MACROECONOMIC AND

FINANCIAL MARKET DEVELOPMENTS

BACKGROUND MATERIAL

TO THE ABRIDGED MINUTES

OF THE MONETARY COUNCIL MEETING

OF 16 NOVEMBER 2021

NOVEMBER

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The background material 'Macroeconomic and financial market developments' is based on information available until 11 November 2021.

Article 3 (1) of the MNB Act (Act CXXXIX of 2013 on the Magyar Nemzeti Bank) defines achieving and maintaining price stability as the primary objective of the Magyar Nemzeti Bank. The MNB's supreme decision-making body is the Monetary Council. The Council convenes as required by circumstances, but at least twice a month, according to a pre-announced schedule. At the second scheduled meeting each month, members consider issues relevant to decisions on interest rates. Abridged minutes of the Council's rate-setting meetings are released regularly, before the next policy meeting takes place. As a summary of the analyses prepared by staff for the Monetary Council, the background material presents economic and financial market developments, as well as new information which has become available since the previous meeting.

The abridged minutes and the background materials to the minutes are available on the MNB's website at:
http://www.mnb.hu/en/monetary-policy/the-monetary-council/minutes

Table of contents

1. Macroeconomic developments

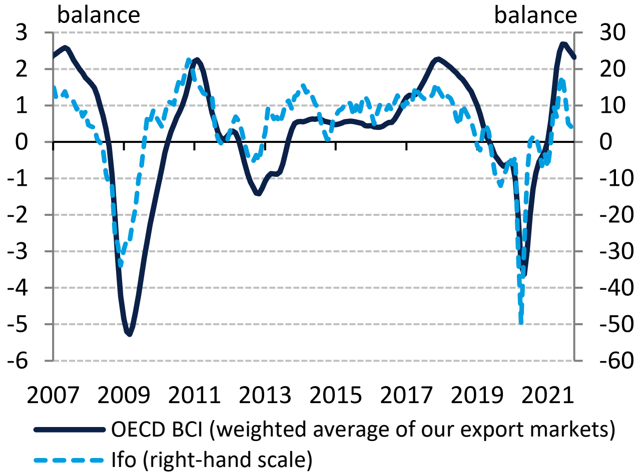
1.1. Global macroeconomic environment

Economic growth in China and in the United States slowed down in the third quarter. The euro area and the EU saw a year-on-year economic growth of 3.7 and 3.9 percent, respectively. Euro area GDP still falls short of its pre-pandemic value. In October, confidence indices related to the international manufacturing and service sectors showed a mixed picture in the individual economies. The deterioration in industrial activity was primarily caused by the global semiconductor shortage. The sharp rise in the number of cases, seen in recent weeks, is already related to the fourth wave of coronavirus, which looking ahead, may restrict the recovery of the economy. In countries with higher vaccination coverage, the negative impact of the potential epidemic restrictions is likely to be more moderate. In the third quarter of 2021, the external inflationary environment remained high. In the United States, inflation stood at 6.2 percent in October, surpassing analysts' expectations. According to preliminary data, euro area inflation rose to 4.1 percent in October.

Global industrial production exceeded its pre-pandemic level as early as September 2020, and has continued to surpass it ever since, while after the restart of the economies, outlook for the service sector also improved significantly. On the other hand, industrial production faltered in August, and looking ahead, the global semiconductor shortage represents a downside risk. Prospects of the service sector improved in parallel with the rise in vaccination coverage; nevertheless, the recovery is still expected to be slow. The strengthening of the fourth wave poses additional risk for recovery. The number of daily commercial flights started to rise from March from the average 65-70 thousand flights registered in the second half of last year and at present it is around 100 thousand, which – however – is still well below the 2019 figures.

Based on preliminary data, economic growth slowed down in the third quarter of 2021. The economic performance of China rose by 4.9 percent year-on-year, and GDP of the United States also grew by 4.9 percent. According to the currently available data, in the third quarter of 2021 the euro area and the EU registered an economic growth of 3.7 and 3.9 percent, respectively, year-on-year. Euro area GDP still falls short of its pre-pandemic value. Of the countries that publish preliminary data, in the third quarter of 2021 the economic performance of Lithuania, Sweden, Latvia and Belgium exceeded the 2019 fourth-quarter

Chart 1 Business climate indices in Hungary's export markets



Source: OECD, Ifo

figure. By contrast, GDP of Germany, Italy, Portugal and Spain still fall short of that.

Monthly production indicators mostly grew further in September. Industrial production in the euro area, the United States, the United Kingdom and in China rose by 5.2 percent, 4.6 percent, 2.9 percent and 3.1 percent, respectively, compared to last September. In September, the volume of retail sales rose in the USA by 13.9 percent, in China by 4.4 percent and in the euro area by 2.5 percent, while it fell in the United Kingdom by 1.3 percent, year-on-year.

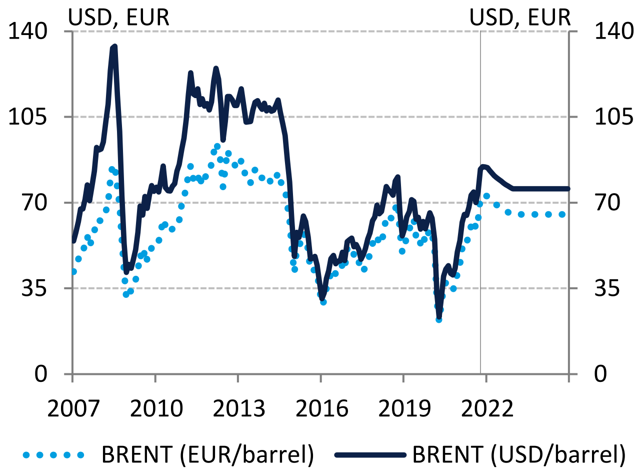
In October, forward-looking confidence indices related to the international manufacturing and service sectors show a mixed picture in the individual economies. Business sentiment in the euro area moderately improved, while it declined in Germany (Ifo Business Climate Index) in October (Chart 1). Purchasing Manager Index of the United States exceeded the threshold value (50 points), while that of China was below it in October.

International labour market trends improved further. In the United States, the number of new unemployment benefit claims was 269,000 in the week ending on 30 October, which is a decrease compared to the previous week, but it still exceeded the 2019 average (200,000). The unemployment rate declined to 4.6 percent in October. The euro area unemployment rate declined, compared to the previous month and is at 7.4 percent now.

According to preliminary data, in annual terms, euro area inflation and core inflation rose to 4.1 percent and 2.1 percent, respectively in October. Preliminary data exceed analysts' expectations of 3.7 percent for inflation and 1.9 percent for core inflation.

Exceeding analysts' expectations by 0.4 percent, CPI inflation in October stood at 6.2 percent in the United States. US consumer price index stagnated at 5.4 percent from June to September, with the exception of August, when it was 5.3 percent. According to preliminary data, the September consumer price index remained above the central bank's target, at 6.8 percent in Poland. In the Czech Republic inflation in September was 4.9 percent, significantly exceeding

Chart 2 World market prices of Brent crude oil



Source: Bloomberg

the 2 percent inflation target of the Czech central bank.

The sharp rise in the number of cases observed in recent weeks is already connected to the fourth wave of the coronavirus pandemic, which – looking ahead – may interrupt the recovery of the economy. In countries with higher vaccination coverage the negative impact of the potential epidemic restrictions is likely to be more moderate.

In October 2021, the average world market price of Brent crude oil was USD 84 per barrel, and then, in the first days of November the spot price stood at USD 83 per barrel (Chart 2). In the second half of October, oil price quotes rose to a 3-year high, over USD 85. This is attributable, in addition to the low natural gas and coal reserves, to the approaching winter season and to the production cut by OPEC+. US President, Joe Biden, called upon the OPEC+ member states to boost output in order to combat rising oil prices; however, the members of the oil cartel ignored the call. There was a moderate adjustment in oil prices in early November due to the accumulation of US reserves and to the signs that high prices may prompt producers to procure larger supply. **The world market price of both industrial commodities and unprocessed food increased in October compared with the previous month.**

1.2. Domestic real economy developments

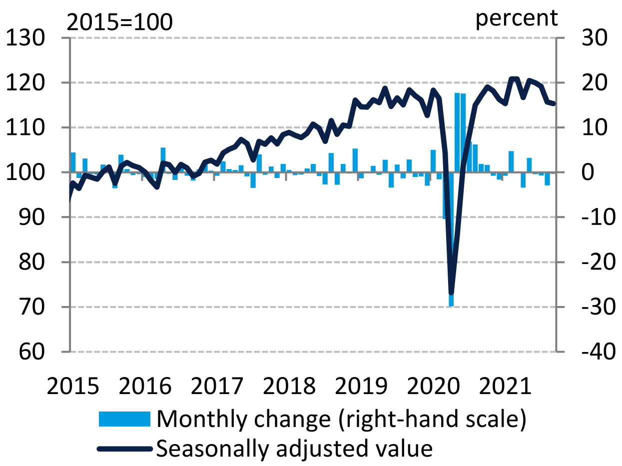
In the second quarter of 2021, Hungary's GDP reached its pre-crisis level. Real time data suggest a slowdown in growth rate in the summer months, which is attributable to the higher bases of 2020 resulting from the partial lifting of restrictions. In September, industrial output repeatedly fell short of their level in early 2020. However, the volume of retail sales and construction output moderately exceeded their pre-pandemic levels. The recovery of the labour market has started after the reopening of the economy. In September 2021, the raw unemployment rate stood at 4 percent, while the number of people in employment rose by 70,000 year on year, surpassing pre-pandemic levels.

1.2.1. Economic growth

As a result of the fast reopening, the Hungarian economy grew further. Based on raw data, Hungary's GDP rose by 17.8 percent year-on-year, while economic performance grew by 2.9 percent quarter-on-quarter in the second quarter of 2021.

In September 2021, industrial production decreased by 2.3 percent (by 1.7 percent based on calendar-adjusted data) year-on-year. Based on the seasonally and calendar adjusted data, the volume of production decreased by 0.3 percent on a monthly basis (Chart 3). In September, the volume of output fell short of the level registered in early 2020. HCSO registered a growth in most of the manufacturing subsectors. However, the output of automotive industry, representing the largest share, declined significantly, primarily due to the factory stoppages caused by the global semiconductor shortage. HCSO registered a growth in most of the manufacturing subsectors. However, the output of automotive industry, representing the largest share, declined significantly, primarily due to the factory stoppages caused by the global semiconductor shortage. The output of automotive industry fell by 25.9 percent, year-on-year, The manufacture of computers, electrical equipment and optical products declined by 11.4 percent. On the other hand, the manufacture of electrical equipment rose significantly, by 28.2 percent, primarily due to the continued pickup in electric engine and battery production.

Chart 3 Development in industrial production



Source: MNB calculation based on HCSO data

In September 2021, based on raw data, the volume of construction output rose by 14.2 percent year-on-year. The level of construction output reached the level before the outbreak of the coronavirus pandemic, but it remained below the growth trend seen in recent years. The volume of output rose by 4.2 percent compared to previous month, based on seasonally and calendar adjusted data. Construction of buildings rose by 21.2 percent, while other construction increased by 6.7 percent, year-on-year. The volume of new contracts concluded fell by 16.1 percent, while the construction companies' contract portfolio at the end of August increased by 12.9 percent compared to September 2020.

According to real time data, GDP growth declined in the third quarter as base effects wore off. Based on the online cash register data, turnover in September grew in nominal terms by 14.0 percent, year-on-year. Due to last year's low base air passenger traffic registered a triple-digit growth in September, albeit at the end of the month it still fell short of the level of two years ago by 58 percent. Catering turnover in nominal terms already exceeded its level of 2019 in the same period since mid-June; however, by the end of October it fell below its level registered in 2020. Cinema attendance is recovering gradually after the reopening, with the decline in July still being around 20 percent compared to its level two years ago, which fell to 10 percent by October. Road passenger and goods traffic have been both improving strongly since mid-March, and in October they were around the level registered in 2019. In October, the electricity load data were slightly below the level of last year.

In October, **household borrowing** exceeded its previous year level by 26 percent on average, while it reached its level registered two years earlier. In September, there was no growth in **the average number of housing market transactions** year-on-year**. Labour market adjustment has been modest in Hungary** during the coronavirus crisis. The seasonally adjusted unemployment rate stood at 3.9 percent in September. Employment is at the peak of the market economy period, based on seasonally adjusted data. In September, based on adjusted data, the number of people in employment exceeded the level of December 2019, before the coronavirus pandemic, by 20,000. **Google searches** related to unemployment also show a favourable picture. Online searches in Hungary for the term “unemployment benefit” and "jobseeker’s allowance” are close to the levels before the outbreak of the pandemic.

According to the HCSO's preliminary data release, **in September exports fell by 0.6 percent and while imports rose by 12.0 percent, in euro terms, compared to last September.** In September 2021, the merchandise trade balance showed a surplus of EUR 1.3 million.

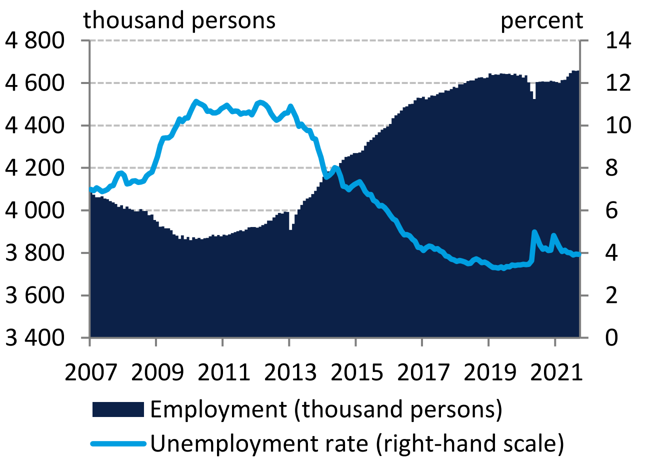
In September 2021, the volume of retail sales was up by 5.8 percent based on raw data and on data adjusted for the calendar effect, year-on-year. Thus construction output slightly exceeded its level registered before the coronavirus pandemic, but materially fell short of the growth trend of past years. Compared to previous month the volume of sales slightly increased (+0.6 percent). The volume of retail sales rose in most shop types in September. Based on the data adjusted for the calendar effect, the volume of retail sales in food stores and groceries rose by 3 percent, that in non-food stores by 8.1 percent, while the volume of fuel retail sales increased by 8.4 percent year-on-year.

In September 2021, the number of tourist overnight stays at commercial accommodations hardly exceeded two-thirds of the pre-pandemic level, while it rose by 39.4 percent compared to September 2020. In September, domestic tourist overnight stays were almost 1.2 million, which slightly fell short of the level registered in the same period of 2020 and 2019. 68 percent of the domestic tourist overnight stays were in hotels, representing a year-on-year growth of almost 17 percent. According to the HCSO's data release, the number of overnight stays by foreign tourists in Hungary was 729,000, while a year ago it was merely 135,000. On the other hand, the number of overnight stays by foreign tourists declined by 51 percent compared to September 2019. 77 percent of foreign tourists stayed in hotels, representing an almost sixfold increase in the number of overnight stays in hotels compared to September 2020.

1.2.2. Employment

Based on the data of the Labour Force Survey (LFS), in September 2021 total number of the employed amounted to 4,687,000 reflecting an increase of 70,000 persons year-on-year (Chart 4). Since September 2020, the number of employees in the primary labour market and the number of public employees rose by 69,000 and 8,000 persons, respectively, while the number of those working abroad declined by 25,000 persons.

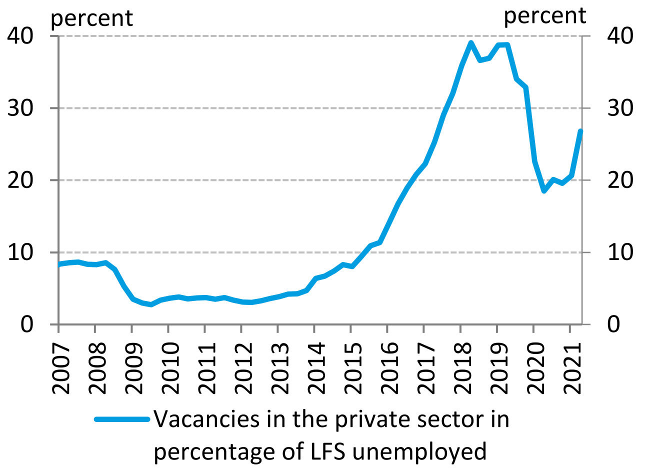
Chart 4 Number of persons employed and the unemployment rate



Source: HCSO

In September, the number of the unemployed was 195,000, falling short of the year-on-year figure by 26,000 persons, and as a result, on the whole the seasonally adjusted unemployment rate stood at 3.9 percent. Based on seasonally adjusted data, in September the number of the unemployed fell by one thousand persons compared to August. Based on the data published by the National Employment Service (Nemzeti Foglalkoztatási Szolgálat - NFSZ) in September and October the number of registered jobseekers in Hungary was 250,000 (-73,000 on an annual basis) and 246,000 (-60,000 on an annual basis), respectively.

Chart 5 Development of labour market tightness indicator



Note: Quarterly data.
Source: National Employment Service, HCSO

In the second quarter of 2021, private sector vacancies amounted to 51,700, exceeding the year-on-year value by 38.5 percent and falling short of the pre-pandemic figure by merely 3 percent. **Labour demand rose substantially in both manufacturing and market services, on an annual basis.** Manufacturing job vacancies exceeded the figure a year ago by 4,200. In the market services sector, real estate, professional and administrative activities job vacancies increased by almost 6,000 and in the information and communication sectors by 1,500. In the rest of the sectors the rise was negligible in annual terms. Within the public sector job vacancies decreased in healthcare and increased in education. Overall, the labour market tightness indicator calculated from the ratio of job vacancies and unemployed persons, **rose significantly compared to the previous quarter**, but it still falls short of the values registered in the previous two years (Chart 5).

1.3. Inflation and wages

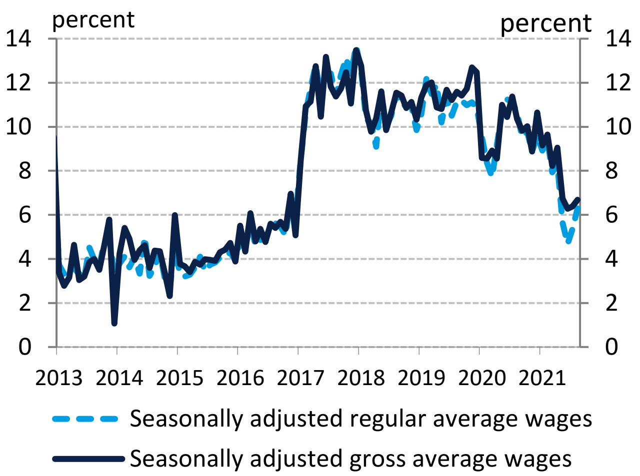
In October 2021, inflation calculated on a year-on-year basis was 6.5 percent, while both core inflation and core inflation excluding indirect tax effects stood at 4.7 percent. Underlying inflation indicators capturing persistent trends (price index of demand sensitive and inflation of sticky price products and services) increased compared to the previous month. The announced price changes suggest that inflation will exceed the figure projected in the September Inflation Report. In August 2021, whole-economy average wages and private sector wages rose by 8.9 percent and 7.2 percent, respectively, year on year. A more moderate annual growth rate in average wages in the private sector was due to statistical effects.

1.3.1. Wage setting

In August 2021, gross average wages in the private sector rose by 7.2 percent year-on-year. Based on the detailed analysis of the sectors, the degree of the distortion in the gross average wage of full-time employees decreased compared to the previous months and, contrary to previous year, result in the underestimation of the wage index. Regular average wages increased compared to previous month, while the degree of bonus payments remained broadly unchanged compared to the level of previous years.

According to seasonally adjusted data, the growth in gross average wage and regular average wage accelerated in the private sector compared to the previous month (Chart 6)**.** In the private sector wage dynamics of market services outstripped that of manufacturing. In August, based on raw data, manufacturing wages were higher by 6.8 percent year-on-year. Wages in the automotive industry – representing the largest share – increased by 5.7 percent in annual terms. In market services, HCSO registered a growth of 7.3 percent. Annual wage dynamics was around 5-10 percent in most industries. Gross wages in the financial, catering and construction sectors rose by 10.4 percent, 7.1 percent and 8.8 percent, respectively, year-on-year.

Chart 6 Dynamics of average earnings in the private sector

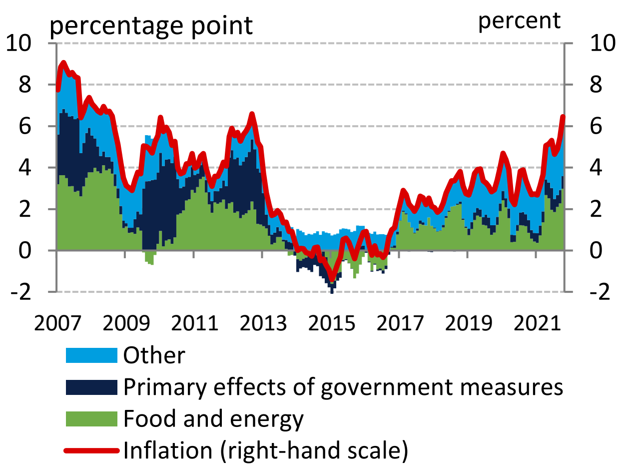


Source: MNB calculation based on HCSO data

1.3.2. Inflation developments

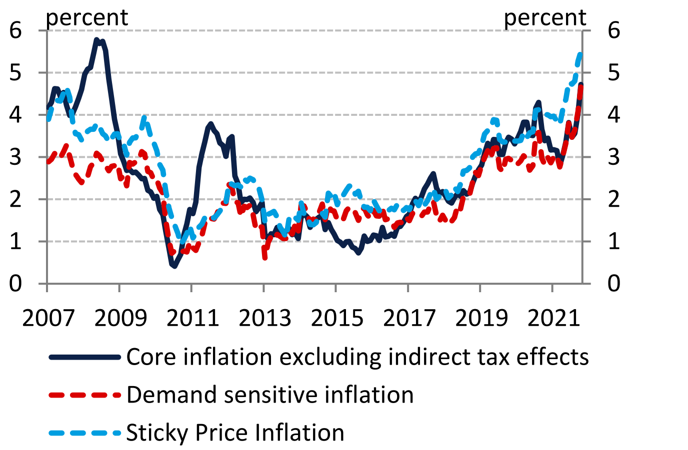
In October 2021, inflation calculated in annual terms was 6.5 percent, while core inflation and core inflation excluding indirect taxes stood at 4.7 percent (Chart 7)**.** Compared to the previous month, inflation increased by 1.0 percentage point and core inflation by 0.7 percentage point. Higher inflation was caused by the rise in the prices of a wide range of products and services.

Chart 7 Decomposition of inflation



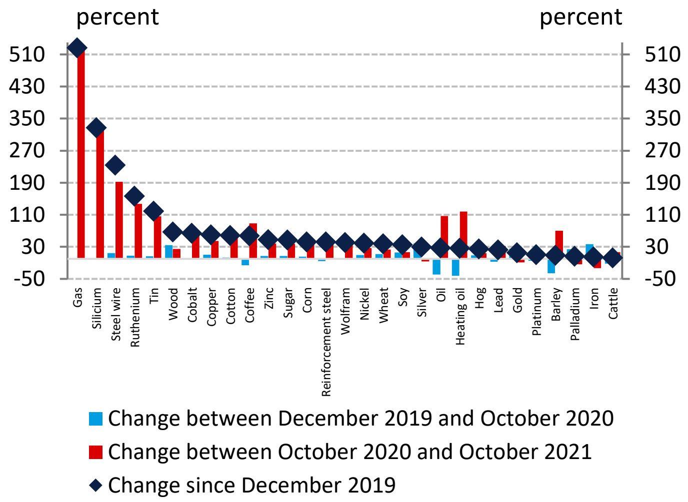
Source: MNB calculation based on HCSO data

Chart 8 Measures of underlying inflation indicators



Source: MNB calculation based on HCSO data

Chart 9 Changes in major commodity prices since December 2019



Source: Bloomberg

Chart 10 Developments in the Freightos Baltic Index for shipments from China

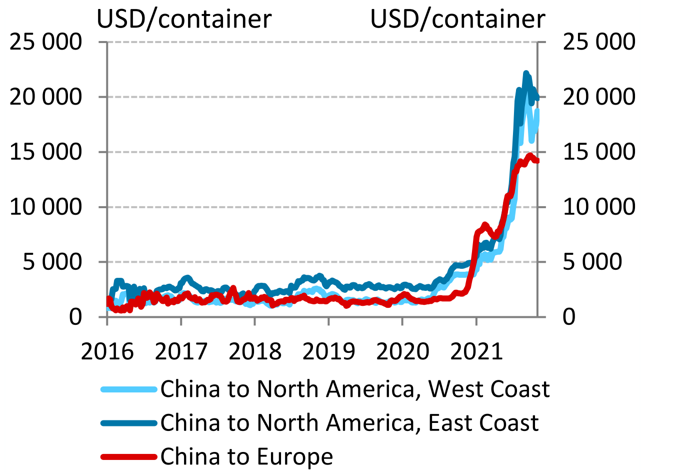
Underlying inflation indicators capturing persistent trends (inflation of demand sensitive and sticky price products and services) **increased compared to the previous month** (Chart 8). In September 2021, agricultural producer prices increased by 23.6 percent in annual terms, while domestic sales prices in sectors of consumer goods increased by 5.4 percent.

1.3.3. Inflation risks

Following a temporary decline in summer, inflation started to rise repeatedly from autumn. The indicator stood at 6.5 percent in October. The announced price changes imply that inflation will exceed the expectations in autumn, unless there will be some sort of correction in the energy prices.

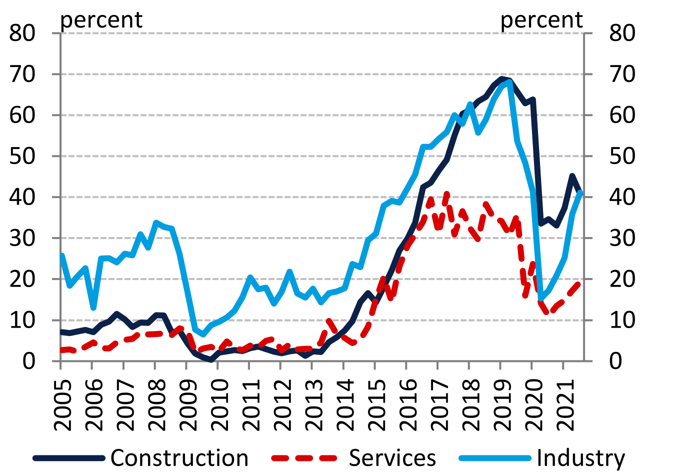
The growth in inflation risks is equally attributable to international and domestic trends. Due to the different nature and management of the crisis, global economic activity and the labour market may recover faster than in the 2008/2009 crisis. **In addition to the rapid economic recovery, a loose fiscal and monetary policy stance, high public debt ratios and expanding lending, along with deglobalisation and shortening value chains, all point to rising inflation globally.** Of the prices of key **commodities** that of gas, coal and electricity rose to a historic high in the past period (Chart 9). On average, gas prices in the first half of this year rose to more than four times the average level in 2019, while electricity prices more than tripled.

Global value chains may recover more slowly than demand, leading to increased cost pressures in global transportation and industrial production. By October, the costs of shipments from China to Europe rose by almost seven times in one year (Chart 10). Merchants will presumably charge part of the resulting extra costs to the consumers, as a result of which the price increasing effect of the significantly higher commodity prices and shipping costs will appear also in the domestic consumer prices more widely. In addition to a fast recovery in demand, the global chip shortage is causing disruptions in industrial production, particularly in the automotive sector, which may have a knock-on effect on prices.



Source: Bloomberg

Chart 11 Labour shortage as a factor limiting production in Hungary



Note: Percentage of companies reporting that "Shortage of labour force" is a main factor currently limiting their production.
Source: European Commission

In addition to international developments, several factors in the Hungarian economy also point to a higher inflation path than previously expected. In the second quarter of 2021, due to the reopening of the economy and the low base of last year, Hungarian GDP grew by 17.8 percent. As regards employment, bottlenecks may be in place, especially in the services and construction sectors, in parallel with the recovery (Chart 11).

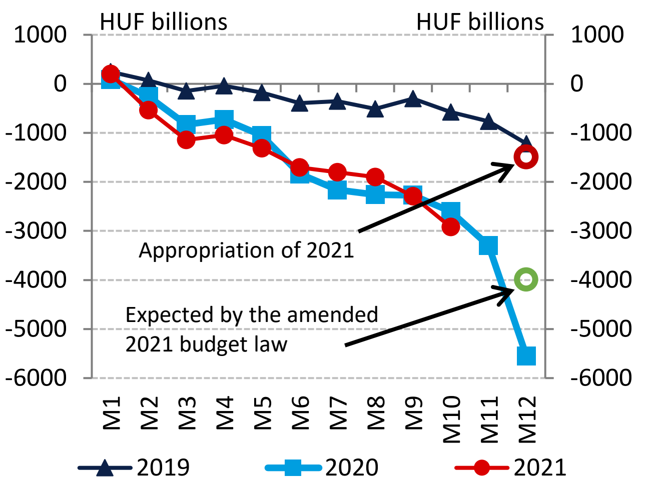
Higher than expected wage growth may persist in certain sectors as the labour market tightens, with a rise in savings over the past year, postponed consumption and the already unrestricted availability of services projecting a growth in consumption expenditures.

The anticipated economic impacts of the fourth wave represent a material downside risk. The economic impact of a new wave of the pandemic can be quantified with a high degree of uncertainty, as an unforeseen turn in the virulence of existing and new variants may occur at any time. In addition to the severity of the restrictions, the economic impact will also be influenced by the caution of the population.

1.4. Fiscal developments

In October 2021, the deficit of the general government's central sub-sector amounted to HUF 630 billion, exceeding the year-on-year deficit by HUF 296 billion, which was the highest deficit in nominal terms in October, ever measured in Hungary. In 2021, the accumulated cash deficit rose to almost HUF 2,922 billion, which is above the accumulated deficit in the same period in 2020 by HUF 318 billion.

Chart 12 Intra-year cumulative cash balance of the central government budget



Source: Budget Act of 2021, Hungarian State Treasury

In October 2021, the **deficit of the general government's central sub-sector** amounted to HUF 630 billion, exceeding the year-on-year deficit by HUF 296 billion, being the highest deficit in nominal terms ever measured in Hungary in October. The accumulated cash deficit of the current year rose to HUF 2,922 billion, which exceeds the accumulated deficit of the same period in 2020 by HUF 318 billion (Chart 12).

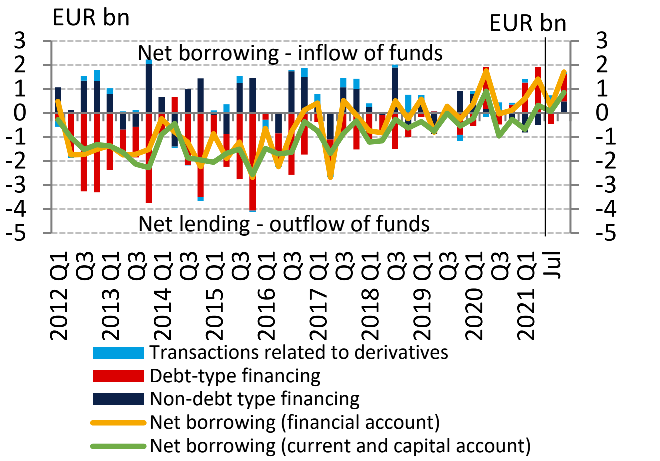
In October, **revenues of the central sub-sector** exceeded the year-on-year revenues by 9 percent (by roughly HUF 137 billion), which was primarily attributable to the rise in the revenues of consumption taxes, as well as taxes and contributions charged on labour incomes. Within tax revenues, VAT revenues increased by HUF 47 billion, as well as labour tax and contribution revenues by HUF 74 billion, respectively, on a year-on-year basis.

The volume of the **central sub-sector's expenditures** in October 2021 exceeded that of the previous year by 18 percent. The rise is mostly attributable to the expenditures related to state property. Furthermore, in terms of proportions, expenditures on housing subsidies, support to local governments and medical and preventive care – resulting from the revision of wages in the healthcare sector – also grew significantly.

1.5. External balance developments

In August, the current account deficit rose above EUR 1 billion and in parallel, net borrowing also grew significantly.

Chart 13 Structure of net lending (unadjusted transactions)



Note: Positive values indicate net borrowing (inflow of funds), while negative values indicate net lending (outflow of funds). The fundamental development of the debt from an economic viewpoint is not influenced by the conversion between unallocated and bullion balances, thus this effect has been excluded.
Source: MNB

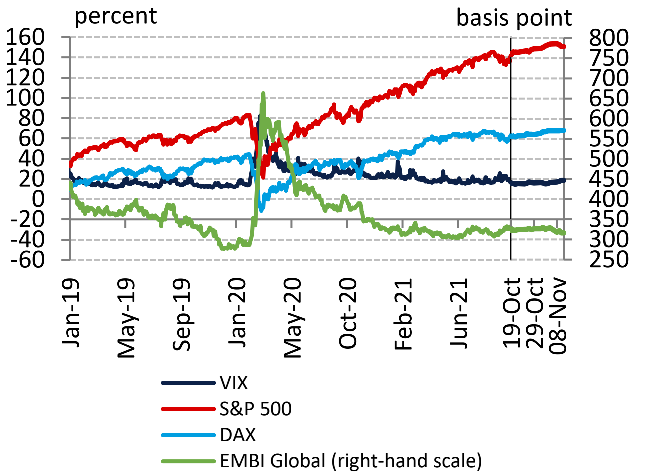
In August, the current account deficit rose above EUR 1 billion (Chart 13). Net FDI inflow was at a similar level as in previous month, while the economy's debt liabilities significantly increased.

2. Financial markets

2.1. International financial markets

Since the last interest rate decision, investor sentiment slightly improved in the developed markets, while it deteriorated in the emerging markets. The VIX index, measuring equity market volatility, rose to 18.7 percent, while the EMBI Global spread in the emerging bond market somewhat declined. The leading stock indices typically rose during the period under review. The dollar has shown a mixed picture against the developed market currencies and it appreciated by 1.3 percent against the euro. Oil prices continued to rise in the first half of the period, followed by a decline caused by the commitment of the US government to accessing affordable energy.

Chart 14 Developed market equity indices, the VIX index (left-hand scale) and the EMBI Global Index (right-hand scale)



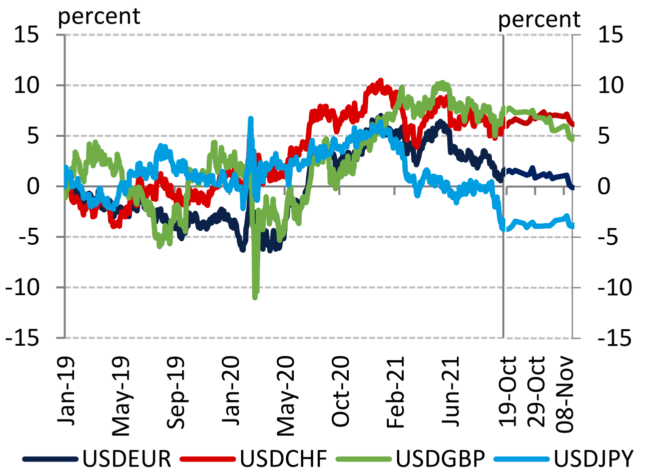
Source: Bloomberg

Since the last interest rate decision, investor sentiment slightly improved in the developed markets, while it deteriorated in the emerging markets. In the first half of the period markets focused primarily on supply problems, high energy prices, and on the global chip and magnesium shortage. In the second half of the period, global investor sentiment was shaped by the major central banks' rate-setting meetings, the third-quarter corporate reports and the incoming inflation data for October. Market participants continue to pay special attention to the spread of the coronavirus' delta variant and the related tightening measures. Last month the number of coronavirus cases rose in Europe, stagnated in the USA and decreased in Asia.

Of the risk indicators, the VIX index, the key measure of equity market volatility, increased compared to the level registered at the previous interest rate decision by 3 percentage point to 18.7 percent, while the index characterising the German DAX stock exchange index increased to a slightly larger degree (Chart 14). The EMBI Global spread in the emerging bond market fell by 6 basis points to 317 basis points, while the MOVE index, measuring developed bond market volatility, stands at 78 basis points after a rise of 1 basis points.

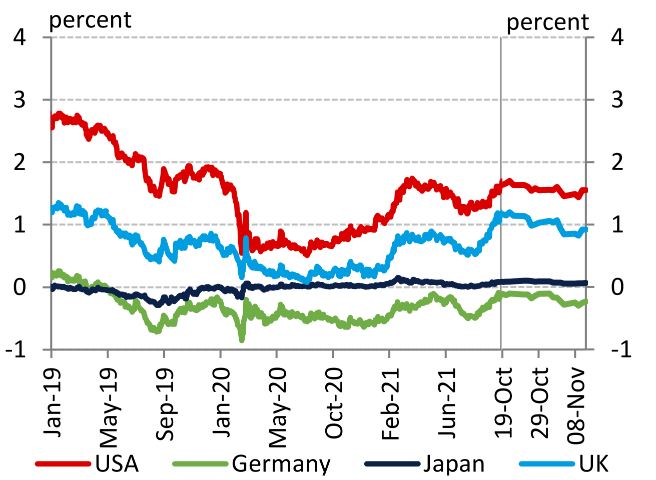
Last month, the leading US and European stock indices typically rose by 2-3 percent. Of the leading European stock indices, the French stock exchange registered an outstanding rise at 5.6 percent, which may have been attributable to the third-quarter GDP figure exceeding expectations. The Japanese stock exchange index rose by 0.2 percent, while the Chinese stock exchange fell by

Chart 15 Developed market FX exchange rates



Note: Positive values indicate the strengthening of the variable (second) currency.
Source: Reuters

Chart 16 Yields on developed market long-term bonds



Source: Bloomberg

1.7 percent as a result of the property market risks and the macro indicators implying a slowdown in the Chinese economy. Overall, the developed MSCI composite index rose by 2.1 percent, while the emerging market index fell by 1.6 percent. In the USA, the largest rise in stock prices was registered by the tech-heavy Nasdaq index; however, at the end of the period a correction commenced in all sectors.

The dollar appreciated by roughly 1.3 percent **against the euro**, and by 2.6 percent against the pound sterling (Chart 15). However, the US currency depreciated against the Japanese yen and the Swiss franc by 0.4 and 0.5 percent, respectively. At the end of the period, the euro-dollar exchange rate came close to 1.15. Both the emerging market currencies and the currencies of the region generally weakened against the dollar, with the zloty depreciating by 2 percent, the forint by 1.8 percent, the leu by 1.4 percent and the Czech koruna by 0.3 percent. Gold and silver prices both rose by nearly 5 percent since the previous interest rate decision, with gold rising to around USD 1,850 per ounce. Bitcoin strengthened to a historic high of nearly USD 68,000 and, after some correction, it rose by 1.1 percent over the period.

Overall, the developed bond yields declined since the last interest rate decision (Chart 16)**.** The ten-year Japanese, US and German yield fell by 2, 9 and 14 basis points, respectively and thus the German, Japanese and US yield closed the period at -0.25, 1.55 and 0.07 percent, respectively. Yields in the Mediterranean countries also declined slightly, while Greek yields were up 14 basis points. Yields in the countries of the region continued to rise: the Hungarian, Czech and Polish long-term yield rose by 3, 9 and 16 basis points, respectively, while the Romanian yield returned to its initial level after a major fall.

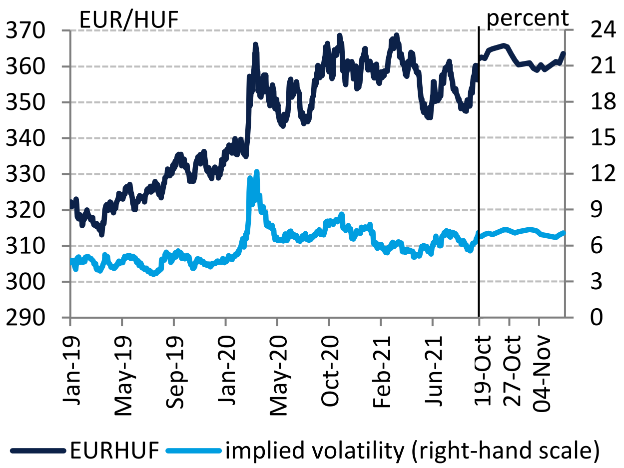
Oil prices have slightly declined recently. At the beginning of the period the growth in oil prices was supported by rising gas prices and the OPEC+ decision related to production cut. Then, the commitment of the US government to access to affordable energy caused prices to decline. **Since the interest rate decision in October, the price of Brent crude oil decreased by 1.5 percent to USD 83.7, while the US**

benchmark WTI oil price fell by 0.5 percent to USD 82.5.

2.2. Developments in domestic money market indicators

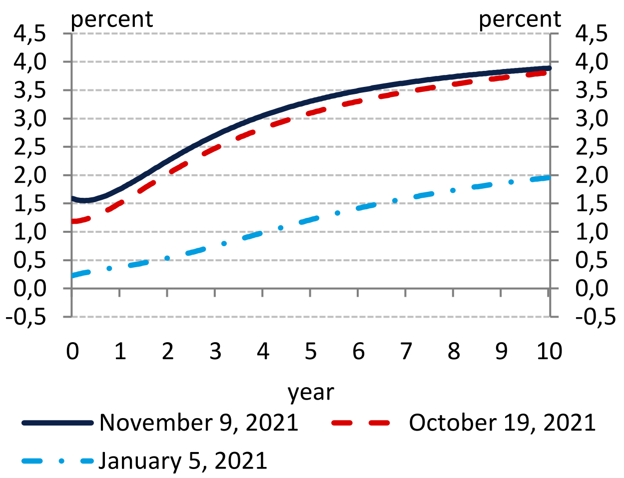
The forint slightly depreciated against the euro since the October interest rate decision. The government securities market yield curve shifted significantly upward. The 3-month BUBOR rose by 20 basis points to 2.09 percent. In the past month, the demand was strong at government bond auctions, on the other hand, average auction yields rose overall.

Chart 17 EUR/HUF exchange rate and the implied volatility of exchange rate expectations



Source: Bloomberg

Chart 18 Shifts in the spot government yield curve



Source: MNB, Reuters

The forint slightly depreciated against the euro since the October interest rate decision. In the first half of the period, the forint moderately depreciated along with the currencies of the region. A correction commenced at the end of the month, and from then onwards it strengthened at a similar rate as the Czech koruna, while lately it has repeatedly weakened. Overall, the forint depreciated against the euro by 0.2 percent, i.e. to a lesser degree than the Polish zloty (0.8 percent), while the Czech koruna appreciated during the period (1.1 percent). The implied volatility of forint remained unchanged last month (Chart 17).

The 3-month BUBOR, relevant for monetary policy transmission, rose by 20 basis points to 2.09 percent since the last interest rate decision.

The government securities yield curve shifted upward (Chart 18)**.** Around the 1-year and middle section of the yield curve a rise of roughly 30 basis points and 15-25 basis points, respectively, was observed, while around the 10-year section a rise of 10 basis points was registered.

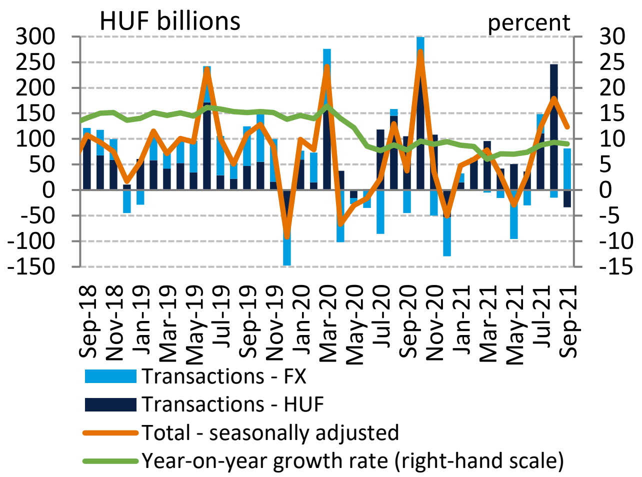
In the past month, the demand was strong at government bond auctions. At the 3-month discount Treasury bill auctions the Government Debt Management Agency accepted bids for a slightly lower volume than announced, while it sold more than the announced volume at the 12-month Treasury bill auctions. Since the last interest rate decision, the average yield at the 3-month auctions rose from 1.25 percent to 1.57 percent, while the average auction yield at the 12-month Treasury bill auctions increased from 1.54 percent to 1.75 percent. Bond auction were characterised by strong demand. The Government Debt Management Agency accepted bids in or over the announced volume at each auction. At the latest auction, the average yield of the 10-year securities was 3.82 percent, representing an increase of 32 basis points compared to average auction yield before the interest rate decision in October. The average auction yield on the 5-year, 15-year (the last issue was in September) and 20-year securities rose by 22 basis points, 72 basis points and 19 basis points to 3.13 percent, 4.24 and 4.28 percent, respectively. The Hungarian 5-year CDS spread fell by 3 basis points and currently stands at 53 basis points.

Non-residents' holdings of forint government securities decreased. Non-residents' holdings in forint government securities decreased by HUF 64 billion to HUF 4,689 billion. On the other hand, meanwhile the market share of non-residents' holding in forint government securities rose from 20.3 percent to 20.7 percent.

3. Trends in lending

In September 2021, outstanding borrowing of non-financial corporations increased by HUF 48 billion, reflecting a fall of HUF 34 billion in forint loans and a rise of HUF 82 billion in foreign currency loans. In September, households' outstanding borrowing rose by HUF 135 billion, and as a result, the annual growth rate remained at 16.3 percent, i.e. the level seen last month.

Chart 19 Net borrowing by non-financial corporations

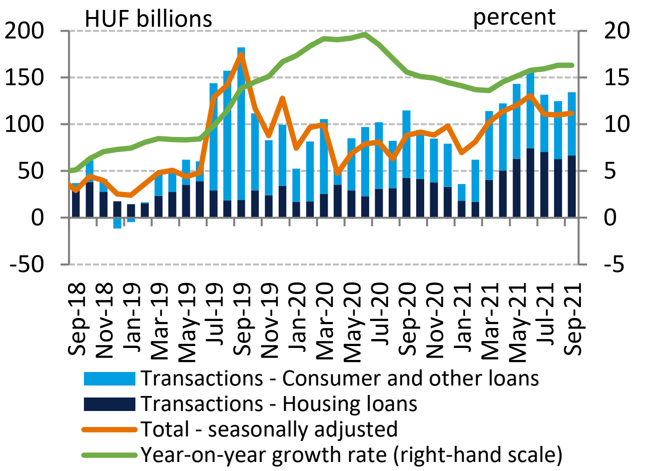


Source: MNB

Chart 20 Net borrowing by households

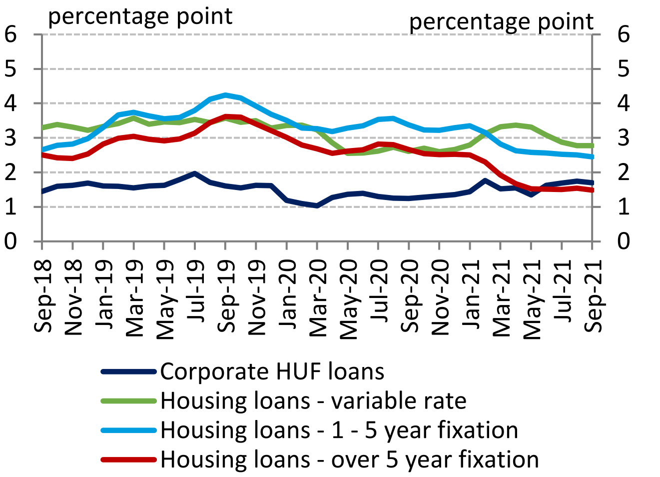
In September 2021, outstanding borrowing of non-financial corporations increased by HUF 48 billion, reflecting a fall of HUF 34 billion in forint loans and a rise of HUF 82 billion in foreign currency loans (Chart 19). Due to the more moderate monthly growth, the annual growth rate decelerated to 9 percent from 9.3 percent registered in previous month. Together with the bond transactions in the balance sheet of credit institutions, the annual growth rate in the month comes to 15 percent, which reflects the increasing importance of BGS in corporate funding. In September, credit institutions disbursed new loans in the amount of HUF 286 billion, which falls short of the year-on-year figure – the period already affected by the effects of the pandemic and the subsidised loan schemes – by 6 percent, while it exceeds the value registered two years ago by 23 percent. Within the monthly disbursements – returning to the trends of the pre-pandemic period – the disbursements of market-based loans account for a major part, 70 percent, of new loans. During the month under review, banks concluded non-overdraft forint contracts with enterprises under FGS Go! in the amount of HUF 51 billion, which accounted for 18 percent of the total forint corporate loan disbursements in September.

In September, households' outstanding borrowing rose by HUF 135 billion, and as a result, the annual



Source: MNB

Chart 21 Development of corporate and household credit spreads



Note: In the case of corporate forint loans, the spread over the 3-month BUBOR. In the case of housing loans with variable interest or interest fixed for 1 year at the most, the 3-month BUBOR, while in the case of housing loans fixed for over one year, the APR-based margin above the relevant IRS.
Source: MNB

growth rate remained at 16.3 percent, i.e. the level seen last month (Chart 20). The moratorium continues to support credit dynamics; however, according to our estimate, annual growth would be robust, i.e. 8.9 percent, even after excluding the effect of that. Disbursement of new household loans amounted to HUF 250 billion during the month, exceeding the year-on-year figure by 25 percent. On the other hand, it still falls short of the disbursements two years ago, a period not yet affected by the pandemic, primarily due to the high base resulting from the soar in prenatal baby support loans after launching the scheme in July 2019. The new measures aimed at first-time homebuyers, available from 2021, were key to the disbursement of housing loans in the amount of HUF 125 billion in September: the volume of loan contracts for home improvement and modernisation purposes was more than four times higher than in September 2019. The pass-through of the gradual increase in long-term yields since the beginning of the year into bank interest rates has not yet fully materialised, but some banks have already started to raise interest rates on housing loans in the summer months.

The smoothed interest rate spread of forint corporate loans was 1.69 percentage points in September 2021, representing a decrease of 0.06 percentage point compared to the previous month (Chart 21). The average smoothed interest rate spread on variable rate housing loans calculated on the basis of the annual percentage rate (APR) remained unchanged during the month and amounted to 2.77 percentage points. After a decline of 0.05 percentage point, the average spread on housing loans with interest rate fixation periods longer than one year and up to 5 years reached 2.45 percentage points in September, while the spread on products with interest rate fixation periods of more than 5 years rose by 0.06 percentage point and stood at 1.48 percentage points at the end of the period under review.