INFLATION REPORT

2020

MARCH

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

Miklós Zrínyi: The Life of Matthias Corvinus

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

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

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

The analyses in this Report were prepared under the direction of Barnabás Virág, 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, Directorate for International Monetary Policy Analysis and Training of Economic Sciences and Directorate Monetary Policy Instruments, Foreign Exchange Reserves and Risk Management. The Report was approved for publication by Márton Nagy, Deputy Governor.

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 19 March 2020.

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The global coronavirus pandemic poses extraordinary challenges to economies around the world. In a much more uncertain than usual and volatile environment, it is the task of economic policy to mitigate the effects on real economy, to lay the foundations for economic recovery and to foster social cohesion. In this extraordinary macroeconomic environment, the Magyar Nemzeti Bank's mandate is still to achieve and maintain price stability, to preserve financial stability, as well as to support the Government's economic policy.

Due to the coronavirus pandemic, economic outlook has become even more uncertain than before. Because of this, the Inflation Report provides an interval instead of point estimates for the main macroeconomic variables, indicating the expected path of the indicators. In addition, the Monetary Council pays more attention than usual to alternative scenarios.

In 2019, world economic growth fell to a ten-year low, while economic activity in Europe decelerated beyond expectations at the end of last year. The coronavirus pandemic hit the global economy in a weakened state; its negative economic effects have appeared quickly in a wide range of countries.

In 2019, global economy rose by 2.9 percent, which is the lowest value in the past ten years. The economy of the United States rose in line with the expectations (2.3 percent), while growth rate in China continued to decrease moderately. Growth in the euro area slowed down to an even greater degree than expected; on quarter-on-quarter basis several large economies registered stagnation or decrease in GDP at the end of last year. The Visegrad region remained the growth centre of the European Union. In 2019, the growth in the region's GDP exceeded the growth of the euro area by 2.5 percentage points.

Global inflation did not change significantly in the past months. Euro area inflation still falls notably short of the 2 percent central bank target, core inflation is steadily around 1 percent. In the first months of 2020, inflation in the countries of Visegrad region rose and, in several cases, it temporarily exceeded the central banks' tolerance bands. The rise in inflation was primarily caused by the increase in prices of products heavily exposed to the global commodity market pricing, i.e. of fuels and food. Global oil prices decreased significantly from mid-February; the fall was more than 50 percent compared to the end of 2019 levels.

The coronavirus pandemic hit the global economy in a weakened state; its negative economic effects have appeared quickly in a wide range of countries. There is currently an exceptionally large degree of uncertainty in judging the potential macroeconomic consequences and their time profile. Looking ahead, the path of recovery after curbing the pandemic may greatly vary by regions: the recovery process may be faster in the regions that cope with the pandemic more rapidly and have strong intervention potential, while the regions struggling with structural problems will experience slower recovery.

Due to the negative economic effects of the coronavirus pandemic, a number of central banks around the world announced easing measures. As a result, the external monetary policy environment has become significantly looser.

In March, the Federal Reserve (Fed) implemented interest rate cuts of 150 basis points in total at two unscheduled meetings, and consequently, the policy rate fell close to 0 percent once again. US policymakers took measures to provide large-scale liquidity and restarted their asset purchase programme to mitigate financial market turbulences. Accordingly, in the coming months government securities and mortgage-backed securities will be purchased for at least an amount of USD 700 billion. In order to ensure dollar liquidity, the Fed loosened the conditions of FX swap lines among the world's leading central banks, and then broadened the range of central banks participating in the programme as well.

The European Central Bank (ECB) left both key interest rates and its forward guidance unchanged, but announced significant easing and liquidity providing measures. To maintain the smooth operation of the financial system, the ECB will provide additional liquidity to the banking sector of the euro area (LTRO), if necessary, while the easing of TLTRO-III's conditions is meant to support bank lending in the Member States that are hit the hardest by the coronavirus pandemic. The Governing

Council increased the amount of its asset purchase programme re-launched in autumn 2019 by a further EUR 120 billion for this year, dominated by corporate bonds. After this, at an unscheduled meeting the ECB also decided to launch a new asset purchase programme with a total amount of EUR 750 billion to offset the negative economic impact of the coronavirus pandemic and to maintain the efficient monetary policy transmission.

Several central banks of the region implemented monetary policy easing measures. Due to the spread of the coronavirus pandemic, the Czech central bank cut its key interest rate by 50 basis points at an unscheduled meeting in March. The policymakers of the Polish central bank also decided to cut interest rate and announced that, as part of a comprehensive liquidity providing measure, they would launch a government securities purchase program at the secondary market. The Romanian central bank also cut its key interest rates by 50 basis points, while easing monetary conditions further by a government security purchase program. In parallel with the growing uncertainty resulting from the spread of the coronavirus, anticipated interest rate paths for the upcoming years shifted substantially downwards in the region.

In the past quarter, risk appetite decreased considerably, and thus financial markets were characterised by high volatility, in a few cases financial market turbulences were observed as well.

At the beginning of the first quarter of 2020, financial market sentiment was favourable, followed by an enormous deterioration in sentiment in global financial markets in mid-February, as the coronavirus pandemic continued to spread. In general, markets were characterised by an increase in risk aversion and selling pressure. Widespread shortage of dollar liquidity was a key factor contributing to financial market volatility, which led to significant capital outflows from emerging markets.

Until mid-February, the key stock price indices showed a rising trend, followed by a significant fall due to the strengthening selling pressure. The US stock price indices registered considerable decrease for several days even in a historic comparison. Long-term yields of developed countries were characterised by a decline throughout the entire period, which was accelerated by the deterioration in global sentiment. In March, long-term government security yields declined to a new historic low. Gold price rose in the first half of the period; however, later, it significantly declined as a result of the deterioration in market sentiment. Following the Fed’s extraordinary interest rate decisions, the dollar showed high volatility. Global oil prices still rose in January; however, subsequently, due to the fall in demand resulting from the deceleration of the Chinese economy and the OPEC+ countries’ failure to reach an agreement on production cuts, they significantly declined: the fall was more than 50 percent relative to December 2019.

Since December, the Hungarian interbank yield curve has become flatter.

BUBOR yields gradually increased in the past quarter. The long section of the interbank yield curve also rose until mid-February; however, subsequently, a considerable fall was registered. Overall, the curve became flatter by the end of the period. Yields on both the short-term and long-term government securities increased. The government securities yield curve shifted upwards and became steeper. Apart from a temporary period, similarly to the currencies in the region, the forint depreciated against the euro.

The fundamentals of the Hungarian economy are strong: the economic policy pursued over the past decade has contributed to maintaining the country’s macroeconomic balance and has significantly reduced its external and internal vulnerability.

The Hungarian economy is still characterised by strong fundamentals. In addition to robust economic growth of the previous years, both household savings rate and the business investment rate stabilised at high levels, while the country’s external financing capacity remained persistently positive. By the end of 2019, Hungary’s net external debt had decreased to around 8 percent of GDP, a historical low; and, looking ahead, its external financing capacity is expected to remain stable. As a result of a disciplined fiscal policy, budget deficit is low, remaining around 2 percent of GDP over the past several years; and the government debt-to-GDP ratio has fallen continuously as well. The foreign currency ratio of the government debt has also significantly decreased. The Hungarian Government Securities Plus (MÁP+) scheme helps to maintain a high savings rate and to finance the government debt. The MNB is constantly reacting to the coronavirus pandemic. Micro- and macroprudential regulatory and supervisory decisions made so far, mitigate the adverse effects of the pandemic on lending.

The measures facilitate healthy lending on both the banks’ and borrowers’ sides. The gradual improvement of the economy’s competitiveness helps economic growth to remain on a sustainable path.

To mitigate the pandemic’s negative economic effects and to ensure the required level of liquidity, the Magyar Nemzeti Bank decided to implement coordinated measures.

As seen in other countries of the region, the Hungarian consumer price index rose temporarily above the central bank tolerance band in the first months of the year, due to a few volatile items heavily exposed to world market developments. As a result of the sharp decline in fuel prices, domestic consumer price index is expected to return to the tolerance band as early as in March and then to fall rapidly, in the short term, below the 3 percent central bank target.

Factors determining the more persistent inflation trends are still characterised by external and internal dichotomy; however, the rate of the price increase is increasingly influenced by fuel and food prices. The economic effects of the global coronavirus pandemic considerably increased the uncertainty surrounding economic growth and inflation trends. Inflation continues to show high volatility in the coming months. As a result of the sharp decline in fuel prices from mid-February, the domestic consumer price index is expected to return to the tolerance band as early as in March and then to fall rapidly, in the short term, below the 3 percent central bank target. Inflation expectations continued to remain anchored. Core inflation excluding indirect tax effects is likely to be around 3.2-3.5 percent on average in 2020, before decreasing gradually to 3 percent.

Outstanding private loans may temporarily rise at a slower pace in 2020, as a result of the moratorium on loan repayments.

In 2019, both the outstanding corporate and the SME sector’s loan expanded by almost 15 percent year on year. In 2020, in parallel with the slowdown in investments, lending growth may be more moderate, which is still supported by the Funding for Growth Scheme Fix and the Bond Funding for Growth Scheme. However, from 2021 until the end of the forecast horizon, the annual growth in outstanding loans is likely to rise to the band of 5-10 percent once again, supporting economic growth.

Household loans outstanding rose by 14 percent on a transaction basis in the whole year. Prenatal baby support loans also contributed to this. In 2020, as a result of the more moderate consumption, substantially lower demand is expected both in the mortgage loan and unsecured consumer loan markets. The moratorium on loan repayments until the end of the year may offset the deteriorating repayment ability resulting from the labour market developments. As a result, in 2020, the household loans outstanding are likely to rise by 5 percent in total. Assuming that the macroeconomic effect of the pandemic will be temporary, from 2021 household loans outstanding will increase by 11 percent annually over the forecast horizon.

Although in 2020 the growth of Hungarian GDP will slow down, Hungary’s economic convergence with the euro area is expected to continue. However, the economic effects of the coronavirus pandemic pose significant uncertainty.

This year’s macroeconomic data are expected to show significant volatility and dichotomy. In the first half of 2020, growth is likely to slow significantly, reflecting the negative economic effects of the pandemic; then domestic growth, the labour market, lending and foreign trade are expected to pick up again as the negative effects wane and lost economic activity is regained. Hungary’s GDP is likely to grow by 2-3 percent in 2020, 4-4.8 percent in 2021 and 3.5 percent 2022, respectively. Convergence with the euro area is expected to continue with the maintenance of the 2-3 percentage point growth surpluses.

Wage increase in the private sector may continue at a more moderate rate, consequently consumption growth rate will somewhat decline. The household savings rate is expected to be persistently high, supported by the government security scheme (MÁP+) introduced last year as well. Longer term investment trends of the corporate sector will remain strong, as it is also supported by the Bond Funding for Growth Scheme in addition to the favourable financing environment. However, due to the uncertainty caused by the coronavirus pandemic, the realisation of certain large investments may be delayed.

The spread of the pandemic deteriorates external economic activity, and consequently, both exports and imports will decelerate in the first two quarters of 2020. Corporations may gradually regain lost exports from the second half of this year. Accordingly, in the second half of the forecast horizon, the increase in Hungarian goods exports may exceed external demand, resulting in an improvement of Hungary's export market share. Following the recovery of the export performance, net exports in 2021 and 2022 will once again make positive contribution to economic growth.

The current account balance is expected to improve gradually in the coming years. The persistence of net lending and net FDI inflows are likely to reduce external debt ratios further.

Primarily due to declining goods balance resulting from the import-intensive investment, the current account balance declined temporarily in 2019. As a result of the improving terms of trade and the expected growth in Hungary's export market share, the trade balance as well as the current account balance are expected to start rising in the coming years. Over the short term, the coronavirus pandemic is likely to generate increasing volatility in Hungary's external trade indicators due to the turbulences appearing in global trade. Corporations may regain the lost exports after the easing of the negative economic impacts. Over the forecast horizon, net lending is expected to persistently stabilise around 2 percent of GDP. Due to the continued favourable external balance position and the significant inflow of FDI funds, external debt ratios are likely to continue to decline further.

Based on preliminary data, budget deficit stood at 2.1 percent of GDP in 2019, thereby exceeding the deficit target, but indicating a fall relative to 2018. In parallel, showing the greatest decrease in the past 20 years, government debt-to-GDP ratio fell to 66.4 percent by the end of 2019. As a result of the pandemic, in 2020 the Country Protection Fund may be fully utilised, and as a result, the deficit may be between 1.6-2.0 percent of GDP depending on the economic growth rate. By the end of the forecast horizon, the government debt ratio may fall to 60 percent, while the steadily decreasing foreign currency ratio is likely to improve the resilience of the Hungarian economy further.

Following symmetric risks in December, the likelihood of downside risk occurrences has increased due to the spread of coronavirus.

The Monetary Council highlighted three alternative scenarios around the baseline projection in the March Inflation Report. The impact of the global coronavirus pandemic on the global economy, which is temporary, but more significant than the baseline scenario, and the more persistent and more significant effect of the pandemic on the global economy may result in a lower inflation path and more subdued growth path compared to the baseline scenario. In the alternative scenario featuring higher wage growth and a strong growth in consumption, domestic economic growth is stronger, and inflation is higher than the baseline projection. In addition to these scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume the implementation of competitiveness reforms and a permanent rise in food prices.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2019	2020	2021	2022
	Actual		Projection	
Inflation (annual average)				
Core inflation[1]	3.8	3.7 - 4.0	3.3 - 3.4	3.0
Core inflation excluding indirect tax effects	3.4	3.2 - 3.5	2.9 - 3.0	3.0
Inflation	3.4	2.6 - 2.8	3.4 - 3.5	3.0
Economic growth				
Household consumption expenditure	5.0	3.7 - 4.0	3.2 - 3.5	3.0
Government final consumption expenditure[6]	2.0	1.0	0.3	1.4
Gross fixed capital formation	15.3	1.1 - 2.9	4.6 - 6.2	3.0
Domestic absorption	5.6	2.3 - 3.0	3.0 - 3.6	2.7
Exports	6.0	1.7 - 3.7	7.5 - 9.6	6.2
Imports	6.9	2.1 - 3.8	6.4 - 8.3	5.4
GDP	4.9	2.0 - 3.0	4.0 - 4.8	3.5
Labour productivity[5]	3.2	2.6 - 3.2	3.9 - 4.4	3.4
Growth surplus compared to the eurozone	3.7	2.2 - 2.6	2.7 - 3.5	2.1
External balance[2]				
Current account balance	-0.7	(-0.6) - (-0.5)	(-0.4) - 0.2	0.0 - 0.7
Net lending	1.3	1.6 - 1.8	1.7 - 2.4	1.6 - 2.3
Government balance[2]				
ESA balance	-2.1	(-2.0) - (-1.6)	(-1.2) - (-0.8)	(-1.1) - (-0.8)
Labour market				
Whole-economy gross average earnings[3]	11.4	8.5 - 9.1	8.4 - 8.6	7.7
Whole-economy employment	1.0	(-0.6) - (-0.3)	0.1 - 0.4	0.1
Private sector gross average earnings[3]	11.6	8.8 - 9.6	9.0 - 9.2	8.4
Private sector employment	1.4	-0.4 - 0.1	0.2 - 0.6	0.1
Unemployment rate	3.4	3.9 - 4.2	3.8 - 3.9	3.7
Private sector nominal unit labour costs	6.4	4.8 - 4.8	3.5 - 3.7	4.2
Household real income[4]	5.0	3.8 - 4.1	2.9 - 3.1	2.5

[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.

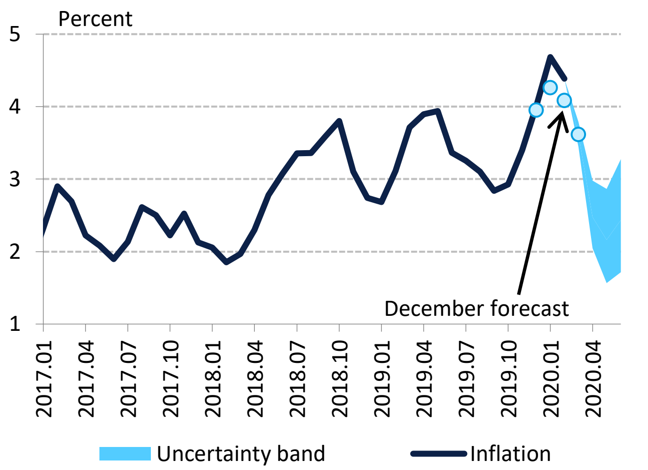
1 Inflation and real economy outlook

Due to the coronavirus pandemic economic prospects have become much more uncertain than previously, where conditions change from day to day. In view of the situation we have temporarily suspended the practice of structuring our forecast around a preferential baseline scenario. Our current forecast indicates a range for each variable, which was defined on the basis of two equally ranked scenarios. We emphasize that the projections are based on information available for the period ending 19 March 2020.

1.1 Inflation forecast

In view of the potential impacts of the coronavirus pandemic on the economy in recent months, there is considerable uncertainty about inflation processes. During the first months of the year, as in several other countries in the region, 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. As a result of the sharp fall in fuel prices, the consumer price index will already return to the tolerance band in March and rapidly fall below the central bank's 3-percent target over the short run. Owing to the general decline in economic activity due to the coronavirus, more subdued external demand and inflation are expected, which will primarily restrain the pricing of industrial products. Weakening domestic economic activity and wage dynamics may result in lower pricing behaviour in the case of the market services as well. Over the forecast horizon, following an easing of the negative implications of the coronavirus for the economy and the effects of the deteriorating external economic activity, domestic demand is expected to strengthen again, together with a temporary increase in price dynamics due to base effects. Taking into account the uncertainty factors, our forecast presents a range estimation: annual average inflation is expected to amount to 2.6–2.8 percent in 2020 and 3.4–3.5 percent in 2021. Following that, inflation will stabilise at the 3-percent inflation target. In 2020 and 2021, core inflation excluding indirect taxes will be lower than the December projection for the whole width of the forecast range, whereas our forecast for 2022 has remained unchanged.

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

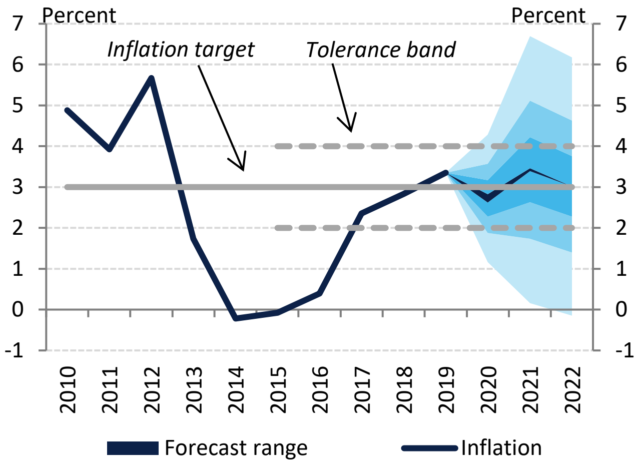


Note: Annual change. The uncertainty band shows the forecast range with regards to the root mean squared error of previous years' near-term forecasts.
Source: HCSO, MNB

In the first months of the year, as in several other countries in the region, 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 conditions (Chart 1-1). As the impacts of the coronavirus pandemic on the economy are unpredictable, there is significant uncertainty about the future development of inflation. Moreover, global oil and commodity prices have plummeted significantly, and their future trends are rather uncertain. At the same time, inflation expectations remain anchored.

As a result of the sharp fall in fuel prices from mid-February, the consumer price index will already return to the tolerance band in March and rapidly fall below the central bank's 3-percent target over the short run. According to our forecast, **overall inflation** will amount to 2.6–2.8 percent this year and 3.4–3.5 percent in 2021. As the effects of volatile, cost-sensitive items fade, inflation will stabilise at the 3-percent target by the end of the forecast horizon. Accordingly, annual average inflation may amount to 3.0 percent in 2022 (Chart 1-2). Core inflation excluding indirect taxes will be 3.2–3.5 percent in 2020, 2.9–3.0 percent in 2021 and 3 percent 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		3.2–3.5	2.9–3.0	3.0
Core inflation		3.7–4.0	3.3–3.4	3.0
Non-core inflation	Unprocessed food	9.4	4.2	3.6
	Fuel and market energy	-9.7	5.6	3.6
	Regulated prices	1.2	2.5	2.4
	Total	-0.1	3.7	3.0
Inflation		**2.6–2.8**	**3.4–3.5**	**3.0**

Note: Based on seasonally unadjusted data.
Source: MNB

An external–internal dichotomy is still observed in the factors determining the expected changes in the longer-term trends in inflation. Looking at **core inflation excluding indirect tax effects**, imported inflation is expected to be more subdued than before and this will restrain the pricing of industrial products, while more moderate domestic demand and slowing wage dynamics may result in lower pricing behaviour in relation to market services. In addition, second-round effects of the decline in oil prices may also be perceived in the changes in core inflation. All of these disinflationary effects may be partly offset by the anticipated higher prices of processed food (dairy products and processed meat products), due to the coronavirus pandemic.

The still-subdued external inflation environment has a moderating effect on the rate of price increases in Hungary. In its latest forecast, the ECB projects that price dynamics will fall short of its inflation target in the euro area as a whole over the entire forecast horizon. Its core inflation forecast, which is more relevant in terms of price dynamics in Hungary, declined by 0.4 percentage point for 2020 and 0.1 percentage point for both 2021 and 2022 compared to its December projection, according to the assumptions of the alternative scenario by the European Central Bank.

Gradual changes in excise duties on tobacco products suggest a mild increase in inflation until end-2021. The previously announced increase in the excise duty on tobacco products in three steps has an effect on inflation from January 2020 until January 2021. Contrary to our previous expectation, the reduction of the VAT rate on accommodation services from 18 to 5 percent was not reflected in the actual incoming data from 1 January 2020 and was thus unable to mitigate the inflation-increasing effect of the excise duty on tobacco products. As the world market price of Brent crude in 2020 Q2 may be lower on average than the level of USD 50 per barrel, thus according to the operative regulations, the excise duty on fuel may increase as of 1 July 2020 (by HUF 5 per litre on petrol and by HUF 10 per litre on diesel). Overall, changes in indirect taxes will increase inflation by 0.4 percentage point both in 2020 and 2021, while they will have a neutral effect on inflation in 2022.

In the case of **non-core inflation items**, unprocessed food prices are higher than our December assumptions. As a result of the African swine fever and in line with global market developments, the producer price of swine has risen considerably in the past months, which was reflected in consumer prices as well. In addition, unfavourable weather conditions affecting Spanish vegetable production also contributed to rising food prices. As an effect of the coronavirus pandemic, disruptions in global supply chains may temporarily further increase the price of some imported foods. As these effects fade, we expect price dynamics in this product group to be similar to the December forecast from 2021 (Table 1-1). In the case of fuels, in line with the changes in futures prices, prices are projected to drop considerably 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 is expected to be broadly in line with our December assumption. Overall, after the cost effects have faded out, the price dynamics of non-core inflation items will be around 3 percent at the end of the forecast period.

Box 1-1: Assumptions applied in our forecast

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

Table 1-2: Main external assumptions of our forecast

Technical assumptions	2020		2021		2022		Change		
	Previous	Current	Previous	Current	Previous	Current	2020	2021	2022
EUR/USD	1.10	1.12	1.10	1.12	1.10	1.12	1.8%	1.8%	1.8%
Oil (USD/barrel)	60.4	40.3	58.5	42.4	58.5	42.8	-33.3%	-27.5%	-26.8%
Oil (EUR/barrel)	54.7	36.2	53.0	37.9	53.0	38.3	-33.8%	-28.5%	-27.7%
Euro area inflation* (%)	1.1	0.7	1.4	1.3	1.6	1.6	-0.4 pp.	-0.1 pp.	0 pp.
Euro area core inflation (%)	1.3	0.9	1.4	1.3	1.6	1.5	-0.4 pp.	-0.1 pp.	-0.1 pp.
GDP growth of Hungary's main trading partners**(%)	1.8	0.8 - 1.2	1.9	2.4 - 2.9	1.9	1.9	-1.0 - (-0.6) pp.	0.5 - 1.0 pp.	0 pp.

Note: Annual average in the case of oil prices. *The alternative scenario of the European Central Bank is incorporated in our forecast. **Growth rate of Hungary's 21 most important export partners weighted by share in exports.
Source: Bloomberg, Consensus Economics, MNB, ECB

In view of the potential economic impact of the coronavirus pandemic spreading worldwide in recent months, the growth prospects for Hungary's main foreign trade partners have deteriorated significantly. Furthermore, structural weaknesses in the euro area, such as the banking system, high debt levels and slow decision-making mechanisms, further reinforce the subdued global outlook. The trade implications of a hard Brexit and the persistence of trade tensions will continue to erode consumer and business confidence and exacerbate the global economic slowdown. **With an eye to the effects of the virus pandemic on the global economy, based on** (previously received) **fourth-quarter growth data for the euro area countries, new releases of business cycle indicators and high-frequency indicators of economic activity, we project a recession for major European economies in the first half of 2020.** Overall, Hungary's foreign trade in 2020 will be shaped by the impact of the coronavirus outbreak on the global economy, the extent of weakening of the German industry, and the timeliness of the production recovery in the northern Italian center of the epidemic. According to our present assumptions, the coronavirus will have a temporary impact on the global economy, but in terms of economic recovery, significant differences may be seen from region to region. We expect a quicker recovery in Asia (e.g. China), whereas a slower recovery is expected in the euro area due to its structural weaknesses.

In line with the outlook for persistently moderate growth in Europe, the European Central Bank continues to project that price dynamics will fall short of its inflation target over the entire forecast horizon. The forecast for euro area GDP – according to information for the period up to 18 February 2020 – fell by 0.3 percentage point for this year and by 0.1 percentage point for 2021, while it remained unchanged for 2022 compared to the December forecast. The forecast for core inflation, which is more influential in terms of price dynamics in Hungary, declined by 0.1 percentage point for both 2020 and 2022 and did not change for 2021. As for the current forecast, according to information for the period up to 18 February 2020, euro area inflation remained unchanged for the entire forecast horizon compared to the December forecast. At the same time, **due the exceptionally rapid changes in the economic environment, the European Central Bank has incorporated information until 9 March in its alternative scenario.** Accordingly, the **European Central Bank forecasts that 2020 inflation will be in total 0.4 percentage point lower, taking into consideration the effects of a significant drop in oil prices** (more than 30 percent). Taking into account that the **EUR exchange rate has strengthened versus USD**, due to the oil price war and coronavirus outbreak, **the GDP forecast for the euro area has decreased by 0.1 percentage point for 2020 and 2021, while inflation may be 0.1 percentage point lower for the entire forecast horizon. The ECB's alternative scenario is incorporated in our forecast, and accordingly euro area inflation is 0.4 percentage point lower in 2020 and 0.1 percentage point lower for 2021, compared to the baseline scenario. The forecast for core inflation, which is more influential in terms of price dynamics in Hungary, declined by 0.4 percentage point for 2020 and by 0.1 percentage point for both 2021 and 2022 compared to the December forecast, according to this scenario.**

Amidst significant volatility, Brent crude oil prices fell substantially in recent months, dropping from USD 60 per barrel to below USD 30 per barrel based on the data with the cut-off date of 19 March 2020. Changes in oil prices were influenced by various major events in the period under review. On the demand side, the coronavirus outbreak had a major negative impact on oil prices, leading to a downward revision of oil demand forecasts in the first half of 2020. **At the OPEC and OPEC+ meeting in Vienna on 5-6 March, no agreement was reached on further narrowing the supply side.** Russia, as a member of OPEC+, was only willing to approve an extension of the current production cap. **This means that when the current cap expires, there will be no new cap, and thus production without limits can begin from 1 April.** In response to this news, an oil price war erupted between Russia and Saudi Arabia, which brought **Brent crude oil prices down to around USD 30 per barrel (-28.5 percent) in one day**, a decrease resembling that of the 1991 Gulf war.

Oil price expectations are currently surrounded by high uncertainty among market analysts. In the future, a possible agreement between Russia and Saudi Arabia, or Russian support for the introduction of a cap could result in an upward move in oil prices, but currently there are no such signs from the parties. Moreover, Saudi Arabia recently announced that they will – while significantly increasing extraction – reduce the price of its various crude oil products by USD 6-8 from April and raise oil exports by 10 million barrels a day from May. **Oil price forecasts released following the Vienna OPEC+ meeting in early March are relatively broad, ranging from USD 20-43 for this year.** According to Goldman Sachs' forecast, the global production surplus could reach unprecedented levels in the period ahead, bringing oil prices down to USD 20. According to a forecast by Standard Chartered, world crude oil prices will fall well below USD 20 per barrel. At the same time, Bloomberg analysts or the US Energy Information Administration (EIA) expect a correction in the oil price later this year, eventually ending up above USD 40 per barrel on an annual basis. Significant uncertainty can also be observed **over the medium term, as forecasts are in the range of USD 30-65 per barrel**.

As for global oil supply and demand, the International Energy Agency's (IEA) March forecast predicts that **global oil demand in 2020 may be lower by 1.1 million barrels per day compared to what was previously anticipated** as a result of the worldwide spread of the coronavirus, with some adjustment only expected in the second half of 2020. For the global oil supply, the US Energy Information Administration (EIA) increased its daily oil production forecast by 150,000 barrels in 2020 and by 200,000 barrels in 2021 due to the break-up of the OPEC+ agreement. This shift is considered to be significant compared to previous extraction targets, which aimed to stabilise global supply near the five-year average. **EUR-denominated oil prices**, **which determine changes in fuel prices in Hungary, were significantly lower than our assumption in December**.

The evolution of the coronavirus pandemic may have a significant impact on Hungary's government budget. In contrast to earlier assumptions, we assume that the entire Country Protection Fund will be spent in order to compensate economic slowdown in 2020. At the same time, GDP and tax revenues rise at a more moderate rate than in our previous projection.

On 18 March 2020, the government announced measures to mitigate the economic impact of the coronavirus pandemic. These include a moratorium on all loan repayments, capping consumer loan interest rates, the protection of lease contracts in sectors that are particularly affected, a four-month suspension of employer SSC (social security contribution) and a reduction in employee SSC. In addition, until June 30, taxi drivers are exempted to pay the lump sum tax of small enterprises (KATA), and companies involved are exempt from Tourism Development Contributions and labour laws are more flexible to support home office and protection of health.

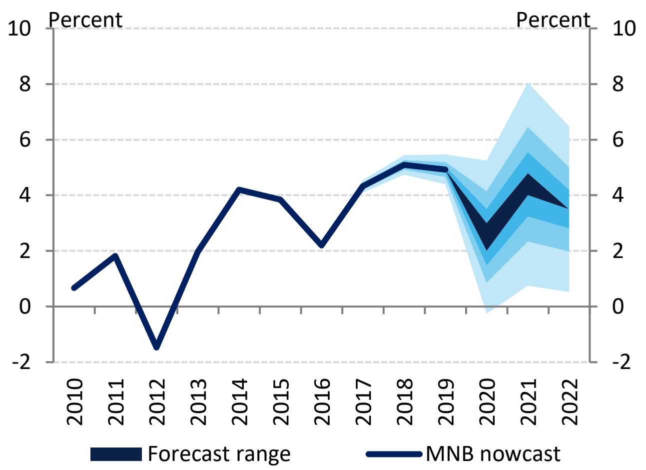
1.2 Real economy forecast

Following last year's 4.9-percent GDP expansion, economic growth will be lower this year. Macroeconomic data are expected to be characterised by high volatility and duality this year. In 2020 H1, in view of the negative effects of the coronavirus pandemic on the economy, growth will decelerate considerably. Nevertheless, as the negative impacts fade and economic activity is restored after the downturn, domestic growth will become dynamic again from H2. The expansion in Hungary's industry and exports will be restrained by disruptions in global supply chains and a major deceleration in Hungary's export markets due to the spread of the epidemic. As a result of domestic and international government measures taken to contain the epidemic, the lower output of market services sectors (tourism, transportation, storage, cultural services) will also restrain GDP growth until mid-2020. Household consumption remains the most important factor behind economic growth, although its rate of expansion will decline. As a result of the mounting uncertainty, the role of precautionary motives in the sector will strengthen, and thus household savings will rise. Long-term, underlying investment trends in the corporate sector remain robust, supported by the favourable financing conditions and the Bond Funding for Growth Scheme. At the same time, due to the uncertainty caused by the coronavirus, some corporate investment will be implemented later. Both the actual absorption of EU funds and public investment from the state-owned funds will decline from 2020. The growth prospects for Hungary's main trading partners have deteriorated considerably due to the spread of the coronavirus. Consequently, in the first three quarters of 2020, both exports and imports will be lower than expected, while companies may gradually make up for the unrealised exports starting from the end of this year. In the second half of the forecast period, Hungary's goods exports may expand to a greater degree than external demand, resulting in a rise in Hungary's export market share. With the recovery in export performance, the contribution of net exports to economic growth will be positive in 2021 and 2022.

In accordance with our previous forecast, GDP growth was 4.9 percent in 2019. In view of the potential impacts of the coronavirus pandemic on the economy in recent months, there is significant uncertainty about real economy developments. **Taking into account the factors causing uncertainty, a range estimation is given in our forecast.**

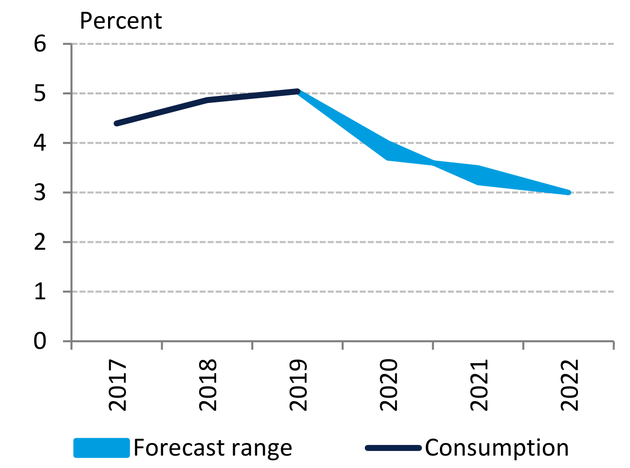
Macroeconomic data are expected to be characterised by high volatility and **duality this year. In 2020 H1, in view of the negative effects of the coronavirus on the economy, growth will decelerate considerably. Nevertheless, as the negative impacts fade and economic activity is restored after the downturn, domestic growth will become dynamic again from H2. From the demand side, the output of market services sectors may decelerate** to a greater degree than previously expected. As a result of domestic and international government measures to contain the epidemic, **the shutdown in the tourism, transportation, storage and cultural services sectors may significantly reduce the expansion of GDP in H1**. According to our forecast, the sharp downturn in 2020 may be followed by a significant correction in line with a decline in risks. In 2021, as the negative impacts of the coronavirus fade, economic activity is expected to quickly recover from the downturn. Provided that our current assumptions prove correct, **GDP growth may be 2.0–3.0 percent in 2020, 4.0–4.8 percent in 2021 and 3.5 percent in 2022** (Chart 1-3).

Chart 1-3: Fan chart of the GDP forecast



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

Chart 1-4: Annual change in consumption



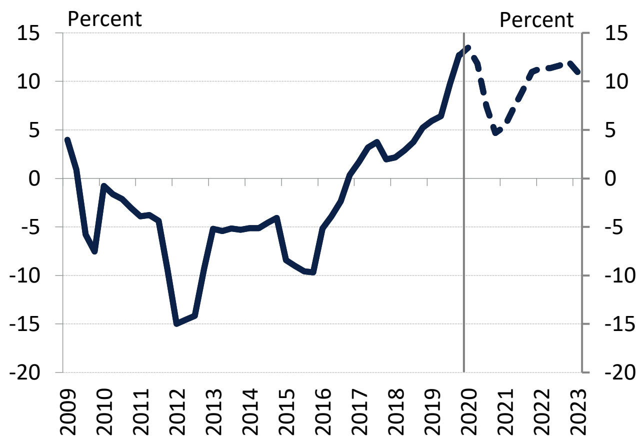
Note: The edges of the band are determined by the two scenarios.
Source: HCSO, MNB

Table 1-3: Consumption, investment and net savings rate of the households in proportion to real household income

	Consumption rate	Net savings rate	Household investment rate
2019	82.6	9.0	8.4
2020	82.5-82.6	9.4-10.3	7.2-8.0
2021	82.7-82.8	9.5-10.2	7.0-7.7
2022	83.0-83.1	9.7-10.2	6.7-7.3

Source: MNB calculations

Chart 1-5: Forecast for lending to households



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

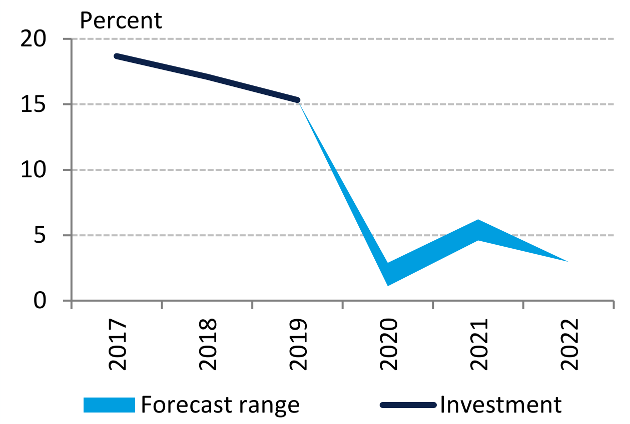
The Hungarian economy **continues to converge with the euro area, and Hungary's growth surplus may be between 2–3 percentage points over the entire forecast horizon**.

Household consumption is expected to remain the most important factor behind economic growth over the forecast horizon, although its growth rate will decline (Chart 1-4). In Q1, the accumulation of food reserves due to the spread of the epidemic will result in a major rise in retail turnover, but the retail trade volume may decrease in H2, and thus **the accumulation of reserves results in a rearrangement of consumption within the year**. Also taking into account the slower expansion of consumption and the effect of the loan repayment moratorium, household loans may grow at a rate of 5 percent in 2020, as a result of a significant decline in demand for housing loans and a moderate drop in consumer loans. In view of the labour market implications of the epidemic, households' potentially deteriorating **repayment ability may be offset by the repayment moratorium**. According to our forecast, trends in the household loan market may be affected by the current negative developments in 2020. Subsequently, the previously observed annual two-digit growth rate may gradually return (Chart 1-5). At the same time, the accumulated net financial worth, which is the highest in the region as a proportion of GDP, may have a favourable impact on consumption.

As a result of the increasing uncertainty, the role of precautionary motives will strengthen significantly in the behaviour of the household sector, and households' investment will decrease, while their savings will rise (Table 1-3)**.** The Hungarian Government Security Plus (MÁP+) scheme, which has been available since June of last year, as well as measures that stimulate demand for government securities (free account management, favourable redemption and the cancellation of tax on interest) also facilitate the rise in household savings.

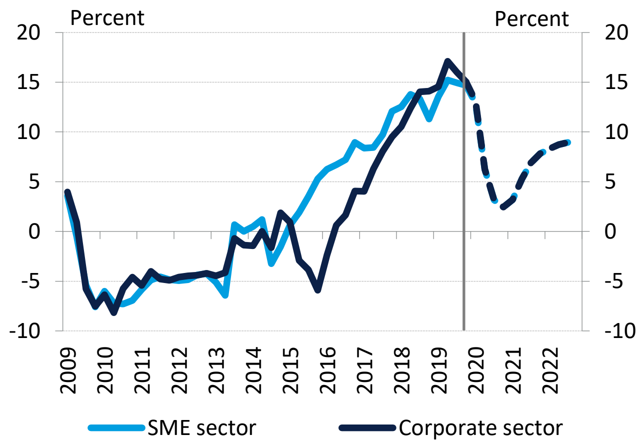
Compared to the projection in the December Inflation Report, whole economy investment will continue to increase at a much slower pace over the entire forecast horizon (Chart 1-6). In the uncertain global economic environment, domestic investment projects financed by foreign direct investment may be delayed in time. **Corporate investment not implemented this year as a result of the decline in economic activity due to the coronavirus will be made up for in 2021.** Other factors, such as capital-labour substitution and previously announced major investment projects, will only be able to partly offset this year's downturn. **Corporate lending may expand more moderately compared to previous years, by**

Chart 1-6: Annual change in investments



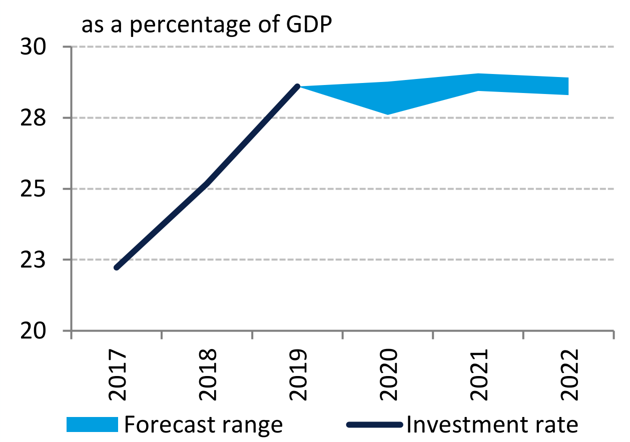
Note: The edges of the band are determined by the two scenarios. Source: HCSO, MNB

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

Chart 1-8: Evolution of the investment rate



Note: The edges of the band are determined by the two scenarios. Source: HCSO, MNB

some 2 percent in 2020, with support from the Funding for Growth Scheme Fix and the Bond Funding for Growth Scheme. Corporate borrowing activity may return to the vicinity of an annual 10-percent growth rate in the second half of the forecast horizon (Chart 1-7).

In line with the fading of the housing market cycle and stronger precautionary savings, households' investment rate will gradually decline over the forecast horizon. Starting from this year, the contribution of household investment to growth will be slightly negative.

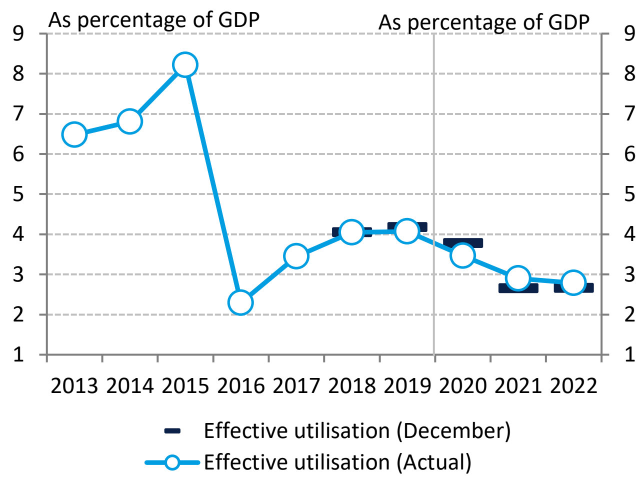
From 2020, both the actual absorption of EU funds and public investment financed from the state-owned funds will be lower. According to our current expectations, the absorption of funds of the 2021–2027 cycle may begin in 2022 at the earliest (Chart 1-9).

The whole economy investment rate **stood at 28.6 percent in 2019, putting Hungary in the vanguard in a European comparison** (Chart 1-8).

Growth prospects for all of Hungary's trading partners have deteriorated considerably in view of the potential impacts of the coronavirus pandemic on the economy in recent months, the disruption of global supply chains and the structural weaknesses of the euro area. Euro area growth figures received at the end of last year already foreshadowed weakening performance by the European economy due to structural reasons, **which was exacerbated in the first phase of the outbreak of the epidemic by the complexity of the European-Chinese supply chains**.

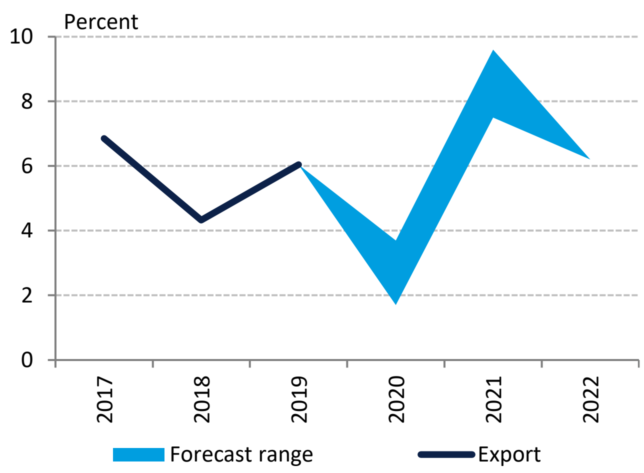
However, the slowdown may be even stronger as a result of government measures taken in order to contain the spread of the new type of epidemic in Europe. Production stopped in the Northern Italian regions, which constitute one of the industrial centres of Europe (and account for nearly one third of Italian economic output); there have also been interruptions in European vehicle manufacturing; German industrial production has declined further; tourism has come to a halt across Europe (moreover, right before the summer months, which provide the highest sales revenues); and there has been a major drop in the output of transportation as well. As a result, **a technical recession in the German and Italian economies as well as a mild recession in the euro area as a whole are expected for 2020 H1**. In our baseline scenario we assume, that the coronavirus has a temporary impact on the global economy, but there may be significant differences in the pace of recovery from region to region. A faster recovery process is expected in the Asian countries (e.g. in China),

Chart 1-9: Effective use of EU funds



Source: Ministry of Finance, MNB

Chart 1-10: Evolution of exports



Note: The edges of the band are determined by the two scenarios.
Source: HCSO, MNB

while it will likely be slower in the case of the euro area due to structural problems. In the short run, the spread of the epidemic on the European continent may primarily affect the sectors linked to tourism and transportation. **In the long run, however, the greatest risks may be posed by protracted factory shutdowns and breakdowns in supply chains**, which may result in a major downturn in European industrial output.

In line with the slowdown in the external economic environment, **both the exports and imports will be lower than previously expected in the first three quarters of 2020**, and companies may gradually make up for the unrealised exports starting from the end of this year. In the second half of the forecast period, as the temporary effects fade and exports rise again, imports will also continue to grow, which is primarily explained by the high import demand of Hungarian exports and the returning buoyant growth in domestic absorption.

In the second half of the forecast period, Hungary's goods exports may expand to a greater degree than external demand, resulting in a rise in Hungary's export market share (Chart 1-10). Starting from 2021, in line with revival in the tourism sector, the dynamic expansion in services exports will also contribute to an increase in Hungarian exports, which will exceed the growth rate of external demand. **As export performance recovers, the contribution of net exports to economic growth will be positive in 2021 and 2022.**

The contribution of agriculture to growth was nearly neutral in 2019. This year, assuming average performance by the sector, the contribution of agriculture to growth may be neutral again.

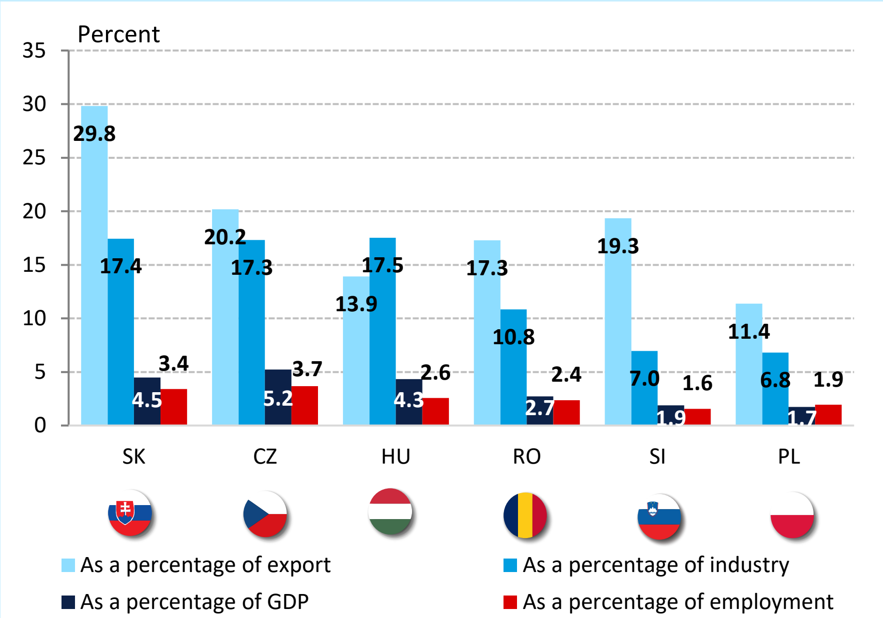
Box 1-2: The role of most affected sectors by the coronavirus epidemic in domestic GDP

The spread of the new coronavirus generates even greater uncertainty in the economic forecasts than usual. Instead of the usual linear effects in the macroeconomic environment, the spread of the virus is characterized by strong non-linear effects which can lead to complete outages almost immediately across a wide range of sectors. With the spread of the virus, even key industries of the Hungarian economy might be forced to reorganise or terminate production temporarily, close their shops or suspend their services. **In addition, the timeline of the epidemic has not been mapped yet, which further complicates the assessment of the growth effects.** Next, we present the role of four selected highly sensitive sectors in domestic GDP.

Automotive industry

As a result of the coronavirus, the largest actors of the automotive industry temporarily suspended production in Hungary as well. The automotive industry plays a major role in the Hungarian economy. **In 2018, the sector accounted for 4.3 percent of GDP and 2.6 percent of total employment.** Last year, employment by the narrow vehicle manufacturing sector exceeded 175,000 persons. In Hungary the automotive industry accounted for almost 14 percent of exports and 17.5 percent of industry value added (Chart 1-11).

Chart 1-11: Importance of the vehicle industry in the economies of the CEE region (2018)



Note: Weights for Poland and employment in Romania are based on 2017 data.
Source: MNB calculation based on Eurostat

The four automotive factories operating in Hungary (Audi, Mercedes, Opel and Suzuki) account for almost 2 percent of GDP. According to our estimates, the production by Audi, Mercedes, Suzuki and Opel account for a dominant part of the Hungarian automotive industry (Table 1-4). **Naturally, the temporary shutdowns and the various production restrictions could cause temporary outages in the supplier chains as well.** The performance of automotive manufacturing also has an impact on the metal and rubber industry, retail and transportation services as well as on engineering activities. **According to our estimate, the shutdown of the production of Audi, Mercedes, Suzuki and Opel factories for one month, together with the impacts on the supplier chains, might affect this year's GDP by almost 0.3-0.4 percent in total** (Table 1-5).

Table 1-4: Role of the Hungarian vehicle factories in the domestic economy

	Audi	Mercedes	Suzuki	Opel	**Total**
Share in industrial value added (Percent)	6.0	1.1	0.7	0.3	**8.1**
Share in GDP (Percent)	1.5	0.3	0.2	0.1	**2.1**
Employment (Person)	13 753	4 486	2 536	843	**21 618**

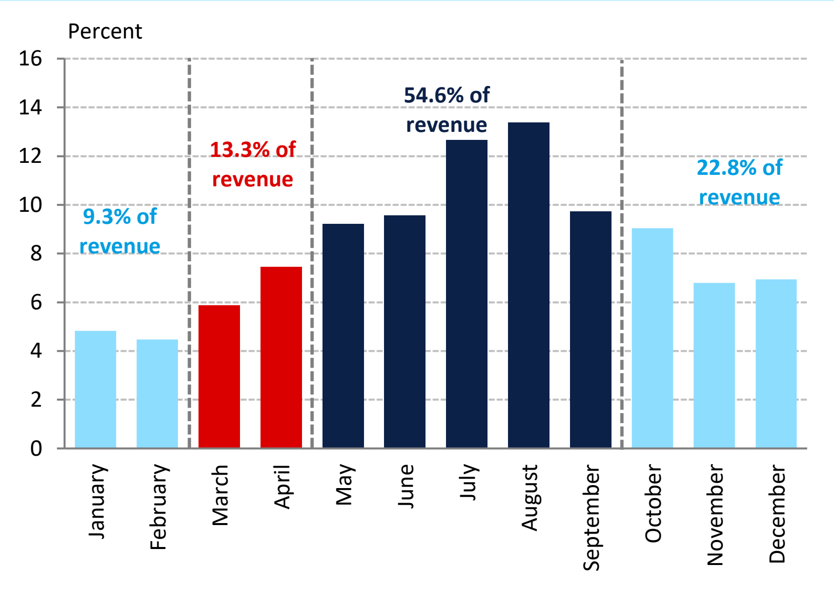
Source: MNB calculation based on the annual report of Magyar Suzuki Zrt., Mercedes-Benz Manufacturing Hungary Kft. and Opel Szentgotthárd Kft. and the value added at basic prices in 2018.

Tourism

The direct share of accommodation and food service activities in Hungary's GDP is approximately 2 percent, while the sector employs roughly 185,000 people. **After examining the satellite accounts, which includes parts of tourism-related industries, the weight of the sector is more significant.** When considering the passenger and goods transport, cultural programmes and entertainment industry linked to tourism, the role of the sector exceeds 6 percent of GDP; but we shall touch upon these sectors separately as well.

In Hungary, **accommodation capacity** rose by almost 80,000 places and **thus at present it exceeds 380,000 places. Hungary is an increasingly popular destination for foreign tourists:** in 2018 almost 58 million foreign visitors arrived in Hungary, and 70 percent of them visited Budapest. They spent almost HUF 2,100 billion in Hungary, accounting for roughly **60 percent of the tourism receipts and spending**. At the same time, a vast part of the tourism sector's revenues is concentrated on the summer months. **The early spring months are important, but not dominant in accommodation receipts**: in March and April lodging providers realise roughly 13 percent of the annual revenues (Chart 1-12). **According to our calculation, a one-month outage of the industry and the related services in early spring will affect the annual growth rate of Hungarian GDP with roughly 0.4-0.5 percentage point** (Table 1-5). **However, in case the downtime extends to the summer months, the monthly drop may be higher.**

Chart 1-12: Intra-year breakdown of the gross revenues of commercial accommodation



Note: Average of 2013-2019.
Source: HCSO

Cultural services

Cultural services account for 1.5 percent of the Hungarian economy's value added and provide almost 80,000 people with full-time employment. As a result of the government measures, the entertainment sector is also forced to a standstill. Theatres, cinemas and museums are closed, concerts and sports events are postponed and the operation of sports clubs was also suspended in several areas. **According to our calculations, a one-month outage in the narrow cultural sector have an effect of roughly 0.1 percentage point on Hungary's annual growth rate** (Table 1-5).

Transportation services

The Hungarian transportation business (transportation and storage) account for 5.1 percent of GDP. The sector employs almost 300,000 persons, and thus its share within total employment is high in an international comparison too. Within transportation, the share of passenger transport accounts for roughly 40 percent, including long-distance and interurban, road, railway and air passenger services. Within goods transport the share of road transport and railway transport is 76 and 20 percent, respectively. **According to our assumptions, the pandemic might impact passenger services and goods transport differently.** While long-distance passenger services related to tourism (primarily air traffic) could temporarily stop, road and rail transport will substantially decrease, but it will not disappear entirely. Developments in goods transport are shaped by dual factors: increased online retail sales volumes have positive effect on goods transport, while tighter border controls, slowdown of manufacturing, and the partial fall of wholesale trade might impact international freight services negatively. **According to our calculations, the effect of an early spring month is 0.2 percentage point in the domestic GDP** (Table 1-5). **In relation to the goods and passenger transport we anticipate the temporary slowdown of the transportation sector in the second quarter, which, in line with the subsequent pick-up of industrial production and consumption, is expected to adjust in the second half of the year.**

Table 1-5: Impact of the one month's outage on the Hungarian key industries

	Weight in GDP (%)	Weight in GDP with related industries (%)	Effect of one month shutdown on GDP (percentage point)
Automotive industry	4.3	4.5 - 6.0	(-0.3) - (-0.4)
Tourism	1.8	6.0 - 7.0	(-0.4) - (-0.5)
Cultural services	1.5	1.5 - 2.0 *	(-0.05) - (-0.15)
Transportation and storage	5.1	4.0 - 6.0 *	(-0.15) - (-0.25)
Sum	**12.7**	**16.0 - 21.0**	**(-0.9) - (-1.3)**

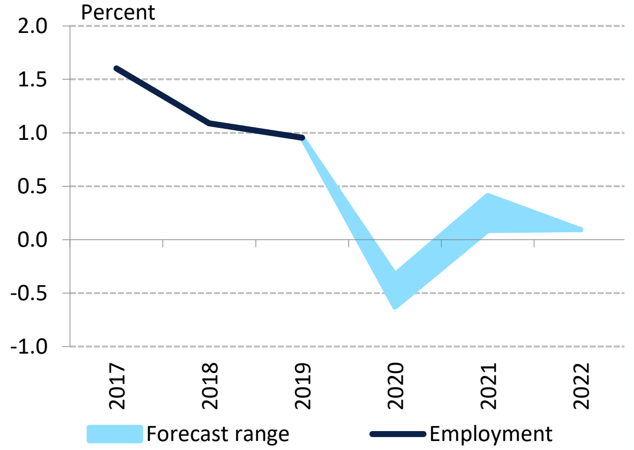
Note: *The direct weight of the sectors based on the corresponding NACE code. The weight with related sectors is based on own estimates using input-output tables and detailed national accounts data. Tourism-related transport and cultural services were taken as tourism suppliers in the second column, thus avoiding double counting in certain sectors.

Source: MNB calculation

1.3 Labour market forecast

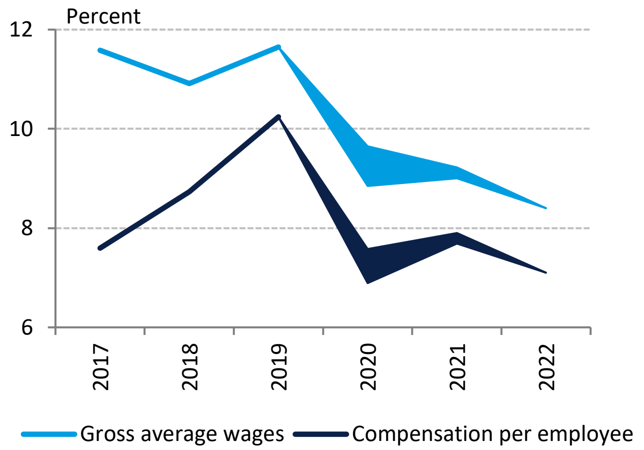
In recent years, the Hungarian economy has approached full employment. Nevertheless, in view of the coronavirus pandemic in recent months, labour market developments are also surrounded by significant uncertainty. This year, employment may decline in the short term due to the coronavirus, but looking forward we expect private sector employment to grow moderately in the coming years. The unemployment rate is expected to be 3.9–4.2 percent in 2020, 3.8–3.9 percent in 2021 and 3.7 percent in 2022. Compared to our previous forecast, we expect slower wage growth in the private sector in 2020.

Chart 1-13 Annual change in employment in the whole economy



Note: The edges of the band are represented by the two scenarios.
Source: HCSO, MNB

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



Note: The edges of the band are represented by the two scenarios.
Source: HCSO, MNB

In recent years, the Hungarian economy has approached full employment. However, during the last three quarters, a slight decline was observed in the data for employment in manufacturing, and we expect this trend to continue. All of this is confirmed by recent press information as well, and in parallel with that the number of vacancies also decreased gradually in 2019. **This year, the number of employed may decline due to the coronavirus in the short term, but we expect private sector employment to grow moderately in the coming years** (Chart 1-13). The number of participants in the public work programme declined gradually in the past quarters, and **according to our current assumptions, the number of fostered workers will further decrease** over the forecast horizon.

As demographic constraints are becoming increasingly effective, **activity is decelerating, while in parallel with a decline in employment dynamics, the unemployment rate is forecast to be 3.9–4.2 percent in 2020, 3.8–3.9 percent in 2021 and 3.7 percent in 2022**. In parallel with the lay-offs during the year and a decline in vacancies, labour market tightness is expected to ease further.

As a result of the pay rise for teachers implemented as of 1 July 2020 and 1 January 2021, we expect higher wage dynamics in the public sector over the forecast horizon. In view of the deceleration in economic growth due to the coronavirus and the expected lowering of bonus payments and other allowances by companies, compared to our previous forecast we expect lower private sector wage dynamics in this year. **Accordingly, wage dynamics of 8.8–9.6 percent, 9.0–9.2 percent and 8.4 percent may be achieved in the private sector in 2020, 2021 and 2022, respectively** (Chart 1-14). Companies typically set wages at the end of Q1, in March. Therefore, relevant information on this year's wage growth will be contained in the Q1 wage data, which will be received in May. In view of the expected impacts of the coronavirus on the economy, employers in some sectors will be exempted from contribution payment obligations until June 2020. Based on our projection, the social contribution tax rate is expected to decline by another 2 percentage points both at the end of 2020 and 2021.

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	4.0	3.7 - 4.0	3.4	3.3 - 3.4	3.0	3.0
Core inflation excluding indirect tax effects	3.4	3.6	3.2 - 3.5	3.1	2.9 - 3.0	3.0	3.0
Inflation	3.4	3.5	2.6 - 2.8	3.3	3.4 - 3.5	3.0	3.0
Economic growth							
Household consumer expenditure	5.0	4.2	3.7 - 4.0	3.1	3.2 - 3.5	3.0	3.0
Government final consumption expenditure[6]	2.0	1.0	1.0	0.3	0.3	1.4	1.4
Gross fixed capital formation	15.3	4.6	1.1 - 2.9	4.1	4.6 - 6.2	3.0	3.0
Domestic absorption	5.6	3.6	2.3 - 3.0	2.8	3.0 - 3.6	2.7	2.7
Exports	6.0	5.6	1.7 - 3.7	5.7	7.5 - 9.6	6.2	6.2
Imports	6.9	5.4	2.1 - 3.8	5.0	6.4 - 8.3	5.4	5.4
GDP	4.9	3.7	2.0 - 3.0	3.5	4.0 - 4.8	3.5	3.5
Labour productivity[5]	3.2	3.3	2.6 - 3.2	3.2	3.9 - 4.4	3.4	3.4
Growth surplus compared to the euro area	3.7	2.3	2.2 - 2.6	2.1	2.7 - 3.5	2.1	2.1
External balance[2]							
Current account balance	-0.7	-0.5	(-0.6) - (-0.5)	-0.3	(-0.4) - 0.2	0.2	0.0 - 0.7
Net lending	1.3	2.0	1.6 - 1.8	1.8	1.7 - 2.4	1.8	1.6 - 2.3
Government balance[2]							
ESA balance	-2.1	(-1.2) - (-0.4)	(-2.0) - (-1.6)	(-1.1) - (-0.3)	(-1.2) - (-0.8)	(-0.9) - (-0.1)	(-1.1) - (-0.8)
Labour market							
Whole-economy gross average earnings[3]	11.4	8.9	8.5 - 9.1	8.0	8.4 - 8.6	7.5	7.7
Whole-economy employment	1.0	0.4	(-0.6) - (-0.3)	0.3	0.1 - 0.4	0.1	0.1
Private sector gross average earnings[3]	11.6	10.0	8.8 - 9.6	8.9	9.0 - 9.2	8.4	8.4
Private sector employment	1.4	0.6	-0.4 - 0.1	0.4	0.2 - 0.6	0.1	0.1
Unemployment rate	3.4	3.5	3.9 - 4.2	3.5	3.8 - 3.9	3.5	3.7
Private sector nominal unit labour cost	6.4	4.3	4.8 - 4.8	3.8	3.5 - 3.7	3.6	4.2
Household real income[4]	5.0	4.1	3.8 - 4.1	2.9	2.9 - 3.1	2.5	2.5

[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 (March 2020)	2.6 - 2.8	3.4 - 3.5	3.0
Consensus Economics (March 2020)[1]	2.3 - 3.5 - 4.0	2.7 - 3.2 - 3.6	
European Commission (February 2020)	3.3	3.1	
IMF (October 2019)	3.4	3.3	3.0
OECD (November 2019)	3.4	4.1	
Reuters survey (March 2020)[1]	2.7 - 3.3 - 3.7	2.8 - 3.2 - 3.5	3.0 - 3.2 - 3.6
GDP (annual growth rate, %)			
MNB (March 2020)	2.0 - 3.0	4.0 - 4.8	3.5
Consensus Economics (March 2020)[1]	1.1 - 2.3 - 3.1	2.3 - 2.9 - 3.8	
European Commission (February 2020)	3.2	2.8	
IMF (October 2019)	3.3	2.9	2.6
OECD (November 2019)	3.3	3.1	
Reuters survey (March 2020)[1]	-5.0 - 0.3 - 2.0	2.5 - 3.4 - 6.2	3.0 - 3.4 - 4.0
Current account balance[3]			
MNB (March 2020)	(-0.6) - (-0.5)	(-0.4) - 0.2	0.0 - 0.7
European Commission (December 2019)	-0.8	-0.7	
IMF (October 2019)	-0.6	-0.5	-0.3
OECD (November 2019)	-0.9	-1.0	
Budget balance (ESA 2010 method)[3]			
MNB (March 2020)	(-2.0) - (-1.6)	(-1.2) - (-0.8)	(-1.1) - (-0.8)
Consensus Economics (March 2020)[1]	(-3.5) - (-1.9) - (-1.0)	(-2.5) - (-1.5) - (-0.8)	
European Commission (December 2019)	-1.0	-0.8	
IMF (October 2019)	-1.6	-1.5	-1.5
OECD (November 2019)	-1.7	-1.4	
Reuters survey (March 2020)[1]	(-4.0) - (-2.9) - (-1.8)	(-2.5) - (-1.9) - (-1.2)	(-1.5) - (-1.2) - (-0.5)
Forecasts on the size of Hungary's export markets (annual growth rate, %)			
MNB (March 2020)	1.2 - 2.0	4.2 - 5.4	3.4
European Commission (November 2019)[2]	3.0	3.0	
IMF (October 2019)[2]	3.4	4.0	3.8
OECD (November 2019)[2]	1.7	2.4	
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (March 2020)	0.8 - 1.2	2.4 - 2.9	1.9
Consensus Economics (March 2020)[2]	1.0	1.7	
European Commission (February 2020)[2]	1.7	1.7	
IMF (January 2020)[2]	1.8	1.8	1.8
OECD (March 2020)[2]	1.2	1.5	

[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, European Commission, IMF, OECD, Reuters poll, MNB

Box 1-3: The MNB has adopted immediate liquidity-supporting measures

Considering the international and domestic financial and capital market trends, and the potential real economy consequences of the coronavirus, in March the MNB adopted several liquidity supporting measures supplementing each other. With a view to supporting the banking sector's liquidity management, on 16 March 2020 the central bank decided to expand the range of eligible collateral to include corporate loans, and starting from 17 March 2020, in addition to the regular 1-, 3-, 6- and 12-month foreign exchange swap tenders held on Mondays, it announced 1-week forint liquidity-providing FX swap tenders on each working day of the week as long as justified by the market and liquidity trends. With a view to further facilitating liquidity management, the MNB also decided on the introduction of a fixed-rate, long-term credit instrument, and released credit institutions from the reserve requirement for an indefinite period.

1. **As part of the measures adopted to assist the business sector, the MNB decided to expand the range of eligible collateral to include corporate loans.** The monetary policy counterparties may offer both forint and foreign currency-denominated, performing corporate loans as collateral. The total value of performing corporate loans in the balance sheet of Hungarian banks amount to almost HUF 3,600 billion, for which the MNB applies a standard haircut of 30 percent, as a result which the value of collaterals eligible to secure the central bank's operations increases by more than HUF 2,500 billion. As a result of the decision, the release of securities collateral improves the banks' liquidity situation, moreover the more favourable assessment of corporate loans in terms of liquidity significantly increases banks' lending potential.

2. **With a view to strengthening liquidity and supporting liquidity management, in the middle of March the MNB started to hold daily one-week forint liquidity-providing foreign exchange swap tenders.** Due to the market turbulence related to the spread of the coronavirus, the volatility of interbank interest rates and implied swap rates increased substantially. Maturities within one week, which are the most important in terms of liquidity management, have registered a rise of 50-70 basis points since the middle of February, while longer maturities within one year registered a somewhat more moderate, but still significant rise. In order to strengthen the interest rate transmission corresponding to the monetary policy stance and reduce swap market volatility, the MNB deems it necessary to shape the forint liquidity-providing swap portfolio more flexibly than before. By announcing the swap instrument with 1-week maturity, the MNB can provide the banking sector with the necessary forint liquidity and through its permanent presence on the market it may contribute to reducing financial market volatility. In addition, the daily tenders enable the central bank to respond rapidly, by shaping the swap portfolio, to the market changes in the tense international financial market situation.

3. **With a view to mitigating the market tension observed for longer maturities, the MNB opted for the introduction of a longer, maximum 5-year maturity, fixed-rate credit instrument.** The rise in market volatility rendered banks' access to funding more difficult and also increased the volatility of long-term yields. The new, long-term secured credit instrument may provide credit institutions with stable funding and help them manage maturity mismatches. In addition, due to its long maturity and fixed interest, the instrument may contribute to reducing the volatility of long-term yields.

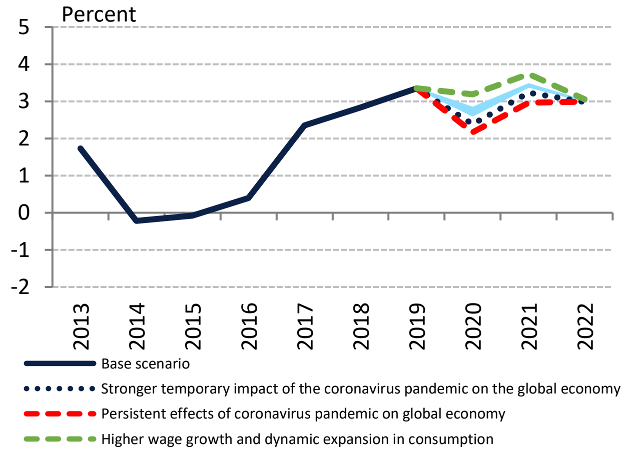
4. **The release of credit institutions from the reserve requirement facilitates the banking sector's liquidity management to a substantial degree.** Pursuant to the MNB's decision, the credit institutions subject to reserve requirements will continue to receive interest calculated at the base rate up to the amount of the regulatory reserve, and they are exempted from the penalty applicable to reserve shortfall. The banking sector may use the liquidity of almost HUF 250 billion, released as a result of the decision, on the interbank market, thereby mitigating money market tensions. The institutions may also use the additional liquidity for the financing of liquidity outflows, as necessary.

2 Effects of alternative scenarios on our forecast

The Monetary Council highlighted three alternative scenarios around the baseline projection in the March Inflation Report. The impact of the global coronavirus epidemic on the global economy, which is temporary, but more significant than the baseline scenario, as well as the more persistent and more considerable effect of the epidemic on the global economy may result in a lower inflation path and more subdued growth path compared to the baseline scenario. In the alternative scenario featuring higher wage growth and dynamic expansion in consumption, domestic economic growth is stronger and inflation is higher than in the forecast from the baseline scenario. In addition to these scenarios, as further alternatives, the Monetary Council also discussed scenarios that assume the implementation of competitiveness reforms and a permanent rise in food prices.

The GDP of the Hungarian economy may decline in the first half of this year or even for the year as a whole, if the global coronavirus epidemic worsens. The negative economic impacts stem from the downturn in external markets, the longer or shorter stagnation in key manufacturing and service sectors, and the more cautious investment and consumption behaviour. In scenarios with weaker economic performance, inflation may also be significantly below the baseline scenario. We expect wage moderation in the first half of the year. At the same time, in the event of a short, temporary outbreak of the epidemic, a rapid recovery in economic activity may once again boost labour market demand and thereby wage dynamics. In our alternative scenario, such a faster outflow of wages through domestic demand could further strengthen the recovery, leading to slightly higher inflation than in the baseline scenario.

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



Source: MNB

Stronger temporary impact of the coronavirus pandemic on the global economy

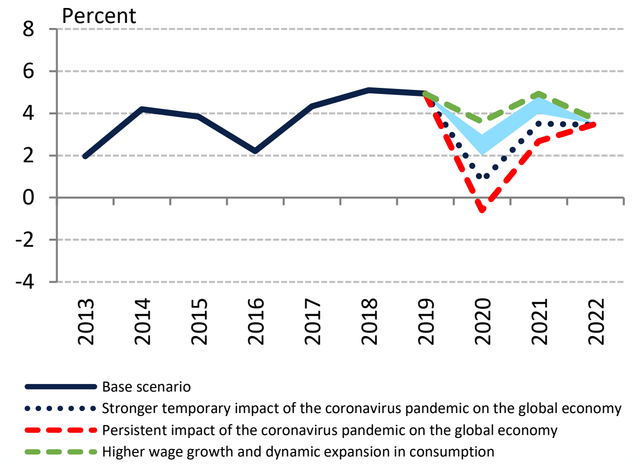
The risks posed by the coronavirus hit the global economy in an extremely weakened state. **The epidemic is expected to cause severe damage to the economy. At the same time, there is considerable uncertainty about the strength and duration of the impacts.**

A downswing is expected in the Chinese economy in Q1, but we foresee a rapid correction after that. Taking into account the structural and cyclical factors that have an impact on the economic activity of the euro area, **we expect subdued growth, although based on the March confidence indicators, a major and permanent economic downturn may also occur.** In terms of the **economic growth of the euro area**, **a further uncertainty factor is the uncertainty about the trade Brexit**.

The outbreak of the epidemic was followed by a major commodity market adjustment, which may continue with the strengthening of risks. In order to offset the unfavourable real economy and financial market effects that evolved, **governments responded with the introduction of fiscal measures, and many central banks adopted stimulating monetary policy steps** (for details see Chapter 3.1).

In our baseline scenario, the coronavirus has a temporary impact on **the global economy, but the pace of recovery may vary considerably from region to region**. **A faster recovery process is expected in China**, while **it is anticipated to be slower in the case of the euro area**. In connection with the coronavirus, global commodity market prices will continue to decline in the short run. In the euro area, GDP growth in Q1 in Germany and Italy will be negative compared to the previous quarter.

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



Source: MNB

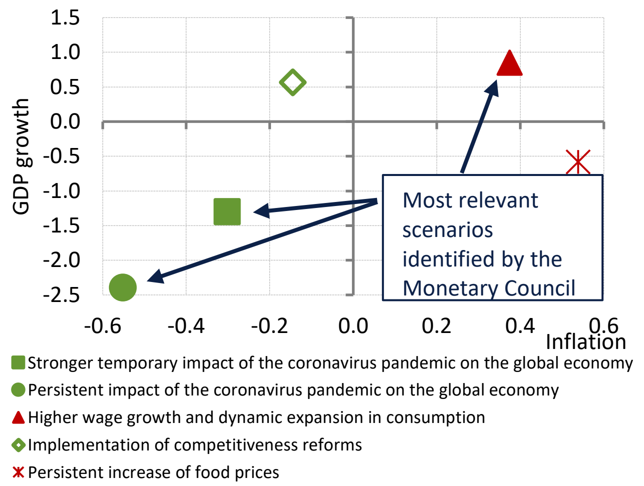
In our alternative scenario, the negative impact of global economic **uncertainties** on business sentiment will continue through to the end of this year. The effects of **the downside risks to global growth will be reflected in real economy data as well**. **Global commodity market prices will remain moderate this year.** We assume that the euro area economy will sink into recession for 2020 as a whole. **Hungary's economic expansion** will continue at a more moderate pace, but the growth surplus of at least 2 percentage points compared to the euro area will remain in place. As a result, investments will be shifting or partly postponed. Unemployment may temporarily rise, while firms will basically responding to wages by cutting back bonuses and other allowances. **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.**

Persistent impact of the coronavirus pandemic on the global economy

The **global risks** explained in the previous scenario **may become permanent in the medium term as well**. The impacts of the coronavirus **may result in lasting supply problems in the global economy**, and non-linearities may appear in how economic effects materialise.

Global commodity market prices remain persistently moderate in our alternative scenario. EU countries, which are already exhibiting subdued growth, may find themselves in an even more difficult situation, and **Europe may again be one of the weakest links** as a result of the high level of debt, structural weaknesses, the rigid institutional system and the vulnerable banking system. In view of cyclical and structural factors, **European economic activity will remain persistently weak**. Compared to the euro area, a growth surplus at least 2 percentage point will remain in place, **but domestic growth will taper off considerably**. The long-term decline also will have a negative impact on companies' medium-term investment decisions. In addition, the domestic unemployment rate

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 on the monetary policy horizon. The red markers mean tighter and the green markers mean looser monetary policy than in the baseline forecast.
Source: MNB

will also rise significantly, while wage dynamics will slow down considerably, which also may affect household consumption decisions. **Weaker-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.**

Higher wage growth and dynamic expansion in consumption

In recent years, in parallel with the dynamic economic growth, employment increased considerably, and unemployment fell to a historically low level. As a result, **labour market conditions have become increasingly tight, leading to dynamic wage increases**. The effects of the coronavirus will only be temporary, and thus demand and supply will rebound quickly, and the previously observed labour market trends will continue.

The measures of the 6-year wage agreement concluded in November 2016 contributed significantly to the double-digit wage increases typical of the previous two years. Based on the current wage agreement, **both in 2019 and 2020 the increases in the minimum wage and the guaranteed wage minimum amount to 8 percent**.

Last year, wage dynamics substantially exceeded the rise in the minimum wage and the guaranteed wage minimum. This was primarily attributable to the tight labour market conditions determining the underlying wage-setting trend. Buoyant wage growth was typical at a wide range of companies.

In our baseline scenario, in view of the deceleration in economic growth due to the coronavirus and the expected lowering of bonus payments and other allowances by companies, compared to our previous forecast we expect lower private sector wage dynamics in this year.

According to the assumptions in our alternative scenario, corporate labour demand will remain permanently high, and thus, as a result of the tighter labour market environment, **wages will increase** throughout the private sector **in the coming years as well**. Compared to the baseline scenario, **expansion in consumption may be persistently higher, resulting in a higher inflation path**.

Other risks

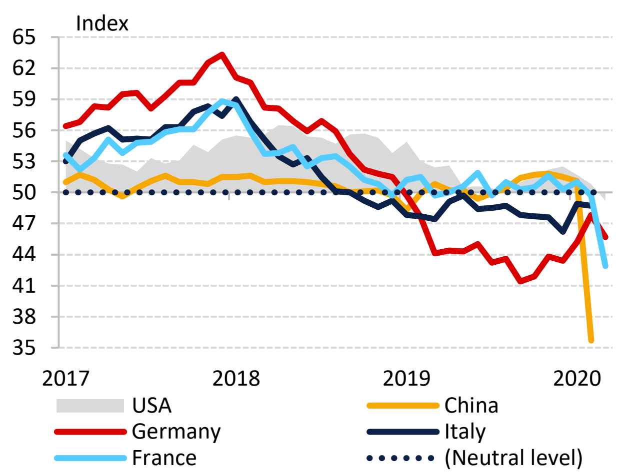
In addition to the scenarios highlighted above, the Monetary Council considered two other alternative scenarios. The risk scenario that presents the **implementation of competitiveness reforms** results in a more closed output gap and lower inflation path than the baseline scenario. According to the assumptions of the risk scenario that **expects a persistent food price increase**, weather phenomena caused by the climate change will result in persistently lower supply. Moreover, the coronavirus keeps on spreading, entailing the restructuring of corporate strategies and the postponement of investment. As a result of the stocking due to fears of a fall in supply and of the epidemic, food prices will rise in the longer run. This scenario assumes higher inflation and lower output than the baseline scenario.

3 Macroeconomic overview

3.1 Evaluation of international macroeconomic developments

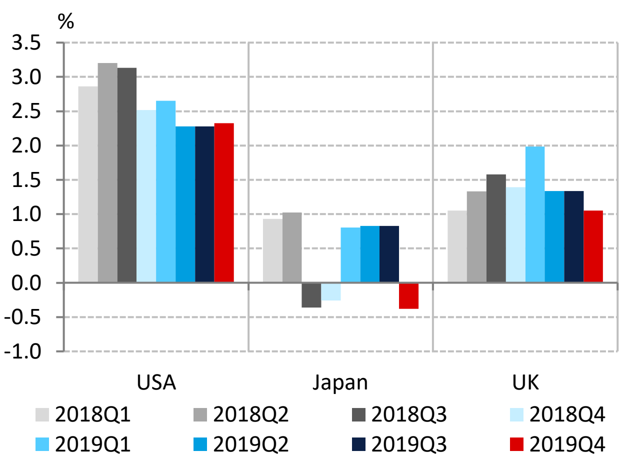
The global economy continued to grow at a subdued pace in 2019, producing the weakest annual growth in the last 10 years. Economic growth in Europe's largest economies decelerated, and, hence euro area growth fell short of expectations. The Visegrad region continued to be the growth centre of the European Union. The coronavirus pandemic has further undermined the growth outlook for the already weak global economy. Global inflation has not changed significantly in the past months. Inflation rates in the United States, Japan and the euro area still fall short of the central bank targets, while inflation in the other developed and emerging economies remained around the central bank targets. Several central banks decided to ease monetary conditions to mitigate the effects of the coronavirus pandemic on global growth prospects.

Chart 2-4: Evolution of manufacturing PMIs



Note: Seasonally adjusted series.
Source: Bloomberg

Chart 2-5: Annual changes in GDP in certain key global economies



Note: Seasonally adjusted series.
Source: OECD

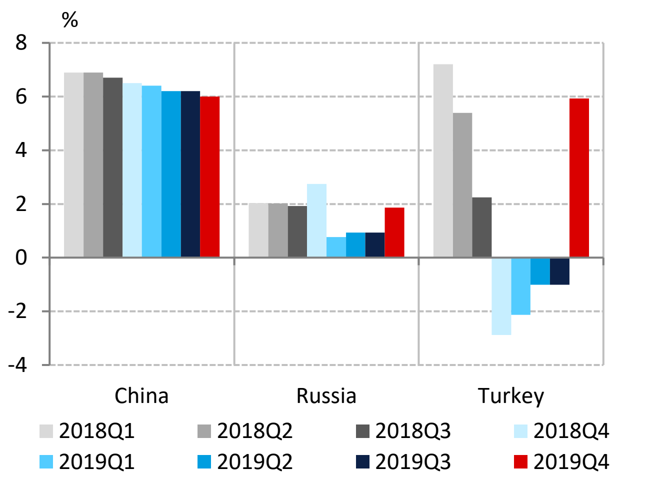
3.1.1. Developments in major global economies

Globally dominant economies continued to expand at an even slower pace in the fourth quarter of 2019, resulting in the slowest global economic growth since the 2008-2009 global economic crisis. As a result of the coronavirus pandemic, the confidence indicators fell to their historical low (Chart 3-1).

In line with expectations, the **US economy grew by 2.3 percent** in year-on-year terms, supported by household and government consumption as well as net exports. However, **one unfavourable trend is that domestic consumption and investment demand have been falling for three consecutive quarters.** US economic growth is projected to gradually decelerate, in conjunction with the end of fiscal stimulation programmes (tax cuts and infrastructure investment programme). Although the initial trade agreement between China and the United States had a calming effect on the markets, its compliance, particularly by China, remains a risk. For the last three quarters, prolonged uncertainties have undermined the dynamics of business investments in machinery, which can be considered as one of the most important drivers of long-term growth. According to market participants, the outcome of the US presidential election also poses a significant risk to the global economy.

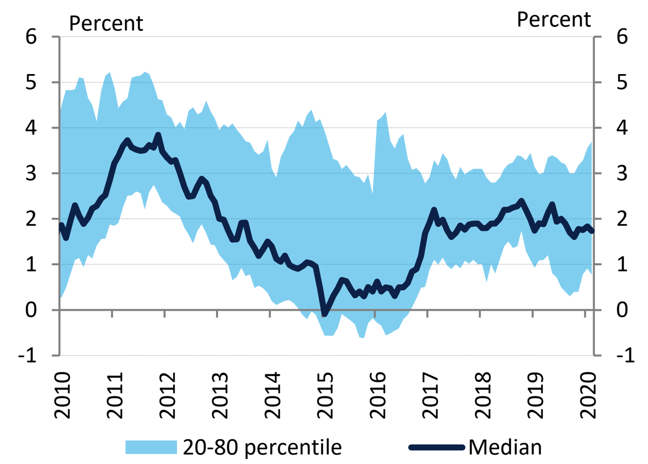
Economic performance in the **United Kingdom stagnated** in 2019 Q4 on a quarterly basis. Despite the favourable impact of household consumption, long-term trends continue to paint an unfavourable picture. Corporate investment in machinery has been declining for almost 2 years, **in response to the unpredictability of Brexit-related trade agreements** and the related risk of disruption, as well as the **persistent uncertainties**. Looking ahead, a further decline in physical capital investment could lead to a reduction in output through industrial production.

Chart 2-6: Annual changes in GDP in certain key global economies



Note: Seasonally adjusted series. Turkey is estimation for 2019 Q4.
Source: OECD

Chart 2-7: 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

The Japanese economy contracted by 0.4 percent in year-on-year terms (Chart 3-2). The underlying reason for this constriction was the increase in the sales tax last year, which had a negative impact on consumption expenditure. At the same time, corporate business investment declined substantially as a result of trade uncertainties.

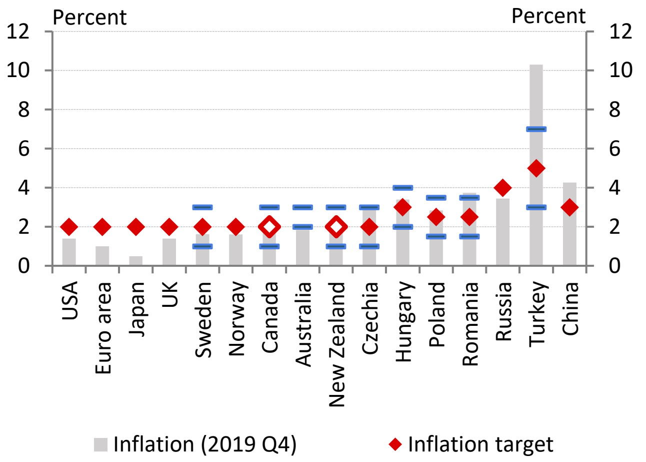
In line with expectations, **of the major emerging countries, China's economic performance continued to decelerate in the fourth quarter of 2019** (Chart 3-3). In Q4, Chinese GDP expanded by 6.0 percent year on year. Expansion in the economy is mainly attributable to household consumption. In addition, investment also contributed to growth, which was a result of both private and state-financed fixed capital formation. Looking ahead, the slowdown in global economic activity, the possible disobedience of the initial trade agreement between China and the United States, the record high indebtedness of the provinces, and the spread of the coronavirus may result in a further slowdown in the Chinese economy.

In Turkey, **the economy surpassed expectations and grew at a rate of nearly 6 percent in 2019 Q4, owing to the correction of the downturn caused by the currency crisis a year earlier**. Growth was driven by household consumption and government spending. **In Q4, GDP in Russia expanded by 1.9 percent year on year.**

Global inflation has not changed significantly in the past months (Chart 3-4). **Inflation rates in the United States, Japan and the euro area still fall short of the central bank targets**, while inflation in the other developed and emerging economies – with the exception of Turkey – was still around the central bank targets (Chart 3-5). Commodity prices fell significantly during the period under review, at the beginning of the year (see Box 1-1 and Chart 3-6).

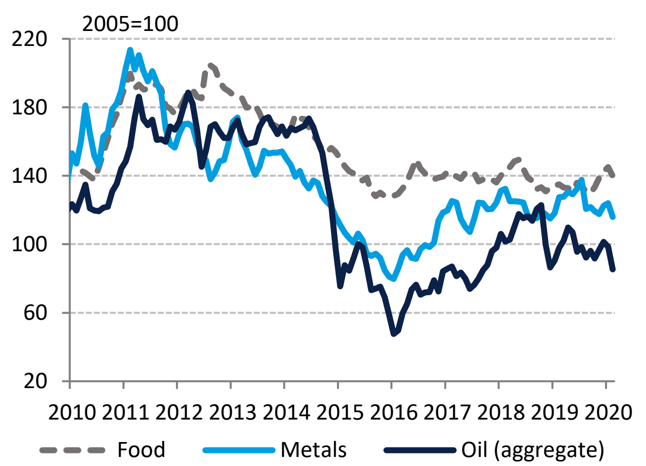
At its extraordinary meetings, the Fed eased its conventional and unconventional monetary policy instruments, including reductions of the fed funds rate totalling 150 basis points. To provide interbank liquidity, it increased the volume of o/n and term repo transactions, introduced 30- and 90-day repo transactions and relaxed its reserve requirements. The Fed restarted and expanded its asset purchase programmes to ensure the stable operation of financial markets and announced swap agreements with numerous central banks during the past quarter (Chart 3-7). The Fed's decision-makers cited the negative growth effects of the coronavirus epidemic as an explanation for the rate cuts and the liquidity providing operations. Regarding the decisions in March, Jerome H. Powell stressed that a major challenge for the global

Chart 2-8: Inflation targets of central banks and actual inflation



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

Chart 2-9: Major commodity price indices



Note: Calculated from prices in USD.
Source: World Bank

economy was in place, but the US economy was on a stable footing and unemployment was historically low in February, while inflation remains below the 2 percent target. The Fed's Chairman said that the central bank would closely monitor the economic effects of the coronavirus epidemic and use all the tools to support the economy.

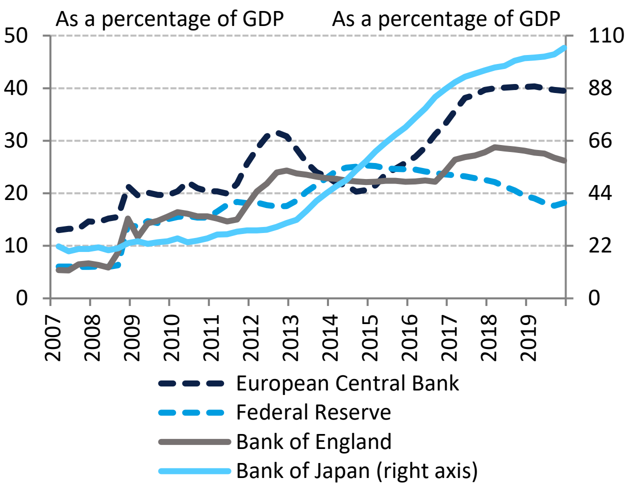
The Bank of Japan eased its monetary conditions in the past quarter, but it did not amend its forward guidance, according to which short-term and long-term interest rates will remain at their current or lower levels as long as the possibility of missing the inflation target remains. In connection with the external environment, the Japanese central bank noted that global growth may continue to decelerate, and the ensuing downside risks had strengthened in the past period. In response to the rapid spread of the coronavirus, the Bank of Japan announced a liquidity expansion package equivalent to USD 42.5 billion, which includes increasing repo availability and providing long-term funding to support the stability of the banking system and the money and capital markets. As part of further easing measures, the central bank has expanded its asset purchase programmes and provided USD funding to Japanese banks following the swap agreement with the Fed.

Decision-makers at the Bank of England lowered the policy rate by 65 basis points, launched several new loan programmes to support small and medium-sized enterprises and expanded the bond-purchase programme. The central bank expects a clear decline in economic activity in the coming months. While inflation has risen to above the 2-percent inflation target on several occasions since April 2019, it fell to 1.8 percent in January.

The Russian central bank lowered its benchmark rate by 25 basis points to 6.0 percent and announced repo operations totalling USD 6 billion to ensure sufficient liquidity in the Russian financial system. The rate cut was driven by lower-than-expected inflation, which fell from 3 percent in December to 2.4 percent in January, well below the 4-percent inflation target. According to the Central Bank of Russia, if economic developments are in line with its forecast, it is open to further interest rate cuts. The Russian economy expanded by 1.3 percent in 2019, while the central bank expects economic growth to accelerate to around 2-3 percent in the years to come.

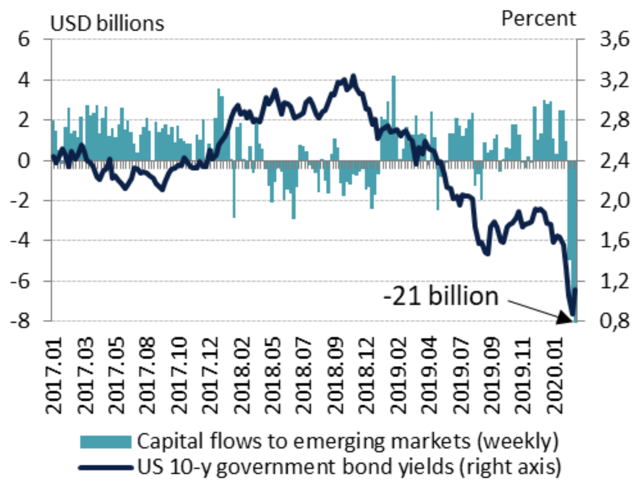
Many other central banks responded to the spread of the coronavirus by easing monetary conditions. The Bank of Canada lowered its benchmark rate by a total of 100 basis points following the Fed's extraordinary rate-setting meetings, to ease the tightening financial condition as risk

Chart 2-10: Central bank balance sheet totals in developed countries



Source: Databases of central banks, Eurostat, FRED

Chart 2-11: Capital flows to emerging markets (weekly) and US 10y-government bond yields



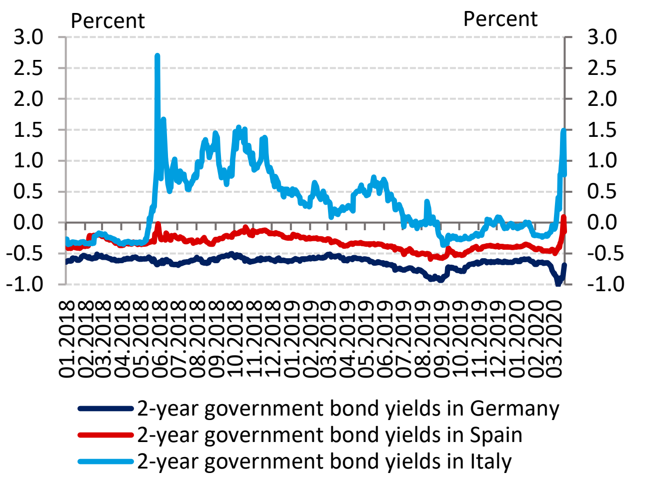
Source: EPFR, Bloomberg

premia rose. It also expanded its asset purchase programme and introduced longer repo operations. The Australian central bank cut its policy rate by 50 basis points, increased the volume of its repo operations and launched a new government securities purchase programme. The South Korean central bank lowered its benchmark rate by 50 basis points and launched a targeted lending programme for small and medium-sized enterprises. The Reserve Bank of New Zealand lowered its base rate by 75 basis points and launched a new government securities purchase programme. The central banks of the Scandinavian countries also eased their monetary conditions: the Norwegian central bank lowered its benchmark rate by 125 basis points and introduced a new three-month loan facility; the Swedish central bank cut its overnight loan interest rate by 55 basis points, introduced a new loan facility to support companies and expanded its asset purchase programme; the Danish central bank raised its benchmark rate by 15 basis points to stabilise the krone exchange rate and introduced a new credit facility to support the functioning of the financial system.

China's central bank eased monetary conditions repeatedly in response to a gradual slowdown in economic growth. This affected the reserve ratio, the one-year benchmark borrowing rate, the medium-term central bank lending rate as well as the rate for 7-day reverse repo operations. The central bank's loose stance is also indicated by its announcement of a liquidity expanding measure amounting to a total of USD 316 billion in January, followed by further easing measures in March. In January, inflation in China was at 5.4 percent, the highest value since January 2012. High inflation was attributable to a significant rise in pork prices. In parallel, however, core inflation plunged to a 9-year low, in line with falling demand.

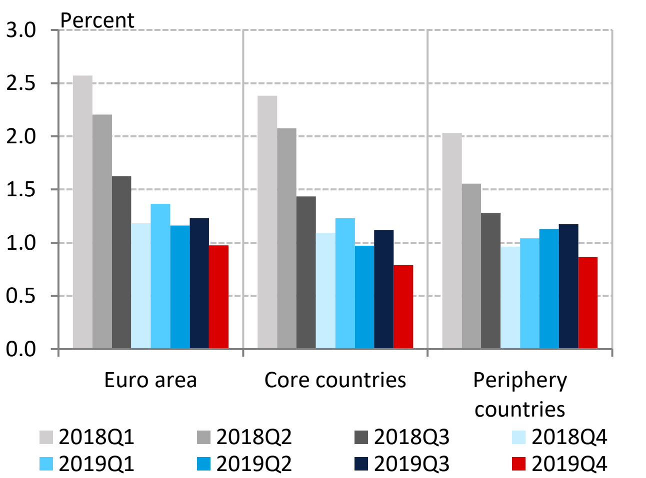
Market sentiment deteriorated in the past quarter, and thus stock exchange indices as well as developed market bond yields typically declined. The rise in investor risk aversion in the past quarter is attributable mainly to coronavirus news. In response to the unfavourable sentiment, both developed and emerging market stock indices declined. US and European indices fell by about 25 to 30 percent and 30 to 35 percent, respectively. In the first half of the period, the US dollar strengthened in the foreign exchange markets of developed economies; however, from mid-February volatility on the developed exchange markets has risen significantly. Over the past quarter, the US currency has appreciated against the euro by 3 percent and against the British pound by about 10 percent. As a result of intensifying risk aversion in late February, bond yields in advanced markets declined

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



Source: Bloomberg

Chart 2-13: Annual changes in euro area GDP



Note: Seasonally and calendar adjusted series. Periphery countries (Portugal, Italy, Greece, Spain), Core countries (Belgium, Germany, France, Netherlands, Austria).

Source: Eurostat

significantly, while US and German 10-year yields fell to record lows. Emerging market bond yields also declined, while spreads were mixed.

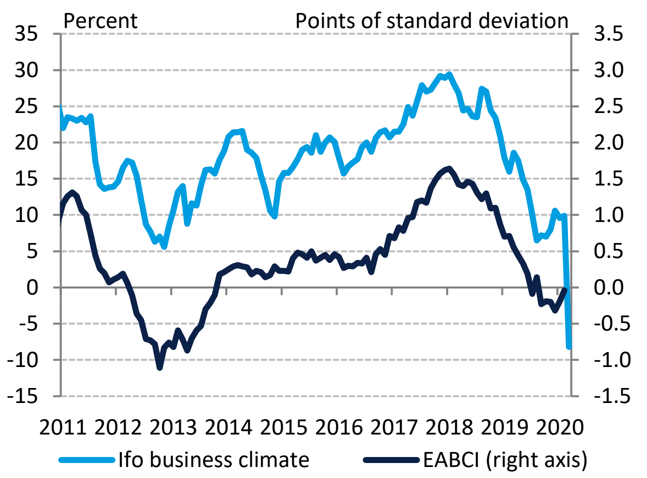
Due to the economic slowdown related to the coronavirus epidemic, market expectations regarding monetary easing have intensified. According to market actors, the Fed will no longer lower the key policy rate, which could stay at 0.0-0.25 percent by the end of the year. At the end of last year, market actors did not expect the Fed to change monetary conditions in 2020. As the economic outlook worsened, expectations of interest rate cuts in the euro area also intensified: while last December market actors did not expect the ECB to change interest rates, current market prices suggest a single interest rate cut of 10 basis points this year.

3.1.2. Developments in the euro area

Despite last year's positive outlook at the end of the year, economic growth in Europe's largest economies slowed down. Euro area growth fell short of analysts' expectations, at a rate of 0.9 percent year-on-year in 2019 Q4 (Chart 3-10). On a short-term base, the euro area expanded by just 0.1 percent. **As a result, euro area growth fell to a six-year low on a quarterly basis**. Weak external economic activity probably adversely impacted growth via lacklustre export performance, while Economic performance in Europe was likely driven **mostly by household consumption**. **Trends in corporate business investment are extremely restrained in the euro area. In the past years, the pace of growth of core and periphery countries were identical and showed a decelerating pattern.**

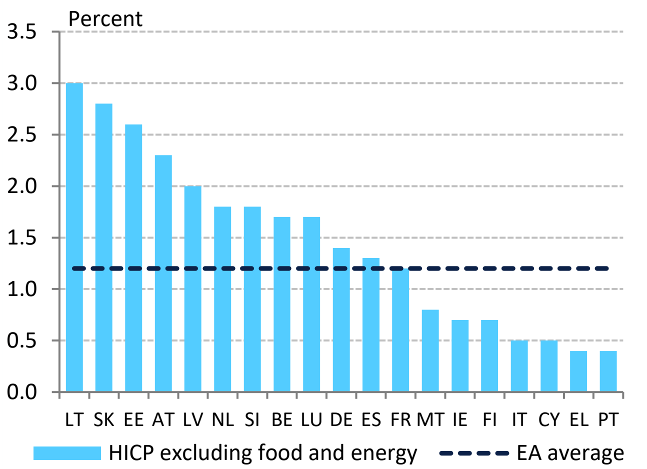
The economic performance of Germany, Hungary's main trading partner **stagnated in 2019 Q4**: domestic consumption slowed, falling industrial production also hampered growth, and exports of goods declined in parallel. For 2019 as a whole, the German economy grew by about 0.5 percent on an annual basis, marking the slowest pace seen in the last decade. Analysts' expectations concerning the performance of the German economy deteriorated further due to the effects of the coronavirus pandemic. **The downturn in German auto industry production is still noticeable, with output falling to a 7-year low.** Employing approximately 2 million people including those employed by suppliers, **the German auto industry's switchover to electric drive technology is progressing extremely slowly, with a number of car makers announcing a delay in mass production of their electric models.** Weakening global demand and regulatory

Chart 2-14: Business climate indices for Germany and the euro area



Source: European Commission, Ifo

Chart 2-15: HICP excluding energy, food, alcohol and tobacco in euro area members (February 2020)



Source: Eurostat

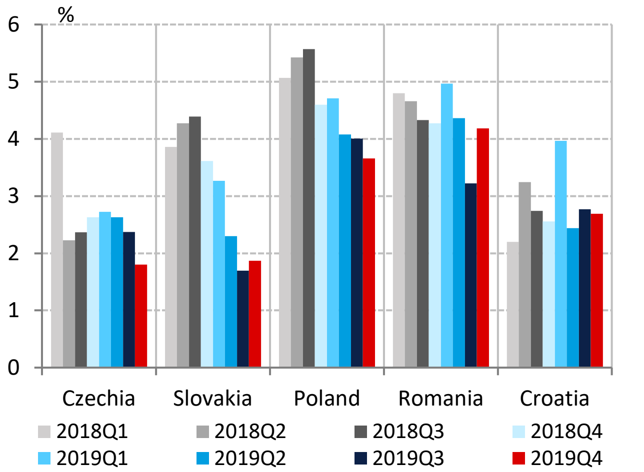
penalties are damaging the prospects of the sector and thus those of German economy as a whole.

Growth data for Q4 varied in the other major European economies. Growth in **France**, the second largest economy in the European Union (annual change: 0.8 percent) was hit adversely by strikes and demonstrations on a quarterly basis. Economic growth also fell in **Italy** owing to weaker domestic demand (quarterly change: -0.3 percent). Regarding periphery countries, growth in **Spain** increased significantly again owing to strong export dynamics (annual change: 1.8 percent), but business investment declined at a rate unseen since 2013. Economic growth in **Austria** continued and came to 1.0 percent in line with GDP growth in the euro area. The business confidence indices capturing the growth prospects of the euro area (EABCI) and the expectations for the German economy (Ifo) recently fell sharply due to the effect of the spread of the coronavirus on the business sector (Chart 3-11).

Inflation remained moderate in the euro area as a whole. The consumer price index was below the 2-percent central bank target in most member states, and there were only four member states (Latvia, Slovakia, Estonia and Austria) where inflation was higher than that in February. Core inflation was at 1.2 percent in February (Chart 3-12).

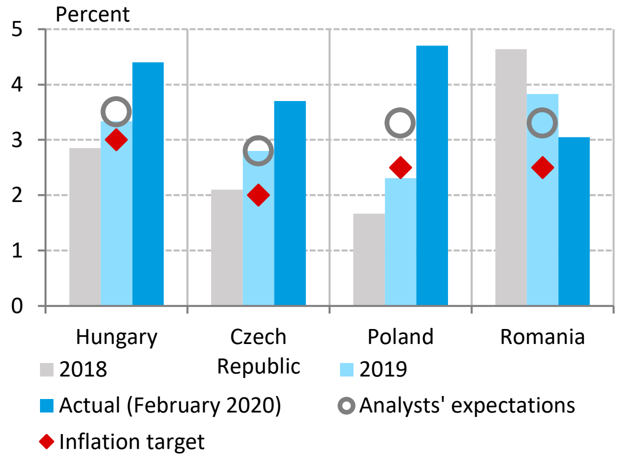
At its March rate-setting meeting, the Governing Council of the ECB left its policy rates unchanged, but announced a multi-component easing package. According to the forward guidance, the policy rates will remain at their current or lower levels until inflation seems to be approaching a level below, but close to 2 percent. In line with the September 2019 decision, net asset purchases restarted from the beginning of November, with a limit amount of EUR 20 billion per month, supplemented by an additional EUR 120 billion at the March rate-setting meeting until the end of 2020, and later by a new EUR 750 billion programme. The asset purchases are expected to end not much before raising the policy rates. As part of the easing package, decision-makers eased the terms of the ongoing TLTRO III program to support the member countries most affected by the spread of the coronavirus and temporarily introduced additional LTRO operations to ensure the liquidity supply of euro area. Christine Lagarde, President of the ECB, said at a press conference following the decision that the global spread of the coronavirus has been a major shock to the economy, which is also severely affecting global growth prospects. Lagarde strongly urged governments and fiscal authorities to act in a timely and coordinated manner to stimulate the economy.

Chart 2-16: Annual changes in GDP in CEE countries



Note: Seasonally and calendar adjusted series. In the case of Slovakia, only seasonal adjustment.
Source: Eurostat

Chart 2-17: 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

The ECB will reinvest the principal of the securities purchased within the framework of the asset purchase programme even well after starting to raise the policy rates. The Governing Council emphasised the necessity of maintaining the very loose stance, as both current inflation and forecast inflation are below target. The composition of asset purchases has changed slightly over the past quarter: the proportion of government bonds increased, while that of all other asset classes declined.

3.1.3. Developments in the CEE region

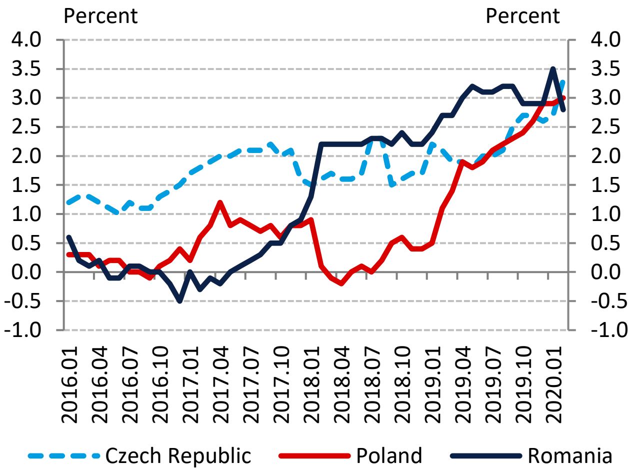
As in the previous quarters, the Central and Eastern European region also proved to be the growth centre of the European Union in the fourth quarter of 2019 (Chart 3-13). The GDP expansion of the CEE region, which is high in a European comparison, was primarily attributable to domestic demand items, while net exports hindered growth in several countries in 2019 Q4 next to weak external economic activity. According to the seasonally adjusted data, Romania, Poland, Slovakia and the Czech Republic recorded GDP growth rates of 4.2 percent, 3.5 percent, 1.9 percent and 1.7 percent, respectively.

Looking at the countries of the region, the rate of increase in consumer prices was above the central bank targets in the past period. In Poland, inflation has gradually moved away from the 2.5-percent central bank target over the past quarter; in February prices increased by 4.7 percent. In the Czech Republic, the rate of increase in consumer prices was still above the 2-percent central bank target, amounting to 3.7 percent in February. Inflation in Romania was within the tolerance band in February (see Box 3-1 for more details).

Based on analysts' consensus in February, inflation is expected to be 3.3 percent in Romania this year and 2.8 percent in the Czech Republic, which are respectively 1.1 and 0.8 percentage points higher than the central bank targets. By contrast, in Poland inflation is likely to be close to the 2.5-percent target (Chart 3-14). Regional developments suggest that core inflation has risen in all countries over the past period (Chart 3-15).

Decision-makers at the Czech central bank cut the benchmark rate by 50 basis points to 1.75 percent after a 25-basis point hike. In its recent forecast released after the first decision, the central bank expects inflation to rise further in the short term, and then gradually decline from the second quarter, which may fall within the tolerance band by the end of this year, however, the development of the coronavirus epidemic made the loosening of monetary

Chart 2-18: Developments of inflation excluding energy, food, alcohol and tobacco in the countries of the region



Source: Eurostat

conditions necessary. Based on the central bank’s projection of the interest rate path, the key policy rate will likely be reduced in the second half of 2020.

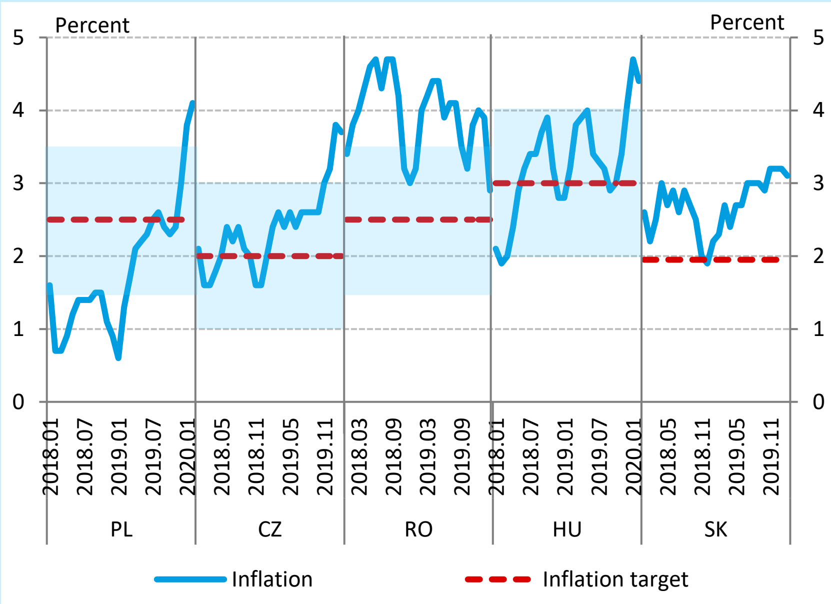
In the past quarter, the Polish central bank's decision-makers lowered the policy rate by 50 basis points and launched a new government securities purchase programme. Decision-makers underlined that the spread of the coronavirus had significantly undermined global growth prospects and increased uncertainty, which is why economic activity in Poland is also expected to slow in the short term. The central bank's latest projections had slightly higher inflation and lower growth rates than in the November report, although based on the statement of the extraordinary meeting, a significantly lower inflation rate is expected as a result of the pandemic and the fall in oil prices.

Decision-makers at the Romanian central lowered the policy rate by 50-basis point and launched a new government securities purchase programme during the past quarter. Decision makers emphasized the negative impact of the coronavirus epidemic on households and companies. Inflation was around the upper bound of the tolerance band in recent months. According to the January 2020 Inflation Report, the rate of inflation may decline in the first quarter of this year, and then, after moving on an upward path, remains at the upper bound of the tolerance band over the forecast horizon.

Box 2-1: Inflation trends in the Central and Eastern European countries

In the past six months, **inflation has risen in the vast majority of the Central and Eastern European countries**, and, in several cases **it has temporarily moved out of the tolerance band around the central banks' inflation targets** (Chart 3-16). In recent months, inflation in the region has been driven **mainly by volatile items**, i.e. **rising fuel and food prices**. The rise in fuel prices until January was in line with the significantly volatile rise in global oil prices. In terms of food prices, African swine fever has caused substantially damage to global pig stocks. As a result, producer prices for slaughter pigs have risen significantly, and last December they were over 15 percent higher in the EU than a year earlier. In addition to the price of pork, the prices of fresh vegetables and fruits have also increased significantly, which is probably due to the severe damage to these products caused by adverse weather conditions in Spain. Overall, the significant rise in domestic demand observed in the past period boosted companies' pricing leeway, and thus the increase in the prices of raw materials may have been more reflected in consumer prices. In addition, inflation in the Czech Republic and Poland was also driven by rising administrative prices. Thus, in the case of the latter, there has been an excise duty increase on alcohol and tobacco products.

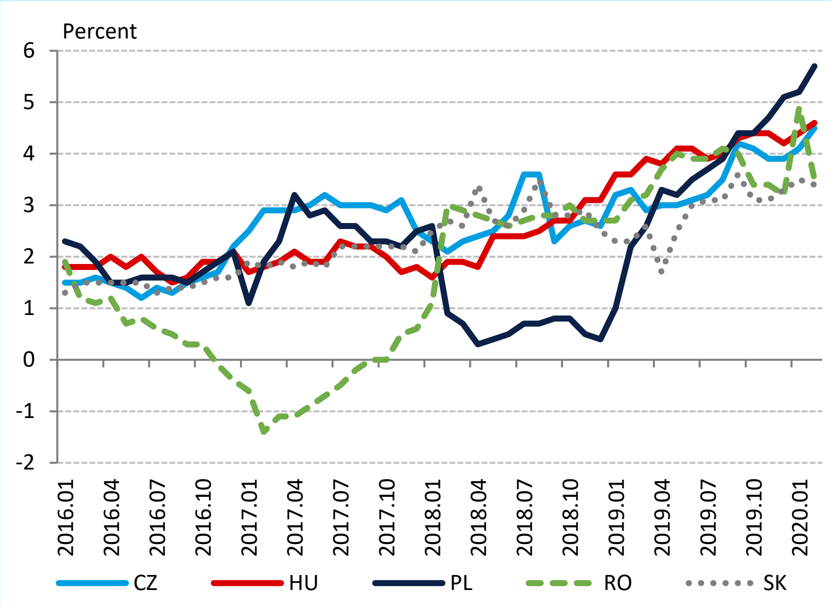
Chart 2-19: Evolution of inflation rates in Hungary and in the countries of the CEE region



Note: Light blue rectangles indicate the tolerance band around the inflation target.
Source: Eurostat, MNB

In addition to the temporary factors, **strong domestic demand in the countries of the region also contributed to rising consumer prices**. Unemployment rates have fallen near their historical low over the past year in these countries, **causing an increase in core inflation and, within that, particularly services inflation through the channel of wages**. For some countries like Hungary and Poland, **minimum wage increases announced by the respective governments also supported the increase in demand and wages triggered by tight labour markets**. In Poland, the government raised the minimum wage by 15 percent this year, to be followed by another 15-percent increase in 2021 and a 10-percent increase until 2024. In all countries of the CEE region **the price of market services rose by around 4 percent year-over-year in January 2020, i.e. at a higher rate than in past years** (Chart 3-17).

Chart 2-20: Services inflation in Hungary and in the CEE region



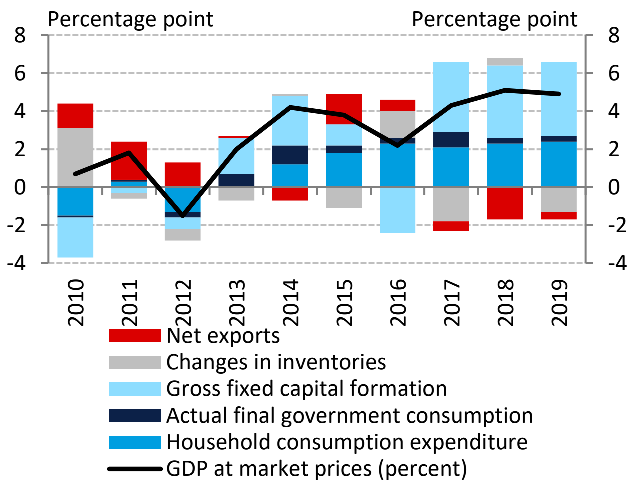
Source: Eurostat

Based on the forecasts of the region's central banks, inflation rates may have peaked in the first quarter of 2020. For the remainder of the year, price dynamics are expected to moderate due to slower food price increases and the impact of world oil prices on fuel prices. In Romania, based on the actual forecast, inflation may stabilise in the upper part of the tolerance band over the forecast horizon. Compared to central bank projections, **inflation in the countries of the region may decline more than expected as a result of global oil prices, which are currently below 30 USD/barrel.** Looking ahead, **the adverse impact of the spread of the coronavirus on the global economy** is also likely to play a role in the moderation of inflation.

3.2 Analysis of the production and expenditure side of GDP

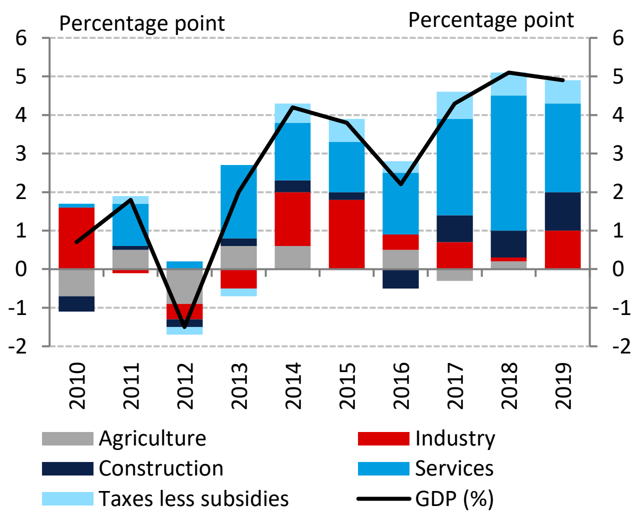
Hungarian GDP grew by 4.5 percent in 2019 Q4 on a year earlier, while the economy grew by 4.9 percent for the year as a whole. Overall, our growth surplus over the euro area was above 3 percentage points. On the expenditure side, domestic demand including business investment and consumption was still the largest contributor to growth. The expansion of household consumption was also fuelled by favourable trends in income, rising household debts, in part related to the 'Prenatal baby support' scheme, and robust consumer confidence. Double-digit corporate credit growth in a favourable financing environment contributed to the significant increase in business investment. Net exports made a negative contribution to domestic growth in the fourth quarter. On the production side, while market services continued to expand, construction and the industrial sectors also contributed to GDP growth.

Chart 2-21: Contribution to annual changes in GDP



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

Chart 2-22: Decomposition of change in production side GDP



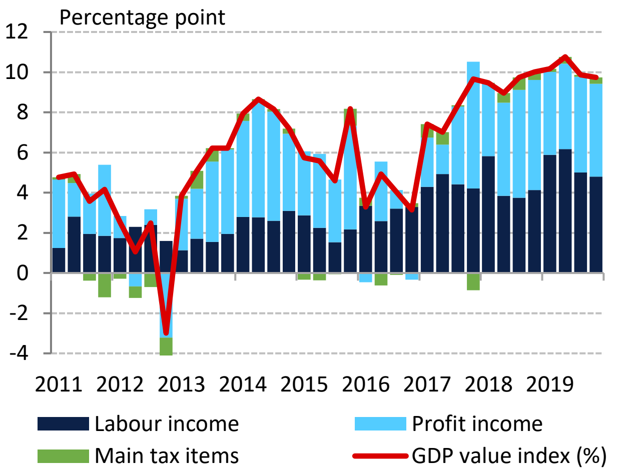
Source: HCSO

In 2019 Q4, **gross domestic product (GDP) increased by 4.5 percent** year on year, while the expansion was 1.0 percent compared to the previous quarter. Hungary was second only to Ireland in the year-on-year growth ranking of the European Union. **Economic growth was mainly supported by investment and consumption** on the expenditure side and by **market services as well as construction and industry** on the production side. In line with increased domestic demand, the growth rate of imports of goods exceeded that of exports. Regarding services, the dynamics of exports and that of imports were nearly identical, and thus **net exports made a negative contribution** to growth in the fourth quarter (Chart 3-18). On the income side, the contribution of **labour income** to growth increased last year and exceeded the **contribution to growth** made by profit income (Chart 3-20).

On the production side, the **performance of the market services sector**, which is closely linked to trends in domestic demand, **continued to improve** (4.6 percent) (Chart 3-19). Regarding the tertiary sector, the strongest gains on a year-on-year basis were seen for the value added of the trade and hospitality services (1.2 percentage points), transport and warehousing (0.5 percentage point) and information and communication (0.4 percentage point), i.e. the largest contributors to GDP. Growth in the **construction** industry decelerated further in the fourth quarter. Despite the persistent weakness of German industry, **domestic industrial production continued to expand** (by 3.2 percent); however, due to a base effect in December and longer winter maintenance, the rate of expansion was lower than in the previous quarter. **The contribution of agriculture to growth was neutral in the fourth quarter.**

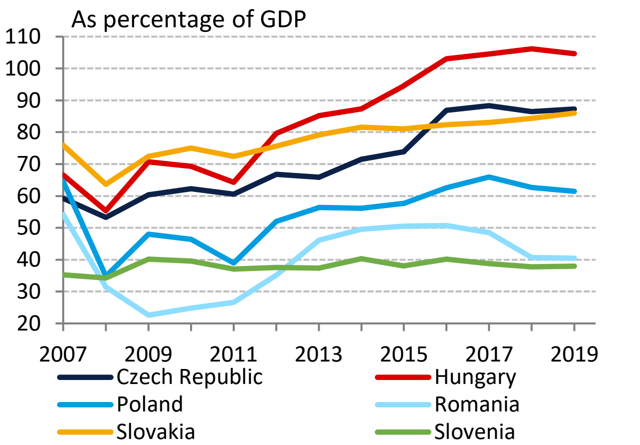
Households' consumption expenditure rose faster **in 2019 Q4** than it did in the previous quarter. **Favourable income developments, a buoyant household lending market and the high financial wealth and consumer confidence** contributed to this expansion in consumption (Charts 3-20 and 3-22). The increase in spending on durable and semi-durable goods (19.2 percent and 8.0 percent, respectively) significantly exceeded the aggregate

Chart 2-23: GDP decomposition based on income account



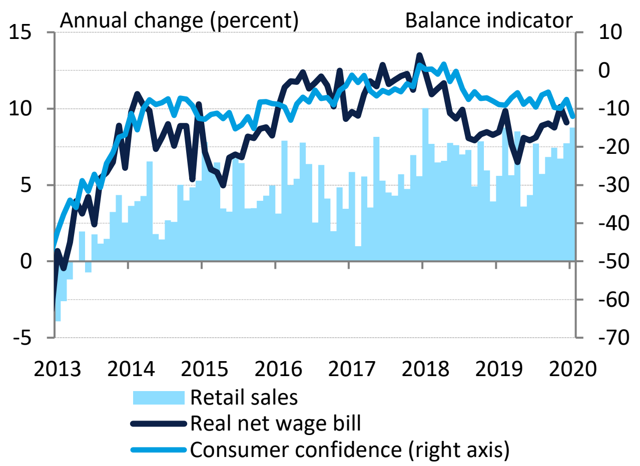
Source: HCSO, MNB

Chart 2-24: Net financial wealth of households in the region



Note: Seasonally adjusted series.
Source: Eurostat

Chart 2-25: Developments in retail sales, income and the consumer confidence index



Note: Seasonally adjusted retail sales data.
Source: European Commission, Eurostat, HCSO

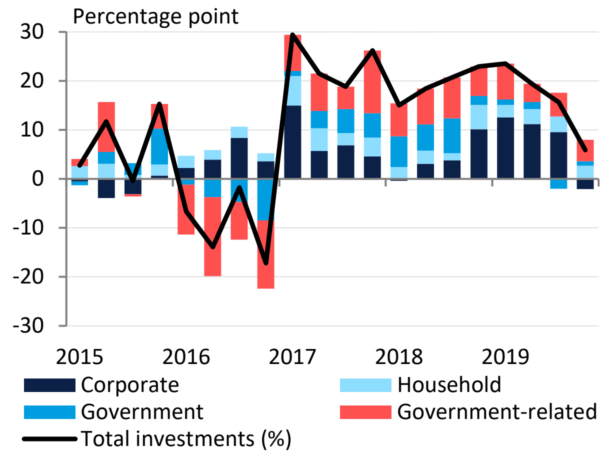
expansion in consumption, while in the case of expenditures on services the rate of expansion in consumption was slightly below average. Pointing to continued favourable consumption developments, retail sales rose by 7.6 percent in January. Overall, the household saving rate was high during the past period, and Hungarian households' financial wealth was the highest in the region (Chart 3-20).

Household loans outstanding rose by 14 percent in 2019. With robust growth of 14 percent during the period under review, household loans outstanding vis-à-vis the entire financial intermediary system increased by HUF 288 billion as a result of lending transactions. Launched in July and aimed at young married couples, **disbursement related to the prenatal baby support scheme**, which, as of December 2019, amounted to HUF 470 billion, **played a significant role in the dynamic growth**. In addition to the prenatal baby support loans, consumer and housing loans also continued to rise. **The additional impact of prenatal baby support loans is currently outweighing its crowding out effect**; however, looking ahead, the share of borrowing that can replace market-priced loans, e.g. low-amount housing loans and personal loans, may increase. Banks' responses to the Lending Survey reflected a pick-up in demand for housing loans in 2019 Q4, while demand for consumer loans remained unchanged. In 2020, demand for housing loans may decline more significantly, while in case of consumer loans demand may decline moderately as a result of the labor market consequences of the epidemic. However, in the following year, with the economy returning to normal, increasing credit demand may again lead to double-digit household credit growth.

In 2019 Q4, **the volume of whole-economy investment rose by 5.9 percent** year on year (Chart 3-23). Both machinery-type investment (1.6 percent) and building-type investment (8.9 percent) grew at significantly slower rates than in previous quarters. Business investment by companies **that produce and provide services for the domestic market** increased slightly, while business investment by sectors **producing for external markets** decreased, mainly due to decline in business investment by the manufacturing sector. **Compared to previous years, the expansion in public investment financed from own and EU funds continued at a lower rate.** Business investment by companies closely related to the state and by the narrow public sector (public administration, health care and defence) increased from a year earlier.

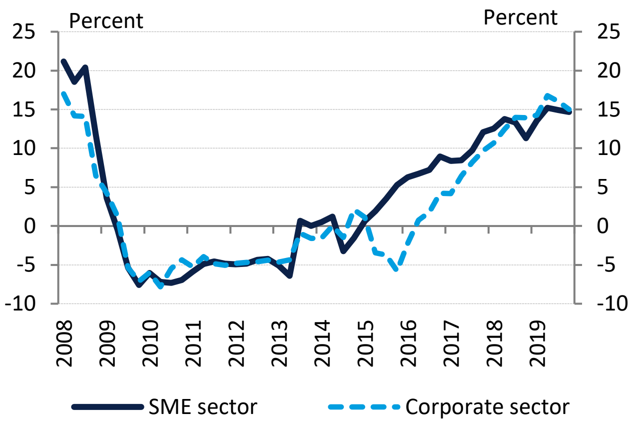
The double-digit growth in corporate loans outstanding continued during the quarter. Due to a large amount of

Chart 2-26: Annual change in investments



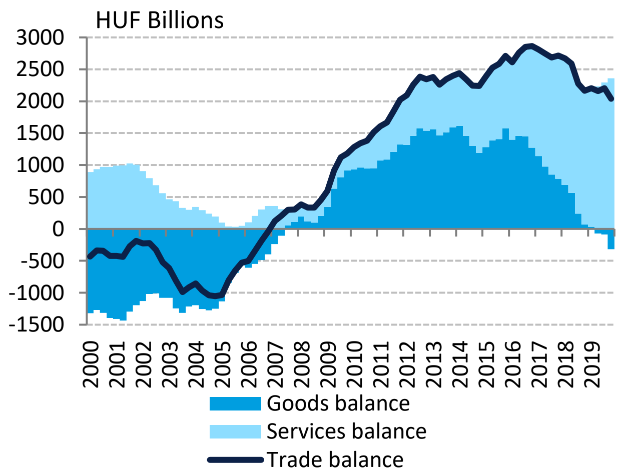
Source: HCSO

Chart 2-27: Annual changes in lending to non-financial corporates and SMEs



Note: Data for the corporate sector are based on transactions with the total financial intermediary system. The SME sector does not include the self-employed. Source: MNB

Chart 2-28: Evolution of the trade balance



Note: Seasonally adjusted, 4-quarter cumulated values, in 2005 prices. Source: HCSO

loan repayments at the end of the year, corporate loans outstanding vis-à-vis the entire financial intermediary system increased slightly, rising by HUF 184 billion in the quarter, which resulted in a 15-percent year-on-year increase. **In the SME sector, credit growth reached nearly 15 percent in 2019.** Strong expansion was observed at both the sectoral and bank level during the quarter. In the Lending Survey, banks reported increasing demand for both long-term and HUF-denominated corporate loans, which was further boosted by nearly HUF 83 billion provided under the FGS fix scheme. **Fixed asset investment (FAI) and financing of receivables were the main drivers of a pick-up in demand by companies.** Within commercial real estate loans, office building loans were in high demand; by contrast, there was a decline in credit demand for housing projects. The latter is likely to be attributable to a decrease in the propensity to invest in real estate and an increase in financing costs. Due to the uncertainties surrounding the coronavirus and the delayed investments due to the restrictions introduced, credit demand is expected to decline significantly for the rest of the year.

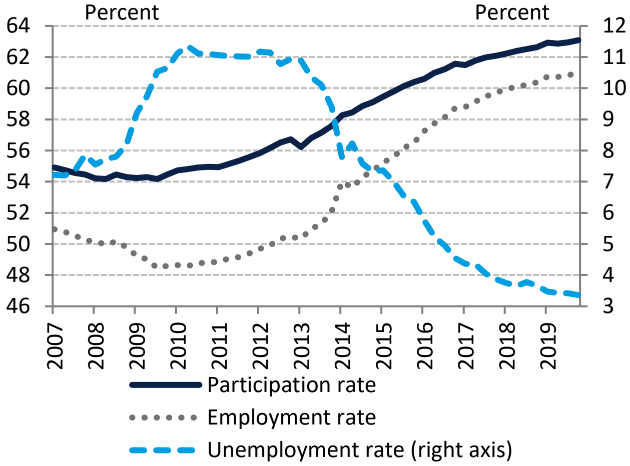
In 2019 Q4, **households' investment activity increased further**. In the fourth quarter, 10,825 new homes were completed, significantly exceeding the number for the same period of the previous year. However, the number of newly issued construction permits fell on a year-on-year basis. **House prices continued to rise** at a somewhat lower rate in 2019 Q3 according to the MNB's composite house price index. According to HCSO data, the rate of increase in the prices of both new and used homes moderated. Developments of housing prices present a regionally varied picture. The dynamics of price increases decelerated in Budapest from the first quarter of 2019, while steadily high growth was observed in other cities, and decrease was recorded in villages in the first three quarters of last year.

In line with the subdued industrial production exports increased more slowly than in previous quarters, which is attributable to significant moderation in the growth rate of goods exports. Expansion in import-intensive domestic demand (household consumption and business investment) continued, and thus the rise in imports exceeded that in exports, with the result that **net exports lowered growth by 1.9 percentage points** in the final quarter. In the case of services exports, the improvement in the balance was due to tourism and exports of transportation services. **As a result, the trade balance decreased in Q4** (Chart 3-25).

3.3 Labour market

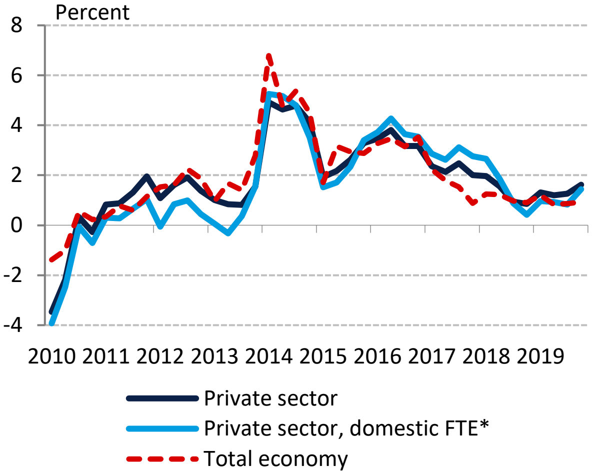
In 2019 Q4, private sector employment continued to increase in annual terms. Within the private sector, employment in manufacturing continued to fall, while the number of employees in the market services sector continued to rise compared to the same period of the previous year. The number of fostered workers remained unchanged at 108 thousand. Based on the number of vacancies, corporate labour demand continued to decline in a wide range of sectors. The seasonally adjusted unemployment rate remained at 3.4 percent. Consequently, labour market tightness remained unchanged compared to the previous quarter, but remains at a high level.

Chart 2-29: Participation, employment and unemployment rate in the total economy



Note: Seasonally adjusted data.
Source: HCSO

Chart 2-30: Annual change in main employment indicators



Note: *Full-time equivalent employment, excluding cross-border workers. Seasonally adjusted data.
Source: MNB calculation based on HCSO data

In 2019 Q4, the participation rate of the 15–74 age group was 63 percent, while the proportion of active persons within the population aged 15–64 years amounted to 72.8 percent. **Based on seasonally adjusted data, the number of economically active persons rose** compared to the previous quarter (Chart 3-26).

The private sector contributed to a further increase in whole-economy employment, while public sector employment reflected a moderate annual decrease. Within the public sector, **the number of fostered workers remained unchanged at 108 thousand**, whereas the number of workers outside the public work scheme declined slightly.

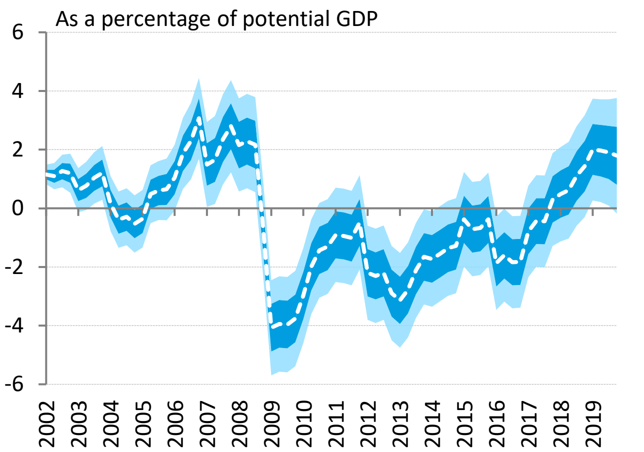
In the private sector, employment in manufacturing continued to fall, while the number of employees in the market services sector continued to rise compared to the same period of the previous year. The number of workers employed at sites abroad rose to 120 thousand. The full-time equivalent number of the employed in Hungary adjusted for the number of the hours worked grew somewhat slower than employment (Chart 3-27).

The number of the unemployed remained practically unchanged. **The seasonally adjusted unemployment rate remained unchanged at 3.4 percent.** The **labour market tightness** indicator, calculated from the rate of vacancies and unemployed persons, **was unchanged compared to the previous quarter, but remains at a high level**.

3.4 Cyclical position of the economy

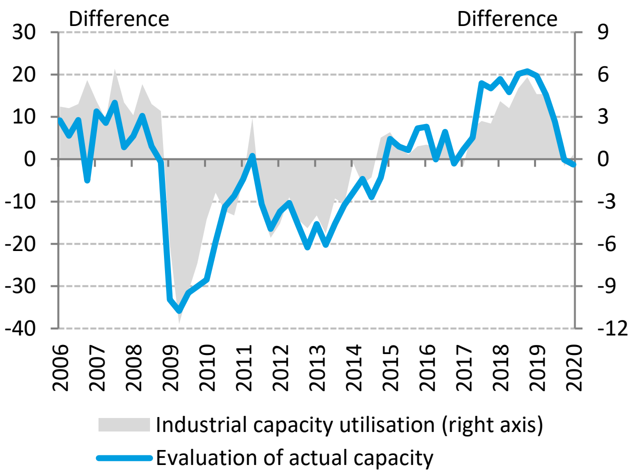
The output gap may have peaked in 2019 Q1, before gradually closing as a result of declining capacity utilisation, easing labour market tightness and persistently weak external demand. According to our estimate, GDP was slightly above its potential level in 2019 Q4. Economic policy can raise the rate of potential growth via specific structural measures aimed at improving competitiveness and increasing productivity while maintaining stability.

Chart 2-31: Uncertainty band of the output gap



Note: The blue areas show the estimation uncertainty band.
Source: MNB

Chart 2-32: Capacity utilisation and evaluation of actual capacity



Note: Deviation from historical average.
Source: ESI

According to our current estimate, the domestic output gap resided in a slightly positive range (Chart 3-28). Therefore, structural and competitiveness measures that expand supply, i.e. potential output, will be crucial in terms of sustainable convergence in the coming period. Our assessment of the cyclical position of the Hungarian economy remained unchanged compared to our estimate in the December Inflation Report.

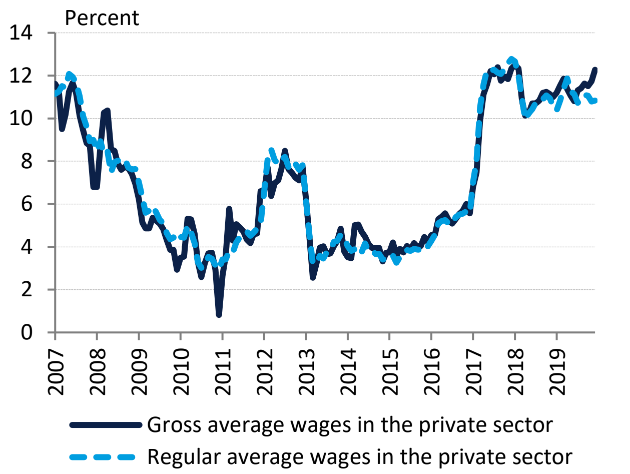
Based on questionnaire surveys, in the past quarters **corporate capacity utilisation declined to its historical average**, and industrial capacity utilisation as well as the tightness of the labour market have moderated since end-2018 (Chart 3-29). Following the dynamic expansion in employment in recent years, labour market tightness is now easing, but remains at a high level.

Productivity increased in the past period, although this was primarily attributable to supply factors. Nevertheless, over the medium term, the historically high investment rate, the announced large investment projects and the capacity expansion of the supplier network may also generate a positive feedback loop throughout **market services with higher value added** (infocommunication, finance, logistics, marketing).

3.5 Costs and inflation

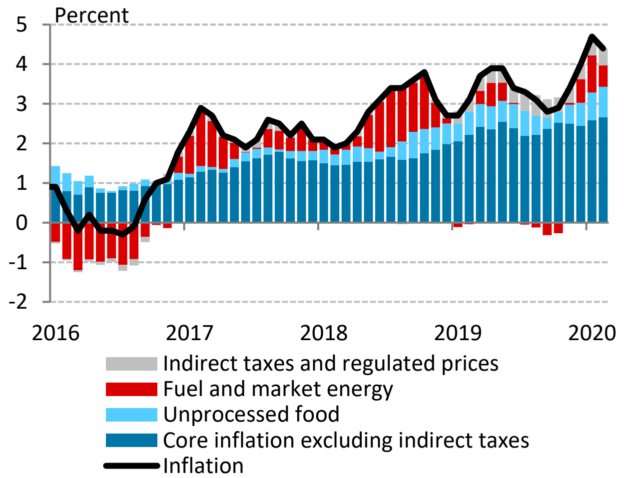
In 2019 Q4, gross average earnings in the private sector increased by 12.3 percent year on year. This double-digit wage growth exceeded the rise in administrative wages and mainly resulted from the tight labour market conditions determining the underlying trend. Inflation continued to increase until January, which was mainly caused by the rise in the volatile fuel and food price index. In February, however, inflation declined to 4.4 percent, driven by declining fuel prices, in line with a sharp fall in global oil prices, as well as by base effects. Overall, inflation has temporarily moved out of the central bank's tolerance band in line with the price dynamics of volatile items. Core inflation excluding indirect taxes rose slightly recently as a result of rising processed food prices, and stood at 3.8 percent in February. In the past months, the indicators capturing longer-term inflationary trends (the price index of demand sensitive products and the inflation of sticky-price products and services) remained practically unchanged.

Chart 2-33: Annual change in gross average wages in the private sector



Note: Quarterly moving averages.
Source: HCSO

Chart 2-34: Decomposition of inflation



Source: MNB calculation

3.5.1. Wages

In 2019 Q4, gross average earnings in the private sector increased by 12.3 percent year on year (Chart 3-30). In Q4, compared to the usual seasonality, regular average wages grew at a slower rate. The bonuses paid by companies at the end of the year exceeded the level observed in previous years. In addition to the historically tight labour market environment, which determines the underlying trend, and the 8-percent increase in the minimum wage and the guaranteed wage minimum as well as last year's restructuring of the cafeteria system also contributed to last year's double-digit wage dynamics. **At the same time, the rise in wage costs was moderated by the 2-percentage point reduction in the social contribution tax rate on 1 July.**

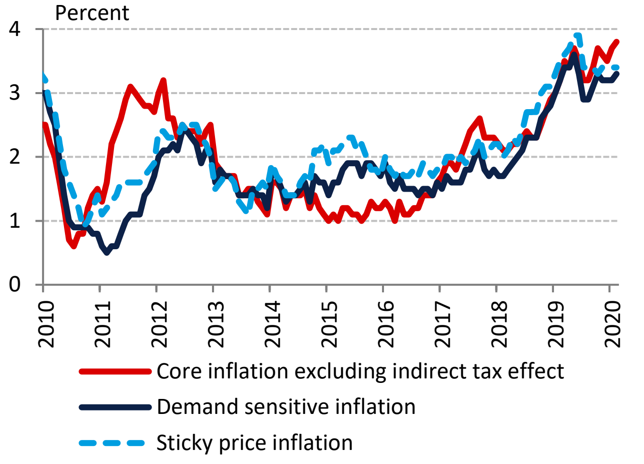
In the private sector, **wage growth accelerated** in the manufacturing and the market services sectors compared to the previous quarter. Wage outflows in sectors paying below-average wages remained higher than in sectors offering above-average wages. Data by headcount category indicate that the **double-digit wage growth continued both among large corporations and small and medium-sized enterprises.**

3.5.2. Producer prices

In 2019 Q4, agricultural producer prices rose in year-on-year terms at a rate similar to the previous quarter. The price rise is mainly attributable to changes in the prices of products of animal origin. Within the product range, domestic pork prices have increased significantly (more than 40 percent on average annually) in recent months due to the effects of swine fever. In addition to the products of animal origin, the prices of seasonal products also rose on a year-on-year basis, but the increase in this category was more subdued than in 2019 Q3. Cereal prices decreased in the last quarter of 2019 compared to the previous year.

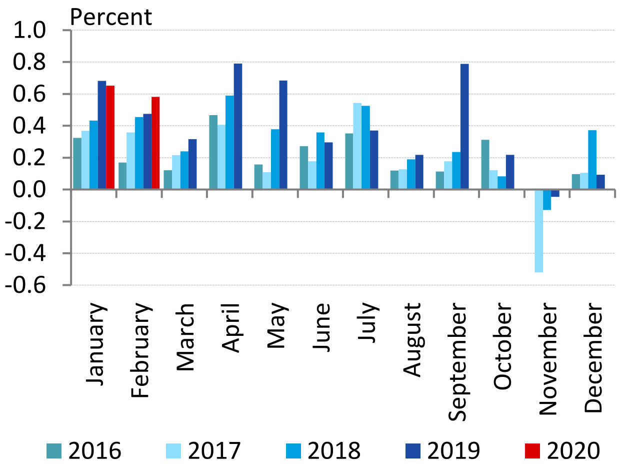
In the case of consumer goods, the rise in producer prices exceeded the historical average by January compared to a

Chart 2-35: Underlying inflation indicators



Source: MNB calculation based on HCSO data

Chart 2-36: Price change of market services



Note: Adjusted for indirect tax effects. Percentage change compared to last month.

Source: MNB calculation based on HCSO data

year earlier. Domestic sales prices in industry as a whole have risen at a rate lower than the historical average in recent months, despite a slight increase in producer prices in the energy-producing sectors following a negative price dynamics in the autumn.

3.5.3. Consumer prices

The domestic consumer price index has been in the central bank's tolerance band since 2017. In the last two months, it temporarily moved out of the band in line with the price dynamics of volatile items. Inflation increased mainly due to the rise in the fuel and food price index. The rise in fuel prices was attributable to the base effect and a sharp rise in global oil prices at the beginning of the year, while an increase in food prices was linked to pork, which became more expensive due to African swine fever, and processed products – meat products and milk. **In February, however, inflation declined to 4.4 percent, driven by declining fuel prices, in line with the sharp fall in global oil prices** (Chart 3-31).

Core inflation excluding indirect taxes has risen slightly recently as a result of higher processed food prices, and stood at 3.8 percent in February. Apart from this however, in the past months, **the indicators capturing longer-term inflationary trends** (the price index of demand sensitive products and the inflation of sticky-price products and services) **remained practically unchanged** (Chart 3-32).

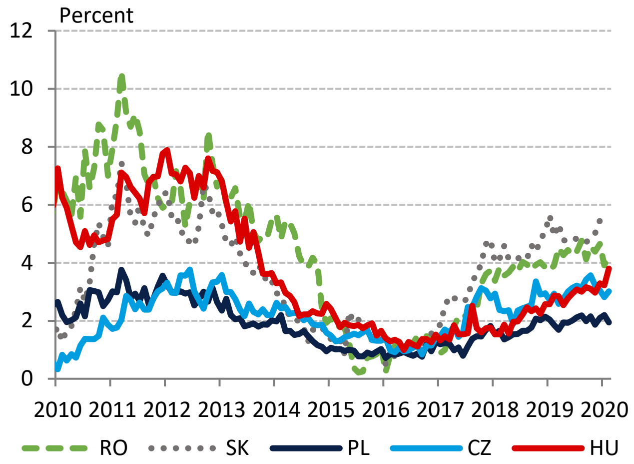
Annual inflation of industrial goods remained subdued in recent months, at below 1 percent, in line with the moderate external inflation environment. Within the product range, prices of both durable and non-durable goods remained broadly unchanged.

Market services inflation has stabilised at around 5 percent in recent months. Re-pricing at the beginning of the year, which determines the price dynamics of the product range throughout the year, reflected a price increase similar to that seen last year (Chart 3-33 and Box 3-2). The inflation of labour intensive and less labour intensive services has remained broadly unchanged in recent months.

Prices of alcohol and tobacco products rose, 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 excise duty on tobacco products, the pass-through was somewhat slower and smaller than earlier tax changes.

On the whole, price dynamics of around 7.5 percent were typical for food in the past months. The inflation of unprocessed food increased close to 11 percent, mainly due to the higher prices of seasonal vegetables and fruits as

Chart 2-37: Inflation expectations in the region



Source: MNB calculations based on European Commission data

well as pork. Processed food prices also increased, mainly due to higher prices of processed meat and dairy products.

Overall, relative to a year earlier, fuel prices have increased in recent months. The base effect of an earlier increase in fuel prices also contributed to the increase in the annual index of the product group until January. At the same time, the inflation of fuel prices slowed down in February from 13.5 percent in January to 7.7 percent as a result of a sharp drop in global oil prices.

Based on data of recent months, due to food prices, inflation has risen faster than the forecast in the December Inflation Report.

3.5.4. Inflation expectations

Over the past months, **households' inflation expectations have risen slightly, but remained subdued**. Households' inflation expectations in the countries of the region show a mixed picture. While, similar to Hungary, Slovakia has seen a rise in inflation expectations, they have remained broadly unchanged in the rest of the region in the past period (Chart 3-34).

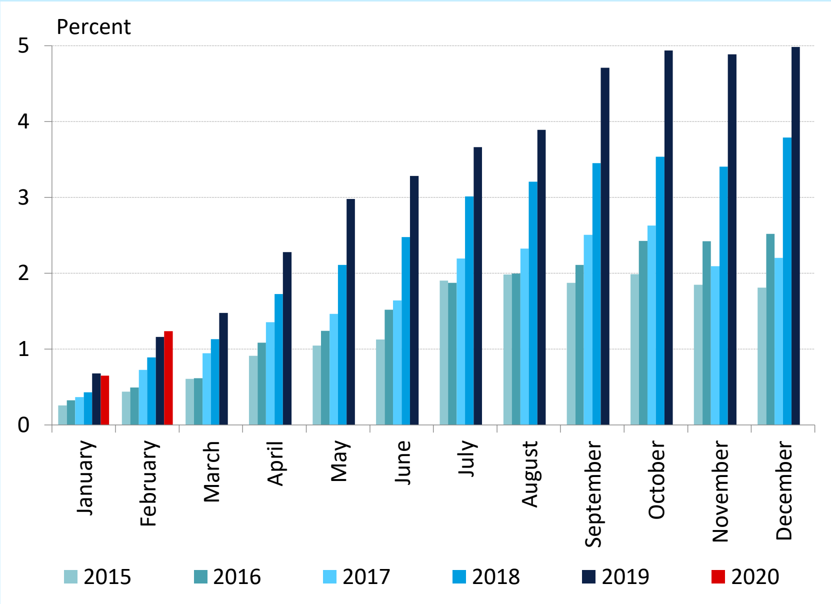
Box 2-2: Changes in re-pricing in the market services sector at the beginning of the year

Market services account for about one-third of core inflation excluding indirect taxes, which captures persistent inflationary trends well. **In the case of market services, the most important information on the price dynamics of a given year is the data of the first months of the year.** In general, higher (lower) January–February price increases are often followed by higher (lower) price dynamics throughout the year. Based on historical experience, about 30 percent of the price increases in this product group in any given year occur in the first quarter, and 70 to 80 percent in the first half of the year (Chart 3-35). In the second half of the year, based on the corporate pricing strategies, no significant changes in the prices of services materialise. Only individual factors can cause significant price increases (such as mobile telephone and internet price increases last September) or price reductions (such as mobile telephone and internet price reductions in November 2017).

The price change of market services depends on several factors: the evolution of costs, the profitability of businesses and the cyclical situation of the economy. Strong domestic demand increased the pricing leeway of companies. Additionally, the double-digit wage dynamics also contributed to the rise in the price dynamics of the product group.

In the first two months of this year, the prices of market services rose. Within the product group, from 1 January, the VAT on accommodation services fell from 18 to 5 percent, but the effect of this did not occur in the prices of services. **Excluding the effects of indirect tax changes, prices in the product group increased by a total of 1.2 percent in January and February, so the re-pricing of market services was basically the same as last year** (Chart 3-35).

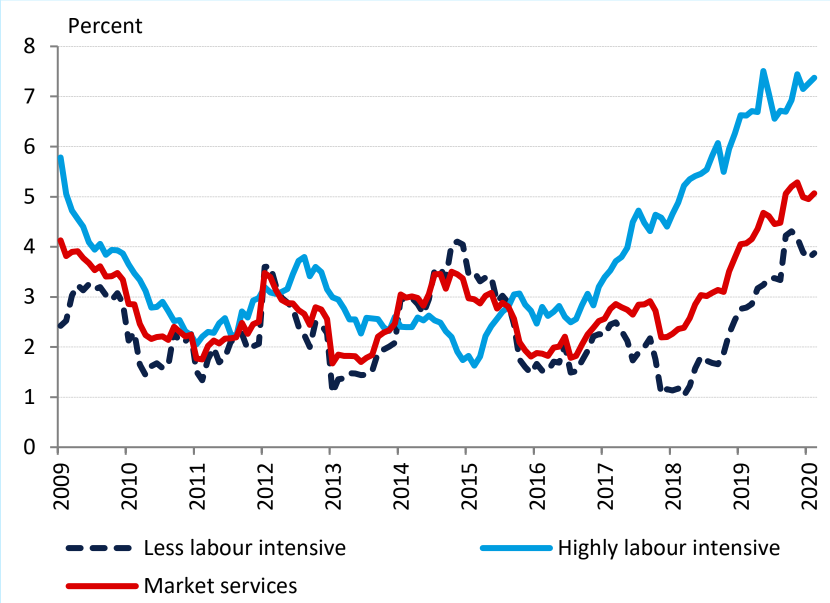
Chart 2-38: Inflation of market services compared to December of previous year



Note: Adjusted for indirect tax effects. Percentage change compared to December of previous year.
Source: MNB calculation based on HCSO data

However, the inflation of labour intensive and less labour intensive services has not changed significantly in the recent period (Chart 3-36).

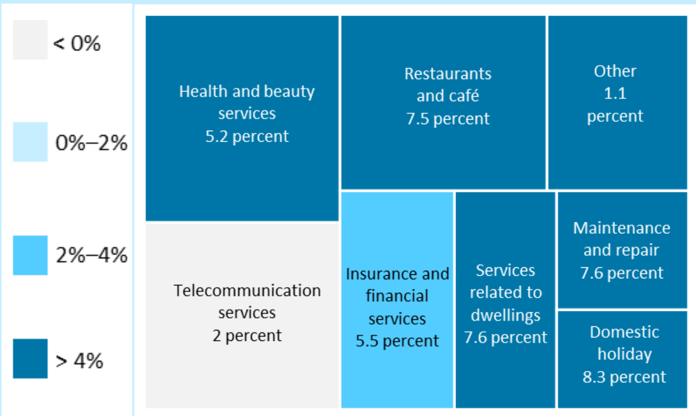
Chart 2-39: Inflation of market services



Note: Highly labour-intensive market services include accommodation, catering, education, healthcare and personal care services.
Source: MNB calculation based on HCSO data

Overall, the annual inflation of market services has not increased further in the past months and stabilised at around 5 percent. At the beginning of the year, in detail it can be stated that the price increases in a broad range of services were similar to those observed in early 2019. The most intense re-pricing took place in the case of accommodation services (8.3 percent). In addition, as in the previous year, the annual rate of change in labour-intensive services, such as restaurant services or maintenance and repair services, was still significant, at over 7 percent. On a year-on-year basis, housing costs have increased at an accelerated rate this year compared with the price dynamics seen at the beginning of last year (Chart 3-37).

Chart 2-40: Inflation of different market services in February 2020



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

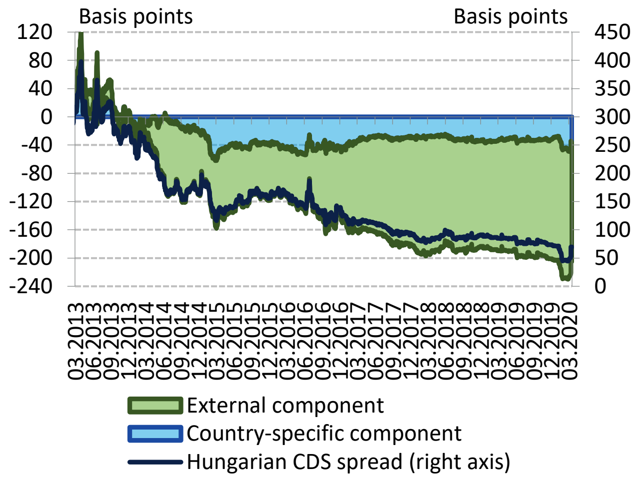
4 Financial markets and interest rates

4.1 Domestic financial market developments

In the past quarter, global market sentiment deteriorated as a result of concerns related to the economic effects of the coronavirus. The VIX index, a measure of stock market volatility, increased above 80 percent by mid-March from its 15 percent level at the beginning of the period, reflecting a steep rise in volatility. US long-term government bond yields have declined considerably since December, while compared to the end of last year, German and Japanese long-term yields have increased slightly as a result of a sharp rise at the end of the period. Spreads on emerging market bonds have risen significantly. Volatility has risen on the developed FX markets as well.

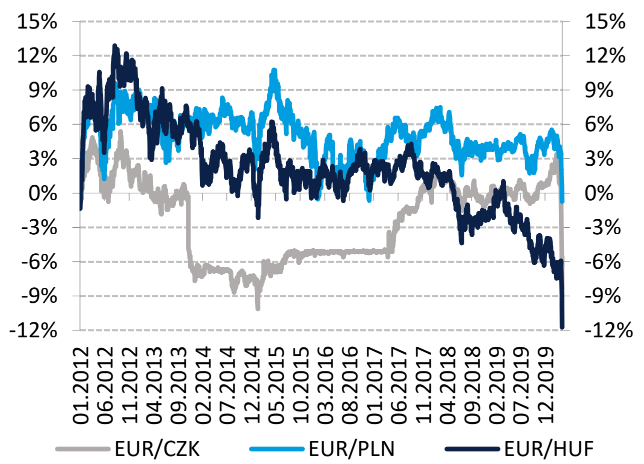
Government bond yields rose in the domestic market. The Hungarian credit risk indicator had initially declined, but then increased, and is thus currently around its mid-December level. The entire domestic interbank yield curve shifted upwards by some 30-40 basis points, and the 3-month BUBOR, which is a determinant in terms of monetary policy, also rose by 45 basis points. The forint depreciated against the euro, together with other currencies from the region.

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



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

Chart 4-2: Exchange rates in the region



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

4.1.1. Risk assessment of Hungary

Hungary's credit risk premium varied in the past quarter (Chart 4-1). In the first half of the period, a major, 20-basis point decline in the CDS spread was observed, with contributions from both international and country-specific factors. In the second half of the period, the domestic CDS spread increased to a similar degree, which was also attributable to international and country-specific factors. Thus, overall, the CDS spread remained unchanged and is currently at around 70 basis points.

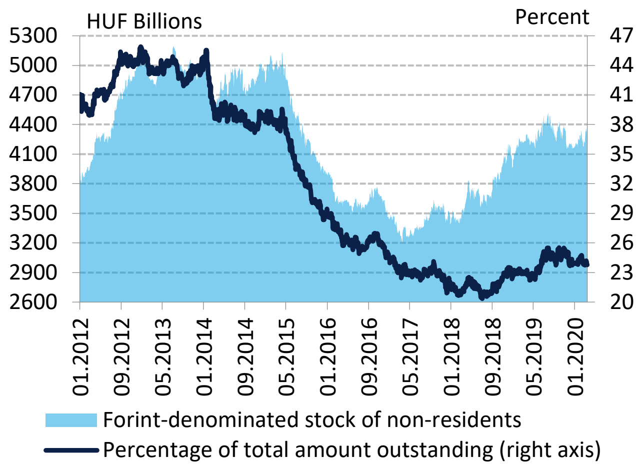
4.1.2. Developments in foreign exchange markets

The forint depreciated by some 7.5 percent against the euro, which was in line with regional developments. Of the currencies of the region, the Czech koruna, the Polish zloty and the Romanian leu weakened against the euro by 9.5 percent, 5.5 percent and 2 percent, respectively (Chart 4-2). In the first half of the period the exchange rate of the forint fluctuated between 330–332, but from mid-January, the Hungarian currency weakened to the level of 340. In mid-March, with the strengthening in global risk aversion, emerging currencies weakened, and thus the exchange rate of the forint against the euro also rose to above 355. The forint depreciated by 10 percent against the dollar, i.e. to a similar degree as the Polish zloty and the Czech koruna, while the Romanian leu weakened to a lesser extent (by 5 percent) against the US currency.

4.1.3. Government bond market and changes in yields

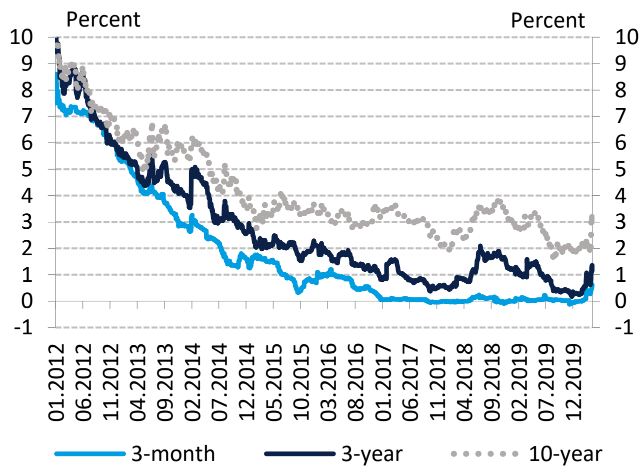
Non-residents' HUF-denominated government bond holdings increased in the past quarter (Chart 4-3). Following a practically continuous decline since 2015, non-residents' HUF-denominated government securities holdings first stabilised and then started to rise in early 2018. The rise stopped by mid-2019,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

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



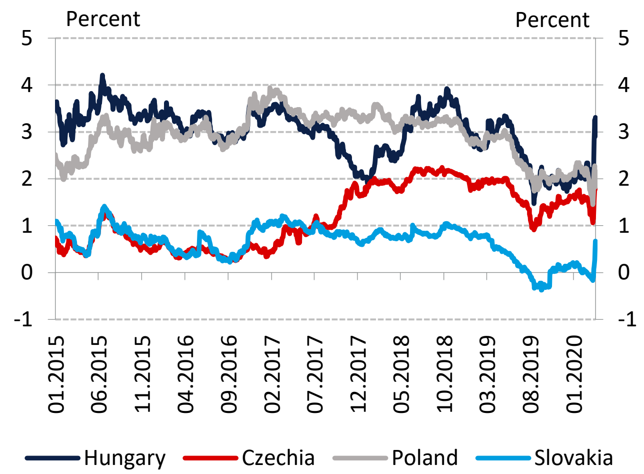
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

Chart 4-4: Yields of benchmark government securities



Source: Government Debt Management Agency (ÁKK)

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



Source: Bloomberg

started to decline gradually: consequently, non-residents' HUF-denominated government securities holdings dropped to below HUF 4,200 billion by the end of last year. However, in the period under review, non-residents' HUF-denominated government securities holdings rose, growing by some HUF 130 billion in the past three months. The ownership share within HUF-denominated government securities remained almost unchanged and is still around 24 percent.

Demand was mostly good in the primary market of government securities, and the Government Debt Management Agency (ÁKK) usually accepted more than the announced quantities. In the past quarter, average auction yields rose for all maturities, and thus at the end of the period the yield of the 3-month auction was at 0.62 percent, while that of the 10-year one amounted to 2.59 percent. In early March, volatility in international financial markets increased considerably, and thus demand was subdued at the domestic bond auctions as well. Therefore, the ÁKK did not raise funds from longer-term securities.

A rise in yields was observed over the entire government securities market yield curve (Chart 4-4). The short section of the yield curve was characterised by gradual rise for the entire period, while yields at longer maturities rose in the second half of the period. The upward shift in the long section of the domestic yield curve may have been attributable to the unfavourable global investor sentiment. Compared to mid-December, the 10-year benchmark yield rose by 140 basis points overall. By the end of the period, the 3-month BUBOR, which is a determinant in terms of monetary policy, increased by 45 basis points to 0.61 percent. Yields rose in the case of longer interbank transactions as well by some 50–60 basis points: 5-year and 10-year interbank yields are around 1 percent and 1.7 percent, respectively.

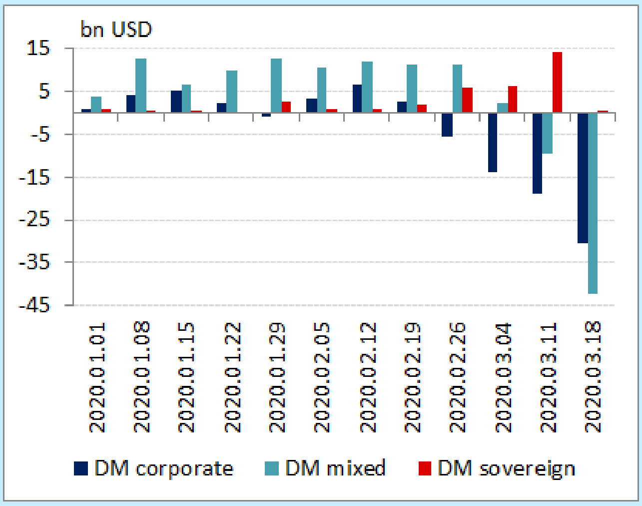
Long-term reference yields in the region increased during the period (Chart 4-5). From 1.82 percent in mid-December, the 10-year forint yield increased to 3.2 percent. The Slovak long-term yield was up 50 basis points, while Polish and Czech long-term yields rose to a lesser extent, i.e. by 16 basis points each.

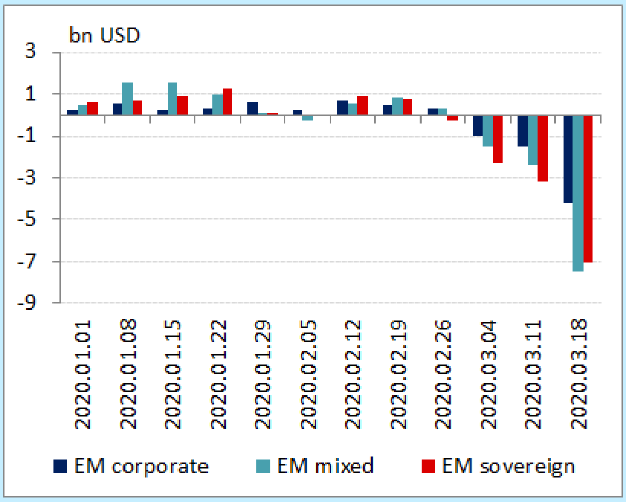
Box 4-1: Both emerging and developed bond markets registered major capital outflows as a result of the pandemic

In March 2020, international financial market turbulence generated significant movements in bond market portfolio flows. Following the considerable bond market inflow observed in January and February, **investors withdrew almost USD 25 billion from the developed bond markets in the first two weeks of March, followed by a record outflow of USD 85 billion in the third week, while emerging market bond funds registered outflows of USD 33 billion** according to the EPFR data. The March outflow amounted to 2 percent of assets under management in the case of the developed markets and nearly 5 percent in the case of emerging bond funds. **In the emerging European region, the outflow was slightly more moderate as a percentage of assets than in Latin America or the Middle East.** Investors' decisions were driven by risk aversion both in the developed and emerging markets; however, as regards the types of the individual investment funds, the picture is more varied.

During times of turbulence, investors typically invest capital in developed bond funds, which may be regarded as safe-haven assets compared to more volatile equity markets or emerging market assets. **However, in March even developed market bond funds lost capital, and only sovereign funds, i.e. those investing in government bonds, were able to attract inflows, although by the third week of March, incoming capital to these funds decreased to a minimal level.** Investors withdrew funds from almost all other asset classes (funds investing in corporate bonds, high-yield bonds, municipal bonds, mortgage-backed and other bonds). The negative impact was exacerbated by the fall in oil prices and by the collapse of tourism and transport, which entailed a fall in the bond prices of the affected industries. Within the developed regions, the North American and the developed European region suffered the largest capital withdrawal in nominal terms, while as a percentage of assets the latter fared worse, **i.e. the developed European bond funds lost the larger part of their capital, which was accompanied by a surge in the bond yields of these countries, particularly of the periphery countries**. More than USD 20 billion was withdrawn from developed European institutional investment funds in March, while European retail investor funds lost USD 6.5 billion. Of the developed bond funds, **US government bond funds registered outstanding inflows**, but only those **that hold short-term government bonds** (USD 25 billion), while investment funds investing in long-term bonds faced outflows. On the **emerging bond markets**, capital was withdrawn amounting to 4–5 percent of asset under management both from the corporate and sovereign bond funds within the institutional investment funds in the week ending by 18 March, while corporate retail funds suffered capital outflows of 9 percent and sovereign retail funds were hit by outflows of 2 percent.

Chart 4-6: Capital flows of developed and emerging market corporate and sovereign bond funds in 2020



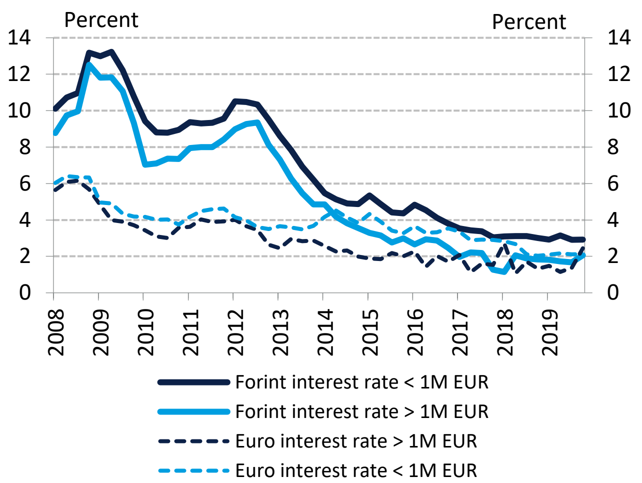


Source: EPFR

4.2 Credit conditions of the financial intermediary system

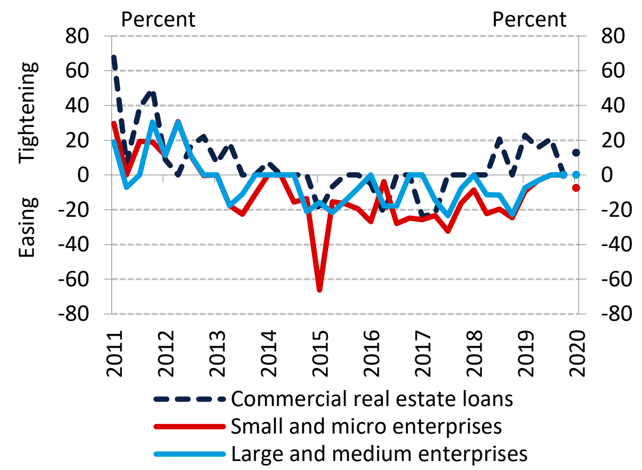
In 2019 Q4, both corporate and household credit conditions remained unchanged. However, looking ahead to the next half year, some banks are planning to tighten conditions on commercial real estate and personal loans. In view of a sectoral composition effect, the average financing costs of corporate EUR loans increased considerably during the quarter. In the case of housing loans, the average level of the APR declined in all interest rate fixation categories, and interest rates on 70 percent of disbursements are fixed for at least 10 years or until maturity. During the quarter, a decline in the real interest rate level was observed, which is explained by an increase in inflation expectations.

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 the corporate sub-segments



Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for Q4 of 2019 and Q1 of 2020.
Source: MNB, based on banks' responses

4.2.1. Corporate credit conditions

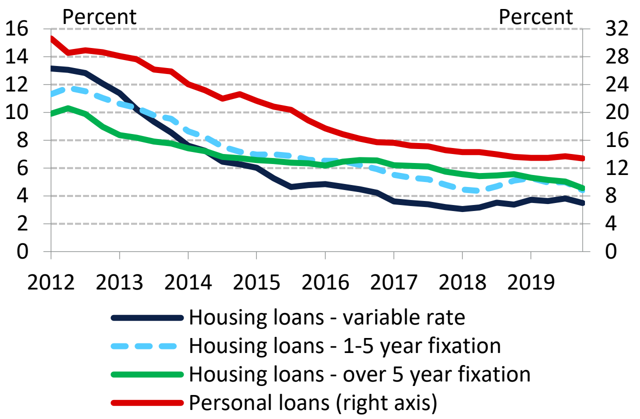
Financing costs of high-amount EUR loans increased. The smoothed average interest rate on new corporate HUF loans – excluding money market transactions – remained unchanged in the case of low-amount loans, while in the case of high-amount HUF loans it rose by 0.4 percentage point compared to the previous quarter. As a result, the average interest rate on HUF loans rose to 2.3 percent by December. A similar trend was observed for EUR loans, i.e. no change in the interest rate on low-amount EUR loans and a significant, 1.1-percentage point rise for high-amount loans. Accordingly, by the end of the quarter, the average financing cost of EUR loans increased to 2.4 percent, exceeding that of HUF loans (Chart 4-7). The rise in the interest rate level of high-amount loans is primarily attributable to contracts concluded in EUR related to the real estate sector, which is considered riskier. Developments in both HUF and EUR interest rates are attributable to changes in interest rate spreads.

Credit conditions remained unchanged in all company size categories. On the whole, the banks participating in the Lending Survey did not change conditions on companies' access to loans in 2019 Q4 (Chart 4-8). Nevertheless, price conditions were tightened in the case of large and medium-sized enterprises, which may continue in the next half year as well. Further tightening took place in the standards of commercial real estate loans, primarily in the case of housing projects. Nearly half of the responding institutions indicated the risk of the evolution of a possible real estate price bubble and fewer mentioned the changes in the capital position as the factor behind the tightening.

4.2.2. Household credit conditions

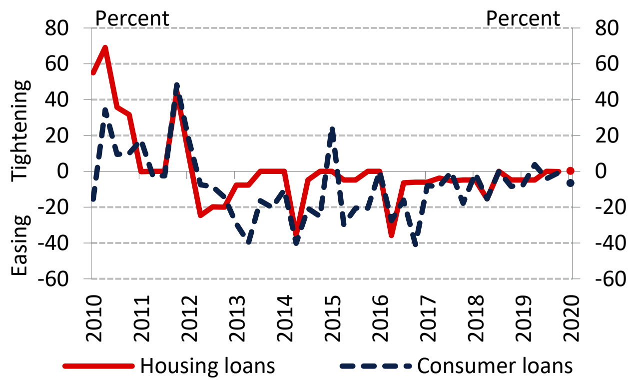
Interest rates on housing loans declined during the quarter. The average APR on housing loans declined in every interest rate fixation category in 2019 Q4, as the average APR fell by 0.6 percentage point for housing loans fixed for 1–5 years and by 0.5 percentage point for loans fixed for more than 5 years (Chart 4-8). The reason for this development was that the rise in longer-term costs of funds (relevant IRSs) was offset by the decline in spreads. 70 percent of the housing loan volume concluded during

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



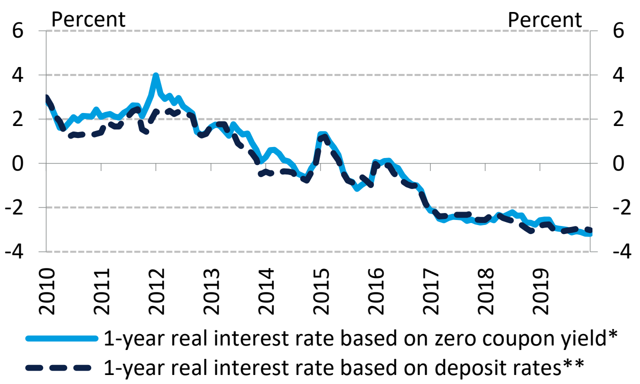
Note: Quarterly average of lending rates on newly disbursed loans. Source: MNB

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 Q4 of 2019 and Q1 of 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

the quarter is fixed for at least 10 years or until the end of the term. At the same time, the ratio of loans with interest rates variable within a year, which are exposed to the highest interest rate risk, sank to below 1 percent. The average APR on personal loans decreased by 0.4 percentage point to 13.3 percent by December. At end-2019, nearly 37 percent of prenatal baby support loans were subject to repayment moratorium; accordingly, these loans are interest-free until the end of the term.

Conditions on housing and consumer loans remained unchanged. In 2019 Q4, based on banks' responses to the Lending Survey, conditions on housing loans remained unchanged (Chart 4-10). At the same time, in net terms 40 percent of the surveyed banks reduced spreads to improve their competitiveness. Looking ahead to the next half year, they still do not plan to change their current housing loan conditions. The quarter under review was characterised by unchanged credit conditions in the case of consumer loans as well. Looking ahead, however, a net 24 percent of banks are already planning tightening as a result of a decline in risk tolerance.

4.2.3. Changes in real interest rates

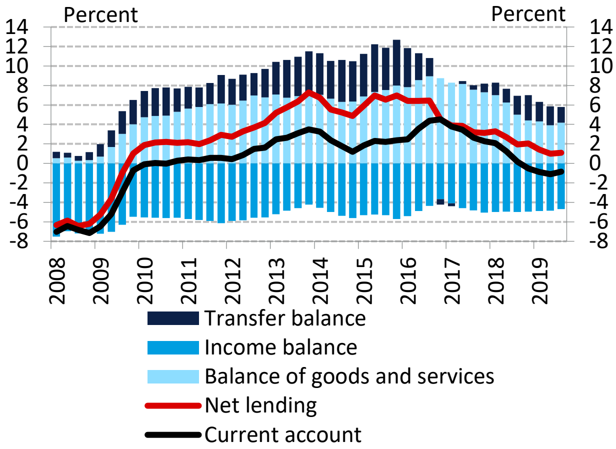
Real interest rates declined during the quarter. The real interest rate level reduced by inflation expectations fell by 0.1 percentage point, estimated on the basis of both government securities market yields and deposit rates. As a result, by the end of the quarter the former and the latter reached levels of -3.2 percent and -3 percent, respectively (Chart 4-11). The fall in the real interest rate level is explained by an increase in inflation expectations.

5 Balance position of the economy

5.1 External balance and financing

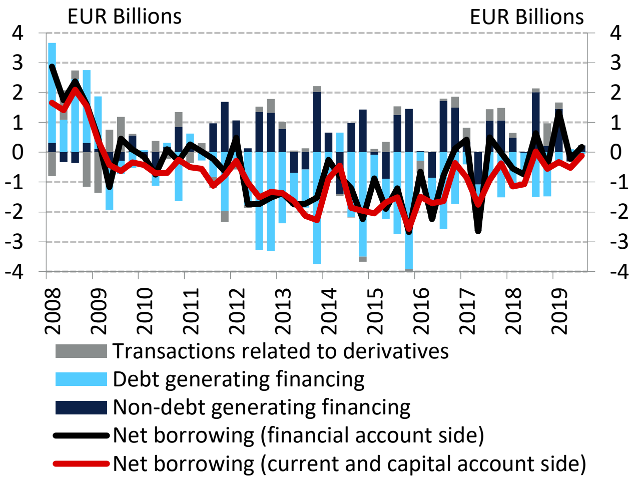
The economy's net lending increased to 1.1 percent of GDP in 2019 Q3, while the current account deficit fell to 0.8 percent of GDP. The rise is due to the increase in the goods balance, which was mainly supported by stronger export growth compared to imports, and favourable terms of trade. The balance of services remains stable at a high level. The impact of the higher goods balance was partially offset by a slight decline in the surplus on the transfer balance in the third quarter, due to lower utilisation of EU transfers. On the financing side, net FDI inflows and the decrease in external debt continued: the net external debt-to-GDP ratio fell to 8.4 percent. According to preliminary data, the net lending of the economy and the current account balance continued to rise in the last quarter of 2019, facilitating a continued reduction in net external debt.

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



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

Chart 5-2: Structure of net lending



Note: The net lending calculated using the bottom-up method corresponds to the total of net lending and the BOP balance of statistical errors and omissions.
Source: MNB

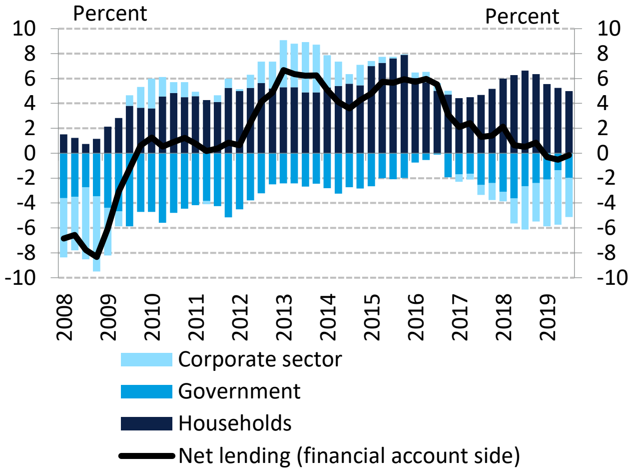
5.1.1. Developments in Hungary's external balance position

In 2019 Q3, the net lending of the economy rose to 1.1 percent of GDP, while the current account deficit fell to 0.8 percent of GDP (Chart 5-1). This represents a significant change relative to the decline seen in the external balance since 2016. The increase in the external net lending was mainly due to the expansion of the foreign trade balance, and in particular that of the goods balance. Stronger net exports was supported by both faster growth in exports than imports and favourable developments in the terms of trade. Growth in industrial production also contributed to the acceleration of exports. The balance of services remains stable at a high level. However, the impact of the increase in the goods balance was partially offset by a slight decline in the surplus on the transfer balance in the third quarter, due to lower utilisation of EU transfers. The income balance continued to improve, with net expenses related to equity income decreasing. Based on the preliminary, partly estimated monthly balance of payments and external trade data, external net lending continued to rise at the end of 2019, mainly due to an increase in EU transfers. Stronger use of current transfers also increased the current account balance for four quarters.

5.1.2. Developments in financing

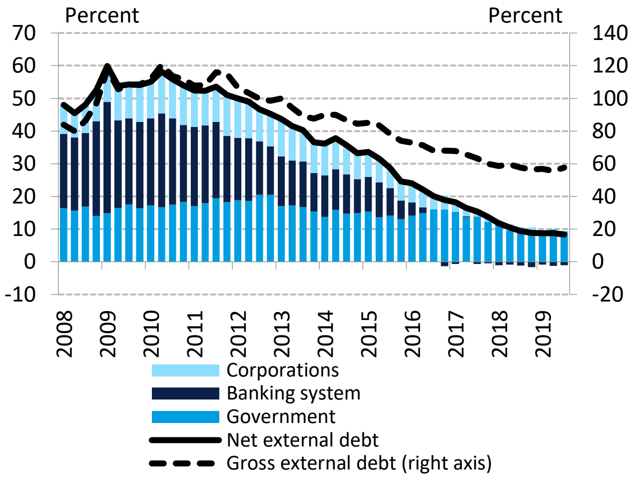
FDI inflows continued in Q3 and net external debt moderated slightly (Chart 5-2). FDI-type financing increased somewhat in the third quarter after a decline in second-quarter dividend payments. Debt-generating financing moderated slightly, following a modest increase in the previous quarter, which can be attributed to the declining net external debt of the general government and, within that, rising foreign exchange reserves. In contrast, the private sector's net external debt increased during the quarter, reflecting banks' rising net external debt. According to monthly financing data, the country's external

Chart 5-3: Decomposition of net lending by sectors



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

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



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

debt continued to decline in 2019 Q4, while FDI funds continued to flow in.

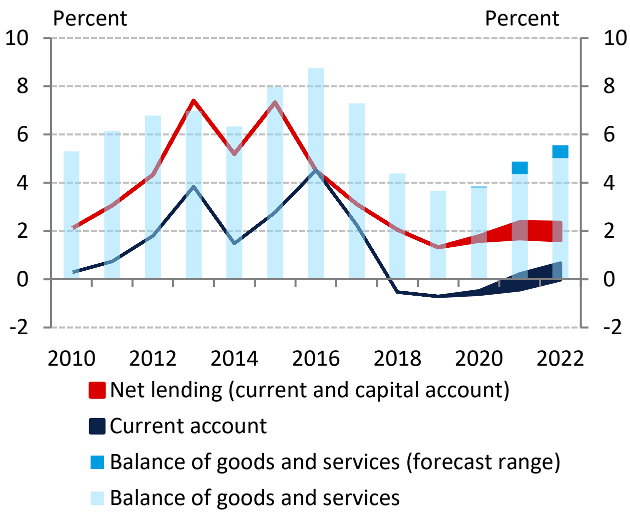
Based on savings in the sectors, improvement in the external position of the Hungarian economy was associated with the private sector (Chart 5-3). The improved private sector position was primarily due to the decreasing financing needs of companies. Households' net financial savings remained high, at around 5 percent of GDP, which was just enough to cover the financing needs of the government and companies on an annual basis. The government's four-quarter financing needs remained subdued, though they increased slightly during the fourth quarter, mainly due to the family protection measures. According to the preliminary financial accounts data, households' net financial savings was high, above 5 percent of GDP in the fourth quarter. The financing needs of the general government stabilised around the favourable level seen in the previous quarter, while corporate financing needs are likely to have increased.

Continued growth in external assets further reduced the country's net external debt to 8.4 percent of GDP (Chart 5-4). In addition to a weak outflow of debt-generating funds, the decline in the indicator was supported by the expansion of nominal GDP, while the revaluation of stocks as a result of falling yields increased the indicator to a moderate degree. Gross external debt stood at 57.7 percent of GDP at the end of the third quarter. The modest increase was linked to the net borrowing of the banking sector and the revaluation of general government gross external debt. Based on preliminary monthly data, the decline in net external debt due to transactions continued in the last quarter of 2019.

5.2 Forecast for Hungary's net lending position

Hungary's net lending will remain stable over the entire forecast horizon, while the current account balance will rise gradually. With a lower growth path, the current account of Hungary will rise more rapidly and show a surplus already in 2021, while in the case of a higher growth path the same will be reached in 2022. The expected growth in net exports is also supported by an improvement in the terms of trade in line with the oil price changes. These effects, however, may be dampened by an expected deterioration in external demand. The country's net lending will be stable at around 2 percent of GDP over the entire forecast horizon, as the effect of the higher trade balance will be offset by a decline in EU transfer absorption, mainly affecting the capital account. Looking at the savings developments of sectors, the rise in net lending is partly attributable to the decreasing deficit of the state, also supported by the declining borrowing requirement of the corporate sector on a lower growth path. Meanwhile, households' net financial savings will remain high over the entire forecast horizon, stabilising above 5 percent of GDP. As a result of a still favourable external position and sustained FDI inflows, the decline in debt ratios will continue.

Chart 5-5: Evolution of net lending

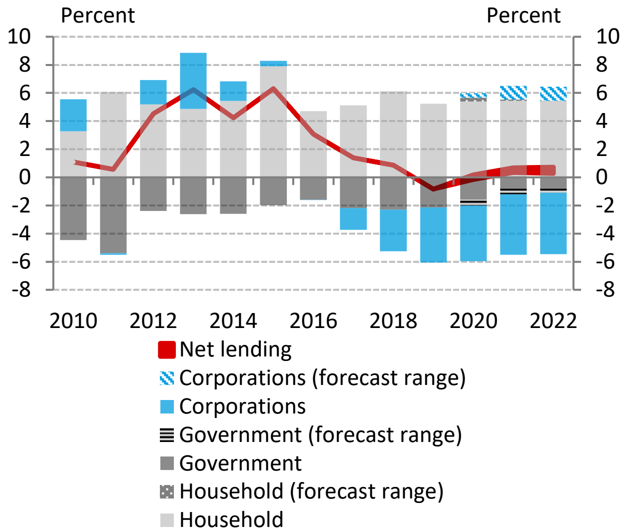


Note: As a percentage of GDP.
Source: MNB

In the current account balance and the country's net lending a slight increase is expected, which may even be greater if the growth path is lower (Chart 5-5). In 2019, there was a decline in the current account balance mainly as a result of a decrease in the goods balance due to the high level of investment. In the coming years, however, the balance will start to increase, in parallel with a rise in the trade surplus. In addition to the improvement in the terms of trade due to the drop in oil prices, the rise of the country's export share, and the postponement of language learning camps abroad also points to a higher balance. Nevertheless, the uncertainty of our forecast is shown in a band between two paths in the external balance indicators as well. Namely, due partly to lower domestic demand, net exports may increase faster in the case of the lower growth path. In addition, changes in the profit balance will also have a modest impact on the current account balance: while with the higher growth path we assume a path similar to our previous forecast, in the case of the lower growth path, in line with the slower expansion in exports, corporate income may also be lower, and thus this item also results in a higher current account balance and net lending. Overall, the current account balance may turn into surplus by the end of the forecast period if growth is higher, or in 2021 already, if growth is lower, while net lending will permanently stabilise at around 2 percent of GDP.

Net lending calculated from the side of financial items will also improve over the forecast horizon, with a possible contribution mainly from the declining general government deficit (Chart 5-6). A reduction of government expenditures (investment, material expenditures, financial transfers) as well as rising tax revenues in line with the economic expansion contribute to the decline in the general government deficit. At the same time, with a lower growth path the government deficit may also be higher. The significant borrowing needs of the corporate sector

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

will continue in the coming years as well. However, with the lower growth path the financing needs may decline due to lower investment dynamics. As a result of an expansion in consumption in line with the growth, households' net financial savings will stabilise at around 5 percent of GDP over the forecast horizon, according to both scenarios. In the coming years, in line with the positive net lending and continued FDI inflows, the external debt indicators will decline further.

5.3 Fiscal developments

Based on preliminary financial account data, the budget deficit amounted to 2.1 percent of GDP in 2019, exceeding the appropriation, but representing a decline compared to 2018. According to our forecast, in 2020 the budget deficit will decline to a much lesser extent than previously expected, in view of the economic environment, which is becoming less favourable due to the coronavirus (COVID-19) pandemic, the necessary measures taken to mitigate the economic impact of the epidemic and the higher expenditures – with the macroeconomic path presented in the March Inflation Report and without taking further measures into account. In the current extraordinary situation it is both necessary to address negative shocks caused by the epidemic in several sectors, and to prepare the recovery of the economy, the financing of which has been provided by the disciplined economic policies of previous years, which have significantly reduced external vulnerability. According to our expectation, as a result of the economic slowdown caused by the coronavirus pandemic, the Country Protection Fund, that ensures a significant reserve for this year, may be completely used up, and thus the deficit may be between 1.6–2.0 percent, depending on the growth rate of the economy. According to our forecast prepared with the usual technical assumptions, the deficit could be around 0.8–1.2 percent in 2021 and 2022. The government debt-to-GDP ratio is expected to decline every year, although the rate of decline will temporarily slow down in 2020.

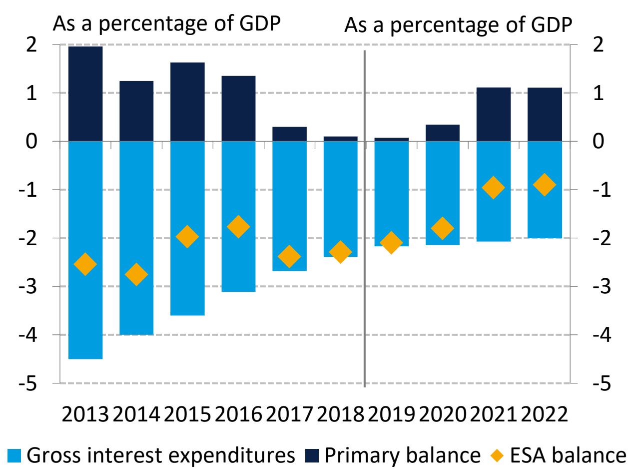
Table 5-1: General government balance indicators

	2019	2020	2021	2022
ESA balance	-2.1	(-2.0)–(-1.6)	(-1.2)–(-0.8)	(-1.1)–(-0.8)
Primary ESA balance	0.1	0.3	1.1	1.1
Fiscal impulse (point estimate)*	-0.1	-0.2	-0.8	-0.1

Note: As a percentage of GDP. Unlike our previous practice, we assume that the Country Protection Fund will be used up completely. The forecast bands reflect the uncertainty regarding the economy and therefore the tax bases. Change in the augmented (SNA) primary balance. *The point estimate shows the midpoint of the forecast bands.

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.

Source: HCSO, MNB

5.3.1. Main balance indicators and the fiscal impulse

Based on the macroeconomic path used in the Report and the information available to date, the significant decline in the deficit expected for 2020 may be postponed to 2021 as a result of the extraordinary epidemic situation (Table 5-1). In view of the worsening economic circumstances, revenues will decline significantly, while expenditures will increase. It is true for the entire forecast horizon that if the Country Protection Fund, which was created to handle emergencies, was spent completely, the deficit would exceed the target that was set earlier, but it would still remain moderate and at the same time, it would reduce the negative impulse (Chart 5-7).

5.3.2. Budget balance in 2019

Based on preliminary financial accounts, in 2019 the accrual-based deficit of the budget was 2.1 percent, which exceeded the 1.8 percent deficit target, but represents a decline compared to 2018. The deficit was higher compared to the December forecast as well, which is primarily the result of higher expenditures of the central budget at the end of the year, which was partly offset by rapidly rising tax revenues as well as a higher-than-expected balance of local governments and companies classified in the government sector.

5.3.3. Budget balance in 2020

The Budget Act for 2020 set 1 percent of GDP as the accrual-based deficit target, which is much lower than the 2.1 percent deficit of 2019. Nevertheless, our forecast suggests that as a result of the less favourable economic environment due to the coronavirus pandemic, measures taken to mitigate the economic impact of the outbreak, and the wage measures announced since December (for those in armed service, teachers, employees of government offices) as well as the higher expenditures

Table 5-2: Decomposition of the change in the 2020 ESA balance forecast (compared to the previous Inflation Report)

	Economic developments	Measure and other
I. Central government revenues	**-0.2**	**-0.2**
Taxes on consumption and payments by economic organisations	-0.1	
Taxes on labour	-0.1	-0.2
II. Central government expenditures	**0**	**-0.3**
Expenditures of budgetary organisations		-0.2
Healthcare expenditures		-0.1
Total (I.+II.)	**-0.2**	**-0.5**

Note: As a percentage of GDP. The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively. The sum of partial data may differ from the aggregated values due to rounding.
Source: MNB

Table 5-3: Differences between our forecast and the appropriations set out in the 2020 Budget Act

	Difference from appropriation
I. Central government revenues	**-0.6**
Consumption taxes	-0.4
Taxes on labour	-0.3
II. Central government expenditures	**-0.2**
Housing subsidies	0.1
Expenditures by budgetary organisations and EU funds co-financing	-0.2
Healthcare expenditures	-0.1
Total (I.+II.)	**-0.8**

Note: As a percentage of GDP. The positive and negative prefixes indicate deficit-reducing and deficit-increasing effects, respectively. For expenditure, the differences do not include the additional expenditure covered by the reserves. The sum of partial data may differ from the aggregated values due to rounding.
Source: MNB

expected on the basis of last year's base and the facts of the first two months, the deficit may be between 1.6 and 2.0 percent, depending on economic growth. The forecast presumes the complete use of the Country Protection Fund in order to offset the negative impacts affecting the economy. Our projection for the deficit represents a major rise compared to our December expectation, but at the same time it shows a slight decline compared to the 2.1 percent deficit in 2019 (Table 5-2).

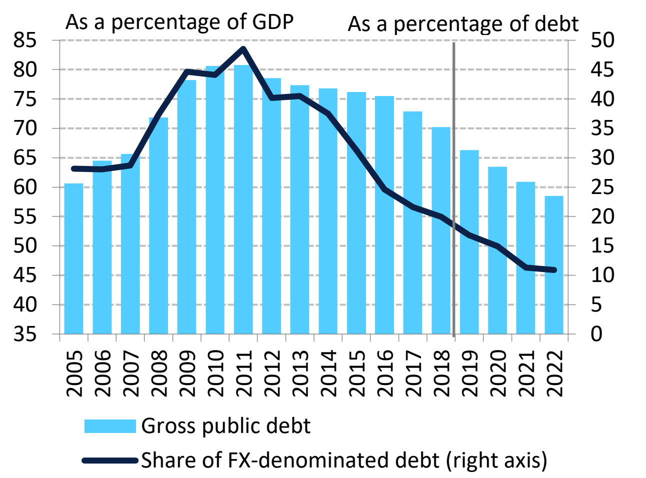
On 18 March 2020, the Government announced measures to mitigate the economic impact of the coronavirus outbreak. These include a moratorium on all loan repayments, capping consumer loan interest rates, the protection of lease contracts in sectors that are particularly affected, a four-month suspension of employer SSC (social security contribution) and a reduction in employee SSC. In addition, until June 30, taxi drivers are exempted to pay the lump sum tax of small enterprises (KATA), and companies involved are exempt from Tourism Development Contributions and labour laws are more flexible to support home office and protection of health. One of the most important economic policy objectives in this epidemic situation is ensuring the protection of jobs. Based on our projections, the static budgetary impact of the measures that were already taken could amount to 0.2 percent of GDP.

According to our forecast, depending on the GDP, the budget deficit in 2020 may be between 1.6–2.0 percent, if the Country Protection Fund is used up completely. In our projection, we still expect lower tax revenues compared to the appropriation, as in the case of the main tax bases we foresee lower growth than stated in the Budget Act. In addition, in the case of budgetary organisations' expenditures as well as medical and preventive expenditures we expect a higher deficit effect than the appropriation (Table 5-3). The differences are only slightly offset by the co-financing related to EU expenditures and the expected lower level of home-building subsidies.

5.3.4. Balances in 2021 and 2022

In the absence of statutory appropriations, technical forecasts were prepared for 2021 and 2022, which indicate a major decline in the deficit. In line with the assumptions in the macroeconomic path – assuming, among other things, the short-term impact of the economic shock caused by the coronavirus epidemic – tax revenues are expected to grow faster in 2021. However, in 2021, in view of the extraordinary situation, the Country Protection Fund, so far, is expected to be used up entirely

Chart 5-8: Gross public debt forecast – calculated with unchanged (end-of-2019) exchange rate over the forecast horizon



Note: Assuming that the budget deficit and the economic growth will meet the forecast band's midpoints in the forthcoming years.
Source: MNB

once again. As of 2021, the increase in tax revenues as a result of favourable macroeconomic developments and the continuation of the previous declining trend of the decrease in government expenditures (investment, material expenditures and financial transfers) as a proportion of GDP contribute to the decline in the deficit of the government sector.

5.3.5. Risks surrounding the baseline scenario

Developments in the coronavirus pandemic may have a major impact on the Hungarian budget. In addition to the direct expenditures on health care and offsetting the economic shock, sectoral measures aiming at the stimulation of the economy may also add to the deficit, while the economic slowdown will reduce tax revenues. Other measures may also be needed in addition to those already known at the cut-off date for this Report, but these may also be provided by the reallocation of budget items.

Modification of the local business tax, that came up earlier at the meeting of the Competitiveness Council (deductibility of depreciation and R&D from the tax base and abolition of top-up with effect from 2021), exemption from PIT for mothers of 3, and the increase in CSED to 100% of the wage have not been included in our forecast for the time being in the absence of relevant legal amendments.

Compared to previous years, although to a lesser extent, our forecast is still considerably affected by the uncertainty related to the utilisation of European Union funds, the structure of payments and the transfers received from the EU. The absorption of transfers affects the accrual-based balance and real economy developments, while the advance subsidies and their receipt influence the changes in government debt. In 2020, the real economy effect of disbursements, i.e. the effective utilisation of EU funds, is expected to decline, which will contribute to a decrease in public investment. According to our expectations, absorption of transfers from the 2021-2027 EU budget may commence in 2022, at the earliest.

5.3.6. Expected developments in public debt

According to preliminary data, at end-2019 gross government debt-to-GDP stood at 66.4 percent (Chart 5-8). There was a major, 3.8-percentage point decrease in the debt ratio compared to the figure of 70.2 percent observed at end-2018. In addition to the robust economic growth, low net financing need also contributed to the decline.

According to our forecast, assuming an end-2019, constant forint exchange rate, the gross government debt-to-GDP ratio may decline to between 65 and 66 percent by end-2020, and thus the debt rule of the Fundamental Law is expected to be complied with (Chart 5-8). The deceleration of economic growth and the higher-than-expected deficit will result in a moderate decline in government debt in 2020. In 2021, however, economic growth may accelerate again, and the expected deficit will decrease and thus the rate of decline in debt may be higher again. The changing EUR/HUF exchange rate affects the debt ratio even in the context of falling FX debt, and thus a ten-unit change in the EUR/HUF exchange rate modifies the debt-to-GDP ratio by 0.3 percentage point.

6 Special topic

6.1 Assessment of central bank projections for 2019

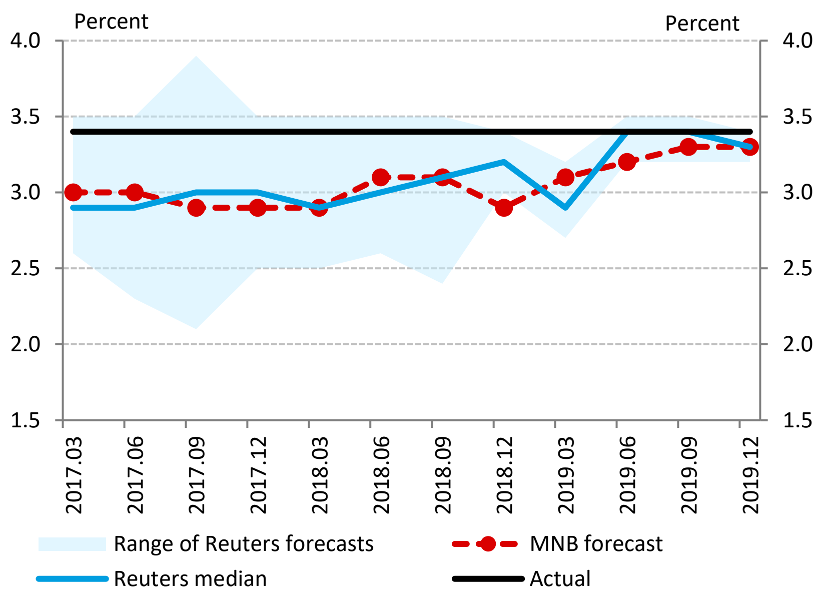
The purpose of this analysis is to present the accuracy of our forecasts for the main macroeconomic variables in the previous calendar year. In addition, we look at how the central bank's forecasting performance compares with market analysts. We first made a forecast for the 2019 variables in March 2017. Overall, 2019 inflation was slightly higher, while economic growth and private sector wage and headcount growth were significantly higher than projected.

6.1.1. Inflation

Average annual inflation was 3.4 percent in 2019. Our forecast was predicated on the favourable internal developments and by the subdued external inflationary environment. Regarding internal developments, we projected that strong domestic demand would increase companies' pricing leeway, which was likely to lead to an increase in price dynamics. However, it was thought that the increase in costs and the resulting inflationary effects would be offset by a decrease in social security contributions imposed on companies. With regard to the impact of the external inflationary environment, according to our projections we expected that the inflationary effects from the euro area would remain subdued, with deteriorating external activity from the second half of the year restraining the dynamics of price increases.

Overall, for the past two years, we have projected price dynamics close to the central bank's 3-percent inflation target. Our inflation forecasts have been revised somewhat, largely due to changes in our assumptions about external inflation and volatile commodity prices (oil, food). From September 2019, we expected an inflation rate of 3.3 percent, which was basically the same as the actual data later published. **The expectations of the market analysts participating in the Reuters survey varied widely until the third quarter of 2018.** Uncertainties in the forecasts started to diminish from late 2018. **From mid-2019 onwards, their median essentially corresponded to the actual data published later** (Chart 6-1).

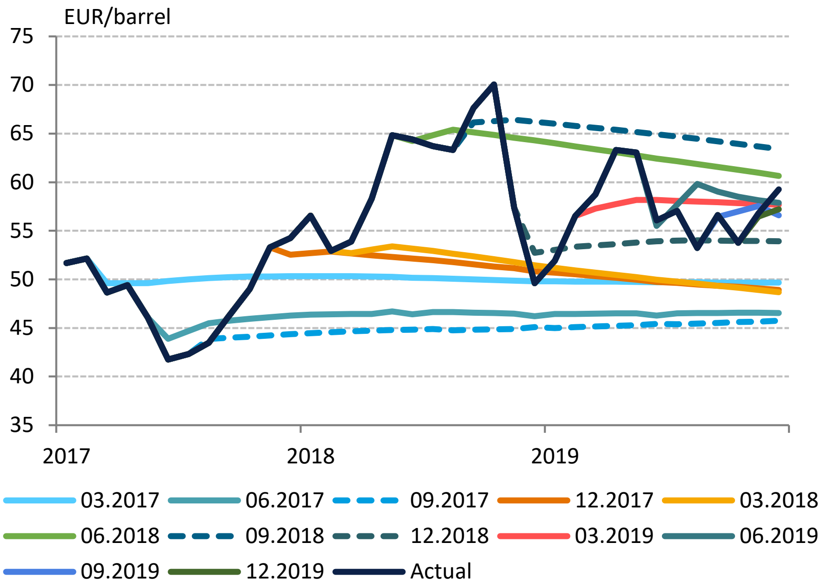
Chart 6-1: Evolution of MNB and market forecasts for 2019 inflation



Note: The band shows the range of economic experts' forecasts surveyed by Reuters.
Source: HCSO, MNB, Reuters

Changes in our projections for 2019 were mainly influenced in 2018 by significant volatility in oil prices (Chart 6-2). The EUR-denominated world price of Brent crude oil, which plays a key role in the evolution of domestic fuel prices, rose to EUR 70 first in response to geopolitical tensions in the Middle East and then fell to EUR 50 by the end of 2018 due to US sanctions against Iran, which prompted us to modify our inflation projections for June and December 2018.

Chart 6-2: Change in oil price assumptions

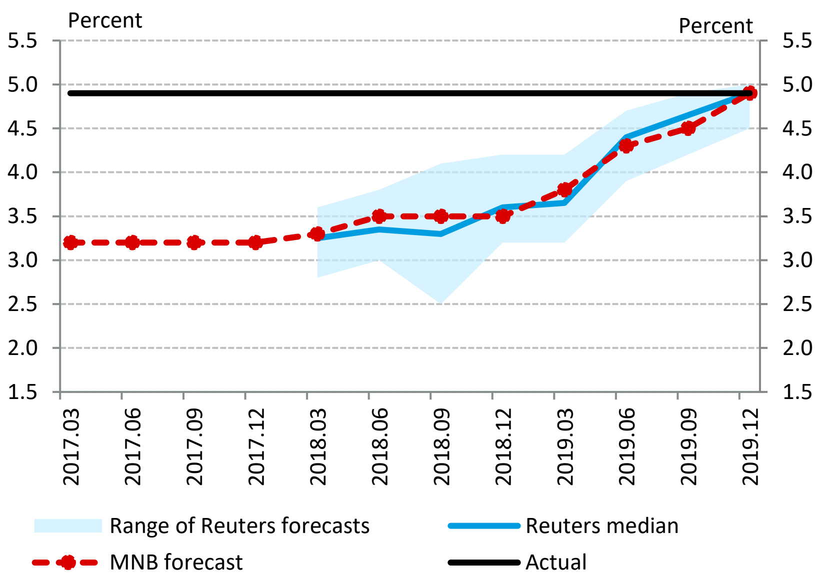


Source: Bloomberg

6.1.2. Economic growth

In 2019, domestic GDP grew by 4.9 percent year-on-year. Forecasts for last year have been revised upward since 2018 (Chart 6-3). **The average forecasting error of the MNB for the same time horizon was somewhat smaller than the median of market analysts.**

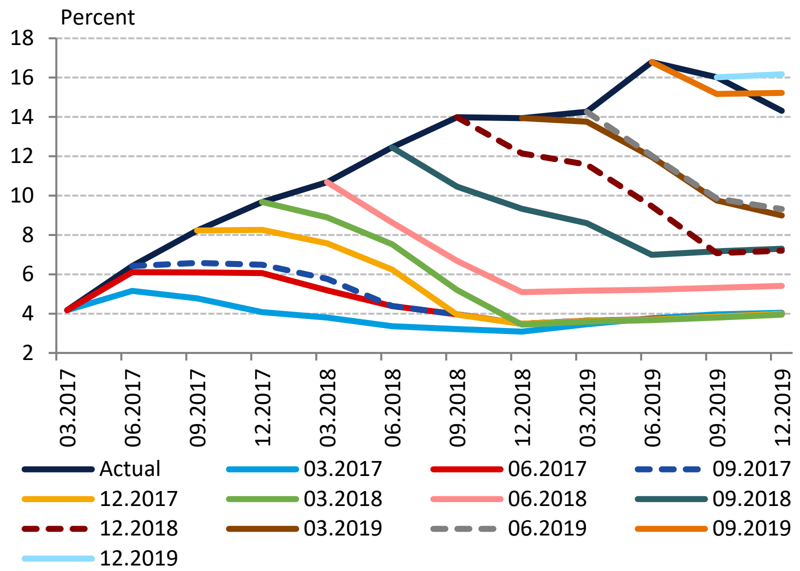
Chart 6-3: MNB and market forecasts for growth in 2019



Note: The band shows the coverage of the forecasts by analysts polled by Reuters.
Source: HCSO, MNB, Reuters

Over the past quarters, our expectations showed that growth would be significantly influenced by strengthening domestic demand, in which the expansion in investments and consumption play a key role. The growth rate of corporate lending accelerated further last year (Chart 6-4) and contributed to the increase of investments in the national economy. In addition to high corporate credit dynamics the increase in investments was also influenced by FDI, the growth of household investment in line with the upswing in the housing market cycle and public investment rising in parallel with the inflow of European Union funds.

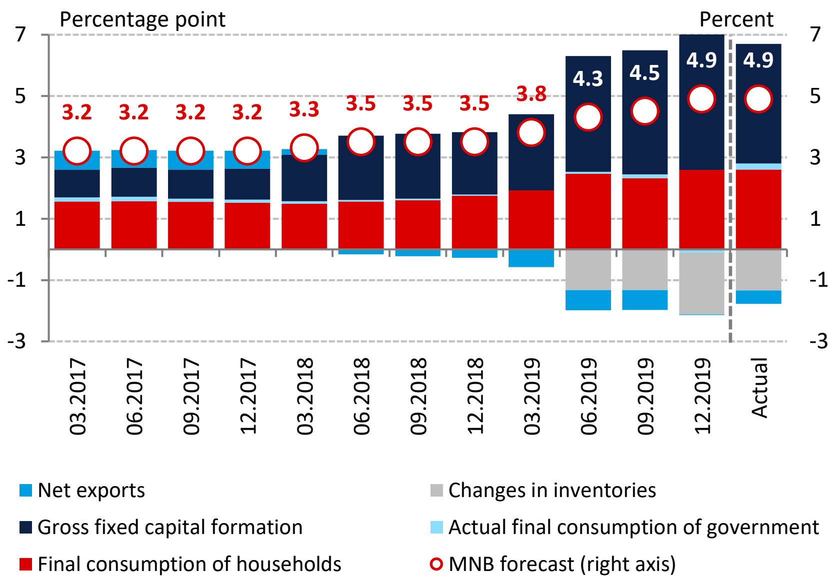
Chart 6-4: Changes in forecasts for lending to non-financial corporations



Note: Transaction-based, year-on-year data. 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

The sustained expansion of household consumption was supported by favourable income trends, a substantial increase in household lending and a significant increase in net financial wealth. Due to the import intensity of expanding domestic demand, we expected net exports to make a negative contribution to growth (Chart 6-5).

Chart 6-5: Expenditure-side decomposition of our GDP forecast

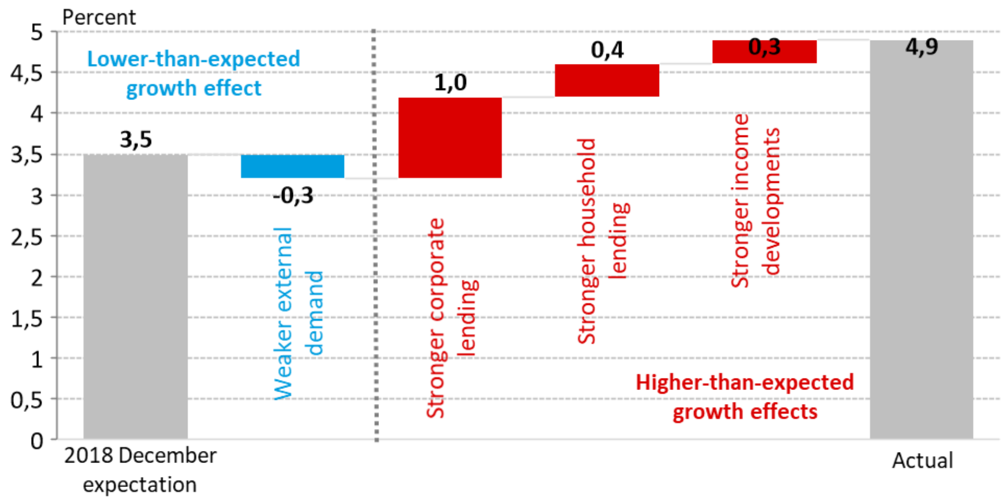


Source: HCSO, MNB

We revised our growth forecast gradually upwards from early 2018. Several factors contributed to the higher-than-expected domestic GDP growth (Chart 6-6).

- **Lending growth in 2019 was significantly more favourable than expected in both the corporate and the SME sectors.** In recent years, partly as a result of central bank programmes, corporate lending, especially to SMEs, has been on the rise. Dynamic corporate credit expansion, along with high capacity utilisation and a low interest rate environment, supported growth in corporate investment activity. According to our estimate, stronger corporate lending resulted in nearly 1 percentage point higher GDP in 2019 than previously expected, which was also indicated by unprecedented growth in construction output and investment in machinery.
- In addition to the corporate sector, **household lending continued to grow more robustly than previously expected.** The expansion is due mainly to the prenatal baby support loan available from July 2019. Credit dynamics surpassing expectations contributed to expanding household consumption last year.
- Household disposable income was also increased by **stronger wage developments**. In addition to consumption, household investment and financial savings also increased. GDP is estimated to have been higher by 0.7 percentage points, due to the more favourable income developments and stronger household lending, which is also confirmed by the rapidly expanding household consumption.

Chart 6-6: Factors underlying GDP growth in 2019



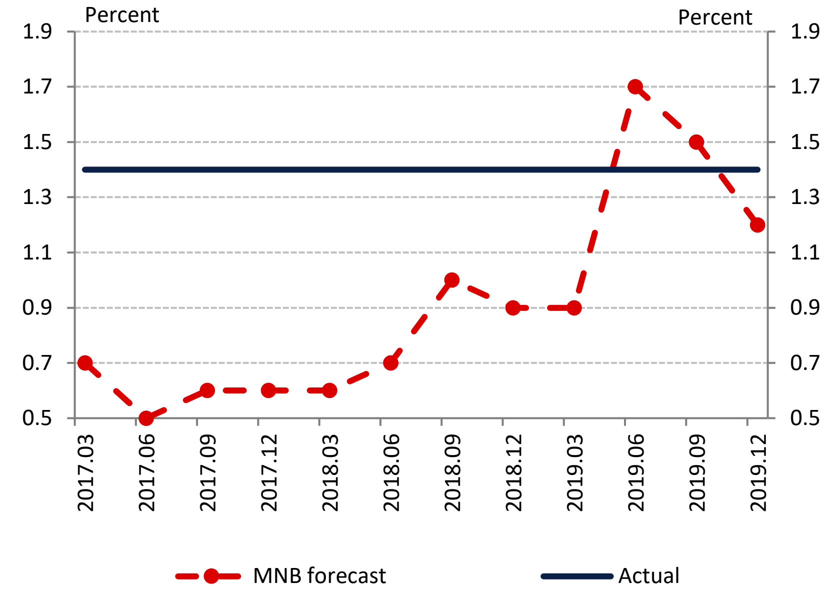
Source: HCSO, MNB

6.1.3. Labour market

In our forecasts, starting in 2018, we gradually revised upwards our private sector projections due to stronger-than-expected economic growth and tight labour market conditions. **From the second half of 2019**, as demographic constraints became more effective and as well as **from the last quarter of 2019** in line with companies' increasing capital-labour substitution, **we expected a gradual slowdown in employment dynamics**. In addition to demographic trends, in line with the dynamic workforce expansion in recent years the potentially available labour reserve has fallen to historically low levels, **and companies' efforts to raise the number of employees are rendered extremely difficult by the scarcity and adaptability problems** (inadequately skilled workforce and lack of job mobility) **of labour reserves**.

Our forecasts for employment growth in the private sector in 2019 **mostly underestimated the actual expansion** (Chart 6-7). After strong employment growth in the first quarter of 2019, we expected this favourable trend to continue for the remainder of the year, albeit at a slower pace compared to previous years, and due to the favourable growth prospects we raised our projection. **However, corporate labour demand gradually declined in 2019 after its peak at the end of 2018, and in the second and third quarters of 2019, employment dynamics in the private sector slowed down compared to previous years.** As a result, our 2019 forecast was revised down significantly in the last quarters.

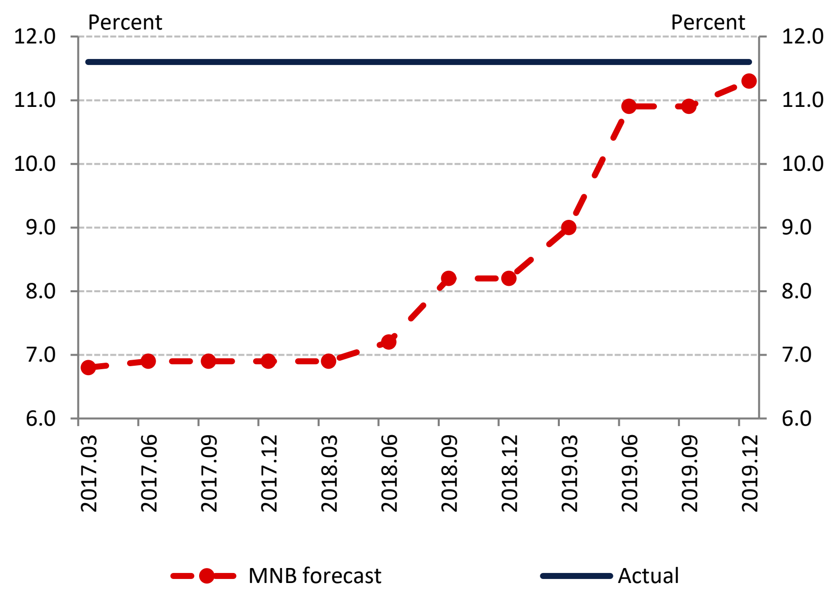
Chart 6-7: MNB forecasts for 2019 private employment growth



Source: HCSO, MNB

In our forecasts, we assumed that, **due to stronger-than-expected economic growth and in a historically tight labour market conditions, companies competed strongly to retain and recruit labour, which led to a dynamic underlying wage developments in 2019.** Wage data received in 2018 suggested that, despite tight labour market conditions, with the reduction in the rate of social contribution tax on gross earnings, companies could raise wages significantly in higher paying categories as well. Thus, impact of the six-year wage agreement boosting the wage dynamics could be stronger in 2019. According to the wage agreement concluded in 2018, the minimum wage and the guaranteed wage minimum increased identically by 8 percent in 2019. As a result, we gradually revised our private sector wage forecast upwards. Overall, our forecasts for wage dynamics in the private sector **in 2019 underestimated actual growth significantly until 2019 Q1; however, from 2019 Q2 the forecasts started to approximate it more closely** (Chart 6-8).

Chart 6-8: MNB forecasts for 2019 private wage growth



Source: HCSO, MNB

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	0.2	0.2
Market prices	1.3	0.8	2.1
Indirect taxes and government measures	0.1	0.2	0.3
CPI	**1.4**	**1.2**	**2.6**

Note: The tables show the decomposition of the yearly average change of the consumer price index. The yearly change is the sum of so-called carry-over and incoming effects. The carry-over effect is the part of the yearly index, which can be explained by the preceding year's price changes, while the incoming effect reflects the changes in the recent year. We decomposed these indices to the sub-aggregates of the consumer price index and calculated the inflationary effects of changes in the indirect taxes, administered prices, and market prices (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	5.1	0.0	7.4
non-processed	2.5	0.0	6.9	0.0	9.4
processed	2.2	0.0	4.2	0.0	6.4
Tradable goods	0.3	0.0	0.4	0.0	0.7
durables	-0.1	0.0	-0.1	0.0	-0.2
non-durables	0.4	0.0	0.7	0.0	1.1
Market services	1.7	0.0	2.5	0.0	4.2
Market energy	2.4	0.0	-0.2	0.0	2.2
Alcohol and Tobacco	2.0	0.8	2.1	0.8	5.7
Fuel	1.8	0.0	-14.4	1.2	-11.4
Administered prices	0.2	0.0	1.3	0.0	1.5
Inflation	**1.3**	**0.1**	**1.0**	**0.2**	**2.6**
Core inflation	1.4	0.1	1.8	0.4	3.7

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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