further tightening of conditions. At the same time, in net terms, 61 percent of the responding credit institutions tightened conditions on commercial real estate loans due to the uncertainty about various segments of the commercial real estate market. However, looking ahead to 2021 H1, conditions on commercial real estate lending may remain unchanged based on the responses to the Lending Survey (Chart 4-9).

4.2.1. Household credit conditions

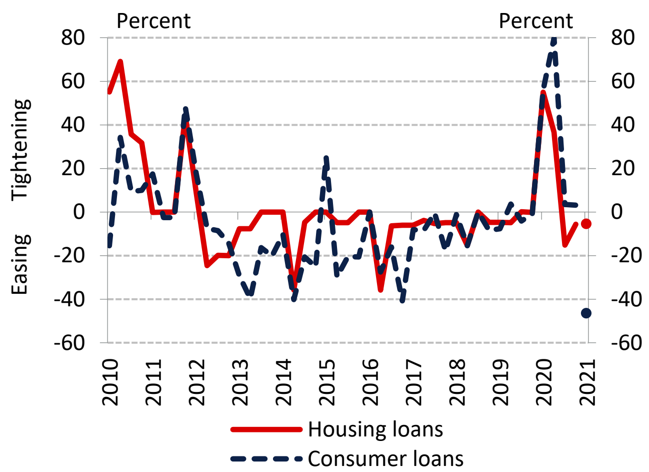
The average APR on housing loans with interest rates fixed for a long term declined during the quarter. The average APR level of housing loan contracts concluded in 2020 Q4 stood at the previous quarter's level of 4.4 percent in the case of loans with 1–5 years of interest rate fixation, while the APR decreased by 9 basis points to

Chart 4-9: Annual percentage rate of charge on new household loans



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

Chart 4-10: 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

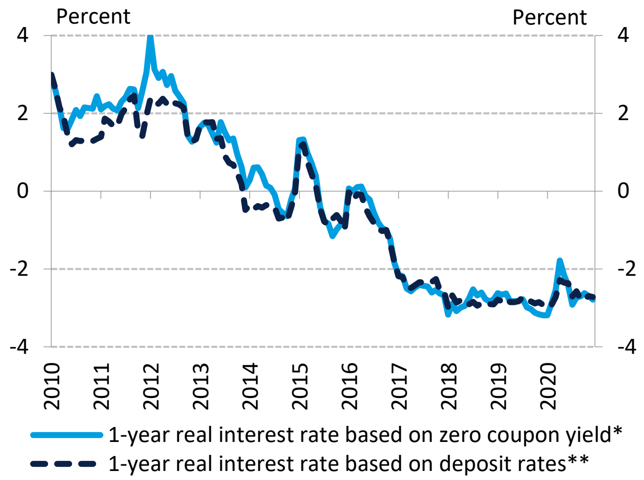
4.2 percent in the case of housing loans with interest rate fixation for more than 5 years (Chart 4-10). In 2020 Q4, the volume of certified consumer-friendly housing loans available with an at least 5-year interest rate period accounted for 71 percent of the quarterly housing loan issuance. In view of the APR limitation concerning unsecured consumer loans, the average APR on personal loans remained at 5.7 percent, but credit institutions may provide consumer loans with market credit costs again from 2021.

Banks left conditions on both housing and consumer loans unchanged during the quarter. According to the responses to the Lending Survey, banks, on the whole, did not change conditions on housing loans in 2020 Q4, although in net terms 36 percent indicated reductions in the spread between the lending rate and the cost of funds. Looking ahead to 2021 H1, they do not plan to change their respective housing loan standards (Chart 4-11). Conditions of access to consumer loans also did not change in Q4, whereas looking ahead to the next half year 47 percent of banks in net terms foresaw easing, which they intend to implement through reductions in the spreads and easing the minimum required credit score. The easing is primarily attributable to housing market developments, related to the family support programmes launched or extended from January 2021.

4.2.2. Changes in real interest rates

The 1-year forward-looking real interest rate remained practically unchanged during the quarter. In 2020 Q4, the real interest rate level reduced by inflation expectations dropped by 8 basis points estimated based on government securities market yields, and increased by 7 basis points estimated based on deposit rates. As a result, in December the former and latter real interest rate levels stood at -2.8 percent and -2.7 percent, respectively (Chart 4-12). The change in quarterly inflation expectations pointed to an increase in the real interest rate level, while the change in benchmark yields pointed to a decline in the real interest rate level.

Chart 4-11: Forward-looking real interest rates



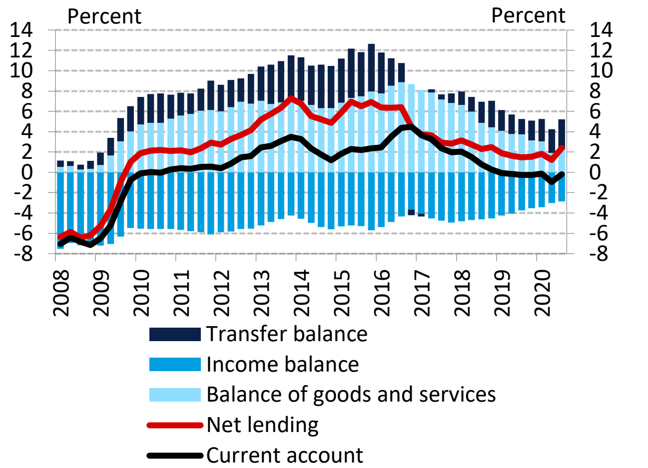
Note: * Based on the 1-year forward-looking inflation expectations of analysts calculated by the MNB using the 1-year zero coupon yield and the Reuters poll. ** Based on the 1-year forward-looking inflation expectations of analysts calculated by the MNB using deposit rates with maturity up to 1 year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

5 Balance position of the economy

5.1 External balance and financing

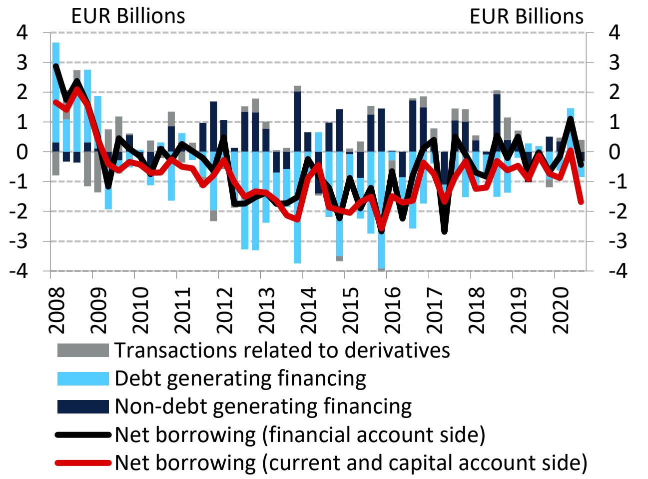
In 2020 Q3, the net lending of the economy rose to 2.4 percent of GDP, while the current account deficit fell to 0.2 percent of GDP. All three factors contributed to the improvement in external balance developments in Q3. The increase in the goods and services balance reflected the rise in export sales as a result of growing industrial production, an improvement in the terms of trade as well as the subdued absorption by domestic actors. The decline in the income account deficit continues to be determined by the decrease in foreign companies' profit, while the transfer balance surplus increased further. According to financing data, net FDI inflows continued, while the net external debt-to-GDP ratio declined. According to preliminary monthly data, the current account balance and the net lending of the economy increased further in Q4.

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

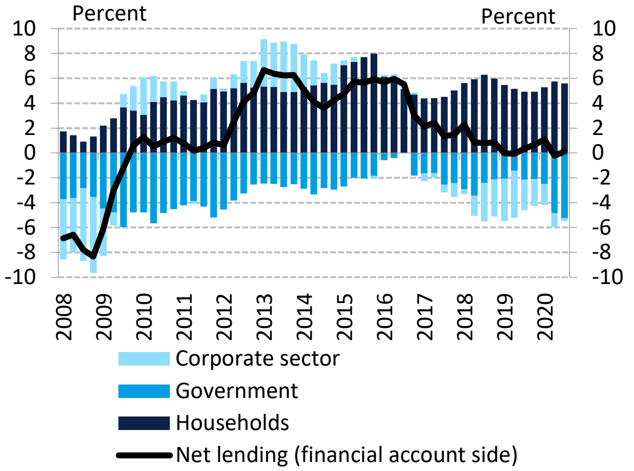
5.1.1. Developments in Hungary's external balance position

The net lending of the economy expanded to 2.4 percent of GDP in Q3, and the current account balance also improved in parallel with this (Chart 5-1). The impacts of the pandemic on external balance indicators moderated in Q3, resulting in improvements in both the current account balance and net lending. The increase in the trade balance –seen for the first time since 2016 – was supported by accelerating exports as well as a decline in domestic demand and an improvement in the terms of trade. The expansion in exports compared to the previous quarter was primarily attributable to the annual rise in the export sales of car factories. The improvement in the terms of trade in line with the decline in energy prices continues to provide significant support to the trade surplus. The lower profit of foreign-owned companies was reflected in a smaller income balance deficit, while the transfer balance also continued to increase in Q3. According to preliminary, monthly data available for the last quarter of the year, the current account balance increased further. The rise in the goods and services balance was the main contributor to the improvement in the balance, but it was also supported by an improvement in the income account. As the transfer balance surplus declined, the expansion in net lending fell short of that seen in the current account.

5.1.2. Developments in financing

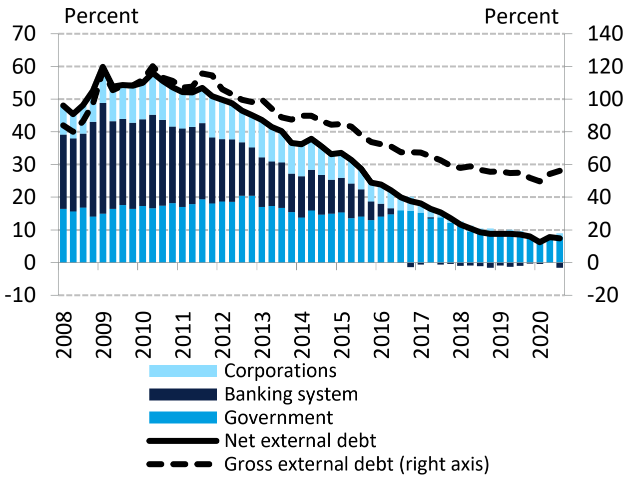
Net FDI inflows increased further in 2020 Q3, while debt liabilities and portfolio equity liabilities declined (Chart 5-2). The value of net foreign direct investments rose primarily as a result of reinvested earnings. Its impact, however, was offset by residents' continued foreign equity purchases, resulting, on the whole, in outflows of non-debt liabilities. Sectoral developments in debt liabilities were significantly affected by the FX liquidity provided – temporarily – by the central bank to the banking sector at the end of the quarter: it added to the inflow of funds to the

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

consolidated general government, while entailing an increase in the outflow of funds from the banking sector (banks' net external debt declined by EUR 2.4 billion during the quarter). The liabilities of the consolidated general government rose by EUR 1.4 billion, with the provision of foreign exchange liquidity and non-residents' purchases of HUF-denominated government securities as contributing factors. Corporations' net external debt increased slightly, while foreign assets declined. According to preliminary data, debt liabilities expanded in Q4, explained partly by a continued decline in corporate assets and partly by a further increase in HUF-denominated government securities purchases by non-residents.

According to the sectors' savings developments, the increase in net lending was attributable to the fact that the improving position of the private sector was only partly offset by the growing net borrowing of the government (Chart 5-3). The pandemic situation affected the savings developments as well: in parallel with a slowdown in consumption, households' net financial savings expanded considerably, while corporate net borrowing declined as a result of the 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 Q4: government net borrowing increased further, while the net financial savings of the private sector – mainly of households – continued to expand.

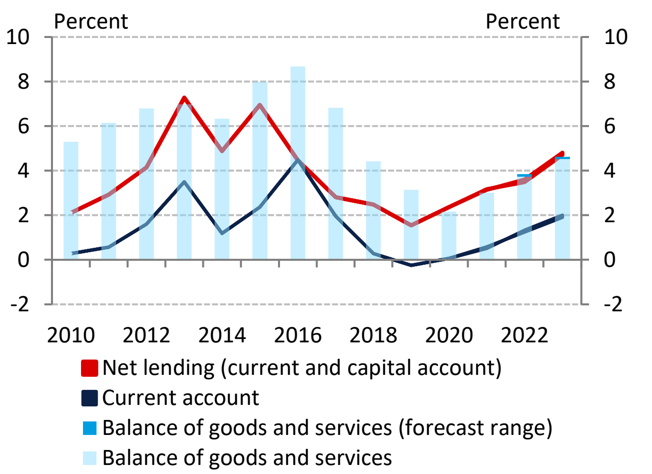
At end-September 2020, net external debt declined to close to 7 percent of GDP (Chart 5-4). Following a rise in the indicator in Q2, net external debt decreased in line with the outflow of debt liabilities. As opposed to the increase in the previous quarter, the impact of transactions was not offset by developments in nominal GDP or by revaluation. The increase in gross external debt was partly attributable to the FX bond issuance during the quarter as well as to the FX liquidity provided to banks at the end of the quarter, for the financing of which the central bank may also use its framework agreements with international organisations.

5.2 Forecast for Hungary's net lending position

The current account balance turned into surplus in 2020, while net lending of the economy was around 2 percent of GDP. Starting from 2021, the trade surplus may increase in accordance with the rise in external demand (which is in line with the gradual easing of the effects of the pandemic), the decline in import-increasing procurements (related to the pandemic) and the growth in industrial production. The income account deficit may slightly increase, which is attributable to the improvement in corporate profitability in line with economic growth, although its impact is partly offset by a further decrease in the interest balance. Overall, the current account surplus grows gradually over the forecast horizon, reaching 2 percent of GDP by 2023. Against the background of an increasing absorption of EU transfers, the net lending of the economy will be close to 5 percent of GDP by 2023. Looking at the position according to the savings of sectors, the general government deficit gradually declines, with the end of the one-off expenditures related to the pandemic and the rise in tax revenues. In line with the weakening effects of the pandemic, households' net financial savings, which surged in 2020, will decline gradually over the forecast horizon, but will remain high, while the net lending of companies will gradually decrease with the acceleration of investment dynamics.

The current account turned into surplus in 2020. As a result of the improvement, which will last over the forecast horizon as well, the surplus will reach 2 percent of GDP in 2023 (Chart 5-5). The trade balance as well as favourable developments in the absorption of current transfers resulted in a better-than-expected current account surplus in 2020 (for more details, see Box 5-1). There will be a significant rise in the trade balance over the forecast horizon, most of which is observed in 2021: firstly, import-increasing expenditures related to the pandemic will decline significantly; secondly, growth in Hungary's export markets will result in a further improvement in the trade balance, also supported by the expected recovery of tourism in the second half of the forecast period. End-2020 data for industrial production, which already exceeded the previous year's figures, also point to improving net exports. In spite of the continued modest decline in interest expenditures, foreign companies' profits will increase with the recovery of corporate profitability, resulting in a higher income account deficit. Accordingly, the current account surplus will grow steadily over the forecast horizon and may reach 2 percent of GDP in 2023. In parallel with the dynamics of the current account, the net lending of the economy may also increase and will be higher than the current account mainly as a result of the absorption of EU transfers (partly originating from the NextGenEU funds). The surplus will rise to nearly 5 percent of GDP in 2023.

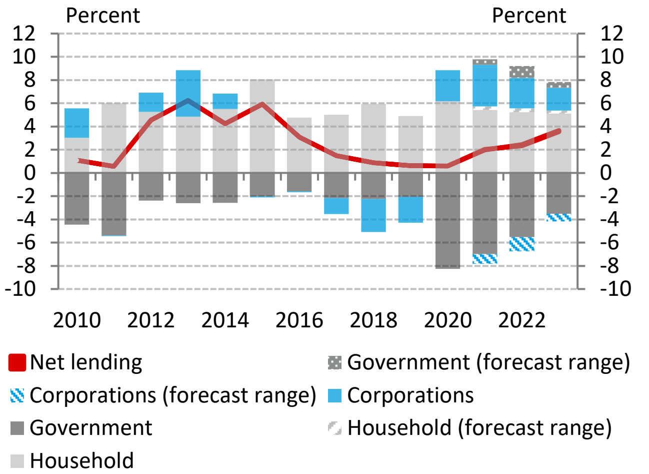
Chart 5-5: Evolution of net lending



Note: As a percentage of GDP.
Source: MNB

The uncertainty in the forecast for external balance indicators is depicted by the band between the two scenarios. Domestic absorption, which shows a faster rise along the higher growth path, will result in higher imports, and with the more dynamic recovery of corporate profitability, foreign companies' profits will lead to faster growth and thus to a higher income account deficit. In spite

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

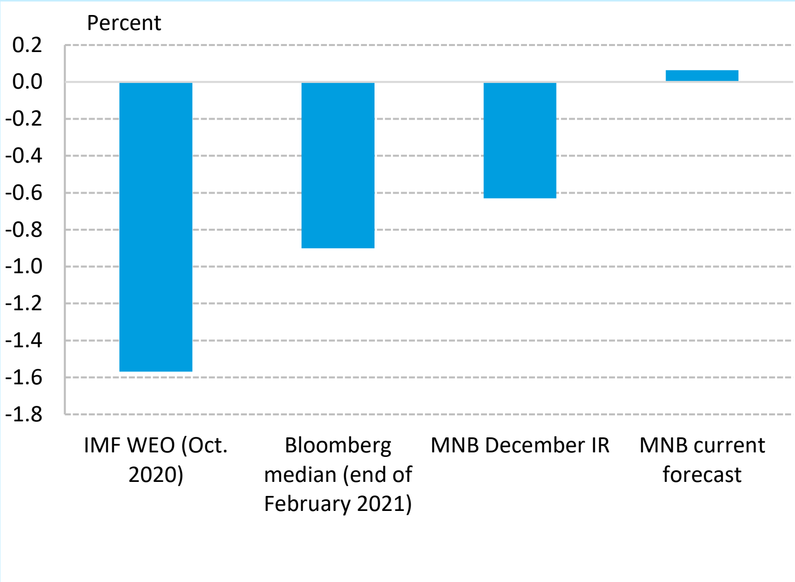
of the above effects, net lending is expected to increase in both scenarios over the forecast horizon.

Based on the savings of sectors, in parallel with a gradual decline in the general government deficit, the net lending of the private sector will weaken slightly over the forecast horizon (Chart 5-6). The budget deficit, which increased as a result of the costs of the containment measures and the fall in tax revenues in 2020, gradually declines over the forecast horizon from 2021. This is attributable to the fact that revenues grow in the more favourable environment stemming from cyclical developments, and the lower expenditures also result in a decline in the deficit compared to 2020. The net financial savings of households, which surged in 2020, may fall slightly as a result of the rise in consumption in line with the weakening effects of the pandemic and the easing of restrictions, although they will still remain high. Companies became net savers in 2020 due to the standstill in investment activity. Starting from 2021, the net position of the corporate sector declines due to the rise in investment in line with the improving profitability and – similarly to the developments in the household sector – with an increase in investment activity as well as the recovery in the economic environment.

Box 5-1: The 2020 current account balance is more favourable than expected

Hungary's current account balance showed a surplus in 2020, which is much more favourable compared to forecasts. Following the slight deficit in 2019, projections for the current account tended to foresee deterioration in the balance for 2020 as a result of the crisis (Chart 5-7). This was attributable to the fact that exports in H1 declined considerably as a result of a downturn in external demand and the shutdown in the tourism sector, while imports decelerated only slightly. The latter was attributable to the one-off import increasing effects of procurements for the health sector related to treating COVID-19. Approaching the second half of the year, however, as a result of the decline in domestic consumption due to the lockdowns and the year-on-year expansion in exports in 2020 Q4 in parallel with the rebound in industrial production, the exports-to-imports ratio turned positive. Accordingly, in our present forecast the current account balance increased compared to the 2019 level and has turned into a surplus.

Chart 5-7: Previous expectations concerning Hungary's 2020 current account balance



Source: MNB, Bloomberg, IMF

Looking ahead, the current account is expected to improve further, and the surplus may be close to 1 percent of GDP in 2021, rising to 2 percent of GDP by the end of the forecast period. Favourable industrial production and external demand data as well as the correction in the tourism sector, which is expected to gradually reopen in line with increasing vaccine coverage, and also the newly installed capacities attributable, *inter alia*, to FDI inflows, contribute to the further rise in net exports. In line with this, the current account may already show a surplus in the short run and expand to 2 percent of GDP by 2023. In view of the increase in the current account and the surplus of the capital account (partly of the recovery fund), the net lending of the economy may also increase.

Net lending in line with the new industrial capacities resulting from FDI inflows and the upturn in production with the absorption of EU funds entails a further decline in net external debt. FDI inflows continue to support the expansion in domestic industrial production capacities. In terms of announcing new investment projects, the trend was not interrupted in 2020. Many new projects were announced during the year, including, *inter alia*, projects (e.g. SK Innovation, Samsung, GS Yuasa) that may create in Hungary one of the regional centres for the manufacturing of batteries, which are indispensable parts in electric vehicles, and thus also support the revival of the domestic automotive industry and exports. In addition, the financing of investment that supports the domestic economic environment is also backed by EU funds, whose amount may increase in the coming years, partly as a result of the utilisation of recovery funds. Accordingly, the decline in net external debt may continue in the coming years as well.

5.3 Fiscal developments

According to preliminary financial account data, as a result of the measures to contain the coronavirus pandemic and of the Economy Protection Action Plan as well as declining tax revenues, the budget deficit rose to 8 percent of GDP in 2020. The effect of measures taken in the past period (reduction of the local business tax for small and medium-sized enterprises, extension and expansion of the sectoral wage subsidy, PIT exemption of people under the age of 25) is only partly offset by the growth forecast, which is more favourable compared to previous expectations, and thus the deficit may decline more slowly than previously anticipated, falling to 3 percent again at the end of the forecast period. According to our forecast, the budget deficit may be between 6.5–7 percent of GDP in 2021, while our technical forecast indicates a gradually declining deficit path for 2022–2023, supported by rising tax revenues stemming from favourable macroeconomic developments and by a decrease in government expenditures as a proportion of GDP. In view of the high budget deficit and the slowdown in economic growth, the government debt-to-GDP ratio temporarily rose to 80.6 percent in 2020, but according to our forecast the government debt will return to a downward path again from 2021.

5.3.1. Main balance indicators

According to preliminary financial account data, the government sector's accrual-based deficit as a percentage of GDP amounted to 8 percent in 2020, while our forecast suggests that it will be 6.5–7 percent in 2021 (Table 5-1). The high deficit in 2020 is the result of the deceleration in the economy, the costs of the containment measures as well as the measures of the Economy Protection Action Plan. The economic slowdown reduced planned tax revenues, while fiscal measures provided the economy with significant additional funding, thereby stimulating the decelerating growth and resulting in countercyclical fiscal policy. Preliminary deficit data for 2020 are considered average in a regional and international comparison. According to the European Commission's most recent estimate, the deficit amounted to 8.4 percent on average for the European Union and 8.2 percent for the countries of the region in 2020.

Table 5-1: General government balance indicators

	2020	2021	2022	2023
ESA balance	-8.0	(-7.0) - (-6.5)	(-5.0) - (-4.5)	(-3.5) - (-3.0)
Primary ESA balance (point estimate)	-5.7	-4.5	-2.6	-1.1
Fiscal impulse (point estimate)*	5.1	0.0	-2.2	-1.8

Note: As a percentage of GDP. The 2020 ESA balance shows the net financing need of the general government from the preliminary financial accounts. The preliminary data on the ESA balance of the general government will be published by the HCSO in early April within the framework of the EDP notification, which may differ from the net financing need from the financial accounts. 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

The budget deficit is expected to reach 6.5–7 percent of GDP in 2021. In view of the third wave of the pandemic and the government measures of the past period (reduction of the local business tax for small and medium-sized enterprises, expansion of sectoral wage subsidies, one-off government decisions affecting expenditures), the decline in the deficit may be slower in 2021 compared to our projection in the December Inflation Report. 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 European Commission, the average budget deficit of the member states will decline to 6.1 percent in 2021, i.e. the deficit in most member states may exceed the 3 percent Maastricht deficit criterion in 2021 as well. The general escape clause that partially suspended the EU fiscal rules in 2020 may remain in effect until 2022 on the basis of the Commission's recommendation, and thus, in all likelihood, even in 2022 it will not be necessary to comply with the EU's 3 percent rule.

5.3.2. Budget balance in 2020

According to preliminary financial account data, the accrual-based budget deficit amounted to 8 percent of GDP in 2020 (Chart 5-8). In Q4, the size of the accrual-based deficit corresponded to 15.6 percent of GDP. Following a major drop in H1, tax and contribution revenues gradually increased, but stabilised at lower levels compared to previous dynamics (Chart 5-9). The measures addressing the medical and economic effects of the pandemic with direct budgetary effects amounted to some 12 percent of GDP. The budget covered about one third of these measures with reallocations, the spending of reserves, increases in taxes (retail tax, contributions by financial organisations) and the reallocation of EU funds. According to our calculations, the net balance effect of the measures may amount to about 8.3 percent of GDP (Table 5-2).

5.3.3. Budget balance in 2021

The accrual-based 2021 budget deficit reaches 6.5–7 percent of GDP, in line with the fiscal plans disclosed in December. The increase in the budget deficit compared to previous expectations is primarily attributable to the government measures aiming at economic recovery. The temporary reduction of the local business tax rate for small and medium-sized enterprises increases these businesses' disposable income by 0.3 percent of GDP in 2021.

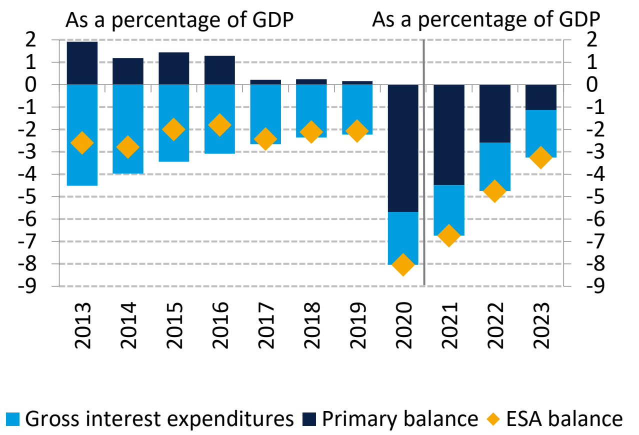
In order to offset the measures introduced to contain the third wave of the pandemic, the scope of sectors entitled to receive sectoral wage subsidies was expanded to the sectors affected by the latest restrictions, and the eligibility period was extended. Companies operating in the accommodation and food service activities sectors can apply for the sectoral wage subsidy since November 2020.

In the more favourable economic environment, higher revenues resulting from the cyclical developments and lower expenditures both result in a decline in the deficit compared to 2020.

5.3.4. Balances in 2022 and 2023

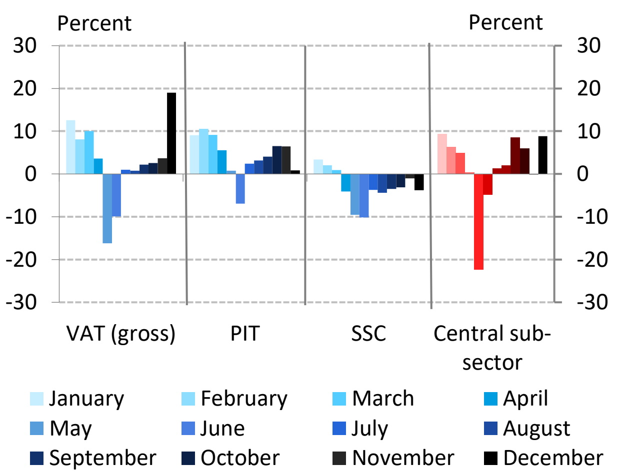
In the absence of statutory appropriations, technical forecasts were prepared for 2022 and 2023, which indicate a gradually declining deficit path. The increase in tax revenues as a result of favourable macroeconomic developments and the decrease in government expenditures (investment, intermediate consumption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

Chart 5-8: 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

Chart 5-9: Year-on-year change in some important tax revenues and total revenue of the central sub-sector in 2020



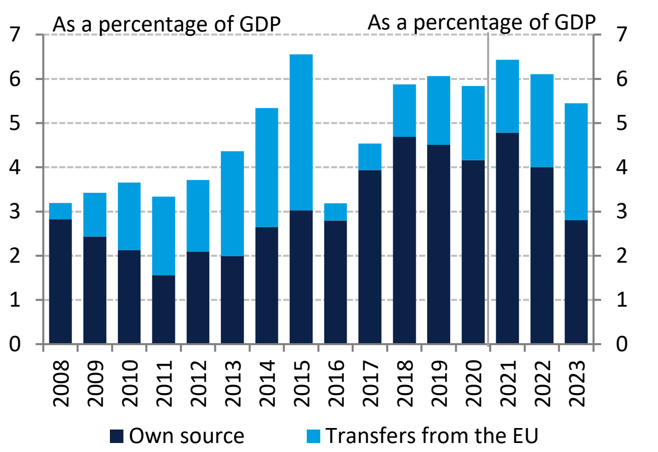
Source: Hungarian State Treasury

Table 5-2: Budgetary implications of government measures in 2020 (as a percentage of GDP)

Measures with budgetary implications	**12.1**
1. Tax cuts and family support measures	0.9
2. Job protection	0.6
3. Economy protection programmes	8.5
4. Expenditure on disease control	2.2
Fundraising measures	**3.8**
1. Revenue-raising measures	0.3
2. Budgetary reallocation	3.0
3. Reallocation of EU funds	0.5
Impact on the budget balance	**-8.3**

Note: The sum of partial data may differ from the aggregated values due to rounding. Cash balance effects, from which the effect on the ESA balance may differ.
Source: Ministry of Finance, MNB

Chart 5-10: Development of government investment



Source: HCSO, MNB

to reducing the general government deficit. From 2022, employees under the age of 25 will be exempted from paying personal income tax up to the degree of the average wage. This measure will leave an amount corresponding to 0.2 percent of GDP with young employees in 2022 and 2023.

5.3.5. Risks surrounding the baseline scenario

The biggest risk is related to the impact of the third wave of the coronavirus pandemic on the economy. A protracted third 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 may increase after 2020 to above 6 percent of GDP in 2021 (Chart 5-10). Government investment is increased by certain expenditures related to the containment of the pandemic as well as by certain one-off investment measures. The actual economic effect may be reduced if – due to capacity constraints – additional investment resources are not utilised in full.

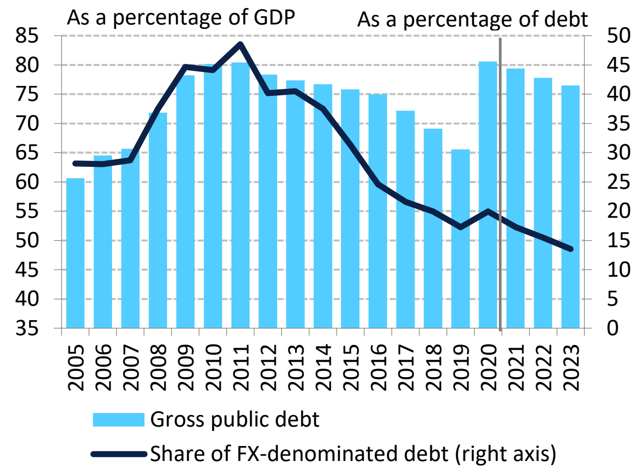
Developments in our forecast involve substantial uncertainties regarding the amount of fund inflows from the European Union. The absorption of transfers affects the accrual-based balance and real economy developments, while the advance subsidies and their receipt influence the changes in government debt.

5.3.6. Expected developments in public debt

According to preliminary data, at end-2020 gross government debt stood at 80.6 percent of GDP. Accordingly, the debt ratio rose by some 15 percentage points compared to its value of 65.5 percent at end-2019. The high budget deficit, the increasing of liquid reserves (STA and FX deposit) as well as revaluation and the deceleration in the growth in nominal GDP contributed to the rise in government debt.

According to our forecast, following a temporary increase, the gross government debt-to-GDP ratio will embark a steadily declining path again in 2021, decreasing below 79.5 percent by end-2021 (Chart 5-11). Government deposits held with the MNB amounted to HUF 2,745 billion at end-2020, and their use in the future may contribute to a further decline in government debt. According to our projection, following last year's temporary rise, the government debt ratio will decline annually by 1-1.5 percentage points on average, and thus by the end of 2023 it may fall to below 77 percent. As a result of last year's FX bond issuances, the share of foreign-currency within central government debt rose to

Chart 5-11: 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

19.9 percent by end-2020, but the persistently negative net FX issuance over the forecast horizon results in a decline in the ratio, which thus may fall to nearly 17 percent this year and below 14 percent by the end of 2023.

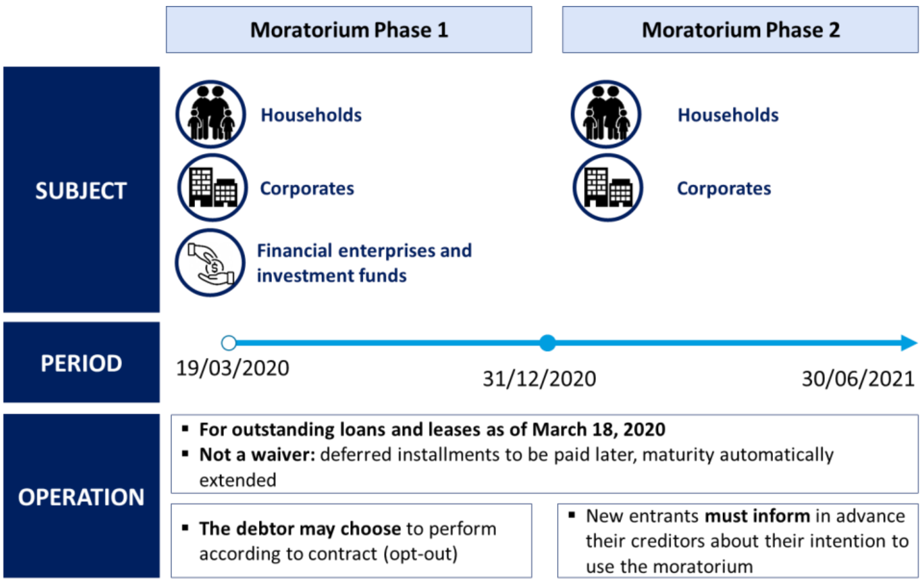
6 Special topics

6.1 Results of the payment moratorium in the household and corporate segments

The payment moratorium in Hungary allows a wide range of debtors to suspend loan repayments over the long term. Based on the Government's decision, which was in line with the MNB's proposal, the repayment obligation of all loan debts disbursed up to 18 March 2020 was automatically suspended until end-2020, without any request, in order to mitigate the negative economic effects of the pandemic. Recourse to the payment moratorium is optional; debtors may, of course, decide to continue repayment of their loans. The interest payments missed because of the moratorium are not cancelled; customers must pay them annually, in equal instalments after the expiry of the moratorium. The instalment to be paid must not increase following the expiry of the moratorium; instead, the residual maturity of the loans will be extended. Deferred interest payments will not be capitalised during or following the moratorium, allowing debtors to bridge possible liquidity difficulties with favourable conditions, by restructuring their debt in this manner.

The protraction of the pandemic and its renewed strengthening seen from September 2020 warranted the introduction of new containment measures (Chart 6-1). In order to offset the potential negative effects of the continuing pandemic on the economy, the Government decided to extend the payment moratorium by 6 months in the case of the household and corporate loans disbursed up to 18 March 2020. According to the Government's decision, in the case of debtors that had taken recourse to the payment moratorium, the payment moratorium will remain in place with unchanged conditions until 30 June 2021, whereas those debtors who are not using the moratorium yet have to inform their creditors about their intention of participation to benefit from the payment moratorium in writing or electronically.

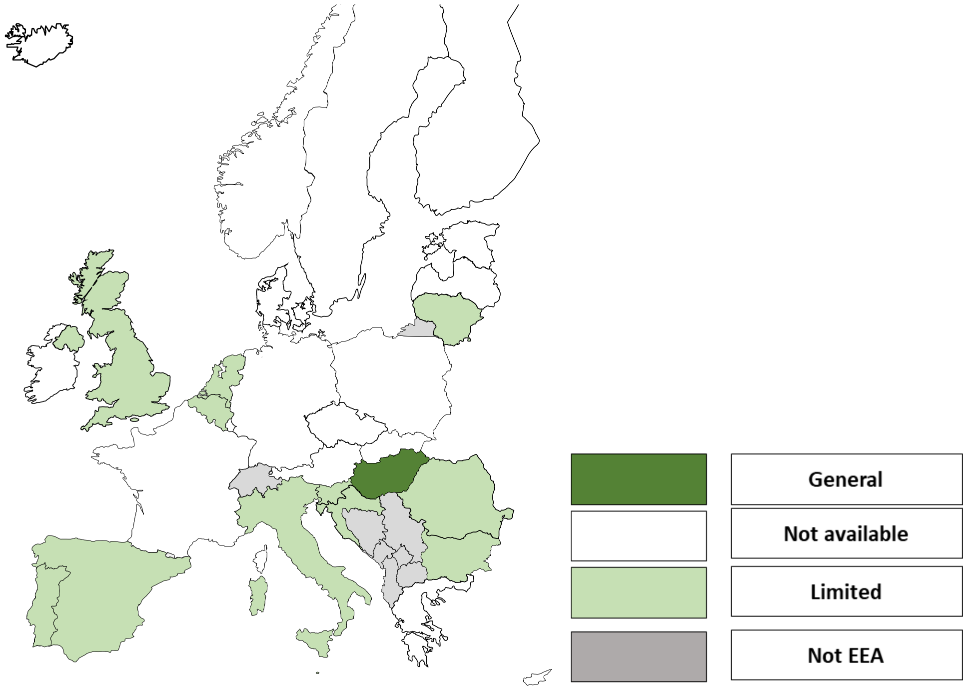
Chart 6-1: Main features of the first and second phases of the payment moratorium



Source: MNB

The moratorium in Hungary is an outstanding crisis management tool even in an international comparison. The introduction of payment moratoria was a generally applied tool in the European Union (Chart 6-2). With the exception of the Scandinavian countries, payment moratoria were introduced almost everywhere. Nevertheless, there are many differences in the details of the measures introduced. In nine countries in the European Union, the practice of payment moratorium was set up as a recommendation of the banking association and not in the form of a legal regulation. Unlike in Hungary, having recourse to it is not automatic in many countries, but tied to application, and it is typical in several cases that the repayment can only be suspended if certain conditions are met (e.g., unemployment, operation or employment in a sector exposed to the pandemic). The length of the moratorium varies on a wide scale: initially, short 3–6-month periods were typical of the northern countries, whereas the usual duration in the countries of the Southern and Central and East European regions, including Hungary, was 6–9 months. As a response to the protracted nature of the pandemic, many countries decided to extend the moratorium, but, unlike in Hungary, typically for a narrower scope of parties (e.g. verified fall in income in the case of unemployment or for those working in tourism) and usually until the end of the year or until June 2021. As a result of the extensions, moratoria are currently in force in 13 countries in Europe.

Chart 6-2: International practice of payment moratoria in the EEA countries and the United Kingdom (as of 2 February 2021)

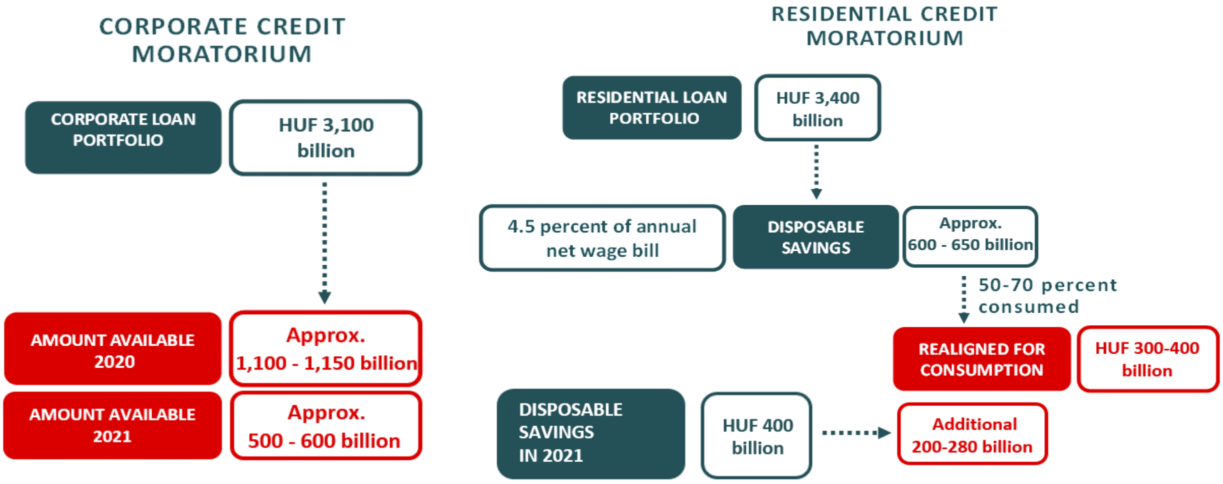


Note: The 'Not available' indication is for the countries where there was no moratorium or the time available for entering has expired. Source: ESRB, MNB collection

Large-scale participation in the moratorium in Hungary remained stable until end-2020. The popularity of the payment moratorium is indicated by the fact that upon the launch of the programme in March some 1.6 million household debtors and 50,000 corporate clients took the opportunity of the moratorium. In December 2020, household loans outstanding under the moratorium accounted for 54 percent (approx. HUF 3,400 billion) of the eligible loans extended until 18 March 2020, whereas the moratorium covered 39 percent (some HUF 3,100 billion) of corporate loans outstanding.

The payment moratorium may have provided significant support to the liquidity position of the actors of the real economy. According to our estimation, as a result of the payment moratorium, additional liquidity amounting to some HUF 1,700–1,800 billion, i.e., 3.6–3.8 percent of 2020 GDP, may have remained with household and corporate debtors in 2020, thus contributing to mitigating the financial stability risks and real economy risks caused by the pandemic. The share of households and businesses from 2020 liquidity effect may have been HUF 600–650 billion and HUF 1,100–1,150 billion, respectively. Our preliminary estimates suggest that the extension of the payment moratorium may leave a further HUF 900–1,000 billion (corresponding to 1.9–2.1 percent of 2020 GDP) with the actors of the real economy until 30 June 2021, of which HUF 500–600 billion and some HUF 400 billion may remain with enterprises and households, respectively.

Chart 6-3: Impact of the moratorium on the instalments of corporate and household loans



Source: MNB

The repayment moratorium on household loans mitigated the decline in households' disposable income, which may have contributed to the modest decrease in household consumption in international comparison in 2020 (Chart 6-3). The temporary postponement of instalments allowed households to spend part of their disposable income on consumption or investment. According to our estimate, the savings that became freely available in 2020 amounted to nearly 4.5 percent of the net wage bill, and will reach 2.7 percent of the net wage bill in 2021 as well. Utilisation of the moratorium contributes to the faster return of consumption to its previous levels: our estimations suggest that households may use 50–70 percent of the released amount for consumption.

6.2 Assessment of central bank projections for 2020

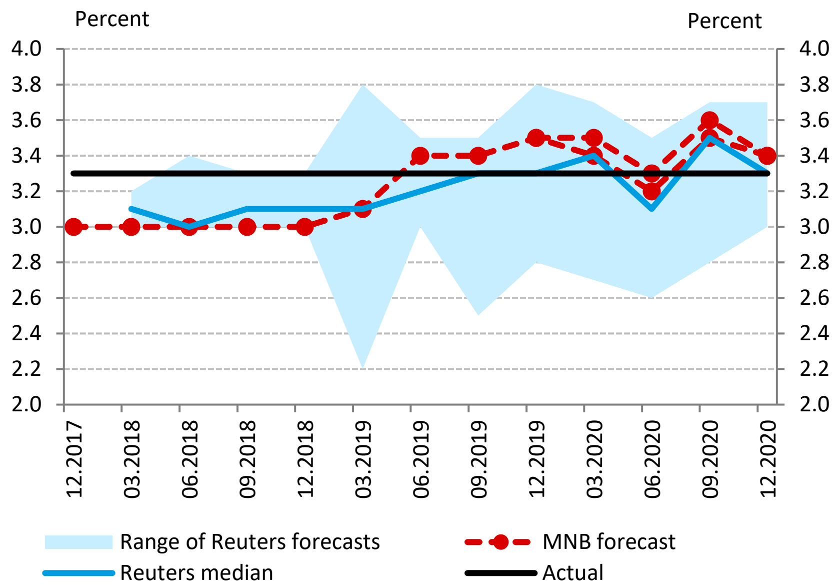
The purpose of this analysis is to present the accuracy of our forecasts for the main macroeconomic variables in the previous calendar year. In addition, we examine how the central bank's forecasting performance compares with market analysts. We first made a forecast for the 2020 variables in December 2017. Starting from the March 2020 Inflation Report, due to the uncertain situation resulting from the coronavirus pandemic, we have temporarily suspended the practice of structuring our forecast around a preferred baseline scenario. Accordingly, we now publish a range forecast. On the whole, our inflation expectation for 2020 was in line with the actual data. As regards economic growth and the increase in private sector's wage and headcount we expected a larger decline after the onset of the pandemic; however, Hungary proved to be more resilient to the second wave of the pandemic.

6.2.1. Inflation

Average annual inflation was 3.3 percent in 2020. Our forecast in the pre-pandemic period was determined by the favourable internal developments, the inflation-increasing effects of tax changes and the moderate external inflationary environment. Regarding internal developments, we projected that strong domestic demand would increase companies' pricing leeway, which was likely to lead to an increase in price dynamics. On the other hand, as regards the increase in costs due to the strong wage growth and the resulting inflationary effects, we believed that those would be offset by the reduction of the social contribution tax levied on corporations. Based on the 2020 tax package adopted by the government, the excise duty on tobacco products rose in January and July. The effect could only be partly offset by the reduction of the VAT rate on accommodation services from 18 percent to 5 percent from 1 January 2020. With regard to the impact of the external inflationary environment, according to our projections we expected that the inflationary effects from the euro area would remain subdued, thus restraining the dynamics of domestic price increases.

Overall, in the past two years, we have projected price dynamics slightly exceeding the central bank's 3 percent inflation target. From June 2019, we mainly raised our projection due to the announced excise duty increases to the level that essentially corresponded to the subsequent actual data. From March 2020, we generally modified our assumptions as a result of the developments related to the pandemic (volatile oil and food prices, containment measures, repricing in summer and changed seasonality, etc.). From September 2020, we expected slightly higher inflation than the subsequent actual data, although due to the economic effects of the pandemic, the forecasts were surrounded by greater uncertainty than usual. From the beginning of 2019, the expectations of market analysts participating in the Reuters survey varied in a wide range, and thus the uncertainty of their 2020 projections increased. Nevertheless, the median forecast by Reuters for 2020 essentially corresponded to the subsequent actual data (Chart 6-4).

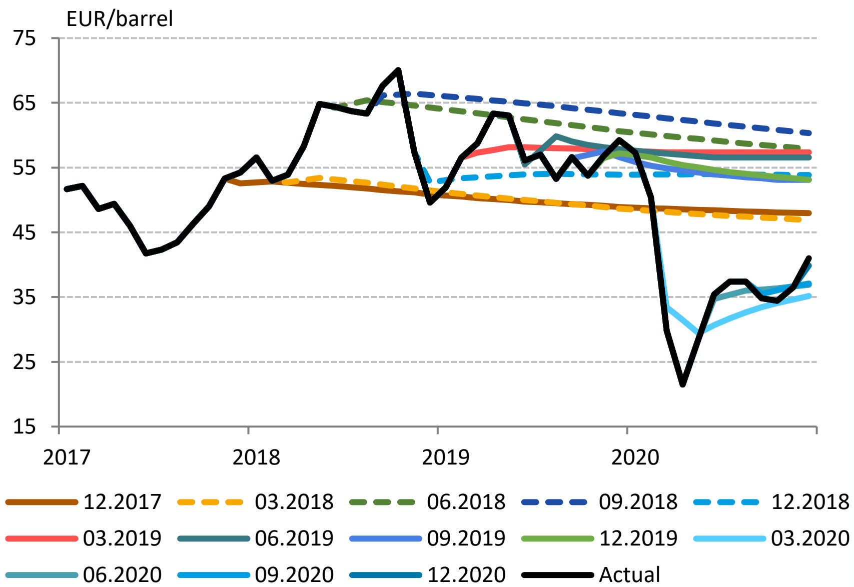
Chart 6-4: Evolution of MNB and market forecasts for 2020 inflation



Note: The band shows the range of economic experts' forecasts surveyed by Reuters. From the March 2020 Inflation Report on, due to the uncertain situation caused by the pandemic, we have temporarily suspended the practice of structuring our forecast around a preferential baseline scenario, and therefore a forecast range was published.
Source: HCSO, MNB, Reuters

The modification of our 2020 forecasts was also influenced by the volatility of the world market price of oil (Chart 6-5). As a result of the pandemic, the EUR-denominated world market price of Brent crude oil, which is key to developments in domestic fuel prices, fell to a historic low, i.e. EUR 22 per barrel, due to the plunge in demand resulting from the global lockdown and containment measures. By summer 2020, oil prices adjusted to EUR 37 per barrel, followed by a rise to EUR 41 per barrel by December 2020. In the second half of 2020, trends in the world market price of Brent crude oil were determined by the OPEC+ production cut negotiations and developments related to the countries' containment measures, which equally influenced both demand and supply conditions in the oil market.

Chart 6-5: Change in oil price assumptions

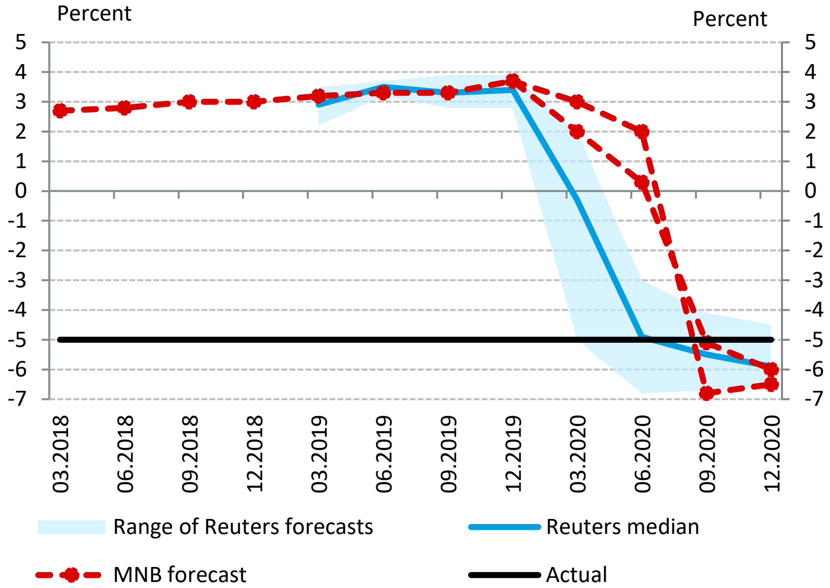


Source: Bloomberg

6.2.2. Economic growth

In 2020, Hungary's GDP fell by 5 percent year on year due to the economic impacts of the coronavirus pandemic. Central bank and market forecasts for last year rose moderately until the end of 2019, anticipating growth of over 3 percent (Chart 6-6). In our forecast, we expected that – similarly to previous years – domestic demand would continue to support growth. In line with the favourable financing environment, companies' investment activity is expected to remain buoyant. Favourable income trends support further growth in household consumption. The recession risks of Hungary's trading partners declined by the end of 2019; however, projections reflected lasting, persistently moderate external business activity. Following the onset of the pandemic in Hungary in March 2020, we revised our GDP projection downward, but the economic impacts of the pandemic were surrounded by significant uncertainty. In the second quarter, the performance of the Hungarian economy declined sharply; the first wave of the pandemic had the strongest impact on the sectors that had previously been the drivers of Hungary's growth.

Chart 6-6: 2020 growth forecasts by the MNB and the market

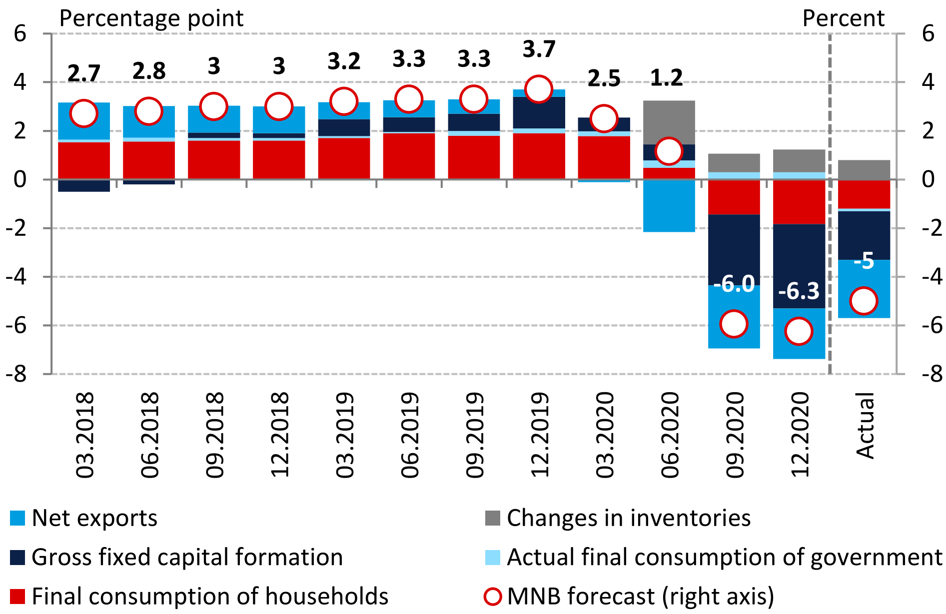


Note The band shows the range of the forecasts by the economists involved in the Reuters survey. From the March 2020 Inflation Report on, due to the uncertain situation caused by the pandemic, we have temporarily suspended the practice of structuring our forecast around a preferential baseline scenario, and therefore a forecast range was published.
Source: HCSO, MNB, Reuters

In our forecasts published in the first half of 2020, we expected a slight increase in GDP. Contrary to our previous methodology, we calculated accepted steps, but also made a conditional forecast. Our forecast is based on two assumptions: no severe second global wave of the coronavirus pandemic, as well as a rapid increase in government investment will be able to support our economy in recession this year. In the second half of 2020, it became apparent that these assumptions were not met. In the case of the coronavirus, more severe new waves of the pandemic arrived after the first wave, which reduced last year's GDP by about 3 percentage points. In addition to health protection priorities, a boost in government investment was only observed at the end of last year. If government consumption and investment had shown double-digit growth in 2020 as a whole, it could have dampened the decline in domestic economic performance by 2.0 to 2.5 percentage points.

From the second half of 2020 – following the onset of the second wave of the pandemic – we anticipated a higher decline in GDP in our forecast, which was also in line with market analysts' expectations. However, Hungary proved to be more resilient to the second wave of the virus (Chart 6-7). The repeated introduction of the restrictions once again had negative impact on the performance of certain services. Nevertheless, the recovery of the production sectors continued, although at a decelerating rate, which was also reflected in the better-than-expected external trade performance at the end of the year. In a European comparison, household consumption slightly decreased in 2020, which was supported by the more moderate labour market adjustment, compared to the 2009 global economic crisis, the well-functioning credit markets and the targeted central bank and government programmes (moratorium on loan repayments, wage subsidies). Investment levels once again were able to rise in the fourth quarter year on year, which also contributed to the more moderate-than-expected fall in GDP in 2020.

Chart 6-7: Expenditure side decomposition of MNB GDP forecast for 2020



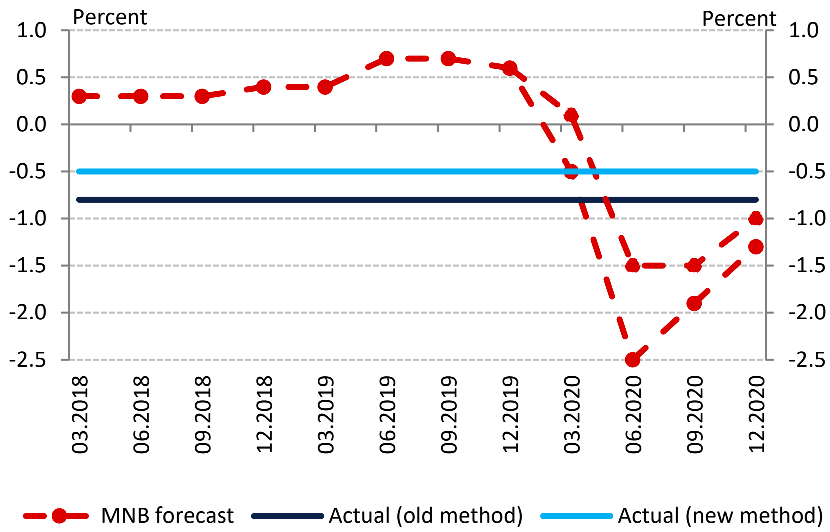
Source: HCSO, MNB

6.2.3. Labour market

In 2020, the number of people in private sector employment declined by 0.5 percent, while our pre-pandemic forecasts still anticipated continued growth in employment. According to previous projections, in parallel with economic growth, the private sector's high labour demand supports a rise in the headcount. In addition to demographic trends, in line with the dynamic workforce expansion in recent years, the potentially available labour reserve has fallen to a historically low level, and thus it represents an increasingly effective constraint for employment growth. In addition to the scarcity of labour reserves, companies' efforts to raise the number of employees is also made extremely difficult by the inadequately skilled workforce and lack of job mobility. In 2019, due to the restrictive factors, we projected moderate (0.3–0.7 percent) growth in private sector employment for 2020.

Due to the pandemic, labour market trends were also surrounded by major uncertainty; last year, employment proved to be more resilient than expected. From 2020 Q2, the economic impacts of the pandemic also appeared in the labour market. Based on lessons learnt from previous crises, we calculated with the termination of more than 100,000 jobs. However, compared to the previous crisis, corporations reduced workforce to a lesser degree and instead tended to cut the hours worked. In 2020, the degree of layoffs was efficiently mitigated by the well-functioning credit markets, the moratorium and the wage subsidies. In addition, the HCSO implemented a methodological change in the number of people in employment in the Labour Force Survey (for more details, see Box 3-3), which revised the 2020 dynamics downward by another 0.3 percentage point (Chart 6-8).

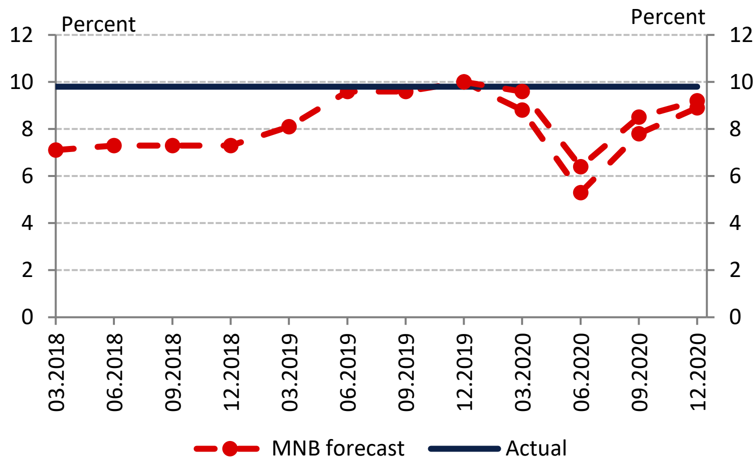
Chart 6-8: MNB forecasts for 2020 private employment growth



Note: From the March 2020 Inflation Report on, due to the uncertain situation caused by the pandemic, we have temporarily suspended the practice of structuring our forecast around a preferential baseline scenario, and therefore a forecast range was published.
Source: HCSO, MNB

In 2020, the crisis essentially had no effect on wage dynamics: in line with our pre-pandemic projections, private sector gross average wages rose by 9.8 percent. In our earliest forecasts for 2020 we assumed that growth in producers' real wages (real labour cost) will follow the rise in productivity. However, wage-setting decisions in early 2019 implied that the intensive competition for labour force retention and hiring prompted a large part of corporations to offer higher wage increase. As a result of the persistently tight labour market conditions, we revised the private sector wage projection significantly downward, close to 10 percent, also for 2020 (Chart 6-9). The onset of the pandemic prompted us to assume that the rapid change in economic conditions would override previous wage increase decisions. Contrary to our forecast, in the end corporations did not reduce either the regular wages or the year-end bonuses, presumably postponing wage adjustment to this year.

Chart 6-9: MNB forecasts for 2020 private wage growth



Note: From the March 2020 Inflation Report on, due to the uncertain situation caused by the pandemic, we have temporarily suspended the practice of structuring our forecast around a preferential baseline scenario, and therefore a forecast range was published.
Source: HCSO, MNB

7 Breakdown of the average consumer price index for 2021

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

	Effect on CPI in 2021		
	Carry-over effect	Incoming effect	Yearly index
Administered prices	-0.1	0.2	0.1
Market prices	0.7	2.3 - 2.4	3.0 - 3.1
Indirect taxes and government measures	0.2	0.5	0.7
CPI	**0.8**	**3.0 - 3.1**	**3.8 - 3.9**

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

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

	2021				
	Average carry-over effect	Carry-over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	-0.9	0.0	4.0	0.0	3.1
non-processed	-3.5	0.0	4.0	0.0	0.5
processed	0.5	0.0	3.9	0.0	4.4
Tradable goods	1.0	0.0	0.4 - 0.5	0.0	1.4 - 1.5
durables	1.3	0.0	0.0	0.0	1.3
non-durables	0.8	0.0	0.6 - 0.8	0.0	1.4 - 1.6
Market services	0.8	0.0	2.7 - 2.9	0.0	3.5 - 3.7
Market energy	1.2	0.0	0.8	0.0	2.0
Alcohol and Tobacco	3.1	1.5	1.0 - 1.3	6.3	11.9 - 12.2
Fuel	2.5	1.2	13.5	-1.5	15.7
Administered prices	-1.1	0.0	1.5	0.0	0.4
Inflation	**0.6**	**0.2**	**2.5 - 2.6**	**0.5**	**3.8 - 3.9**
Core inflation	1.2	0.2	1.7 - 1.9	0.8	3.9 - 4.1

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