INFLATION REPORT

2019

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, Directorate Financial System Analysis and Directorate Structured Finance Strategy. 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 21 March 2019.

Contents

List of boxes

The monetary council's key findings related to the Inflation report

The Magyar Nemzeti Bank's (MNB) single anchor is inflation, its primary objective is to achieve and maintain price stability. Since mid-2018, the consumer price index has been continuously fluctuating around 3 percent and core inflation excluding indirect tax effects rose to 3 percent at the beginning of the year, therefore the MNB has met its inflation target. A dichotomy is observed between the factors determining the developments in inflation. Persistently buoyant domestic demand is boosting, and weakening external activity is restraining the pace of price increase. The Monetary Council will assess the effects of this on the maintenance of price stability over the 5-8 quarter horizon of monetary policy.

The global economy continued to expand in the fourth quarter of 2018 as well, but the outlook for economic activity deteriorated considerably in the past period. The Central and Eastern European region continues to be the growth centre of the European Union in the coming quarters. Global inflation showed a declining trend again in the past months.

While downside economic risks were strengthening, the global economy continued to expand in the fourth quarter of 2018. In the last quarter of 2018, GDP growth in the United States accelerated further, while that in the Chinese economy decelerated slightly. At the same time, the data received in the past period mainly indicated a slowdown in economic activity. The economic expansion of the euro area slowed. In addition, downside risks to its growth prospects strengthened. As in the past years, the Central and Eastern European region proved to be the growth centre of the European Union. GDP growth in the region exceeded the expansion of the euro area by 2.5 percentage points.

Global oil prices rose – primarily as a result of supply side developments –, however global inflation showed a declining trend in the past months. In the euro area, parallel to the deteriorating economic activity, inflation was below the 2 percent central bank target, while the dynamics of core inflation was also subdued. With the exception of Poland, inflation increased in the countries of the region.

As a result of the strengthening of uncertainties surrounding global economic growth and downside risks to inflation, the world's leading central banks became more cautious.

In December, the Federal Reserve (Fed) continued the gradual interest rate hikes, while central bank communication became more cautious. In March, decision-makers announced the gradual conclusion of its balance sheet reduction. The Bank's balance sheet will not decline further essentially after September 2019. Based on decision-makers' projection and on market pricings, no interest rate hike is expected for this year. The European Central Bank (ECB) has modified its forward guidance, consequently, the first interest rate hike has been shifted to a later date. Key interest rates will remain at their present levels at least through the end of 2019 and in any case for as long as necessary. In addition, the ECB will launch a new series of quarterly targeted longer-term refinancing operations (TLTRO-III) to improve the effectiveness of monetary policy transmission and to maintain favourable bank lending conditions. As a result, the central bank balance sheet is expected to remain essentially unchanged for a prolonged period. Due to the shift in the first interest rate hike to a later date and changing balance sheet policy, monetary conditions in the euro area will remain loose for a longer period of time. The Czech, Polish and Romanian central banks did not change their respective monetary conditions in the past quarter. Expected interest rate paths shifted downwards in the countries of the region.

In spite of the deteriorating outlook for economic activity, money market sentiment improved in the past months, the effect of which was perceptible both in developed and emerging bond and equity markets.

In the past period, money market sentiment improved, which was attributable to central bank policies that tended to be looser than earlier expected as well as to declines in various one-off risk factors. Of the latter, mainly the favourable developments of the trade negotiations between the United States and China were determinant. The withdrawal of capital from developed and emerging bond markets still continued at the end of 2018, but its direction reversed in early January, as money market sentiment was becoming more favourable. Stock exchange price indices in developed countries rose considerably during the period: the equity market decline, which had lasted until end-December, was followed by practically steady increase as of January, in parallel with which the volatility of equity markets also decreased significantly.

The favourable economic developments and the lower vulnerability of the country were confirmed by the fact that two international credit rating agencies upgraded the credit rating of Hungary in the past quarter. As a result of a decline in long-term yields, domestic government securities market and interbank yield curves became flatter.

Yields up to one year essentially did not change, as a result of a considerable decline in yields on the medium and mainly on the long section, the domestic interbank and government securities market yield curves also became flatter. During the period, the strengthening of the forint against the euro was greater than that of the currencies in the region. It was an acknowledgement of the favourable economic developments and the reduction of the vulnerability of the country that the international credit rating agencies S&P and Fitch Ratings upgraded Hungary's credit rating from 'BBB-' to 'BBB'.

The MNB has met its inflation target. In the coming quarters, inflation will fluctuate around the 3 percent central bank target. Core inflation excluding indirect tax effects is expected to continue to rise until the autumn months and then to decline from the end of 2019.

The factors driving changes in inflation and core inflation excluding indirect tax effects are on both the upside and the downside. Persistently buoyant domestic demand is boosting, and weakening external activity is restraining the pace of price increase. Since mid-2018, the consumer price index has been continuously fluctuating around 3 percent and core inflation excluding indirect tax effects rose to 3 percent at the beginning of the year, therefore the MNB has met its inflation target. Volatile items continue to influence inflation. Therefore, in assessing the outlook, the measures of underlying inflation capturing persistent trends deserve more attention. In the early months of the year, the price increase observed concerned a wide range of services and was stronger than in the previous years, which resulted in a rise in core inflation excluding indirect tax effects at the beginning of the year. Core inflation excluding indirect tax effects is expected to continue to rise until the autumn months and then to decline from the end of 2019. According to the ECB's latest forecast, as a result of a deceleration in global economic activity, underlying inflation developments in the euro area are expected to remain persistently subdued.

Economic growth is expected to slow gradually from 2019, but to remain strong. As a result of the dynamic growth in credit markets, the investment rate is likely to stabilise at high levels. Higher real incomes are expected to contribute to a further expansion in household consumption and savings. However, regarding long-term, sustainable economic growth, the improvement in competitiveness by structural measures will be given increasing emphasis.

Strengthening domestic demand will play a major role in the development of economic growth in the coming years as well. As a result of the dynamic growth in credit markets, the investment rate is likely to stabilise at high levels. Higher real incomes are expected to contribute to a further expansion in household consumption and savings. All the three sectors (companies, the state and households) contribute to investment growth in 2019. Nevertheless, following high basis, government investment is expected to decline as of 2020, while private investment continues to grow further. The actual absorption of EU funds peaks in 2019, before declining gradually. Due to weakening demand in external – mainly European – markets, Hungarian exports in 2019 may fall short of the path projected before. At the same time, in line with the installation of new export capacities affecting a wide range of industrial sectors and with a further dynamic expansion in services exports, Hungary's export market share gradually improves over the forecast horizon.

Dynamic expansion in corporate and household lending may continue over the forecast horizon.

In 2018, corporate lending and household loans outstanding increased by 14 percent and more than 5 percent, respectively, year on year. Loans outstanding of the SME sector continued to expand dynamically, by nearly 12 percent. The household segment was characterised by decline in the interest rate risk. By the end of the year, new housing loans were extended almost fully with interest rate fixation over one year, within which the share of loans with interest rate fixation over 5 years rose to above 60 percent. The increase in the latter was greatly attributable to the central bank programmes aiming at the reduction of banks' costs of funds, the growing market share of Certified Consumer-friendly Housing Loans as well as the introduction of the payment-to-income ratio differentiated by interest rate fixation period. Lending is expected to increase further in the coming years. The rate of expansion in household loans outstanding will continue to pick up over the forecast horizon.

The external financing capacity of the economy will stabilise at a high level, while the surplus of the current account will increase again as of 2020. As a result of the persistent external financing capacity, net external debt of the economy will decline to close to zero by 2021.

With a decline in the trade balance, the current account surplus declined in 2018 and is expected to decrease in 2019. In addition to the decelerating external demand, the general increase in domestic absorption also points to lower net exports. The external financing capacity of the country will be persistently around 2.3 percent of GDP over the entire forecast horizon. The effect of the lower trade balance will be largely offset by an increase in EU fund absorption, which mainly affects the capital account. As a result of the building out of new capacities, the again increasing trade surplus will result in improvements in the current account in 2020 and 2021 again. With the continuance of the financing capacity of the country, external debt ratios will decline further, and net external debt may fall to close to zero by 2021 in parallel with that.

According to preliminary financial account data, the budget deficit in 2018 was 2.2 percent of GDP, i.e. slightly less than the statutory appropriation of 2.4 percent. In 2019, the deficit may be a little bit lower than the 1.8 percent statutory appropriation, and similar deficit is expected for 2020 as well. The government debt ratio decreased by 2.5 percentage points to 70.9 percent in 2018. In line with the Hungarian and EU fiscal rules, debt will continue to decline over the entire forecast horizon.

The macroeconomic outlook is surrounded by both upside and downside risks.

In addition to the baseline projection in the March Inflation report, the Monetary Council highlighted two alternative scenarios. In the case of the alternative scenario assuming higher wage growth and dynamic expansion in consumption, domestic economic growth is stronger, and inflation is higher than in the forecast of the baseline scenario. Materialisation of the scenario presenting strengthening in the growth risks affecting the euro area results in a lower inflation path and more restrained growth compared to the baseline scenario. In addition to the scenarios set forth above, the Monetary Council discussed, as further risks, scenarios that present a looser external monetary policy environment, a larger impact of consumption expansion on inflation as well as the materialisation of competitiveness reforms.

SUMMARY TABLE OF THE BASELINE SCENARIO

(Forecast based on endogenous monetary policy)

	2018	2019	2020	2021
	Actual		Projection	
Inflation (annual average)				
Core inflation[1]	2.5	3.8	3.4	3.0
Core inflation excluding indirect tax effects	2.4	3.4	3.2	3.0
Inflation	2.8	3.1	3.1	3.0
Economic growth				
Household consumption expenditure	5.3	3.7	3.2	2.9
Government final consumption expenditure	0.0	0.7	1.1	0.6
Gross fixed capital formation	16.5	9.7	2.7	2.0
Domestic absorption	7.0	4.6	2.6	2.2
Exports	4.7	5.6	6.3	6.3
Imports	7.1	6.6	5.9	5.7
GDP	4.9	3.8	3.2	3.0
Labour productivity[6]	2.7	2.7	2.8	2.9
External balance[2]				
Current account balance	0.6	0.2	0.4	0.9
Net lending	2.3	2.3	2.3	2.3
Government balance[2,5]				
ESA balance	-2.2	(-1.5) – (-1.6)	(-1.4) – (-1.6)	(-1.5) – (-1.7)
Labour market				
Whole-economy gross average earnings[3]	11.1	9.2	7.2	7.5
Whole-economy employment	1.1	0.5	0.3	0.0
Private sector gross average earnings[3]	10.5	9.0	8.1	8.0
Private sector employment	1.3	0.9	0.4	0.2
Unemployment rate	3.7	3.6	3.5	3.4
Private sector nominal unit labour costs	5.3	4.8	3.2	3.4
Household real income[4]	6.8	3.4	3.0	2.8

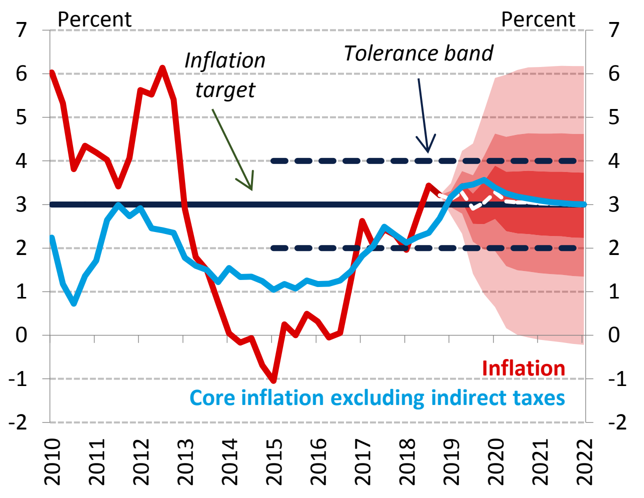
[1] Based on seasonally unadjusted data.
[2] As a percentage of GDP.
[3] For full-time employees, calculated from levels.
[4] MNB estimate.
[5] The lower value of the forecast band shows the ESA balance if the Country Protection Fund is used, while the higher value shows the ESA balance if the Country Protection Fund is not used. The ESA value for 2018 represents the net lending of the general government from the preliminary financial accounts.
[6] Whole economy, based on national accounts data.

1. Inflation and real economy outlook

1.1. Inflation forecast

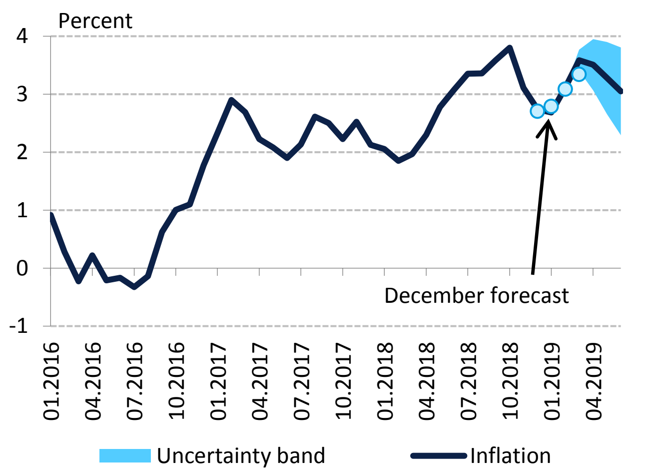
Since mid-2018, consumer price index has been continuously fluctuating around 3 percent, and core inflation excluding indirect tax effects rose to 3 percent, therefore the MNB has met its inflation target. According to our current forecast, inflation remains volatile over the short term, fluctuating around the 3-percent inflation target. The consumer price index continues to rise in March before dropping below 3 percent again in the summer months. The factors affecting core inflation adjusted for indirect tax effects reflect two different trends: on the one hand, this measure of inflation will continue to rise with persistently strong domestic demand over the short run, while on the other hand this process will be increasingly restrained by the disinflationary impact of weakening external economic activity, mainly in Europe. From the end of 2019, in a persistently subdued external inflation environment, core inflation adjusted for indirect tax effects will gradually moderate to near 3 percent as the effect of this year's processed food price increases fade out.

Chart 1-1: Fan chart of the inflation forecast



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

Chart 1-2: Monthly evolution of the near-term inflation forecast



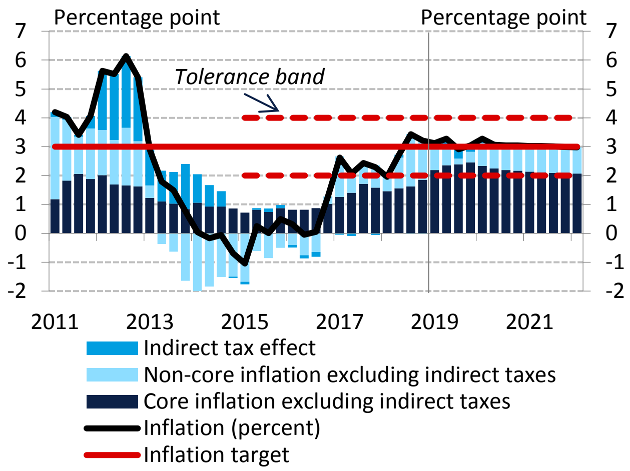
Note: Annual change. The uncertainty band shows the root mean squared error of previous years' near-term forecasts.
Source: HCSO, MNB

Since mid-2018, consumer price index has been continuously fluctuating around 3 percent, and core inflation excluding indirect tax effects rose to 3 percent, therefore the MNB has met its inflation target. According to our current forecast, **in the short run inflation remains volatile** mainly due to the fluctuating fuel prices similarly to the recent months**, but the index will continue to hover around the inflation target** (Chart 1-1). The consumer price index will continue to rise in March before dropping to below 3 percent in the summer months due to the base effects of fuel prices (Chart 1-2).

In 2019 Q1, core inflation adjusted for indirect tax effects will be slightly above 3 percent, and owing to robust household consumption, it continues to rise for the rest of the year. Strong domestic demand broadens companies' leeway in pricing, which may point to rising price dynamics. The inflationary effect of private sector wages above the level of productivity growth will be partly offset by further cuts in the social contribution tax paid by corporations. **In parallel with the expected strong domestic demand, core inflation adjusted for indirect tax effects will rise over the short term, but the rise in prices will be increasingly offset by moderate external inflation.** Core inflation excluding tax effects will be somewhat higher this year than our December forecast. The difference is caused by the higher-than-expected repricing of market services at the beginning of the year and higher price dynamics of processed food. From the end of 2019, in a persistently subdued external inflation environment, **core inflation adjusted for indirect tax effects will grad gradually moderate to near 3 percent** as the effect of this year's processed food price increases fade out.

The growth rate of domestic prices will be restrained by moderate external inflation. In view of more moderate global activity, in its latest forecast the ECB revised its

Chart 1-3: Decomposition of the inflation forecast



Source: HCSO, MNB

Table 1-1: Details of the inflation forecast

		2018	2019	2020	2021
Core inflation excluding indirect tax effects		2.4	3.4	3.2	3.0
Core inflation		2.5	3.8	3.4	3.0
Non-core inflation	Unprocessed food	6.9	7.8	3.2	3.6
	Fuel and market energy	8.2	-1.1	3.5	3.1
	Regulated prices	0.1	0.7	1.9	2.6
	Total	3.6	1.6	2.6	2.9
Inflation		**2.8**	**3.1**	**3.1**	**3.0**

Note: Based on seasonally unadjusted data.

Source: MNB

inflation and core inflation projections downward over the entire forecast horizon until 2021. **The rise in euro area underlying inflation will be slower than expected, and overall inflation will remain below the ECB's inflation target in the coming years as well.**

Changes in indirect taxes contribute slightly positively to inflation in 2019 and 2020 (Chart 1-3). After starting in September 2018, the last step of the excise tax hike for tobacco products will be implemented in July 2019. Similar to the tax hike implemented in the first two steps (September 2018 and January 2019), we anticipate faster pass-through in this last phase than seen in previous years.

As regards non-core inflation, price dynamics are expected to be moderate this year and gradually accelerate in coming years (Table 1-1). Over the short run, fuel price inflation will temporarily fall into negative from 16 percent recorded in last October, and – with the fading of the effects of the price cuts from end-2018 and early 2019 – from the beginning of 2020 it will stabilise at a level of around 3 percent. We project higher fuel price dynamics than in our previous forecasts, as the futures prices of Brent crude oil are at a higher level than our December assumptions. Regulated energy prices will not change until the end of the forecast horizon, and moderate price dynamics are expected in the case of non-energy regulated prices. On balance, after the cost effects have faded out, the price dynamics of non-core inflation items will be around 3 percent from mid-2020.

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 the external assumptions is to make our forecasts more transparent (Table 1-2).

Table 1-2: Main external assumptions of our forecast

Technical assumptions	2019		2020		2021		Change		
	Previous	Current	Previous	Current	Previous	Current	2019	2020	2021
EUR/USD	1.14	1.14	1.14	1.13	1.14	1.13	0.0%	-0.1%	-0.1%
Oil (USD/barrel)	61.1	65.0	61.2	65.1	61.2	65.1	6.5%	6.4%	6.4%
Oil (EUR/barrel)	53.8	57.3	53.9	57.4	53.9	57.4	6.5%	6.4%	6.5%
Food prices									
Wheat (USD/bushel)	5.31	5.11	5.75	5.44	5.99	5.67	-3.7%	-5.4%	-5.3%
Maize (USD/bushel)	3.87	3.87	4.12	4.12	4.23	4.22	0.0%	0.0%	-0.2%
Euro area inflation (%)	1.6	1.2	1.7	1.5	1.8	1.6	-0.4 pp.	-0.2 pp.	-0.2 pp.
Euro area core inflation (%)	1.4	1.2	1.6	1.4	1.8	1.6	-0.2 pp.	-0.2 pp.	-0.2 pp.
GDP growth of Hungary's main trading partners*(%)	2.4	2.1	2.3	2.2	2.2	2.2	-0.3 pp.	-0.1 pp.	0 pp.

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

Global oil prices continued to fluctuate in late 2018 and early 2019. **In the second half of December 2018**, the price of Brent crude per barrel **dropped to USD 50 from USD 60**, which was followed by an increase in prices in the first weeks of this year, with **oil prices rising to USD 65-70 by mid-March**. Decelerating global activity and the exacerbation of risks to future growth had initially pushed down prices, but this decline was offset early this year as the OPEC+ production cut agreement took effect. In early December, the participating states agreed to curb crude output by 1.2 million barrels per day. Commitments were mostly carried out by the participants of the agreement. Besides these commitments, the increase of oil prices in March was supported also by the cancellation of the OPEC meet scheduled for April, thus the first revision of the production cut may take place earliest in June. As the ongoing dynamic rise in US shale oil extraction was only able offset this effect to a limited degree, oil supply decreased overall, exerting an upward pressure on prices. Future price developments are surrounded by significant uncertainty. Based on the March survey of Consensus Economics, forecasters expect oil prices to range between USD 55 and 80 this year (EUR 48.1–70). The oil price developments assumed in our baseline scenario are surrounded by two-sided risks. Oil prices may increase as a result of the expiry of the waivers from the sanctions against Iran in May 2019 and due to the capacity constraints in US shale oil extraction and transportation. By contrast, risks to global economic activity may lead to lower oil prices via a decline in demand. **EUR-denominated oil prices – as the main determinant of Hungarian fuel prices – have increased compared to our December assumption. Our assumption concerning the EUR/USD cross rate remained largely unchanged compared to our December forecast.**

In its latest forecast, the European Central Bank continues to project that price dynamics will fall short of its inflation target over the entire forecast horizon. The reason for the persistently low inflation forecast by the ECB is the lower path of core inflation over the entire forecast horizon, as well as the significant decrease in oil prices for 2019 and 2020, compared to the 2018 level. Over the forecast horizon, euro area inflation rises from 1.2 percent projected for 2019 to 1.5 percent in 2020 and to 1.6 percent in 2021, and falls short of the inflation target of the ECB over the entire horizon.

Compared to our December assumptions, external demand growth is expected to be more restrained over the short run. In addition to the general slowdown in global activity, weaker industrial performance among Hungary's main trading partners also suggests subdued European economic activity. European medium- and long-term growth prospects are surrounded by downside risks, such as intensifying trade tensions, the downturn in Chinese vehicle sales, changes in global vehicle industry trends, the escalation of structural problems and uncertainties about Brexit.

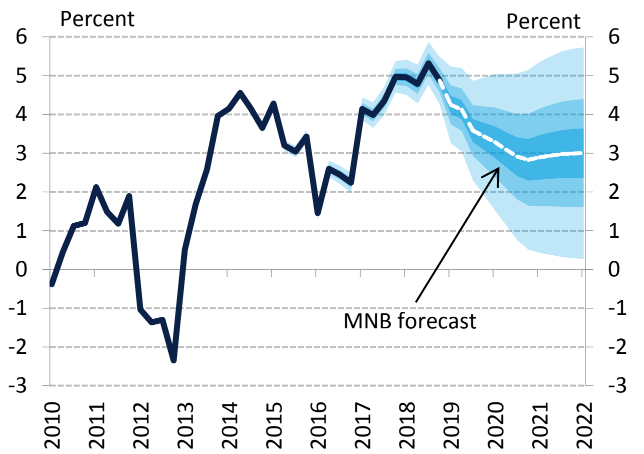
Based on futures quotes, **we revised the expected increase in wheat prices downwards compared to the assumptions in the December Inflation report, while our assumptions concerning the corn price increase remained largely unchanged.**

The **demographic policy package** announced in February is set to increase budget expenditures over the entire forecast horizon compared to the assumptions presented in the December Inflation report. The fiscal effect of the measures will amount to around 0.1 percent of GDP this year and 0.4 percent both in 2020 and 2021. At the same time, the deficit path is expected to remain nearly unchanged compared to the December Inflation report, because of a moderation in government capital transfers, while **tax revenues are expected to rise more dynamically than expected**.

1.2. Real economy forecast

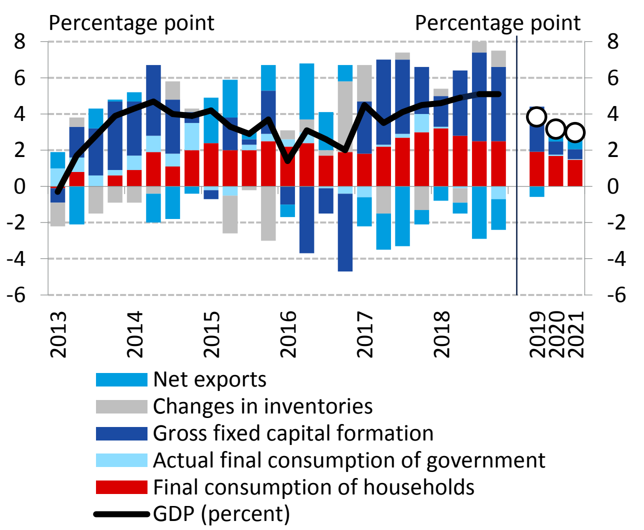
Last year's outstanding economic expansion is followed by a gradual slowdown, but growth may remain dynamic in 2019 as well. Domestic demand will continue to play a key role in growth in the coming years. Consumption growth continues to be supported by favourable income trends, the high level of net financial wealth and consumer confidence, a vibrant credit market, the newly introduced family support programme, and the second-round effects of the housing market boom. Private investment will increase over the entire forecast horizon, owing primarily to buoyant corporate investment amid the dynamic expansion of the corporate credit market. The high level of capacity utilisation, the tight labour market, large corporate investment projects and the upswing in the housing market supported by government programmes all contribute to the expansion in investment. Government investment will moderate in 2020 and 2021 according to our projection, due to the high base. As a result of moderate economic growth in Hungary's main trading partners and the subdued performance of the German automotive industry, Hungarian exports may fall short of the previously expected path in 2019. At the same time, Hungarian exports continue to grow steadily over the forecast horizon in line with the build-up of new export capacities and the dynamic expansion in services exports, resulting in a further improvement of Hungary's export market share. In terms of long-term, sustainable economic growth, structural measures targeting the competitiveness of the economy will become increasingly important.

Chart 1-4: Fan chart of the GDP forecast



Note: Based on seasonally and calendar adjusted and reconciled data.
Source: HCSO, MNB

Chart 1-5: Contributions to annual changes in GDP



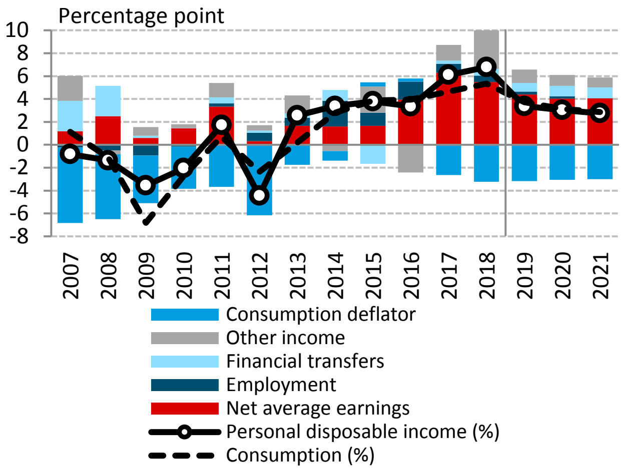
Source: HCSO, MNB

In 2018, Hungary's GDP registered significant 4.9-percent growth compared to the previous year. We expect that last year's outstanding expansion will be followed by a gradual slowdown, but growth may still remain dynamic in 2019. If the assumptions of the current forecast hold, the expansion may amount to 3.8 percent in 2019, 3.2 percent in 2020, and 3 percent in 2021 (Chart 1-4). Economic growth is driven by the dynamic expansion of corporate investment – in line with the corporate credit market boom – and by growing consumption supported by the persistently favourable underlying income trends (Chart 1-5). From 2020 on, economic growth will slow down, in line with the deceleration in real wages and a decline from the high base in public investment activity.

We expect household consumption to expand further in our forecast. The increase in household consumption expenditures is strongly supported by the favourable underlying income trends related to the continued robust increase in wages and growth in employment (Chart 1-6). The previously accumulated **high net financial wealth, the high level of consumer confidence, as well as the second-round effects of the pick-up in the housing market contribute to the expansion in consumption.** Demographic trends represent an increasingly effective constraint for employment expansion. Moreover, the size of the administrative wage increases will be less than that of the last year, which will restrain the dynamics of the net real wage bill for the coming years. Therefore, the expansion of household consumption remains dynamic, but continues at a somewhat slower pace (Chart 1-7).

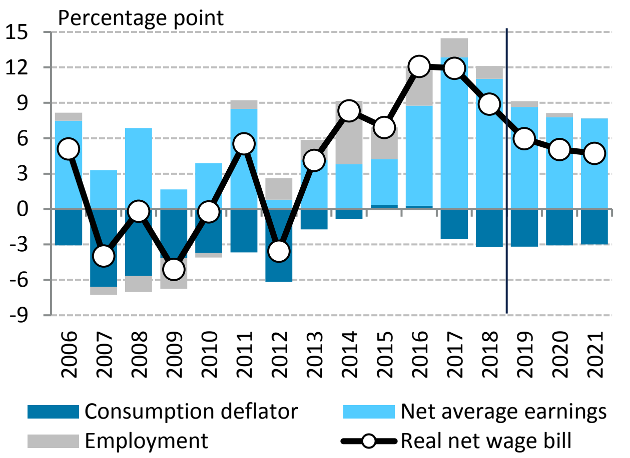
Growth in household lending continues to significantly support the rise in household consumption. Looking forward, the dynamic rise in the gross volume of new credit

Chart 1-6: Decomposition of personal disposable income



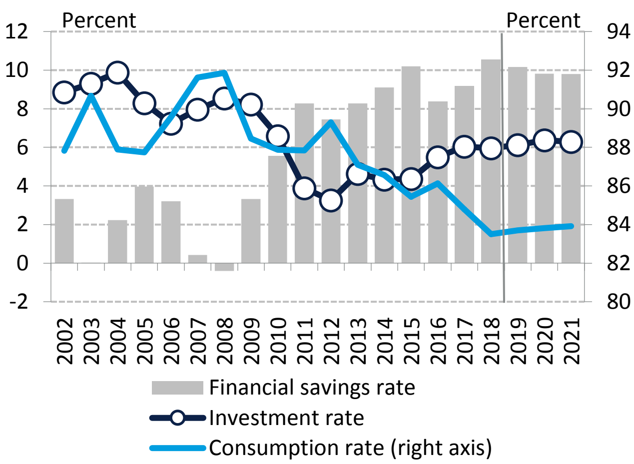
Note: Annual changes. Source: MNB

Chart 1-7: Real net wage bill decomposition



Note: Annual changes. Source: HCSO, MNB

Chart 1-8: Evolution of households' consumption, investment and financial savings rates as a percentage of disposable income



Source: HCSO, MNB

agreements will continue. Banks expect continuing expansion in demand both for consumer and housing loans. In our forecast, **we expect lending to households to increase further** over the short run, supported by the persistent increase in household income and hence, **households' increased willingness to borrow**. Consumption and household investment will increase further over the entire forecast horizon thanks to the measures aimed for supporting families from the second half of 2019, including preferential home equity loans, and the significant expansion of the home creation subsidy scheme and the lending programme (for more detail, see Box 5-1).

In line with the expansion in incomes, we expect **continued consumption growth in a broad range of product groups.** The growth rate of the consumption of services has been historically high this year, and looking ahead, its dynamics will persistently exceed the expansion in aggregate consumption. The dynamic rise in purchases of durable and semi-durable goods will continue in the coming quarters. **According to our expectations, purchases of durable goods and services will remain robust in the increase in total household consumption.**

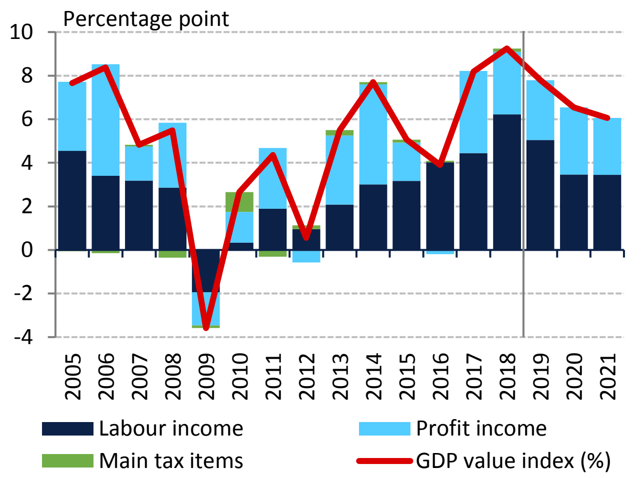
In the coming years, the expansion in consumption will be consistent with the growth rate of disposable incomes, and thus the **consumption rate is expected to stabilise**. Households' investment rate also does not change substantially over the forecast horizon. Consequently, the savings rate of households may be higher than previously projected, and stabilise at around 10 percent in the coming years (Chart 1-8).

On the income side, the contribution of employees' compensation is expected to account for the greater half of nominal GDP growth in 2019, while starting from 2020, earned and profit incomes will contribute to nominal GDP growth to a nearly identical degree (Chart 1-9).

Whole-economy investment is expected to grow over the entire forecast horizon. According to our forecast, a rise in the investment activity in all three sectors will contribute to the expansion in investment this year, but the **decline in government investment** will lower the growth rate of whole-economy investment **from 2020**. Looking ahead, the **whole-economy investment rate will be continuously above 25 percent** (Chart 1-10).

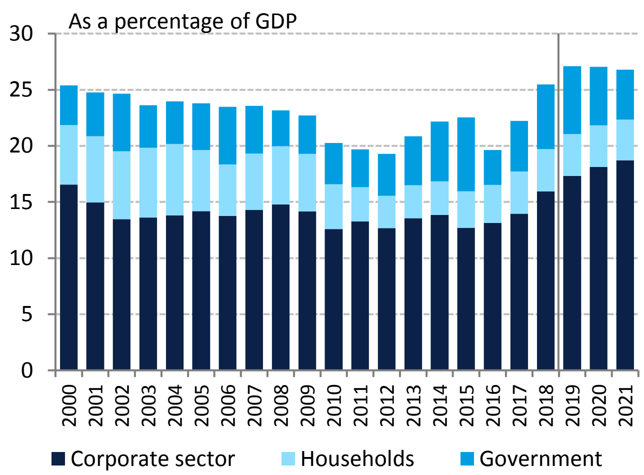
Developments in corporate sector investment activity will be favourable. With the continued, double-digit expansion in SME loans, the corporate credit market will **remain one of the key drivers of economic growth in the coming years**

Chart 1-9: GDP decomposition based on the income account



Note: For 2015, average labour cost growth measured in labour statistics is used instead of the decline registered in the national accounts.
Source: HCSO, MNB

Chart 1-10: Evolution of investment rate by sectors



Source: HCSO, MNB

(Chart 1-11). The expansion in the corporate credit market is strongly supported by the FGS Fix programme launched in early 2019, which will be supplemented from 1 July 2019 with the HUF 300 billion initial credit line allocated under the central bank's new monetary policy instrument, the Bond Funding for Growth Scheme[1] (BGS) (see Box 1-3). The BGS is intended to diversify the financing structure of the Hungarian corporate sector in a targeted manner. Under the programme, the central bank will purchase investment-grade bonds issued by non-financial corporations.

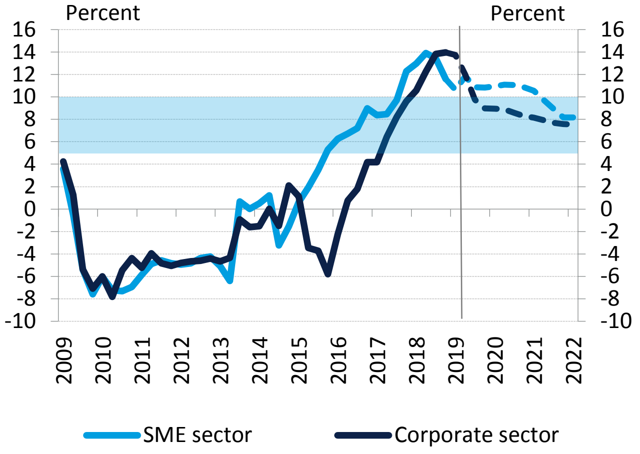
In addition to developments on the financing side, corporate investment may also be supported by rising domestic demand, the low interest rate environment, high capacity utilisation and the tight labour market. The dynamics of corporate investment may be boosted by the previously announced **large investment projects and capacity expansions** (e.g. Mercedes, MOL, BMW, FAKT AG) and the recently announced construction of the second plant of SK Innovation over the entire horizon. The actual utilisation of EU funds, a considerable portion of which serves the purpose of economic development, supports the rise in corporate investment until 2019.

In line with the expansion in home-building, **household investment is expected to increase** over the entire forecast horizon, also supported by the government measures announced in February. As only a part of the measures will be implemented this year, they are expected to **boost household investment mainly in 2020–2021.** Moreover, the significant number of residential building permits and the gradual upswing in the construction of new homes also indicate buoyant household investment activity. Our forecast is based on the assumption that home-building will peak in 2020.

Government investment is expected to expand until 2019, as we expect the actual absorption of EU funds to reach its peak this year before declining gradually by 2021 (Chart 1-12). Accordingly, **public investment is expected to decline in 2020–2021.**

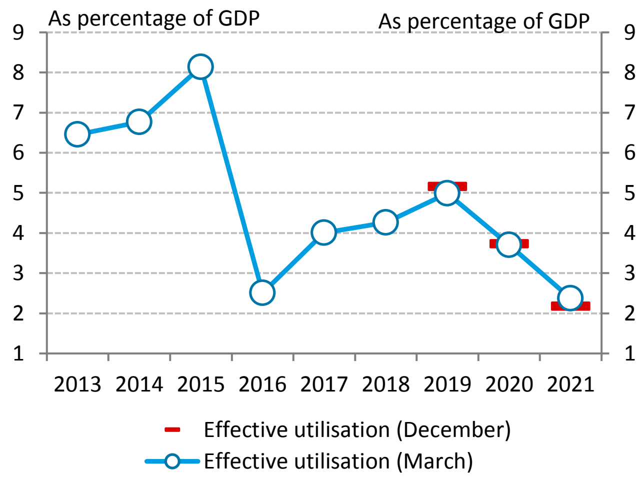
External demand may expand more slowly than anticipated in the December Inflation report, which is also confirmed by the forecasts prepared (and typically revised downwards) by international institutions. In addition to a general deceleration in global activity, expectations about euro area economic performance for this year have gradually weakened in the recent period. **The downside risks surrounding global and European economic activities have intensified** (for more detail, see Box 1-1). Increasing trade tensions, a slowdown in the Chinese economy, Brexit

Chart 1-11: 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 1-12: Effective use of EU funds



Source: Ministry of Finance, MNB

(and the uncertainty stemming from the related negotiations) as well as the high government debt in Italy and the financial and real economy risks stemming from the Italian fiscal policy may all affect developments in Hungary's external demand.

As a result of moderate economic growth in Hungary's main trading partners and the subdued performance of the German automotive industry, in 2019 **Hungarian exports may fall short of the previous forecast.** At the same time, in line with the installation of new export capacities and the dynamic expansion in services exports, **Hungarian exports grow steadily over the forecast horizon, contributing to a further improvement in Hungary's export market share** (Chart 1-13).

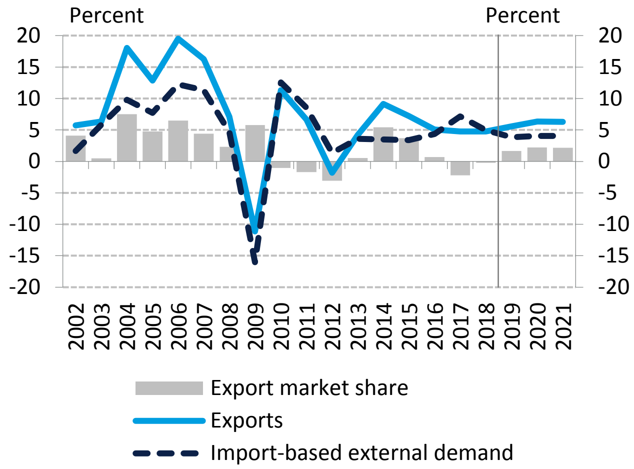
In parallel with rising exports and the expansion in domestic demand factors (consumption, investment), imports also continue to increase; accordingly, we expect **net exports to slightly reduce economic growth in 2019.** Although the expansion of imports restrains economic growth through a decline in net exports over the short run, the increase in investment-related imports contributes to growth in potential GDP by raising the capital stock over the long run. Additionally, due to slower growth in household consumption and investment, the import demand of the economy will decline in the second half of the forecast horizon. **In 2020 and 2021, the contribution of net exports to economic growth will be positive.**

In 2018, the contribution of agriculture to GDP growth was positive. **This year, assuming average performance by the sector, the contribution of agriculture to growth may be neutral.**

GDP has been close to and slightly above potential output. Therefore, the **expansion in the supply side of the economy may determine** the sustainability of growth in the next period. **In our forecast, we expect an improvement in labour productivity**, although this process may mainly reflect cyclical factors. A generally observed phenomenon is that labour productivity increases in the ascending phase of economic activity (Kaldor–Verdoorn law). Over the medium term, the high investment rate, the large investment projects announced and the capacity expansions across the supplier network generate positive feedback across market services with higher value added (information and communication, finance, logistics,

[1] The considerations behind the introduction of the Bond Funding for Growth Scheme and the main features of the scheme will be published by the MNB in the form of a background material. The product information document containing the detailed terms and conditions will be published by the MNB by the end of April 2019.

Chart 1-13: Changes in export market share



Note: Annual change.
Source: HCSO, MNB

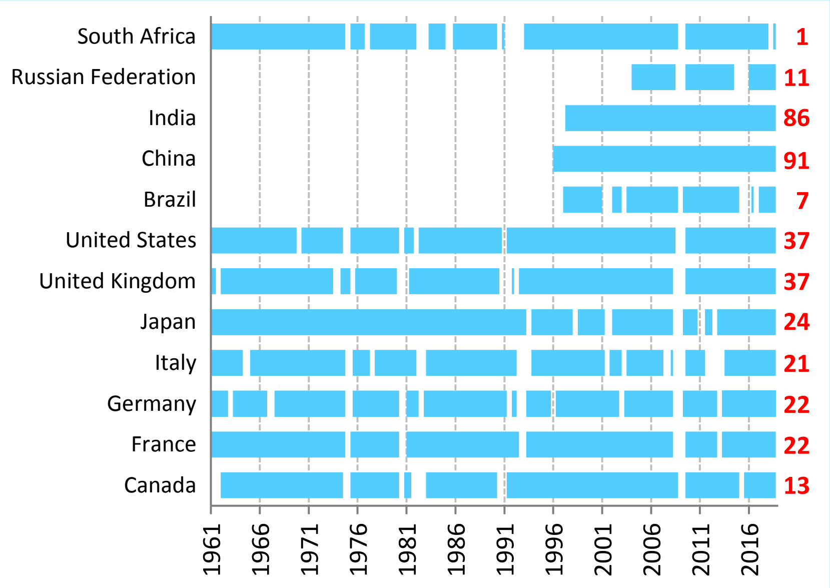
marketing) as well. **Looking ahead, the developments in productivity determine the long-term, sustainable expansion in GDP. Economic policy can raise the rate of potential growth through structural measures aimed at improving competitiveness while maintaining stability.**

Box 1-2: International economic activity and risks surrounding the global growth outlook

In the recent past, the growth rate of the global economy has decelerated considerably, which may have been influenced by the prolonged trade tensions, the weak performance of German industry, the slowdown in the Chinese economy and uncertainty surrounding Brexit. In parallel with this, **the confidence indicators capturing the manufacturing outlook** which is more closely related to the external environment **have moved steadily lower in 2018** in the most important economic hubs of the world.

Economic growth is characterised by periodicity, and growth periods are interrupted by shorter or longer recessions. Of 13 OECD and 9 other developing countries,[2] 13 are in the historically longest growth cycle, with an average length of 14.5 years. Among the G7 countries, the length of the growth period and average growth rate of the United States, the United Kingdom, France and Canada is lower than before the crisis, but the current US growth period is the second longest in a historical comparison (Chart 1-14).

Chart 1-14: Growth periods in the G7 and BRICS countries



Note: The coloured bars show the growth periods while the red numbers show the number of quarters of the actual growth periods. Data for China are only available since 1996.
Source: MNB calculation based on OECD data

In the United States, internal demand has remained robust on account of the low unemployment and rising wages, triggering a 2.9-percent expansion of the economy in 2018. The country's growth was significantly assisted by the tax package adopted in December 2017 as well as the fiscal stimulus measures from February 2018 and the positive growth impact of infrastructure investments. **US economic growth is expected to gradually decelerate as the impact of the fiscal measures wears off after 2019** (Table 1-3). **The US debt-to-GDP ratio is at historic highs**, coming close to the levels seen in the Second World War (Chart 1-15). Public sector debt is also high, which makes economic actors' adjustment more difficult to the slowdown in economic growth, due to the higher debt burden.

In China, the world's largest exporter, the growth model was mainly based on exports prior to the crisis, and thus China achieved high growth through emerging imbalances. The structure of the Chinese economy was dominated by industry and investments. The shift to the new growth model reduces the imbalances and seeks to establish an economic structure sustainable in the long run (with a bigger role for household consumption). At the same time, however, **the previous strong growth has slackened**, and thus Chinese growth dropped to 6.6 percent in 2018, the lowest level since the crisis (Table 1-3). The economic restructuring halted in the past two years, and **therefore looking ahead the future performance of the**

[2] Argentina, Brazil, China, Columbia, India, Indonesia, Russia, Saudi Arabia, South Africa.

Chinese economy is surrounded by downside risks on account of the protracted restructuring and the challenges faced by the financial system (massive growth in private sector indebtedness and shadow banking). To prevent this, in early March the government announced that it wished to keep economic growth in the 6–6.5-percent band by tax cuts worth billions, infrastructure investments and subsidised loans to small enterprises. Moreover, Xiang Songzuo, the former chief economist of the People's Bank of China, believes that shadow lending may be supported, contrary to earlier policy measures, to promote growth. As China is deeply embedded in global value chains, a slowdown in GDP growth also strongly influences world trade.

Table 1-3: Change in GDP growth forecasts

	2018	2019			2020		
		IMF (October 2018)	Consensus Economics (March 2019)	Difference	IMF (October 2018)	Consensus Economics (March 2019)	Difference
Germany (27.3%)	1.4	1.9	1.0	-0.9	1.6	1.5	-0.1
Italy (5.2%)	0.9	1.0	0.1	-0.9	0.9	0.6	-0.3
Austria (4.7%)	2.7	2.2	1.8	-0.4	1.6	1.7	0.1
France (4.3%)	1.5	1.6	1.3	-0.3	1.6	1.3	-0.3
United Kingdom (3.7%)	1.4	1.5	1.3	-0.2	1.5	1.5	0.0
Netherlands (3.5%)	2.5	2.6	1.6	-1.0	2.3	1.6	-0.7
USA (2.9%)	2.9	2.5	2.4	-0.1	1.8	2.0	0.2
Belgium (2.2%)	1.4	1.5	1.3	-0.2	1.5	1.3	-0.2
China (1.9%)	6.6	6.2	6.2	0.0	6.2	6.1	-0.1

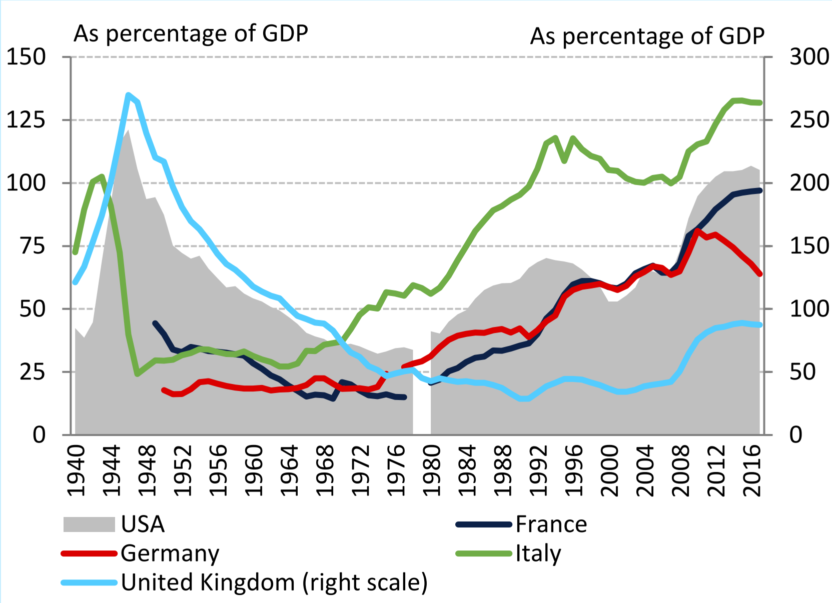
Note: The share of goods exports based on 2018 data is shown in brackets.
Source: Consensus Economics, Eurostat, IMF

Throughout Europe, economic growth is mainly driven by domestic demand, whereas net exports curbed growth in several countries in the second half of 2018, in the context of weakening and increasingly uncertain external economic activity. Following the exceptional GDP growth in 2017 (2.4 percent), euro area economic performance gradually decelerated in 2018, managing merely 1.1 percent in the fourth quarter compared to the same period of the previous year. Germany's economic output rose by 1.4 percent in 2018, the slowest pace in five years. The French economy also faltered, with growth coming in at 1.5 percent in 2018. Italy has moved into technical recession, as GDP contracted in the third and fourth quarter of 2018 on a quarterly basis, which has been unprecedented since early 2013.

The economic slowdown in the euro area is attributable to global and idiosyncratic factors. In the context of the general slowdown in global economic growth, **the trade tensions between the US and China also affected Europe through indirect channels, which also undermined the trade balance**. Additionally, euro area economic performance was also hampered by idiosyncratic factors. German industrial production was weak in the second half of 2018, which may be explained by the licensing procedures that are protracted due to the **European Union's emission regulation**. Italy's performance was marred by high government debt and the concerns related to the adoption of the budget.

In parallel with falling indicators of economic activity, expectations for euro area economic performance this year have been considerably dampened, which is principally linked to the deterioration of the German and Italian outlook (Table 1-3). German prospects are diminished by the **falling industrial production and lower exports**. In the years ahead, the concerns related **high government debt**, the budget and Italy's major government securities market exposure will weigh on Italian growth. The current level of Italian government debt is far more than double the level of 60 percent of GDP stipulated in the Maastricht criteria (Chart 1-15).

Chart 1-15: Debt-to-GDP ratio in advanced countries



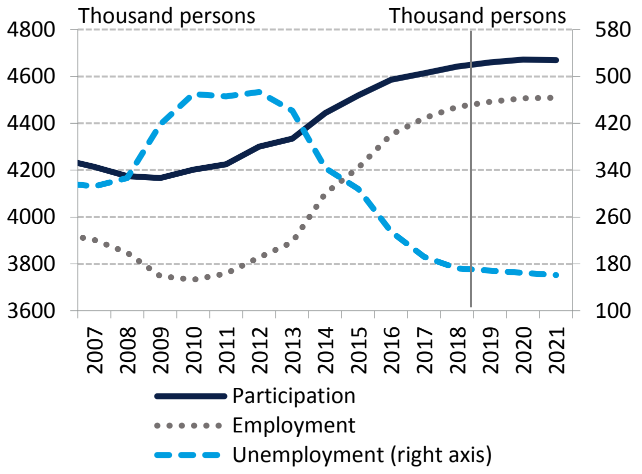
Source: IMF

In addition, **the medium-term growth prospects of the euro area are surrounded by additional downside risks**. The output of the automotive industry may be further reduced by the heightening trade tensions as well as the **slump in Chinese car sales** and the **changing global trends in the industry** (the growth of electromobility, environmental rules). **The exit of the United Kingdom from the EU**, and the uncertainty arising from the exit negotiations may have a significantly negative impact on the medium-term growth of the euro area. A no-deal Brexit would blight the growth prospects of European economies through direct trade channels as well as through major negative spillover effects. The direct effects would be primarily felt in the case of agricultural products as well as machinery and equipment, and supplier networks would also be severely impacted on account of the low-inventory production processes. The uncertainty surrounding the exit also affects companies' investment decisions, the postponement of which also points towards slower European economic growth.

1.3. Labour market forecast

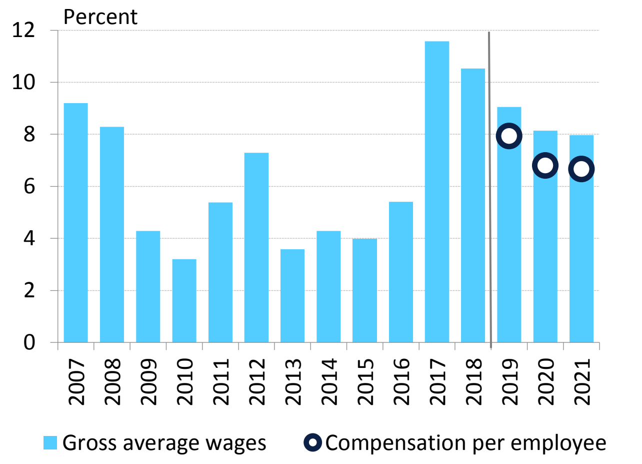
Over our forecast horizon, with the continued, moderate increase in employment, the unemployment rate will decline to a historical low level, and the labour market is moving closer to full employment. Intense competition for skilled workers and the dynamic pay rises of large corporations prompt a significant part of companies to implement higher wage increases than previously expected. The inflationary effect from the cost side will be moderated by the reductions in social security contribution set forth in the wage agreement. In addition to tight labour market conditions, the continued rise in wages may be increasingly determined by the improvement in productivity and competitiveness.

Chart 1-16: Employment, participation and unemployment in the whole economy



Source: HCSO, MNB

Chart 1-17: Annual changes in gross average wages and labour cost in the private sector



Source: HCSO, MNB

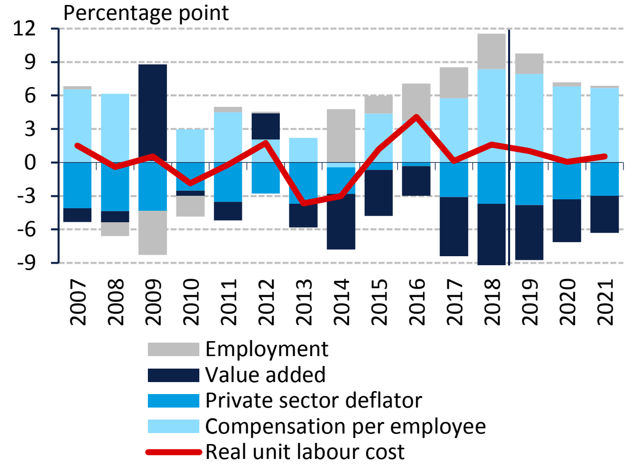
According to our expectations, with the increasingly effective demographic constraints the **growth rate of participation decelerates and at the end of the forecast horizon the expansion in labour supply comes to a halt** (Chart 1-16). In parallel with the demographic trends and in line with recent years' dynamic expansion in employment, the potentially available labour reserve dropped to a historical low, which represents an increasingly persistent constraint to the continued increase in employment.

The growth rate of employment decelerates gradually over the forecast horizon. In parallel with economic growth, the high labour demand of the private sector contributes to further expansion in employment. However, companies' efforts to expand headcount are rendered especially difficult by the scarcity and mismatch problems of labour reserves (inadequate skills of the labour force and the lack of job mobility).

The number of public workers decreased steadily in recent quarters, and **by the end of the forecast horizon public employment is expected to decline by an additional 20,000 workers**. In the tight labour market environment, some of those who leave public employment may return to the primary labour market. Employment in the public sector will remain practically unchanged in the coming years.

In parallel with the continued, moderate increase in employment, the **current unemployment rate of 3.7 percent will drop to 3.4 percent** by the end of the forecast period. In the historically tight labour market environment, there is fierce competition among companies to retain labour and fill vacancies, which leads to dynamic wage growth (Chart 1-17). **The intense competition for skilled labour and the dynamic pay rises by large corporations prompt a significant part of companies to implement higher wage increases than previously expected. Therefore, we anticipate stronger wage dynamics than assumed in our December projection.** According to our assumption, restructuring of the cafeteria system may raise private sector wage growth by 1 percentage point.

Chart 1-18: Decomposition of real unit labour cost growth in the private sector



Note: For 2015, average labour cost growth measured in labour statistics is used instead of the fall registered in the national accounts.
Source: HCSO, MNB

Thanks to the dynamic wage growth in recent years, the wage share has caught up with its historical average. **Besides the tight labour market conditions, the continued rise in wages may be increasingly determined by the improvement in productivity and competitiveness.** In the coming years, the dynamics of the wage cost will slightly exceed productivity growth on average (Chart 1-18).

The inflationary effect from the cost side will be moderated by the contribution reductions set forth in the wage agreement. The social security contribution decreased by a total of 7.5 percentage points in the recent years. Looking forward, further cuts will be implemented in four steps of 2 percentage points each, depending on the increase in real wages. In accordance with this year's budget, the next 2-percentage-point cut in social contributions is expected for 1 July. According to our projection, the following reduction in social contributions will take place in the last quarter of 2020.

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

	2018	2019		2020		2021	
	Actual	Projection					
		Previous	Current	Previous	Current	Previous	Current
Inflation (annual average)							
Core inflation[1]	2.5	3.5	3.8	3.3	3.4	3.0	3.0
Core inflation excluding indirect tax effects	2.4	3.2	3.4	3.1	3.2	3.0	3.0
Inflation	2.8	2.9	3.1	3.0	3.1	3.0	3.0
Economic growth							
Household consumer expenditure	5.3	3.4	3.7	3.1	3.2	2.8	2.9
Government final consumption expenditure	0.0	1.0	0.7	1.0	1.1	0.5	0.6
Gross fixed capital formation	16.5	8.1	9.7	0.7	2.7	1.6	2.0
Domestic absorption	7.0	4.0	4.6	2.0	2.6	2.0	2.2
Exports	4.7	6.5	5.6	6.5	6.3	6.7	6.3
Imports	7.1	7.2	6.6	5.7	5.9	5.8	5.7
GDP	4.9	3.5	3.8	3.0	3.2	3.0	3.0
Labour productivity[6]	2.7	2.9	2.7	2.7	2.8	3.0	2.9
External balance[2]							
Current account balance	0.6	0.7	0.2	1.3	0.4	1.9	0.9
Net lending	2.3	2.7	2.3	3.1	2.3	3.1	2.3
Government balance[2,5]							
ESA balance	-2.2	(-1.6) – (-1.7)	(-1.5) – (-1.6)	(-1.4) – (-1.6)	(-1.4) – (-1.6)	(-1.4) – (-1.6)	(-1.5) – (-1.7)
Labour market							
Whole-economy gross average earnings[3]	11.1	8.5	9.2	6.9	7.2	6.9	7.5
Whole-economy employment	1.1	0.5	0.5	0.3	0.3	0.0	0.0
Private sector gross average earnings[3]	10.5	8.2	9.0	7.3	8.1	7.0	8.0
Private sector employment	1.3	0.9	0.9	0.4	0.4	0.2	0.2
Unemployment rate	3.7	3.6	3.6	3.5	3.5	3.4	3.4
Private sector nominal unit labour cost	5.3	3.6	4.8	3.2	3.2	2.1	3.4
Household real income[4]	6.8	3.0	3.4	2.6	3.0	2.4	2.8

[1] Based on seasonally unadjusted data.
[2] As a percentage of GDP.
[3] For full-time employees, calculated from levels.
[4] MNB estimate.
[5] The lower value of the forecast band shows the ESA balance if the Country Protection Fund is used, while the higher value shows the ESA balance if the Country Protection Fund is not used. The ESA value for 2018 represents the net lending of the general government from the preliminary financial accounts.
[6] Whole economy, based on national accounts data.

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

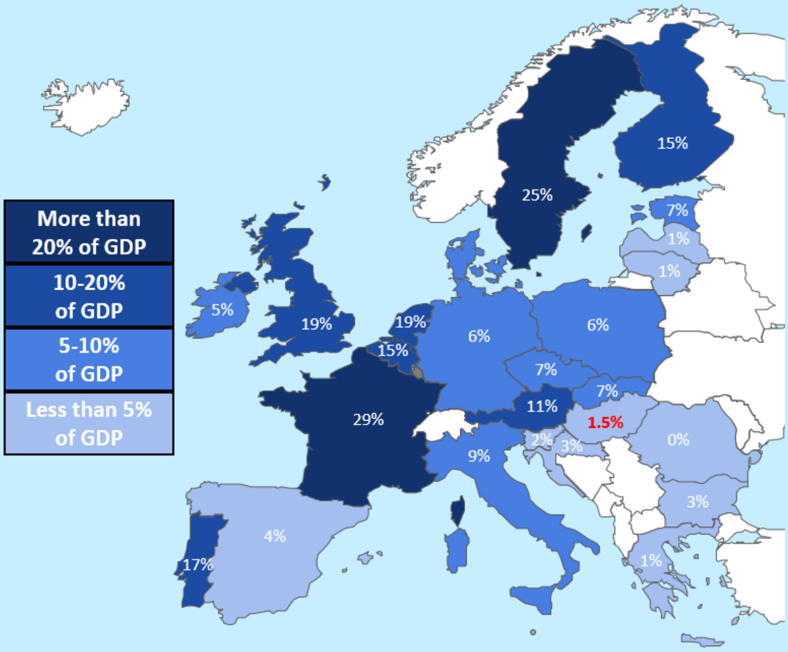
	2019	2020	2021
Consumer Price Index (annual average growth rate, %)			
MNB (March 2019)	3.1	3.1	3.0
Consensus Economics (March 2019)[1]	2.6 – 3.0 – 3.3	2.4 – 3.1 – 3.8	
European Commission (February 2019)	2.8	3.0	
IMF (October 2018)	3.3	3.0	3.0
OECD (November 2018)	4.0	4.0	
Reuters survey (March 2019)[1]	2.7 – 2.9 – 3.3	2.2 – 3.0 – 3.8	2.4 – 3.0 – 3.2
GDP (annual growth rate, %)			
MNB (March 2019)	3.8	3.2	3.0
Consensus Economics (March 2019)[1]	2.3 – 3.5 – 4.2	2.2 – 2.8 – 3.5	
European Commission (February 2019)	3.4	2.6	
IMF (October 2018)	3.3	2.6	2.4
OECD (November 2018)	3.9	3.3	
Reuters survey (March 2019)[1]	3.2 – 3.7 – 4.2	2.2 – 2.9 – 3.5	
Current account balance[3]			
MNB (March 2019)	0.2	0.4	0.9
European Commission (November 2018)	0.0	0.3	
IMF (October 2018)	2.1	1.9	1.4
OECD (November 2018)	0.9	0.6	
Reuters survey (March 2019)	0.5 – 1.4 – 2.3	0.9 – 1.7 – 2.8	
Budget balance (ESA 2010 method)[3,4]			
MNB (March 2019)	(-1.5) – (-1.6)	(-1.4) – (-1.6)	(-1.5) – (-1.7)
Consensus Economics (March 2019)[1]	(-1.5) – (-2.0) – (-2.5)	(-1.2) – (-2.0) – (-2.8)	
European Commission (November 2018)	-1.9	-1.8	
IMF (October 2018)	-2.0	-1.9	-1.8
OECD (November 2018)	-2.0	-2.0	
Reuters survey (March 2019)[1]	(-1.7) – (-2.0) – (-2.4)	(-1.3) – (-1.9) – (-2.6)	
Forecasts on the size of Hungary's export markets (annual growth rate, %)			
MNB (March 2019)	3.8	4.0	4.0
European Commission (November 2018)[2]	4.7	4.1	
IMF (October 2018)[2]	4.8	4.5	4.3
OECD (November 2018)[2]	4.3	4.2	
Forecasts on the GDP growth rate of Hungary's trade partners (annual growth rate, %)			
MNB (March 2019)	2.1	2.2	2.2
Consensus Economics (March 2019)[1]	1.8	1.9	
European Commission (February 2019)[2]	2.0	2.1	
IMF (January 2019)[2]	2.1	2.0	2.0
OECD (March 2019)[2]	1.7	1.8	

[1] For the 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 forecasts for all partner countries.
[3] As a percentage of GDP.
[4] The lower value of the forecast band shows the ESA balance if the Country Protection Fund is used, while the higher value shows the ESA balance if the Country Protection Fund is not used.
Source: Consensus Economics, European Commission, IMF, OECD, Reuters poll

Box 1-3: The Bond Funding for Growth Scheme (BGS)

In addition to bank loans, raising funds in the bond market is an alternative source of finance for companies. In the Anglo-Saxon countries, in view of the level of development of the capital market, bonds traditionally play a stronger role in corporate financing than in the countries of the European Union, where bank loans dominate. In the USA, the share of bonds within non-financial corporations' debt-type financing amounts to nearly 70 percent, while this ratio is reversed in the EU. At the end of 2018 Q3, the bonds outstanding of non-financial corporations in the European Union exceeded EUR 2,000 billion, which corresponds to roughly 13 percent of GDP. However, significant differences are observed across Member States. It is typically the companies of more developed economies that use the bond market for raising funds. Volume of corporate bonds outstanding is the highest in France, where it reaches nearly 30 percent of GDP, followed by Sweden, the Netherlands and the United Kingdom, each with outstanding amounts of around 20 percent of GDP. **In Central and Eastern European countries, the ratio of companies' funds obtained from the bond market is below 10 percent, but the Hungarian corporate bond market falls far short of even the values observed in the neighbouring countries** (Chart 1-19). Within the European Union, in the case of the less developed countries, not only bonds outstanding, but total corporate indebtedness is also lower. In the case of these countries, including Hungary, one of the indispensable conditions for successful catching up and real economy convergence is financial convergence, within the framework of which the depth of the capital market also increases in addition to bank intermediation.

Chart 1-19: Outstanding bonds of non-financial corporations in the European Union, as percentage of GDP (2018 Q2)



Source: Eurostat

In Hungary, as a result of the turnaround in lending that took place in the past years, the volume of corporate lending can already be considered adequate, but funding has not yet been sufficiently diversified. **Domestic companies rely excessively on the banking sector**, which is reflected by the fact that while at end-2018 the value of non-financial corporations' bank loans exceeded 17 percent of GDP, their bonds outstanding were around a mere 1.5 percent of GDP, which was well below the averages of both EU countries and the Central and Eastern European countries.

By expanding the liquidity of the domestic corporate bond market, on 1 July 2019 the MNB will launch its corporate bond purchase programme with a total amount of HUF 300 billion to improve the efficiency of monetary policy transmission (Table 1-6). With the new monetary policy instrument, the **Bond Funding for Growth Scheme (BGS)**, the MNB intends to facilitate the diversification of the financing structure of the domestic corporate sector, i.e. an adequate degree of domestic companies' reliance on obtaining funds from the bond market as well, in addition to bank loans. **Within the scheme, the central bank will purchase bonds of non-financial corporations that have a good rating**, and it will also be possible to purchase securities backed by corporate credit claims. With this scheme, which dovetails with the MNB's previous measures to facilitate companies' supply with funds, the central bank will follow the practice of leading European central banks, the European Central Bank and the Bank of England, which also purchased corporate bonds as part of their set of unconventional monetary policy instruments.

Table 1-6: Main parameters of the Bond Funding for Growth Scheme

Total amount	HUF 300 Bn
Start of the purchases	1 July 2019
Issuers of the bonds to be purchased	domestic non-financial corporations
Denomination of the bonds to be purchased	HUF
Original maturity of the bonds to be purchased	minimum 3 years, maximum 10 years
Credit rating of the bonds to be purchased	at least B+
Proportion of the MNB's purchase per bond series	max. 70 per cent
Maximum exposure of the MNB per corporate group	HUF 20 Bn
Minimum volume per issuance	HUF 1 Bn
Sterilisation of the excess liquidity arising from the purchases	by the preferential deposit facility

Note: The detailed terms and conditions of the scheme will be published on the MNB's website.
Source: MNB

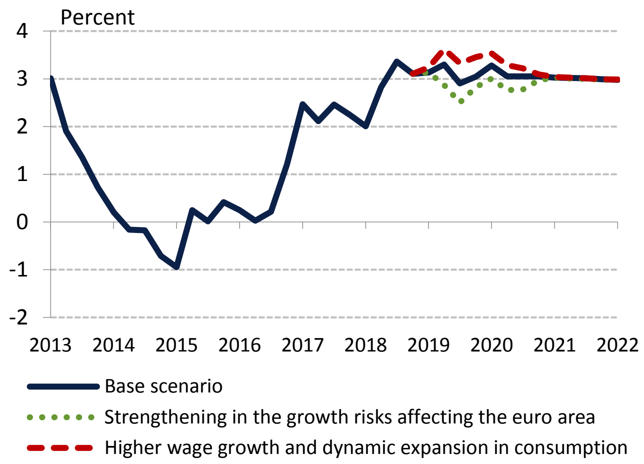
The BGS will contribute to increasing the efficiency of monetary policy transmission. By increasing bond market liquidity, the MNB's intention is for economic agents to make use of other channels of funding as well in addition to bank loans, and thus central bank's interest rate decisions may more efficiently influence developments in corporate funding costs and, through that, achieving and maintaining price stability target. **Companies' diversified fund raising may trigger healthy competition between bank loans and funds from the bond market.** In addition, in case of a possible crisis, an established corporate bond market may contribute not only to the recovery of the market on its own, but it also creates an opportunity for the central bank to directly and efficiently support companies' access to funds, thus reducing the period of recovery from the crisis.

The scheme does not affect the monetary policy conditions of the MNB. In terms of interest rate policy stance, the scheme is neutral, as the additional amount of money in the banking sector resulting from the central bank purchases carried out within the BGS will be sterilised by the MNB using the preferential deposit facility, the interest rate on which equals the base rate. With the bonds purchased by the MNB, the latter will extend the set of securities eligible as central bank collateral, thus providing regulatory support and increasing investors' demand for bonds. In addition, in order to encourage market making that contributes to market liquidity, the MNB will also provide an opportunity of securities lending for credit institutions doing the market making. The available quotes, and thus the scope of investors, may expand with the availability of price monitoring, providing further support to diversified corporate financing.

2. Effects of alternative scenarios on our forecast

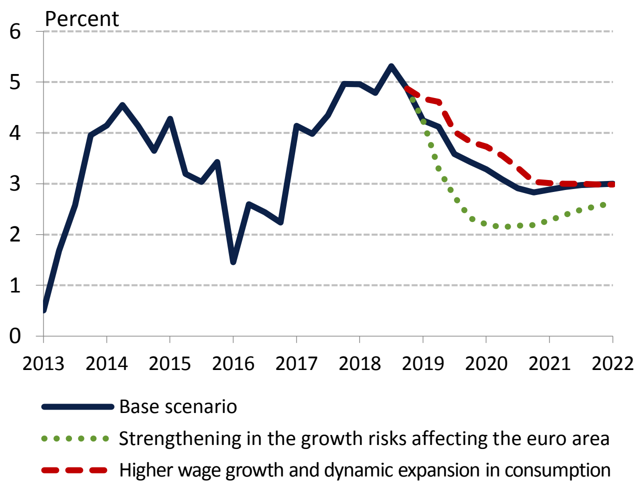
The macroeconomic outlook is surrounded by both upside and downside risks. In addition to the baseline projection in the March Inflation report, the Monetary Council highlighted two alternative scenarios. In the case of the alternative scenario assuming higher wage growth and dynamic expansion in consumption, domestic economic growth is stronger and inflation is higher than in the forecast of the baseline scenario. Materialisation of the scenario presenting strengthening in the growth risks affecting the euro area results in a lower inflation path and more restrained growth compared to the baseline scenario. In addition to the scenarios set forth above, the Monetary Council discussed, as further risks, scenarios that present a looser external monetary policy environment, a larger impact of consumption expansion on inflation as well as the materialisation of competitiveness reforms.

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



Source: MNB

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



Source: MNB

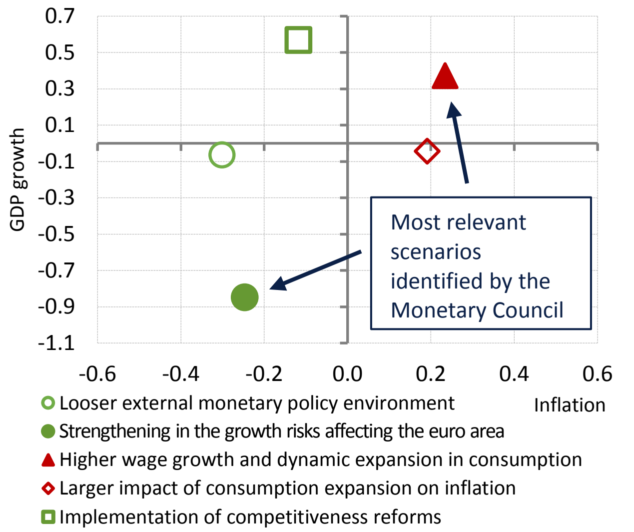
Higher wage growth and dynamic expansion in consumption

In the past period, in parallel with a dynamic expansion in employment and a decline in unemployment, **labour market conditions became increasingly tight**. Over the past two years, the minimum wage and the guaranteed wage minimum rose by a total of 24 percent and 40 percent, respectively. At end-2018, employer and employee associations concluded an agreement for two years, based on which **the minimum wage and the guaranteed wage minimum will increase by an additional 8 percent both in 2019 and 2020**, while the wage recommendation is also 8 percent. In addition, **the outcome of collective wage negotiations at large corporations reflects** employees' double-digit pay rise demands and **the tight labour market situation.** In addition to the wage agreements announced in the past months, earlier trends also indicate that **double-digit wage increases at large corporations are likely to continue**. With **the pass-through** of pay rises at large corporations **towards smaller companies, double-digit wage increases may become general** in the whole private sector.

In our baseline scenario, based on large corporations' wage agreements announced in the past period, double-digit wage increases continue in this segment, while **for smaller companies the 8-percent wage recommendation and minimum wage increase may function as guidance**. Looking ahead, consumption dynamics will decline.

According to the assumptions of **our alternative scenario**, small and medium-sized enterprises are compelled to offset the labour-draining effect of the large corporation sector by dynamic wage increases. The **effect of the pass-through of pay rises at large corporations is felt in the economy as a whole**, and double-digit wage increases will become

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 marker means tighter and the green markers mean looser monetary policy than the baseline forecast.
Source: MNB

general in the private sector. All of this is coupled with stronger consumption dynamics and stronger wage cost increases, **which is consistent with tighter monetary conditions**.

Strengthening in the growth risks affecting the euro area

In 2018, euro area economic growth decelerated gradually; in the fourth quarter the area expanded by a mere 1.1 percent year-on-year. Moreover, new information received in the past period in connection with the prospects of European economic activity indicates a slowdown in economic performance. In parallel with the decline in the indicators of economic activity, **expectations regarding this year's economic performance of the euro area also moderated**. The economic slowdown in the euro area **is attributable to global as well as one-off factors**. In addition to the general deceleration in global economic activity, the protracted **trade tensions** between the USA and China had an unfavourable impact on Europe as well, through indirect channels. **Further potential risks** to be identified are the **high government debt** of euro area member countries and **the vulnerability of the Italian banking sector**. In addition, the **exit of the United Kingdom from the EU** and the uncertainty stemming from the exit negotiations may have a major negative impact on the medium-term growth of the euro area.

In the baseline scenario, with the general slowdown in global economic activity, compared to our earlier expectations, more restrained industrial growth in Hungary's main trading partners, the slowing growth dynamics of European household consumption and the deteriorating European business confidence **point to more restrained European economic activity, mainly in the short run**.

In the **alternative scenario** we assume that the medium- and long-term growth prospects of the euro area are considerably impaired by the **intensification of trade tensions**, the **escalation of structural problems** and **Brexit without an agreement**, which may cause serious damage to the supplier networks as well. As a consequence of all this, **the euro area economy would fall into recession**, also reducing European inflation, and thus the achievement of the domestic inflation target is **consistent with looser monetary conditions**.

Other risks

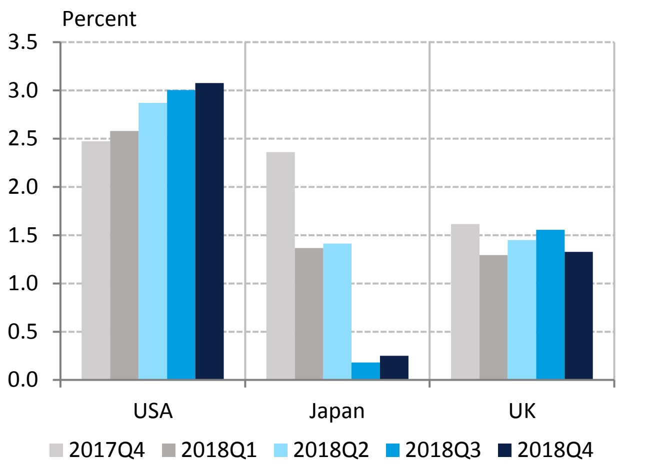
In addition to the scenarios highlighted above, the Monetary Council considered three more alternative scenarios. The scenario that assumes a **looser external monetary policy environment** suggests a more moderate inflation path and a somewhat lower growth path compared to the baseline scenario. The scenario that assumes a **larger impact of consumption expansion on inflation** results in a higher inflation path than the baseline scenario. If the alternative scenario that assumes the **implementation of competitiveness reforms** materialises, it will result in lower inflation and higher growth than the baseline scenario.

3. Macroeconomic overview

3.1. Evaluation of international macroeconomic developments

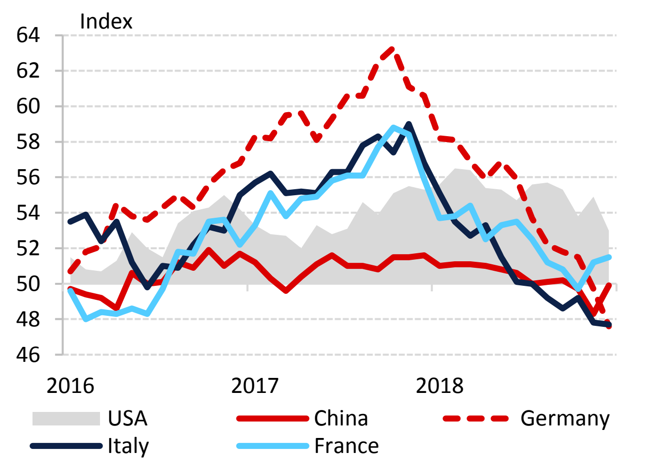
The global economic expansion continued in 2018 Q4, while risks intensified. The Visegrád region is still the growth centre of the European Union. Due to the steady deterioration in global growth prospects and the downside risks to inflation, the expected interest rate path of world's leading central banks has flattened even more in the last quarter. In the region, no central bank has adjusted monetary conditions, while the Chinese central bank decided to introduce a new lending incentive instrument and reduce the reserve requirement ratio.

Chart 3-1: Annual changes in GDP in certain key global economies



Note: Seasonally adjusted series.
Source: OECD

Chart 3-2: Evolution of manufacturing PMI



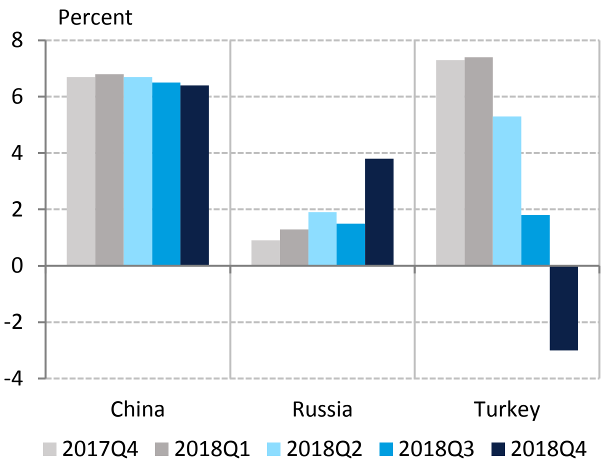
Note: Seasonally adjusted series.
Source: Bloomberg

3.1.1. Developments in globally important economies

In the 2018 Q4, the US economy expanded at the fastest pace since 2015 **with a rate of 3.1 percent year-on-year** (Chart 3-1); therefore, the economy expanded by 2.9 percent overall in 2018. Growth was mainly driven by household consumption, which was strongly supported by the tax reform adopted at the end of 2017 that reduced the personal income tax rate. Additionally, corporate investments also contributed significantly to last year's growth. Net exports made a negative contribution to economic performance, which was partly offset by the massive inventory investments before customs measures took effect. **The outlook for US economic growth suggests a gradual slowdown, as the effects of growth-supporting measures fade** (tax cuts and the economic stimulus effects of the infrastructure investment programme). Moreover, due to the significant weight of the US in global imports, **measures that increase trade tensions may have a substantial impact on global economic growth**. Confidence indicators for manufacturing have moved steadily downwards in 2018 in the most important economic hubs of the world (Chart 3-2).

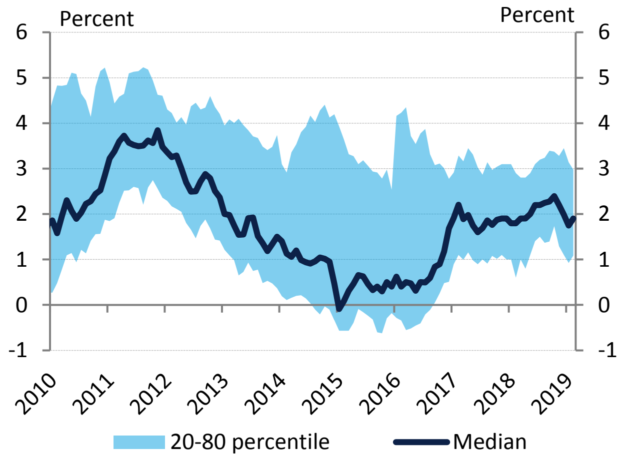
The United Kingdom's economy expanded by 1.3 percent last year, at the slowest rate since 2009. Growth was mainly supported by household consumption. Overall, corporate investments stagnated compared to the previous year, which was influenced by investments postponed due to Brexit as well as the drop in investments in the automotive industry. Brexit and the uncertainty surrounding the negotiations carry downside risks for the medium-term growth prospects. Apart from the increased uncertainty, depending on the evolving regulations, the exit will affect the extent of the decline in trade, the realisation of investments and developments, the future development of productivity, the labour market and income processes, and the financial system and budgets. Moreover, on account of the low-inventory production methods, a no-deal Brexit would severely impact supplier networks, which would exert a negative effect on the euro area economy through

Chart 3-3: Annual changes in GDP in some emerging economies



Source: Macrobond, Trading Economics

Chart 3-4: 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 close trade ties. **In Q4, the Japanese economy expanded by 0.3 percent year-on-year and by 0.5 percent compared to the previous quarter** (Chart 3-1). After the natural disasters, household consumption and investments reflected a correction in the last three months of 2018.

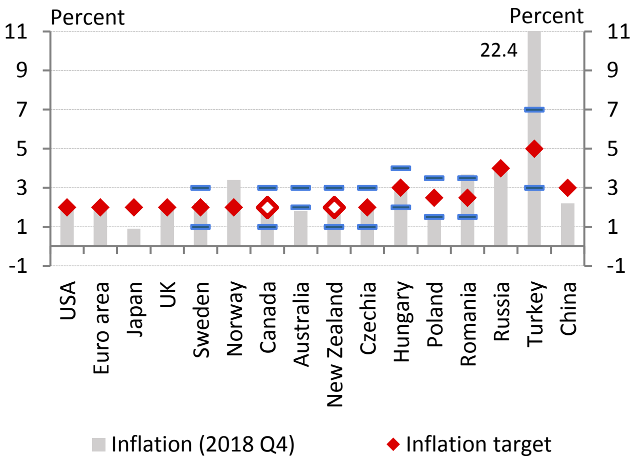
Among the major emerging countries, the Chinese economy expanded by 6.4 percent in 2018 Q4 (Chart 3-3). The economic expansion is mainly related to household consumption, although investment also contributed to growth. Net exports curbed the economic performance, which is mainly attributable to the slowdown in exports related to higher tariffs. The potential heightening of trade tensions poses downside risks to the growth prospects of the Chinese economy. **In Russia, economic growth received a major boost** in the fourth quarter, which was mainly the result of a massive positive revision related to construction activities.

Global inflation continued on a downward trend in recent months (Chart 3-4). Until January, inflation rates gradually fell, and thus in most advanced countries inflation declined to around the central bank's target again, or even below that in some cases, in the fourth quarter (Chart 3-5). After this, **global inflation rose somewhat in February**, on the back of rising commodity prices, mainly oil prices (Chart 3-6).

Following the 25-basis point interest rate hike in December, the Fed's decision-makers left the policy rate unchanged during the period, as expected. Based on the median of decision-makers' March forecasts, no further increases are expected this year, which means a lower interest rate path than in December. Due to the uncertainty related to economic developments, the FOMC will take a patient approach in shaping monetary conditions in the future. According to the Fed's March decision it will slow the pace of the decline of the reinvestment of maturing assets in its balance sheet in May and end it in late September. As a result, the size of the central bank balance sheet will not decrease further.

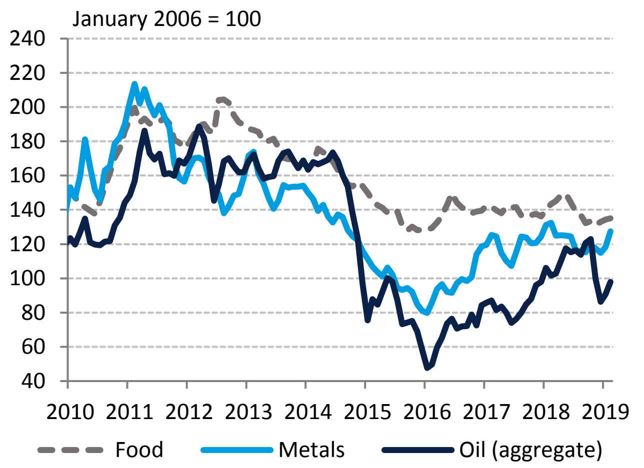
In the past quarter, the Bank of Japan did not change monetary conditions and continues to align its Quantitative and Qualitative Easing Programme with the 0-percent long-term yields. Since the announcement of yield curve targeting, the rate of monthly purchases declined further (Chart 3-7). The central bank wishes to permanently maintain the current extremely low level of short- and long-term interest rates. It revised downwards its latest forecast for economic growth and the inflation path, too. According to the decision-makers, the output gap is positive and the labour market is growing tighter, but

Chart 3-5: Inflation targets of central banks and actual inflation



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

Chart 3-6: Major commodity price indices



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

inflation has not shown any major convergence towards the inflation target.

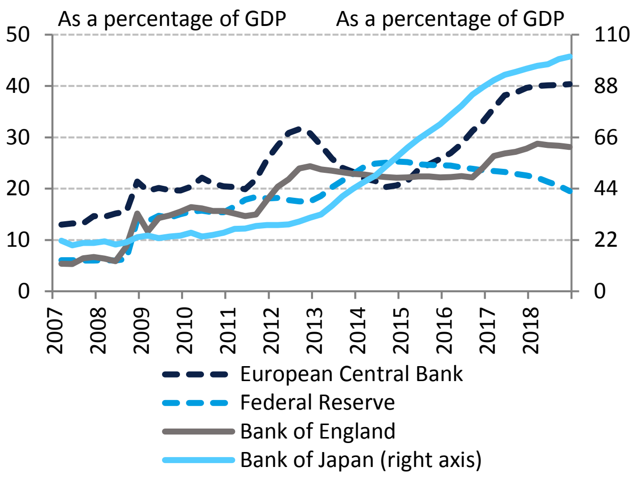
The decision-makers of the Bank of England did not change the base rate or the asset purchase programme during the past period. Downside risks have increased in the past quarter, and thus the Bank of England revised downwards its growth forecast in the February Inflation report. The economic outlook depends heavily on the outcome of the EU negotiations, especially the form of the new trade agreements. Decision-makers believe that the monetary policy response to Brexit will not be automatic, irrespective of its form, and its direction will depend on economic developments.

Defying expectations, the Russian central bank raised the key interest rate by 25 basis points to 7.75 percent in December. This was the second hike in 2018, which was mainly necessitated by short-term inflationary pressure. Although the central bank noted in the press release on the decision that further interest rate increases can be expected, if it is necessary because of the economic and inflation paths as well as external conditions, **it did not change the policy rate at its January meeting**.

In December, the People's Bank of China decided to introduce a new lending incentive instrument, the Targeted Medium-term Lending Facility, to support an adequate quantity and quality of lending to the SME sector and non-government-owned companies. **The central bank also cut the reserve requirement ratio by 1 percentage point in January.** This step was necessary to further support the real economy, establish the optimal liquidity structure and reduce financing costs. According to the central bank's press release, banks need to spend a portion of the funds from the reduction of the reserve requirement ratio on repaying the money drawn down from the Chinese central bank's medium-term lending facility. The measure is expected to release liquidity on the order of CNY 1,500 billion.

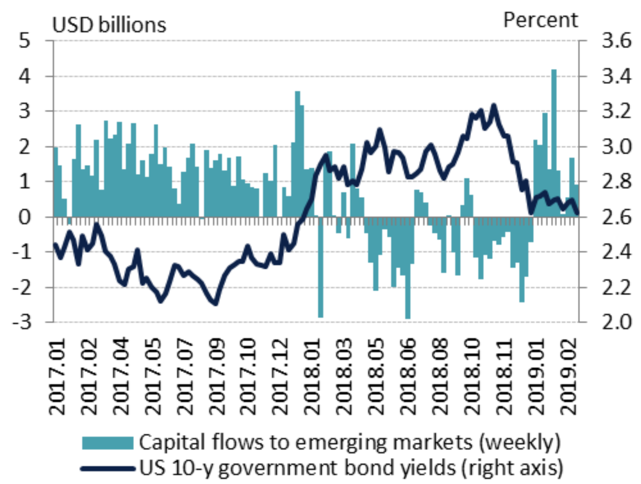
The last quarter saw an improvement in market sentiment, which was reflected in both developed and emerging bond and equity markets. Improving market sentiment was supported by the falling probability of the occurrence of several downside risks, including mainly the favourable direction that the trade negotiations between the US and China took. In early January, a positive turnaround was seen in developed and emerging bond markets, with USD 26 billion flowing into developed markets and more than USD 11 billion into emerging markets in the past three months (Chart 3-8).

Chart 3-7: Central bank balance sheet totals in developed countries



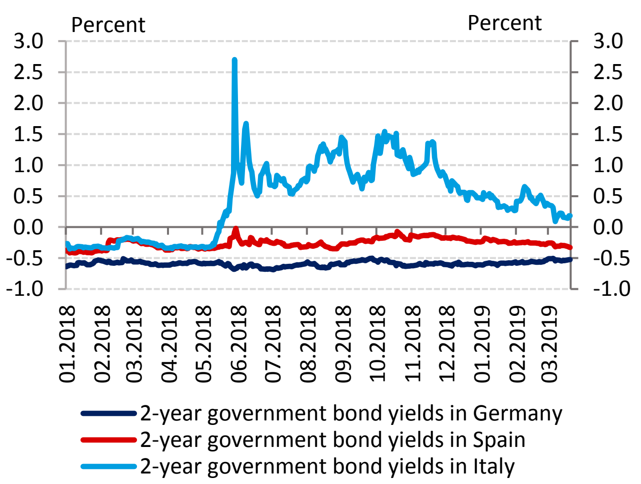
Source: Databases of central banks, Eurostat, FRED

Chart 3-8: Capital flows to emerging markets (weekly) and US 10y-government bond yields



Source: EPFR, Bloomberg

Chart 3-9: 2-year government bond yields in Germany, Italy and Spain



Developed market interest rate increase expectations rose in the period. The expected hike in the ECB's overnight deposit rate was postponed, while in the case of the Fed, the market pricing does not suggest further interest rate hikes this year. 10-year US yields fluctuated in the 2.5–2.9-percent band in the past quarter, which is a roughly 30-basis point decrease from the previous quarter. The German long-term yield was 14 basis points lower than at the end of the previous quarter. Among the euro area periphery countries, Italian bond yields fell significantly in the period, as a result of the reduction of the Italian budget deficit target and thus the conclusion of the debate between the Italian government and the EU. Italian 2-year yields fell by almost 50 basis points, and a similar downward correction occurred at the long end of the yield curve. The Spanish yield decreased by 15 basis points, while there was no major change in Portuguese 2-year bond yields (Chart 3-9). Developed country stock market indices continued the downward trend from the previous quarter at the beginning of the period and then started rising from January; therefore, overall the major European indices rose by 8 percent, while US indices climbed by 6–10 percent. The VIX index, measuring US equity market volatility, decreased again, from 22 percent to 14 percent.

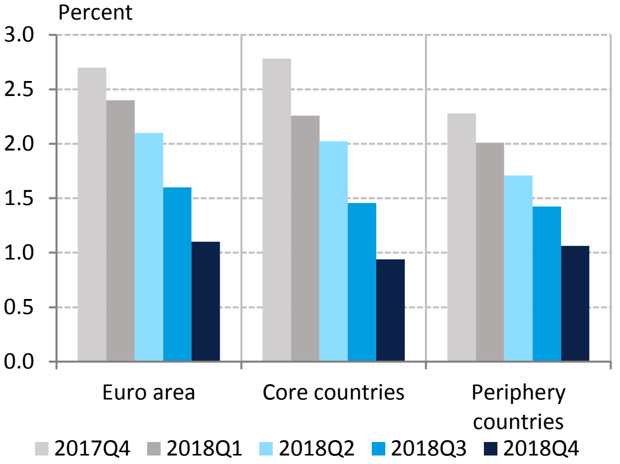
Oil prices rose by more than 10 percent during the period, mainly owing to supply-side developments. Oil prices falling to their annual low at the start of the period, increased steadily after the end of December. They were initially driven by the expectations that OPEC countries would abide by the reduced production levels undertaken from January. In early January, incoming data suggested that the OPEC members had already honoured most the production limitation in the agreement in December, which drove further oil price rises. At the end of February, Saudi Arabia indicated that it would extend the reduction of its production until the end of the year, although this announcement only triggered a temporary oil price increase. At the end of the period, the price of Brent was USD 67.5 per barrel, with WTI trading at USD 59 per barrel.

3.1.2. Macroeconomic developments in the euro area

Following the exceptional GDP growth in 2017 (2.4 percent), **euro area economic performance gradually decelerated in 2018**, growing by 1.1 percent in the fourth quarter year-on-year (Chart 3-10). **The economic performance of** Hungary's main trading partner, **Germany, rose by 1.4 percent in 2018**, increasing at the slowest pace in the last five years. The Q4 growth of 0.6 percent was supported primarily by investments, while household consumption was more moderate. In line with the poor

Source: Bloomberg

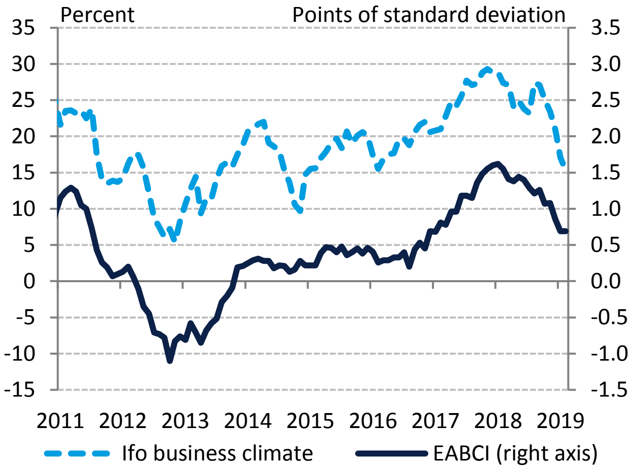
Chart 3-10: Annual changes in euro area GDP



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

Source: Eurostat

Chart 3-11: Business climate indices for Germany and the euro area



Source: European Commission, Ifo

industrial performance, German exports declined quarter-on-quarter. **Expectations regarding German economic performance this year were lowered substantially** in the past period. German prospects are diminished by the falling industrial production and lower exports. Overall, the slower growth in the euro area **core countries** mirrored that of the periphery countries. Growth in the **periphery countries** was mostly curbed by the stagnation of the **Italian economy**. Italy has moved into a technical recession, as GDP contracted in the third and fourth quarter of 2018 on a quarterly basis, which has been unprecedented since early 2013.

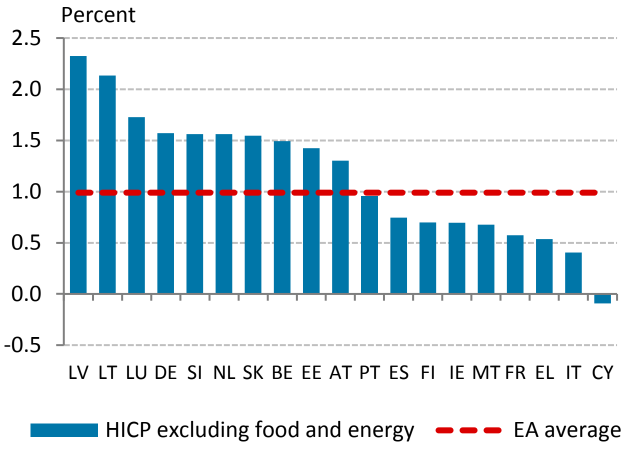
Both the business confidence index capturing the prospects of the euro area (EABCI) and the expectations for the German economy (Ifo) declined in the past period (Chart 3-11). The decline is primarily explained by deterioration in the business prospects of the responding companies. **With respect to the growth prospects of the euro area, downside risks have strengthened** (the expansion of measures curbing trade, the vulnerability of the Italian economy arising from high government debt, Brexit and the slowdown of the Chinese economy). As far as longer-term growth prospects are concerned, the slow expansion in productivity continues to pose risks.

In line with the slowdown in euro area economic growth, **inflation dropped to 1.4 percent in the euro area until January** and **was at 1.5 percent in February**. Accordingly, the consumer price index is below the 2-percent central bank target in most Member States. Besides the consumer price index the core inflation which present better the underlying inflation was also moderate in the eurozone. However, **at the level of the Member States, there are significant differences in core inflation rates** (Chart 3-12), which can be explained by the different cyclical positions of the countries. While core inflation in the Baltic States and Slovakia has been close or even above the European Central Bank's inflation target, in other countries – mainly in southern Europe – it is well below, at around 0.5 percent.[3] 5-year inflation expectations 5 years ahead still fall short of the ECB's inflation target.

At its January and March meetings, the Governing Council of the European Central Bank left the key interest rates unchanged. According to the press release, policy rates in the euro area will remain at their current levels at least “through the end of 2019”, or even after that if necessary.

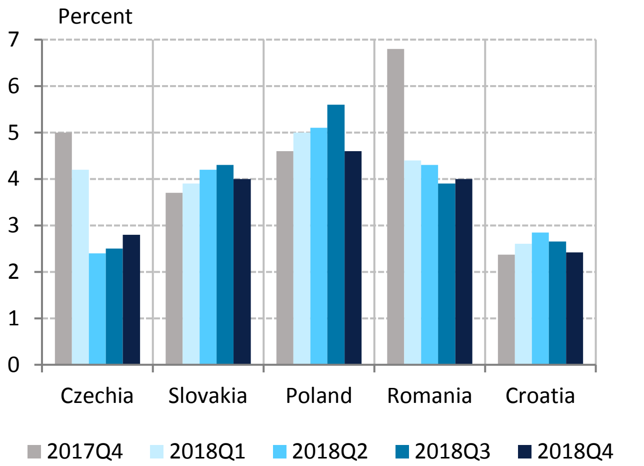
[3] The September 2018 Inflation report's Box 1-3 presents a more detailed discussion of core inflation, which is consistent with the inflation target and is calculated according to historical experience.

Chart 3-12: HICP excluding food and energy in the EA members (February 2019)



Source: Eurostat

Chart 3-13: Annual changes in GDP in CEE countries



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

The central bank also announced that it would launch a new targeted longer-term refinancing programme (TLTRO-III), with quarterly frequency and a maturity of two years between September 2019 and March 2021. This measure helps to preserve the favourable bank lending conditions and the smooth transmission of monetary policy as well as loose monetary conditions. Net purchases under the asset purchase programmes were terminated at the end of December 2018. The principal payments from maturing securities purchased under the asset purchase programme will be reinvested for an extended period of time after the key interest rates start to be raised, and in any case for as long as the Governing Council deems it necessary. According to market pricing, the key interest rates will remain at their present levels at least until the third quarter of 2020.

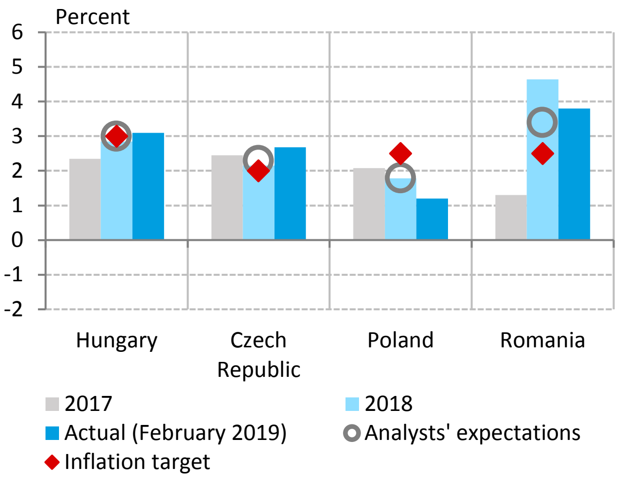
3.1.3. Developments in the CEE region

As in the previous quarters, the CEE region proved to be the engine of the European Union's growth in 2018 Q4 again (Chart 3-13). Poland recorded GDP growth of 4.6 percent, Slovakia and Romania achieved 4.0 percent, the Czech economy expanded by 2.8 percent, while the economy of Croatia expanded at a rate of 2.4 percent in Q4. Throughout the region, economic growth is mainly driven by domestic demand, whereas net exports curbed growth in several countries at the end of 2018, in the context of weakening external economic growth.

Inflation varied in the countries of the region in recent months. In the Czech Republic, inflation once again rose above the inflation target during the period and was 2.7 percent in February. At the same time, inflation fell in Poland until January and the price index was 1.2 percent in February. In Romania, inflation increased over the upper bound of the tolerance band around the inflation target to 3.8 percent, following its decrease in the beginning of the period. According to the central bank's latest projection, inflation is expected to decline further this year. Based on the March consensus forecast, average inflation may come in slightly above the central bank's target in the Czech Republic and Romania, while in Poland the pace of price increases continues to fall short of the 2.5-percent target (Chart 3-14). In the countries of the region, core inflation increased during the period (Chart 3-15).

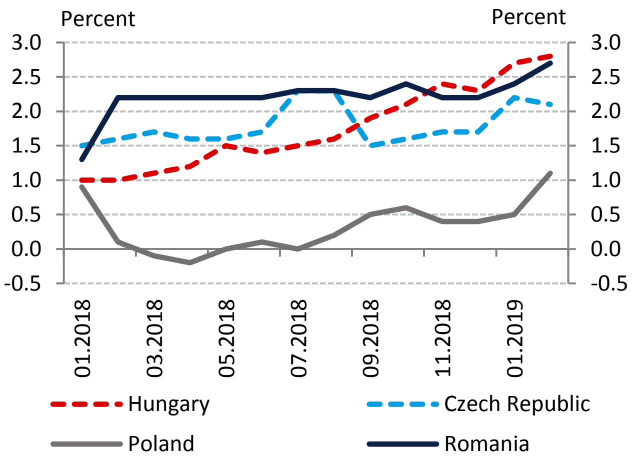
Among the central banks in the region, the decision-makers of the Czech central bank decided to leave the policy rate unchanged in December and February. According to the central bank's latest forecast, the inflation path was revised downwards for this year, while the inflation outlook remained almost unchanged over the

Chart 3-14: Inflation targets of central banks, inflation, and economic agents' expectations



Note: Analyst's expectations relate to annual average in 2019.
Source: OECD, Trading Economics, National Institute of Statistics Romania, Consensus Economics

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



Source: Eurostat

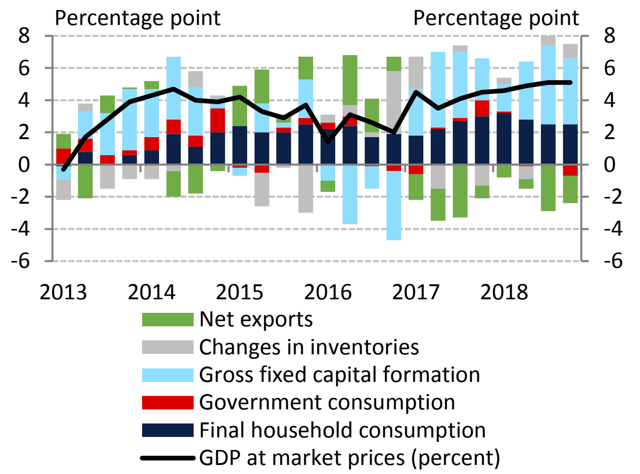
monetary policy horizon. Interest rate path forecasts have shifted somewhat higher due to the weaker-than-expected exchange rate, while the central bank projects a lower path next year on account of euro area interest rate expectations. During the past quarter, the Polish central bank's decision-makers did not change the policy rate. According to decision-makers, the central bank's measures are shaped by the deviation from the inflation target. The latest forecast shows moderate inflation ahead, rising close to the target over the monetary policy transmission horizon. The members of the Monetary Policy Council believe that the current level of interest rates facilitates achievement of the inflation target and sustainable growth in the Polish economy, as well as the preservation of macroeconomic equilibrium. The Romanian central bank's decision-makers did not change the monetary conditions in the past period. Following the high levels in the autumn months, inflation returned into the tolerance band by the end of the year, then it was fluctuating around the upper bound of the tolerance band. According to the press release of the central bank, this means that the medium-term price stability objective has been achieved, which was ensured by cautious monetary policy measures. According to the central bank's latest projection, inflation is expected to further decline this year, more than previously forecasted. After that, it is expected to start rising again, coming in somewhere below the upper bound of the tolerance band over the remainder of the forecast horizon.

3.2. Analysis of the production and expenditure side of GDP

Economic growth in Hungary rose substantially in 2018 Q4, with a wide range of sectors contributing to the 5.1-percent GDP growth. On the expenditure side, domestic demand items – consumption and investment – continued to contribute to growth to the greatest degree, while the contribution of net exports was negative. In addition to favourable wage developments, the expansion of household consumption was supported by a rising household credit market and robust consumer confidence. The substantial growth of investments was driven by preferential financing side developments: the double-digit expansion of the corporate credit market and the increase in the effective utilisation of EU funds. On the production side, as the growth in market services continued, construction as well as industrial sectors (mainly the chemical industry and food industry) contributed to GDP growth.

In 2018 Q4, Hungary's gross domestic product increased by 5.1 percent in year-on-year terms and by 1.0 percent compared to the previous quarter. As before, economic growth was mostly supported by domestic demand, primarily through the pick-up in consumption and investment. The rate of growth in the exports of goods and services declined in Q4. In parallel with the increase in domestic demand items, the expansion of goods imports exceeded export growth, and thus the contribution of net exports to growth was negative in the period between October and December (Chart 3-16).

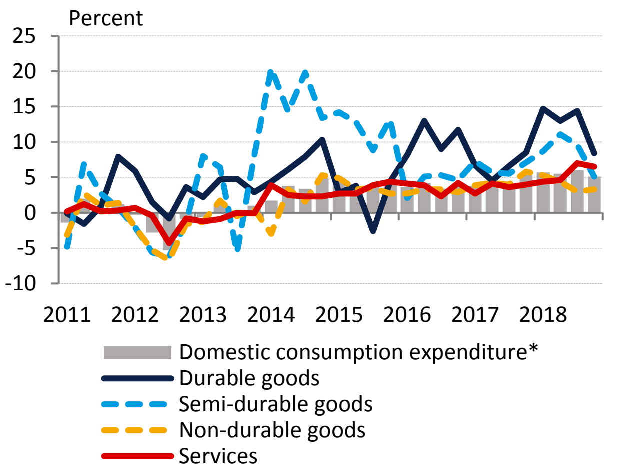
Chart 3-16: Contribution to annual changes in GDP



Source: HCSO

Household consumption growth continued in 2018 Q4. In parallel with the rising phase of the housing market cycle, **the increase in spending on durable goods**, which have a high recovery potential, **as well as on services considerably exceeded the aggregate expansion in consumption** (Chart 3-17). **Services consumption expanded by 6.5 percent**, which is exceptional even in historical comparison. Growth was supported by robust consumer confidence, willingness to borrow and **net financial wealth** as well as by a dynamic increase in wages and further expansion in employment (Chart 3-18). The consumption of durable products rose by 8.4 percent, while spending on semi-durable products rose by 5.1 percent in Q4. The dynamics of further consumption growth is also confirmed by the January data on retail sales volume, which was up by 4.9 percent year-on-year (Chart 3-19).

Chart 3-17: Annual change in aggregate consumption and its subcomponents

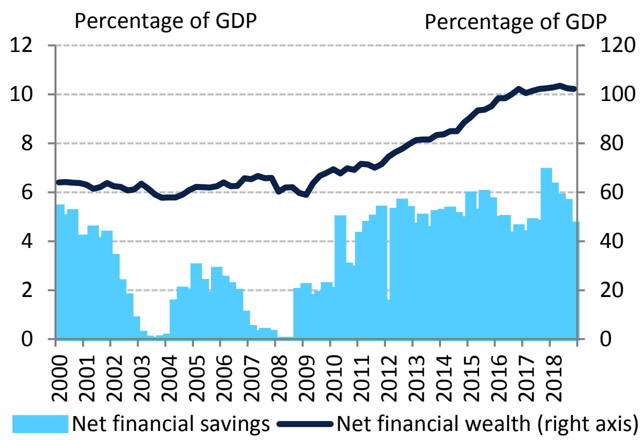


Note: *Domestic consumption expenditure does not include the balance correction for tourism and therefore differs from household consumption expenditures in the national accounts data.

Source: HCSO

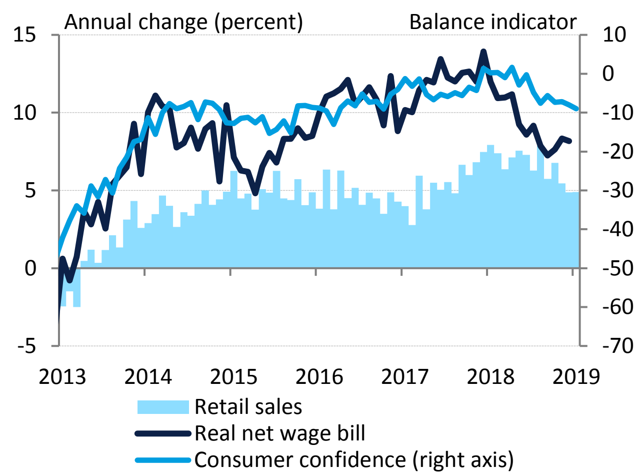
The increase in household borrowing had accelerated to over 5 percent by the end of 2018. In 2018 Q4, households' total outstanding loans vis-à-vis the financial intermediary system expanded by HUF 72 billion as a result of transactions, which contributed to the 5.2-percent year-on-year credit growth. The annual average growth in the volume of loan agreements concluded with households was 37 percent. Within that, the granting of new housing loans and personal loans increased by 31 percent and 48 percent, respectively. In nominal terms, the disbursement of housing loans has reached the volume of 2008, but in real terms the pre-crisis level was still considerably higher. In the present credit cycle, household debt is developing with a healthy

Chart 3-18: Net financial savings of households



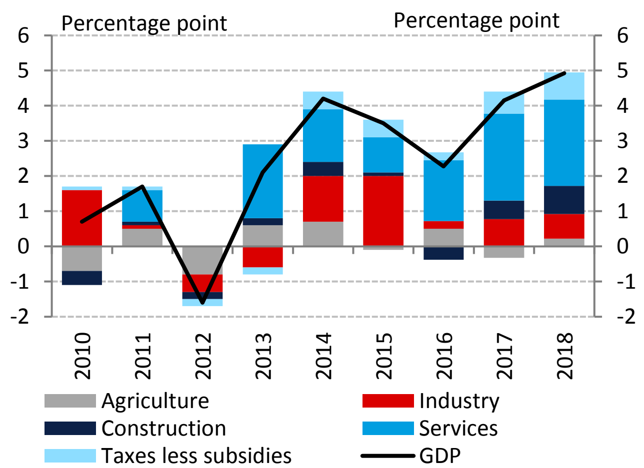
Note: Seasonally adjusted series
Source: HCSO

Chart 3-19: Developments in retail sales, income and the consumer confidence index



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

Chart 3-20: Decomposition of GDP growth from the production side



Source: HCSO

structure, owing to the prevailing debt cap rules and the growing share of loans fixed for a longer term. 94 percent of the housing loans concluded in the quarter had an interest rate fixing of over one year, and the share of Certified Consumer-Friendly Housing Loans had risen to 61 percent within the loans with interest rate fixing for at least 5 years by the end of the period under review. Based on the responses received in the Lending Survey, banks continued to register strong demand for housing loans, while there was a fall in consumer credit. Looking ahead to the next half year, however, they expect elevated demand for both credit products. The high wage growth and the favourable credit terms continue to support households' investment and consumption loan demand.

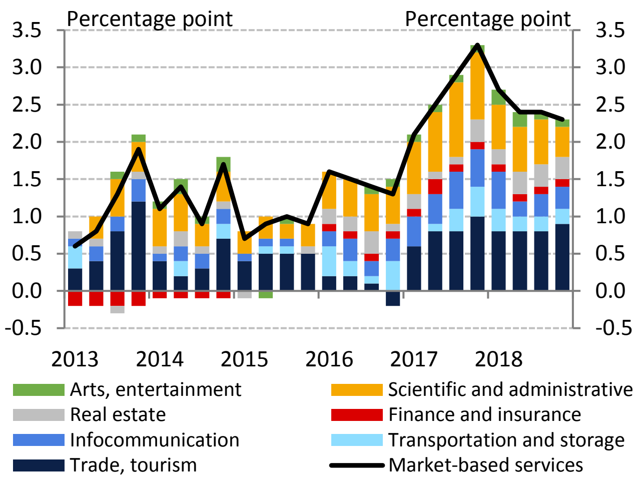
Value added increased in all sectors. In line with the strong growth in domestic demand on the expenditure side, on the production side market services supported economic growth in the fourth quarter (Chart 3-20). Growth was also significant in trade, accommodation services and catering, information and communication, professional, scientific and administrative services sectors (Chart 3-21). The dynamics of public services did not change year-on-year.

In 2018 Q4, the level of public consumption plunged, while the volume of in-kind social benefits received from the government increased considerably year-on-year.

In 2018 Q4, national economy investment rose by 17 percent year-on-year (Chart 3-22). Investment by companies producing goods or providing services for the domestic market increased less than in the previous quarter, which is explained by the fall in construction and trade investments, which offset the slight uptick in the investment activity in accommodation services, catering and the information and communication sector. Investment by the firms producing mainly for exports were up significantly, which was supported by the **huge investments by the dominant automotive industry** on the one hand, and by the considerable expansion of the manufacturing subsector (electronics, manufacturing of electronic equipment). Buoyant expansion in investment was observed in public sectors (health care, administration) and in sectors closely related to the public sector (transport, energy) – primarily as a result of developments implemented from EU and own funds. **In line with the intense investment activity, the dynamic increase in construction output continued in Q4.**

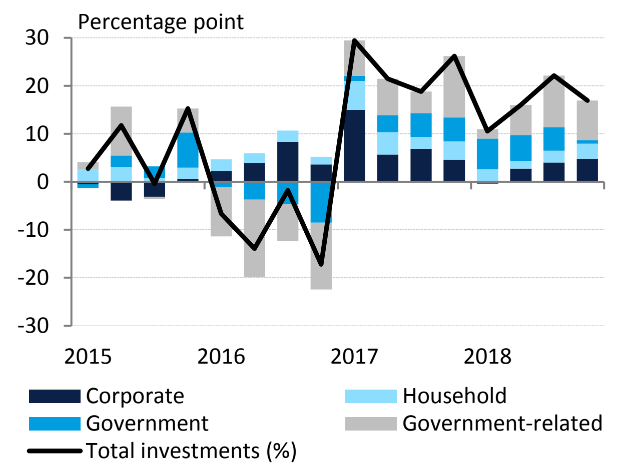
Corporate loans outstanding expanded by 14 percent year-on-year. Non-financial corporations' loans outstanding vis-à-vis the financial intermediary system increased by HUF 247 billion in Q4 as a result of

Chart 3-21: GDP growth decomposition of the subsectors of market-based services



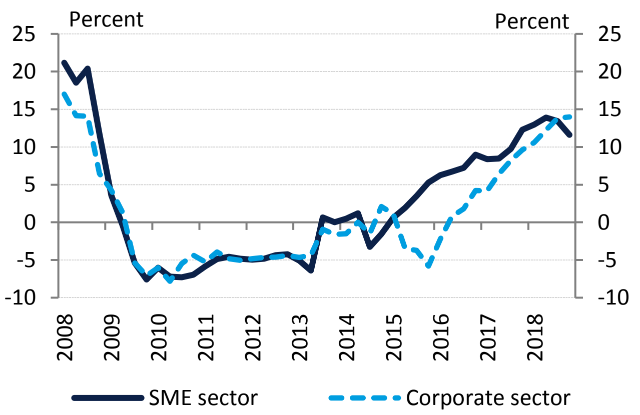
Source: HCSO

Chart 3-22: Decomposition of the annual change in investments



Source: HCSO

Chart 3-23: Annual changes in lending to non-financial corporates and SMEs



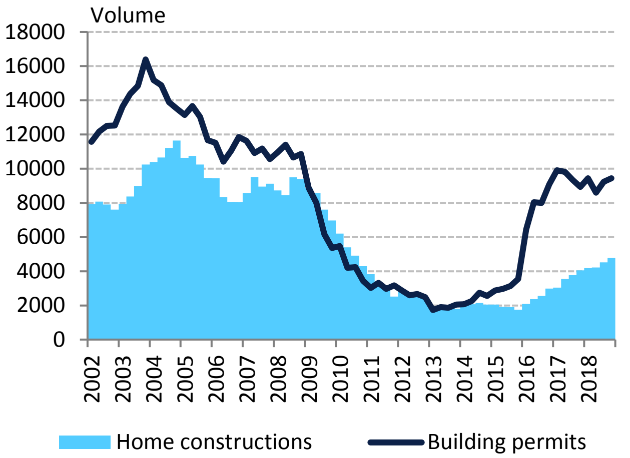
Note: Data for the corporate sector are based on transactions with the total financial intermediary system. The SME sector does not include the self-employed. Source: MNB

disbursements and repayments, and thus corporate loans outstanding and the SME sector's loans outstanding (excluding self-employed entrepreneurs) expanded by 14 percent and 11 percent, respectively, year-on-year (Chart 3-23). Corporate growth was dominated by several large-scale transactions conducted by international large enterprises linked to Hungarian investments, related to acquisitions and the purchase of commercial properties. The annual volume of the contracts signed by credit institutions and corporations decelerated slightly in quarter-on-quarter terms, which may be explained by the wait-and-see strategy related to the central bank's FGS fix scheme. According to the responses received in the Lending Survey, half of the banks registered increased demand for forint loans and short-term loans, but all banks expect growing demand for long-term loans for the first half of 2019, due to the rising financing requirements. In the next half year, banks mainly anticipate demand related to companies' tangible asset investment needs and they also expect the strong credit demand for the construction of commercial properties to persist.

Households' investment activity continued to improve in Q4. In parallel with the favourable demand conditions, the expansion in home-building continued (Chart 3-24), strongly supported by households' high propensity to borrow and the housing programmes offering favourable credit conditions. In line with the previously issued building permits, 7,463 home completions were registered in 2018 Q4, representing growth of 16.5 percent year-on-year. The number of newly issued building permits rose considerably compared to the same period of the previous year. At the same time, the number of building permits issued is still high, and thus we expect further expansion in home-building in the coming quarters. **As a result of the buoyant demand, housing prices continued to rise, driven by price changes of used and new homes as well.** The deceleration in the rise in housing prices experienced in the past quarters is still observed, which can be explained by the fact that the weight of homes outside the capital city, where the price level is typically lower, increased in housing market turnover.

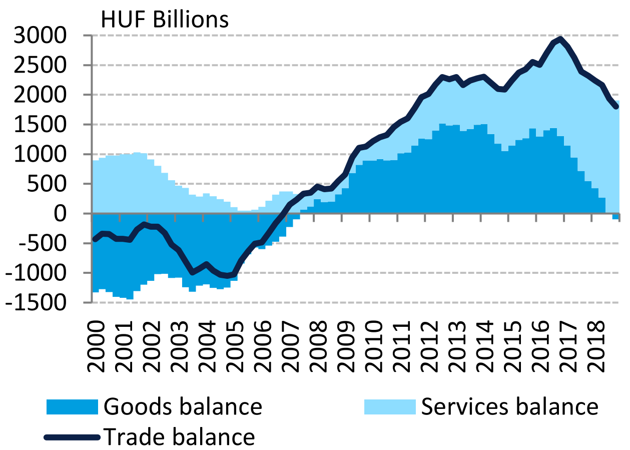
The contribution of net exports to Hungarian economic growth was negative in Q4. In parallel with the expansion in the items of domestic demand (household consumption, investments), goods imports grew at a faster pace than exports, resulting in a negative balance of goods negative in the fourth quarter. The increase in Hungary's services exports continued, mainly related to the export of financial and other business services, in addition to tourism and transportation services. The trade balance continued to

Chart 3-24: Evolution of housing starts and building permits



Note: Seasonally adjusted data.
Source: HCSO

Chart 3-25: Evolution of the trade balance



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

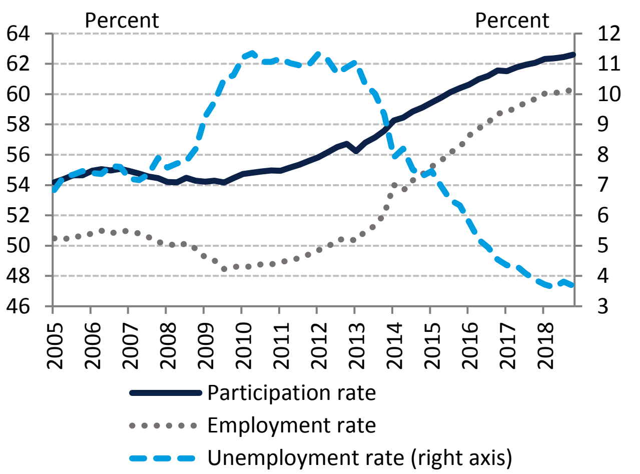
decline in the fourth quarter, but the balance of services still showed a large surplus (Chart 3-25). As a result of the import need of domestic demand items, the annual dynamics of total exports was exceeded by the growth rate of imports, and thus, **on the whole, net exports had a negative impact on economic growth in Q4.**

The contribution of agriculture to economic growth was positive in 2018. As a result of the summer weather conditions, wheat production stagnated at the previous year's level, while corn production increased considerably compared to 2017. Thus, on the whole, agricultural value added rose. Overall, last year, the contribution of inventories to growth was positive, in light of the publication of the four-quarter data.

3.3. Labour market

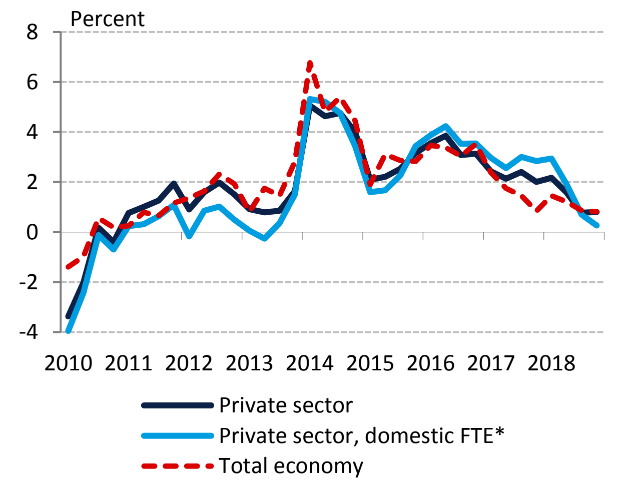
Employment in the private sector increased in the final quarter of 2018. Within the private sector, manufacturing and construction employment rose, but employment in the market services sector decreased compared to the previous quarter. The number of public workers declined to 131,000. The seasonally adjusted unemployment rate dropped to 3.7 percent in Q4.

Chart 3-26: Participation, employment and unemployment rate in the total economy



Note: Seasonally adjusted data.
Source: HCSO

Chart 3-27: 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 the last quarter of 2018, the participation rate of the 15–74 age group was 62.6 percent, while the proportion of active people in the population aged 15–64 years amounted to 72.2 percent. **According to seasonally adjusted data, the number of economically active people increased slightly** (Chart 3-26).

The rise in total employment is linked to the private sector, as employment in the public sector has not changed significantly. Within the government sector, **the number of public workers declined to 131,000**, whereas the number of workers outside the public work scheme increased.

Within the private sector, manufacturing and construction employment rose, but employment in the market services sector decreased compared to the previous quarter. Following a decline in the previous quarter, the number of people employed abroad rose to 110,000 in the fourth quarter. The full-time equivalent number of employees in Hungary adjusted for the number of hours worked grew slower than employment (Chart 3-27).

In the last quarter, the number of unemployed shrank, and **the seasonally adjusted unemployment rate fell to 3.7 percent**. Based on the rate of vacancies, corporate labour demand remained high in manufacturing and rose moderately in the market services sector.

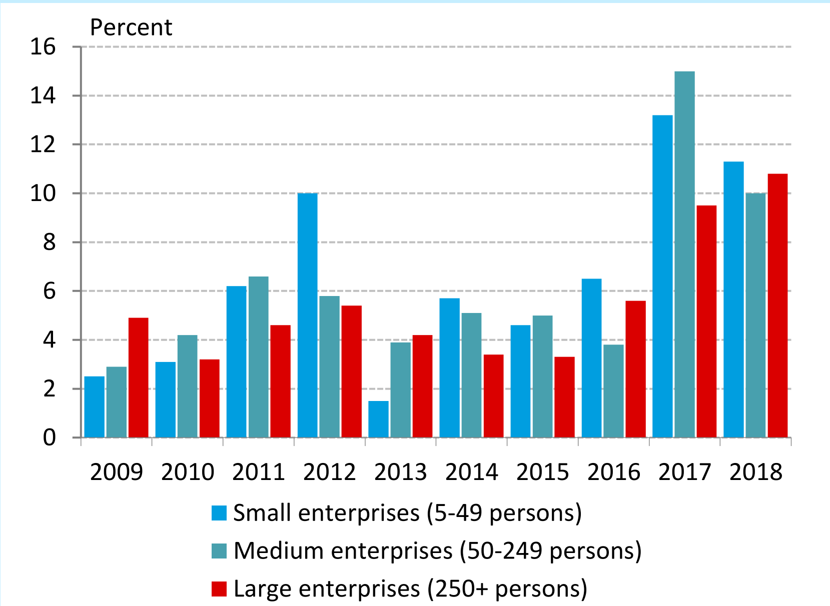
Box 3-1: The role of corporate duality in wage growth

The Hungarian corporate sector has a dual structure. Over 99 percent of companies are made up of small and medium-sized enterprises, the overwhelming majority of which are in Hungarian hands. The SME sector plays a central role in employment, with over 70 percent of employees working in this segment. At the same time, despite their dominance, SMEs generate less than half of Hungarian GDP. **This corporate duality, which can be observed in several indicators, is also evident in wage growth.**

In recent years, the primary labour market has been characterised by strong labour demand and tight labour supply, with companies competing fiercely to retain and hire workers. The high labour demand of the private sector has led to a gradual increase in underlying wage trends since 2016. The double-digit wage growth in the past two years has been significantly supported by the measures of the six-year wage agreement as well. **The administrative measures** (larger minimum wage increases, tax cuts) **may have influenced wage growth differently by company sizes in 2017–2018**, and therefore it is important to examine the gross average earnings in the private sector in a more detailed breakdown.

Based on the classification of companies according to headcount categories, large enterprises are those that employ at least 250 people. In this segment, employees typically earn more than the minimum wage and the guaranteed minimum wage. Accordingly, when the level of the compulsory minimum wages is increased, it affects large enterprise pay raises less, as it is determined primarily by market factors. **In recent years, the large enterprise sector has seen increasing wage growth in parallel with the tightening of the labour market,** and wage growth was over 10 percent among large enterprises in 2018, for the first time after the crisis (Chart 3-28). By contrast, **wage dynamics of small and medium-sized enterprises aligned closely to the minimum wage and guaranteed minimum wage increase in recent years**.

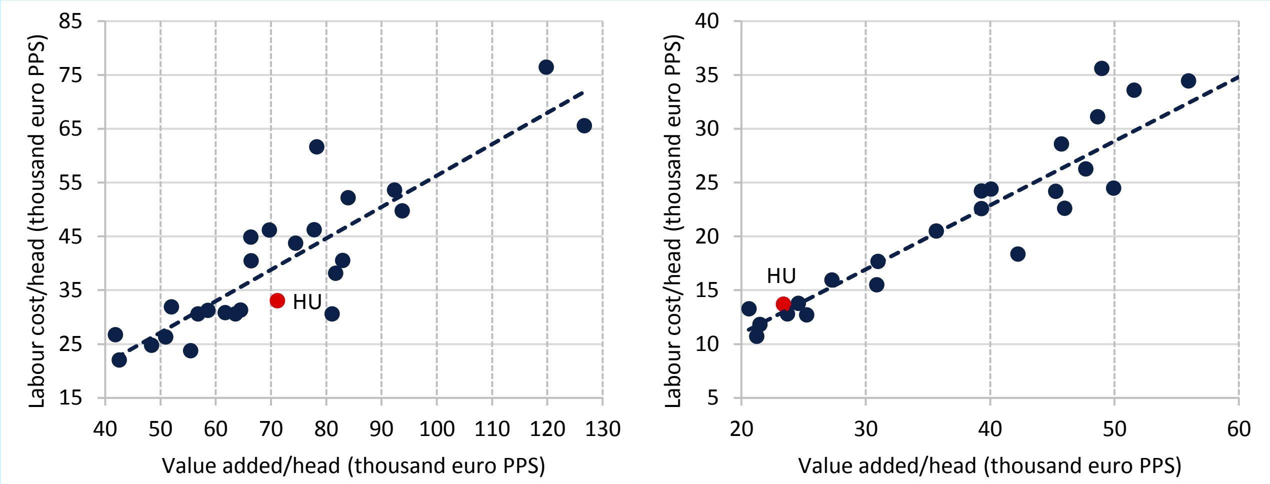
Chart 3-28: Annual growth of gross average earnings by company size



Note: The data for 2018 show annual growth adjusted for the effect of the methodological change.
Source: HCSO

Large, typically foreign-owned corporations continue to have leeway in raising wages. Large enterprises are more productive and competitive than their smaller peers, but the level of wages remains below the high level of productivity (Chart 3-29, left panel). This is mainly because the relatively low average wage paid by their competitors does not generally encourage stronger wage-setting by foreign companies. The tightening labour market environment prompted large enterprises to meet the increasing wage demands in wage negotiations, which was feasible due to the low wage costs that are relatively low in light of the high productivity.

Chart 3-29: Relationship between labour costs and productivity among foreign-owned companies (left panel) and Hungarian companies (right panel), 2016



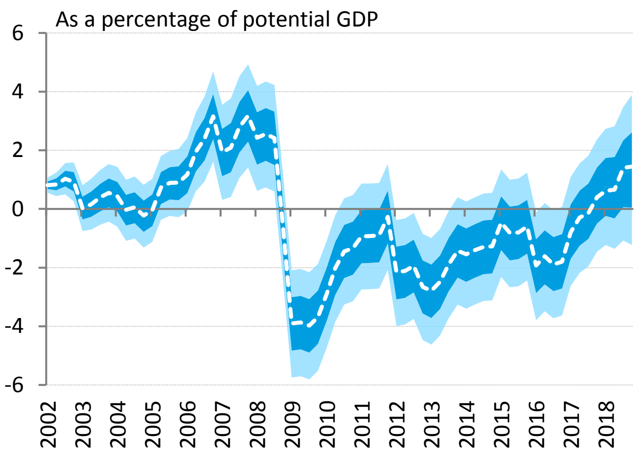
Note: With the exception of Luxembourg and Ireland.
Source: Eurostat

In contrast to large enterprises, there is less room for manoeuvre in the SME sector for wage-setting at the expense of profitability. The wage costs of the mainly Hungarian-owned small and medium-sized enterprises do not significantly deviate from the productivity of the SME sector (Chart 3-29, right panel). The lower wages paid by Hungarian SMEs are **less enticing in the competition for skilled workers** than working abroad or even at a Hungarian large enterprise. In the case of smaller firms, the double-digit wage growth registered in recent years has been determined by the large minimum wage increases, which indirectly affected a major portion of the wage scale. **Looking ahead, improving the SME sector's productivity is a necessity, which would not only help maintain wage growth but would also mitigate corporate duality.** Out of the Magyar Nemzeti Bank's 330-point competitiveness programme, 26 points focus on enhancing the productivity of small and medium-sized enterprises, which may be supported by stronger investment activity in the sector, networking, improving technological awareness and the honing of business skills.

3.4. The cyclical position of the economy

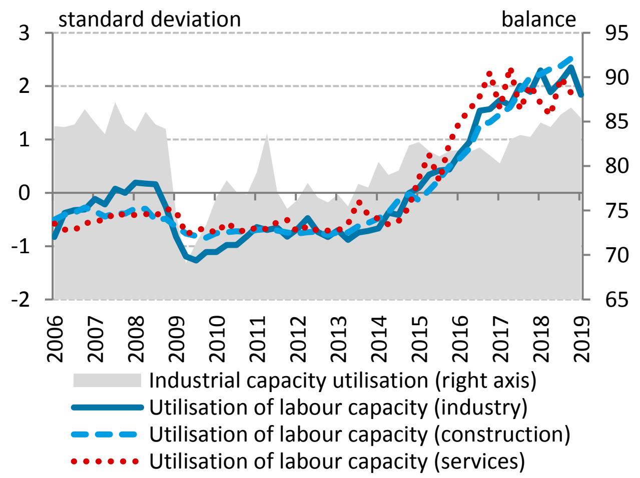
GDP is estimated to have been slightly above potential output. Corporate capacity utilisation is still high, while free reserves directly available on the labour market remain low. As the output gap closes, the expansion in the supply side of the economy will become a key factor in terms of the sustainability of growth. Economic policy can raise the rate of potential growth through specific structural measures aimed at improving competitiveness and increasing productivity while maintaining stability.

Chart 3-30: Uncertainty band of the output gap



Note: The blue area shows the estimation uncertainty band.
Source: MNB

Chart 3-31: Capacity utilisation and utilisation of labour capacity



Source: ESI

GDP is estimated to have been slightly above potential output (Chart 3-30). **Our assessment of the cyclical position of the Hungarian economy has remained practically unchanged** compared to our estimate in the December Inflation report.

Based on questionnaire-based surveys, **corporate capacity utilisation remains still high**, coming close to the average level of the pre-crisis period. The dynamic expansion in employment in recent years has contributed to the tightening of the labour market. The **quantity of directly available new labour continues to represent a bottleneck** in production for industrial, construction and service sector companies (Chart 3-31).

Closing the output gap can be achieved through a decline in demand or an expansion of supply; therefore, from a social perspective, **measures that boost supply, i.e. potential output and aim to improve productivity through structural tools** will be of key importance in the coming period.

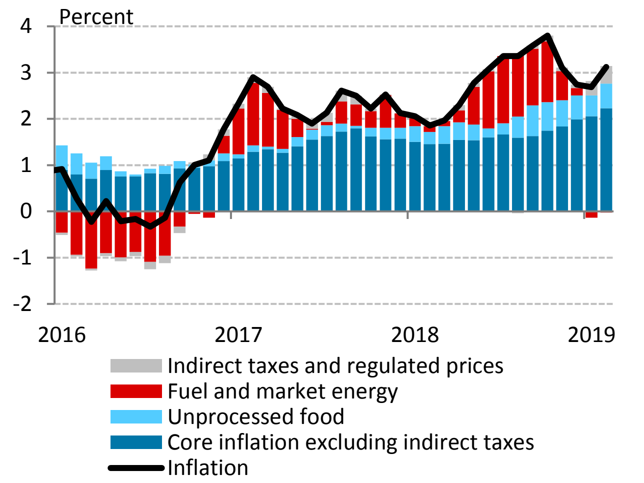
Productivity has risen in the past period, but this is attributable to cyclical factors rather than a structural improvement in the competitiveness of the economy. Nevertheless, over the medium term, the high investment rate, the large investment projects which have been announced and the capacity expansion of the supplier network also may generate a positive feedback loop across **market services with higher value added** (information and communication, finance, logistics, marketing).

The cyclical position of the Hungarian economy is affected by the fact that the output gap of the **euro area** is estimated to have closed last year, while the cyclical position of the **economies in the region** may already be in positive territory. However, we note that the growth prospects for the euro area are surrounded by risks and, in parallel with the deterioration in economic activity, the closing gap may turn back and the region's output gap may re-open in the forecast horizon.

3.5. Costs and inflation

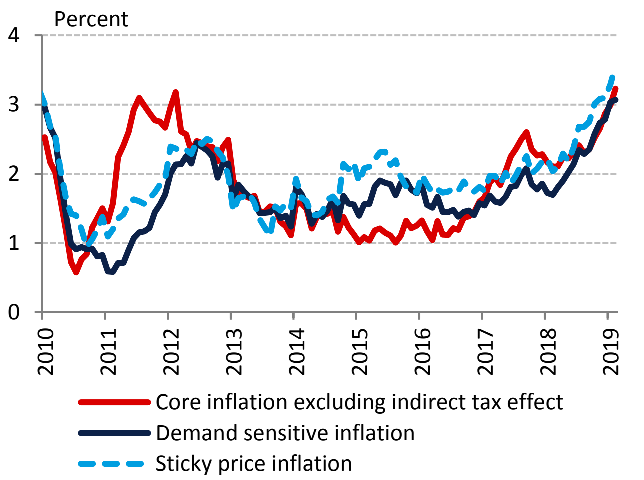
Inflation continued to fluctuate in recent months, but the indicator has been within the tolerance band near the 3-percent inflation target since March 2018. At the end of last year, the consumer price index dropped slightly below 3 percent again, coming in at 3.1 percent this February after a moderate increase. Inflation was dampened by falling fuel prices, while the February rise was due to an increase in core inflation adjusted for indirect tax effects as well as the stronger price dynamics in unprocessed food and fuel. Core inflation adjusted for indirect tax effects rose above 3 percent early this year, triggered by the repricing of market services at the beginning of the year. In the fourth quarter, private sector gross average earnings rose by 10.4 percent year-on-year. The double-digit wage growth in 2018 as a whole was supported by the increase in the minimum wage and the guaranteed wage minimum by 8 and 12 percent, respectively, in addition to the historically tight labour market environment determining the underlying wage trend. Relevant information on this year's pay increases will be available from the Q1 wage data.

Chart 3-32: Decomposition of inflation



Source: MNB-calculation

Chart 3-33: Underlying inflation indicators



Source: MNB calculation based on HCSO data

3.5.1. Consumer prices

Inflation continued to fluctuate in recent months. At the **end of last year**, the consumer price index **dropped below 3 percent** again, to 2.7 percent, and then **rose to slightly over 3 percent this February**. The falling inflation was caused by a drop in fuel prices in December 2018 and January 2019, while the February increase was mainly due to a rise in core inflation excluding indirect taxes (Chart 3-32).

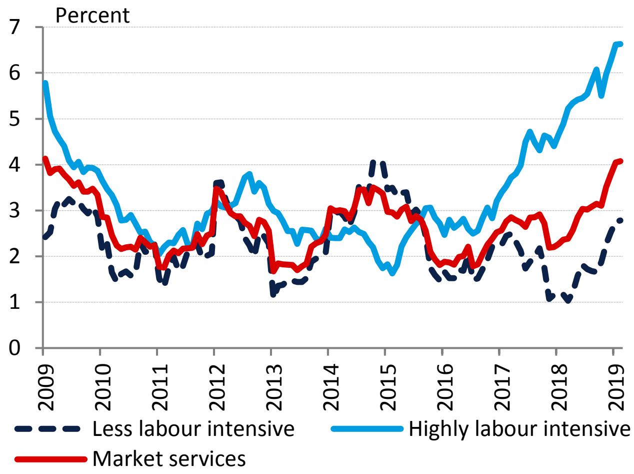
Indicators capturing longer-term inflation trends (core inflation adjusted for indirect tax effects, inflation of demand-sensitive and sticky-price products and services) **continued to increase** late last year and early this year (Chart 3-33). Core inflation adjusted for indirect tax effects had risen to just over 3 percent by February, mainly due to the repricing of market services at the start of the year (see Box 3-2).

The inflation of tradeable goods increased somewhat in previous months. The inflation of non-durable goods increased, due to the fluctuation in airfares and the rise in the public health product tax that affects several products in this product group. At the same time, the price dynamics of durable goods remained practically unchanged.

At the end of last year and the start of this year, **the inflation of market services continued to increase**, which was partly offset by the withdrawal of the financial transaction levy on transfers below HUF 20,000 in January. **In the case of repricing at the beginning of the year**, which dominates annual price developments in this product group, **a larger price increase was observed compared to previous years, affecting a larger set of services**. Inflation of both labour-intensive and technology-intensive services increased (Chart 3-34).

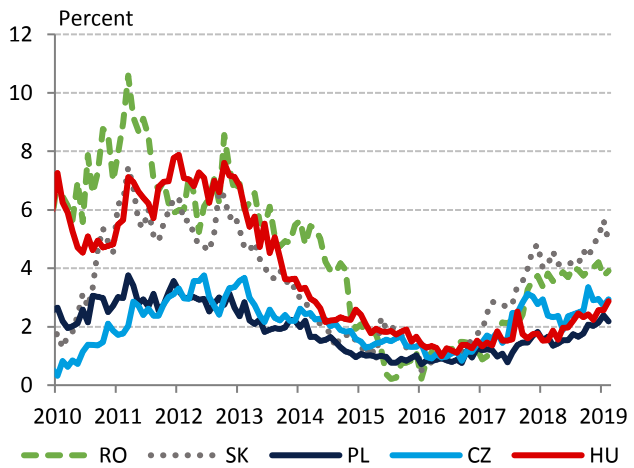
The price of alcohol and tobacco products rose, mainly caused by the tax increases (public health product tax and excise duty) affecting this product group. In the case of the higher excise duty on tobacco products, swifter and stronger

Chart 3-34: Inflation of market services



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

Chart 3-35: Inflation expectations in the region



Source: MNB calculations based on European Commission data

pass-through was observed as compared to earlier tax changes.

Overall, food was characterised by increasing price dynamics in recent months. The inflation of unprocessed food continues to hover around the 10 percent mark, the same level as in the autumn months, primarily owing to price hikes for seasonal foodstuffs. The inflation of processed food also surged, as the VAT cut on milk only partly offset the price increases that affected several products and the increase in the public health product tax in this January.

Fuel prices fluctuated widely in recent months. At the end of last year and in the first weeks of 2019, fuel prices fell by 10 percent, followed by a 0.9 percent rise in February.

In light of the data from recent months, inflation was essentially in line with the forecast in the December Inflation report, whereas core inflation and core inflation adjusted for indirect tax effects were higher than anticipated. The difference was caused by major repricing affecting market services early in the year and the rising price of processed food. The swifter pass-through of the hike in excise duty on tobacco products also played a role in the higher-than-expected core inflation.

3.5.2. Inflation expectations

In recent months, **households' inflation expectations** increased somewhat, although **they are still moderate**, indicating that expectations are anchored. Expectations in Hungary were in line with the expectations observed in the countries of the region, where steadily low inflation was typical in the past (Chart 3-35).

3.5.3. Wages

In 2018 Q4, gross average earnings in the private sector rose by 10.4 percent year-on-year (Chart 3-36). The double-digit wage growth in 2018 as a whole was supported by the increase in the minimum wage and the guaranteed wage minimum by 8 and 12 percent, respectively, in addition to the historically tight labour market environment determining the underlying wage trend. The large enterprises that are affected less by the administrative wage rises registered stronger wage growth in recent years, in parallel with the tightening labour market (see Box 3-1). Last year, companies' wage-setting was also supported by the reduction of the social contribution tax by 2.5 percentage points.

Within the private sector, wage dynamics in the market services sector were slightly stronger than manufacturing wage growth. In contrast to the end-of-year seasonality, no change was recorded in the regular average wage on a

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

Note: Quarterly moving averages.
Source: HCSO

monthly basis. The premium payments in December were higher than in previous years. Wage dynamics in the sectors paying below-average wages were still higher than in the sectors with above-average wages, although the difference had declined by the end of the year. Since companies typically set new wages in March, **relevant information on this year's pay increases will be available from the Q1 wage data**.[4]

3.5.4. Producer prices

Agricultural producer prices rose year-on-year in 2018 Q4. The price increase is mainly linked to price developments for seasonal products, as the rising prices of vegetables and potatoes were only partly offset by the drop in the price of fruits. In addition to seasonal products, grain prices were also up year-on-year, while the prices of animal products declined in the past period.

Producer prices of consumer goods rose slightly, while domestic sales prices of the industry as a whole increased somewhat above the historical average year-on-year until January. In the case of the latter, the higher price dynamics are attributable to the rising prices of energy producing sectors.

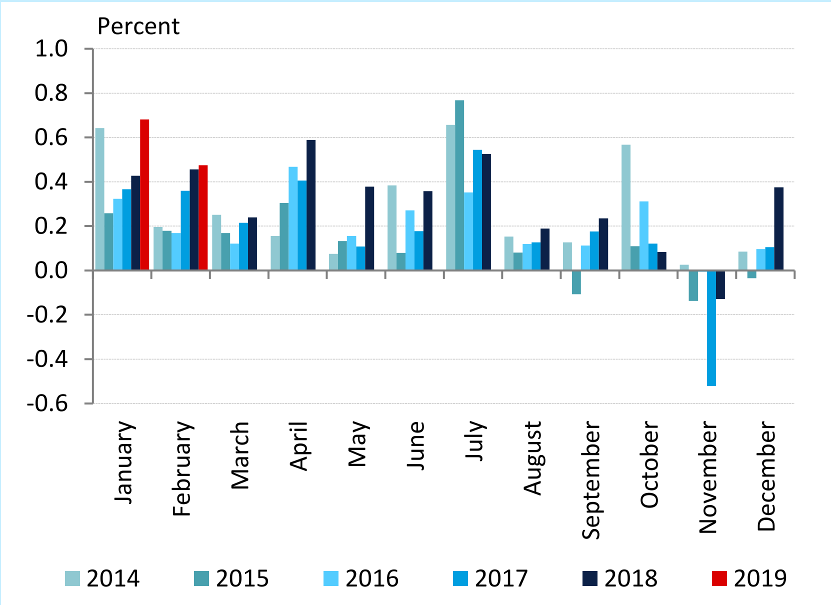
[4] The HCSO will renew earnings statistics, producing and publishing information on monthly earnings from the National Tax and Customs Administration's declaration on contributions.

Box 3-2: Repricing at the beginning of the year in the market services sector

Market services comprise one-third of core inflation adjusted for indirect tax effects, which captures persistent inflation trends well. **In the case of market services, the most important information on price developments in the given year is provided by the data for the first months of the respective year.** According to historical experience, 30 percent of the price increases in the product group occur until February, and generally the higher (lower) January–February price increase is followed by higher (lower) price increases throughout the year.

In the first two months of this year, the price of market services rose, which was partly offset by the January withdrawal of the financial transaction levy on transfers below HUF 20,000. **Disregarding the effects of the tax change, prices in the product group rose by a total of 1.2 percent in January and February, which means a higher start-of-year repricing than in previous years** (Chart 3-37).

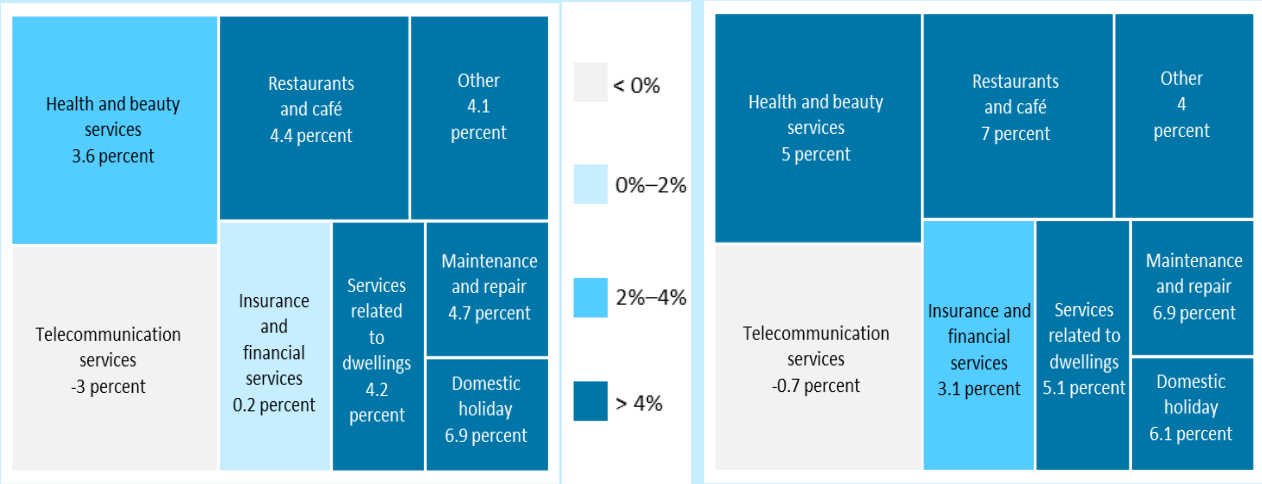
Chart 3-37: Price changes of market services



Note: Adjusted for indirect tax effects. Percentage change from previous month.
Source: MNB calculation based on HCSO data

Examining the start-of-year repricing in detail, it can be stated that prices rose for a wide range of services. This means that the accelerating price development, which has characterised the product group since early 2018, was more widespread in services, and the share of services with inflation of over 4 percent increased (Chart 3-38). In addition, the pace of price increases accelerated for services with higher price dynamics in 2018, and in some services, such as restaurants or repair and maintenance services, the annual price change came close to or even reached 7 percent.

Chart 3-38: Inflation of certain market services in February 2018 (left panel) and February 2019 (right panel)



Note: Annual price change excluding indirect tax effects; the size of the rectangles denotes the weight of the specified service.
Source: MNB calculation based on HCSO data

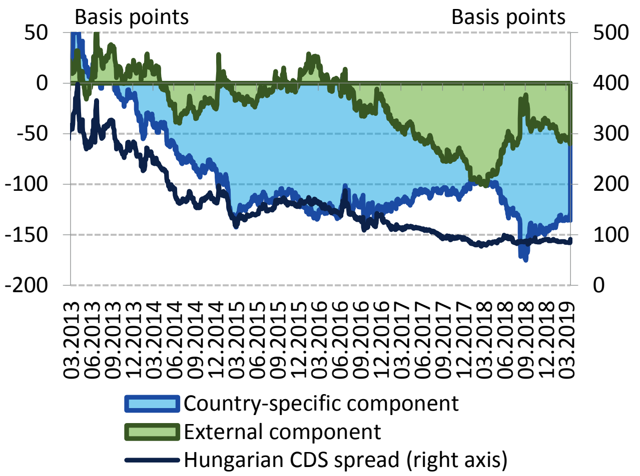
The price change of market services depends on several factors: cost developments, the profitability of companies and the cyclical position of the economy. In the previous months, households' expenditures on market services increased at a higher rate than total household expenditures on overall. Strong domestic demand adds to companies' leeway in terms of pricing, which, along with the wage share reaching its historical average, leads to an increase in the price dynamics of the product group.

4. Financial markets and interest rates

4.1. Domestic financial market developments

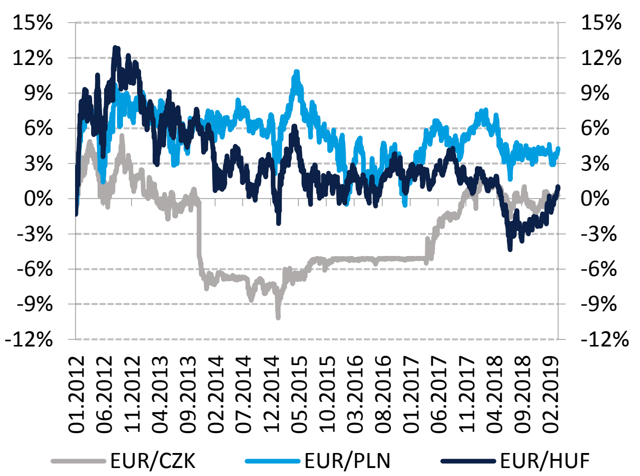
Market sentiment improved in the past quarter. There was a sharp, more than 8-percentage point decline in the VIX index, a measure of stock market volatility. Long-term market yields on government securities in developed markets have fallen by 15–30 basis points since mid-December, and the emerging bond market EMBI Global index also declined by 60 basis points. The US dollar depreciated slightly against the euro. Although the European currency was weakened by the announcements following the ECB's March rate-setting meeting, the US currency depreciated against the euro for the most part of the period. The period saw substantial capital flows both to developed and emerging regions. Hungarian 10-year yields dropped in Q1 along with the long-term yields of its regional peers. The Hungarian credit risk indicator was unchanged. Compared to regional currencies, the forint strengthened versus the euro to a larger degree.

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. Hungary's risk assessment

Hungary's credit spread was unchanged in the first quarter (Chart 4-1). As Hungary's credit spread remained unchanged against the backdrop of a decline in international factors, the decomposition methodology shows an increase in the individual (country-specific) component. The decline in the international component was primarily supported by the easing of global market tensions and the significant downward adjustment of the Turkish spread, which benefited not only the Hungarian CDS spread but also the spreads of the core Central and Eastern European region. However, due to the slight increase in the region at the end of the period, the Hungarian CDS spread was at the level of the previous quarter.

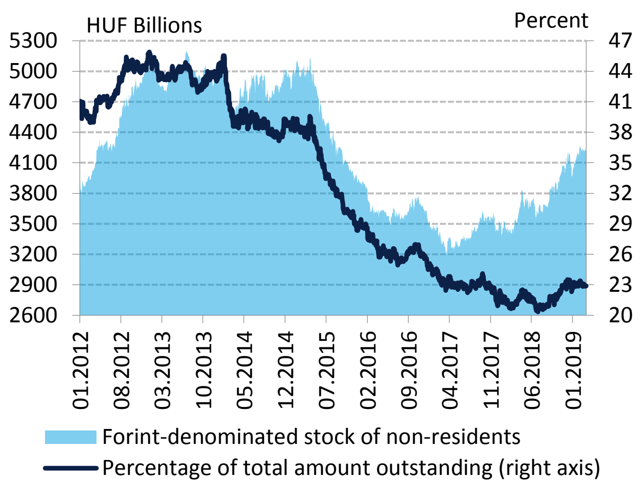
4.1.2. FX market developments

The forint appreciated by 3.1 percent against the euro, while the Czech koruna and the Polish zloty strengthened less tangibly, by 0.8 and 0.5 percent (Chart 4-2). **At the same time, the Romanian leu weakened by 2.2 percent in the period under review**. At the beginning of the period, the forint exchange rate fluctuated in an even narrower band (321–324), but following a gradual strengthening it reached a level of 313–316 by the end of the period. All of the regional currencies strengthened against the US currency at the end of the period, but they performed differently even against the US dollar during the first quarter. The forint, the Czech koruna and the Polish zloty appreciated, while the Romanian leu depreciated against the US dollar.

4.1.3. Government securities market and changes in yields

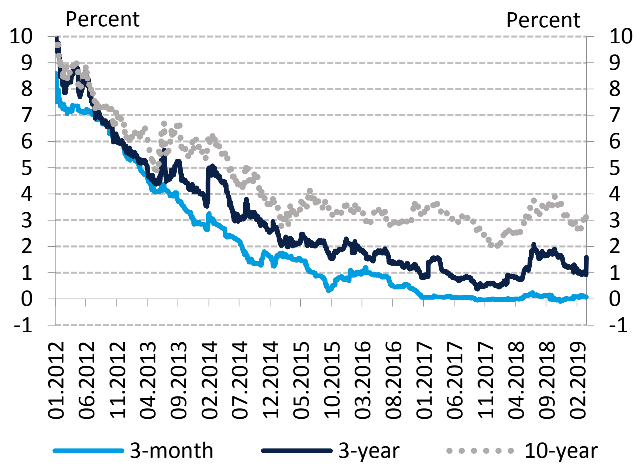
Non-residents' HUF-denominated government securities holdings continued to rise in the past quarter (Chart 4-3). Following a practically continuous decline since 2015, non-residents' HUF-denominated government securities holdings first stabilised and then started to rise from March

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



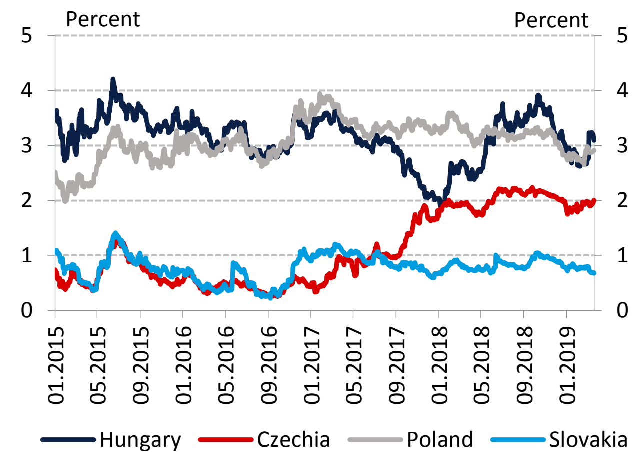
Note: The chart shows the stock of T-bills and T-bonds.
Source: MNB

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

2018. Non-residents' HUF-denominated government securities holdings declined at the beginning of the period and then mostly increased from mid-January; as a result, the holdings of non-residents rose by HUF 153 billion in the first quarter overall, while their ownership share remained around 23 percent of the market stock.

Demand was strong in the primary government securities market. In the case of longer-term securities, the Government Debt Management Agency often accepted higher amounts than announced. Average 3-month auction yields increased, while 12-month yields decreased. Average auction yields rose by 30 and 50 percent across the 3 and 10-year maturities, respectively, basically due to switching auctioned papers to longer maturities. At the 5-year maturity there was a 40-basis point fall in the auction yield of the same bond.

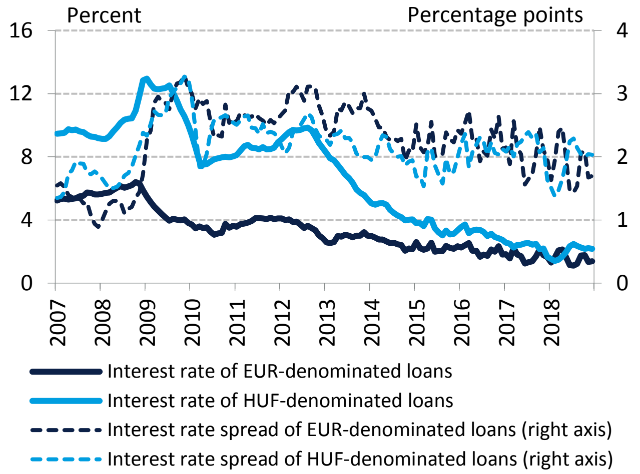
In the secondary government securities market, the yield curve edged down by 30–45 basis points on the medium and long sections, while the short end was fundamentally unchanged (Chart 4-4). Amid volatile emerging market sentiment, Hungarian 3- and 5-year benchmark yields rose until mid-October, but this was followed by a steep fall in yields, which also continued in the first quarter of 2019. Furthermore, benchmark yields fell sharply at the long end of the yield curve until the end of February. Their subsequent increases can be attributed to the switch to new 3- and 10-year benchmark bonds. As a result, 10-year benchmark yield decreased moderately – by 3.2 percent – at the end of the period, while the 10-year point of the yield curve dropped considerably by 45 basis points compared to the previous quarter. The short-term section of the interbank and government securities market yield curve was fundamentally unchanged, whereas yields edged down in the medium and especially, the long sections, flattening the slope of the yield curve.

Long-term benchmark yields were mixed across the region during the quarter (Chart 4-5). Owing to the benchmark switching mentioned above, the 10-year forint yield decreased slightly, by 5 basis points, the Czech yield declined by 2 basis points, whereas Polish and Slovakian long-term yields dropped by 10 and 20 basis points, respectively.

4.2. Credit conditions of the financial intermediary system

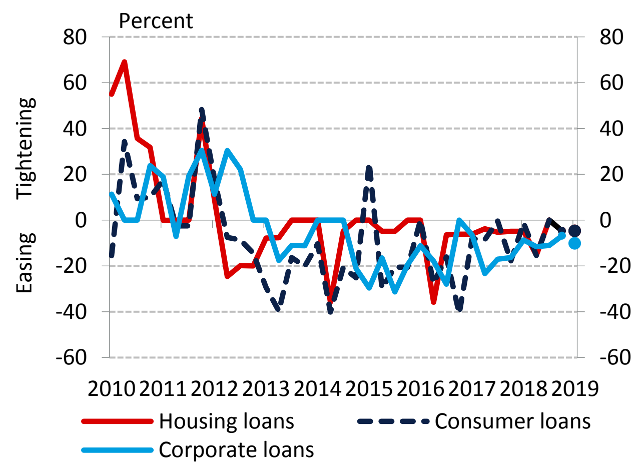
In 2018 Q4, banks continued to ease their corporate credit conditions, which primarily meant the easing of coverage requirements, and looking ahead they also anticipate further easing, mainly for small and medium-sized enterprises. During the quarter, both corporate EUR loan interest rates and EUR spreads declined; interest rates on HUF loans were also down, while the spreads remained at an unchanged level compared to the previous quarter. Banks did not ease the standards of housing loans, while they indicated an easing of the conditions of personal loans for the next half year. The spread on housing loans increased slightly in the case of contracts fixed for a longer term, but remained below the level of variable-rate loans in Q4. As a result of a slight rise in inflation expectations, a moderate decline took place in the level of the one-year forward-looking real interest rate.

Chart 4-6: Smoothed interest rates and spreads on corporate loans by denomination



Note: Interest rates smoothed by the 3-month moving average. The spread is the 3-month moving average of spreads on the 3-month BUBOR and EURIBOR, respectively. Loans with floating interest rates or with up to 1-year initial rate fixation. Since January 2015, money market transactions are excluded.
Source: MNB

Chart 4-7: Changes in credit conditions in the corporate and household sectors



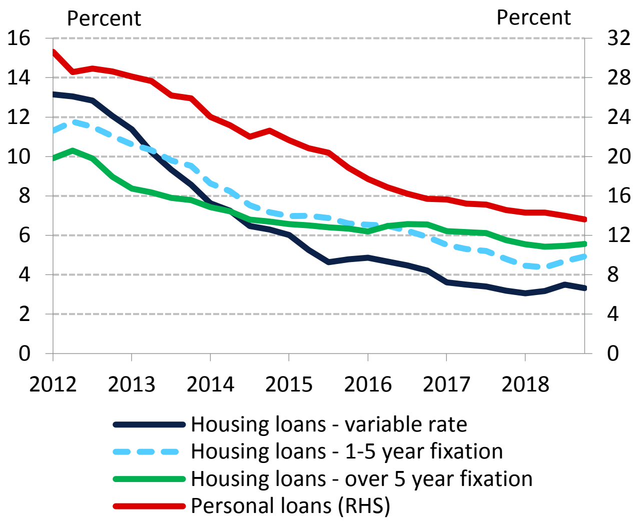
Note: Net percentage balance of respondents tightening/easing credit conditions weighted by market share. Forecast for H1 2019.
Source: MNB, based on banks' responses

4.2.1. Corporate credit conditions

Both the interest rate and spread on EUR-denominated corporate loans declined in 2018 Q4. The interest rate on new market-based, small-amount corporate HUF loans excluding money market transactions decreased by 0.2 percentage point, while in the case of high-amount loans it remained at the level of the previous quarter. As a result, by the end of the quarter the average HUF interest rate decreased to 2.2 percent. The average interest rate on both small-amount and high-amount EUR loans was up by 0.1 percentage point, but due to composition effect, following a 0.4 percentage point decline, the average interest rate on EUR loans decreased to 1.4 percent by the end of the period under review (Chart 4-6). One-off, high-volume items played a significant role in the changes in interest rates on high-amount corporate loans in the case of both currencies. The spread on corporate HUF loans remained unchanged at 2 percentage points, while following a 0.4 percentage point fall, the spread on EUR loans sank to 1.7 percentage points by the end of the quarter.

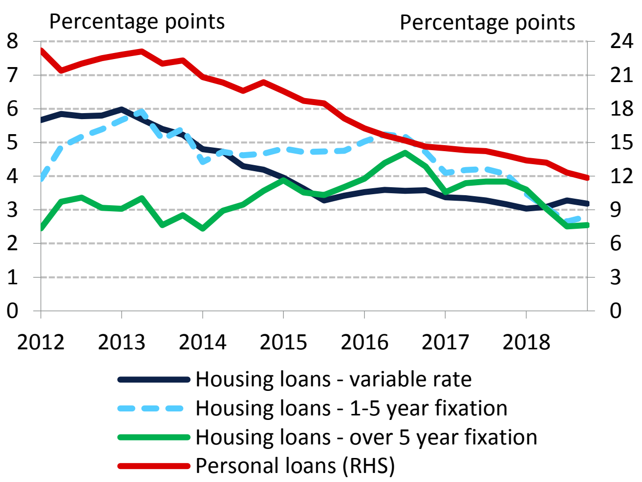
Credit conditions in the corporate segment eased in 2018 Q4 as well. A net 7 percent of banks participating in the Lending Survey eased their corporate credit conditions, which was mainly reflected in the easing of coverage requirements (Chart 4-7). In terms of company size, both for micro and small enterprises as well as for medium-sized and large companies one quarter of the banks eased the credit conditions: the maximum size of the credit line was increased in the case of the former category, while spreads were reduced in the latter category. Based on banks' expectations, for 2019 H1 the conditions of access to credit may ease mainly for micro and small enterprises, which is also probably a result of increased interest in the favourable loans available within the framework of the FGS Fix programme.

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



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

Chart 4-9: Interest rate spreads on new household loans



Note: In the case of variable-rate housing loans or ones with up to 1-year rate fixation, APR-based smoothed spread over the 3-month BUBOR, while in the case of housing loans fixed for a period longer than one year, the APR-based smoothed spread over the corresponding IRS. For personal loans, APR-based smoothed spread over the 3-month BUBOR.
Source: MNB

4.2.2. Household credit conditions

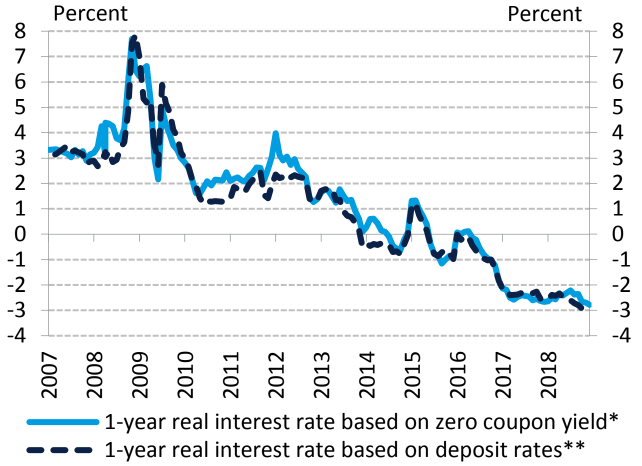
The spread on fixed-rate housing loans has already sunk below the spread on variable-rate loans. The APR level of new housing loans declined (by 0.2 percentage point) in the case of variable-rate loans, while as a result of a rise in the costs of funds, increases of 0.3 and 0.1 percentage point were observed for loans with initial rate fixation between 1–5 years and with over 5 years fixation, respectively, in 2018 Q4 (Chart 4-8). Similarly to credit costs, in the case of variable-rate loans the spread on housing loans declined: following a decrease of 0.1 percentage point, it stood at 3.2 percentage points. After an increase of 0.2 percentage point, the spread on loans with interest rate fixation between 1–5 years reached 2.8 percentage points, while in the case of loans with initial rate fixation of over 5 years the spread remained unchanged at a level of 2.5 percentage points. Accordingly, in Q4 the spread on housing loans with longer interest rate fixation was still below the level of variable-rate housing loans (Chart 4-9). Following a 0.4 percentage point decline, the average APR level of personal loans was 13.6 percent in the period under review, while the spread decreased to 11.9 percentage points by the end of the year.

Banks did not change their credit conditions for households. On the whole, the banks participating in the Lending Survey did not change the conditions of housing loans (Chart 4-7), but regarding partial conditions, in net terms 44 percent of the banks reported a reduction of spreads. The easing was primarily attributable to housing market developments and the favourable liquidity position of banks. Banks also left conditions on consumers loans unchanged, but in the market of personal loans 11 percent of banks in net terms mentioned easing, and a similar proportion of them plan to ease their conditions in the next half year as well. As they said, it will be reflected in a reduction of spreads. Responding institutions do not plan to change conditions on housing loans in the next half year.

4.2.3. Changes in real interest rates

The one-year forward-looking real interest rate declined during the quarter. Estimated from government securities market yields, the real interest rate level reduced by inflation expectations decreased in Q4, and thus following a decline of 42 basis points it stood at -2.8 percent at the end of the period (Chart 4-10). Following a decline of 21 basis points, the real interest rate calculated on the basis of deposit rates stood at -3.0 percent in December 2018. The fall in the real interest rate level is explained by a moderate increase in inflation expectations.

Chart 4-10: Forward-looking real interest rates



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

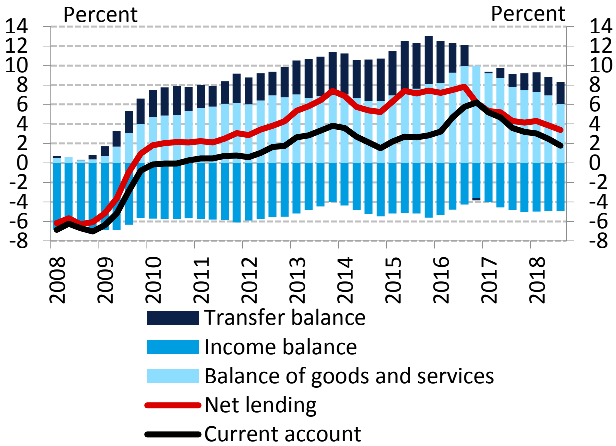
Source: MNB, Reuters poll

5. Balance position of the economy

5.1. External balance and financing

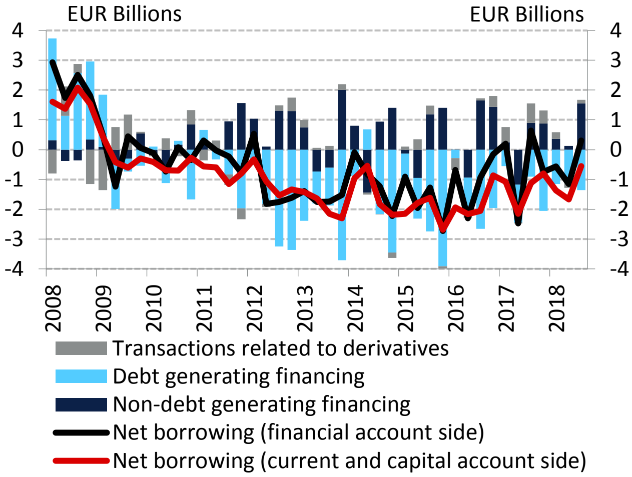
According to preliminary data, in 2018 Q3 the net lending of the economy and the current account surplus were around 3.4 percent of GDP and 1.8 percent of GDP, respectively. The external balance indicators declined slightly during the quarter, but are still outstanding in a regional comparison. The decline is attributable to a decrease in the balance of goods, which is primarily related to the strong domestic demand, but temporary factors and a deterioration in the terms of trade also played a role in the decline. The balance of services remains at a persistently high level. As a result of higher EU transfer absorption, the surplus of the transfer balance increased again in Q3. The deficit of the income balance remained unchanged: the decline in foreign interest expenditures was offset by the change in the compensation of employees. In terms of the financing side, net FDI inflows increased and external debt declined further: the net external debt-to-GDP ratio fell to a historical low of 8.7 percent, while gross external debt amounted to 58 percent of GDP. Based on preliminary monthly data, both the net lending of the economy and the current account surplus declined in the last quarter of 2018, although net external debt may have also continued to decline in parallel.

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

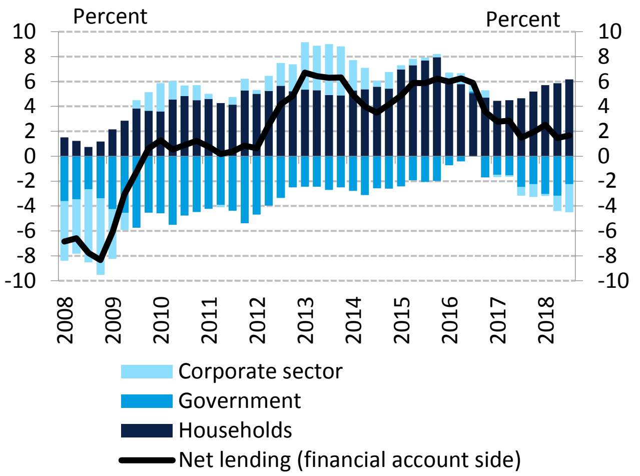
5.1.1. Developments in Hungary's external balance position

In 2018 Q3, the net lending and the current account surplus amounted to 3.4 percent of GDP and 1.8 percent of GDP, respectively (Chart 5-1). The decline continues to be attributable to the decrease in the balance of trade, and within that the lower balance of goods. In addition to the increase in imports due to expanding investment, the slowdown in exports related to temporary factors also contributed to the decline in the balance. The balance of services remains at a persistently high level. The effect of the decline in the balance of goods was partly offset by the fact that in Q3 the surplus of the transfer balance increased as a result of a higher absorption of EU transfers. Compared to the previous quarters, the deficit of the income balance did not change significantly: the decline in foreign interest expenditures was offset by the change in the compensation of employees. According to preliminary monthly balance of payments data, which are partly based on estimates, at end-2018 the current account balance and net lending continued to decline, which is primarily explained by the decrease in the trade balance.

5.1.2. Developments in financing

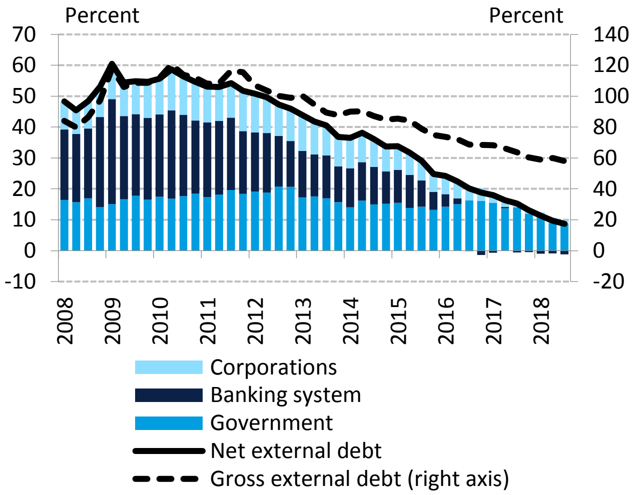
FDI inflows increased in Q3 as well, while the net external debt of the country declined (Chart 5-2). The slight inflow of funds shown in the financial account was related to higher FDI inflows, while debt-type liabilities declined further. Debt outflows concerned all three sectors: the largest decline took place in the corporate sector. According to monthly financing data, Hungary's external debt continued to decline in 2018 Q4, while further FDI inflows were observed.

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

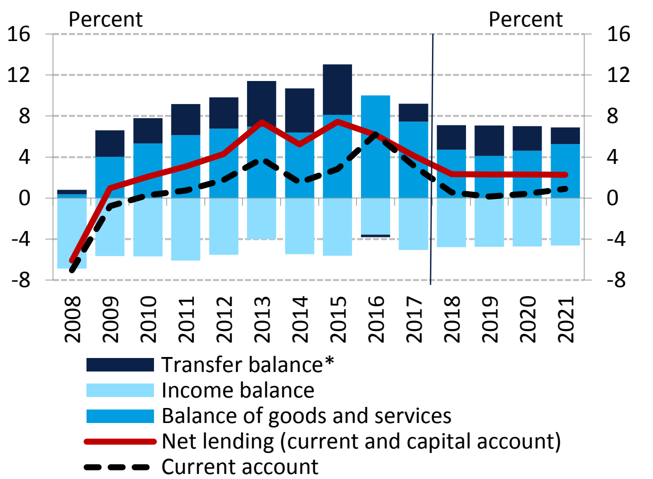
Looking at the sectors' savings, the net lending of households and the general government increased to a greater degree than the corporate sector's net borrowing (Chart 5-3). The four-quarter position of the general government improved considerably, as a result of the dynamic expansion in tax revenues related to consumption and wages. In addition, net lending was also supported by the slight increase in households' financial savings, in parallel with a strong rise in wages. At the same time, the increase in corporates' net borrowing reduced the country's net lending, which is in line with the steady rise in investment. According to preliminary financial accounts, households' net lending fell in Q4, although it remains at a high level. The net borrowing of the general government stabilised around the previous quarter's favourable level, while a further increase in the net borrowing of companies is expected.

Hungary's net external debt-to-GDP ratio fell to a historical low of 8.7 percent (Chart 5-4). The decline was mainly attributable to the debt-generating outflow of funds, while the revaluation of holdings due to the yield decline slightly raised the indicator. Similarly to what was observed in the case of transaction developments, all three sectors contributed to the decline in net external debt. As a result of the decline, the net external debt of the private sector as a whole turned negative. In Q3, the country's gross external debt-to-GDP ratio declined by two percentage points to 58 percent. According to preliminary monthly data, the decrease in net external debt as a result of transactions continued in the final quarter of 2018 as well.

5.2. Forecast for Hungary's net lending position

Hungary's net lending will be at a high level over the forecast horizon, and the current account will also continue to exhibit a surplus. Following a temporary decline, the latter will increase again as of 2020. As a result of lower net exports, the current account surplus fell in 2018 and will decline in 2019, which is partly attributable to lower external demand and partly to a rise in import-intensive domestic investment. Starting from 2020, however, with new capacities becoming productive, the balance of trade and thus the current account surplus will also increase. At the same time, the country's net lending will be stable at around 2.3 percent of GDP over the entire forecast horizon, as the effect of the lower balance of trade will be offset by an increase in the absorption of EU funds, mainly affecting the capital account. Looking at the savings developments of sectors, the nearly unchanged net lending will be a result of a decline in households' net financial savings offset by a decrease in corporate and government net borrowing. As a result of favourable income developments, households' financial savings peaked in 2018, before declining as borrowing rose, but will still remain at a high level. Corporate net borrowing increased in 2018 as a result of a strong investment growth, before tapering off slightly from 2020 due to declining investment attributable to slower EU transfer inflows. After 2.2 percent of GDP in 2018, the budget deficit will stabilise at 1.5 percent of GDP. As a result of still significant net lending, debt ratios will continue to decline, and thus the net external debt of the economy may decrease to close to zero by 2021.

Chart 5-5: Evolution of net lending



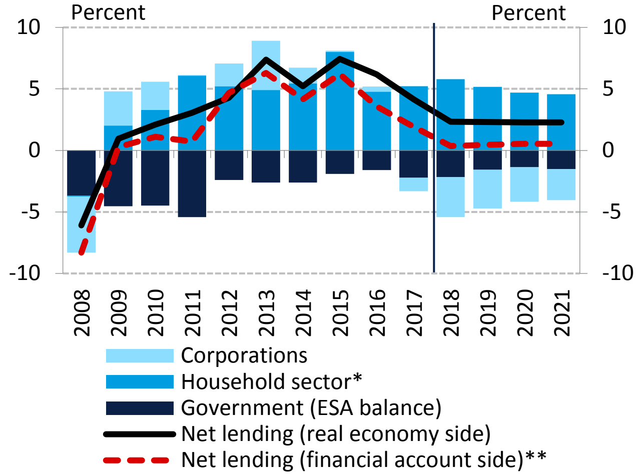
Note: As a percentage of GDP* The sum of the balance of the current transfers and the capital account balance.

Source: MNB

The net lending of the economy will stabilise at a high level, around 2.3 percent of GDP, while the current account surplus will temporarily and slightly decline (Chart 5-5). The decline in the current account balance in 2018 and 2019 is explained by the temporary decline in the balance of trade. The lower balance is attributable to slowing external demand as well as to the expansion in domestic investment and household consumption. In addition, in 2018 the deterioration in the terms of trade due to oil price increases also had a negative impact on the balance of trade. Starting from 2020, however, as new capacities start to produce, net exports will increase, also contributing to an improvement in the current account. No major change is expected in the deficit of the income balance as the impact of slightly declining interest expenditures will be offset by an increase in the income of those employed abroad. As a result of EU funds, the transfer balance, which mainly contains capital transfers, rose in 2018 and will grow in 2019 as well, which – offsetting the fall in the balance of trade – contributes to the preservation of the net lending of the country. As a result of the above developments, the current account surplus will temporarily decline in 2019, but will rise again from 2020, reaching 1 percent of GDP by the end of the forecast period. Meanwhile, net lending, which is important in terms of external debt indicators, will be stable around 2.3 percent of GDP, which will continue to ensure the decline in the external vulnerability of the country.

The high level of net lending will evolve against the background of households' slightly declining financial savings as well as a decrease in governments' and corporates' net borrowing (Chart 5-6). In 2018, the decline in net lending was the result of an increase in corporates'

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

net borrowing (mainly related to investment), which was partly offset by a rise in household savings due to an improvement in households' income position. Following that, however, households' net financial savings will decline in parallel with a rise in lending, although they will still remain at a high level. This effect is partly offset by the lower net borrowing of the corporate sector from 2019, in relation to subdued investment due to decelerating EU transfer inflows. In addition, maintaining the external position is supported by the fiscal position as well: while the budget deficit in 2018 may have been 2.2 percent of GDP, the decline in the budget deficit may continue in 2019–2021, which is primarily related to dynamic growth in tax revenues as well as a decrease in interest expenditures and financial transfers as a percentage of GDP.

Over the forecast horizon, with sustained net lending, the decline in the country's external vulnerability may continue. As a result of net lending stabilising at a high level, debt ratios will continue to fall, and thus net external debt is expected to decline to close to zero by 2021.

5.3. Fiscal developments

Based on preliminary financial account data, the budget deficit amounted to 2.2 percent of GDP in 2018. According to our forecast, the deficit will remain moderate over the entire horizon, which is supported by favourable developments in tax revenues stemming from economic growth. Compared to the December Inflation report, the family protection action plan raises fiscal expenditures, but tax revenues, which will be higher than previously expected, and the decline in government capital transfers shown in the multi-annual fiscal outlook will partly offset this effect over the forecast horizon. In 2019, through a decline in the budget deficit, fiscal policy may reduce aggregate demand, while the fiscal impulse is expected to be close to neutral in the coming years. In 2018, the gross public debt ratio amounted to 70.9 percent of GDP, which is 2.5 percentage points lower than the 73.4 percent recorded at the end of 2017. According to our forecast, the debt ratio will continue to follow a declining trend, decreasing to below 65 percent by the end of the forecast horizon, in parallel with a steady decline in the share of FX debt.

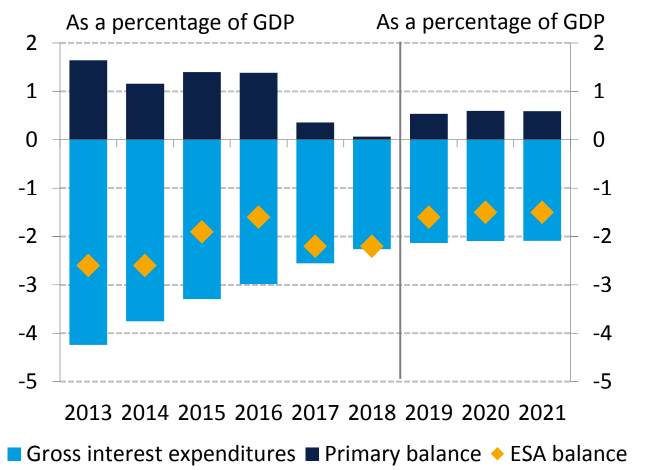
Table 5-1: General government balance indicators

	2018	2019	2020	2021
ESA balance	-2.2	(-1.5) – (-1.6)	(-1.4)–(-1.6)	(-1.5)–(-1.7)
Primary ESA balance	0.1	0.5 – 0.6	0.5 – 0.7	0.4 – 0.6
Fiscal impulse*	0.6 – 0.7	(-0.5)–(-0.6)	(-0.2)–(-0.3)	0.0 – 0.1

Note: As a percentage of GDP. The ESA value for 2018 represents the net lending of the general government from the preliminary financial accounts. The lower value of the forecast band shows the ESA balance if the Country Protection Fund is used while the higher value shows the ESA balance if the Country Protection Fund is not used. *Change in the augmented (SNA) primary balance.

Source: HCSO, MNB

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



Note: The point estimate seen in the chart assumes either cancellation or utilisation of the Country Protection Fund depending on which one is closer to the government deficit target. The figures do not include the imputed interest expenditures from 2012 related to the reform of the pension system.

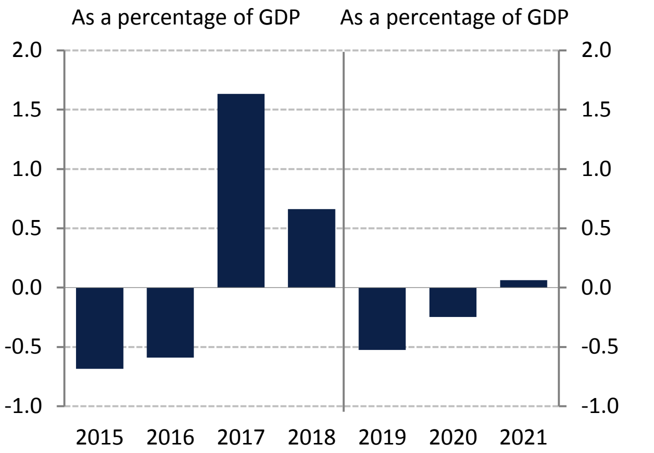
Source: HCSO, MNB

5.3.1. Main balance indicators and the fiscal demand effect

According to our forecast, the ESA deficit may amount to 1.5–1.6 percent of GDP in 2019, while the expectations for 2020 and 2021 are 1.4–1.6 percent and 1.5–1.7 percent, respectively (Table: 5-1)**.** Based on preliminary financial account data, the budget deficit was 2.2 percent of GDP in 2018, i.e. slightly below the statutory appropriation of 2.4 percent. Compared to the previous year, in 2019 the general government deficit is expected to decline considerably as a result of a dynamic growth in tax revenues as well as decreases in interest expenditures and financial transfers as a percentage of GDP (Chart 5-7). The announced family protection action plan will increase expenditures considerably from 2020 (the fiscal and lending effects of the individual measures are presented in detail in Box 5-1). Over the forecast horizon, the fiscal impact of the measures will mostly be offset by rising tax revenues, which will increase dynamically with the expansion of the economy, and we also have taken into account the reduction of government capital transfers in accordance with the changes that appeared early in the year in the multi-annual fiscal outlook.

As a result of significant tax cuts, in 2018 fiscal policy significantly expanded aggregate demand, whereas in 2019 the fiscal impulse may reduce demand as a consequence of a declining deficit, and it may be nearly neutral in the second half of the forecast horizon. The reduction of taxes on labour and tax rates on certain groups of products and services continued last year. In 2019 and 2020, as a result of the declining deficit, the budget will pursue a counter-cyclical policy, which, with the strengthening of the impacts of the family protection measures, may be followed by a nearly neutral aggregate demand position by 2021 (Chart 5-8).

Chart 5-8: Fiscal impulse



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

Table 5-2: Decomposition of the change in the 2019 ESA balance forecast (compared to the previous Inflation report)

	Economic developments	Measure and other
I. Central government revenues	0.2	0.0
Taxes on consumption and duties	0.2	
II. Central government expenditures	-0.1	-0.1
Pension and healthcare expenditures	-0.1	
Family protection action plan		-0.1
III. Other items	0.0	0.1
Other		0.1
Total (I.+II.+III.)	0.1	0.0

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 because of the rounding.
Source: MNB

5.3.2. Budget balance in 2018

Based on preliminary financial account data, which usually provide a good approximation of accrual-based general government developments, the deficit was 2.2 percent of GDP in 2018. This deficit was below the 2.4-percent deficit target set out in the Budget Act. The increase in tax revenues significantly exceeded the statutory targets, which was partly offset by the fact that some fiscal expenditures were also higher than the appropriations. The higher-than-expected surplus of local governments also contributed to a more favourable deficit than set in the statutory target.

5.3.3. Budget balance in 2019

According to our forecast, in 2019 the general government deficit may be 1.5–1.6 percent of GDP, i.e. somewhat lower than the 1.8 percent targeted in the Budget Act. According to our forecast, compared to the December Inflation report the deficit may be 0.1 percent of GDP lower, resulting mainly from higher-than-expected revenues from consumption taxes and levies (Table 5-2). This will partly be offset by the impact of the package of family protection measures in H2, which may increase expenditures by 0.1 percent of GDP. Real economic growth will exceed 3.5 percent, and thus we expect pension premium payments at end-2019. Revenues from small enterprise taxes may exceed our December projection, while expenditures related to the public work scheme may be somewhat lower.

Our forecast for the 2019 deficit is slightly lower than this year's deficit target. Of the tax revenues, payments by economic organisations and consumption taxes are expected to be higher than the statutory appropriation, while tax and contribution revenues on labour may be somewhat lower. The Budget Act that was adopted last year does not contain the expenditure-increasing effect of the family protection action plan's measures, which is projected to be 0.1 percent of GDP in 2019. The expenditures of central budgetary organisations are expected to exceed the statutory appropriation, which will only be partly offset by the co-payments related to the lower-than-projected EU funding. Overall, this year's fiscal balance may be 0.2–0.3 percent of GDP lower than the deficit target, depending on the cancellation of the Country Protection Fund (Table 5-3).

5.3.4. Balances in 2020 and 2021

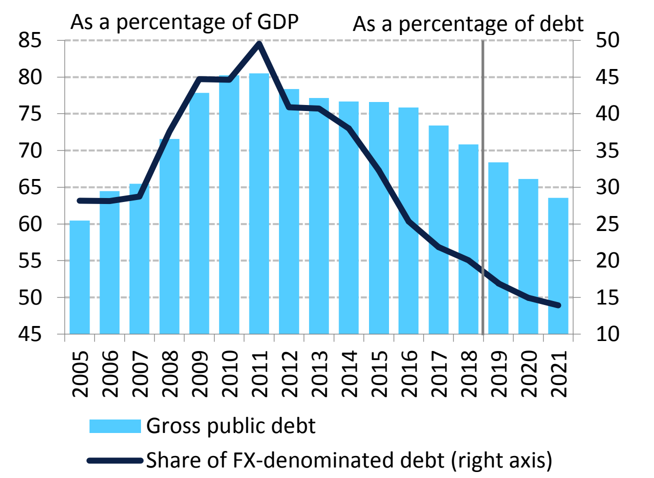
As the relevant budget acts are not available yet, the forecasts for 2020 and 2021 are prepared using technical projections, which continue to show moderate

Table 5-3: Differences between our forecast and the appropriations set out in the 2019 Budget Act

	Difference from appropriation
I. Central government revenues	0.4
Payments by economic organisations	0.1
Consumption taxes	0.6
Taxes on labour	-0.3
II. Central government expenditures	-0.3
Expenditures of budgetary organisations and EU co-financing	-0.1
Family protection action plan	-0.1
Pension and healthcare expenditures	-0.1
III. Other effects	0.1 – 0.2
Cancellation of Country Protection Fund	0.0 – 0.1
Other	0.1
Total (I.+II.+III.)	0.2 – 0.3

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 because of the rounding.
Source: MNB

Chart 5-9: Gross public debt forecast – calculated with unchanged (end-of-2018) exchange rate over the forecast horizon



Source: MNB

developments in the deficit path. There is no change in our 2020 projection compared to December, while the deficit in 2021 may be 0.1 percent of GDP higher. Looking ahead, the only slightly altered deficit path is a result of contrasting effects. The gradually rising fiscal impact of the family protection action plan points to an increase in expenditures. However, this is partly offset by an increase in tax revenues due to favourable macroeconomic developments, and we also took into account the reduction of government capital transfers in accordance with the change published early in the year in the multi-annual fiscal outlook. Our forecast for small enterprise and consumption tax revenues is rising over the entire forecast horizon.

5.3.5. Risks surrounding the baseline scenario

Fiscal developments continue to be significantly affected by the utilisation of EU funds, the structure of disbursements and the amount of transfers received from the EU. In 2018, invoiced disbursements were lower than the statutory appropriation. This phenomenon may continue this year as well, strengthening the risks that point to a lower fiscal deficit. However, higher expenditures may arise if the planned budgetary investments, and especially local government investments, are implemented faster than expected.

The uncertainty related to the measures of the family protection action plan stems from the different utilisation of the individual benefits compared to our forecast, and thus the estimated fiscal effects may be different from the baseline scenario.

5.3.6. Expected developments in public debt

According to preliminary data, at end-2018 the gross government debt-to-GDP ratio was 70.9 percent (Chart 5-9). The debt ratio declined significantly, falling by 2.5 percentage points compared to the 73.4 percent of GDP observed at end-2017. In addition to robust economic growth, the low net financing need also contributed to the decline. The financing need was significantly reduced by the fact that advance payments related to EU funds to economic agents that belong to the sub-systems of the general government were settled on their accounts held with the Hungarian State Treasury. In addition, by 30 September 2018 they had to transfer EU advances exceeding HUF 50 million that had been allocated to them earlier but had not been used yet to their accounts held with the Hungarian State Treasury. The share of foreign currency within the central government debt declined from 21.8 percent at end-2017 to 20.1 percent.

According to our forecast, assuming a constant end-2018 forint exchange rate, the gross government debt ratio will decline to 68.4 percent of GDP by the end of 2019, i.e. the debt rule of the Fundamental Law is expected to be complied with this year as well. Over the forecast horizon, as a result of the economic growth and the moderate deficit, government debt will continue to gradually decline. According to our projection, between 2019 and 2021 the government debt ratio may decrease by 2.3-2.6 percentage points annually, and thus it may fall to below 65 percent by end-2022. By end-2019, the share of foreign currency within the central government debt may be around 17 percent, subsequently declining to close to 14 percent over the forecast horizon, which may further reduce Hungary's external financial vulnerability.

Box 5-1: Budgetary and lending impacts of the Government's demographic measures

The budgetary and lending impact of the family protection action plan announced in February will mainly emerge in 2020 and 2021 over the forecast horizon. The programme's direct budgetary impact is estimated to be just 0.1 percent of GDP for this year, possibly increasing to 0.4 percent in 2020 and 2021 (Table 5-4). In addition, the summer language camp grants for secondary school students will increase budget expenditures by 0.2 percent of GDP in 2020 and 2021. Expenditures related to the action plan can only be estimated as their exact extent largely depends on the number of participants. The measures could exert a substantial effect on domestic household lending: the MNB forecasts that in the medium term, the family support programme may boost the expansion of household lending by approximately 1 percentage point. The programme could increase tax revenues from lending, consumption and investment, which could partly offset the programme's direct expenditures.

Table 5-4: Gross static budget impact of the Family Protection Action Plan as a percentage of GDP

Measures	Estimated gross fiscal effects		
	2019	2020	2021
1. Prenatal baby support	0.02	0.10	0.15
2. Expansion of nursery school capacities	0.02	0.10	0.08
3. Other measures of family protection action plan	0.07	0.20	0.20
Measures of the family protection action plan combined	**0.11**	**0.40**	**0.43**
Summer language camp for secondary school students	0	0.17	0.17
Every measure announced in February combined	**0.11**	**0.57**	**0.60**

Source: MNB calculation

1. The prenatal baby support is an interest-free general purpose loan of up to HUF 10 million. The loans may be taken out by married couples where the woman is under 41 and one of the claimants has had insurance for at least three consecutive years. The prenatal baby support is subject to credit assessment, and monthly repayment may not exceed HUF 50,000. Loan repayment is suspended when the first and the second baby arrives for 3 years each. When the second baby arrives, 30 percent of the outstanding principal is cancelled, and in case of the third child, the total principal is cancelled, but this only pertains to children born after 1 July 2019. The Hungarian state provides guarantee for the loan. The programme can be entered from 1 July 2019 until the end of 2022. Based on our assumptions, a major portion of the new loans is expected to be taken out instead of market loans, and replacement effect may be observed in case of personal loans of large amount and housing loans. Taking into account the above, the programme may increase annual credit growth by 1 to 2 percentage points over the forecast horizon.

2. Loans disbursed under the Family Housing Benefit (CSOK) scheme with government-backed interest subsidy can be taken out for used properties as well from 1 July 2019. Families with two children can obtain HUF 10 million, while those with three or more children can apply for loans of HUF 15 million, interest on which may not exceed 3 percent per year. Besides, the HUF 35 million ceiling on the purchase price of used properties will be abolished. The measures are estimated to require budgetary expenditures of under 0.1 percent of GDP over the forecast horizon.

3. The village CSOK will be available in the communities of under 5,000 inhabitants where the number of population has declined relative to the data from 1 January 2003. According to available information, the non-refundable CSOK subsidies that could only be used for new homes can now also be used for purchasing, enlarging or modernising used properties in the communities concerned. With respect to the highest allowance of HUF 10 million, at most 50 percent can be used for purchasing, and the rest must be spent on renovation or enlargement. The announced measure can affect around 2,400 communities, and its expected costs will not exceed 0.1 percent of GDP. In view of the limitations on eligibility, and the fact that 64 percent of the properties in the communities concerned are exchanged for under HUF 5 million, this measure is not expected to have a major impact on lending developments aggregated at the national level.

4. From families' outstanding mortgage credit, HUF 1 million is written off upon the birth of their second child after 1 July 2019, HUF 4 million is written off once after the birth of the third or further child, and HUF 1 million is written off after the birth of each additional child. This debt write-off is estimated to amount to budgetary expenditure of under

0.1 percent of GDP per year. It could reduce annual household credit growth by 0.5 percentage points at most in the next three years.

5. Women with four children will be exempt from paying personal income tax for their whole life. This allowance will take effect in 2020, and it can also be claimed for children over 18 who are not dependants anymore. The costs of this measure are expected to not exceed 0.1 percent of GDP in any year, as there are at most 60,000 potential beneficiaries.

6. Those with at least three children may apply for a non-refundable grant of up to HUF 2.5 million for purchasing a new, seven-passenger vehicle. The government grant may not exceed 50 percent of the gross purchase price of the vehicle, and the applicants must pay the price reduced by the grant. The budget impact may be around 0.1 percent of GDP until the end of 2022, with 35,000 potential beneficiaries during the whole period.

7. The number of available capacities in nurseries will be expanded to 70,000 until 30 June 2022. The total budgetary effect of this expansion is estimated at a total of 0.2 percent of GDP in the forecast horizon combined, partly in the form of normative subsidies (the number of newly admitted children) and partly in the form of investments.

8. From 2020, the childcare allowance (gyed) received can be claimed by working grandparents, too. Transferring the childcare allowance to grandparents is not expected to generate any significant surplus budgetary expenditure. Since 2014, under the Gyed Extra scheme, mothers can receive gyed if they return to the labour market. When the grandparent gyed is used, the childcare allowance will be transferred to the grandparent instead of the mother.

9. From 2020, secondary school pupils in the 9th and 11th grade can participate in a two-week summer language camp abroad during the summer vacation. The cost of the measure is estimated to amount to 0.2 percent of GDP next year and in 2021, assuming an average participation rate of roughly 60–70 percent in the relevant cohorts.

6. Special topics

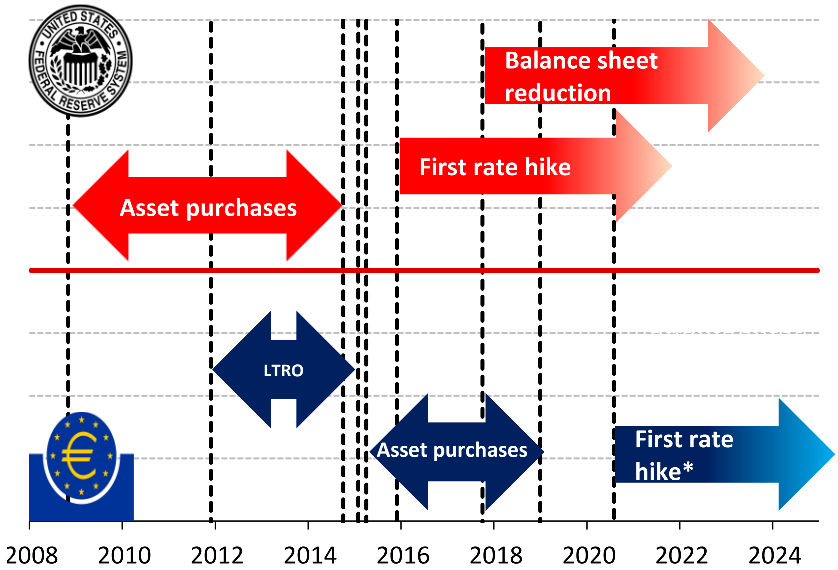
6.1. The future of unconventional instruments in international central bank practice[5]

6.1.1. The role of unconventional instruments in the crisis

During the crisis, central banks in advanced economies committed to maintaining persistently loose monetary conditions in order to support the recovery and raise inflation to the target level. In this context, **they sought to** indirectly **reduce interest rates** on short- and longer-term **instruments by lowering their policy rate and introducing unconventional instruments**, thereby creating favourable financing conditions in the economy, which paved the way for the recovery. While gradually reducing the policy rate, central banks **increasingly faced the limitations of their conventional instruments** as they approached levels near zero. In such an environment, central banks had to **develop new, unconventional instruments** whose impact mechanism was rather uncertain due to their innovative nature, but they effectively targeted the easing of monetary conditions when central banks could no longer move by using interest rates.

Within the framework of their unconventional policies, central banks committed to steadily maintaining low base rates, which they regularly reaffirmed in their official communication in the form of **forward guidance**, thereby influencing yields on long-term instruments. They launched **large-scale asset purchase programmes** by expanding their balance sheets with long-term government bonds or riskier securities, such as mortgage-backed securities and corporate bonds. In addition, they also launched **lending incentive schemes** to promote lending activities (Chart 6-1).

Chart 6-1: Unconventional policies of the ECB and the Fed and prospects for normalisation



Note: In the case of the ECB, the date of the first interest rate increase reflects market expectations.
Source: Central bank websites

The gradual economic **upswing** in recent years **allowed the Fed to reshape its instrument strategy used in the crisis**. Indirect effects of the permanent use of new instruments introduced during the crisis, as well as **the manner, timing and**

[5] BIS (2018): *Monetary policy: a narrow normalisation path.* In: BIS Annual Economic Report 2018. pp. 25-41.

Bullard, J. (2019): *When Quantitative Tightening Is Not Quantitative Tightening.* 2019 U.S. Monetary Policy Forum. The Future of the Federal Reserve's Balance Sheet. New York, Feb. 22, 2019.

Duprat, Marie-Héléne (2018): *Monetary Policy: Back to Normal?* Societe Generale, Economic and sectoral studies department. Econote No. 40., April 2018.

pace of their phase-out all represent uncertainties for central banks. Central banks are also at crossroads regarding the **optimal set of instruments to be used after normalisation and the central bank balance sheet**.

6.1.2. Main theoretical reasons behind normalisation

After the period of persistently accommodative monetary conditions, there may be several arguments for the necessity of normalising the monetary policy environment. Keeping in mind central banks' inflation target, **cyclical developments that are favourable** from the perspective of economic growth **may lead to the overheating of the economy as well as overly large and overly rapid price increases.** Without any monetary policy measures, **this may lead to a permanent overshooting of the inflation target** over the monetary policy horizon, and therefore a **change in the monetary policy stance is necessary** from the historically low interest rate environment that persisted for a long time.

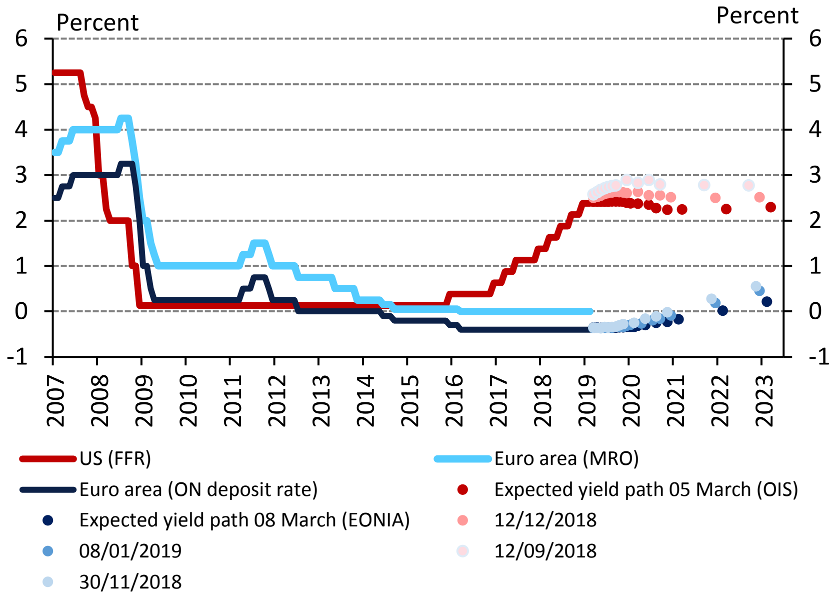
Another important argument for normalisation is the **mitigation or elimination of financial stability risks** related to the prolonged, historically low interest rate environment. **Central bank asset purchases influenced asset price developments**, and they were mainly motived by the desire to stimulate aggregate demand. However, this also led to flatter yield curves, partly on account of the reduced spreads between term premiums, which therefore **pointed towards a reduction in bank profitability and higher risk-taking on the part of investors**. **A persistently loose environment supports households' and companies' borrowing activities, but a large increase in outstanding debt rises the interest rate sensitivity of economy to future monetary policy measures** (BIS, 2018).

6.1.3. Risks surrounding the normalisation process

For central banks, the planning and implementation of normalisation process involve several uncertainties. Decision-makers need to **decide on the fact, method, timing, pace and communication of the phase-out of unconventional instruments**. In addition, central banks are also forced to decide on **the interest rate level available after the normalisation as well as the balance sheet total**. Experience has shown that **normalisation is generally characterised by data-dependence**, in other words, during the change of stance, incoming data shape the central bank's view on economic prospects, and they also provide guidance related to the above-mentioned decisions which are source of uncertainty.

While normalising monetary conditions, the **pace and persistence of normalisation** are uncertain. If normalisation is **too slow, the economy may remain overheated**, which may be a risk of persistently overshooting the inflation target, and in addition, the build-up of financial stability risks may also continue. **In the case of too fast interest rate increases or balance sheet deleveraging**, the **heightened interest rate sensitivity** attributable to the long period of loose conditions **may be strong**, exerting a negative impact on economic activity. In addition, when normalisation is too rapid, **it may excessively increase the interest rates paid by economic actors with variable-rate loans**, and financial market sentiment may also be dampened (BIS, 2018). The persistence of normalisation is another issue, since most central banks continue to face fragile underlying trends. This is confirmed by the uncertainty regarding the expected interest rate path of the Fed and the ECB and their downward shift in the past half year (Chart 6-2).

Chart 6-2: Change in market expectations regarding advanced economy interest rates and the development of the policy rates of major central banks



Source: Bloomberg

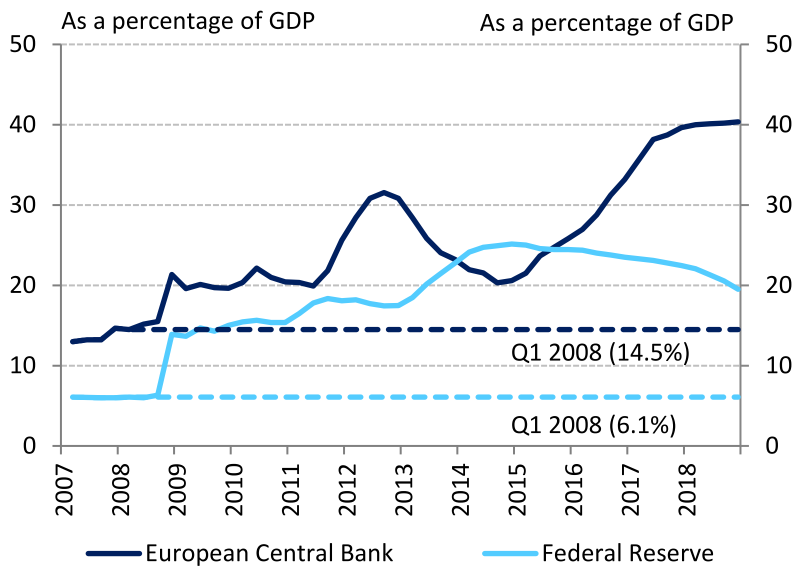
6.1.4. The role and future of unconventional instruments in the practice of the world's leading central banks

During the crisis, interest rates reached historically low levels, while central bank balance sheets expanded to an unprecedented extent as a result of central bank policies (BIS, 2018). Besides the issue of raising interest rates, central banks also need to decide on the future of the expanded balance sheets. According to the arguments for reducing the balance sheets, the impact of the **persistent asset purchases** on asset prices **may lead to the emergence of market risks or bubbles**. Furthermore, the large share of government securities in central bank balance sheets **may also raise central bank credibility issues**, while it may provide negative incentives to the government regarding how fiscal policy should be conducted (Duprat, 2018).

However, **the changed environment calls for a larger central bank balance sheet than before the crisis** for several reasons. **Until the eruption of the crisis**, the expansion of the Fed's balance sheet was almost exclusively **linked to the increase in the demand for cash** (Duprat, 2018). After the crisis, the demand for cash continued to exhibit a sharp rise due to the interest rate environment and buoyant economic growth. Based on the experiences from the crisis, **financial regulation was tightened across the board**. As a result of the better liquidity and capital position arising from the regulation, the **commercial bank reserve holdings held by the central bank also expanded considerably**. In contrast to the experiences prior to the crisis, **reserves form a larger part of the liability side of the Fed's balance sheet** than cash holdings (Duprat, 2018).

Other **uncertainties** faced by central banks include the **macroeconomic effects** of the phase-out of unconventional instruments and the related **contraction of the central bank balance sheet**. Taking into account the Fed's balance sheet policy, in a presentation, James Bullard, the governor of the St. Louis Fed, said that according to their calculation, **in a near-zero interest rate environment in the US, balance sheet policy may affect the macroeconomy**, thereby confirming the effectiveness of the Fed's quantitative easing; **however**, he believed that **when the interest rates are higher, balance sheet policy does not have a significant impact**, therefore **deleveraging does not pose macroeconomic risks in the present interest rate environment** in the US (Bullard, 2018).

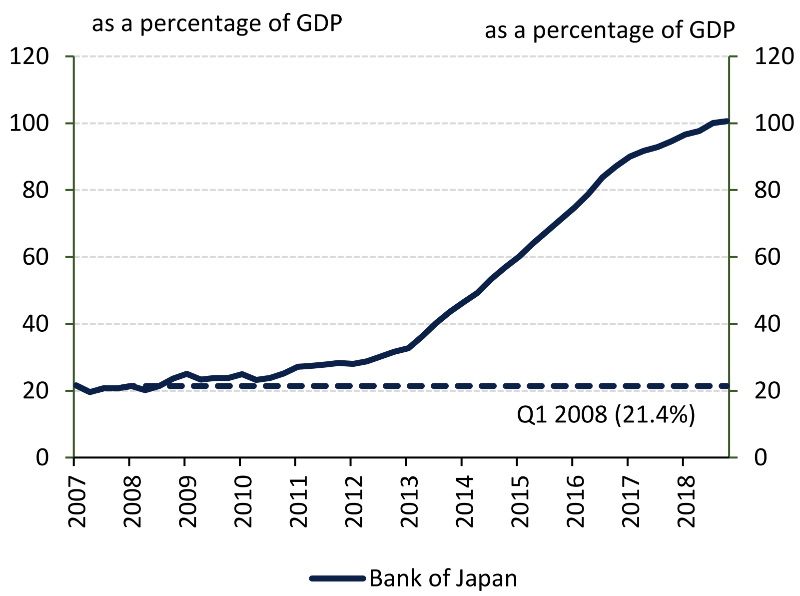
Chart 6-3: Change in the balance sheets of the Fed and the ECB from 2007



Source: Central bank database, Eurostat

As a result of the programmes used **in the crisis, the balance sheet of the world's leading central banks has considerably expanded**. The Fed's balance sheet amounted to 6.1 percent of GDP in 2008 Q1 and then peaked during the crisis in 2014 Q4, at 25.1 percent of GDP. After that, in parallel with the beginning of normalisation, the balance sheet started to contract, falling to 19.5 percent of GDP by 2018 Q4. The ECB's balance sheet expanded from 14.5 to 40.4 percent of GDP during the crisis, relative to 2008 Q1 (Chart 6-3). The Japanese central bank increased its balance sheet from 21.4 percent of GDP to 100.6 percent of GDP by 2018 Q4 (Chart 6-4).

Chart 6-4: Balance sheet of the Japanese central bank since 2007



Source: Bank of Japan

6.1.5. Normalisation and monetary policy outlook of the world's leading central banks

Among the globally dominant central banks, **the Fed started the normalisation of monetary conditions**. After that, **the ECB** turned towards normalisation by **terminating its asset purchases and changing its communication**. **Despite the programmes** announced by the **Japanese central bank** in recent years, **inflation is still not close to the central bank's target**. The central bank's communication **does not suggest any future change of course regarding monetary policy**.

Among globally dominant central banks, only the Fed has made progress in normalisation. It announced the tapering of its asset purchase programme in December 2013. In December 2015, the central bank raised its base rate for the first time. After the beginning of interest rate increases, the central bank **published its deleveraging strategy** in June 2017, before launching its balance sheet deleveraging in October 2017. Decision-makers **announced the gradual ending of balance sheet reduction in March 2019.** Consequently, the Bank's balance sheet is expected not to decline further after September of 2019. **Until March 2019**, the Fed has **raised the policy rate nine times**. The interest rate path expected by market participants has shifted increasingly downwards in the past half year, and **currently a drop in the policy rate is priced with a higher probability over a two-year horizon than an increase. In December 2018, the ECB terminated its net asset purchases**, but the central bank indicated that it would continue reinvesting the maturing securities for an extended period of time after raising the policy rate, therefore **deleveraging can start in 2020 or 2021 at the earliest**. In the context of incoming unfavourable growth data and the muted underlying inflation trends, **the ECB's interest rate increase expectations have shifted further and further away**. At its March meeting, the central bank announced the launch of its TLTRO-III programme to stimulate lending processes. Given the Japanese central bank's balance sheet total exceeded 100 percent of GDP, **the governor said in February 2019 that the central bank was ready to take further monetary easing measures** if inflation fails to approach the 2-percent medium-term inflation target. He also stated that if inflation developments continue to fall short of the expectations, the central bank may decide to further lower the current policy rate of -0.1, or it may even reduce the 0-percent yield target of 10-year government bonds into negative territory. Moreover, the Bank of Japan may further expand its asset purchase programme, or it may decide to increase the monetary base more than before. Most central banks face fragile underlying trends and were unable to launch their exit strategy or make meaningful progress in recent years. **Therefore, over the medium term, central banks are not expected to return to their pre-crisis instruments, and unconventional instruments are now more likely to be included among traditional instruments.**

6.1.6. Conclusion

Most developed central banks have begun normalising monetary conditions. Normalisation is **generally data-dependent**, and therefore the whole process of the change in course is fundamentally determined by the close monitoring of the incoming data and continuous assessment of the outlook. In the persistently loose monetary policy environment during the crisis, **economic actors may have become more sensitive to interest rates**, so central banks adopt a **careful, gradual pace of interest rate increases** during normalisation. **In the future, central banks may face the limits of interest rate policy more often and for longer times**, when monetary conditions would need to be eased. This suggests that going forward **unconventional instruments may become an integral part of central bank policies.** Partly on account of the tighter regulation of the financial system, **the balance sheets of developed country central banks are not expected to shrink back to pre-crisis levels**. Overall, in view of the strategy of world's leading central banks and the recent developments, in contrast to the pre-crisis period, the **turnaround in monetary policy** points towards **maintaining loose monetary conditions after an exceptionally loose environment**, rather than the emergence of a tight monetary policy stance.

6.2. Evaluation of the central bank's forecasts for 2018

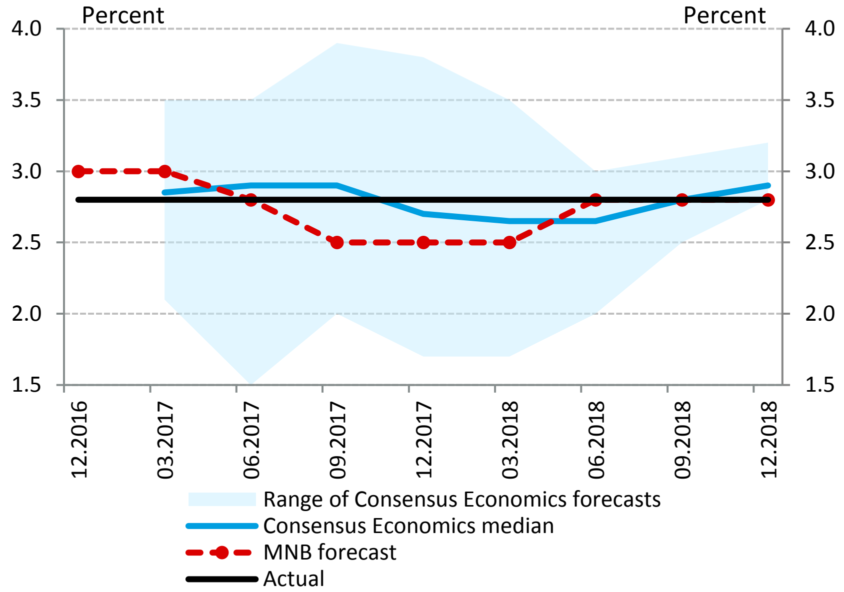
The purpose of this analysis is to present the accuracy of the fulfilment of our forecasts for the values of the key macroeconomic variables in the previous calendar year. In addition, we also examine how the central bank's forecasting performance relates to market analysts. The first forecast for the variables examined for 2018 was prepared in December 2016. Overall, 2018 inflation was largely in line with our forecast, with economic growth and wage growth in 2018 coming in higher than expected, and the growth of the number workers in the private sector coming in lower.

6.2.1. Inflation

In 2018, average annual inflation was 2.8 percent. **Our forecast showed that on account of the rise in core inflation adjusted for taxes due to favourable income developments and rising domestic demand, inflation would gradually approach the 3-percent central bank target**. However, a moderate inflationary impact of wage outflows was expected on account of the weakened relationship between labour costs and prices after the crisis, the low wage share and the low inflation expectations by households. It was projected that the inflationary impact from the labour market may remain moderate even in the context of higher wage dynamics due to administrative measures, since the upward pressure on costs exerted by the measures would be mitigated by the further reduction of the social contribution tax as well as the whitening effect of earned income.

At the end of 2016, 3-percent inflation was projected for 2018, which was reduced to 2.5 percent in two steps in 2017, then raised back again to 2.8 percent in 2018 Q2. After that **incoming actual data were in line with the projections**. The expectations of market analysts participating in the Consensus Economics survey varied widely until mid-2018. The median of the forecasts was closer to the actual data received later until early 2018, while last year's MNB projections were more accurate (Chart 6-5).

Chart 6-5: 2018 inflation forecasts by the MNB and the market

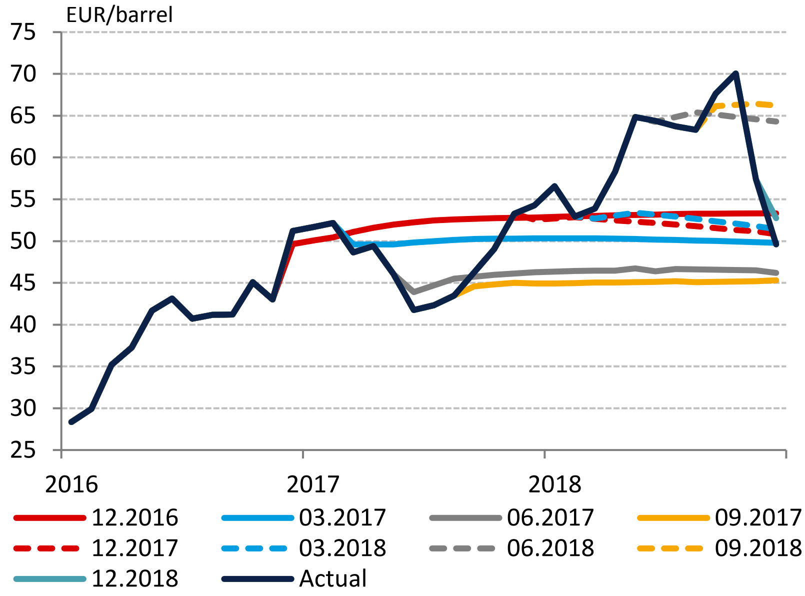


Note: The band shows the range of the forecasts by the economists involved in the Consensus Economics survey.

Source: Consensus Economics, HCSO, MNB

The changes in the projections for 2018 **were caused mainly by the fluctuations of oil prices** (Chart 6-6). In mid-2017, oil prices nosedived, which prompted us to revise downwards our assumption for the oil price and thus also our inflation projection. In 2018 Q2, our forecast was also revised upwards on account of the change in oil prices.

Chart 6-6: Development of oil price assumptions

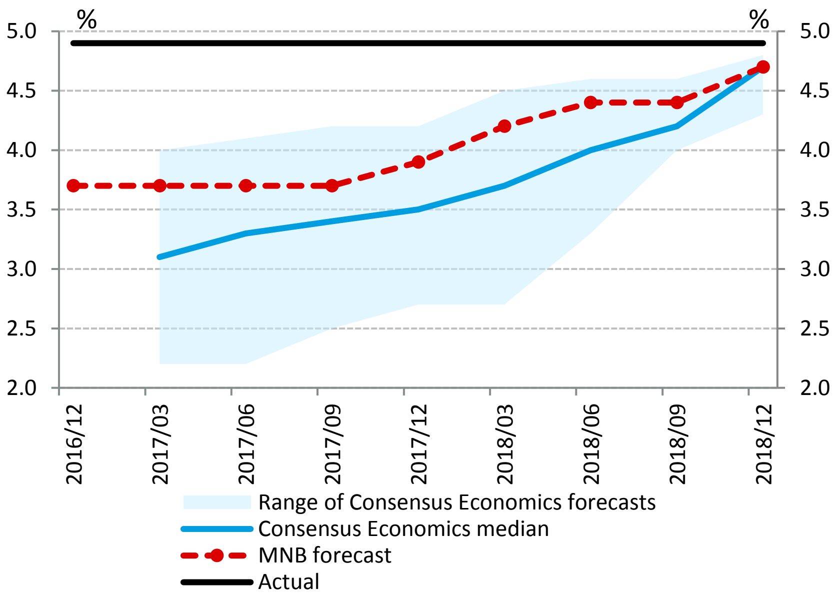


Source: Bloomberg

6.2.2. Economic growth

Last year, Hungary's GDP grew by 4.9 percent. Economic growth in 2018 exceeded the central bank's projection and market expectations as well. Although the forecasts continuously moved upwards last year, no analyst expected economic growth to be as strong as was actually observed (Chart 6-7). **The MNB's average forecast error for the entire horizon was smaller than the forecast error in the market analysts' median.**

Chart 6-7: 2018 growth forecasts by the MNB and the market



Note: The band shows the range of the forecasts by the economists involved in the Consensus Economics survey.

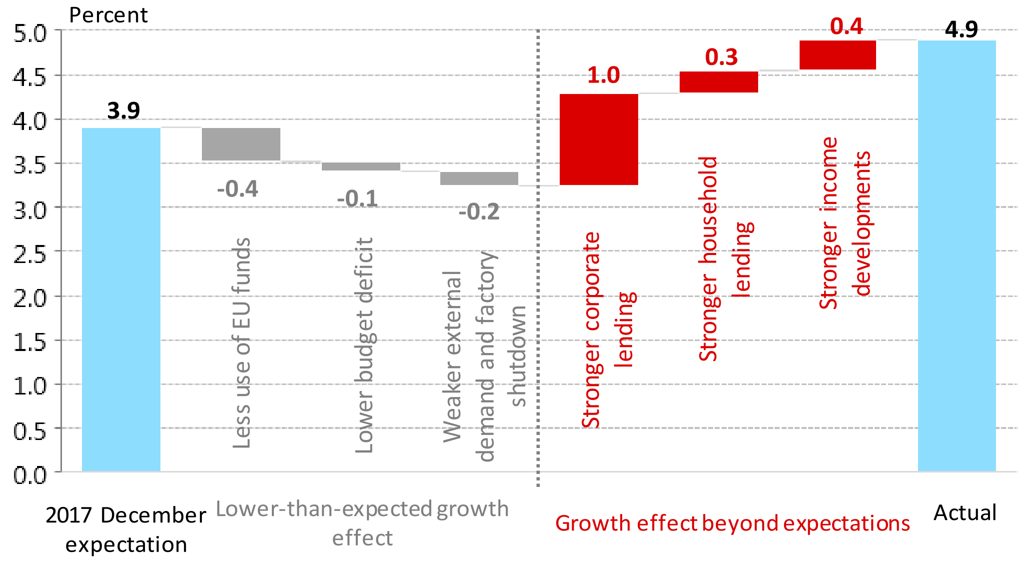
Source: Consensus Economics, HCSO, MNB

Our expectations showed that growth would be significantly influenced by strengthening domestic demand, in which the expansion in consumption and investments play a key role. This year's increase in household consumption can be linked to the positive income trends, the expansion of household lending and the significant rise in net financial wealth. The increasing investments in the national economy are also influenced by FDI and the government investments rising in parallel with the inflow of European Union funds. Stemming from the import-intensive nature of the growth in domestic demand items, net exports were expected to contribute somewhat negatively to growth.

Since the end of 2017, our growth forecast has been revised gradually and significantly upwards (Chart 6-8). **The strong expansion of Hungarian GDP was shaped by several opposing effects.**

- The deteriorating external economic activity, the lower-than-expected drawdown of EU funds and the weaker impulse from fiscal policy pointed towards slower growth, but these had a more minor impact on growth than expected, and the **massive expansion in lending** overcompensated for this, coupled with a more rapid growth in households' income.
- **In 2018, lending expanded much more favourably than expected in the whole corporate segment and also among SMEs.** Since 2013, the corporate credit market, especially that of SMEs, has avoided a meltdown, and it has embarked on a growth path in recent years. In parallel with high capacity utilisation and the low interest rate environment, the buoyant corporate credit expansion supported the dynamic rise in companies' investment activity. The stronger corporate lending is estimated to have resulted in GDP coming in almost 1 percentage point higher in 2018 than expected, which was indicated by the dynamically expanding construction output and machinery investment.
- Besides the corporate segment, **household lending growth also continued to be stronger than expected**. The expansion affected both housing and consumer loans. The stronger-than-expected credit growth contributed to the buoyant expansion of household consumption last year. Higher household disposable income boosted not only consumption but also investments and financial savings. Taken together, 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 6-8: Factors explaining the higher GDP growth in 2018



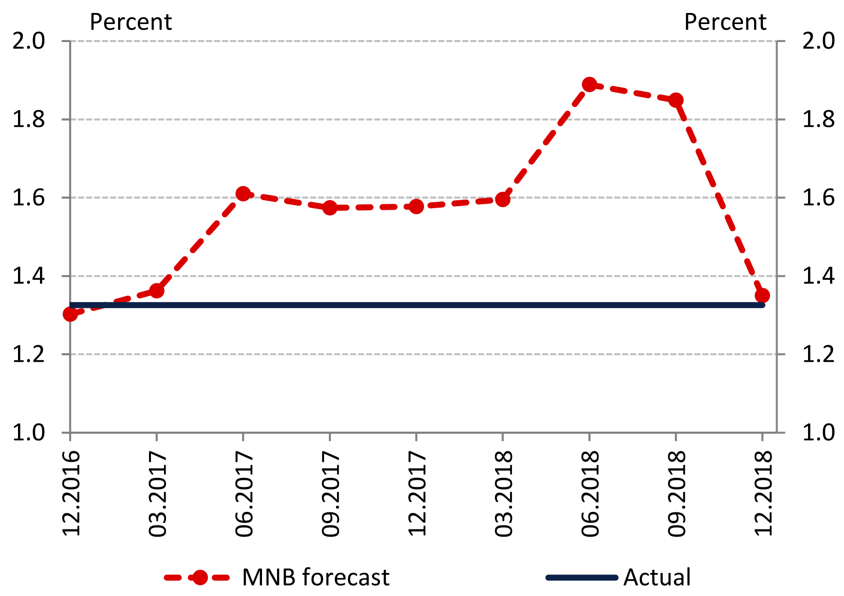
Source: HCSO, MNB

6.2.3. Labour market

Employment growth was projected to **slow down in 2018**. In parallel with economic growth, the high labour demand of the private sector contributed to the further expansion of employment. However, **companies' efforts to increase their headcount are considerably hampered by the scarcity and alignment problems of the potential labour reserves** (the inadequate skills of the workers and the lack of labour mobility). Our projections for 2018 showed that demographic developments would increasingly impose an effective constraint on employment growth.

Our forecasts for employment growth in the private sector in 2018 **mostly overestimated the actual figure** (Chart 6-9). From the summer of 2017, it was expected that the number of public workers would fall significantly on account of the reduction in the limit, and some of those that do not remain in the programme would find employment in the private sector. As growth prospects brightened, our projection was raised further. However, **in 2018 Q2 and Q3 private sector employment stagnated despite the intense labour demand, probably because the supply constraints were stronger than expected.** Therefore, our forecast for 2018 was also revised considerably downwards in the last quarter.

Chart 6-9: MNB projections for the private sector's headcount index in 2018

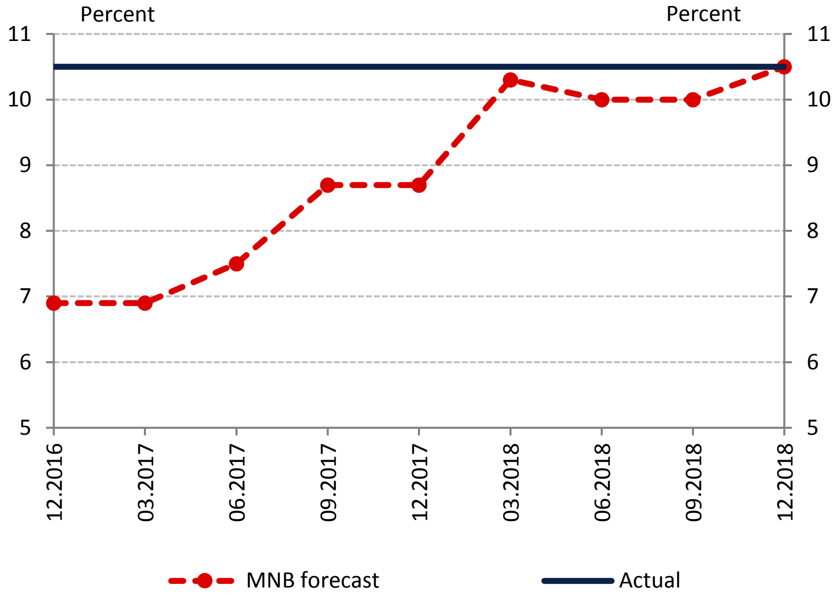


Source: HCSO, MNB

Our projections assumed that **in the historically tight labour market environment, there is strong competition among companies to retain labour and fill vacancies, which also leads to dynamic underlying wage setting trends in 2018**. The wage data received in 2017 showed that in the context of tight labour market conditions, companies raise wages more even in higher salary categories as the employer's social contribution on gross earnings was reduced, suggesting that the effect of the six-year wage agreement on lifting wage growth would also be stronger in 2018. **The effect of the administrative measures included in the wage agreement** (substantial minimum wage increases, tax cuts) **was significantly underestimated until 2018.** Accordingly, our projection for private sector wages was gradually revised upwards.

For 2018, double-digit wage growth was expected, albeit it was still weaker than in 2017, because the minimum wage and guaranteed minimum wage increases were lower than in the previous year. Overall, our **forecasts** for 2018 private sector wage growth **substantially underestimated the actual figure until 2018, but they were practically identical in 2018** (Chart 6-10).

Chart 6-10: MNB projections for the private sector wage index in 2018



Source: HCSO, MNB

7. Breakdown of the average consumer price index for 2019

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

	Effect on CPI in 2019		
	Carry-over effect	Incoming effect	Yearly index
Administered prices	0.0	0.1	0.1
Market prices	0.6	2.2	2.8
Indirect taxes and government measures	0.1	0.1	0.2
CPI	**0.7**	**2.4**	**3.1**

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

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

	2019				
	Average carry-over effect	Carry-over indirect tax effect	Average incoming effect	Incoming indirect tax effect	Yearly index
Food	1.5	0.0	3.8	-0.3	5.0
non-processed	1.6	0.0	6.2	0.0	7.8
processed	1.4	0.0	2.7	-0.5	3.7
Tradable goods	0.9	0.0	0.6	0.1	1.6
durables	0.5	0.0	0.1	0.0	0.6
non-durables	1.1	0.0	0.7	0.2	2.0
Market services	1.3	0.0	3.3	-0.2	4.4
Market energy	5.3	0.0	2.7	0.0	8.0
Alcohol and Tobacco	1.6	0.9	2.8	2.2	7.4
Fuel	-5.1	0.0	2.8	0.0	-2.3
Administered prices	0.2	0.0	0.5	0.0	0.7
Inflation	**0.6**	**0.1**	**2.3**	**0.1**	**3.1**
Core inflation	1.3	0.1	2.2	0.2	3.8

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

LIST OF CHARTS AND TABLES

List of charts

List of tables

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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