



INFLATION REPORT



2020
JUNE

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

Miklós Zrínyi: The Life of Matthias Corvinus



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

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

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

The analyses in this Report were prepared under the direction of the Executive Director for Monetary Policy and Economic Analysis. 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 and Directorate Financial System Analysis. The Report was approved for publication by Barnabás Virág Deputy Governor of 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 June 2020.

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

In the current extraordinary economic environment, the Magyar Nemzeti Bank's (MNB) mandate is still to achieve and maintain price stability, to preserve financial stability, as well as to support the Government's economic policy. Based on incoming data, Hungarian economic performance in 2020 is likely to be more subdued than earlier expected, while the outlook for inflation has shifted downwards persistently.

There remains an exceptionally large degree of uncertainty in judging the time profile of the health emergency and the speed of the global economic recovery.

In parallel with the onset of the coronavirus pandemic, global economic activity declined significantly in the first quarter, and is likely to continue in the second quarter, according to monthly business cycle indicators. From the beginning of May economic activity has restarted gradually as the restrictive measures were eased.

As a result of the measures taken to prevent the spread of the pandemic, in the second quarter real economic activity declined, while unemployment rates rose worldwide. In the first quarter of 2020, the US economy still grew modestly year on year, while China's GDP fell by 6.8 percent, the largest decline in the past 50 years. Euro-area economic performance also decreased substantially, and an even more severe downturn can be expected in the second quarter according to business cycle indicators. Accompanied by a significant slowdown, several Central and Eastern European economies continued to grow year on year in the first quarter.

The effects of the restrictive measures are mostly expected to be reflected in second-quarter data. From the beginning of May economic activity has restarted gradually as the restrictive measures were eased. There remains an exceptionally large degree of uncertainty in judging the time profile of the health emergency and the speed of the global economic recovery.

Global inflation has decreased in recent months. Disinflationary effects have strengthened generally. In May, euro-area inflation fell to close to zero percent, and core inflation turned negative in some of the countries. As temporary effects faded, the rate of increase in consumer prices slowed again in the countries of the CEE region. As a result of the coronavirus pandemic, the inflation outlook in the global economy and the euro area shifted downwards significantly and persistently. Consistent with this, the global leading central banks' projections anticipate a significantly lower inflation environment in the coming years.

Due to the coronavirus pandemic, the outlook for growth in the global economy has deteriorated significantly. Disinflationary effects have strengthened generally. In parallel, central banks announced further easing measures. As a result, the external monetary policy environment has become significantly looser.

Of the global leading central banks, the Federal Reserve (Fed) left the target range for its key policy rate unchanged, at close to zero, in the past quarter. The Fed decided to introduce a number of new liquidity-providing and credit instruments, and it also continued its asset purchase programme. As a result of the strong easing measures, the Fed's balance sheet has expanded by nearly USD 3,000 billion since early March. The European Central Bank (ECB) also left key policy rates unchanged and introduced additional liquidity-providing measures. The European Central Bank raised the total amount of its asset purchase programme (PEPP), launched to counteract the effects of the pandemic, to EUR 1,350 billion and extended its horizon.

In our region, the decision-makers at the Czech and the Polish central banks cut the policy rates to close to zero as well. In parallel with its bond purchase programme, the Polish central bank also launched a new refinancing programme. Under this programme, the central bank provides funding at favourable terms to commercial banks to support corporate lending. Decision-makers at the Romanian central bank cut the key policy rate twice and continued their asset purchase programme in the past quarter.

In parallel with the restart of economic activity and the easing measures taken by the global leading central banks, investor sentiment improved, and financial market volatility decreased in the past quarter.

There was huge uncertainty caused by the coronavirus pandemic at the beginning of the period; however, sentiment improved perceptibly in global financial markets as the restrictive measures were eased and economic activity was restarted. The key stock price indices have followed an upward trend since April, thereby correcting a large part of the decline in the first quarter. Long-term yields in developed countries declined in the period. As a result of the improvement in sentiment, safe-haven currencies depreciated while the shortage of dollar liquidity eased. Global oil prices were highly volatile: futures quotes fell into negative territory for a short while, then, following a recovery in oil demand, they rose to nearly USD 40 again in the second half of the period.

Hungarian interbank and government bond yield curves have flattened since April.

Hungarian interbank yields declined gradually after rising in April. This led to the interbank yield curve shifting down in the past quarter. Long-term government bond yields declined considerably and, as a result, the government securities yield curve flattened, which also reflected the MNB's government securities purchases. In the period, the forint appreciated against the euro, in line with other currencies in the region.

The coronavirus pandemic hit the Hungarian economy when its fundamentals were stable, and growth was strong. The adverse consequences of the pandemic were muted by the rapid and efficient measures taken by the Hungarian Government and the Magyar Nemzeti Bank.

The fundamentals of the Hungarian economy are strong. The economic policy pursued over the past decade has maintained the country's macroeconomic balance and reduced its external and internal vulnerability. The effects of the coronavirus pandemic also appeared in Hungary's macroeconomic data: in the first quarter of 2020, Hungary's economic growth slowed to 2.2 percent year on year. However, the Hungarian economy's growth surplus compared to the euro area far exceeded the value of around 3 percentage points seen in recent years. Although based on monthly incoming business cycle indicators, the effects of the pandemic are likely to be the strongest in the second quarter, a recovery is expected in the second half of the year as the economy is restarted.

Hungary's defence against the first wave of the coronavirus has been successful, which provides appropriate foundation for the economic recovery. The rapid and efficient measures taken by the Hungarian Government and the Magyar Nemzeti Bank mitigate the adverse consequences of the pandemic on the real economy and financial markets. The government's Economy Protection Action Plan has contributed to maintaining the operation of companies, preserving jobs and creating new ones, and the moratorium on instalment payments of loans has provided financial protection to Hungarian families and companies that are in distress. The measures taken by the MNB have helped stabilise domestic money market developments while liquidity with favourable conditions, available to all economic agents, supports the recovery of economic growth.

Due to the coronavirus pandemic, strong disinflationary effects have appeared in the Hungarian economy as well. Looking ahead, high volatility in inflation is expected to persist. Nevertheless, inflation rate is likely to stabilise again around the 3 percent central bank target as the effects of cost-sensitive items fade. Weakening economic activity caused by the coronavirus pandemic reduces core inflation excluding indirect tax effects through several channels.

Following a temporary rise at the beginning of 2020, the consumer price index quickly returned into the central bank tolerance band, in line with expectations, before declining to its lower bound. Looking ahead, high volatility in inflation is expected to persist due to the base effects linked to fuel prices. Historically high growth in food prices has been raising inflation. Nevertheless, inflation is likely to stabilise again around the 3 percent central bank target as the effects of cost-sensitive items fade.

Weakening economic activity caused by the coronavirus pandemic reduces core inflation excluding indirect tax effects through several channels. In addition to a weaker external inflation environment, more muted domestic demand compared to previous years is also increasingly restraining underlying inflation. Due to strong disinflationary effects, core inflation excluding indirect tax effects will fall below 3 percent: it is expected to stand at 3.3–3.5 percent in 2020 and at 2.6–2.7 percent in 2021.

The Funding for Growth Scheme Go! has contributed to a pick-up in the credit market and investment dynamics, which also helps to restore economic growth.

In the first quarter of 2020, outstanding lending to the corporate sector and SMEs grew by 16.5 percent and 14 percent, respectively, year on year. This dynamic growth was supported partly by the disbursement of loans applied for earlier, and the repayment suspension as a result of the moratorium on instalment payments of loans. Launched to offset the negative economic effects of the coronavirus pandemic, the FGS Go! and the Hungarian Development Bank's credit and guarantee programmes have promoted the recovery of the credit market and investment growth. The growth rate of outstanding borrowing of corporations is expected to slow to close to 6 percent over the forecast horizon, before gradually returning to around 10 percent in the second half of 2021.

In the first quarter, the stock of lending to households grew by 16 percent year on year, with a substantial contribution from lending related to family protection subsidies. In 2020, the negative economic effects of the pandemic and a decline in housing market activity are expected to reduce demand for consumption and investment loans. However, prenatal baby support loans have supported lending to the household sector. With the lifting of the moratorium, growth in lending to the household sector is expected to slow down to close to 5 percent in the first half of 2021, and by the end of the forecast horizon it is expected to become double-digit again.

Overall, Hungarian GDP may grow at a restrained pace in 2020. A pick-up in public investment and an expansion in corporate lending are required to a quick 'V' shape economic recovery in the second half of the year. With the easing of restrictive measures, economic prospects have improved, but are still surrounded by great uncertainty.

This year's macroeconomic data are expected to show significant volatility and dichotomy. The effects of the pandemic are likely to be the strongest in the second quarter. Following a significant decline in GDP in the spring, a recovery of economic growth is expected from the third quarter. A pick-up in public investment and an expansion in corporate lending are required for a quick 'V' shape economic recovery in the second half of the year. In line with the expected slower recovery in the external environment, production in industrial sectors selling for export may pick up towards the end of the year. Overall, Hungarian GDP may grow at a restrained pace in 2020. Economic growth is expected to be 0.3–2.0 percent in 2020, 3.8–5.1 percent in 2021 and 3.5–3.7 percent in 2022. Contrary to previous crisis periods, Hungary's growth surplus is also expected to persist relative to the euro area, looking ahead.

Due to heightened uncertainty, corporate investment projects are expected to take longer to materialise, but recovery of economic growth is also likely to be supported by a pick-up in public investment in the second half of 2020. The government's credit and guarantee programmes, and the MNB's FGS Go! and Bond Funding for Growth Scheme have supported the recovery of investment growth. As a result, the investment ratio is expected to be persistently high. The moratorium on instalment payments of loans contributes HUF 2,000 billion to maintaining purchasing power and preserving jobs. The temporary decline in households' high savings ratio, the large wealth accumulated in recent years and the households' moratorium on instalment payments of loans represent significant reserve for growth. Accordingly, contrary to the 2008-2009 crisis, household consumption is likely to continue to support the conditions for a recovery of economic growth.

As a result of the pandemic, the growth prospects of Hungary's trading partners deteriorated abruptly and to a large degree. In line with this, Hungary's exports and imports are likely to decline in 2020. The large domestic vehicle manufacturing plants restarted production in mid-April; however, interruptions in supplier chains, a fall in global demand and changing consumer habits also make it difficult for exports to return to their previous growth path. In line with the expected slower recovery in the external environment, production in export-oriented industrial sectors may pick up towards the end of the year. Global tourism is expected to recover slowly, which will also reduce the performance of domestic tourism. This year, negative net exports are expected to restrain GDP growth; however, they are likely to support it once Hungary's export partners restart their production between 2021 and 2022.

This year, the current account balance is likely to develop similarly to last year overall, before gradually improving up to the end of the forecast horizon. As a result of Hungary's persistent financing capacity, the external debt-to-GDP ratios are expected to decline further.

In 2020, the current account balance has been shaped by opposing trends. Commodity exports and tourism, declining due to falling external demand, as well as procurement of equipment, related to protection against the pandemic, are likely to reduce the trade balance. These effects are expected to be mitigated by an improvement in the terms of trade. Nevertheless, the current account balance is likely to be improved by a decline in the income deficit in response to expected lower profits of non-resident companies, reflecting lower external and domestic demand. However, looking ahead, the current account balance is expected to improve gradually as the effects of the pandemic fade. Due to the persistently high transfer balance, Hungary's net lending is expected to be maintained, and as a result, the external debt ratios are expected to decline further.

In 2020, the budget deficit may rise to 3.8 percent of GDP as a result of the costs of the coronavirus pandemic prevention, the measures of the Economy Protection Action Plan, declining tax revenues and a slower rise in nominal GDP. Utilising the entire room for manoeuvre in the government budget is expected to support a pick-up in public investment in the second half of the year, which will promote the recovery of economic growth. However, the budget deficit in 2020 is likely to remain low in international comparison. The draft legislation for the 2021 budget, submitted in May, sets a deficit target of 2.9 percent. The continued decline in the government debt-to-GDP ratio since 2011 is expected to come to a temporary halt in 2020, due to a higher budget deficit and the moderate growth in nominal GDP. However, with the restoration of economic growth, the government debt ratio is expected to return to a declining path again in 2021.

The effects of the coronavirus pandemic and its time path continue to pose a downward risk to the recovery in economic growth.

The Monetary Council highlighted three alternative scenarios around the baseline projection in the June Inflation Report. The alternative scenarios assuming a gradual (slower-than-baseline) recovery from the economic downturn caused by the global coronavirus pandemic and a slow recovery with a second wave of the pandemic may result in a lower inflation path and more subdued growth path compared to the baseline scenario. In the alternative scenario featuring a dynamic expansion in consumption, inflation is higher, while Hungary's economic growth is stronger than projected in the baseline scenario. 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)

	2019	2020	2021	2022
	Actual		Projection	
Inflation (annual average)				
Core inflation ¹	3.8	3.8 – 4.0	3.0 – 3.1	2.9
Core inflation excluding indirect tax effects	3.4	3.3 – 3.5	2.6 – 2.7	2.9
Inflation	3.4	3.2 – 3.3	3.2 – 3.3	3.0
Economic growth				
Household consumption expenditure	5.0	0.3 – 1.8	2.8 – 3.8	3.1 – 3.2
Government final consumption expenditure ⁶	2.0	1.3 – 1.8	1.0 – 1.4	1.2 – 1.3
Gross fixed capital formation	15.3	1.7 – 2.9	6.2 – 7.2	3.7 – 4.1
Domestic absorption	5.6	2.8 – 4.0	3.3 – 3.9	2.8 – 3.0
Exports	6.0	(-8.1) – (-5.1)	5.8 – 8.4	5.2 – 5.6
Imports	6.9	(-5.4) – (-3.0)	5.2 – 6.9	4.5 – 4.8
GDP	4.9	0.3 – 2.0	3.8 – 5.1	3.5 – 3.7
Labour productivity ⁵	3.2	2.5 – 3.5	2.1 – 3.2	2.8 – 3.3
External balance²				
Current account balance	-0.8	(-1.9) – (-1.5)	(-1.1) – (-0.9)	(-0.8) – (-0.5)
Net lending	1.0	0.3 – 0.7	1.2 – 1.3	1 – 1.2
Government balance²				
ESA balance	-2.0	-3.8	-2.9	(-2.2) – (-2.1)
Labour market				
Whole-economy gross average earnings ³	11.4	6.5 – 7.5	7.9 – 8.6	7.1 – 7.5
Whole-economy employment	1.0	(-2.5) – (-1.7)	1.6 – 1.9	0.4 – 0.6
Private sector gross average earnings ³	11.6	5.3 – 6.4	9.1 – 9.7	7.8 – 8.3
Private sector employment	1.4	(-2.5) – (-1.5)	2.1 – 2.5	0.4 – 0.8
Unemployment rate	3.4	4.8 – 5.5	3.8 – 4.3	3.4 – 3.7
Private sector nominal unit labour costs	6.4	0.9 – 1.2	4.0 – 4.6	3.1 – 3.4
Household real income ⁴	4.7	(-0.7) – 0.4	3.3 – 4.1	3.3 – 3.5

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.

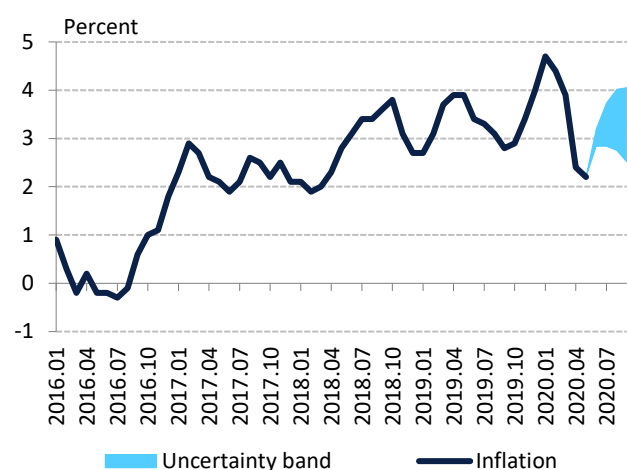
⁶ Includes government consumption and the transfers from government and non-profit institutions.

1 Inflation and real economy outlook

1.1 Inflation forecast

As a result of the coronavirus pandemic, strong disinflationary effects have also appeared in the Hungarian economy. The deterioration in economic activity is restraining core inflation excluding indirect tax effects via several channels. External inflation may be subdued for a longer period of time, which will also restrain the rate of price increases in Hungary. In addition, as a result of temporarily lower demand for market services, we expect a downturn in underlying inflation developments. As a result of these effects, core inflation excluding tax effects will fall below 3 percent, annual average core inflation excluding indirect taxes will be 3.3–3.5 percent in 2020, 2.6–2.7 percent in 2021 and 2.9 percent in 2022. Inflation remains highly volatile, but as the effects of volatile, cost-sensitive items fade, inflation will stabilise close to the 3-percent inflation target.

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



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

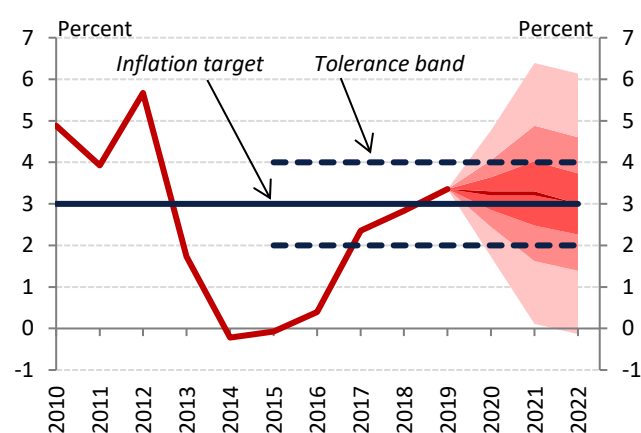
Source: HCSO, MNB

Following a temporary rise late last year, as we expected, inflation returned to the tolerance band again in March and continued to fall. The global coronavirus pandemic has also a significant impact on inflation developments. As a result of base effects, on a temporary basis, inflation will increase slightly in the coming months (Chart 1-1). **In 2020 and 2021, inflation will amount to 3.2–3.3 percent**, and then – as the effects of volatile and cost-sensitive items fade – inflation will stabilise close to the 3-percent inflation target (Chart 1-2). According to our forecast, **core inflation excluding indirect taxes will be 3.3–3.5 percent in 2020, 2.6–2.7 percent in 2021 and 2.9 percent in 2022.**

The external inflationary environment continues to have a strong mitigating effect on the rate of domestic price increases. As a consequence of the negative economic effects of the coronavirus outbreak, **the ECB forecasts price dynamics below its inflation target over the entire forecast horizon.** It also significantly lowered its projection for core inflation, which has a more significant impact on domestic price dynamics. Due to weaker European growth prospects, **more moderate imported inflation** restrains developments in prices of industrial goods. As a result of the lockdown measures introduced because of the coronavirus pandemic, **weaker demand** and **slower increases in wages** may lead to subdued price dynamics in market services.

Changes in indirect taxes point to an increase in inflation over the forecast horizon. One of the underlying factors is **the increase in the excise duty on tobacco products in three steps** (from January 2020 to January 2021). In addition, according to current regulations, **the excise duty on fuel will increase slightly as of 1 July 2020** (by HUF 5 per litre on petrol and by HUF 10 per litre on diesel), as the average world market price of Brent crude was lower than USD 50 per barrel in 2020 Q2. Overall, changes in indirect taxes will raise inflation by 0.4 percentage point in 2020 and 2021, and have a neutral effect on inflation in 2022.

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

	2020	2021	2022	
Core inflation excluding indirect tax effects	3.3–3.5	2.6–2.7	2.9	
Core inflation	3.8–4.0	3.0–3.1	2.9	
Non-core inflation	Unprocessed food	13.0	5.5	3.6
	Fuel and market energy	-5.2	5.8	3.6
	Regulated prices	0.7	2.4	2.5
	Total	1.8	3.9	3.0
Inflation	3.2–3.3	3.2–3.3	3.0	

Note: Based on seasonally unadjusted data.

Source: MNB

As regards non-core inflation items, prices of unprocessed foods are higher than we assumed in March, due to the joint impact of several factors. On the one hand, border closures owing to the coronavirus outbreak caused supply to decrease (transport and harvest barriers). On the other hand, according to industry information, fruit production may be particularly weak this year. As a result of unfavourable weather conditions, fresh fruits and vegetables suffered significant damage. This spring, the number of frosty nights exceeded the average of previous years, causing huge damage to crops. In the middle of June, the rainfall was highly above the historical average in Hungary, which can result in plant disease. In the case of fuels, in line with the changes in futures prices, prices are projected to drop this year, while in 2021 an increase in prices is expected as a joint result of base effects and corrections in futures prices. Regulated energy prices will not change until the end of the forecast horizon, while the price dynamics of non-energy regulated prices are expected to be more moderate than in our March assumption. In order to slow the spread of the coronavirus pandemic, educational institutions were closed. In consequence, the rises in prices of meals in nurseries, kindergartens and schools experienced in previous years did not happen. **The cancellation of some sports events and the temporary closure of museums also resulted in more subdued price dynamics for non-energy regulated prices.** On the whole, after the cost effects have faded out, the price dynamics of non-core inflation items will be around 3 percent at the end of the forecast horizon (Table 1-1).

Box 1-1: Assumptions applied in our forecast

Hungary is a small, open economy, and as such our forecasts for the most important macroeconomic variables are fundamentally influenced by developments in external factors and changes in the assumptions related to such (Table 1-2).

Table 1-2: Main external assumptions of our forecast

Technical assumptions	2020		2021		2022		Change		
	Previous	Current	Previous	Current	Previous	Current	2020	2021	2022
EUR/USD	1.12	1.11	1.12	1.12	1.12	1.12	-0.9%	0.0%	0.0%
Oil (USD/barrel)	40.3	40.8	42.4	43.0	42.8	43.6	1.2%	1.4%	1.9%
Oil (EUR/barrel)	36.2	36.6	37.9	38.2	38.3	38.7	1.1%	0.8%	1.0%
Euro area inflation* (%)	0.7	0.2 - 0.3 - 0.4	1.3	0.4 - 0.8 - 1.1	1.6	0.9 - 1.3 - 1.7	(-0.5) - (-0.4) - (-0.3) pp.	(-0.9) - (-0.5) - (-0.2) pp.	(-0.7) - (-0.3) - 0.1 pp.
Euro area core inflation (%)	0.9	0.8	1.3	0.7	1.5	0.9	-0.1 pp.	-0.6 pp.	-0.6 pp.
Euro area real GDP** (%)	0.8	(-12.6) - (-8.7) - (-5.9)	1.3	3.3 - 5.2 - 6.8	1.4	2.2 - 3.3 - 3.8	(-13.4) - (-9.5) - (-6.7) pp.	2.0 - 3.9 - 5.5 pp.	0.8 - 1.9 - 2.4 pp.
GDP growth of Hungary's main export partners** (%)	0.8 - 1.2	(-7.0) - (-3.0)	2.4 - 2.9	1.0 - 4.5	1.9	0.5 - 3.0	(-7.8) - (-4.2) pp.	(-1.4) - (1.6) pp.	(-1.4) - (1.1) pp.

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

Source: Bloomberg, Consensus Economics, MNB, ECB

The spread of the COVID-19 pandemic fundamentally influences the performance of the global economy. **Growth prospects in Hungary's main trading partners deteriorated abruptly and to a large degree in the past weeks and months.** Following the first quarter, which brought recession in several countries, an even more severe decline can be projected for the second quarter. Due to the different economic structures of Hungary's export partners (weights of export and domestic demand, importance of tourism and the automotive industry) and differences in the efforts to contain the virus, growth prospects in Hungary's export partners **are highly uncertain.** In parallel with the flattening of the epidemic curves, the large European economies started to ease restrictions gradually from May, and the business confidence for manufacturing and the services sector improved. Hungary's main foreign trade partner, **Germany, has announced a EUR 34 billion programme to boost car sales.** Significant cash support is provided for the purchase of new electric and hybrid cars, and the programme also includes additional benefits (conditional abolition of VAT on company car purchases, conditional abolition of car tax and innovation support for manufacturers). In China, the performance of the restarting economy has already improved perceptibly in the official statistics. **Based on forward-looking indicators, external business cycle indicators improved slightly in May, in parallel with the slowdown in the spread of the virus and the gradual reopening of the economies. Manufacturing confidence indicators have corrected across Europe and in the CEE region but remained strongly negative.**

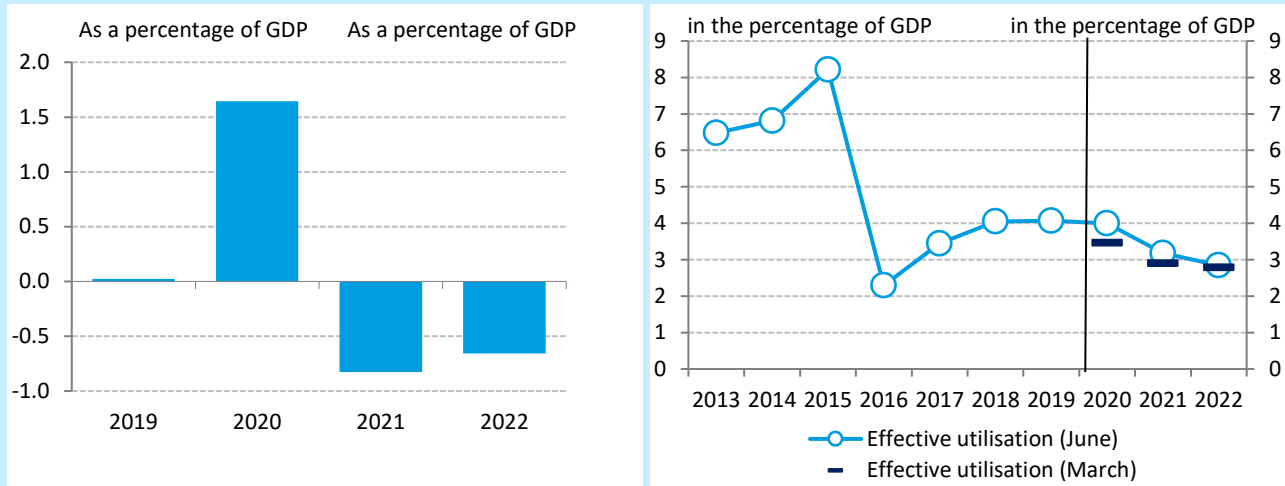
In line with the persistently moderate growth outlook in Europe, the European Central Bank continues to project that price dynamics will fall short of its inflation target over the entire forecast horizon. Illustrating the high degree of uncertainty and the various pandemic scenarios, the forecast for real GDP growth in the euro area lies in a wide range. The ECB expects contraction between 12.6 and 5.9 percent in 2020, followed by growth of 3.3–6.8 percent in 2021 and 2.2–3.8 percent in 2022. The forecast for core inflation, which is more influential in terms of price dynamics in Hungary, declined for 2020, 2021 and 2022. As for the current forecast, euro area inflation is projected to be lower over the entire forecast horizon compared to the March forecast.

The world market price of Brent crude oil was volatile in the past period. In April, Saudi Arabia flooded the market with a large volume of oil, which led to an extraordinary fall in oil prices. In addition, according to the estimate of the International Energy Agency, **as a result of the restrictions introduced due to the coronavirus, demand for oil dropped by one quarter in April. Finally, the production cut originally scheduled for 1 July was introduced from 1 May, which represents historically the largest cut ever, at 9.7 million barrels per day,** meaning that 10 percent of total production was removed from the market. As a result of the production cut, the price of Brent started to rise and was close to USD 30/barrel in mid-May. On 6 June, the OPEC+ countries decided to extend the production cut. From that time on, they will review the volume of the production cut on a monthly basis, with the latest group meeting taking place on June 18, where the OPEC+ countries committed to continuing the production cut and stricter compliance until July. **Oil price expectations are surrounded by cautious optimism among market analysts, who anticipate volatile but moderately rising oil prices.**

The course of the Covid-19 pandemic may have a significant effect on Hungary's public budget. In 2020, the increase in the deficit will be caused on the one hand by the slowdown in economic growth, and on the other hand by government measures for health purposes and economic protection. According to the government's plans, **the measures addressing**

the medical and economic effects of the pandemic with direct budgetary effects amount to 5.2 percent of GDP. The government may cover a significant portion of these measures with reallocations, the utilisation of reserves, increases in taxes (retail surtax, contributions by financial organisations) and the regrouping of EU funds. According to our calculations, the net balance effect may amount to 1.1 percent of GDP. Furthermore, the slowdown in economic growth lowers tax revenues compared to what was planned (automatic stabiliser), and thus the budget deficit may rise to 3.8 percent in 2020, resulting in countercyclical fiscal policy (Chart 1-3). For 2020 and 2021, to the extent of the budgetary room for manoeuvre we expect an increase in government investment.

Chart 1-3: Fiscal impulse (left panel) and the effective utilisation of EU funds (right panel)



Note: The fiscal impulse corresponds to the change in the augmented (SNA) primary balance. The fiscal impulse contains the effect of EU funds to the extent of the co-financing. A positive prefix indicates demand expansion, while a negative prefix implies demand restraint.

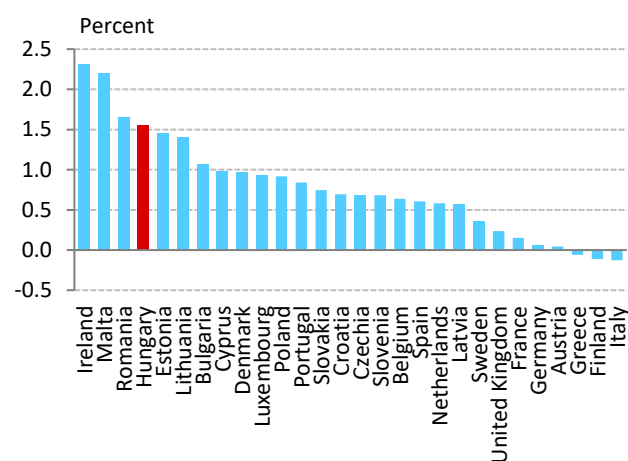
Source: MNB, MoF

The budget deficit decreases to 2.9 percent of GDP for 2020 according to the proposed budgetary legislation for 2021, which can be achieved according to our forecast. In a more favourable economic environment, higher revenues from cyclical processes and lower expenditures may result a lower deficit as well. Owing to the decreasing deficit, the fiscal impulse may be negative in 2021.

1.2 Real economy forecast

Domestic GDP may bottom out in Q2 2020, after which a rapid V-shaped recovery is expected. This year's economic growth will be conditional on rising public investments and corporate lending. Additionally, due to the moratorium on retail loan repayments, household consumption may rise slightly this year. GDP is likely to grow at a modest rate in 2020, with expansion of 3.8–5.1 percent in 2021 and 3.5–3.7 percent in 2022. Hungary's growth surplus compared to the euro area will remain in place. In its latest forecast, the ECB significantly lowered its projection for euro area economic performance, which involves a high degree of uncertainty. Economic developments are characterised by a structural duality: due to the subdued external environment, domestic demand will shift to become the key factor driving growth this year. The investment rate will remain high, even compared to the rest of Europe. Corporate investments may be delayed due to coronavirus-related uncertainties, but the FGS Go! and the increasing scale of corporate lending will facilitate a rebound in investment activity. We expect a rapid economic recovery, strongly supported by a rise in public investments in H2 2020. In contrast to the 2008–2009 crisis, household consumption will continue to support growth, thanks to the high accumulated wealth and savings rate in recent years and the recently introduced moratorium on retail loan repayments. The high rate of household savings provides a growth reserve, and a temporary reduction in this reserve will encourage a recovery in consumption. Growth prospects in Hungary's trading partners deteriorated, and in line with this domestic exports and imports will also drop in 2020. In line with the expected slower recovery in the external environment, production in export-oriented industrial sectors may pick up towards the end of the year. Net exports will dampen growth in 2020, but as economic recovery in Hungary's export partners gains ground it will once again support GDP expansion in 2021 and 2022.

Chart 1-4: Carry-over effect of GDP growth 2020



Source: Eurostat, MNB

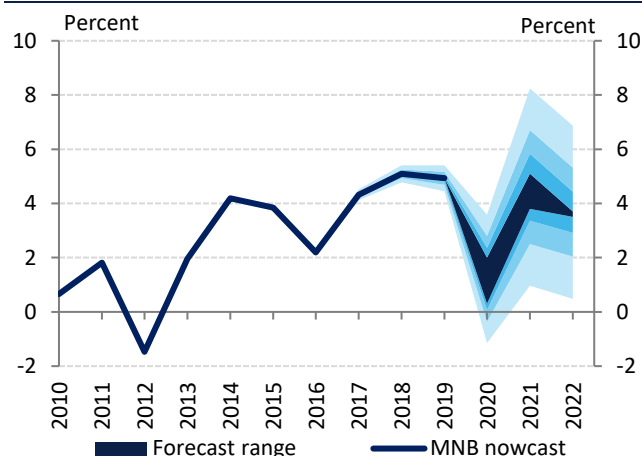
Hungary's GDP growth in Q1 2020 was among the highest in the EU, which was also attributable to significant carry-over effects from last year (Chart 1-4). However, the economic impacts of the coronavirus pandemic became apparent in Hungary's macroeconomic figures from the middle of March. Due to the containment measures which were introduced and the global economic slowdown, **Hungary's economic performance may bottom out in Q2 2020.**

There is **still considerable uncertainty** in the forecasts, due to the economic impacts of the coronavirus pandemic, and therefore **the prognosis we present is range-based**. It is assumed that – with an improvement in the COVID-19 situation – social distancing measures will be quickly relaxed, along with a rapid economic recovery, resulting in GDP growth from the second quarter. **In addition to successful health protection measures, economic output this year will be supported by rising public investments and corporate lending and the exploitation of growth reserves provided by household consumption. GDP is likely to grow by 0.3–2.0 percent in 2020, 3.8–5.1 percent in 2021 and 3.5–3.7 percent in 2022** (Chart 1-5).

Hungary's **economic convergence to the euro area will continue**, and in contrast to earlier crisis situations, the growth surplus compared to the euro area will remain in place.

National economy investments will promote recovery, thanks to the FGS Go!, rising corporate lending and an increase in public investments from H2 2020 (Table 1-3).

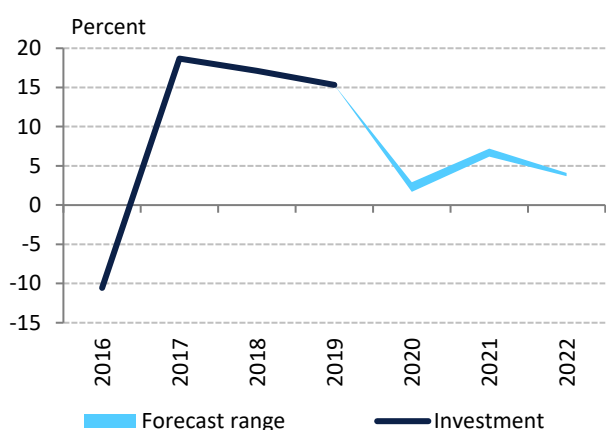
Chart 1-5: Fan chart of the GDP forecast



Note: Based on seasonally unadjusted data.

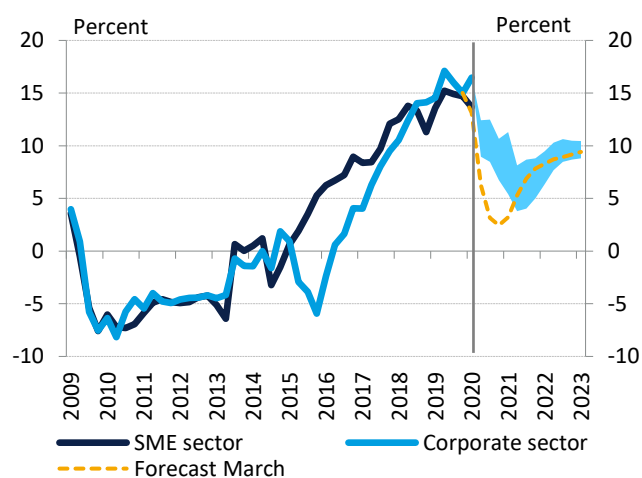
Source: HCSO, MNB

Chart 1-6: Annual change in investments



Source: HCSO, MNB

Chart 1-7: Annual changes in lending to non-financial corporations and SMEs



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

In 2020, the increasing scale of coronavirus-related uncertainty led to subdued corporate investment activity offset by a rise in public investments. Overall, national economy investments may increase by 1.7–2.9 percent this year. We expect that corporate investments not realised or postponed this year as a result of declining economic activity due to the coronavirus situation will be compensated in the coming years. The **FGS Go! and the Bond Funding for Growth Scheme** also encourage corporate sector lending, further supporting corporate investment activity. Corporate lending is expected to grow by 6–10 percent in 2020 (Chart 1-7).

Households' investment activity will decrease inline with the end of the housing market cycle and the current increasingly uncertain income prospects. At the same time, the state-subsidised schemes (HPS, Prenatal Baby Support Loan) may promote household lending, encouraging household investments despite the pandemic situation.

In crisis situations the role of the state typically increases. **Rapid post-pandemic economic recovery may take place amid increased public investment activity.** The rise in public investments in the second half of the year will be supported by boosting the effective utilisation of EU funds, and **we also expect growing investment from own funds.** In addition, the state will provide significant capital transfers to raise private investments as well. After 2020 the rate of public investments will decrease in line with the end of EU funds.

The national economy investment rate stood at 28.6 percent in 2019, putting Hungary in the forefront in Europe. **We forecast a steadily high investment rate on an international level as well** (Table 1-3).

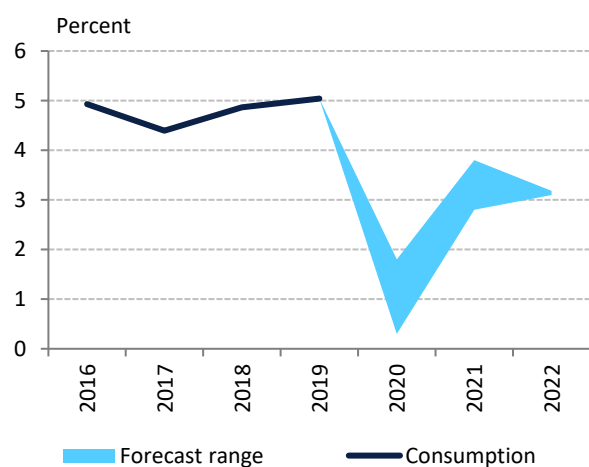
Household consumption is expected to **remain an important factor behind economic growth** (Chart 1-8). Restrictions related to COVID-19 and anti-pandemic measures will **result in a lower level of consumption in Q2 2020. At the same time, the high rate of household savings and net financial wealth represents growth reserves for household consumption, while the moratorium on loan repayments may free up additional space from disposable household income to be spent on consumption** (see Box 3-1). As restrictions are lifted, we expect **consumption to start growing again in the second half of the year**, and – depending on short-term changes in consumer behaviour (postponement of consumption, pandemic-related fears, usage rate of moratorium) – growth of 0.3–1.8 percent is projected.

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

	2019 Actual	2020	2021 Projection	2022
Gross fixed capital formation	15.3	1.7 – 2.9	6.2 – 7.2	3.7 – 4.1
Government investments	7.9	5.5 – 6.7	(-8.1) – (-6.6)	(-0.8) – 0.0
Private investments	17.6	0.7 – 1.9	10.2 – 11.0	4.8 – 5.0
Investment rate	28.6	28.7 – 28.9	29.4 – 29.5	29.6

Note: Investment rates of EU27 countries based on European Commission forecasts.

Source: HCSO, MNB calculations

Chart 1-8: Annual change in consumption

Source: HCSO, MNB

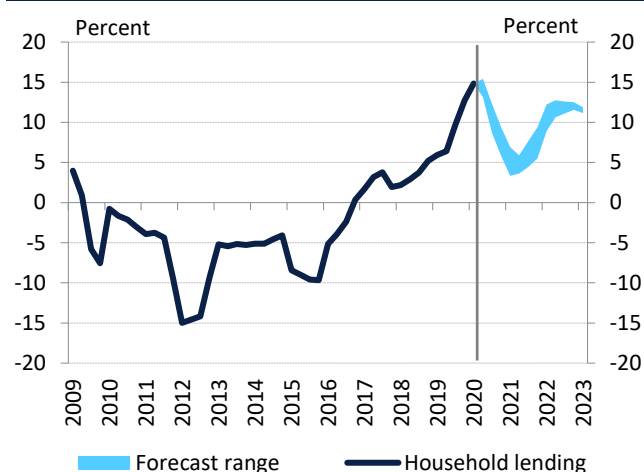
Following dynamic expansion in recent years, the growth rate of household lending may decrease in line with weakening credit demand (Chart 1-9). The deteriorating economic outlook may lead to reduced risk tolerance and tighter credit conditions. In addition to the state-subsidised loan schemes, however, the moratorium on loan repayments may also support household lending: demand for prenatal baby support loans remains high, despite the weakening economic environment.

We assume a shift in the utilisation of household income as a result of the moratorium (see Box 1-2). Due to that and the significantly lower rate of wage growth compared to previous years, households' net financial savings may fall in 2020 (Table 1-4), along with a simultaneous further increase in financial wealth. With economic recovery, the Hungarian Government Securities Plus (MÁP+) scheme offering favourable conditions as well as measures that stimulate demand for government securities (free account management, favourable redemption and cancellation of tax on interest) may also facilitate an increase in household savings over the coming years (see Box 4-1). Accordingly, the consumption rate will temporarily rise in 2020 and decrease again from 2021, while the investment rate is expected to gradually decline with the end of the housing market cycle.

The global spread of the COVID-19 pandemic has fundamentally changed the outlook for worldwide economic performance. Growth prospects in Hungary's trading partners deteriorated abruptly and to a large degree. Following the first quarter, which brought a recession in several countries, an even more severe decline may be projected for the second quarter. Due to the different structures of the economy (weight of exports and domestic demand, importance of tourism and automotive industry) and differences in the efforts to contain the virus, growth prospects in Hungary's export partners are highly uncertain. According to the ECB projections for June, there may be wide variation in the economic performance of euro area members which account for more than 60 percent of domestic exports, and the GDP decline could range from 5.9 to 12.6 percent in 2020.

Hungary is a small, open economy deeply integrated in the European (German) automotive value chain. Due to the restrictive measures introduced, the dominant export industrial subsectors (primarily automotive and mechanical engineering) shut down for several weeks in March and April. Hungary's large automotive factories started reopening from the middle of April, but

Chart 1-9: Forecast for lending to households



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

Source: MNB

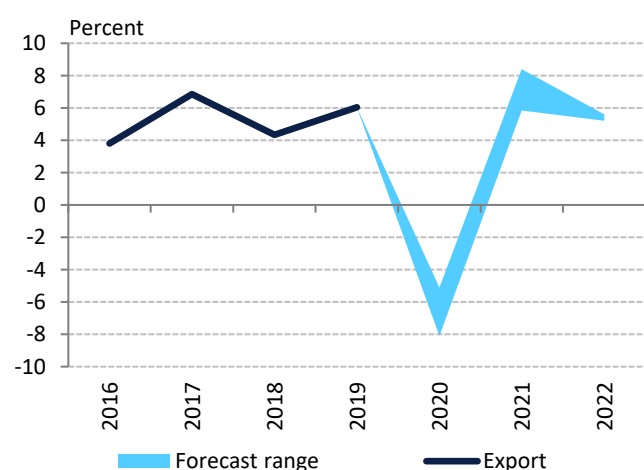
disruptions in supply chains, waning global demand and changing consumer behaviour may slow the process of returning to the previous growth path in exports. Moreover, **international tourism** – which had gained momentum in recent years – **may see a slow recovery**, which could also impact international trade in services. According to our forecast, **domestic exports and imports will both decline in 2020** (Chart 1-10). **Net exports will hamper growth this year**, but with growth resuming in Hungary's export partners **it will make a positive contribution once again in 2021 and 2022.**

Table 1-4: Consumption, investment and net savings rate of households, in proportion to real household income

	Consumption rate	Net savings rate	Household investment rate
2019	82.8	8.9	8.4
2020	83.5 – 83.9	7.8 – 8.3	8.2 – 8.3
2021	83.2 – 83.5	9.1 – 9.3	7.4 – 7.5
2022	83.1 – 83.3	9.5 – 9.6	7.2 – 7.3

Source: MNB calculations

Chart 1-10: Evolution of exports



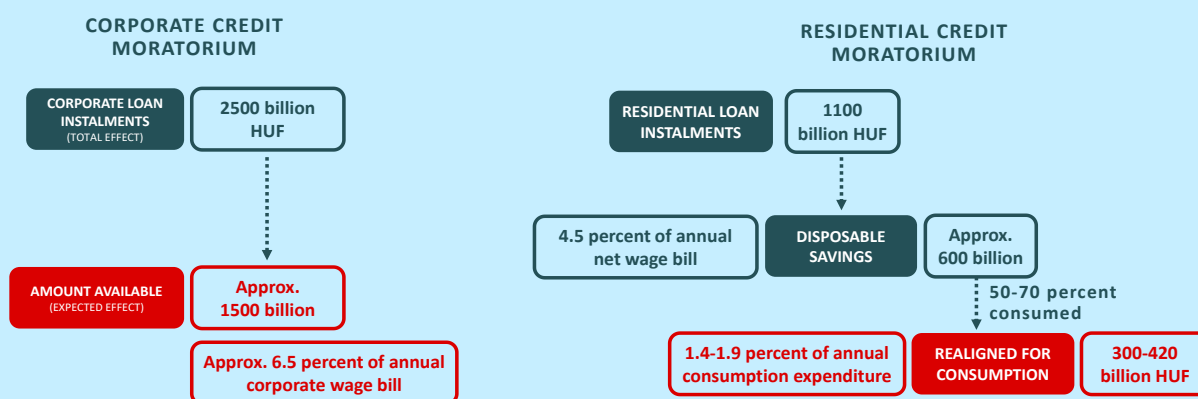
Source: HCSO, MNB

Box 1-2: Economic impacts of the moratorium on household and corporate loan instalments

The announcement of the general moratorium on payments – which automatically suspends until the end of 2020 the instalments on corporate and household loans concluded before 18 March 2020 – serves the management of the economic impacts of the coronavirus. The measure significantly eases the liquidity strains of economic agents with outstanding loans. In the Box below we quantify the potential economic effects of the moratorium, which – according to our assumptions – will contribute to the recovery of the economy by easing burdens on corporations and households.

The moratorium related to corporate loans helps prevent the interruption of production chains and work processes in the economy due to the lower capacity utilisation and the increase in bankruptcy rates owing to the coronavirus. In addition, the moratorium on repayments supports growth in outstanding lending, as the loans disbursed to corporations are accompanied by moderate instalments. According to market information corporate loan instalments impacted by the moratorium amount to roughly HUF 2,500 billion in total. According to our assumptions, the suspension of repayments will be used in the value of roughly HUF 1,500 billion by corporations. The amount thus released, which may temporarily be used freely, provides corporations with larger room for manoeuvre in the period of economic recovery; according to our estimate this amount equals to roughly 6.5 percent of the annual corporate wage bill (Chart 1-11).

Chart 1-11: Impact of the moratorium on corporate and household loan instalments



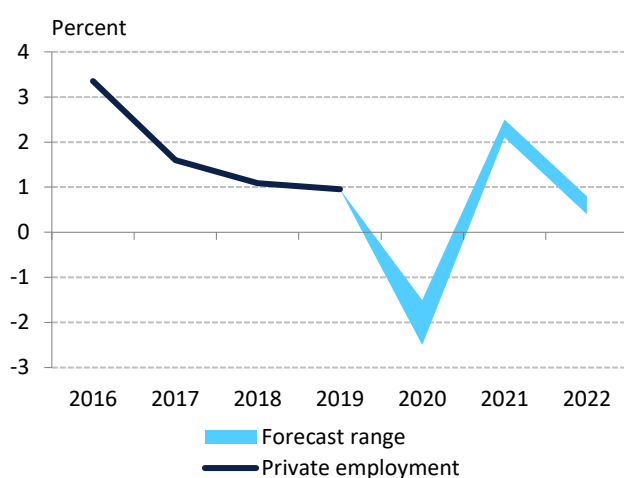
Source: MNB

The moratorium on the instalments of household loans may facilitate the substitution of consumption lost due to potential declines in incomes, thus helping to smooth households’ consumption over time (Chart 1-11). According to market information, the instalments of household loans in the remaining part of the year amount to roughly HUF 1,100 billion in total. According to our assumptions, households will resort to the moratorium for roughly HUF 600 billion. The temporary postponement of instalments provides households with the opportunity to use this part of the disposable income for consumption or investment. According to our estimate, the savings released in 2020 amount to approximately 4.5 percent of the annual net wage bill. Utilisation of the moratorium contributes to the quick return of consumption to the normal level; our estimations suggest that households may use 50–70 percent of the released amount for consumption.

1.3 Labour market forecast

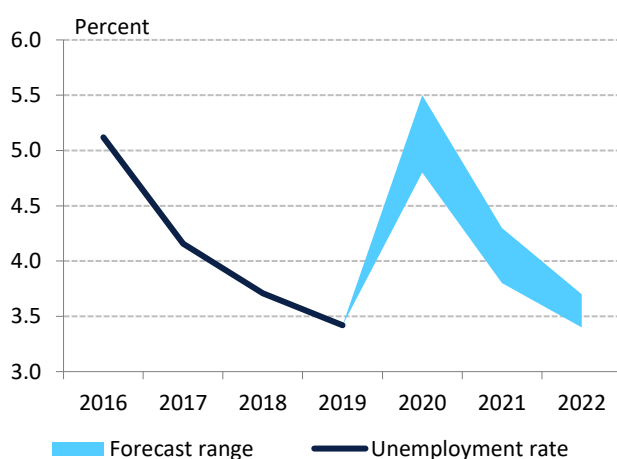
In line with the economic recovery, the labour market is also expected to start rebounding in the second half of the year. Rapid recovery in employment is also supported by the new sources of loans for SMEs (FGS Go!) as well as by job protection and job creation measures. As a result of an increase in labour demand and economic policy measures, a significant portion of lost jobs may already be restored by the end of the year. With the return of job losers who became temporarily inactive due to stay-at-home orders, the unemployment rate will peak in Q3 2020. Approaching full employment again, the unemployment rate will drop to below 4 percent. In view of the renegotiating of wages as well as the restraining of variable pay and bonuses, wage dynamics are expected to slow significantly in 2020. With the fast recovery of the economy, competition for hiring new labour and retaining existing staff will increase again; this year's temporarily lower wage growth will be followed by adjustment in 2021.

Chart 1-12: Annual change in employment in the private sector



Source: HCSO, MNB

Chart 1-13: Evolution of the unemployment rate



Source: HCSO, MNB

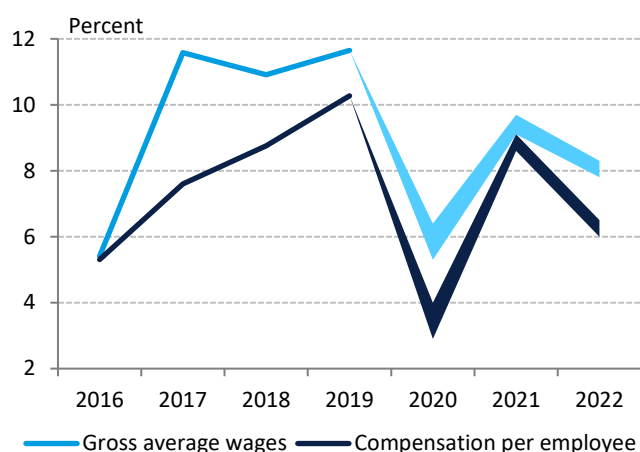
From the second quarter, the impacts of the coronavirus pandemic on the economy are reflected in the labour market as well. According to our expectations, compared to the 2008–2009 crisis, businesses may react faster, in the form of lay-offs, temporary stoppages and a reduction in the number of working hours. **In line with the economic recovery, the labour market is also expected to start rebounding in the second half of the year.**

Depending on their capital position, companies strive to retain most of their staff; **the rapid recovery in employment is also supported by the new sources of loans for SMEs (FGS Go!) as well as by job protection and job creation measures.** Instead of further lay-offs, the wage subsidy for shortened working hours encourages companies to resort to intensive-side adjustment, i.e. we expect a rapid rise in the ratio of part-time employees (for more information on part-time employment see 6.2 Special topic). **Labour market capacities** are expected to **bounce back quickly**, and thus the ratio of part-time employees will also return to its previous level.

Due to the impacts of the pandemic on the economy, more than 100 thousand jobs may cease to exist. As a result of an increase in labour demand and economic policy measures, a significant portion of the lost jobs may already be made up for by the end of the year. Accordingly, employment in the private sector will decline by 1.5–2.5 percent on average this year (Chart 1-12). With the return of the job losers who became temporarily inactive due to the stay-at-home orders, **the unemployment rate will peak in Q3 2020**, before starting to decline. As full employment is approached again, the unemployment rate will drop to below 4 percent (Chart 1-13).

The rapid change in the economic situation and the easing of labour market tightness render the previous wage increase plans obsolete, and the legal conditions are also in place to accommodate this. **With the renegotiation of wages and the restraining of variable pay and bonuses,**

Chart 1-14: Annual changes in gross average wages and labour cost in the private sector



Source: HCSO, MNB estimation

wage dynamics are expected to slow significantly in 2020 (Chart 1-14). As the economy quickly recovers, competition for hiring new labour and retaining the existing staff will increase again, and **according to our forecast, this year's temporarily lower wage growth will be followed by adjustment**: private sector wages will grow by 9.1–9.7 percent in 2021 and by 7.8–8.3 percent in 2022.

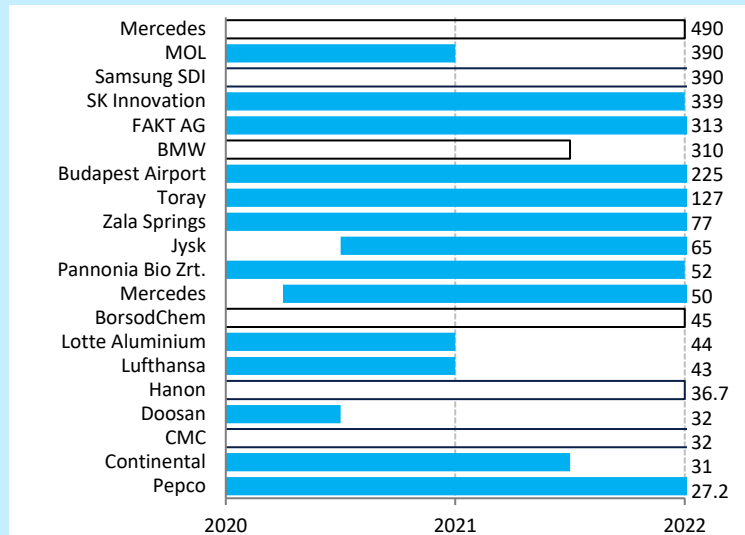
The average labour cost is reduced by tax cuts. In certain sectors, employers are relieved of their contribution payment obligations in the short run, and the social contribution tax will decline by 2 percentage points from 1 July 2020. The social contribution tax may decrease by another 2 percentage points over the forecast horizon, at the beginning of 2022, as we expect.

Box 1-3: Role of investments in economic recovery

In Q1 2020, whole economy investments declined by 8 percent year on year, thus breaking the upward trend in investments which had been observed for a longer period. **Investments in machinery dropped by 7 percent**, while **building-type investments increased by 2.8 percent** in Q1 2020 year on year. Among **enterprises** that employ at least 50 persons – these account for 58 percent of the investment performance – the volume of developments **rose** much less dynamically than the average rate observed in previous periods, i.e. only **by 4 percent**, and **developments at budgetary organisations**, which realise 10 percent of all investments, **fell short of the base period by 17 percent**. **Investments in manufacturing**, the sector with the highest weight, have presumably already been curbed by the coronavirus pandemic, as they **rose** to a substantially lesser degree than last year, advancing by just **1.1 percent**. The increases of 10.4 percent in real estate transactions, 30.8 percent in agriculture and 1.5 percent in trade and vehicle repair – i.e. the sectors that also have a larger weight in investment performance – were offset by the fact that transportation and warehousing, representing the third largest weight, fell by 5.7 percent in Q1 2020, and **the volume index of investments also declined in most sectors of the national economy** in year-on-year terms.

In 2019, Hungary's investment rate reached 28.6 percent, which was among the highest in the European Union. Along with public investments, corporate and household investments also both contributed to the rise in the rate. **In recent years, the corporate sector in Hungary undertook major capacity expansions**, with the investment activity of corporations growing at double-digit rates in 2017–2019. Samsung SDI, Mercedes-Benz, MOL, Gránit Pólus, SK Innovation, BMW, Budapest Airport, FAKT AG and Toray together implemented investments in the total amount of several thousand billion forints – also exceeding HUF 100 billion on an individual basis – and several of these projects are still ongoing at present (Chart 1-15). On the other hand, according to the information provided by MAPI Hungarian Development Agency Corp, despite the economic damages caused by the pandemic, **there are 3,500 mostly Hungarian-owned companies in Hungary that are ready to improve production efficiency through progressive investments** (roughly an amount of HUF 500 billion).

Chart 1-15: Major investment projects scheduled for 2020–2022



Note: Figures in HUF billions. No information is available with regard to the time profile of investments indicated by blank columns.

Source: MNB based on press information

Owing to the coronavirus pandemic, **uncertainty about economic prospects rose significantly**, as a result of which many companies must revise and restructure their expenditures, often **leading to investments being delayed or, in a worse case, even being suspended**. One example of this in Hungary was the **announcement that construction of the BMW factory in Debrecen would be postponed for several months**. If the uncertainty related to global economic prospects continues over the long run, and it takes longer for industries planning and implementing capacity expansions in Hungary (primarily in the automotive industry) to recover, **corporate investments may be rescheduled**.

In crisis situations, countercyclical fiscal policy is an important pillar of economic recovery. However, it should be noted that the **economic effects of fiscal measures differ based on their structure** (Table 1-5). The importance of **public investments increase due to its high multiplier effect**, since these investments are able to efficiently use the available resources for economic growth. According to our estimate, one unit of public investment increases the level of GDP by almost 0.8 units, and the short-term impact is even higher than that in the case of building-type investments. **For that very reason, it is particularly important to ensure that public investments are implemented this year already, thereby also supporting rapid economic recovery**.

Government investment is boosted by spending on pandemic control and the Economic Action Plan investment measures. Among other things, HUF 82 billion was transferred from the Economic Protection Fund to the construction of the Budapest-Belgrade railway line, HUF 79 billion for road development and HUF 24 billion for investments of the Hungarian Armed Forces, and renovation costs. In addition, more than HUF 300 billion was paid into the Central Residual Settlement Fund, to be used primarily for investment and accumulation expenditures. The actual effect of this spending may be reduced by the fact that the transfers provided from the Economic Protection Fund may also impact other investment expenditures. Nevertheless, in our forecast we project an increase in public investment, to the extent of the room for budgetary manoeuvre, and the related stimulus effect.

Table 1-5: Multiplier effects by investment sectors and nature of utilisation

	Building	Machinery	Other	All types
Corporate	0.77	0.34	0.77	0.43
Household	0.89	0.43	0.84	0.78
Government	0.90	0.41	0.88	0.77
Whole economy	0.84	0.35	0.81	0.52

Note: The table shows the increase in the number of units of GDP stemming from one unit of investment in the respective year. Other investment: Investments of non-building and non-machinery type (e.g. livestock for breeding, intangible assets). Source: MNB

Table 1-6: Changes in projections compared to the previous Inflation Report

	2019	2020		2021		2022	
	Actual	Projection					
		Previous	Current	Previous	Current	Previous	Current
Inflation (annual average)							
Core inflation ¹	3.8	3.7 – 4.0	3.8 – 4.0	3.3 – 3.4	3.0 – 3.1	3.0	2.9
Core inflation excluding indirect tax effects	3.4	3.2 – 3.5	3.3 – 3.5	2.9 – 3.0	2.6 – 2.7	3.0	2.9
Inflation	3.4	2.6 – 2.8	3.2 – 3.3	3.4 – 3.5	3.2 – 3.3	3.0	3.0
Economic growth							
Household consumer expenditure	5.0	3.7 – 4.0	0.3 – 1.8	3.2 – 3.5	2.8 – 3.8	3.0	3.1 – 3.2
Government final consumption expenditure ⁶	2.0	1.0	1.3 – 1.8	0.3	1.0 – 1.4	1.4	1.2 – 1.3
Gross fixed capital formation	15.3	1.1 – 2.9	1.7 – 2.9	4.6 – 6.2	6.2 – 7.2	3.0	3.7 – 4.1
Domestic absorption	5.6	2.3 – 3.0	2.8 – 4.0	3.0 – 3.6	3.3 – 3.9	2.7	2.8 – 3.0
Exports	6.0	1.7 – 3.7	(-8.1) – (-5.1)	7.5 – 9.6	5.8 – 8.4	6.2	5.2 – 5.6
Imports	6.9	2.1 – 3.8	(-5.4) – (-3.0)	6.4 – 8.3	5.2 – 6.9	5.4	4.5 – 4.8
GDP	4.9	2.0 – 3.0	0.3 – 2.0	4.0 – 4.8	3.8 – 5.1	3.5	3.5 – 3.7
Labour productivity ⁵	3.2	2.6 – 3.2	2.5 – 3.5	3.9 – 4.4	2.1 – 3.2	3.4	2.8 – 3.3
External balance²							
Current account balance	-0.8	(-0.6) – (-0.5)	(-1.9) – (-1.5)	(-0.4) – 0.2	(-1.1) – (-0.9)	0.0 – 0.7	(-0.8) – (-0.5)
Net lending	1.0	1.6 – 1.8	0.3 – 0.7	1.7 – 2.4	1.2 – 1.3	1.6 – 2.3	1 – 1.2
Government balance²							
ESA balance	-2.0	(-2.0) – (-1.6)	-3.8	(-1.2) – (-0.8)	-2.9	(-1.1) – (-0.8)	(-2.2) – (-2.1)
Labour market							
Whole-economy gross average earnings ³	11.4	8.5 – 9.1	6.5 – 7.5	8.4 – 8.6	7.9 – 8.6	7.7	7.1 – 7.5
Whole-economy employment	1.0	(-0.6) – (-0.3)	(-2.5) – (-1.7)	0.1 – 0.4	1.6 – 1.9	0.1	0.4 – 0.6
Private sector gross average earnings ³	11.6	8.8 – 9.6	5.3 – 6.4	9.0 – 9.2	9.1 – 9.7	8.4	7.8 – 8.3
Private sector employment	1.4	(-0.4) – 0.1	(-2.5) – (-1.5)	0.2 – 0.6	2.1 – 2.5	0.1	0.4 – 0.8
Unemployment rate	3.4	3.9 – 4.2	4.8 – 5.5	3.8 – 3.9	3.8 – 4.3	3.7	3.4 – 3.7
Private sector nominal unit labour cost	6.4	4.8	0.9 – 1.2	3.5 – 3.7	4.0 – 4.6	4.2	3.1 – 3.4
Household real income ⁴	4.7	3.8 – 4.1	(-0.7) – 0.4	2.9 – 3.1	3.3 – 4.1	2.5	3.3 – 3.5

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 1-7: MNB baseline forecast compared to other forecasts

	2020	2021	2022
Consumer Price Index (annual average growth rate, %)			
MNB (June 2020)	3.2 – 3.3	3.2 – 3.3	3.0
Consensus Economics (June 2020) ¹	2.4 – 3.0 – 3.9	0.7 – 2.9 – 3.8	
European Commission (May 2020)	3.0	2.7	
IMF (April 2020)	3.4	3.3	3.2
OECD (June 2020)	3.5	1.8 – 2.1	
Reuters survey (June 2020) ¹	2.6 – 3.1 – 3.5	1.9 – 3.0 – 3.7	2.9 – 3.2 – 3.5
GDP (annual growth rate, %)			
MNB (June 2020)	0.3 – 2.0	3.8 – 5.1	3.5 – 3.7
Consensus Economics (June 2020) ¹	(-6.8) – (-4.8) – (-2.8)	2.0 – 4.2 – 7.3	
European Commission (May 2020)	-7.0	6.0	
IMF (April 2020)	-3.1	4.2	2.6
OECD (June 2020)	(-10.0) – (-8.0)	1.5 – 4.6	
Reuters survey (June 2020) ¹	(-6.8) – (-4.9) – (-3.0)	2.8 – 4.3 – 6.3	2.1 – 3.4 – 4.2
Current account balance³			
MNB (June 2020)	(-1.9) – (-1.5)	(-1.1) – (-0.9)	(-0.8) – (-0.5)
European Commission (May 2020)	1.3	1.5	
IMF (April 2020)	-0.1	-0.6	-0.3
OECD (June 2020)	(-1.3) – (-1.2)	(-1.3) – (-0.4)	
Budget balance (ESA 2010 method)³			
MNB (June 2020)	-3.8	-2.9	(-2.2) – (-2.1)
Consensus Economics (June 2020) ¹	(-6.0) – (-4.9) – (-4.0)	(-4.8) – (-3.3) – (-2.8)	
European Commission (May 2020)	-5.2	-4.0	
IMF (April 2020)	-3.0	-1.6	-1.5
OECD (June 2020)	(-9.9) – (-8.8)	(-9.0) – (-7.3)	
Reuters survey (June 2020) ¹	(-6.0) – (-4.8) – (-3.5)	(-4.0) – (-3.1) – (-2.7)	(-2.0) – (-1.9) – (-1.5)
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (June 2020)	(-7.0) – (-3.0)	1.0 – 4.5	0.5 – 3.0
ECB (June 2020)	(-12.6) – (-8.7) – (-5.9)	3.3 – 5.2 – 6.8	2.2 – 3.3 – 3.8
Consensus Economics (June 2020) ²	-6.5	5.0	
European Commission (May 2020) ²	-6.6	5.7	
IMF (April 2020) ²	-6.2	4.7	1.8
OECD (June 2020) ²	(-10.1) – (-7.9)	2.7 – 6.0	

¹ For Reuters and Consensus Economics surveys, in addition to the average value of the analysed replies, we also indicate the lowest and the highest values to illustrate the distribution of the data.

² Values calculated by the MNB; the projections of the named institutions for the relevant countries are adjusted with the weighting system of the MNB, which is also used for the calculation of the bank's own external demand indices. Certain institutions do not prepare forecast for all partner countries.

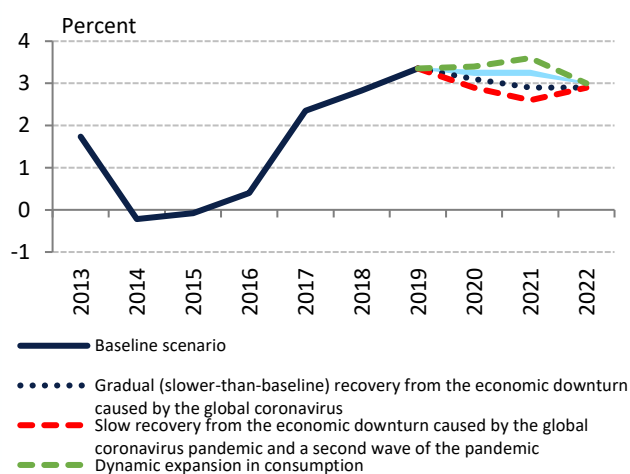
³ As a percentage of GDP.

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

2 Effects of alternative scenarios on our forecast

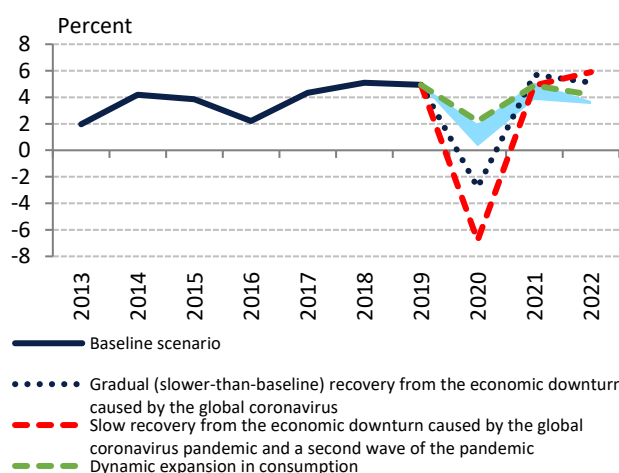
The Monetary Council highlighted three alternative scenarios around the baseline projection in the June Inflation Report. The alternative scenarios assuming a gradual (slower-than-baseline) recovery from the economic downturn caused by the global coronavirus pandemic and a slow recovery with a second wave of the pandemic may result in a lower inflation path and more subdued growth path compared to the baseline scenario. In the alternative scenario featuring a dynamic expansion in consumption, inflation is higher, while Hungary's economic growth is stronger than projected in the baseline scenario. 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

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

Gradual (slower-than-baseline) recovery from the economic downturn caused by the global coronavirus

In our baseline scenario, as a result of the direct and indirect impacts of global risks, Hungary's economic growth declines, but convergence to the euro area is still expected to continue with a growth surplus of at least 2 percentage points.

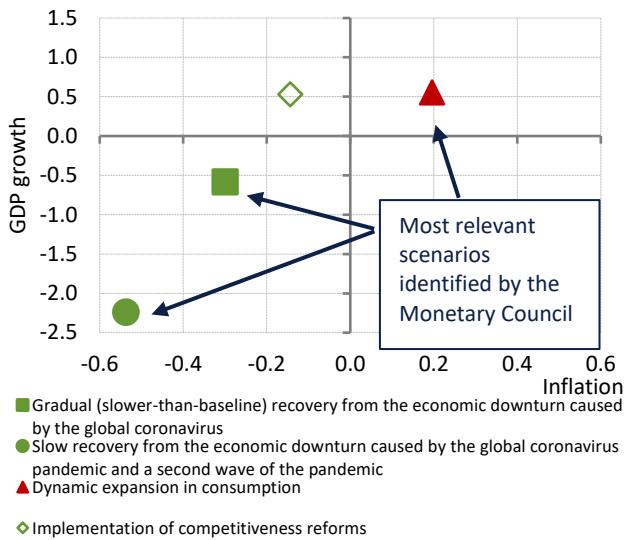
In our alternative scenario, the recovery in global economic performance proceeds slowly and the rebound of the euro area after the recession takes longer, **resulting in slack external demand. Inflationary pressure from the euro area remains low. Demand for commodities and the prices thereof remain persistently moderate.** Accordingly, **compared to the baseline scenario, Hungary's economic performance declines to a larger degree this year**, but from 2021 domestic GDP once again expands strongly. The growth surplus compared to the euro area remains in place. Slower-than-expected external economic activity and more subdued developments in euro area inflation **suggest that domestic inflation and growth paths will be lower than in the baseline scenario.**

Slow recovery from the economic downturn caused by the global coronavirus pandemic and a second wave of the pandemic

In addition to the assessment of global developments described in the previous scenario, **looking ahead, epidemiologists assume a second wave of the pandemic**, which may once again have major negative effects on both global and Hungarian growth prospects.

In this alternative scenario, the negative effect of the coronavirus on the real economy persists, **and the second wave of the pandemic results in an additional downturn both in the global and the Hungarian economy.** Global commodity market prices remain persistently moderate. As a result of this, **EU countries**, which are already exhibiting subdued growth, **may find themselves in an even more**

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

difficult situation. In view of cyclical and structural factors, European economic activity remains persistently weak. Compared to the euro area, Hungary's growth surplus remains in place, but domestic growth drops significantly in 2020; however, in the following two years we once again anticipate growth in the economy. Slower-than-expected external economic activity and more subdued developments in euro area inflation suggest that domestic inflation and growth paths will be significantly lower than in the baseline scenario.

Dynamic expansion in consumption

While household consumption may have fallen sharply in April, it may also bounce back faster than seen in previous crises. High-frequency data already reflect a rise in consumer demand in May. The robust growth in consumption registered in previous years occurred in a sustainable structure, as households' investment and savings ratios, and their financial wealth also rose considerably. The moratorium on loan repayments by households also supports the smoothing of household consumption in 2020. The favourable wealth position and savings rate represent a reserve for growth in the coming period.

If consumer confidence rebounds quickly after the pandemic and households spend a large part of their previously accumulated savings on consumption, domestic economic activity will recover faster. A larger fall in households' savings and a larger rise in consumption corresponds to GDP growth that is higher than assumed in the baseline scenario.

Other risks

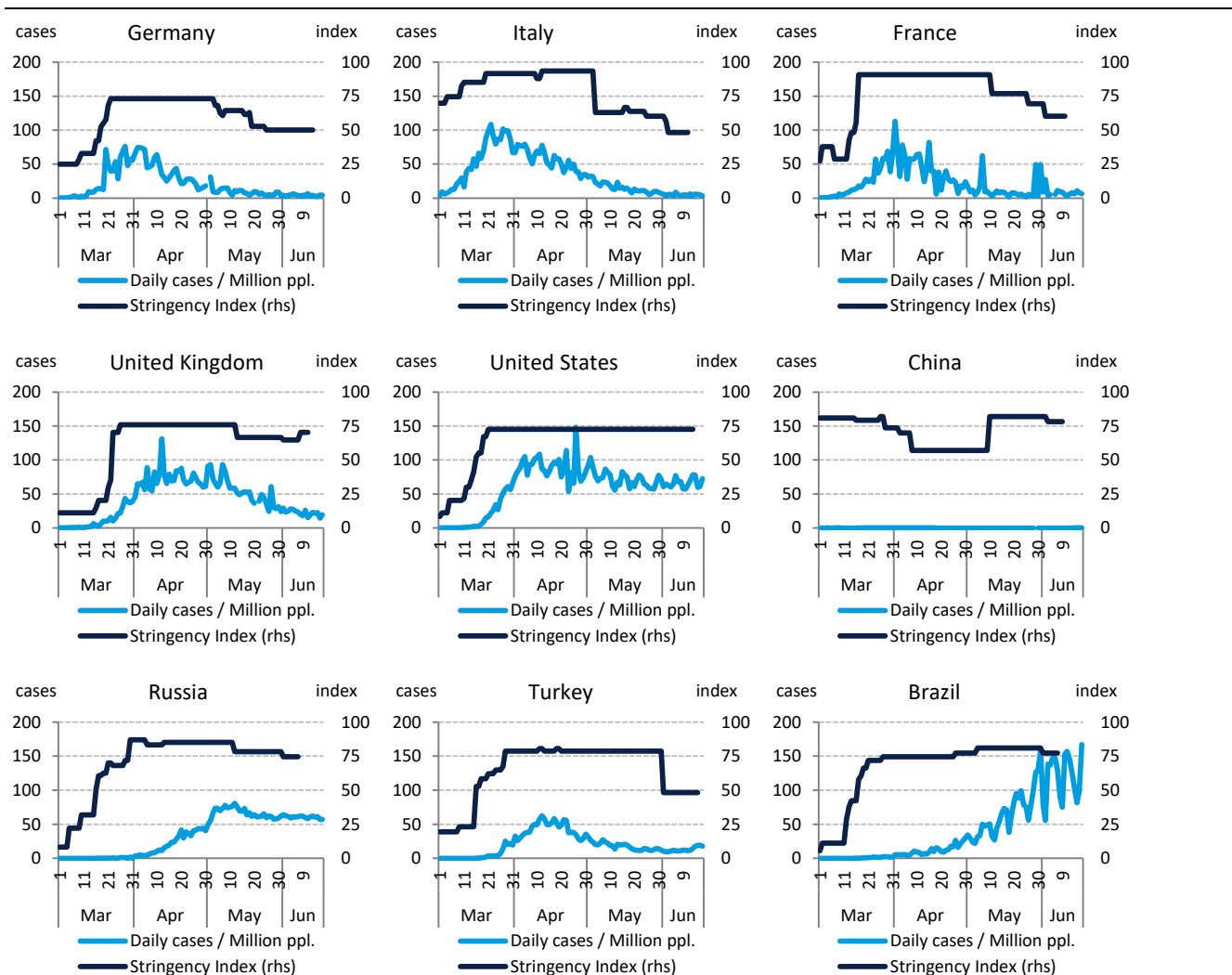
In addition to the scenarios highlighted above, the Monetary Council considered another alternative scenario. The scenario featuring implementation of competitiveness reforms also involves higher aggregate productivity, and thus higher potential activity in the economy. With higher potential growth, the stronger-than-baseline GDP growth will not result in an increase in inflation.

3 Macroeconomic overview

3.1 Evaluation of international macroeconomic developments

In the past period, trends in economic performance have been dominated by the coronavirus pandemic and the related containment measures. Global tourism essentially came to a standstill in mid-March. The output of large economies already declined in Q1 2020, which – based on activity data for April and May – may be followed by an even stronger contraction in Europe in the second quarter. In parallel with the flattening of the epidemic curve, European economies have started reopening. At the same time, certain emerging economies (Brazil, India) have become new hotspots in the spread of coronavirus, and the epidemic curve in the United States has also not flattened substantially. The fast spread of the coronavirus pandemic prompted central banks around the world to loosen monetary conditions. Of the world’s leading central banks, the Federal Reserve once again reduced its key policy rate to nearly zero, and additionally started significant quantitative easing and launched new programmes to stimulate lending. The European Central Bank is trying to mitigate the negative impacts of the coronavirus using liquidity-providing instruments and a new asset purchase programme. As a result of the significant easing, the balance sheet total of both central banks rose dynamically. Similarly to the central banks of developed countries, central banks in the emerging economies also typically implemented interest rate cuts. In addition, several central banks launched asset purchase programmes and introduced new credit instruments to mitigate the disinflationary risks developing as a result of the coronavirus pandemic and to provide sufficient liquidity.

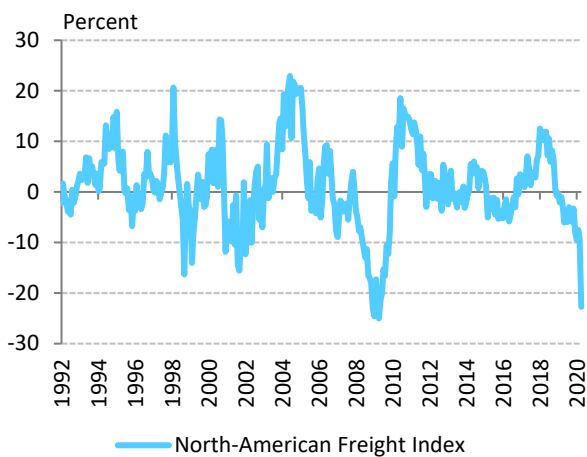
Chart 3-1: Number of COVID-19 cases and the stringency of safety measures designed to stop its spread



Note: Cases as a ratio of total population (millions). Index value is on a scale between 0 to 100.

Source: Johns Hopkins University, Hale et. al. (2020): Oxford COVID-19 Government Response Tracker, Blavatnik School of Government

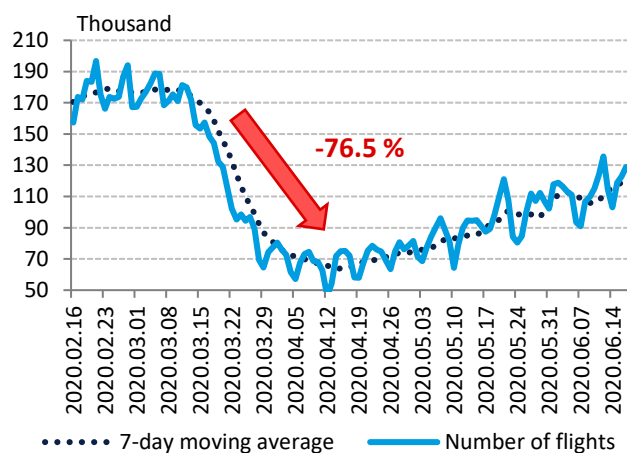
Chart 3-2: Annual changes in North American freight index



Note: The freight index of North America includes transportation by land, air and water.

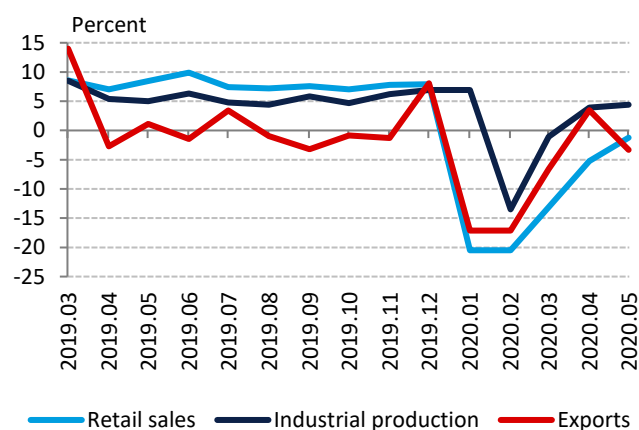
Source: Cassinfo

Chart 3-3: Total number of global flights



Source: Flightradar24

Chart 3-4: Annual changes in Chinese macroeconomic data



Source: Macrobond

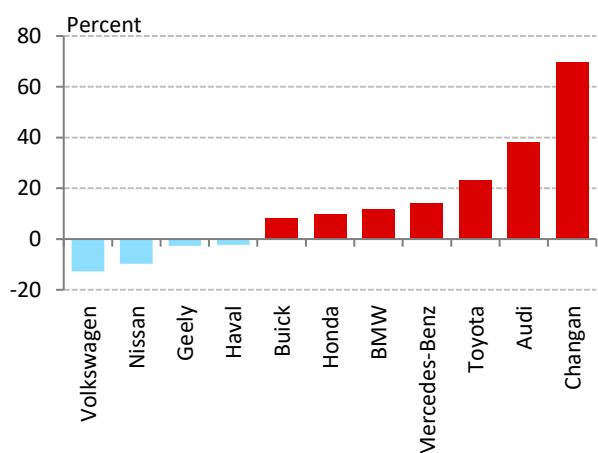
3.1.1 Trends in international economic activity

In the past period, trends in economic performance were determined by the COVID-19 pandemic and the related containment measures. **The pandemic hit the global economy in a weakened state, and its negative economic effects appeared quickly in a wide range of countries.** The index measuring **overall transportation by land, air and sea in North America hit a 10-year low in April**, after falling **almost 23 percent** compared to April 2019 (Chart 3-2). **Global tourism essentially came to a standstill in mid-March.** Following the wide-ranging implementation of travel restrictions, the number of flights plunged from almost 200,000 registered at the beginning of the year. **In mid-April, there were merely 46,000 flights daily** – including flight serving both goods and passenger traffic – which **represents a fall of almost 80 percent** compared to the beginning of the year. The **past weeks were characterised by gradual adjustment in air traffic, which reflects the ongoing efforts to reopen economies** (Chart 3-3).

The economic impacts of the coronavirus first appeared in China. As a result of the quarantines, shop closures and factory shutdowns, China’s economic performance fell substantially. **In Q1 2020, Chinese GDP contracted by 6.8 percent** in year-on-year terms, marking the poorest performance in the last 50 years. Retail sales volume and the number of motor vehicle registrations already improved in April and May after the low registered in January and February (Charts 3-4). In the case of vehicle sales in China, the European brands generally performed well in the first four months of the year (Chart 3-5). As a result of economic reopening, **capacity utilisation rose in the past weeks** and **business sentiment in China improved.** **In April, industrial production and exports both rose** by more than 3 percent in year-on-year terms. The improvement in Chinese economic performance may help restore European economic activity through **the gradual recovery of production chains.**

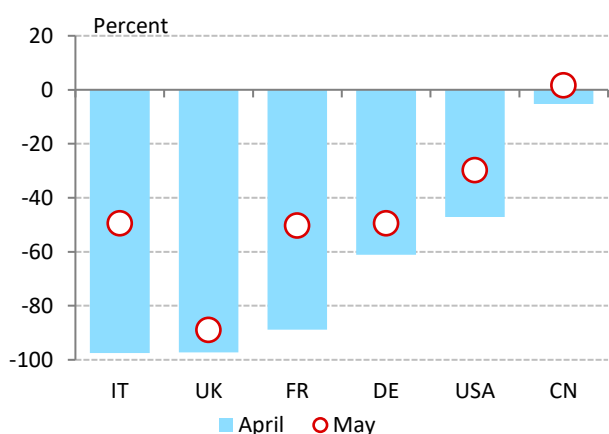
In Q1 2020, US GDP grew moderately, expanding by 0.3 percent year on year. By mid-March the pandemic had reached the American continent as well, and the economic impacts substantially curbed the dynamics of household consumption. In addition, private investments also fell in the first quarter in year-on-year terms. The **United States took measures rather late**, the absence of which facilitated the rapid spread of virus first in the state of Washington and in New York City, regarded as the largest centres, and then all over the country. The country is still **close to the peak of the epidemic curve.** In May, US industrial output

Chart 3-5: Annual changes in Chinese vehicle sales (Jan-Apr 2020)



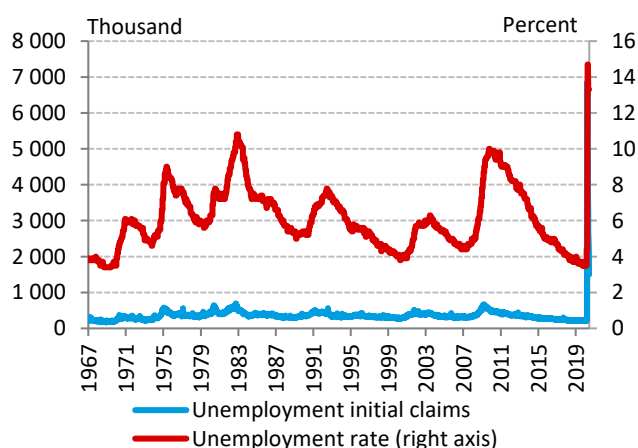
Source: Carsalesbase

Chart 3-6: Annual change in vehicle registrations (April-May 2020)



Source: ACEA, Macrobond

Chart 3-7: Evolution of unemployment initial claims and unemployment rate in the United States



Note: The unemployment rate shows the over-16 age group, based on seasonally adjusted data.

Source: Fred, U.S. Bureau of Labor Statistics

declined by 15.3 percent in year-on-year terms. In April 2020, the retail and catering sales volume declined by 19.9 percent year on year, while car registrations fell by almost 50 percent (Chart 3-6). May was characterised by a milder decline. In the acute period of the pandemic, **for the week ending on 28 April, 6.867 million new applications for unemployment benefit were submitted in the USA**, which was unprecedented since 1967. **By the end of May**, after a continuous decline, the number of new applications submitted **fell below 1.9 million**. In line with this, **in April the unemployment rate of those over 16 peaked at 14.7 percent**, and then **in May, after a moderate decline, it stood at 13.3 percent** (Chart 3-7).

At present, **the new hotspots in the coronavirus pandemic are certain emerging markets (Brazil, India)**. In Q1 2020, Russia and Turkey registered increasing numbers, but Russia is still at the peak of its epidemic curve at present.

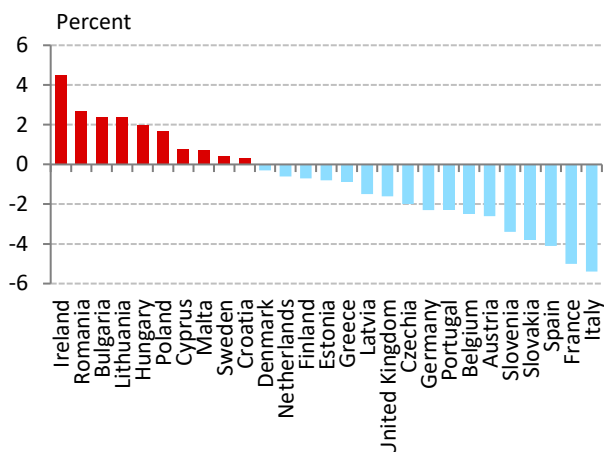
By March the continuous deterioration in the economic situation stemming from **the coronavirus reached Europe as well**. Economic performance in the **United Kingdom fell by 1.6 percent in Q1 2020** year on year, the largest drop registered since Q4 2009 (Chart 3-8). Of the industrial sectors, **vehicle manufacturing suffered the largest decline**. Retail sales volume fell by almost 23 percent, while **the registration of new cars dropped close to zero in April**.

In Q1 2020, the **economy of the euro area and of the 27 Member States of the EU contracted by 3.1 percent and 2.6 percent, respectively**, year on year. According to **the ECB's June projection, economic performance in euro area may reach its low in Q2 2020, when GDP of the area may fall short of the year-on-year figure by 13 percent**.

The countries that introduced stricter restrictions prior to rise of the epidemic curve were able to keep their epidemic curve flat throughout the pandemic. On the other hand, countries with steeper curves had to take stricter measures to stop the contagion – the Oxford Stringency Index exceeded 90 only in Italy, France and in the United Kingdom. The more stringent measures typically entail higher economic sacrifices; the weight of tourism and catering, which are particularly impacted by curfew measures, is the highest in southern countries. **The effect of the coronavirus already appeared in the GDP declines registered in Italy, France and Spain in the first quarter**. Based on energy production, Hungary's main export markets may have been operating at about 90 percent of last year's capacity in mid-June (Chart 3-9).

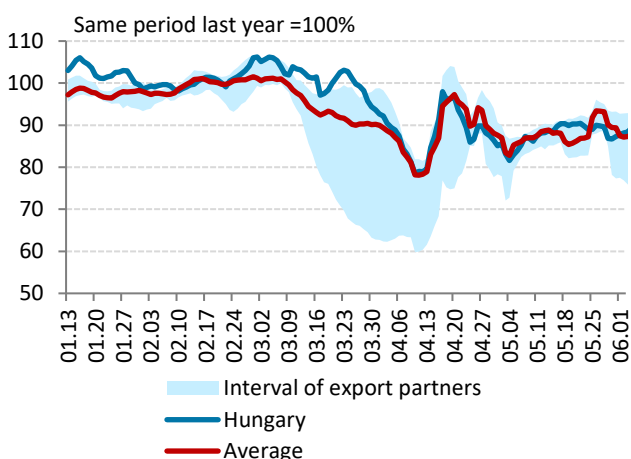
The economic performance of Germany, Hungary's main trading partner, **declined by 2.3 percent in Q1 2020**, following the moderate growth observed in recent years.

Chart 3-8: Annual changes in GDP growth in Q1 2020



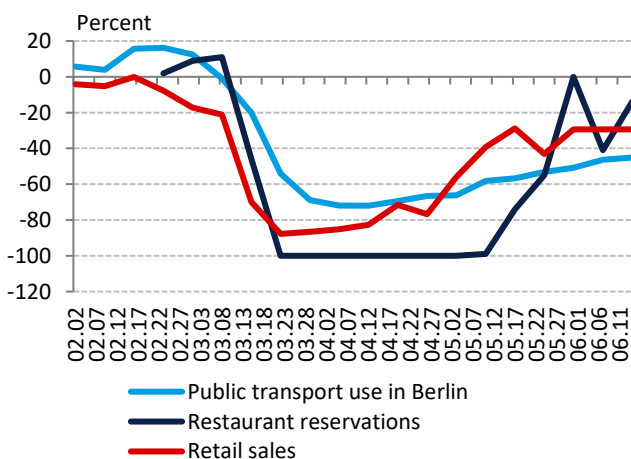
Note: Based on seasonally and working day adjusted data.
Source: Eurostat

Chart 3-9: Annual changes in electricity load of Hungarian export partners in 2020



Note: Export partners: Austria, Germany, Romania, Czechia, Italy, Slovakia Source: MNB based on ENTSO-E

Chart 3-10: Annual change in high frequency indicators of Germany in 2020



Source: Bloomberg

The introduction of curfew measures forced several service sectors to suspend their activities. In parallel with the **major decline in industrial production** (-25.3 percent in April), goods exports also fell sharply. In the past period, **German business sentiment deteriorated to an extraordinary degree**, setting a negative record in April, followed by a correction in May. In recent years, the German automotive industry had already been forced to make changes, due to the shift to alternative powertrains and tighter EU regulations. **The coronavirus further intensified the challenges facing the automotive industry, which may retard recovery in this sector.** German retail sales volume fell by 6.5 percent in April in year-on-year terms, accompanied by a 61.1-percent drop in car registrations (Chart 3-6). **Economic indicators show gradual improvement in the first two weeks of June** (Chart 3-10). In the past period, German business sentiment plummeted, hitting a negative record in April, followed by a correction in May (Chart 3-11 and Chart 3-12).

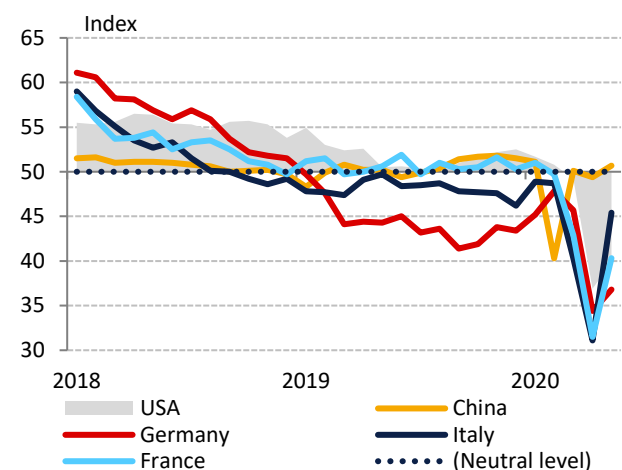
The **epidemic curves are already in the descending phase in most of the European countries.** In parallel with the flattening of the epidemic curve, governments **started to gradually ease restrictions.** Gradual reopening commenced in Germany on 20 April, in Italy on 4 May, in Spain and France on 11 May, which is also **evidenced by the indicator of the Google mobility index related to the activity of the population** (Chart 3-13).

The EU's fastest growing economies were in the **Central and Eastern European region** in the first quarter of 2020 again (Chart 3-8). However, due to the pandemic, of the countries of the region, **GDP declined in Q1 2020 in Slovakia (-3.8 percent) and the Czech Republic (-2.0 percent)**, in year-on-year terms. Slovakia's poor performance is primarily attributable to the falling output of the vehicle industry. Based on the seasonally adjusted data, **Romania and Poland registered growth rates of 2.7 and 1.7 percent**, respectively, which was also supported by significant **positive carry-over effects.** The **epidemic curves were relatively flat** in the countries of the region, and thus restrictions began to be lifted in these countries as well.

3.1.2 International monetary policy, inflation and financial market trends

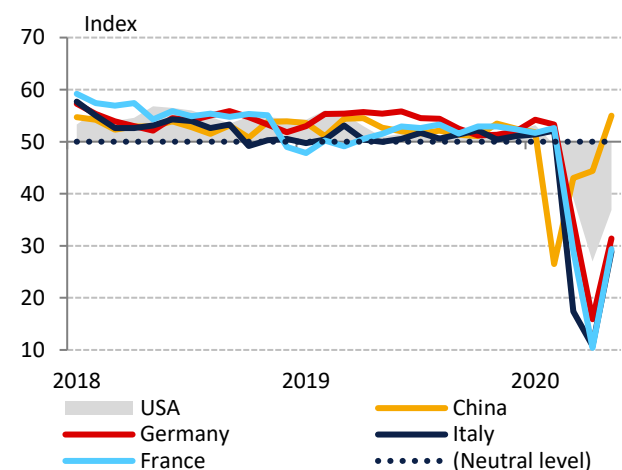
Global inflation decreased in recent months (Chart 3-14). Inflation rates in the United States, Japan and the euro area are lower than the central bank targets, while inflation in other developed and emerging economies – with the exception of Turkey – was still near the central bank targets. (Chart 3-15).

Chart 3-11: Evolution of manufacturing PMIs



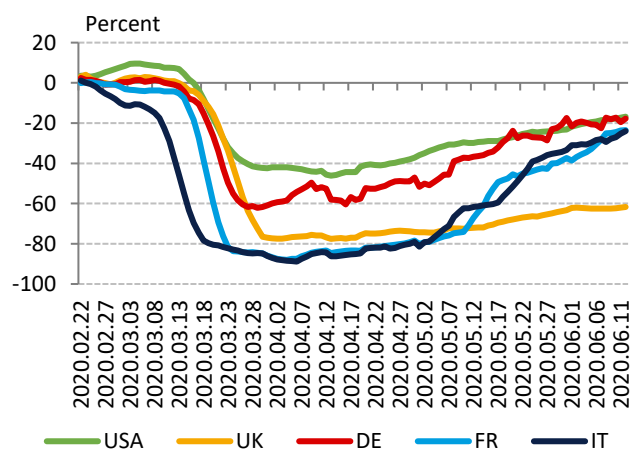
Note: Seasonally adjusted series.
Source: Bloomberg

Chart 3-12: Evolution of services PMIs



Note: Seasonally adjusted series.
Source: Bloomberg

Chart 3-13: Google mobility index (retail and recreation)

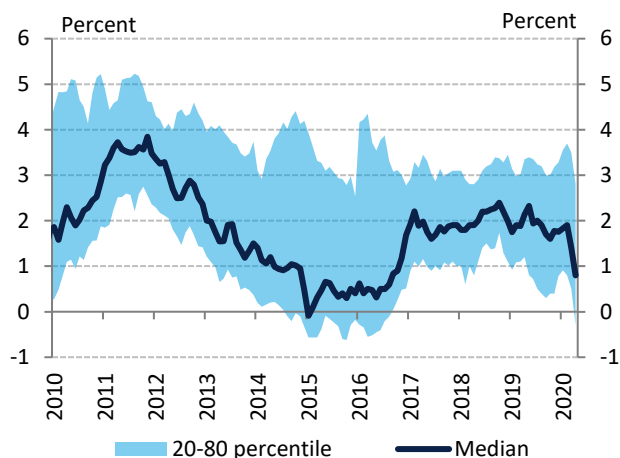


Note: The chart shows 7-day moving averages.
Source: Google

As a result of the spread of the coronavirus, since March the Federal Reserve reduced its key policy rate by 150 basis points to ease monetary conditions. In order to stabilise the government securities market, the central bank first announced an asset purchase programme with a total volume of USD 750 billion, which was later changed to an open-ended, unlimited programme. In order to ensure interbank liquidity, the central bank offers repurchase agreements (collateralised loans) in the amount of USD 1,000 billion, to keep the cost of corporate and household loans low. In addition, numerous programmes were launched – with a total volume of roughly USD 700 billion – to support the functioning of submarkets, in the framework of which the central bank purchases securities or accepts such as collateral. Furthermore, in April the Fed launched a new lending programme to support medium-sized enterprises (Main Street Lending Programme), within the framework of which it purchases loans disbursed under the programme from commercial banks up to the amount of USD 600 billion. As a result of the major loosening, the balance sheet of Fed increased by roughly USD 3,000 billion since early March. The central bank believes that the public health crisis, which developed as a result of the coronavirus, will significantly influence inflation and employment trends both in the short and medium term. Based on the forward guidance, the central bank will not change its key policy rate until such time as it becomes sure of the attainment of its full employment and price stability objectives. In June, the Fed announced that it will begin buying individual corporate bonds and the central bank also updated the implementation strategy of its bond-buying programme. Under this programme the Fed will follow a market index, which will complement the facility’s current purchases of exchange-traded funds specialising in corporate bonds.

In the past quarter, the Japanese central bank did not change its interest conditions, but in March it decided to double the annual limit of JPY 6,000 billion for the purchase of ETFs, pursued as part of its asset purchase programme. Thus, from now on, the Japanese central bank may purchase ETFs in the amount of JPY 12,000 billion annually. In addition, the central bank also decided to introduce a new, corporate financing operation and raised its purchase limit for corporate bonds and debt certificates by JPY 2,000 billion. In April, the central bank cancelled the annual maximum purchase limit on Japanese government securities, which was JPY 80,000 billion until then; i.e. the central bank may purchase government securities without limit in order to keep the 10-year yield close to 0 percent. In addition, at its May rate-setting meeting, Japan’s central

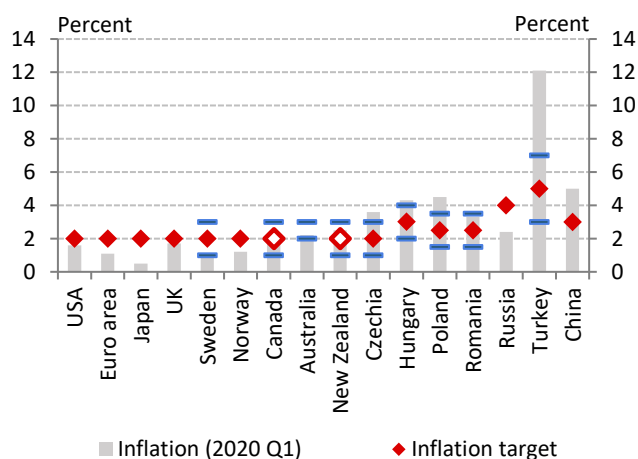
Chart 3-14: Global inflation developments



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

Source: OECD

Chart 3-15: 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 actual, which is marked by empty diamond.

Source: OECD, FRED, National Institute of Statistics Romania

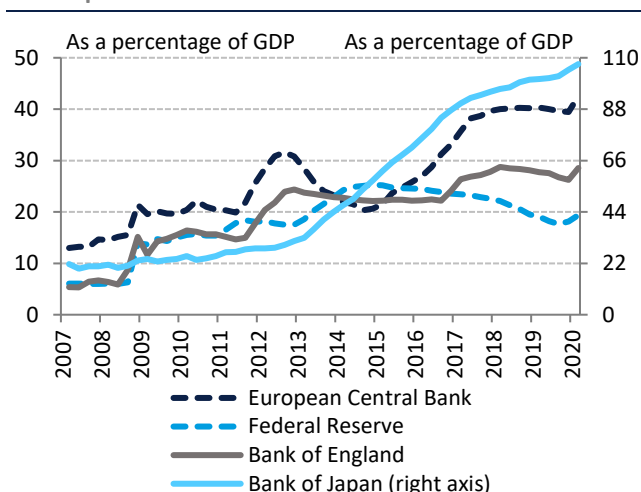
bank decided on the introduction of a new credit instrument aimed at SMEs. Under the new credit instrument, SMEs can obtain loans with a maximum maturity of 1 year at 0 percent interest. At its June meeting, the central bank boosted the size of its stimulus programme to JPY 110 trillion, in order to ease financial strains on corporations.

In the past period, the policymakers of the Bank of England implemented an interest rate cut of 65 basis points in total, in two steps, and thus the key policy rate fell to 0.1 percent. In addition, the central bank decided to introduce a Term Funding Scheme with additional incentives for SMEs (TFSME), the amount of which may be 10 percent of the outstanding loans of the participating banks. The central bank also launched the Covid Corporate Financing Facility (CCFF), with an unlimited facility amount, under which the central bank purchases short-term bonds issued by corporations. In order to increase liquidity, the central bank lowered the countercyclical capital buffer to 0 percent, and also decided to apply a Contingent Term Repo Facility (CTRF). The central bank increased its asset purchase programme by GBP 200 billion, under which it purchases government bonds and corporate bonds. According to the latest, May forecast of the central bank, due to the coronavirus the economy may contract by 14 percent in 2020. The downturn may be followed by fast recovery, and thus the central bank calculates with a growth of 15 percent in 2021. The Bank of England extended its asset purchasing program by an additional GDP 100 billion to keep government borrowing costs low.

Since March, the Chinese central bank (PBoC) reduced further the one-year benchmark lending rate, which thus fell to 3.85 percent. PBoC reduced both the medium-term central bank lending rate and the seven and fourteen-day reverse repo rates. Furthermore, the Chinese central bank also decided to lower the interest rate on the excess reserves held by banks over the mandatory reserves. From 7 April, the central bank pays 0.35 percent on excess reserves instead of 0.72 percent.

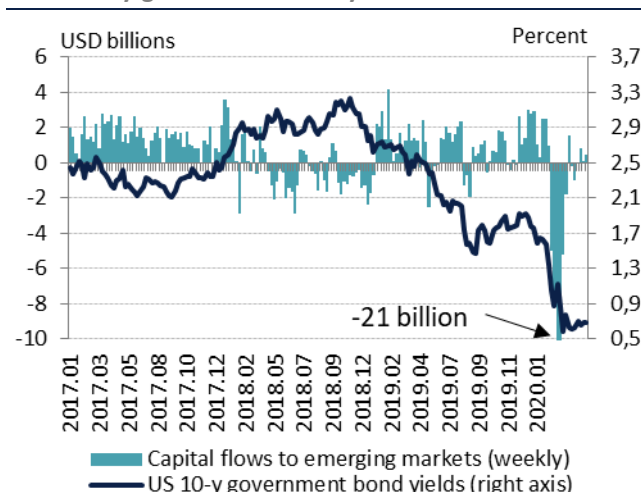
In the past quarter global financial market sentiment significantly improved, volatility declined and stock price indices rose. The financial market tensions caused by the coronavirus peaked in mid-March, after which financial markets were characterised by gradual calming. This was also reflected by the significant decline in equity market and bond market volatility. All of this was supported by fiscal and monetary measures to mitigate the virus and the gradual lifting of restrictive measures. Amid the favourable sentiment, both developed and emerging market stock

Chart 3-16: Central bank balance sheet totals in developed countries



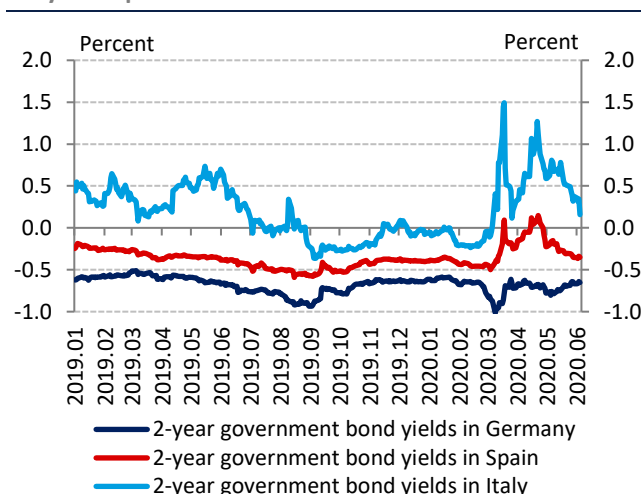
Source: Databases of central banks, Eurostat, FRED

Chart 3-17: Capital flows to emerging markets (weekly) and US 10y-government bond yields



Source: EPFR, Bloomberg

Chart 3-18: 2-year government bond yields in Germany, Italy and Spain



Source: Bloomberg

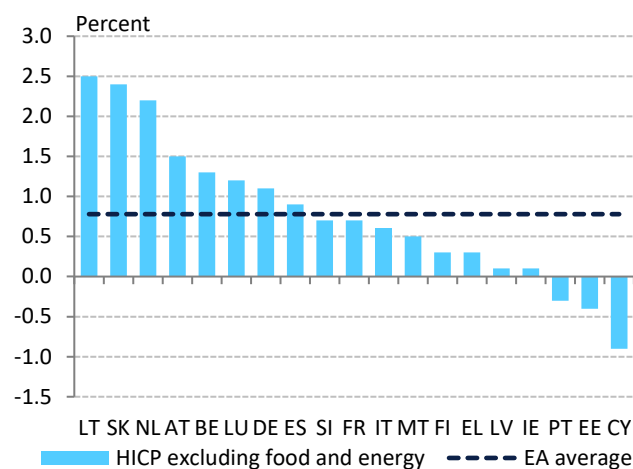
indices rose substantially, advancing by 30–40 percent. The foreign exchange market was characterised by depreciation of the US dollar, which also may have been linked to rising risk appetite. Developed market bond yields fell by 20–40 basis points, also supported by the central banks' asset purchase programmes (Chart 3-17). Following the decision of ECB at the beginning of June, Italian bond yields fell by 15–20 basis points within one day. Demand for risky assets also increased in the past period, as a result of which – following the major capital inflow in March and April – even emerging market bond funds registered capital inflows in May. Accordingly, bond yields decreased in the emerging market as well, and spreads also declined (Chart 3-18).

The market expects central banks to maintain the loose monetary policy due to the unfavourable economic prospects. Market pricing suggests that the Fed will maintain the present level of interest rates for about three years and will start increasing interest rates only after that. In mid-March, the market still expected the first interest rate hike to take place at an earlier date, i.e. at the end of 2021. Expectations related to ECB are similar: based on the market pricing, the present interest rate conditions may persist until mid-2023. This also represents looser conditions than expected in March, when the market anticipated the first interest rate increase in spring 2022.

In the past period, inflation in the euro area fell significantly in May consumer prices increased by 0.1 percent in the area as a whole. The consumer price index was below the central bank target in most member states, with inflation higher than target only in Slovakia. Core inflation declined from 1.2 percent in February to 0.8 percent in May (Chart 3-19). In a breakdown by Member States, in the past period core inflation fell in most countries, with core inflation dropping into negative territory in Estonia, Portugal and Cyprus.

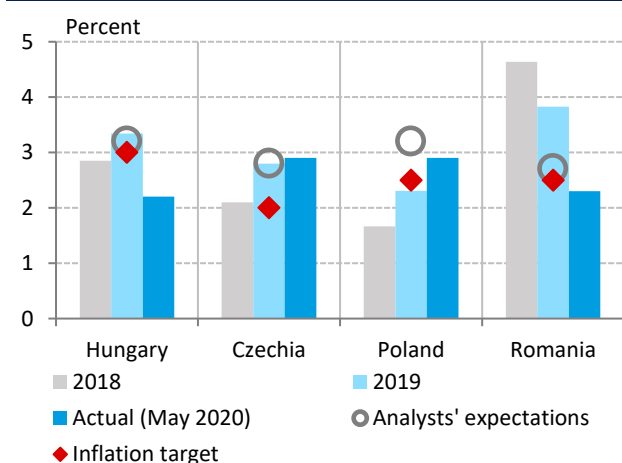
At its March rate-setting meeting, the Governing Council of the ECB left its policy rates unchanged, while at the same time loosening monetary conditions using other instruments. The ECB increased funding for the euro area banking sector in several steps, thereby preventing the freezing up of financial markets and increases in yields: the central bank eased the parameters of its targeted longer-term refinancing operations (TLTRO III), and thus banks have access to funding under more favourable interest rates. In addition, the ECB also decided to launch new Pandemic Emergency Longer-term Refinancing Operations (PELTRO). The purpose of the new instrument is to provide the euro area's banking sector with liquidity and to ease

Chart 3-19: HICP excluding energy, food, alcohol and tobacco in the euro area members (April 2019)



Source: Eurostat

Chart 3-20: Inflation targets of central banks, inflation and analysts' expectations



Note: Analyst's expectations relate to annual average in 2020.

Source: OECD, Trading Economics, National Institute of Statistics Romania, Consensus Economics

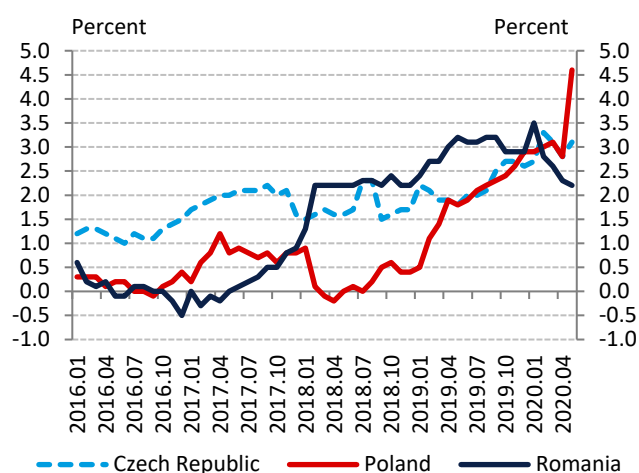
tensions in the financial markets. PELTRO will consist of an additional 7 tenders and the loans will expire gradually between July and September 2021. In addition, the ECB also substantially expanded its asset purchases: it announced asset purchases for an additional EUR 120 billion for this year, supplementing the present monthly purchases in the amount of EUR 20 billion. In addition, the ECB also launched a new asset purchase programme with an overall volume of EUR 750 billion (Pandemic Emergency Purchase Programme – PEPP) targeted at countering the impacts of the pandemic. In this programme, the ECB also cancelled the rule that it may purchase only 33 percent of the bond portfolio issued by the individual Member States. At its June rate-setting meeting, the ECB increased its PEPP, launched in March, by EUR 600 billion, thereby raising the overall volume of PEPP to EUR 1,250 billion. The ECB also prolonged the time horizon of purchases from end-2020 until at least June 2021, or the purchases will continue as long as the negative impacts of the coronavirus are present. The expiring securities purchased under PEPP will be reinvested until at least the end of 2022. As a result of the measures taken by the central bank, the ECB's balance sheet total has increased by EUR 900 billion since early March.

The ECB will reinvest the principal of the securities purchased within the framework of the asset purchase programme even well after starting to raise policy rates. The Governing Council emphasised the necessity of maintaining the very loose stance, as both current inflation and forecast inflation are below target.

As regards the countries of the region, the rate of increase in consumer prices declined, but is still close to the inflation targets (Chart 3-20). Inflation in Poland peaked in January at 4.7 percent, which was followed by a gradual decline. In the Czech Republic, consumer prices rose by 3.7 percent in February and then started to decline gradually; by May inflation had decelerated to 2.9 percent. Inflation in Romania has fallen since January and it was steadily within the tolerance band; in April consumer prices rose at a rate of 2.3 percent. Core inflation decreased in Hungary and Romania and increased in Poland and the Czech Republic over the past period (Chart 3-21).

Decision-makers at the Czech central bank cut the benchmark rate in 3 steps since March to 0.25 percent in response to the unfavourable economic impacts of the coronavirus. In addition, the Czech central bank also implemented liquidity-increasing measures. In its latest forecast, the Czech central bank projects a contraction of

Chart 3-21: Developments of inflation excluding energy, food, alcohol and tobacco in the countries of the region



Source: Eurostat

8 percent for this year, which may be followed by growth of 4 percent in 2021.

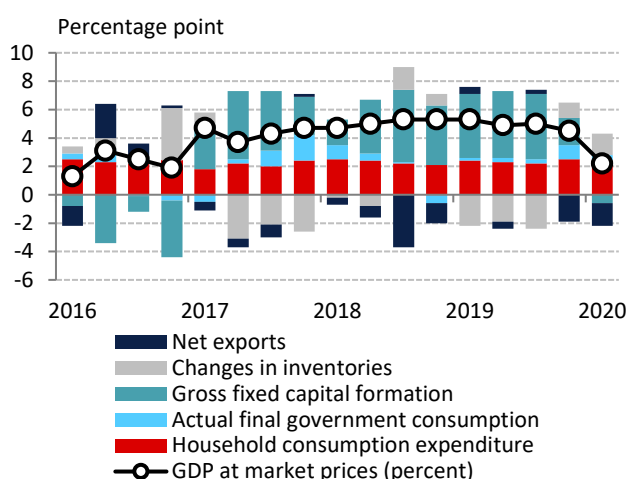
Decision-makers at the Polish central bank cut the benchmark rate in 3 steps from 1.5 percent to 0.1 percent since March. In addition, the Polish central bank also conducts repo operations, and decided on the launch of a new credit instrument, which provides refinancing loans to banks at favourable conditions for lending to corporations. In addition, the central bank also launched a large-volume bond purchase programme. In the opinion of the central bank, economic conditions were relatively favourable at the beginning of the year, but on an annual basis GDP growth has decelerated. Since then, the indicators measuring economic activity have deteriorated.

In the past quarter, the Romanian central bank's decision-makers reduced the key policy rate in two steps from 2.5 percent to 1.75 percent. In the first two months of the year growth was still robust, but in Q1 2020, economic growth slowed to 2.7 percent compared to the rate of 4.3 percent registered in the previous quarter. Based on the central bank's new forecast, the inflation rate will fall moderately in Q2 2020. Thereafter, in the second half of the year inflation will rise to the upper part of the tolerance band, and will then remain around the inflation target until the end of the forecast horizon.

3.2 Analysis of the production and expenditure side of GDP

In Q1 2020, the Hungarian economy grew by 2.2 percent, putting it in the vanguard of European countries. The economic effects of the coronavirus pandemic appeared in Hungary in March, and thus they only moderately influenced the Q1 growth figures. In the special situation caused by the pandemic, continuous monitoring of economic performance and the use of the widest possible information base is crucially important. According to high-frequency data, which provide up-to-date information, economic performance may have reached its low in April and since then the economy has started to recover gradually.

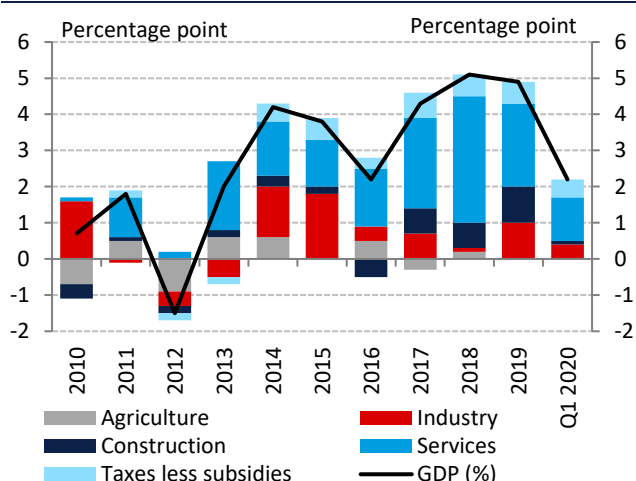
Chart 3-22: Contribution to annual changes in GDP



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

Source: HCSO

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



Source: HCSO

In Q1 2020, Hungary's gross domestic product grew at a rate of 2.2 percent year on year, while on a quarter-on-quarter basis GDP contracted by 0.4 percent. Hungary takes a distinguished place in the growth ranking of the European Union; due to the impacts of the coronavirus, GDP in several European countries already decreased in the first quarter. On the expenditure side, economic growth was supported by household consumption and positive changes in inventories (Chart 3-22), while whole-economy investments and net exports curbed GDP growth.

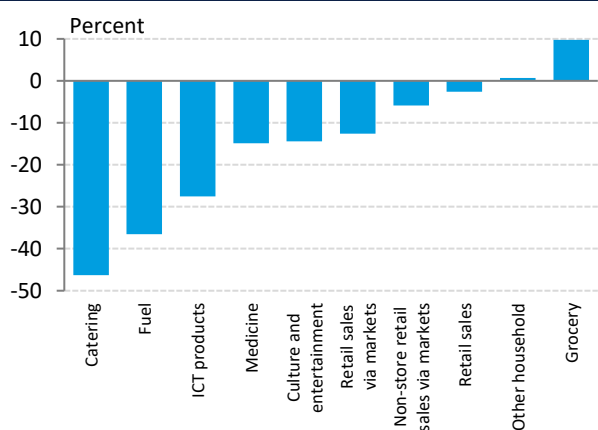
On the production side, the economic effect of the coronavirus already appeared in the performance of most economic sectors (Chart 3-23). The value added of the information and communication sector grew at a robust rate (8.8 percent), which may have also been attributable to the spread of home office work and digital education in March.

The acute phase of the lost turnover in services may have lasted from mid-March until the end of April; however, in the period after that turnover recovered on a broad basis.

As a result of curfew measures and border closures since early March **tourism demand plunged**. The turnover of tourism and catering, the sector that suffered the largest revenue shortfall, increased slightly in May, but turnover is still merely around 60 percent of the amount registered at the beginning of March. Due to the economic consequences of the coronavirus, the performance of the sector is expected to return to the previous levels more slowly, in parallel with the gradual lifting of restrictions and the opening of borders. **Domestic tourism demand may recover faster in the coming period**, while the recovery of international tourism may take years and may also be influenced by the changing consumption and travelling habits triggered by COVID-19.

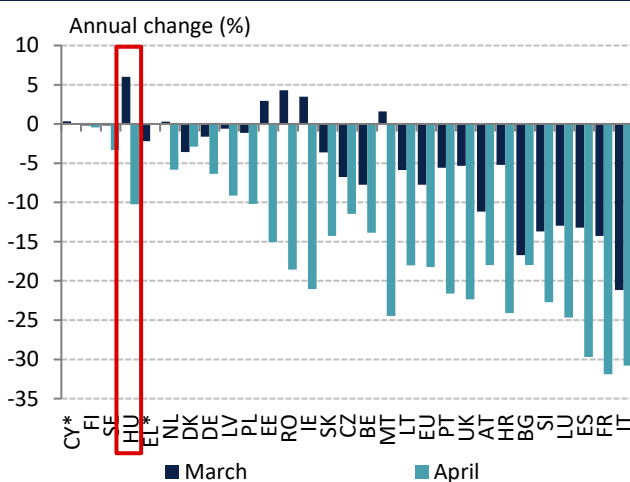
As a result of the outbreak and spread of the epidemic, retail and pharmaceutical sales rose sharply in the first half of March, which was also attributable to stockpiling and panic buying. A substantial decline was already observed in April in a wide range of non-food retail stores, while parcel services and internet retail sales increased by 104 percent compared to April 2019. In May, total retail

Chart 3-24: Evolution of turnover in retail trade and catering in May



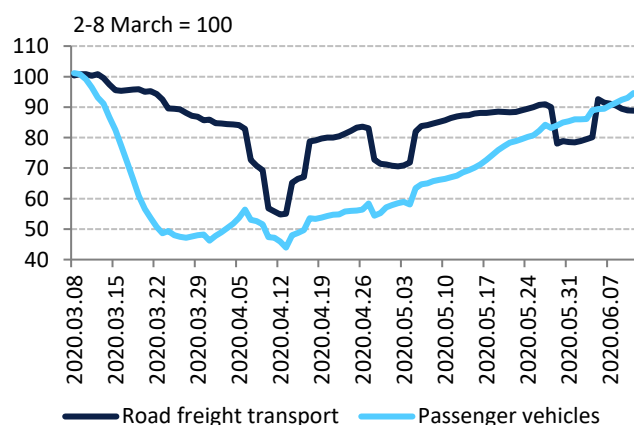
Note: Compared to the same period of last year. Source: HCSO

Chart 3-25: Annual change in retail trade in the European Union in March and April



Note: Seasonally adjusted data. *No data for April. Source: MNB based on Eurostat.

Chart 3-26: Road traffic changes relative to reference period



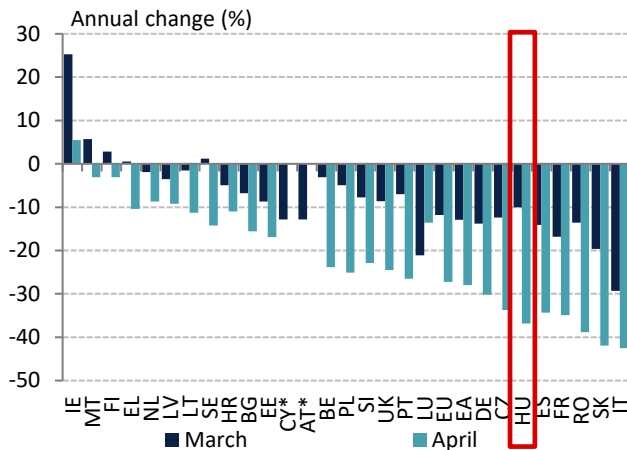
Note: Using seven-day moving average. Source: NTPS Plc. Business Intelligence, MNB calculation

sales volume was 2.6 percent lower (-10.2 percent in April) than in the same period in 2019. **Turnover has started to return in most retail sectors**, with the turnover of grocery stores already 9.8 percent higher than a year earlier. At the same time, a slower recovery is expected in the case of catering (-46.3 percent) and, in line with subdued vehicle traffic, a significant decline in fuel (-36.5 percent) and information and communication technology products is still visible (Chart 3-24). **Based on the available international data, the decline in Hungarian retail turnover was smaller than average.** The average performance for March and April, which were affected by the epidemic, was -2.1 percent in Hungary, representing the third strongest retail sales growth in Europe on the average for these two months according to current data (Chart 3-25).

Changes in goods traffic may provide information with regard to the real-time performance of the **transportation sector**. According to data provided by the National Toll Payment Service Plc. Business Intelligence, road transport of goods **may have reached its low in April, when it stood at 60–80 percent of the average value registered at the start of March.** The data reflect a continuous rise in traffic from early May, which increased to around 90 percent by the middle of the month (Chart 3-26). The sector is expected to recover only gradually, in line with the pick-up in industrial production; however, the restoration of road freight transport to the levels registered before the spread of the coronavirus in Hungary may be the first signs of recovery. The earlier and more drastic decline in passenger car traffic is the result of the spread of working from home and curfew restrictions.

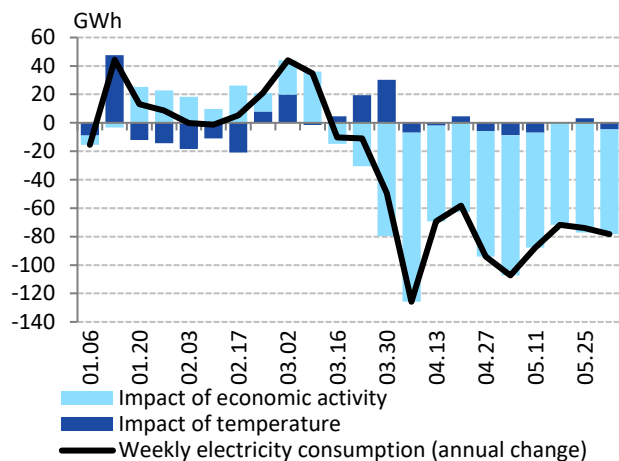
In April, as a result of the stoppage of the largest vehicle plants in Hungary and the significant deterioration in the global economic outlook, industrial production declined substantially (-36.8 percent). The decline in industrial performance typically occurred Europe-wide in the sectors producing for external markets (Chart 3-27). **Energy consumption data suggest that the gradual recovery of the sector's production has commenced** (Chart 3-28). On the other hand, based on market information, the largest automotive companies may return to full capacity utilisation only gradually. For the time being, production has only restarted on a part-time basis. Recovery of industrial production is essentially determined by the pattern and rate of the recovery of the global economy, the position within the supplier chains and the changing consumer trends.

Chart 3-27: Annual change in industrial production in the European Union in March and April



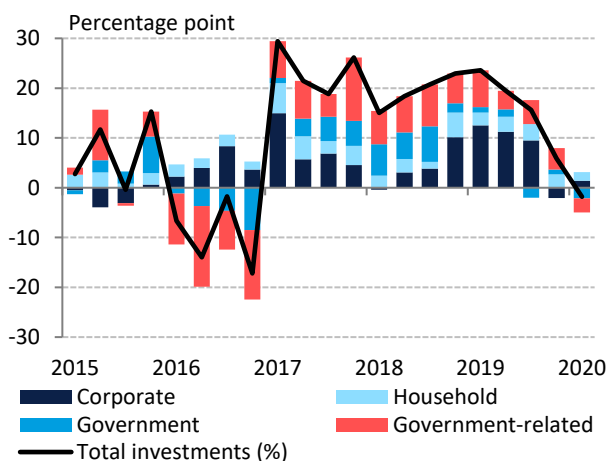
Note: Unadjusted data. *No data for April.
Source: MNB based on Eurostat

Chart 3-28: Annual change in weekly electricity consumption



Source: MNB estimation based on ENTSO-E

Chart 3-29: Decomposition of the annual change in investments

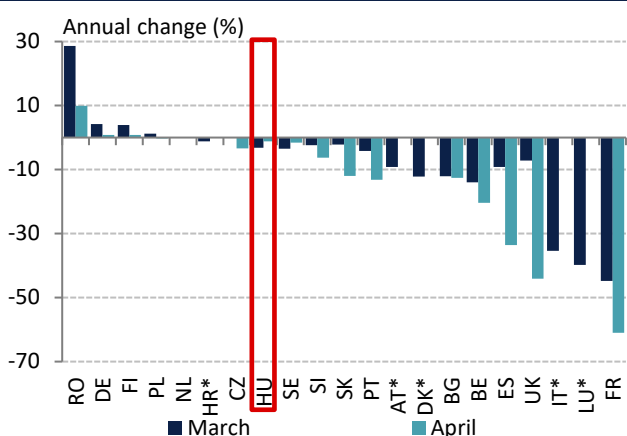


Source: HCSO

The growth in the volume of whole-economy investments which had been seen since early 2017 stopped in the first quarter, and investment activity declined by 1.8 percent year on year (Chart 3-29). The volume of investments in buildings rose moderately (+2.8 percent), while the volume of investments in machinery and equipment declined (-7 percent). In April 2020, construction output decreased by 2.1 percent year on year. Within the two main construction groups, the construction of buildings fell 1.4 percent, while other construction dropped by 2.8 percent. According to the available data, Hungarian construction output is in the vanguard of the European ranking. The construction industry grew significantly on average in March-April only in Romania (Chart 3-30). In April, the volume of new contracts concluded was 3.9 percent higher, while the volume of the month-end contract portfolio fell short of the year-on-year value by 15.4 percent. Based on available European data, Hungarian construction production is at the forefront. Only Romania (9.9 percent), Germany (0.8 percent) and Finland (0.8 percent) saw construction output increase on an annual basis in April. France saw the largest decline (-61 percent), but output in the sector also declined substantially in the United Kingdom (-44 percent) and Spain (-34 percent) (Chart 3-30).

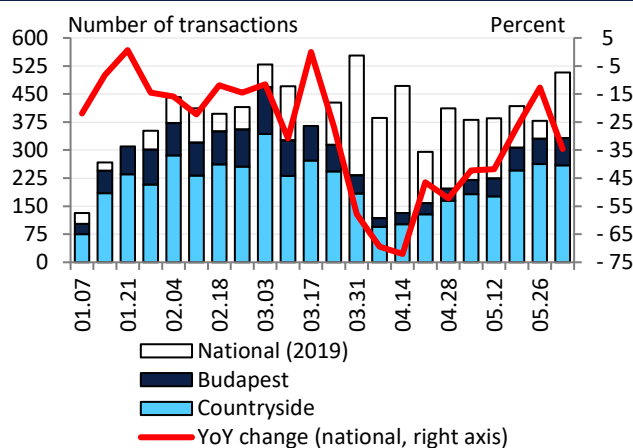
In the first three months of 2020, 4,775 new homes were completed, representing growth of 30 percent in year-on-year terms. However, in line with the end of the housing market cycle, the number of building permits issued declined by 27 percent on an annual basis in Q1 2020. According to preliminary data, the deceleration in the annual growth rate in house prices continued. Average price appreciation at the national level and in Budapest was 12.3 percent and 9.5 percent, respectively. The spread of the coronavirus pandemic and the containment measures resulted in an abrupt, drastic fall in market activity. In April, the number of completed transactions was significantly lower in a year-on-year comparison, which was in line with the curfew measures and the increased uncertainty surrounding households' income position. After the low point in April, the domestic housing market quickly recovered in May, but the decline is still significant on an annual basis (Chart 3-31). In May, 75 percent more sales were made in Budapest and 67 percent in the countryside than in the previous month. In an annual comparison, the number of transactions in the capital is 42 percent lower than in May 2019, while in rural areas it is 27 percent lower. The negative impact of the pandemic was already visible in property prices in May. In line with this, the annual growth rate of house prices continued to decelerate both in Budapest and the countryside.

Chart 3-30: Annual change of production in construction in the European Union in March and April



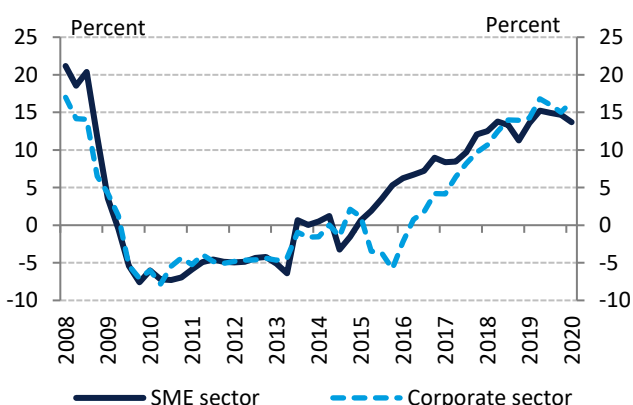
Note: Seasonally adjusted data. *No data for April.
Source: MNB based on Eurostat.

Chart 3-31: Weekly number of transactions completed by housing market intermediaries



Note: Transparent columns are 2019 national transaction numbers. Source: MNB, Housing intermediary database

Chart 3-32: 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

Annual growth in household loans outstanding exceeded 16 percent. In Q1 2020, household loans outstanding vis-à-vis the entire financial intermediary system increased by HUF 238 billion due to transactions, and thus a 16-percent growth rate was observed for this period. Dynamic growth was supported by the disbursements under contracts concluded earlier as well as by the decline in instalments in the second half of March in relation to the moratorium on payments. Lending for housing purposes remains robust for the time being, but the quarterly disbursement of personal loans has already declined moderately, partly due to the halt in product development related to the maximum APR of unsecured consumer credits. The banks participating in the Lending Survey have not yet experienced any fall in demand for housing loans during the quarter under review, while almost 40 percent of the banks perceived a decline in consumer loans. Looking ahead to the next half-year, in net terms, 80 percent of them anticipate declining credit demand for both products. On the other hand, the state-subsidised schemes (Home Purchase Subsidy Scheme for Families, Prenatal Baby Support Loan) may support lending to households even during the crisis triggered by the pandemic.

Corporate loan dynamics accelerated further in the first quarter (Chart 3-32). Corporate loans outstanding vis-à-vis the entire financial intermediary system increased by HUF 416 billion during the quarter, as a result of which the annual growth rate amounted to 16.5 percent. Based on preliminary data, the loans outstanding of the SME segment rose by almost 14 percent in year-on-year terms, which was also supported by loan contracts concluded during the quarter in the amount of HUF 71 billion under FGS Fix. This growth, which is exceptional by international standards as well, is essentially attributable to the disbursement of special, high-volume transactions and to the technical effect of the moratorium on loan instalments, which was introduced to mitigate the economic effects of the pandemic. Based on the results of the Lending Survey, banks reported weakening demand both for long-term loans and foreign currency-denominated loans. Furthermore, looking ahead to the next half-year, 40 percent of the banks, in net terms, anticipate weakening demand irrespective of the enterprise size category. An even larger part of the respondent banks, roughly 80 percent of them, expect a decline in demand for commercial real estate loans. In line with the situation of the real estate market, all actors assume a drop in loan demand related to housing projects in parallel with the decline in willingness to invest in real estate.

Box 3-1: Household wealth and savings rate in two pre-crisis periods (2008 and 2019)

In recent years, the consumption of Hungarian households grew dynamically. Since 2013 the volume of the Hungarian household consumption rose by 28 percent in total, putting Hungary in the vanguard of Europe (third place after Romania and Iceland). In Q1 2020, household consumption continued to grow dynamically. However, the **coronavirus and the related restrictions may result in a temporary decline in household consumption**. In recent years, increasing consumption was one of the growth engines of the domestic economy, and **consumption behaviour is key to economic recovery**.

The 2008–2009 crisis hit the Hungarian population in a vulnerable state, with low reserves. Between 2002 and 2007 households' consumption expenditure rose by 25.9 percent in total (Table 3-1). At the same time, consumption took place in an unsustainable structure: in the years preceding the 2008 crisis, households spent almost 90 percent of their disposable income on consumption and roughly 8 percent on investment, while the savings rate was markedly low. The unsustainable growth in consumption took place in conjunction with households' excessive indebtedness in an unsound structure. **The balance sheet deleveraging processes in the recovery period persistently curbed consumption, which was already on a declining trend due to the crisis**. Households' consumption expenditure (calculated at the average price of 2005) fell by more than 12 percent between 2007 and 2012.

Table 3-1: Comparison of periods characterised by increasing consumption

Consumption broadening before 2008				Consumption broadening before 2020			
Year	YoY change (% in 2005 prices)	Net financial wealth ¹	Net savings rate ²	Year	YoY change (% in 2005 prices)	Net financial wealth ¹	Net savings rate ²
2002	7.9	64.2	3.4	2014	2.5	89.6	9.2
2003	8.5	62.1	0.1	2015	3.7	96.9	10.3
2004	1.8	62.1	2.3	2016	4.9	102.7	8.4
2005	2.8	65.5	4.1	2017	4.4	105.1	9.0
2006	1.8	67.6	3.3	2018	4.9	106.4	10.9
2007	1.0	68.2	0.6	2019	5.0	107.9	8.9
2008	-1.2	59.6	-0.2				
2002-2007 total	25.9			2014-2019 total	28.3		
2008-2012 total	-12.4			³2020-2022 total	7.3-8.0		

Note: ¹ Percentage of GDP, ² In proportion to personal disposable income (%), ³ MNB forecast.

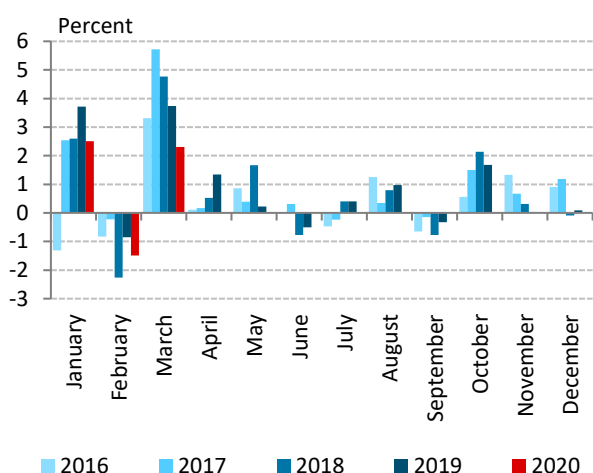
Source: HCSO, MNB

By contrast, in the past period households' consumption rose in line with disposable income. The growth in consumption was realised in a sound structure, in conjunction with high savings and investment ratios (Table 3-1). Due to this, the economic downturn caused by COVID-19 finds households in a favourable state of equilibrium. **Households' net savings and net financial worth were close to their historic peak, deemed high even by international standards**, which may support consumption growth and foster economic recovery. Households' favourable state of equilibrium provides room for manoeuvre in the deteriorating economic environment as a result of the coronavirus, and represents a growth reserve for the years ahead.

3.3 Labour market

Labour market tightness, determining the wage trends, fell to the level registered at the beginning of 2017, and in line with this wage dynamics decelerated significantly in March in certain service sectors. In April 2020, total employment fell to 4.368 million; the majority of those who lost their jobs increased the number of the economically inactive instead of the unemployed, as a result of the pandemic and the containment measures. Job losses hit both manufacturing and service sector employees. In May, the majority of enterprises planned further redundancies, albeit to a lesser degree than in April. Based on Google search trends it can be assumed that unemployment will significantly rise in the short run, followed by a decrease.

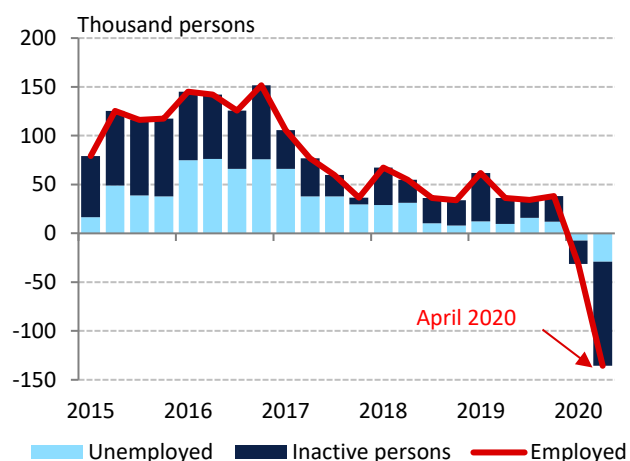
Chart 3-33: Monthly changes in regular average earnings in the private sector



Note: HCSO estimate from 2019.

Source: HCSO

Chart 3-34: Decomposition of the annual changes in the whole-economy employment



Note: Instead of Q2 2020, monthly data for April is available. Changes in the number of unemployed and economically inactive have the opposite sign.

Source: HCSO

3.3.1 Wages

In the first quarter, annual wage growth was only impacted by the economic effects of the coronavirus to a lesser degree. Gross average earnings in the private sector rose 9 percent year on year. Examining the industries linked to the private sector, **wage dynamics in certain service sectors have already decelerated substantially in March.** In the most affected sectors (accommodation and food service activities; information and communication; administrative and support service activities; other services) annual wage growth fell below 5 percent.

Companies typically revise wages once annually, which mostly appears in raising regular wages (not including bonus payments) in March. **This year, the monthly increase in regular average wages fell substantially short of the values registered in previous years** (Chart 3-33). As a result of the more moderate wage increases, regular wage growth decelerated to 7.4 percent in the private sector on an annual basis.

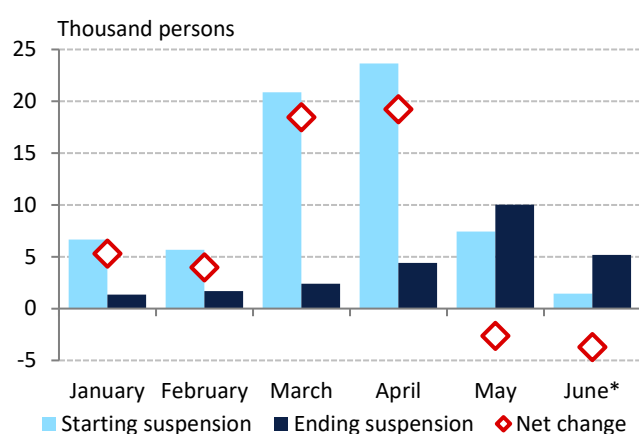
According to the corporate surveys, some companies plan to or have already reduced wages in the second quarter due to the pandemic. It weakens the bargaining position of employees that **labour market tightness, which determines wage trends, already fell to the level of early 2017** in the first quarter.

3.3.2 Employment and unemployment

According to the Labour Force Survey, the labour market consequences of the pandemic have already hit April harder compared to the previous months. **In April 2020, total employment fell to 4.368 million**, representing a year-on-year decrease of 136 thousand (Chart 3-34).

Total employment includes employees and the self-employed together. The latter group includes **private entrepreneurs, many of whom temporarily suspended their activity due to the state of emergency related to the coronavirus pandemic.** In March and April, the number of those suspending their activity rose by nearly 40 thousand; most of the suspensions occurred in the services requiring personal contact. **From May, the number of persons**

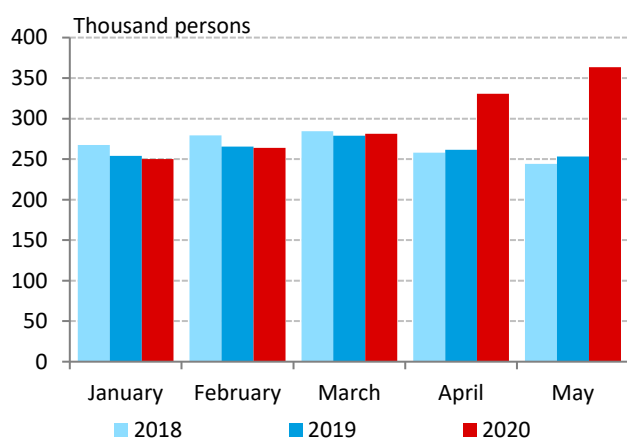
Chart 3-35: Suspensions among private entrepreneurs (2020)



Note: * Data is available until 4th of June.

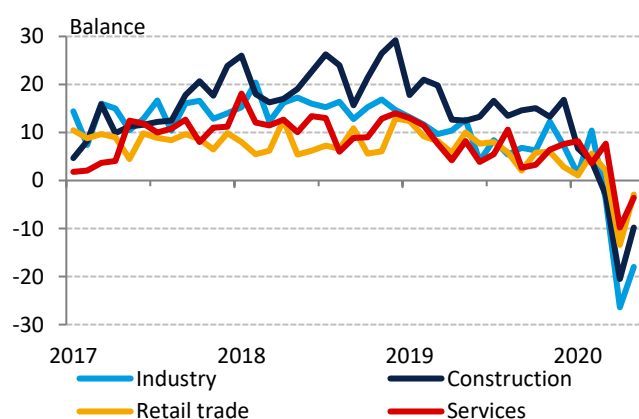
Source: HCSO based on EVNY

Chart 3-36: Monthly number of registered job seekers



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

Chart 3-37: 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

ending suspension already exceeded the number of those starting suspension (Chart 3-35), which suggests that the recovery of the economy has already commenced.

In line with the pandemic and containment measures, the decline in employment did not entail an immediate, large increase in the unemployment rate, and thus the **seasonally adjusted unemployment rate rose only moderately, to 4 percent**. This is due to the fact that the definition used by the Labour Force Survey – harmonised with the international standards – regards those as unemployed who have no job and in the past 4 weeks actively sought employment and if they found a job they would be able to take up work within 2 weeks. Due to the stay-at-home orders taken in the period of the coronavirus pandemic, this methodological condition often cannot be satisfied, and thus the **majority of those who lost their job raised the number of the economically inactive instead of the unemployed**.

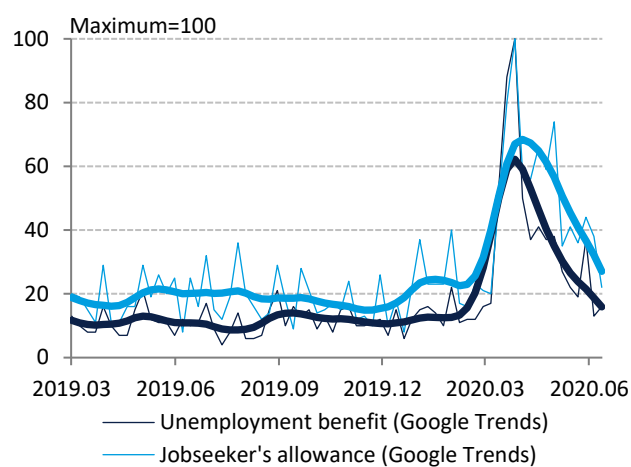
In the data release of the NES (National Employment Service) those persons are regarded as unemployed who have no registered employment relationship and **have registered themselves as jobseekers with the employment office**. According to the monthly data in **May, the number of registered jobseekers was 363,3 thousand** (Chart 3-36), which exceeds the first-quarter figure by 98,2 thousand. The number of newly registered jobseekers was higher, while the outflow from the register (due to finding a job, public employment, lack of cooperation, other reason) was far lower than the values registered in the past period.

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

The business survey of ESI – monitoring economic sentiment – also evidences the decline in employment in the second quarter. Employment expectations related to the next 3 months moved into the negative range in all of the examined sectors, breaking the positive trend of previous years. **In May, the majority of enterprises planned further redundancies, albeit to a lesser degree than in April** (Chart 3-37).

Labour market trends also show a similar pattern in the household survey of ESI. **Households' unemployment expectations** related to the next 12 months remained historically high in **May, but already declined compared to the previous month**.

Chart 3-38: Google searches for terms related to unemployment



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

Source: Google

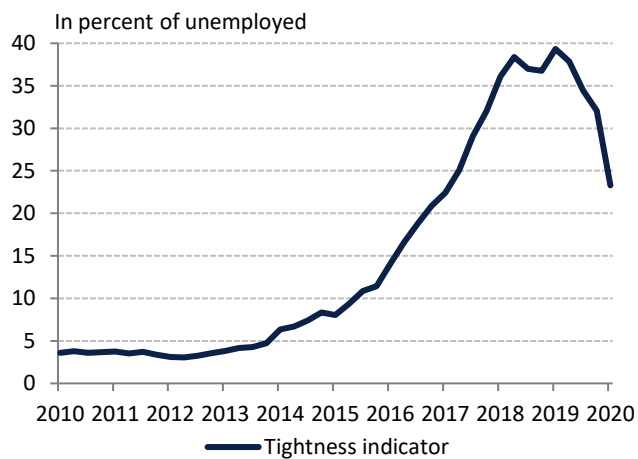
The analysis of Google searches (Google Trends) facilitates the observation of labour market changes in real time. **The high-frequency internet searches contain information primarily on short-term unemployment (new job losers)**, for example, information on how frequently users searched for “unemployment benefit” or “jobseeker’s allowance” phrases.

Google searches connected to unemployment peaked at the end of March and beginning of April (Chart 3-38), but they are still at a level exceeding the historical average. Search trends also underpin the assumption that unemployment may rise substantially in the short run – appearing in the Labour Force Survey data with a delay of 1–2 months – and then it will start to decline.

3.4 The cyclical position of the economy

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

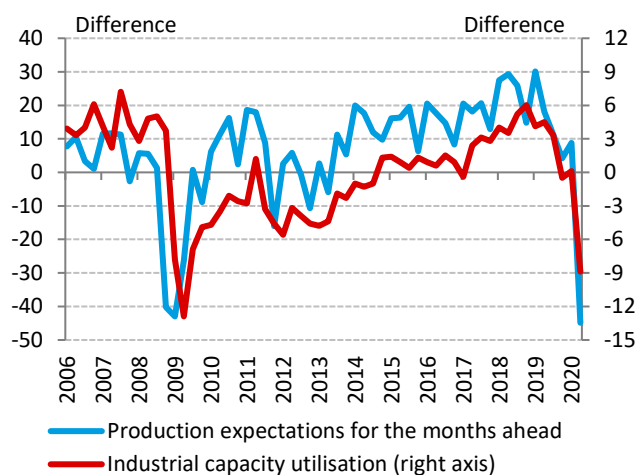
Chart 3-39: Development of labour market tightness



Note: Based on seasonally adjusted, quarterly data. Labour market tightness indicator is calculated as a ratio of the number of vacancies and the number of unemployed.

Source: HCSO

Chart 3-40: Capacity utilisation and production expectations in manufacturing



Note: Deviation from historical average.

Source: MNB based on ESI

In Q1 2020, gross value added continued to grow, but the impacts of the coronavirus already influenced economic performance in March. According to our forecast, **GDP may reach its low in the second quarter**, due to factors such as the temporary stoppage of key actors of vehicle industry, the loss of demand in tourism and catering, and the general effect of curfew measures.

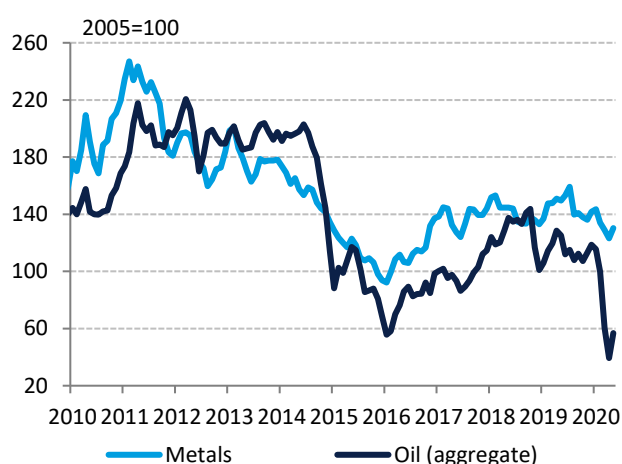
According to our estimate, the **cyclical position of the economy will enter the negative range in the second quarter**, and the output gap will narrow significantly compared to the previous quarters. **Developments in cyclical position are surrounded by even greater uncertainty than usual.** Due to the pandemic, estimating the duration of impacts on economic agents and identifying the nature of such impacts (supply or demand) represents a challenge. The deteriorating income prospects and decline in global demand typically influence GDP on the **demand** side, while the closures of cinemas and theatres due to the curfew and social distancing measures, and the lower capacity utilisation resulting from the measures adopted to protect the health of workers at the production lines tend to be of a **supply** nature.

The impact of the coronavirus pandemic was also felt in the Hungarian labour market; **in the first quarter, labour market tightness fell to the level registered in 2017** (Chart 3-39). According to the questionnaire-based surveys, **capacity utilisation at manufacturing companies fell sharply in Q2 2020**, in line with part-time operations and the slump in global demand (Chart 3-40). Due to the pandemic, the prospects for global economic performance weakened considerably, accompanied by a sharp rise in the related uncertainty. In line with this, future output expectations for domestic manufacturing companies declined significantly. According to our expectations, the economy will rapidly recover, and as a result of this, the temporarily low capacity utilisation will gradually pick up. On the other hand, **economic performance in the euro area may drop sharply in 2020** – or, according to certain forecast scenarios, it may be steadily weak.

3.5 Inflation trends

Following the temporary rise late last year, inflation returned to the tolerance band in March and then fell to 2.2 percent in May. The sharp fall in inflation is primarily attributable to the steep decline in fuel prices, in line with developments in global oil prices. Core inflation excluding indirect taxes declined in the period under review, reaching 3.5 percent in May. In the past months, in terms of the Bank's measures of underlying inflation developments which capture persistent inflationary trends, the inflation of demand sensitive products declined, while that of sticky-price products and services remained practically unchanged.

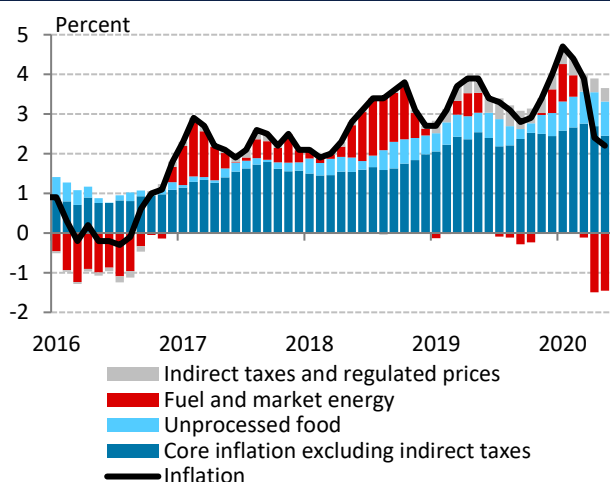
Chart 3-41: Major commodity price indices



Note: Calculated from prices in USD.

Source: World Bank

Chart 3-42: Decomposition of inflation



Source: MNB calculation

3.5.1 Commodity prices

The weakening economic performance and prospects due to the COVID-19 pandemic have had a major impact on price developments for the most important commodities.

As a result of the curfew measures and border closures to curb the pandemic, a significant part of road and air traffic came to a halt, **triggering a massive slump in demand for crude oil.** The sharp drop in global production resulted in price decreases due to falling demand for industrial metals. In recent months, automotive production temporarily stopped around the world, significantly reducing the price of several industrial metals. A large part of the demand for aluminium comes from the automotive industry; moreover, automotive battery production accounts for four fifths of global lead demand. In parallel with the slowing spread of COVID-19, restrictions have been gradually eased, causing prices to rise in May, as a result of increasing demand for both crude oil and industrial metals (Chart 3-41).

3.5.2 Consumer prices

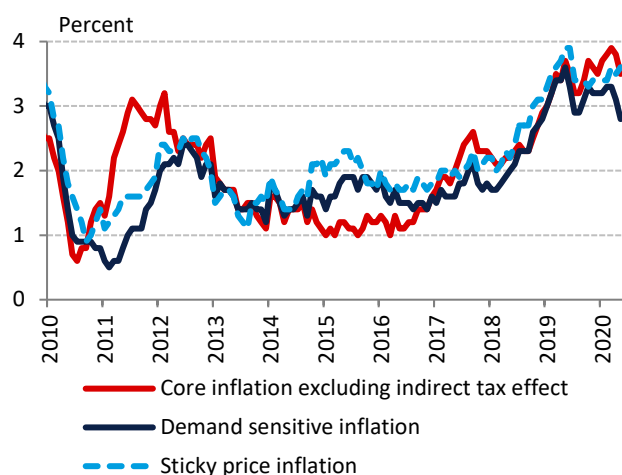
Following the temporary rise at the end of last year, inflation returned to the tolerance band in March and then fell to 2.2 percent in May. The sharp drop in price dynamics is primarily attributable to the significant fall in fuel prices, in line with developments in global oil prices (Chart 3-42).

Core inflation excluding indirect taxes declined in the period under review, reaching 3.5 percent in May. In the past months, **of the Bank's measures of underlying inflation developments capturing persistent inflationary trends, the inflation of demand sensitive products declined, while that of sticky-price products and services remained practically unchanged** (Chart 3-43).

Annual inflation of industrial goods remained subdued in recent months, in line with the moderate external inflation environment. Within this product group, inflation of durable goods rose, while inflation of non-durables declined.

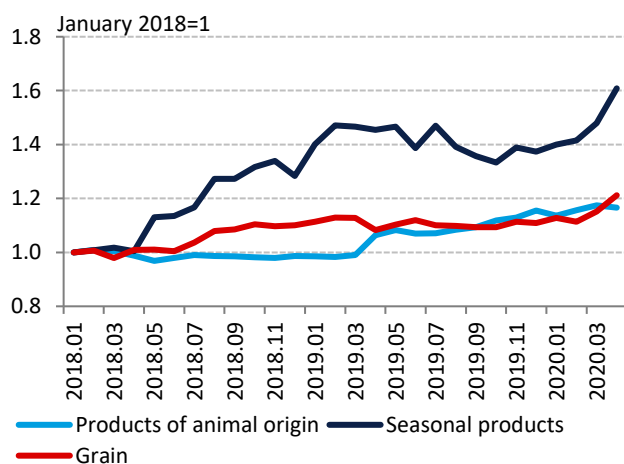
The rising inflation of market services stopped in March and then fell to 4.8 percent in May. Social distancing proved to be an efficient measure to prevent the spread of the coronavirus pandemic, and thus in addition to closing

Chart 3-43: Underlying inflation indicators



Source: MNB calculation based on HCSO data

Chart 3-44: Development of agricultural prices



Note: Based on seasonally adjusted data.

Source: HCSO

cinemas and theatres, other services and events were also cancelled. All of this significantly has complicated data collection and also the measurement of price changes in these product groups (see Box 6.2).

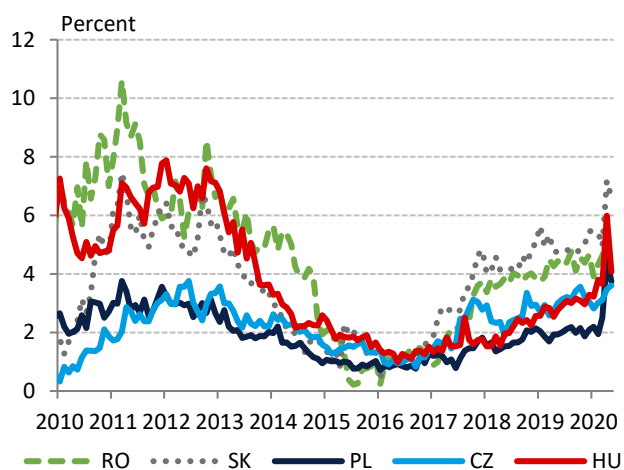
Prices of alcohol and tobacco products rose in the spring months, which was caused by the price-increasing effect of the excise duty rise for tobacco products in January. In the case of the increase in the excise duty on tobacco products, the pass-through was somewhat slower than the earlier tax changes.

On the whole, inflation of around 9 percent was typical for food in the past months. Price dynamics were higher than observed in previous years both for processed and unprocessed food. **Agricultural producer prices rose gradually from the second half of last year, which also passed through to consumer prices** (Chart 3-44). The effect of the decline in the global swine population resulting from African swine fever can be also felt in Hungarian pork prices: in May, the price of pork exceeded that registered one year ago by almost 21 percent. In addition, the poor crop resulting from the unfavourable weather conditions caused prices of fresh vegetables and fruits to rise significantly. Increased demand led to a rise in the mark-up of several products, and thus in the review period the consumer price of both processed and unprocessed food increased substantially in Hungary.

In line with the steep fall in the world market price of the Brent crude oil in March and April, fuel prices in Hungary declined considerably. Although the wholesale price of petrol and diesel oil fell by HUF 100 and HUF 77 in total, respectively, in the period from 1 March to 1 May, the restrictions implemented to curb the spread of the pandemic substantially reduced traffic in Hungary, as a result of which demand for fuel also declined significantly. Despite the recent easing of restrictions, the willingness of the population to travel remains lower, and thus turnover at fuel stations falls short of the year-on-year value.

Considering the data from recent months, inflation declined in accordance with our expectations, but in terms of the structure it differed somewhat from the forecast in the March Inflation Report. Due to the developments in the prices of market services, core inflation and core inflation excluding indirect taxes were higher than projected in March. This was partially offset by the more moderate price developments of fuels and regulated prices. Free parking, introduced due to the coronavirus pandemic, caused regulated prices to decrease.

Chart 3-45: Inflation expectations in the region



Note: Data for Romania is not available for May.

Source: MNB calculations based on European Commission data

3.5.3 Inflation expectations

Households' inflation expectations declined in May following a temporary rise in April. In the period under review, as a result of the coronavirus pandemic, both statistical and behavioural effects shaped expectations (see Box 6-2). In the countries of the region, households' inflation expectations show a mixed picture: in the Czech Republic, following a rise in April, inflation expectations continued to increase, while in Poland and Slovakia – similarly to Hungary – expectations fell (Chart 3-45).

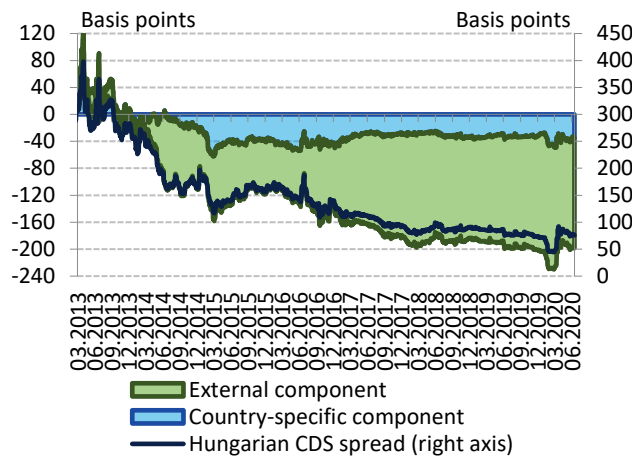
4 Financial markets and interest rates

4.1 Domestic financial market developments

Global market sentiment improved in the past quarter, primarily due to the easing of the containment measures introduced in connection with the coronavirus pandemic. The main stock markets mostly rebounded from their March declines, with the VIX index – which measures stock market volatility – falling to nearly 35 percent from its level of around 75 percent at the start of the period. US, German and Japanese long-term government securities yields continued to fall during the quarter, which may have been significantly attributable to the asset purchase programmes of developed central banks. Spreads on emerging market bonds also declined considerably.

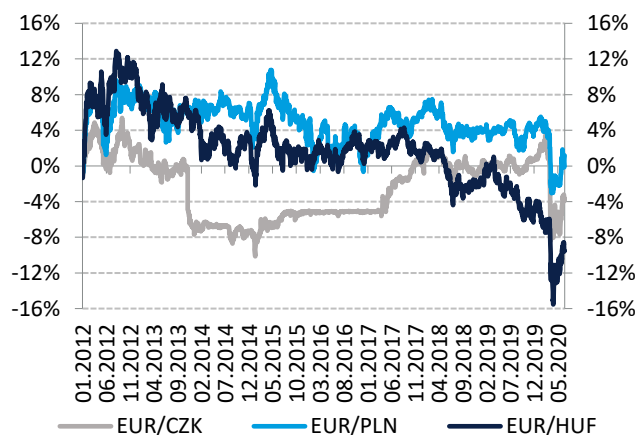
The Hungarian credit risk premium declined as international sentiment improved. Despite non-residents' government securities sales, the domestic 10-year government securities yield declined together with other yields in the region, although to a greater degree, by more than 100 basis points. As a result of the considerable fall in long-term yields, domestic interbank and government securities yield curves became flatter. Nevertheless, short-term interbank yields rose, with the 3-month BUBOR increasing by 27 basis points. The forint strengthened by more than 2 percent against the euro, together with other currencies from the region.

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 represent appreciation of the currency. Source: Bloomberg

4.1.1 Risk assessment of Hungary

Hungary's credit risk premium decreased in the past quarter (Chart 4-1). In the first half of the period, the CDS spread increased by some 10 basis points, but in the second half of the period the domestic CDS spread fell significantly, primarily due to improving international investor sentiment. Accordingly, for the period as a whole, the spread fell by 9 basis points to 76 basis points.

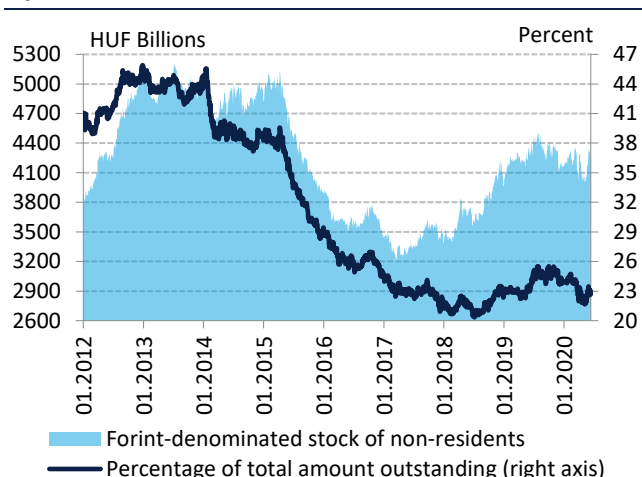
4.1.2 Developments in foreign exchange markets

The forint appreciated by approximately 2.2 percent against the euro, which was in line with regional developments. Of the regional currencies, the Czech koruna, the Polish zloty and the Romanian leu appreciated against the euro by 4.8, 1.9 and 0.7 percent, respectively (Chart 4-2). At the beginning of the period, the exchange rate of the forint weakened close to the level of 370, before gradually strengthening to nearly 345. The forint appreciated by 6.3 percent against the US dollar, while the Czech koruna strengthened to a greater degree, i.e. appreciating by 8.6 percent, with the Polish zloty and the Romanian leu strengthening to a lesser extent, by 5.6 percent and 4.4 percent, respectively.

4.1.3 Government bond market and changes in yields

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

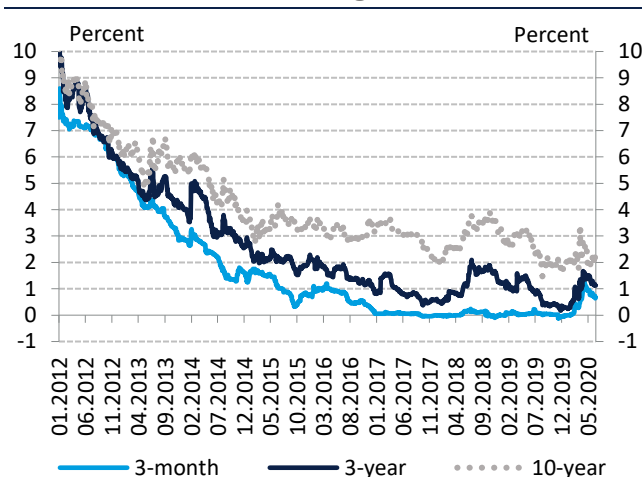
Chart 4-3: HUF-denominated government securities held by non-residents



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

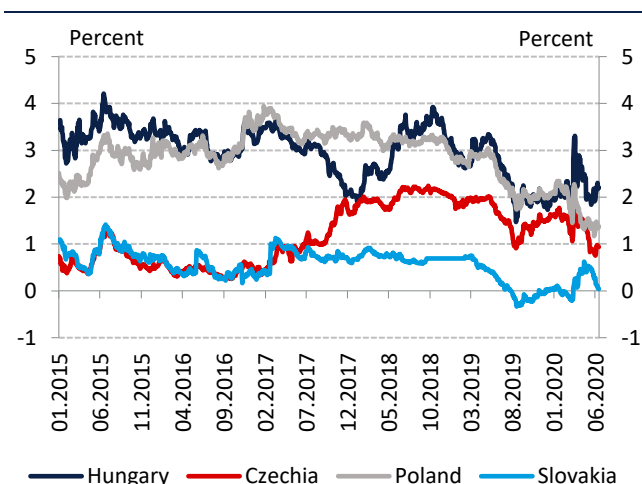
Source: MNB

Chart 4-4: Yields of benchmark government securities



Source: Government Debt Management Agency

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



Source: Bloomberg

holdings declined sharply starting from mid-March, before rising slightly again from May. As a result, non-residents' HUF-denominated government securities holdings contracted by some HUF 45 billion in the past three months. The ownership share within HUF-denominated government securities also declined slightly, standing somewhat below 23 percent.

Demand was mostly good in the primary market for government securities, and the Government Debt Management Agency usually accepted more than the announced quantities. Compared to the auctions held at the end of the previous period, the average yield at the auction for the 3-month discount treasury bill was almost unchanged, whereas average auction yields at the long maturities declined. Accordingly, at the end of the period the average yields of the 3-month auction and of the 10-year auction were 0.67 percent and 2.12 percent, respectively. In addition, in the quarter under review, Hungary issued FX bonds worth a total EUR 4.5 billion in the international bond markets.

The government securities market yield curve became flatter (Chart 4-4). Following a brief rise, yields on the short end of the curve returned to mid-March levels, while the long end of the curve shifted downwards. Compared to mid-March, the 10-year benchmark yield dropped by 111 basis points in total, which may have also been attributable to the MNB's government securities purchase programme. With regard to short-term interbank yields, the 3-month BUBOR rose 27 basis points to 0.9 percent by the end of the period. At the same time, longer-term interbank yields declined, falling to levels around 0.95 percent and 1.45 percent at 5-year and 10-year maturities, respectively.

Long-term reference yields in Hungary and the region declined considerably (Chart 4-5). The 10-year forint yield saw the largest decline, falling by more than 110 basis points to 2.2 percent from the mid-March level of 3.31 percent. Polish and Czech long-term yields also dropped markedly, by 85 and 79 basis points, respectively, while the Slovak yield declined to a lesser degree, i.e. by 22 basis points.

Box 4-1: Hungarian Government Securities Plus (MÁP+) scheme provided stable funding during the turbulent period as well

One of the most important lessons learnt during the one year that has elapsed since the start of Hungarian Government Securities Plus scheme is that household savings are able to play a key role in financing government debt. The Government Debt Management Agency announced the renewal of the household government securities strategy on 8 April 2019 with the objective of creating a simple transparent product range and introducing an easily available new high-end retail product. Demand for Hungarian Government Securities Plus was strong from the very beginning, and accordingly by October the holdings had exceeded the volume of both the Premium Hungarian Government Securities and the One-Year Hungarian Government Securities. Sales of the new government securities slowed down at the beginning of 2020, first due to seasonal effects, and then subscriptions declined due to the uncertainty caused by the coronavirus. However, in parallel with the easing of the shock caused by the virus and of the curfew measures, demand once again increased and weekly sales stabilised at the level of HUF 30-50 billion; accordingly, households' Hungarian Government Securities Plus holdings now exceed HUF 4,000 billion.

The favourable vulnerability indicators supported by Hungarian Government Securities Plus and the more stable financing compared to the wholesale market created substantial room for the government to manage the crisis. The coronavirus crisis hit the Hungarian economy in a much more favourable state compared to the 2008 shock, and the retail government securities strategy and particularly the launch of Hungarian Government Securities Plus one year ago played a key role in this regard. Amidst the dynamic wage growth observed in recent years, the retail government securities strategy and the Hungarian Government Securities Plus supported the stabilisation of household savings at a high level, which contributed to the maintenance of persistently positive net lending. Both the foreign currency ratio of government debt and the share of debt financed by non-residents decreased, and thus in parallel with the strengthening of Hungary's self-financing, external vulnerability also declined considerably.

Hungarian Government Securities Plus provides stable funding not only in a calm market environment, but it behaves relatively more favourably than the alternative financing channels in turbulent situations as well, which can be explained by the following factors:

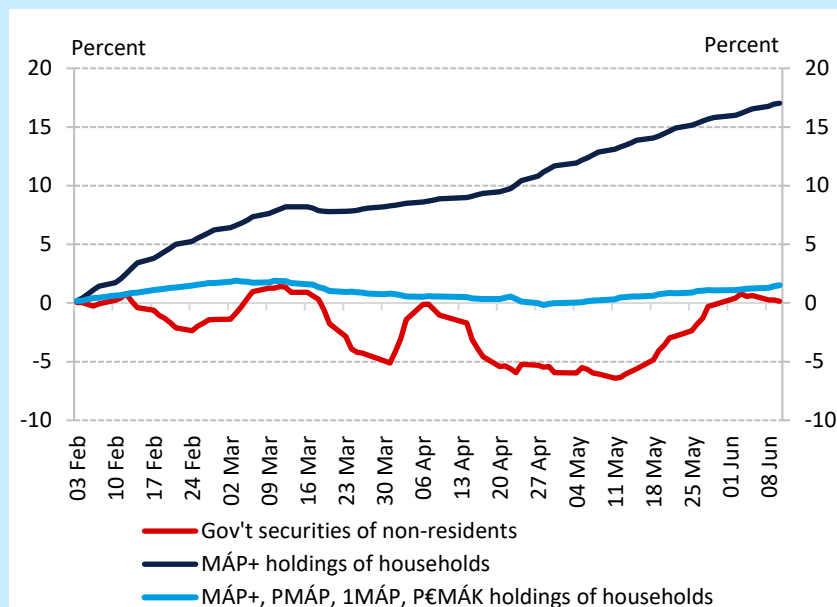
- as proven by previous domestic examples, on the wholesale market **secondary market turbulences can lead to the primary market freezing up in a matter of seconds**, and can thus cause delays in the financing of the government;
- the **range of retail holders is less concentrated** than is the case with non-resident holders, for example; moreover, the "home bias" also supports the stability of resident household investors (this was also evidenced by the experiences gained in the 2008 crisis in Hungary);
- in the changing environment **Hungarian Government Securities Plus will remain, in all probability, relatively the most attractive Hungarian product**, since all similar events would affect alternative investments as well.

Developments in the past months confirmed the aforementioned arguments:

- **in the second week of March there were interruptions at the government securities auctions**, and these were cancelled on the third week due to market turbulences;
- **while sales by Hungarian actors were negligible, non-resident investors their Hungarian government securities holding by roughly HUF 300 billion in the second half of March**, which including a drop of HUF 150 billion in just one day. Moreover, certain signs suggest that restructuring among non-resident holders were even larger because of the "hot potato effect" (certain large non-resident sellers were replaced by other non-residents). However, non-resident holders joining on the purchase side only bought at higher yields, which resulted in a rise of over 150 basis points in long-term yields just in a few days;
- households kept their **Hungarian Government Securities Plus holdings relatively stable even during the restructuring of the portfolio, and even increased them** (Chart 4-6);

- free redemption remained low not only in the period free of external and internal shocks (around 1 percent of the respective tranche), but it also remained moderate after the increase in uncertainty (1-3 percent), which is attributable to the fact that – **due to the tiered interest rate – those who have already purchased Hungarian Government Securities Plus have strong incentives to retain the securities;**
- during the turbulent period, a large part of the households suffered major losses on mutual fund shares and stock exchange equities due to the fall in prices, while Hungarian Government Securities Plus holdings rose further, signalling that – despite the shock – **Hungarian Government Securities Plus remained the most attractive risk-free investment product in Hungary.**

Chart 4-6: Cumulated net change in non-residents' government securities holdings and households' Hungarian Government Securities Plus holdings (31 January 2020 = 0)



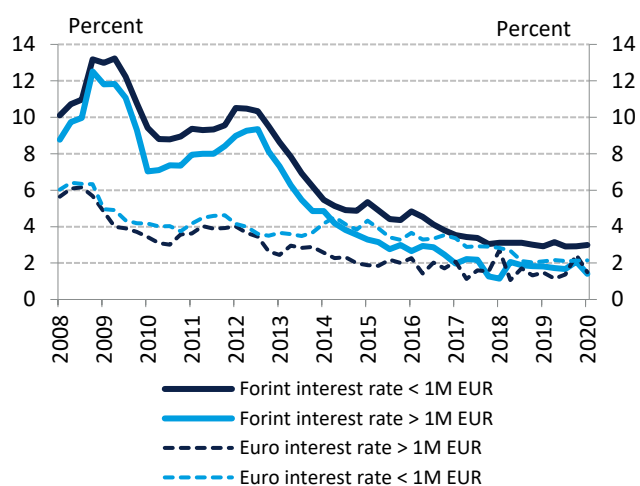
Note: 5-day moving averages.

Source: MNB

4.2 Credit conditions of the financial intermediary system

As a result of the deteriorating economic prospects linked to the coronavirus, banks tightened both corporate and household credit conditions during the quarter. Looking ahead to the next half-year, banks held out the prospect of further and – in the case of corporate loans – stronger tightening. The average cost of finance of corporate euro loans fell substantially during the quarter. Similar trends were observed for the average credit costs of personal loans; however, for the remainder of the year this product will be available at the statutory APR, which is substantially lower than the present conditions. The average credit cost also declined for housing loans with interest rate fixation longer than one year, in addition to the fact that interest rates on 72 percent of disbursements are fixed for at least 10 years or until maturity. The level of real interest rates rose considerably during the quarter, explained by the lower inflation expectations and higher corporate deposit rates.

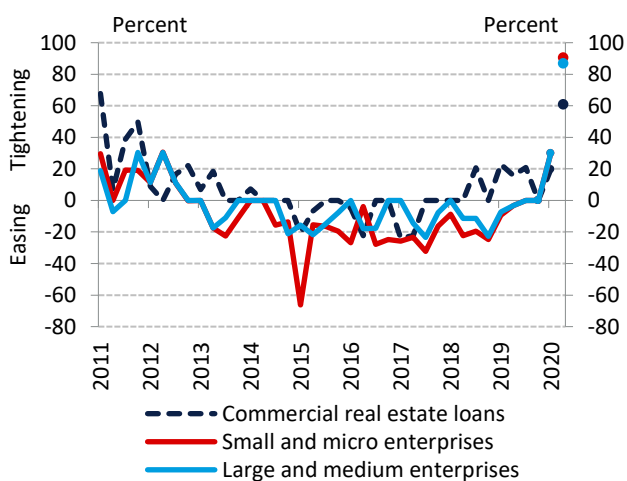
Chart 4-7: Interest rates on new corporate loans



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 Q2 of 2020 and Q3 of 2020.

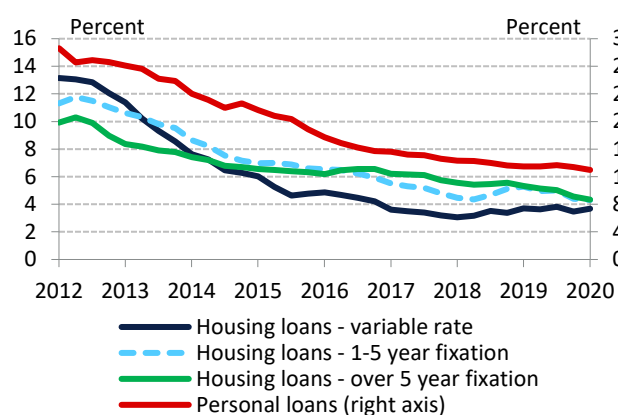
Source: MNB, based on banks' responses

4.2.1 Corporate credit conditions

Financing costs of high-amount euro loans fell during the quarter. The smoothed average interest rate level of new corporate forint loans – excluding money market transactions – remained unchanged in the case of low-amount loans, while in the case of high-amount forint loans it declined by 0.7 percentage point quarter on quarter. As a result, the average interest rate on forint loans fell to 1.8 percent by March. A similar trend was observed for euro loans, i.e. no change in the interest rate on low-amount euro loans and a significant, 1-percentage point decrease in the case of high-amount loans. Accordingly, the average cost of finance of euro loans once again fell below that of forint loans, amounting to 1.6 percent at the end of the quarter (Chart 4-7). During the quarter, euro interest rates were determined by changes in spreads, while the decline in the spreads on forint loans was partly offset by rising funding costs.

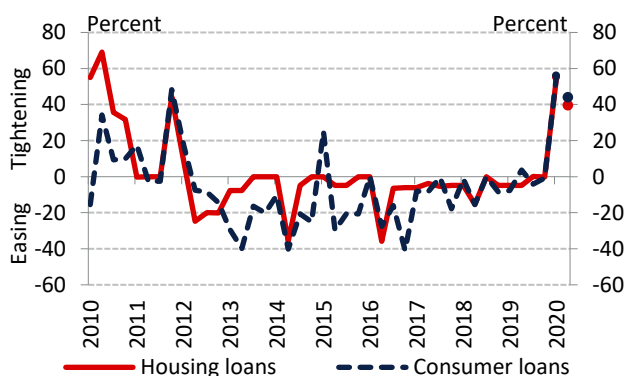
One third of the banks tightened corporate credit conditions. One third of the banks participating in the Lending Survey tightened corporate credit conditions in the first quarter as a result of the deteriorating economic environment linked to the coronavirus; however, in the next half-year they plan to tighten conditions to an even larger degree: in the case of small and medium-sized enterprises this will occur through the higher collateralisation requirements, while in the case of large and medium-sized companies through tighter monitoring (Chart 4-8). Moreover, one third of the respondent banks tightened credit standards on commercial real estate loans in all categories (housing projects, office buildings, logistics centres, shopping centres) in the first quarter, primarily citing sector-specific problems. Looking to the next half-year, in net terms, 61 percent of banks plan to implement further tightening, which is also substantially influenced by the change in risk tolerance.

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



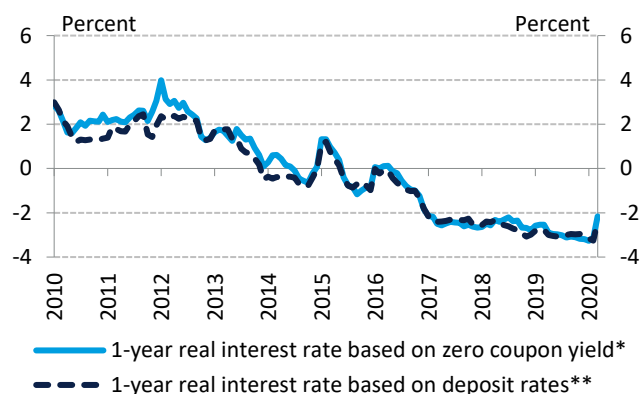
Note: Quarterly average of lending rates on newly disbursed loans. Source: MNB

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 Q2 and Q3 2020. Source: MNB, based on banks' responses

Chart 4-11: Forward-looking real interest rates



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

4.2.2 Household credit conditions

The average credit cost of personal loans declined considerably. The average credit cost of housing loans with interest rate fixation over one year decreased moderately during the quarter, as the average APR fell by 0.1 percentage point on housing loans fixed for 1–5 years and by 0.2 percentage point on loans fixed for more than 5 years (Chart 4-9). The rise in funding costs (relevant IRS) was offset by the declining spreads, where the spreads on housing loans fixed for 1–5 years and for more than 5 years fell by 0.4 and 0.5 percentage point, respectively. The ratio of disbursements less exposed to interest rate risk has not changed in the past one year: the interest rate on 72 percent of the housing loans concluded during the quarter was fixed for at least 10 years or until maturity. The average APR on personal loans fell to a historic low of 13 percent in March; on the other hand, in the remaining part of the year, banks will extend personal loans at the statutory APR (at present 5.9 percent at the most). At the end of the period under review, 38 percent of the prenatal baby support loans – which play a significant role in new household loans – were subject to moratorium on instalments, and thus these loans became interest-free until maturity.

Credit standards for both housing and consumer loans were tightened during the quarter. Citing lower risk tolerance and a change in customers' creditworthiness, in net terms, half of the banks participating in the Lending Survey tightened credit conditions on housing and consumer loans, primarily in relation to the prescribed minimum level of creditworthiness. In the next half-year, 40 percent of banks anticipate additional tightening measures in both product categories, justified by the deteriorating economic prospects (Chart 4-10).

4.2.3 Changes in real interest rates

Real interest rates rose significantly during the quarter. In the period under review, the real interest rate level reduced by inflation expectations rose by 1 percentage point based on government securities market yields and by 0.7 percentage point estimated on the basis of deposit rates. As a result, by the end of the quarter, the former and the latter had reached levels of -2.2 percent and -2.4 percent, respectively (Chart 4-11). The rise in the level of real interest rates is explained by the lower inflation expectations and rising corporate deposit rates.

Box 4-2: Corporate lending as a growth support

The gradually deteriorating economic prospects resulting from the coronavirus pandemic also had negative impacts on the banking sector's willingness to lend since – in line with their procyclical operation – banks curb their lending activity to reduce expected losses. Although the actual corporate lending data for the first quarter was still outstanding, as corporate loans outstanding vis-à-vis the financial intermediary system rose by 16.5 percent year on year, this extraordinary growth was essentially attributable to the disbursement of one-off high-volume transactions and the technical effect of the moratorium on loan instalments introduced with a view to mitigating the economic effects of the coronavirus pandemic. The annual growth rate of 16 percent is also deemed outstanding in an international comparison, but looking ahead we expect lending activity to already decline in the months ahead as a result of the pandemic.

In order to maintain the primary source of corporate fundraising, i.e. lending, the MNB, the Hungarian Development Bank (MFB) and Eximbank announced measures that together provide corporations with funds of at least HUF 2,200 billion, offering efficient solutions for the sector's liquidity problems.

The Magyar Nemzeti Bank, guided by the changing credit demands, launched a new scheme within the Funding for Growth Scheme under the name of FGS Go!. This product, with a total limit of HUF 1,500 billion, is available from 20 April 2020 and provides small and medium-sized enterprises with funding at favourable interest rates up to the amount of HUF 20 billion with a maximum 20-year maturity. Under the scheme, it is once again possible to grant working capital loans with maturity of three years at the most: thanks to the wide range of possible uses, amongst other things, enterprises can finance inventory, wage costs or trade receivables. Furthermore, it is also permitted to refinance existing loans, and thus debt servicing burdens can be lowered in these difficult times.

Table 4-1: Key features of the FGS Go!, the new Széchenyi Card Programmes and the MFB credit schemes

	FGS Go!	New Széchenyi Card Programmes	MFB Crisis Loan	MFB Competitiveness Loan Programme	SME Technology Loan Programme
Loan size	1 mn - 20 bn	1 mn - 1bn	1-150 mn	1-10 bn	1-150 mn
Loan targets	working capital, investment (including leasing), loan redemption	working capital, investment, overdraft	working capital, investment, investment substitute	working capital, investment, acquisition, loan redemption, liquidity financing	acquisitions of assets, starting a business
Duration	working capital: max. 3 year investment: max. 20 year	working capital: 2-3 year investment: 6 / 10 year	working capital: max. 3 year investment: max. 10 year	working capital: max. 5 year other: max. 15 year	2-7 year
Interest	max. 2.5%	0.1-0.5%	max. 2.5%	preferential fixed or variable	0%
Size of own resources	determined by the disbursing credit institution	investment: min. 10%	investment: min. 10%	min. 0% or 25%	min. 10%
State surety and fee	determined by the disbursing credit institution	determined by the disbursing credit institution	Up to 80% (annual 0.1%)	Up to 80% (annual 0.1%)	determined by the disbursing credit institution
Contract period	from 20 Apr 2020 (no end date)	from 15 May 2020 (no end date)	from 30 Apr 2020 until 30 Jun 2021	from 30 Apr 2020 until 31 Mar 2023	until limit is reached
Eligible for borrowing	micro, small and medium enterprises	micro, small and medium enterprises	micro, small and medium enterprises	small, medium and large companies	micro, small and medium enterprises

Note: In addition to the interest rates of 0.1-0.5 percent of the Széchenyi Card Programme additional fees may be charged.

Source: MNB

The Hungarian Development Bank is helping corporations adjust to the crisis with a credit, guarantee and capital programme, covering all corporate sizes, with an overall volume of HUF 1,500 billion. The MFB Crisis Loan and the SME Technology Credit Programme with an overall amount of HUF 180 billion and HUF 98 billion, respectively, target the micro, small and medium-sized enterprises, while the MFB Competitiveness Loan Programme, with an overall amount of HUF 150 billion, targets medium-sized and large corporations. In addition, the MFB Group launched guarantee schemes with a total amount of HUF 550 billion, where corporations may benefit from a 90 percent guarantee for their overdraft, working

capital and investment loans. The capital programme with an overall amount of HUF 371 billion provides companies experiencing financial difficulties due to the crisis with an opportunity to raise funds.

Eximbank has introduced a new loan, guarantee and insurance product, which helps enterprises producing for export or experiencing difficulties due to the pandemic, where a decline over 20 percent can be observed at least in one economic indicator.

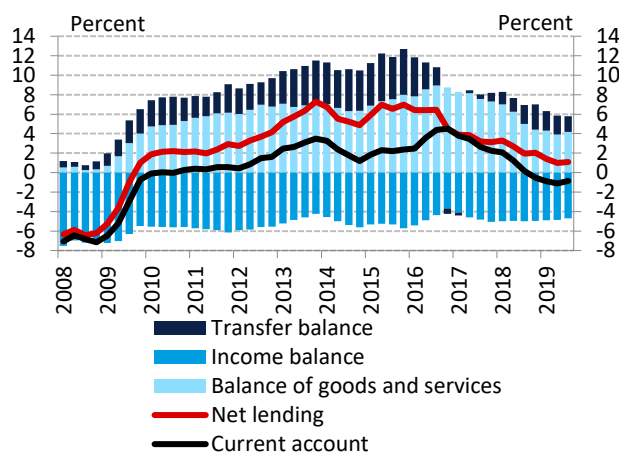
Altogether, the loan and guarantee programmes announced by the government and the MNB, and the moratorium on payments contribute to mitigating the decline in corporate lending. Considering the foregoing, according to our expectations, over the forecast horizon annual corporate loan growth will slow to close to 6 percent and from the second half of 2021 it may gradually return to a level close to 10 percent.

5 Balance position of the economy

5.1 External balance and financing

In Q4 2019, the net lending of the economy and the current account deficit stabilised at 1 percent and 0.8 percent of GDP, respectively. The stagnation of the indicators is the combined result of opposing trends. The decline in trade balance was primarily attributable to goods imports, which rose in annual terms, but the surplus of the services balance also declined. On the other hand, the rising absorption of EU transfers and the declining income balance deficit improved Hungary's external balance position. Based on the financing data, net FDI grew due to transactions, while net external debt as a percentage of GDP fell below 8 percent. According to preliminary data, the net lending of the economy and the current account balance rose moderately in Q1 2020, and in parallel with this net external debt declined further.

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



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

Source: MNB

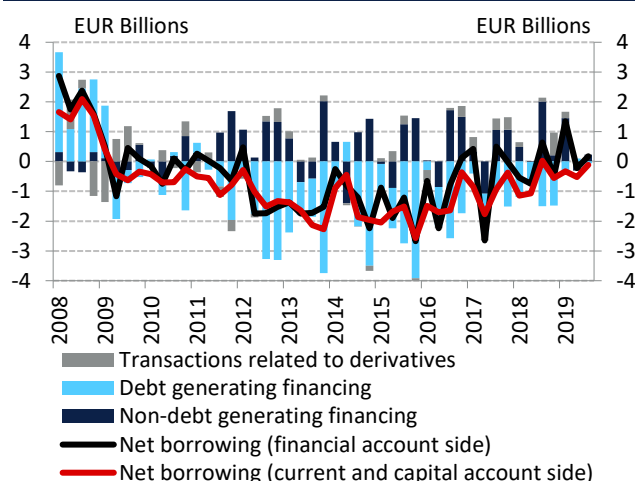
5.1.1 Developments in Hungary's external balance position

At the end of 2019, the net lending of the economy and the current account deficit stabilised at 1 percent and 0.8 percent of GDP, respectively (Chart 5-1). In the fourth quarter, external balance indicators stopped declining as a combined result of opposing effects: the trade balance deteriorated, while the transfer balance and income balance improved net lending. The decline in the trade balance is primarily attributable to the decrease in the four-quarter value of the goods balance (linked to rising imports), and the services balance surplus also declined moderately. Due to the decrease in fuel prices, terms of trade improved the trade balance. The effect of the trade balance was offset by the rising transfer balance, primarily linked to the increase in EU transfers. In addition, the moderately decreasing income balance deficit also improved the external balance, which is primarily attributable to the further decrease in interest paid abroad. Based on the preliminary monthly data, the current account balance improved slightly in Q1 2020, while net lending improved significantly.

5.1.2 Developments in financing

In Q4 2019, FDI rose further, while Hungary's net external debt declined (Chart 5-2). The outstanding growth in reinvestments continued at the end of 2019 as well, while the higher outward investments of domestic companies supported a decrease in net FDI transactions. The fall in net external debt was linked to the consolidated general government, whereas the private sector indicator increased. The government's declining net external debt was primarily attributable to the absorption of EU transfers, but non-residents' forint government securities holdings also decreased. The net external debt of the banking sector increased, primarily due to the rise in foreign liabilities, and corporations' net external debt also rose moderately. According to the monthly financing data, Hungary's net

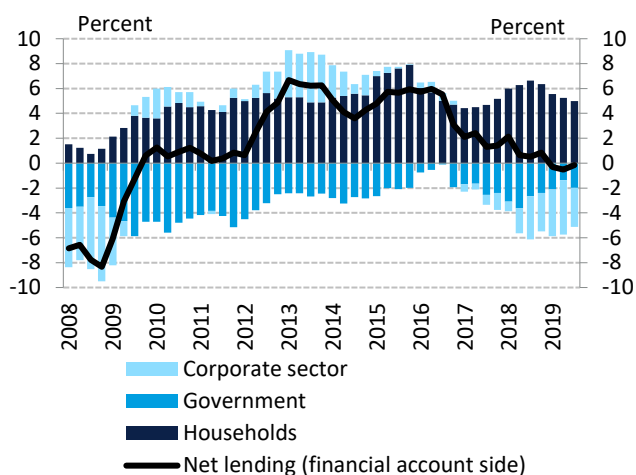
Chart 5-2: Structure of net lending



Note: Net lending calculated with the bottom-up method corresponds to the total of net lending and the BOP balance of statistical errors and omissions.

Source: MNB

Chart 5-3: Decomposition of net lending by sectors



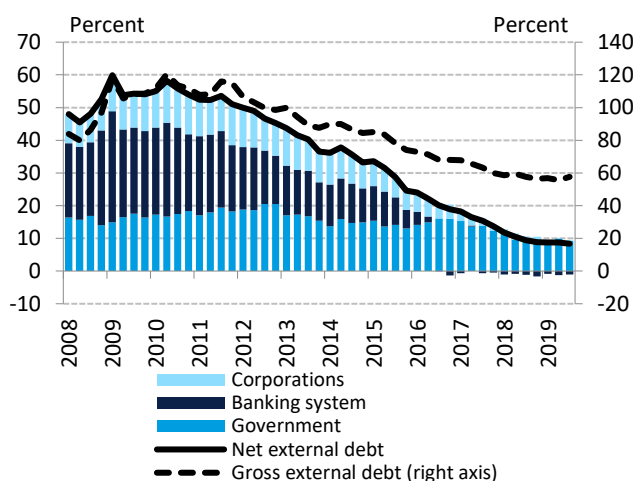
Note: Four-quarter cumulation, as a percentage of GDP.

Source: MNB

external debt continued to fall in the first quarter of 2020, while FDI funds registered an additional net inflow.

Based on the trends in the savings of sectors, the external position of the Hungarian economy developed similarly as in the previous quarter (Chart 5-3). The position of the individual sectors did not change significantly: in addition to households’ persistently high net lending, amounting to 5 percent of GDP, there was only a small need for external financing. The dynamic investment activity of corporations at the end of last year kept the sector’s net borrowing at a steadily high level. The low government deficit developed as the combined result of tax revenues well above the estimate and expenditures. Based on the preliminary financial accounts, households’ four-quarter savings ratio exceeded 5 percent of GDP in Q1 2020, and the government’s net borrowing also improved moderately.

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



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

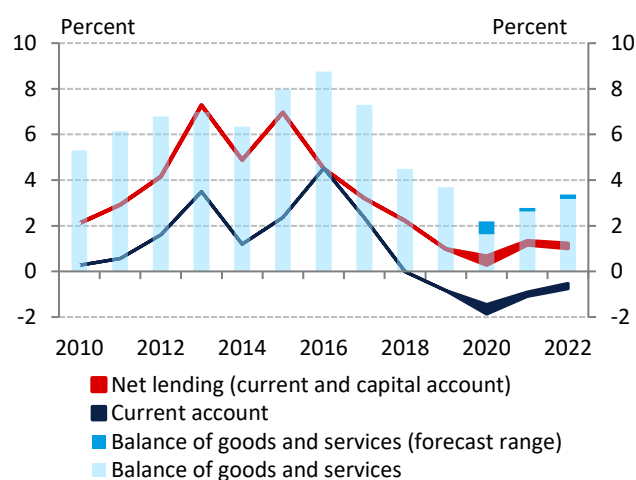
Source: MNB

In connection with the decrease in external liabilities, Hungary’s net external debt fell below 8 percent of GDP (Chart 5-4). In addition to the decrease in debt liabilities, the rise in nominal GDP also supported the decrease in the indicator, while the revaluation of stocks due to falling yields moderately increased the indicator. At the end of 2019, gross external debt approached 53 percent of GDP. Based on preliminary monthly data, the decline in net external debt due to transactions continued in Q1 2020 as well.

5.2 Forecast for Hungary's net lending position

Following the temporary decline this year resulting from the impacts of the pandemic, the external balance indicators of the Hungarian economy will gradually increase over the forecast horizon. The current account deficit may remain below 2 percent of GDP even in the lower growth scenario, while in the higher growth scenario the current account balance – in connection with the faster recovery of the external environment and of domestic tourism – may develop more favourably. Following its low registered in 2020, Hungary's net lending will stabilise at around 1.0-1.3 percent of GDP, as the effect of the higher trade balance will be partly offset by the declining absorption of EU transfers. From the perspective of the sectors' saving, the costs of the prevention of the epidemic temporarily increase the government deficit, which will be followed by a gradual decline in the budget deficit. In parallel with this, households' net saving will be around 5 percent of GDP, which will significantly support Hungary's external balance position.

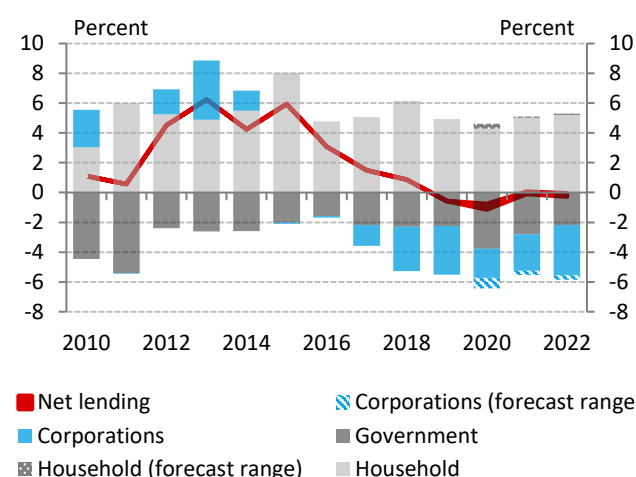
Chart 5-5: Evolution of net lending



Note: As a percentage of GDP.

Source: MNB

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

Following the temporary decline in external balance indicators, we expect a slow improvement until the end of the forecast horizon (Chart 5-5). As a combined result of opposing trends, the current account and, in parallel with this, net lending will once again rise after their low registered in 2020. The effect of decreasing exports resulting from the declining external demand, procurements related to the prevention of the pandemic and tourism is reflected by a further decrease in the trade balance. More moderate investment and a rise in consumption as well as improving terms of trade resulting from the lower oil price point in the opposite direction. In line with the lower demand, the profit of non-resident corporations declines, which results in a drop in the income balance deficit and thus an improvement in the current account. As the impact of the pandemic fades, the current account balance will gradually rise and in parallel with that net lending will stabilise at a high level.

We illustrate the uncertainty in a band between the two forecast scenarios in the case of the external balance indicators as well. In the higher growth scenario, the balance of net exports may be higher in line with stronger external demand. In addition, the current account balance is also influenced, to a lesser degree, by the profit balance assumed in the different scenarios. As the combined result of these effects, net lending will stabilise at a high level in the second half of the forecast horizon.

Net lending based on the financial account will gradually improve, after a temporary fall, with a strong contribution from the government's decreasing borrowing requirement (Chart 5-6). As a result of the prevention of the pandemic, in 2020 the general government deficit will temporarily rise and then – as a result the decline in government expenditures and rising tax revenues in line with economic growth – general government net borrowing will embark on a downward path. If the scenario of higher GDP growth is realised, net household saving may be lower, in line with the higher consumption path. Corporations' net borrowing is also

influenced by the path of GDP: stronger demand underlying higher growth may be accompanied by higher profitability, resulting in lower net borrowing. Positive net lending over the forecast horizon and continued FDI inflow will result in a further decrease in Hungary's net external debt ratio.

5.3 Fiscal developments

As a result of the measures to control the pandemic and the Economy Protection Action Plan, as well as declining tax revenues, in 2020 the budget deficit may rise to 3.8 of GDP and thus fiscal policy may be countercyclical in 2020. In our forecast, we project an increase in public investment and its economic stimulus effect to the extent of the room for budgetary manoeuvre. From 2021, in the more favourable economic environment, the higher revenues resulting from the cyclical processes on the one hand, and the lower expenditures on the other hand, will once again reduce the deficit. The 2021 budget bill includes a deficit target of 2.9 percent, which is achievable according to our forecast. Due to the higher budget deficit and the slowdown of economic growth, the government debt-to-GDP ratio will temporarily rise in 2020, but from 2021 the government debt returns to a downward path.

5.3.1 Main balance indicators and the fiscal impulse

According to our forecast, the government sector's accrual-based deficit as a percentage of GDP may amount to 3.8 percent in 2020 and 2.9 percent in 2021 (Table 5-1).

In 2019, the budget deficit slightly exceeded the appropriation of 1.8 percent and amounted to 2.0 percent. In 2020, the higher deficit is partly attributable to the economic slowdown and partly to the budgetary measures related to healthcare and protecting the economy. The slowdown in economic growth reduces tax revenues (automatic stabiliser). On the other hand, fiscal measures provide the economy with surplus funds, thereby stimulating the decelerating growth and resulting in a countercyclical fiscal policy (Chart 5-7).

In the 2021 budget bill, the budget deficit falls to 2.9 percent of GDP, which is achievable according to our forecast. In the more favourable economic environment, higher revenues resulting from the cyclical processes and lower expenditures may both reduce the deficit. As a result of the falling deficit, the fiscal impulse may be negative in 2021. In our technical projection for 2022, the deficit continues to decline compared to the previous years.

5.3.2 Budget balance in 2020

In 2020, the budget deficit as a percentage of GDP may correspond to the targeted value of 3.8 percent. The plans and projections before the outbreak of the pandemic projected a deficit of around 1 percent, with reserves amounting to 1 percent of GDP. Due to the all-time low deficit target and the high reserves, there was adequate room for manoeuvre in the budget to manage the crisis. According to the government's plans, the measures aimed at addressing the health and economic impacts of the pandemic, with a direct fiscal impact, amount to 5.2 percent of GDP. The government may cover a large part of the measures by reallocation, absorption of reserves, tax increases (retail surtax, contribution of financial organisations) and the reallocation of EU funds. According to our calculations, in this way the net balance impact of the measures may be 1.1 percent of GDP (Table 5-2). The economic slowdown considerably reduces

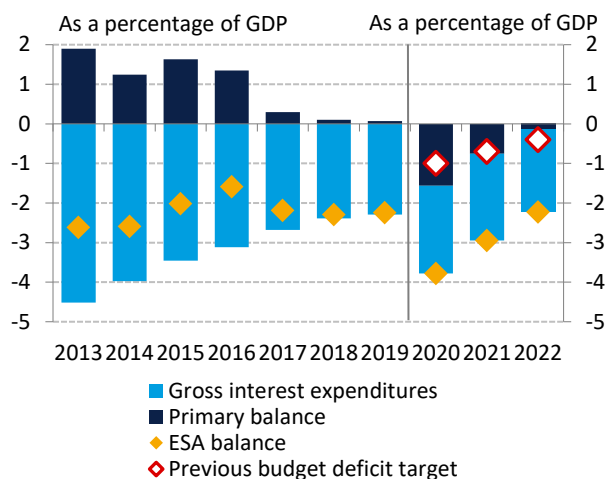
Table 5-1: General government balance indicators

	2019	2020	2021	2022
ESA balance	-2.0	-3.8	-2.9	(-2.2)–(-2.1)
Primary ESA balance	0.1	-1.6	-0.8	-0.1
Fiscal impulse (point estimate)*	0.0	1.6	-0.8	-0.7

Note: As a percentage of GDP. In 2020 and 2021, we expect an increase in public investment to the extent of the room for manoeuvre in the budget. In 2022, the lower value of the forecast band shows the ESA balance if the governmental reserves are used while the higher value shows the ESA balance if the reserves are not used. * Change in the augmented (SNA) primary balance. The point estimate assumes either cancellation or utilisation of the Country Protection Fund depending on which one is closer to the government deficit target.

Source: HCSO, MNB

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



Note: The point estimate on the graph shows the midpoint of the deficit forecast bands. The previous budget deficit target shows the deficit targets in the projection of the 2020 Budget Act.

Source: HCSO, MNB

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

Measures with budgetary implications	5.2
1. Tax cuts	0.8
2. Job protection	0.5
3. Job creation programmes	0.7
4. Reopening the economy	1.6
5. Protection of families and pensioners	0.0
6. Expenditures of disease control	1.7
Fundraising measures	4.2
1. Revenue-raising measures	0.3
2. Budgetary reallocation of the 2020 budget	3.0
3. Reallocation of EU funds	0.8
Impact on the budget balance	-1.1

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

Source: Ministry of Finance, MNB

tax revenues compared to the previous estimates. Payments by enterprises, consumption taxes, labour taxes and contribution revenues may all substantially fall short of the statutory appropriation, but according to our forecast based on the macroeconomic path these revenues decline to a smaller degree than in the Convergence Programme. The economy protection measures suggest that government investments – which last year affected 6 percent of GDP (from EU and own funds in total) – may increase further, substantially contributing to the countercyclical behaviour of the budget (Chart 5-8).

5.3.3 Balances in 2021 and 2022

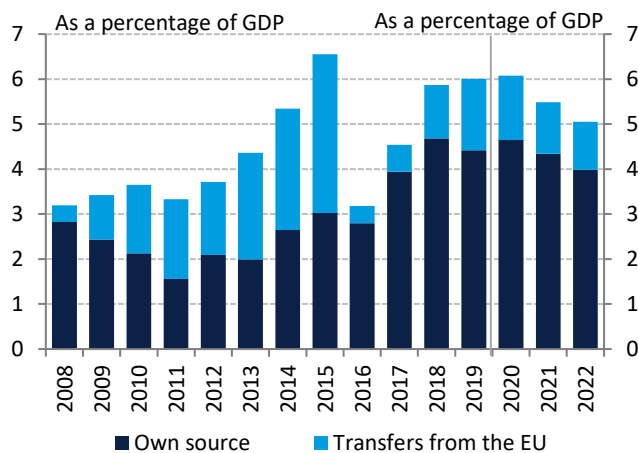
According to the budget bill submitted to the Parliament, in 2021 the ESA budget deficit may be 2.9 percent of GDP.

Accordingly, the deficit target is lower than the 2020 target of 3.8 percent by roughly 1 percentage point. Based on the economic impacts of the pandemic and the economic protection and further measures included in the bill, we have increased our 2021 deficit forecast compared to March, but we deem the deficit target to be achievable.

The decrease in the budget deficit compared to 2020 is realised primarily by curbing the expenditures of budgetary organisations and institutions. A decrease, as a percentage of GDP, can be expected primarily in government investments and intermediate consumption, which rose to a high level, but the compensation of employees and current transfers to households may also decrease as a percentage of GDP. The fall in the deficit is also supported by rising tax and contribution revenues, which were moderate in 2020 due to the measures adopted to mitigate the economic slowdown and to restart the economy.

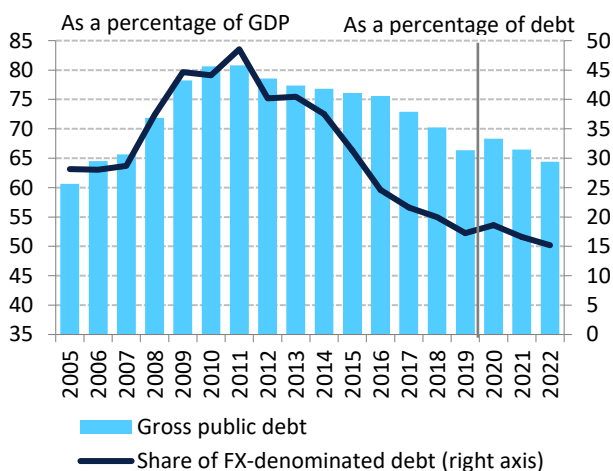
According to our forecast, the budget deficit in 2021 may be 2.9 percent, and thus the deficit target included in the budget bill is achievable. Compared to the budget bill, we project higher wage indices and more moderate consumption expenditures, and thus in our forecast the consumption tax revenues which fall short of the appropriation are offset by higher personal income tax and contribution revenues. According to our forecast, on the expenditure side the expenditures of budgetary organisations may exceed those assumed in the budget bill, while housing subsidies may fall short of the appropriation. In addition, according to the plans, the amount of the central reserves of the budget will be HUF 270 billion, i.e. 0.5 percent of GDP in 2021, which – should the revenues fall short of the appropriation – may ensure the feasibility of the deficit target.

Chart 5-8: Development of government investment



Source: HCSO, MNB

Chart 5-9: Gross public debt forecast



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

Source: MNB, GDMA

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

5.3.4 Risks surrounding the baseline scenario

The most significant risk is the possible return of the coronavirus pandemic, which would further reduce tax revenues and necessitate additional fiscal measures. In our baseline scenario, in 2020 government investments may slightly exceed the high level of 6 percent, reached in 2019. Government investments are increased by certain expenses related to the prevention of the pandemic and also by the investment measures of the Economy Protection Action Plan. In our forecast, we project a rise in public investments and a fiscal stimulus effect to the extent of the available fiscal leeway. However, the actual economic effect may be reduced by the fact that – due to the existing capacity constraints – surplus investment resources are not utilised in full. In addition, the reallocations providing funding for the Economy Protection Fund may have also affected investment items.

5.3.5 Expected developments in public debt

According to the preliminary data, at the end of Q1 2020, the gross government debt-to-GDP was 66.8 percent (Chart 5-9). The debt ratio fell by 2.7 percentage points year on year, while compared to the value registered at the end of 2019 it rose by 0.5 percentage point. In the first quarter of the year, in addition to net debt issuance, revaluation and the slowdown in economic growth also contributed to the rise of the debt ratio.

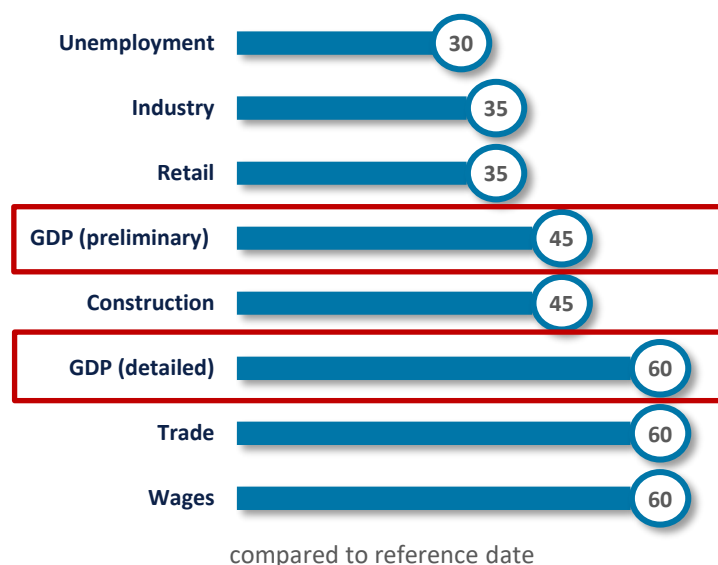
According to our forecast, in 2020, due to the deteriorating economic environment stemming from the coronavirus pandemic, the measures necessary to mitigate the economic effects of the pandemic and the higher expenditures, the gross government debt-to-GDP ratio will temporarily rise from 66.3 percent, registered at the end of 2019, to 68-69 percent. However, in 2021, as a result of the recovery in economic growth and the decline in the expected deficit, government debt will return to a declining path. According to our projection, following the temporary rise, the government debt ratio will decline annually by 2 percentage points on average, and thus by the end of 2022 it may fall below 65 percent. As a result of the foreign currency bond issuance, by the end of 2020 the share of foreign currency-denominated debt may temporarily rise above 18 percent, and then, over the forecast horizon the negative net foreign currency issuance will reduce the ratio, which may fall to around 15 percent by 2022.

6 Special topics

6.1 Assessment of economic performance in the light of high-frequency data

One of the important tasks of economists is to determine and analyse trends in economic activity and prepare forecasts on expected economic developments based on known, aggregated time series and statistics such as the unemployment rate, industrial production and GDP growth. **The macroeconomic data collected and published by statistical offices describe the changes in economic trends** in a harmonised manner, also comparable at an international level. On the other hand, the time series published regularly by international organisations and statistical offices are usually available with a significant time lag. In Hungary, in line with the European standards, the Hungarian Central Statistical Office usually publishes the official statistical data with a time lag of 30–60 days after the period under review (Chart 6-1).

Chart 6-1: Availability of official statistical data compared to the reporting month in certain cases



Source: MNB representation based on the HCSO's release calendar

In turbulent periods, real-time data sources of higher frequency may provide decision-makers with informative signals on economic activity trends. The spread of the coronavirus pandemic generates even greater uncertainty in the economic trends than usual. **The spread of the epidemic appears as an outlier instead of the effects justified by economic correlations, substantially complicating the assessment of economic trends and the preparation of projections.** However, real-time data help identify turning points and provide economic policy decision-makers with up-to-date information.

As a result of the spread of the virus and the government measures to control it, all economic agents have had to radically transform their activities. Numerous industrial sectors were forced to announce the reorganisation of their production or temporary stoppage, while units in the tertiary sector closed their shops or suspended their services overnight. The rapidly implemented restrictive measures and border closures had unprecedented impacts on economic performance, which is in line with the drastic decline observed in the output data and indicators for April.

In periods of crisis, use of the largest possible information base is of the utmost importance in supporting economic policy decision-making and fast economic recovery. **In the following, we present the change in economic activity in the past days and weeks, and the co-movement of these with the official macroeconomic statistics relying on alternative indicators.**

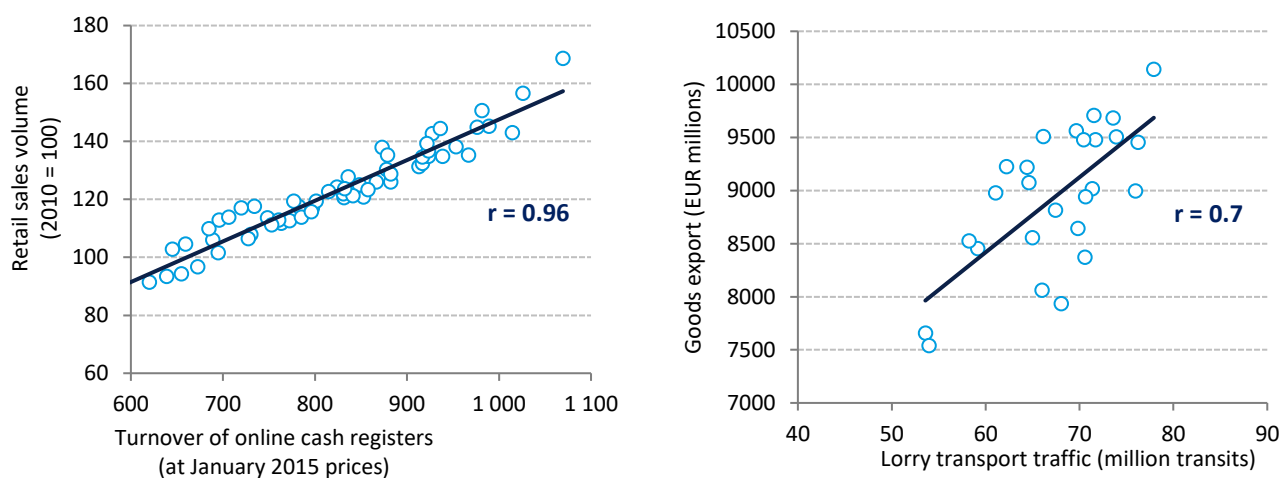
6.1.1 Co-movement of monthly sector statistics with real-time data

For monitoring and forecasting household consumption, which accounts for roughly half of Hungary's GDP, among other things, economists use retail sales volume. In order to reduce the shadow economy, in 2013-2014 the Hungarian government prescribed the mandatory use of online cash registers in certain sectors, which in addition to the precise

observation of domestic retail and wholesale turnover, also quantifies the turnover of certain services, such as e.g. taxi services, catering, accommodation services, hiring and repair activity. **There is strong relation, i.e. a correlation of roughly 0.96, between the turnover of online cash registers and the volume of retail sector statistics** in the period of 2015–2020 (Chart 6-2, left panel).

Due to its integration in global value chains, Hungary is one of the world's most open economies, and as such, it is particularly exposed to international trade and merchandise trade. Exports account for roughly 83 percent of Hungary's GDP, while the ratio of goods exports is 65 percent. Since the products are delivered abroad primarily by road, which accounts for 85 percent of freight services in Hungary, it makes sense to approximate goods export by the volume of goods transport. **The partial correlation of 0.7 between goods exports and goods transport shows a strong relation** (Chart 6-2, right panel).

Chart 6-2: Co-movement of retail sales volume and turnover data from online cash registers (left panel) and goods export and goods transport by road (right panel)

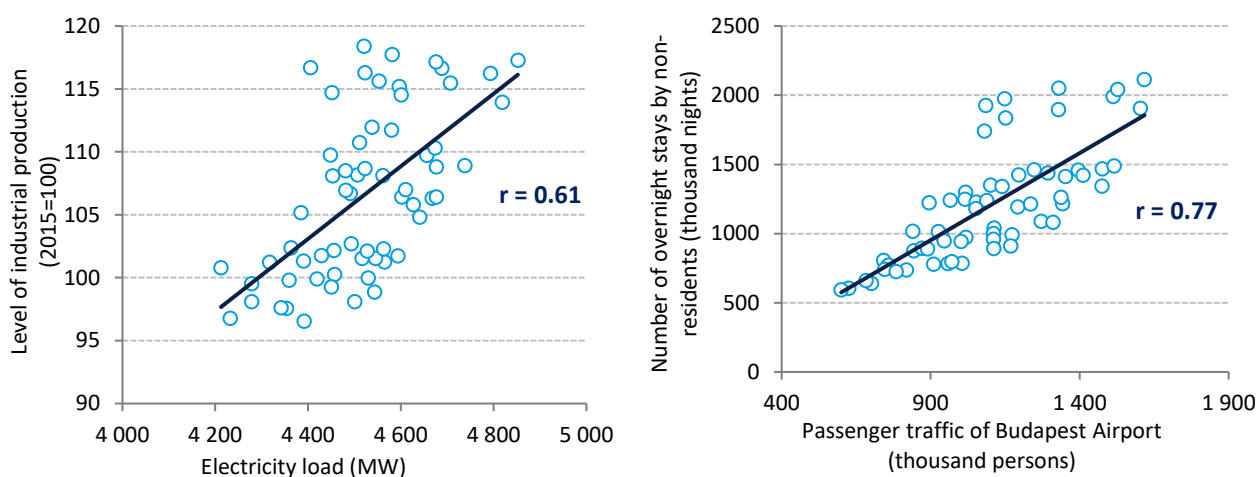


Note: Based on seasonally unadjusted data. The left panel includes monthly data for January 2015 - February 2020; the right panel for January 2018 - February 2018.

Source: Based on HCSO, Ministry of Finance/Tax registry and NÚSZ Zrt. Business Intelligence MNB calculations

Industrial production trends are key to domestic growth. According to international experiences, the load on electricity grids gives a good approximation of industrial activities' performance. Industrial activity may be approximated by examining energy load between 8 a.m. and 6 p.m. and adjusted for temperature effects of high seasonal volatility. **The sector statistics of Hungarian industrial production moves closely together with the electricity load value, indicated by a correlation of 0.55** (Chart 6-3, left panel). For the approximation of tourism, **the number of overnight stays by non-residents, and the passenger traffic of the Budapest Liszt Ferenc airport can be used, which shows a correlation of 0.77** (Chart 6-3, right panel).

Chart 6-3: Co-movement of industrial production and electricity load (left panel) and overnight stays by non-residents and passenger traffic of the Budapest Liszt Ferenc airport (right panel)



Note: The level of industrial production has been seasonally adjusted, while electricity load excludes temperature effects. The right panel is based on seasonally unadjusted data. Both panels contain monthly data for the period of January 2015 - February 2020.

Source: MNB calculation based on HCSO, ENTSO-E and Budapest Airport data

6.1.2 Economic activity trends based on real time data

Relying on the available high-frequency data, the Magyar Nemzeti Bank continuously monitors the trends in economic performance. Our economic activity monitor uses 14 indicators. Retail and wholesale turnover is approximated based on the available data from the online cash registers. Demand for **financial services** are explained by household borrowing data, while changes in **real estate transactions** are explained by the frequency of housing market transactions. Road traffic data and fuel consumption provide a view of the trends in **logistics and goods transport**, while the situation of **tourism** is approximated by passenger traffic by air, number of hotel guests. Electricity consumption data provide guidance with regard to **industrial production**. **Labour market trends** are revealed by the number of weekly registered jobseekers, and the Google searches for unemployment benefit and jobseeker's allowance. Finally, the **external trade prospects** of the domestic economy are indicated by the weighted stringency index related to Hungary's 10 most important export partners (Table 6-1).

Table 6-1: Heat map of weekly indicators monitoring economic activity

		Dec 30	Jan 6	Jan 13	Jan 20	Jan 27	Feb 3	Feb 10	Feb 17	Feb 24	Mar 2	Mar 9	Mar 16	Mar 23	Mar 30	Apr 6	Apr 13	Apr 20	Apr 27	May 4	May 11	May 18	May 25	Jun 1	Jun 8	
Retail and wholesale	Turnover of online cash registers ¹	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Financial services	Retail lending ²	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Transportation and logistics	Road passenger traffic ³	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Road lorry traffic ³	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Fuel consumption ⁴	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Tourism	Air passenger traffic ⁵	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Hotel traffic ⁶	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Real estate	Housing market transactions ⁷	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Industry	Electricity load ⁸	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Labour market	Registered jobseekers ⁹	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Google search: Unempl. Assistance ¹⁰	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Google search: Job Search Allowance ¹⁰	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Economic isolation	Restrictions on export markets ¹¹	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

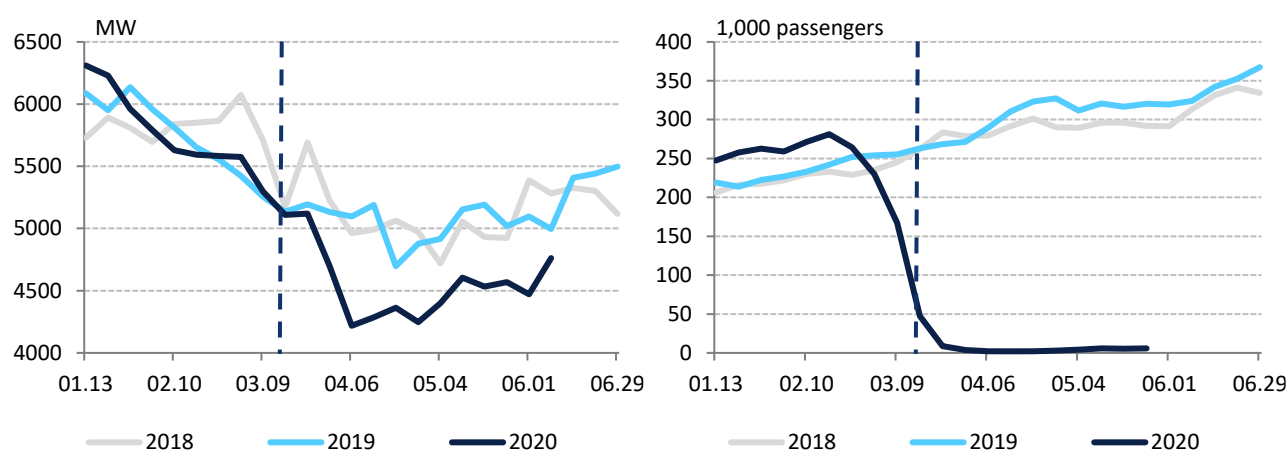
Note: Data for the week commencing on the respective calendar day; for the purposes of comparison calculation compared to the same week of 2019. In the colour scale, green indicates increasingly good, while red indicates increasingly poor values. Units of measurement: 1: real annual change based on billion forints, 2: nominal annual change based on billion forints, 3: annual change based on the number of road transits, 4: million litres, 5: as percentage of the level recorded in 2019, 6: annual change, 7: annual change based on number of transactions, 8: as a percentage of the level recorded in 2019, 9: thousand persons, 10: frequency of online searches based on Google Trends, 11: government response stringency index of the 10 largest trading partners weighted with their export market share based on Hale et al. (2020).

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

Our heat map clearly reflects the slowdown in economic performance after the introduction of restrictive measures. On the week commencing on 9 March – in line with the global spread of the virus – signs of slowdown already appeared in tourism. The number of air passengers declined and the turnover of hotels also decreased. **In relation to the spread of the coronavirus, the turning point for most sectors was the week commencing on 16 March.** Catering and tourism registered a drastic fall, which is obviously closely related to the curfew measures applicable to households. The decline in passenger road transport also signals a downturn, which by April fell to less than half of the level registered in previous years. The full stoppage of tourism is well illustrated by the fact that while last year the Liszt Ferenc airport handled more than 1.3 million passengers, this April it served merely 10,000 passengers (Chart 6-4, right panel).

As a result of the interruptions of global production chains and the rapidly disappearing demand in world markets, industrial units announced the suspension of their production all over the world. **In the second half of March, Hungarian manufacturing plants, including vehicle plants and their suppliers, announced their temporary stoppage one after the other.** The contraction of industrial production and industrial exports is reflected by the fact that in April the electricity load fell short of that registered last year by roughly 12–15 percent (Chart 6-4, left panel).

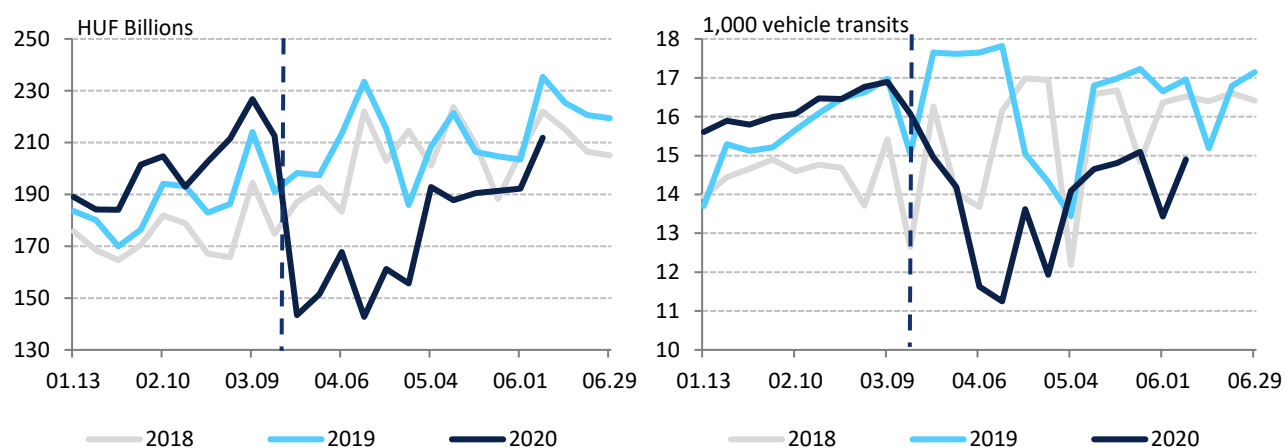
Chart 6-4: Dynamics of the domestic electricity load (left panel) and traffic of Budapest Liszt Ferenc Airport (right panel) on a weekly basis



Note: Based on seasonally unadjusted data. Weekly data between the 1st week of 2018 and the 24th week of 2020.
 Source: MNB calculation based on ENTSO-E and Budapest Airport data

Following the panic buying in March, retail sales volume tapered off, and the volume substantially declined. At the beginning of the year, the retail sales volume exceeded the average of previous years, but in the weeks after 15 March it fell short of that by roughly 30–50 percent. In the second half of March, household purchases by bankcard showed a similar decline (Chart 6-5, left panel). **From the second half of March goods transport by road dynamically declined, and by April it plunged to 75–80 percent of the average of previous years** (Chart 6-5, right panel). This March, air cargo traffic still rose by 7 percent in annual terms, mostly due to the procurement of medical equipment, but in April trade measured in tonnage of goods declined at the same rate.

Chart 6-5: Dynamics of real online cash register turnover (left panel) and lorry transport traffic (right panel) on a weekly basis

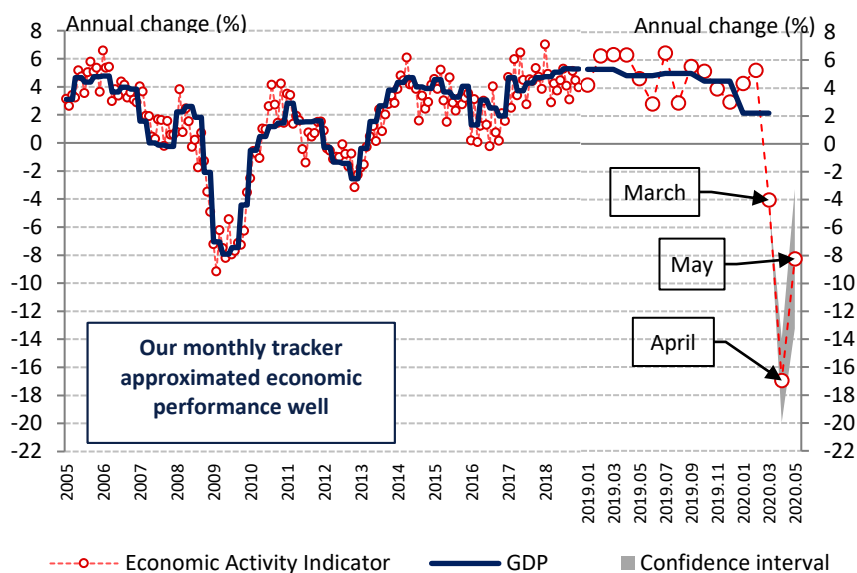


Note: Based on seasonally unadjusted data. Weekly data between the 1st week of 2018 and the 24th week of 2020.
 Source: MNB calculation based on Ministry of Finance/Tax registry and NÚSZ Zrt. Business Intelligence data

Based on our analysis, April may have been the trough in the performance of the Hungarian economy, while in May a gradual recovery commenced in several sectors. In May, based on the detailed bankcard data, we can observe the start of the recovery procedure, which is in line with the gradual easing of restrictive measures. The retail sales volume, estimated on the basis of the data from the online cash registers, shows a somewhat slower recovery, but this year’s dynamics falls short of last year’s value by hardly 10 percent. In mid-May, electricity load and road transport only fall short of last year’s averages by 5–10 percent and 6–8 percent, respectively. There are more and more cars on the roads, and life is starting to return to normal in industrial production and logistics as well. Larger automotive companies have announced the restart of production and the increase in their capacity utilisation one after the other.

On the other hand, in line with the expectations, the tourism and catering sector is still highly affected by the restrictions, but some correction can be observed here as well following the downturn registered in April. Some of the airlines restarted their operation in Budapest under extraordinary precautionary measures, and in the second half of May accommodations in the countryside also started to reopen. In international transportation, the fast resolution of the interruption in the early phase of the virus and the opening of the borders for goods transportation, and the recovering road traffic all point to positive prospects.

Chart 6-6: Monthly GDP indicator based on economic activity



Source: HCSO, MNB calculations

Due to the pandemic, our nowcasting related to economic activity is surrounded by considerable uncertainty. Although in the second half of March the coronavirus had already made its effect felt in the performance of the Hungarian economy, it had no material impact on GDP growth in the first quarter. **Based on our activity measurement indicator, in March Hungarian economic activity may have decreased by approximately 4 percent.** The economic impact of the introduced restrictions was already realised in the second quarter. **In April, the fall may have amounted to 13–20 percent in total, while based on the available data, economic activity may have declined by 3–13 percent year on year in May** (Chart 6-6).

6.2 Impacts of the coronavirus pandemic on inflation and labour market statistics

In addition to the economic challenges, the coronavirus pandemic also generated new challenges for data collectors and data analysts. Due to the measures taken to prevent the spread of the pandemic and control its economic consequences, the collection or construction of certain data necessitates a different approach than usual. As the collection of data became difficult (or even physically impossible) due to the restrictions, statistical offices were forced to apply alternative solutions. In addition, the measures taken by the governments will leave a mark on statistics as well: thus, in Hungary the moratorium on household loan instalments **may also appear in the statistics on the use of income**. The measurement and behaviour dilemmas triggered by the pandemic can be well identified primarily in the inflation and labour market indicators, which are described in detail in our special topic.

6.2.1 Measurement uncertainty in inflation resulting from the pandemic

In addition to the inflation trends, the pandemic also influences the collection and methodology of consumer prices, and thus **the calculation of inflation**. For the purposes of producing the consumer price index, the Hungarian Central Statistical Office – in line with international practice – records the price of the various representative items prevailing on the respective day at several points of the country. A major part of the prices is recorded on the spot; the recording of online prices is typically of supplementary nature in the practice of statistical offices.

However, in recent months, due to the increased health risks and the restrictions, the **HCSO applied alternative data collection methods**. The resource needs of telephone and e-mail enquiries, and data collection over the internet is significantly higher compared to traditional on-site price recording, and **thus the volume of the collected data may fall short of earlier collection results**. Moreover, some of the traditional recording venues (e.g. cinemas, theatres, restaurants, sports events) were forced to close down during the peak of the pandemic, and thus the necessary price information was not available through the traditional channels. **In this special situation, in order to substitute the prices of unobservable products, the HCSO applies a methodology, developed jointly with international organisations and the statistical offices of other countries**. For the substitution of the price index of representatives or consumption groups without actual observation, they used one of the three methodologies described below.

- 1) In the case of **substitution based on the nearest aggregate**, the missing price index of the representative to be substituted is replaced with the price index for the aggregate which is one level higher in the hierarchy, if a sufficient number of observations are available for this aggregate.
- 2) If there are not sufficient data for this aggregate, in order to substitute the price index of the representative all such products and services are taken into consideration for which a sufficient number of observations are available. The disadvantage of this substitution **based on the overall consumer price index calculated from actual observations** is that **it may significantly distort the real price change in the respective representative**.
- 3) In the case of representatives, whose price rarely changes – or which were not available in the respective month due to administrative restrictions – a **constant price** is assumed. Such services include e.g. cinemas and theatres. In the case of highly seasonal products – e.g. air tickets – it is justified to use the month-on-month index of the same month of the previous year.

When applying any of the three methods **the estimation of the price change of unobservable products is uncertain, which deteriorates the quality of the consumer price index**. These new challenges in data collection appeared not only in Hungary, but also in many other countries around the world. During the data collection necessary for the calculation of US inflation for March, the ratio of prices recorded in person decreased significantly, while the importance of online data collection rose considerably. The database compiled through alternative channels contained less observations (Table 6-2).

Table 6-2: Results of the responses given in the survey of prices of goods and services

	March 2019 (percent)	March 2020 (percent)
Collected prices	87	75
Uncollected prices	13	25
Collection mode:		
Personal visit	67	37
Telephone	9	12
Online	14	35
Other*	9	16

Note: * Data collected in other ways, e.g. from data reported by companies or collected by national offices.

Source: US Bureau of Labor Statistics

6.2.2 Statistical and behavioural effects in inflation expectations

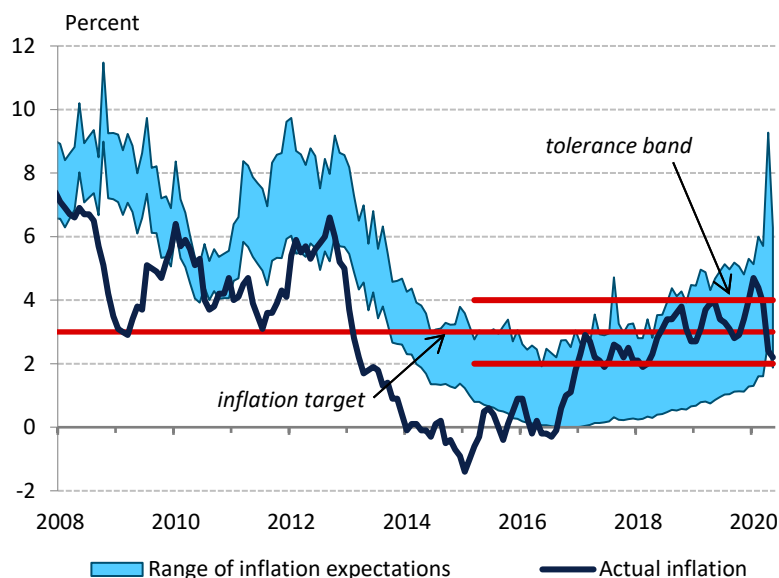
In countries which operate an inflation targeting system, inflation expectations bear utmost importance for the monetary policy, since they carry information on households' and corporations' expectations. Accordingly, most central banks regularly monitor the expectations of certain economic agents. The qualitative survey of households' inflation expectations is performed monthly in Hungary on behalf of the European Commission.

In April, a temporary rise in households' inflation expectations was observed, which is the combined result of several factors. On the one hand, **when formulating their expectations, households mainly rely on the trends observed in the past;** their expectations with regard to the future are influenced by their current perception of inflation. During the first months of the year, the consumer price index in Hungary temporarily rose above the central bank's tolerance band due to some volatile price items that are strongly exposed to global commodity market developments. **(Past) developments in inflation at the beginning of the year pointed to rising inflation expectations.** Moreover, when asked, **households tend to overestimate the price change of the products that they purchase more frequently.** Foods, which satisfy daily needs, have a critical weight in this, while price developments of less frequently purchased products are usually ignored or taken into consideration to a negligible degree. This leads to a considerable difference between the perceived inflation rate and the official inflation rate. The ensuing distortion may have been particularly large in recent months, as interruptions in supply chains resulting from border closures and stockpiling by households due to curfew measures **caused food prices to rise to a larger degree than the increases observed in previous years.**

In addition, it can be stated that **due to the reaction seen during the crisis, the volatility of sentiment indicators increased significantly around the world,** often reaching unprecedented values. **As a result of the foregoing, the data for April expectations cannot be fully reconciled with the time series of the pre-pandemic period.**

In March, inflation once again returned to the tolerance band and then subsequently declined further (Chart 6-7). **In line with this, according to the May survey of the European Commission, households' inflation expectations also declined.** In the coming months, inflation is expected to develop moderately, which – due to the retrospective nature of inflation expectations – may result in decreasing expectations.

Chart 6-7: Changes in households' inflation expectations



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

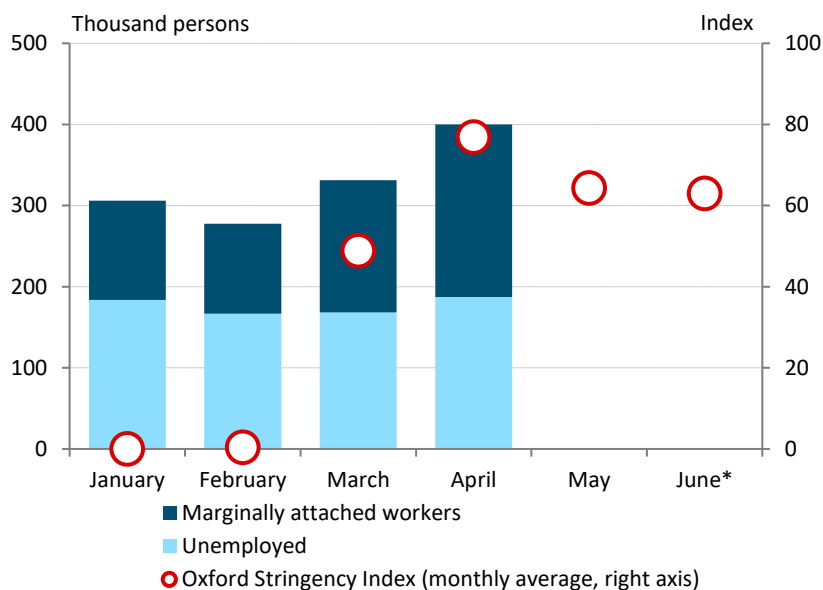
6.2.3 Why did unemployment not increase in statistical terms as a result of the lay-offs?

As a result of the changed economic situation caused by the pandemic, from March corporations started to implement lay-offs. In April, the number of people in employment fell short of the year-on-year value by 136 thousand, but – based on the definition used by the Labour Force Survey to ensure international comparability – **far fewer people became unemployed in statistical terms than would be implied by the decrease registered in employment. Due to the curfew measures, it was less feasible to comply with the three criteria of unemployment, as specified by ILO, the labour organisation of the UN.** According to the ILO definition, a person is unemployed who

1. has no job (**not employed**),
2. has looked for a job in the past 4 weeks (**active job search**),
3. and had they found a job, would be able to take up work within 2 weeks (**availability**).

Those who failed to satisfy one of the latter two criteria are classified as economically inactive persons more tightly attached to the labour market, as they have similar characteristics as unemployed persons and the probability of their finding a job is almost the same. Accordingly, the group of inactive persons attached to the labour market also forms part of the available labour reserves. **In April, the size of the labour reserves was almost one and half time higher than the value registered a year ago, which is primarily attributable to the rise in the number of the inactive resulting from the lay-offs.** Namely, due to the curfew measures, they were unable to look for a job actively or take up work within 2 weeks. Based on the Oxford Stringency Index **social distancing may have peaked in April (Chart 6-8); in parallel with the gradual lifting of the curfew measures, the ratio of the unemployed and the inactive is likely to return to normal**, as an increasing number of jobseekers will be able to fulfil all three criteria. In parallel with this, the impact of the earlier job losses may also raise the unemployment rate.

Chart 6-8: Labour market reserves and changes in the stringency of restrictive measures



Note: Inactive persons attached to the labour market: A) inactive, looks for a job, but unable to take up work within 2 weeks, B) inactive, would like to work, but did not look for a job * Based on data available until 4 June.

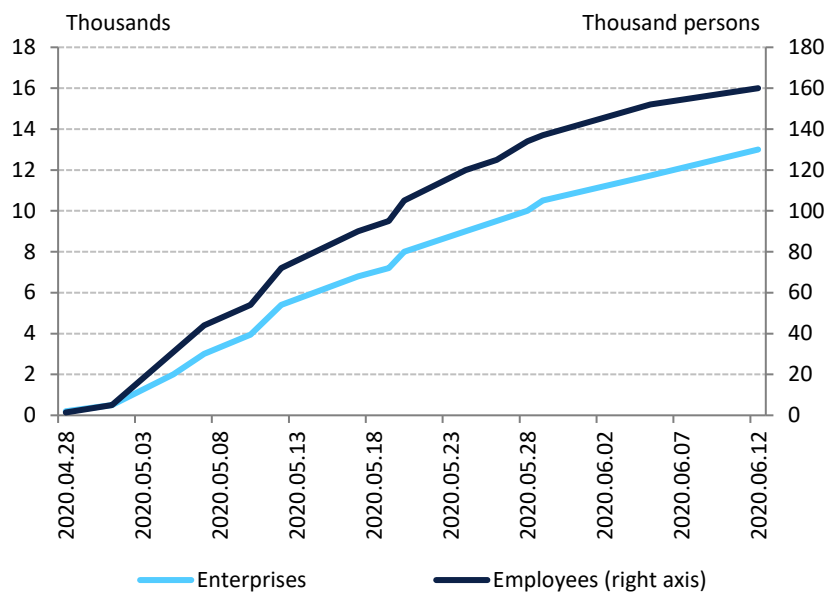
Source: HCSO, Hale et. al. (2020)

6.2.4 Consequences of the spread of part-time work arrangements in the labour market indicators

When economic performance declines, it is a general phenomenon that employment decreases to a lesser degree than production, since adjustment may take place not only in the headcount (on the extensive side), but also in the number of working hours (on the intensive side). With a more moderate adjustment in headcount, i.e. by labour hoarding, the costs of recruitment and training can be reduced in the period of recovery, and employees' experience does not fade when they are kept on the payroll. In the light of this, **it may be an alternative to dismissals if corporations continue employing staff in a part-time arrangement by reducing the working hours of full-time employees.** The degree of part-time arrangements due to labour hoarding may vary depending on the characteristics of the individual companies and sectors.

Retention of jobs is a key objective of economic policy, and thus it supports part-time employment in the economic situation that developed as a result of the coronavirus pandemic. Companies may apply for a job protection wage subsidy for shorter working time, in lieu of keeping employees on the payroll. Employees employed in a working time regime reduced by 15–75 percent receive 70 percent of their lost wage, up to a maximum of HUF 112,500, from the state. **Up to 12 June, 13 thousand companies applied for the subsidy in respect of 160 thousand employees** (Chart 6-9), in a total amount of HUF 26.5 billion. The appropriation for the job protection wage subsidy amounts to HUF 200 billion, and thus an additional HUF 173.5 billion is still available for this purpose.

Chart 6-9: Number of companies and employees applying for job protection wage subsidy



Source: MNB collection

The effect of the job protection wage subsidy may appear in different ways in the various labour market indicators. The wage subsidy does not form part of the wage, as the employee receives the subsidy directly from the state. In addition, **in statistical terms, lowering wages in proportion to the working time may affect changes in gross average wage to a lesser degree**, since the HCSO publishes the index in respect of full-time employees. As a result of the rise in the ratio of part-timers, in fact annual growth in the average wage per employee slows down to a greater degree, which also influences households' disposable income. During the crisis of 2008–2009, **also considering the impact of part-time employees, annual wage growth in the private sector fell short of the published indicator by 1 percentage point in 2009.**

As a consequence of the part-time arrangements, the number of people in employment – expressed as a number of persons – does not provide a full picture of the labour use of the private sector. However, as an alternative, the full-time equivalent headcount shows that based on the hours worked employees performed the work of how many full-time employees in total. Significant differences may develop between the evolution of headcount and the full-time equivalent headcount, if the ratio of part-timers changes substantially. **The recently adopted economic policy measures aimed at retaining labour encourage companies to opt for employment in shorter working time instead of dismissal.** Thus, due to the rise in the ratio of part-timers, the full-time equivalent headcount may decrease to a larger degree over the short run. Due to the economic impacts of the coronavirus pandemic, underemployment may once again rise, that is, many opt for part-time employment out of necessity, and in fact they would like to work more, but do not find full-time job.

7 Breakdown of the average consumer price index for 2020

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

	Effect on CPI in 2020		
	Carry-over effect	Incoming effect	Yearly index
Administered prices	0.0	0.1	0.1
Market prices	1.3	1.4 – 1.5	2.7 – 2.8
Indirect taxes and government measures	0.1	0.3	0.4
CPI	1.4	1.8 – 1.9	3.2 – 3.3

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

Source: MNB

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

	2020				
	Average carry-over effect	Carry-over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	2.3	0.0	6.2 – 6.4	0.0	8.5 – 8.7
non-processed	2.5	0.0	10.5	0.0	13.0
processed	2.2	0.0	4.0 – 4.3	0.0	6.2 – 6.5
Tradable goods	0.3	0.0	0.4 – 0.6	0.0	0.7 – 0.9
durables	-0.1	0.0	0.0 – 0.2	0.0	(-0.1) – 0.1
non-durables	0.4	0.0	0.8 – 0.9	0.0	1.2 – 1.3
Market services	1.7	0.0	2.7 – 2.8	0.0	4.4 – 4.5
Market energy	2.4	0.0	-0.5	0.0	1.9
Alcohol and Tobacco	2.0	0.8	1.3	2.6	6.7
Fuel	1.8	0.0	-9.1	1.2	-6.1
Administered prices	0.2	0.0	0.5	0.0	0.7
Inflation	1.3	0.1	1.5 – 1.6	0.3	3.2 – 3.3
Core inflation	1.4	0.1	1.9 – 2.1	0.4	3.8 – 4.0

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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