MONTHLY MONITOR

October 2022

Századvég Economic Research Institute

SZÁZADVÉG

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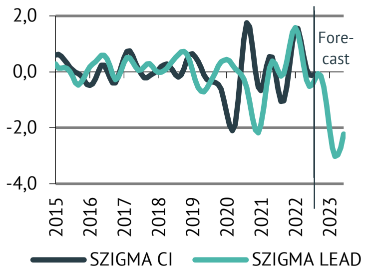
1. Summary

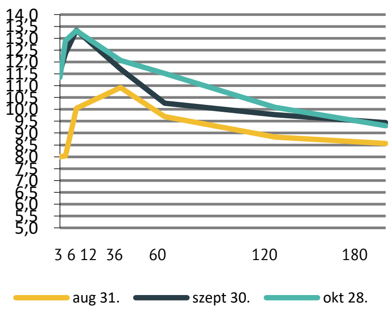
IN OCTOBER, THE MNB LEFT THE BASE RATE UNCHANGED, BUT RAISED THE OVERNIGHT DEPOSIT RATE TO 18.0%.

SIGMA indicators



Source: Századvég

Forint yield curve (%)



Source: Refinitiv

Forecast (30.09.2022)	2022
Change in the GDP (%)	4.5
Inflation (annual average, %)	13.1
Gross wages (year-on-year change, %)	19.7
EUR/HUF (annual average)	390

In September 2022, inflation risks continued to rise both globally and in Central and Eastern Europe. This is mainly due to falling but still high energy prices, disrupted supply chains and, crucially, the consequences of the increasingly protracted war between Russia and Ukraine.

The sharpest monetary erosion was in the Baltic countries and Central and Eastern Europe. According to the Harmonised Index of Consumer Prices (HICP), consumer prices rose by 22.4% in Estonia, 21.8% in Latvia and 22.0% in Lithuania.

The high inflation environment is forcing central banks to raise interest rates. Hungary has the highest effective interest rate (overnight (O/N) deposit rate: 18.0%) in the region, following the October move by the Hungarian central bank.

In an environment of higher interest rates and higher inflation, there is a trend towards a preference for premium Hungarian government bonds with above-inflation yields over those with fixed yields.

2. Overview of the economy

2.1 External environment

In Q2, Hungary's 6.5% growth was the third highest in the EU.

Euro area average inflation rose to 10.7% on an annual basis in October 2022. The fastest monetary erosion continues to be in the Baltic states: The average inflation rate was 22.4% in Estonia, 22.0% in Lithuania and 21.8% in Latvia. In addition to these countries, the Netherlands (16.8%), Slovakia (14.5%) and Belgium (13.1%) have seen the fastest price increases. The lowest inflation rates in the euro area were in France (7.1%) and Spain (7.3%). On a monthly basis, inflation rose spectacularly in Italy (4.0%), while it fell in only three countries (Estonia, Greece and Malta). Growing energy prices remain the biggest concern across Europe. Compared to the same period last year, household expenditure on this increased by 41.9%. On a monthly basis, there was also a significant increase of 6.5% in household energy. In addition, processed food prices rose the most (15.4%), with supply shortages caused by the war playing a major role, alongside record high energy prices. However, the October average inflation rate in the euro area was held back by a 6.0% price increase for non-energy goods and a 4.4% increase for services.

The current monetary erosion is the highest in the history of the euro area, and the European Central Bank has had to react: at the end of October, it raised its base rate by 75 basis points to 2%, the highest since the 2008 global crisis. Thanks to the decision, the euro also started to strengthen against the dollar, bringing the single European currency back below parity. The energy crisis, record-high inflation and the ongoing tightening of the interest rate environment are slowing the economy, which is expected to result in euro area GDP growth of just 0.2% in Q3 2022 compared to the previous quarter. Forecasts are also increasingly gloomy, with the IMF estimating that in 2023 the euro area economy will grow by an average of only 0.5%, while Germany and Italy will contract, albeit only marginally (-0.3% and -0.2%, respectively).

2.2 SZIGMA indicators

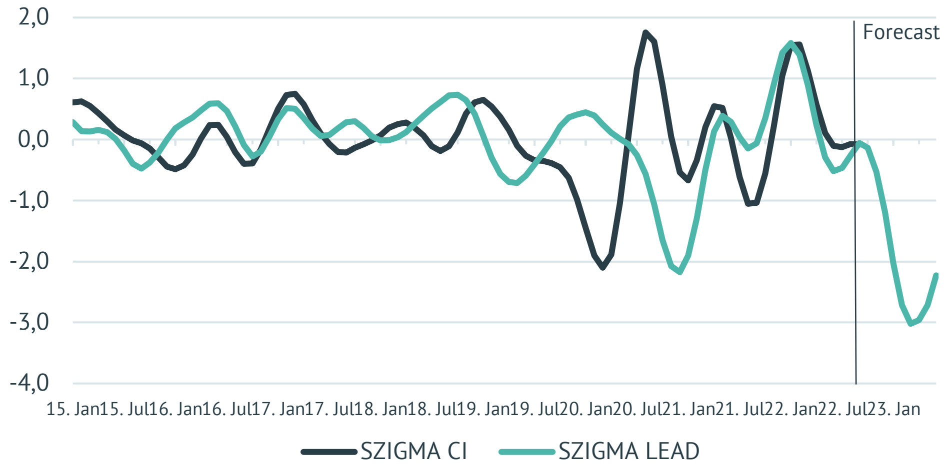
The Hungarian economy continued to

In September 2022, the SZIGMA CI indicator, which provides a snapshot of the current state of the Hungarian economy, had been in negative territory for 4 months. So, the Hungarian economy grew at a lower rate than the historical trend. Over the past four months, below-trend growth bottomed out in July 2022, and from then on started to strengthen, approaching the historical trend. This was driven by a strong increase in industrial production and sales volumes in August 2022. Despite the high base, both industrial production and sales volumes grew strongly on an annual basis, with seasonally and working-day adjusted industrial production (with fixed base) up 9.2% and industrial sales up 13.1% year-on-year. The volume of industrial sales was mainly driven by exports (18.4%), but domestic sales (5.2%) were also up compared to the same period last year. The growth rate of the Hungarian economy was held back by a decline in the stock of fixed-base contracts of construction firms at the end of the month, which fell by 8.2% on a fixed basis and on an annual basis. This year-on-year decline was only due to a significant (19.0%) fall in the month-end stock of contracts for the construction of buildings. The stock of contracts for the construction of other civil engineering works at the end of the month did not decrease substantially (0.3%). in August 2022, the number of new non-residential building projects fell both year-on-year and month-on-month, foreshadowing an expected slowdown in construction.

The SZIGMA LEAD indicator, which expresses expectations for the Hungarian economy's performance in the short term, projects the Hungarian economy to grow at a below-trend rate until the end of the forecast horizon. Hungary's below-trend growth is expected to weaken further until April 2023, followed by a slow recovery until June 2023. This is driven by a decline in construction volumes and stagnation in industrial production and sales, as well as a fall in household and business confidence indices.

The unfavourable economic environment (inflationary impact, high interest rates, energy crisis, etc.) is expected to persist in 2023. As part of its adaptation, the government is postponing investments it has not yet started. As a result of the increased reference rates, households and businesses are also rethinking their plans to take out new loans. This is supported by the fact that the end-month portfolio of fixed-base contracts of construction firms and the number of new non-residential buildings to be built fell both year-on-year and month-on-month in August 2022. Thus, we expect a decline in the output of the construction industry. On a fixed basis, the stock of new industrial orders has fluctuated within a narrow range over the past year, except for a spike in volume in December 2021. In August 2022, on a fixed basis, the stock of new industrial sales orders showed a mixed picture, with a decline on monthly basis (5.2%) and an increase on annual basis (25.2%). Within this, new exports increased by 30.0% year-on-year, but fell by 5.7% month-on-month. New domestic industrial sales orders rose by 3.0% on an annual basis, while they fell by 3.1% on a monthly basis. Thus, we expect the volume of new industrial production and sales to stagnate. The Ifo Business Climate index, which measures the business climate in the German economy, decreased by 4.2 index points in September 2022 compared with the previous month and by 14.8 index points compared with the previous year. The significant drop in the confidence index was driven by pessimistic expectations for the future, especially regarding the recession, as companies in all sectors saw their business in worse shape. In line with this, expectations for all economic sectors (manufacturing, services, trade, construction) included in the confidence index deteriorated. The consumer confidence index, as measured by Eurostat, continued to deteriorate in September 2022, standing at - 47.7 index points. The index continued to fall both on a monthly basis (by 1.6 index points) and on an annual basis (by 29.2 index points). The increasing negative index value suggests that the segment's turnover could be increased by restoring consumer confidence. The negative index value implies that an improvement in confidence could further expand sales of the segment.

FIGURE 1: CURRENT (CI) AND FORECASTING (LEAD) SZIGMA INDICATORS



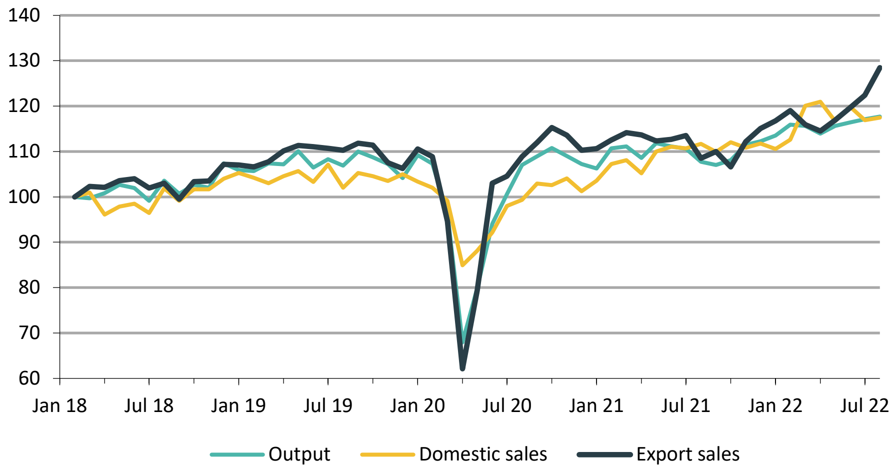
Source: Századvég

2.3 The real economy

With a high base, industrial export sales expanded strongly.

In August 2022, the volume of industrial production increased by 14.4% in terms of raw data and by 9.3% in terms of working-day adjusted data compared to the same period of the previous year. The difference between the raw and calendar-adjusted figures is due to the number of working days, as there were 2 more working days in August than in the same period last year. On a monthly basis, seasonally and working-day adjusted industrial production expanded by 0.1% in August 2022 compared with the previous month. The annual growth in industrial sales in August 2022 was strong in both areas (exports and domestic). On an annual basis, the increase in industrial export sales was outstanding (27.7%) compared to August 2021. The annual growth of domestic industrial sales also expanded strongly (8.0%) compared to the same period of the previous year, despite the high base effect.

FIGURE 2: CHANGES IN INDUSTRIAL PRODUCTION AND SALES (JANUARY 2018 = 100%)



Remark: Seasonally and calendar adjusted indices. Source: Hungarian Central Statistical Office, Századvég

The sectors of industrial production contribute to industrial output to different degrees. The manufacturing sector contributed the largest share (92.3%) to industrial production in August 2022, followed by electricity, gas, steam supply and air conditioning (7.2%) and mining and quarrying (0.6%). On an annual basis, the manufacturing sector grew by 14.9%, the electricity, gas and steam supply and air conditioning sector by 1.8% and the mining and quarrying sector by 21.0%. The main contributors to manufacturing output in August 2022 were the automotive industry, the food industry and the manufacture of computer, electronic and optical products. In August 2022, the automotive industry, which accounted for 21.2% of manufacturing output, increased its annual output by 57.8%. Food production, which accounted for 14.3% of manufacturing output in August 2022, grew by 13.8% year-on-year. The computer, electronic and optical products manufacturing subsector, which accounted for 13.3% of manufacturing output in August 2022, was up 25.5% from the same period last year. The August 2022 manufacturing output was dragged down by four sub-sectors with smaller shares. The rubber sector, which accounted for 8.4% of manufacturing output in August 2022, was 2.8% down on the same period last year. Metal production in August 2022, which accounted for 7.7% of manufacturing output, fell by 5.6% from a year ago. In

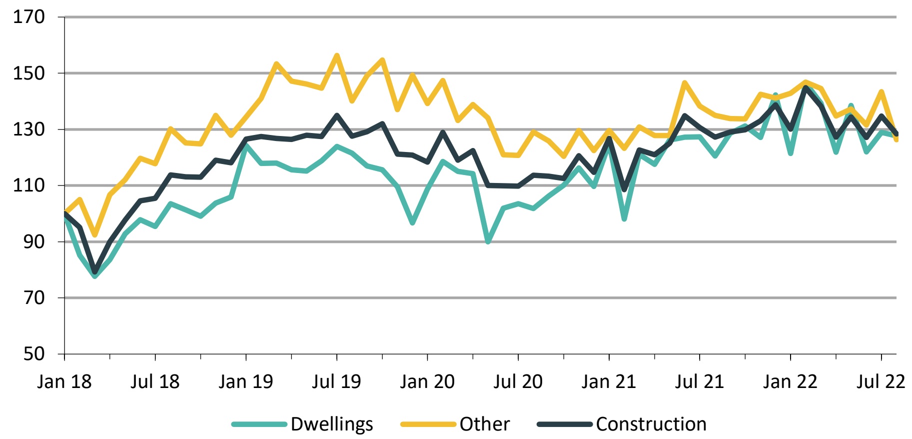
August 2022, the output of the coke and refined petroleum products subsector, which accounted for 6.9% of manufacturing output in that month, fell by 14.6% compared with a year ago. The chemicals sector, which accounted for 4.9% of manufacturing output in August 2022, suffered a 29.8% drop in production compared to the same period last year. The smallest contribution (0.9%) to manufacturing output in August 2022 came from the manufacturing of textiles, wearing apparel, leather and leather products, which grew by 14.4% year-on-year.

At the end of August 2022, total stock of industrial sales orders was 19.7% higher than a year earlier, driven mainly by an increase in export sales orders. The stock of new sales orders in August 2022 was up 25.1% from a year earlier, driven mainly by increases in new sales orders in electrical equipment manufacturing (61.5%), automotive manufacturing (60.2%) and computer, electronic and optical products (44.1%) subsectors. The stock of new sales orders fell by more than 26% for chemical products and by 20% for metal products compared to the same period last year. New domestic sales orders rose by 2.5% and new export orders by 30.0%.

New construction orders have shrunk significantly.

Monthly construction output in August 2022 was flat on an annual basis, unchanged compared with August 2021. On a monthly basis, seasonally and calendar-adjusted construction output fell by 4.4% compared to the previous month. Although construction output in August 2022 stagnated year-on-year, the picture was mixed across the main construction categories: while construction of buildings increased by 5.5%, construction of civil engineering works fell by 8.5%. Construction sales orders were down 7.8% at the end of August 2022 compared with the same period last year. Within the main construction categories, contracts for the construction of buildings fell (by 18.9%), while contracts for civil engineering works increased slightly (0.2%). New construction sales orders fell sharply (by 50.4%) compared to the same period last year, which foreshadows a gradual decline in construction contracts and a slowdown in construction output. New contracts signed fell in both main categories, with new contracts for buildings down by 18.3% and new contracts for civil engineering works down by 68.9% compared to August 2021. In August 2022, the building materials price index was up by more than 25% compared to the same period last year. At the same time, the high growth rate in the previous year, i.e. the high base, played a role in the more than 50% decline in new construction contracts, as new construction contracts grew by 45.5% year-on-year in August 2021. This current drop in new contracts in August 2022 is larger than the high base would justify. In addition to the base effect, this decline in new contracts can also be attributed to the continued rise in producer prices, raw material supply issues, rising financing costs and the unfavourable economic environment.

FIGURE 3: CHANGES IN THE CONSTRUCTION INDUSTRY (JANUARY 2018 = 100%)



Remark: Seasonally and calendar adjusted indices.

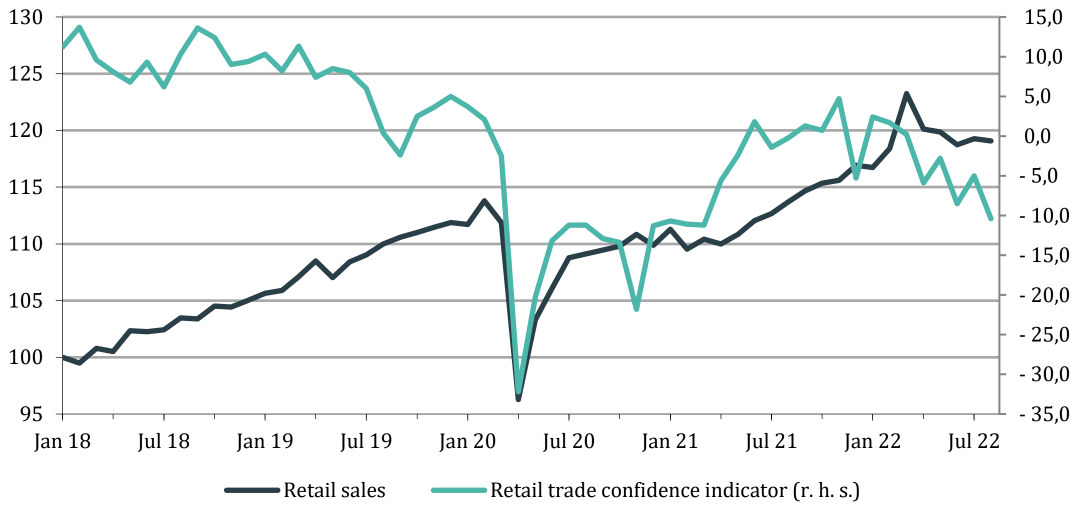
Source: Hungarian Central Statistical Office, Századvég

The volume of retail sales increased by 2.4%.

In August 2022, retail sales increased by 3.3% on a raw basis and by 2.4% on a calendar-adjusted basis compared with the same period of the previous year. Excluding motor vehicle fuel sales, retail sales already fell slightly (1.3%) in August 2022. The slowdown in sales growth is partly due to the increase in the base: a year ago, with the third wave subsiding, the widespread availability of vaccines and thus the reduction of restrictions, consumption started to increase, resulting in a higher base. In addition, the steadily rising energy costs due to misguided sanction policies are putting increasing inflationary pressures on the economy, which is encouraging households to rationalise consumption. The rising interest rate environment, future uncertainty and upside inflation risks are also holding back current consumption. The slowdown is mainly due to the combined effect of these factors. In August 2022, turnover in specialised and non-specialised food shops decreased by 2.4%, while turnover in non-food shops increased by 0.5%. In fuel retail, calendar-adjusted volume of sales increased by 18.4% compared to August 2021. The increase in petrol station sales volumes was supported by the government's introduction of official prices following the coronavirus pandemic, in addition to a significant increase in car use in the summer, but the fall on a monthly basis shows that the abolition of the price cap on company cars has had a strong impact on consumption. In addition, households are also likely to start cutting back their consumption in this area.

On a calendar-adjusted basis, sales of food, beverages and tobacco products increased by 0.3%, while that of foodstuffs fell by 3.7% and sales of non-specialised foodstuffs by 2.4%. Nonfood retail saw a 3.7% drop in sales volume in books, newspapers and stationery and a 3.1% drop in sales volume in perfumes. In contrast, sales volumes of second-hand goods and pharmaceuticals and medical products increased by 6.2%, while those of computer and other manufacturing goods rose by 3.7% compared to the same period last year.

FIGURE 4: VOLUME OF RETAIL SALES (JANUARY 2018 = 100%)



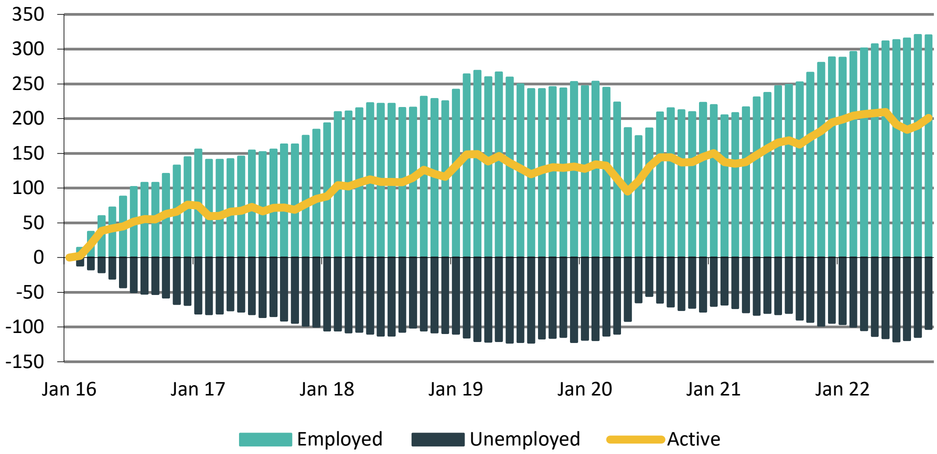
Remark: Seasonally and calendar adjusted indices.

Source: Hungarian Central Statistical Office, Eurostat, Századvég

The unemployment rate is 3.6% in September 2022.

In July–September, the seasonally adjusted number of employees was around 4,708,000, 8,500 lower than in the previous three months, but 51,800 higher than in the same period of the previous year. The employment rate was 64.07% in September. Compared to the previous month, the number of the unemployed increased by 11,600, or 16,200 on a quarterly basis, but on an annual basis it is still decreasing (13,900), with a share of 3.6% in July–September. The active population increased by 11,700 compared to the previous months, and by 31,800 compared to the same period of the previous year, which means that 66.48% of the 15-74 age group entered the labour market. The rise in unemployment is the result of the increase in activity and the fall in employment. In August, the number of employees increased by nearly 1,500 on a seasonally adjusted basis, and by 45,000 compared to the same period of the previous year. The most significant increase in the number of employees was in the competitive sector, with 56,000 more working in enterprises having at least 5 employees compared to 2021, up by more than 4,000 compared to June. The number of non-profit employees rose by a few hundred over the month, while the number of public sector employees fell by 2,500.

FIGURE 5: CHANGES IN THE LABOUR MARKET (JANUARY 2016 = 0, THOUSAND EMPLOYEES)



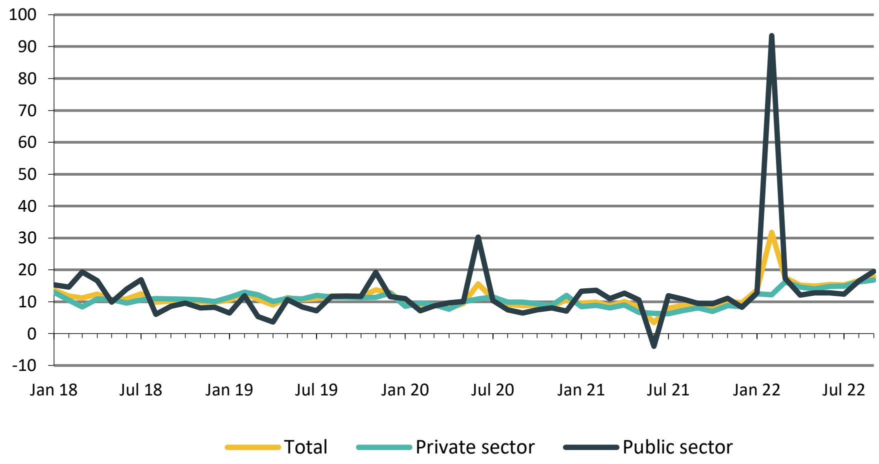
Remark: Seasonally and calendar adjusted indices

Source: Hungarian Central Statistical Office, Századvég

The average gross monthly wage was HUF 497,152 in

In August, the average gross monthly wage in the national economy was HUF 497,152, up 16.6% compared to the same period last year. The highest average gross monthly wage was recorded in the non-profit sector, at HUF 507,172. The average net monthly wage including benefits was HUF 342,900, an annual increase of 17.3%. The average regular gross monthly wage, excluding bonuses, rewards and one-off allowances, increased by 15.6% in June compared to a year earlier, to an estimated HUF 472,200. Despite the accelerating inflation, 15.6% in August, real wages still rose at a slowing pace, by 0.8%. The median gross monthly wage was HUF 394,500.

FIGURE 6: CHANGES IN GROSS WAGES (ANNUAL CHANGE, %)



Source: Hungarian Central Statistical Office, Századvég

2.4 External balance

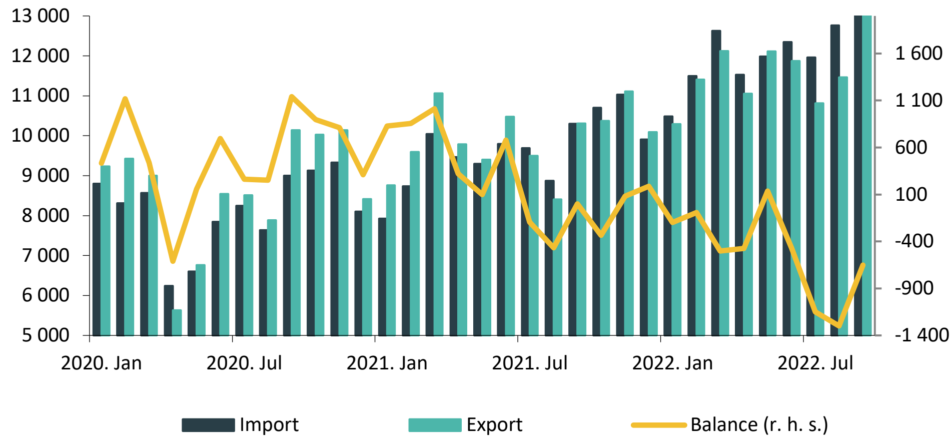
In July, the EUR value of product exports increased by 13.0%, and the EUR value of product imports increased by 24.0% year-on-year. The foreign trade deficit was, therefore, EUR 1.3 million, EUR 1.1 billion less than in the previous year.

In July, the volume of food product imports increased by 14.0%, and food product exports decreased by 4.2% year-on-year. As for energy carriers, imports increased by 14.0% and exports decreased by 54.0%. As for processed products, imports decreased by 1.4%, and exports by 5.5% on a year-on-year basis. As for machinery and transport equipment, imports increased by 7.1%, and exports by 7.8%.

The foreign trade balance deteriorated.

In August 2022, the EUR value of exports was 37.0% higher, while the EUR value of imports was 43.0% higher than one year before. The trade deficit in goods amounted to EUR 1.6 million, which is EUR 863 million higher than a year earlier.

FIGURE 7: FOREIGN TRADE BALANCE (EUR MILLION)



Remark: The August 2022 figures are from the first estimate.

Source: Hungarian Central Statistical Office, Századvég

2.5 Fiscal outlook

Tax and contribution receipts were 15.9% higher in the first nine months of the year.

At the end of September 2022, the cumulative deficit of the central budgetary subsystem stood at HUF 2,691.7 billion. This was caused by a deficit of HUF 2,773.0 billion in the central budget and HUF 171.3 billion in social security funds, as well as a surplus of HUF 252.6 billion in extra-budgetary funds.

The government has raised its 2022 general government deficit target under the European Union's ESA methodology from 4.9% of GDP to 6.1%. The new target is justified by the fact that the Hungarian Hydrocarbon Stockpiling Association (HUSA) is considered part of the government sector according to Eurostat's decision, while the HUSA is obliged to accumulate a special natural gas reserve in the value of HUF 740 billion under a July law. Without a decision on the HUSA, the ESA deficit target for 2022 would remain unchanged at 4.9% of GDP in the underlying trend, according to the Ministry of Finance.

Receipts from business organisations accounted for 97% of the annual target up to September, the highest completion rate of the three main tax revenue groups. Corporate tax revenues, the most significant item among payments by business entities, accounted for 99.8% of the annual target by the end of September, exceeding the balance of the same period last year by HUF 153.5 billion (35.3%).

Revenues from consumption-related taxes were 24.7% higher than a year earlier. VAT receipts were HUF 1,169.3 billion (30.2%) higher than the cumulative total for the same period of the previous year. By the end of September, 91.9% of the annual target had been met. The increase in VAT receipts was also driven by higher VAT receipts on domestic, import and tobacco products. Excise tax revenue was HUF 11.7 billion (1.3%) higher than in January–September 2021. This was driven by higher revenues from tobacco and spirits and other products, and lower revenues from fuels.

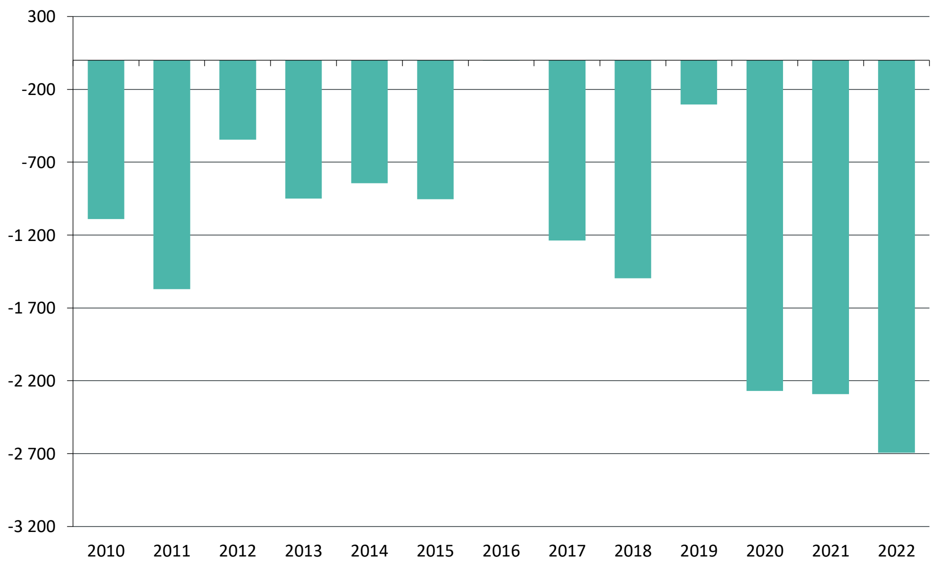
Personal income tax receipts decreased by 10.9% (HUF 230.9 billion) compared to January–September 2021. The decline is driven by a one-off tax rebate for parents with children, while income tax revenues, which increase as wages rise, gradually mitigate the negative impact. Receipts from social contribution tax and social insurance contributions increased by 11.4% (HUF 443 billion) compared to the same period of the previous year. The increase was driven by higher wages, while the reduction in the social contribution tax rate had the opposite effect.

The cumulative revenue of EU programmes reached HUF 790.2 billion by the end of September 2022, which corresponds to 33.4% of the statutory target. At the same time, the cumulative expenditure of EU programmes closed at HUF 2,366.9 billion, 78.9% of the statutory appropriation.

Among significant expenditure items, expenditure on housing subsidies and chapter-administered professional appropriations was higher than both the year before and the annual appropriations. Expenditure on housing subsidies was HUF 209.2 billion higher than in the same period of the previous year, reaching 114.5% of the annual target. In the first nine months of the year, expenditure on chapter-administered professional appropriations was HUF 824 billion higher than in the same period of the previous year, and 115.9% of the annual appropriations.

In January–September 2022, cumulative expenditure on retirement benefits amounted to HUF 3,512.2 billion, up by 19% compared to the same period of the previous year. During the same period, the Health Insurance Fund spent HUF 2,748.2 billion, an increase of 18.4% compared to the base period. Within this, expenditure on medical and preventive care, which accounts for more than half of the Fund's expenditure, increased by 20.3%.

FIGURE 8: CENTRAL SUBSYSTEM BALANCE, 2010–2022 JAN–AUG MONTH (HUF BILLION)



Source: Ministry of Finance, Századvég

2.6 Monetary developments

In September, prices increased by 20.1%, on average.

In September 2022, consumer prices increased by 20.1% on average compared to the same period of the previous year. In addition to the prices of food (35.2%) and consumer durables (14.7%), the biggest price increases in the past year were for household energy (62.1%), due to changes in the terms for discount household utility prices. Consumer prices rose by 4.1% on average over a month. The seasonally adjusted core inflation rate showed a year-on-year increase of 20.7%.

The more significant contributors to the 35.2% average increase in food prices were the 76.2% rise in bread prices, the 68.0% increase in cheese prices and the 66.3% rise in dairy prices. The average inflation of 60.2% for dry pasta and 53.7% for eggs also outpaced average food price increases during the month. In contrast, pork prices rose at a below-average rate (22.4%), while sugar (10.9%) and edible oil (5.0%) inflation was also below average. The steady rise in the price of processed and unprocessed food is mainly due to drastically high production costs due to energy prices and the drought that hit Hungary in the summer.

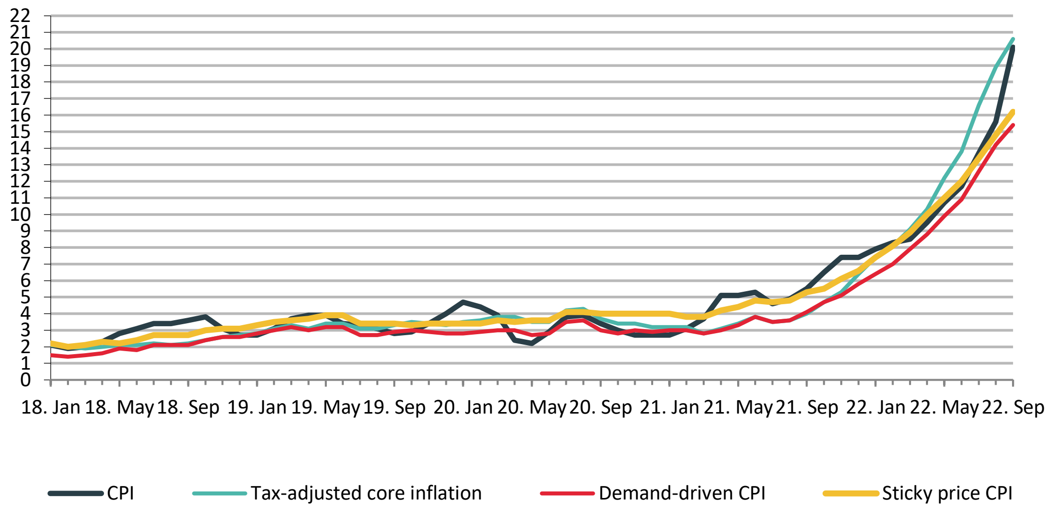
The 19.9% increase in new car prices and the 16.7% increase in used car prices played a particularly important role in the 14.7% average increase in consumer durables. Room furniture prices also increased at an above-average rate, by 20.1%, while kitchen furniture prices rose by 21.2% compared to the same period last year. Jewellery also saw a significant price increase of 17.4% in on a yearly basis in September. Consumer durables inflation is moderated by a 2.9% increase in the prices of computers, cameras and telephones, and a 3.2% increase in the prices of televisions. For consumer durables, volatile forint exchange rates are among the factors that increase inflation risks, alongside supply chain disruptions and parts shortages.

The average increase in household energy prices was 62.1% in September, compared to the same period of the previous year. Within household energy, the price of piped natural gas increased by 121.0%, electricity by 28.9% and cylinder natural gas by 45.0% over the past year. Despite the price boom on the world market, the discount household utility prices remained stable until July. From August, they remained the same up to average consumption. Above average consumption, however, consumers have to pay a higher price, which is calculated by the HCSO in the billing month, so the higher figures are first published this month. The rise in energy prices contributed roughly 2.5-3.0% to the increase in inflation in September.

In September, the price of services rose by an average of 8.2%, with home repair and maintenance up 21.7%, vehicle repair and maintenance up 22.8% and taxi up 28.5%. The average price increase of services was moderated by, among other things, no change in the prices of sanitation, water and sewerage (100.0%), a 4.6% decrease in the price of TV subscriptions and a 1.7% decrease in the price of local public transport. Clothing prices increased by 6.7% on average over a year.

Compared to the previous month, the price of household energy increased by 59.2%, the price of food increased by 3.5% on average and the price of consumer durables increased by 0.8%. The price of services fell by 0.1% on a monthly basis.

FIGURE 9: THE EVOLUTION OF INFLATION (ANNUAL CHANGE IN PERCENTAGE)



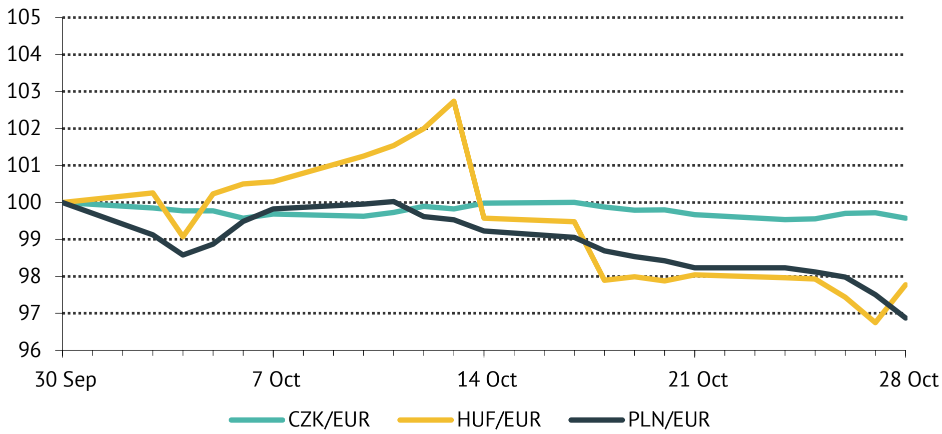
Source: MNB, Századvég

Among the core inflation indicators published by the MNB, in September, the seasonally adjusted core inflation rate was 20.7%, the core inflation rate net of indirect taxes was 20.6%, and the sticky price inflation rate was 16.2%. Core inflation excluding processed food was 15.4% in September.

Both the Czech koruna and the Polish zloty strengthened.

Exchange rates in the region showed a mixed picture in relation to the euro. The foreign currency exchange rates for both the Czech koruna and the Polish zloty have strengthened against the Euro, by 0.43% and 3.13%, respectively. However, government security yields have increased: the Czech 10-year government bond yield closed 65 basis points higher at 6.02%, while the Polish 10-year yield closed 136 basis points higher at 8.38%.

FIGURE 10: CHANGES IN EXCHANGE RATES IN THE REGION (BASELINE VALUE = 100%)



Source: Refinitiv, Századvég

HUF/EUR exchange rate strengthened significantly.

Overall, indicators of the Hungarian financial and foreign currency markets have shown a mixed picture in the past period. The 10-year government bond yield closed at 10.28%, rising 37 basis points. The HUF strengthened by 2.23% against the euro, by 5.12% against the Swiss franc and by 3.29% against the US dollar. This means that at the end of October 2022, one euro was worth 412 forints, one US dollar was worth 414 Forints and one Swiss franc was worth 416 forints. Sovereign debt held by foreigners has recently increased by HUF 624 billion to HUF 5,914 billion.

The central bank's new effective rate from mid-October: 18%

At its October meeting, the Monetary Council of the central bank left its key interest rate unchanged at 13.00%. The Monetary Council raised the overnight deposit interest rate to 12.5% and the lending rate to 25.0%. The central bank raised the overnight deposit facility rate of its effective interest rate to 18.0%. The MNB has increased the effective interest rate by 1,740 basis points since the start of the rate hike cycle. The asymmetric interest rate corridor defines the limits of the overnight interbank market interest rate and the central bank overnight deposit interest rate. The central bank explained these moves with the stronger inflationary environment and financial market turbulence. In the long run, a high interest rate environment will change the choice between consumption or saving and help to suppress inflation, but it could also cause the credit market to dry up. It also makes external speculation on the weakening of the forint more difficult by making it more expensive to hold positions.

Over the past month in the government bond market, yields for shorter maturities varied between -22 basis points and 53 basis points on the secondary yield curve. This means that the 3-month yield was 11.35%, the 6-month yield was 12.9% and the 1-year yield was 13.32% on 28 October. The 3-year yield rose by 37 basis points to 12.07%. Yields are up 125 basis points over the 5-year horizon and 30 basis points over the 10-year horizon and down 13 basis point over the 15-year horizon compared to the previous month. These three yields changed, therefore, to 11.51%, 10.08%, and 9.31%, respectively.

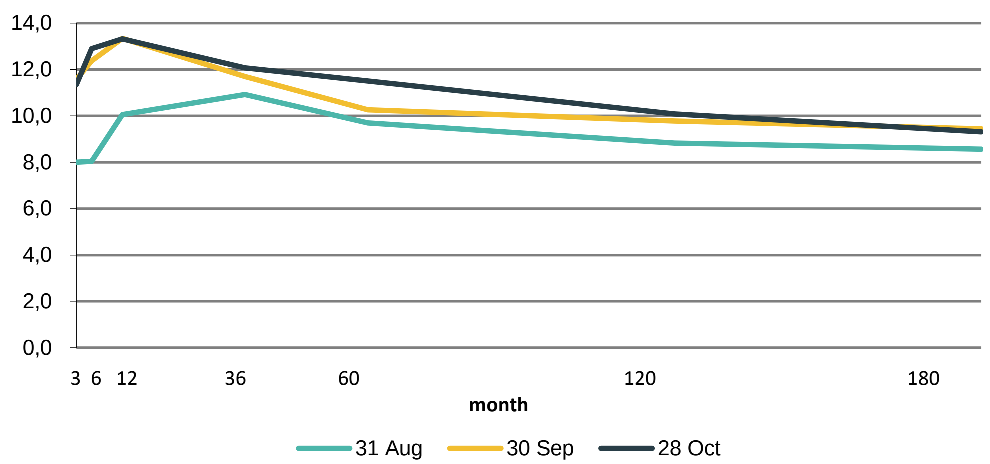
Since 3 June 2019, retail investors can buy "super government bonds" (MÁP+) with a relatively high rate that gradually increases during its term, ensuring a total annual yield of 4.95%. On 31 October 2022, the total value of government bonds held by retail investors was HUF 3,236.4 billion after a HUF 5.6 billion increase from the HUF 3,870.4 billion level at the end of September. Given the high inflationary environment, the public prefers to hold government bonds with a fixed real interest rate, which are inflation-tracking, to the tune of HUF 3,967.6 billion (PMÁP as of 30 September:

HUF 3,546.0 billion). The GDMA currently maintains the interest rate premium on the 5-year government bond at 1.5 percentage points, while the interest rate premium on the 3-year government bond at 0.75 percentage points.

The share of foreign currency debt in the sovereign debt changed to 23.8% in August (corresponding to an increase of 0.2 percentage points), which is in the range (10–25%) specified in the financing plan for 2022 of the Government Debt Management Agency Ltd.

At the end of October, Hungary's sovereign debt rating remained at Baa2 with a stable outlook at Moody's, BBB with a negative outlook at S&P and BBB with a stable outlook at Fitch. Thus, all three major international credit rating agencies have a risk rating for Hungarian treasury securities that is one category above the lowest grade that is still recommended for investment.

FIGURE 11: CHANGES IN THE HUF YIELD CURVE (%)

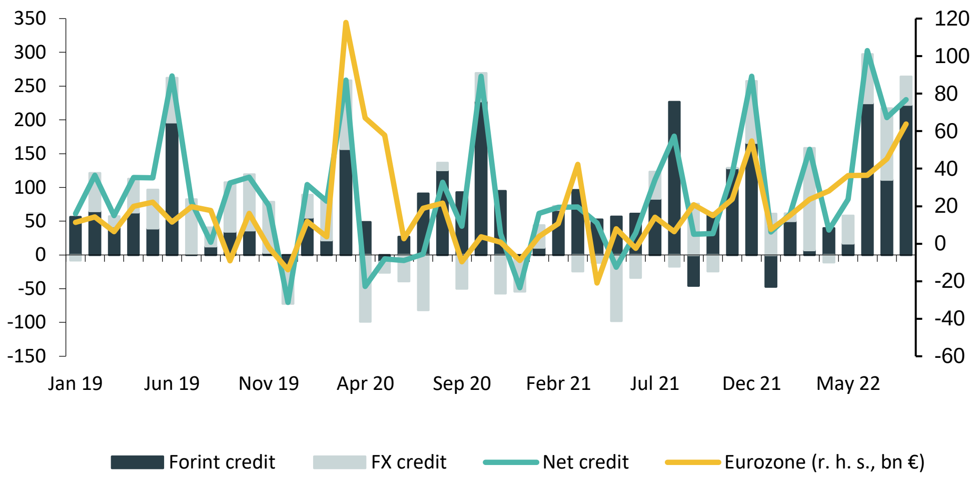


Source: GDMA, Századvég

Corporate holdings of HUF credits have increased

Seasonally adjusted data show that the net borrowing of HUF loans in the business sector was HUF 222.3 billion in August 2022. The net borrowing of foreign currency loans was HUF 41.7 billion in August; in other words, the aggregate value of foreign currency loans held by the business sector, i.e. exchange rate risk exposure, increased. This means that, based on seasonally adjusted data, total net borrowing was HUF 229.8 billion in August. Corporate borrowing in the euro area was EUR 63.8 billion in August 2022.

FIGURE 12: CORPORATE BORROWING (HUF BILLION)



Source: MNB, ECB, Századvég

3. Macroeconomic forecast

In the first two quarters, the Hungarian economy grew by 8.0% and 6.5% respectively. However, by the end of the year, growth prospects had deteriorated as a result of rising commodity and energy prices and recessionary expectations from trading partners. In our forecast, we have assumed a weak exchange rate, high oil prices and a negative output gap for the euro area. Over the forecast horizon, in 2024, oil prices could reach a level that is lower than today, but historically still high. In the euro area, the output gap is not expected to close until the end of the forecast horizon. With these assumptions, on a year-on-year basis, the Hungarian economy is expected to expand by 2.2% in Q3 of 2022 and 1.2% in Q4. Annual economic growth is expected to reach 4.4% in 2022, followed by 1.8% in 2023 and 3.7% in 2024.

The significant increase in gross domestic output seen at the beginning of the year was mainly supported by an expansion in domestic demand. Within domestic demand, household final consumption expenditure increased by 14.1% in Q1 and by 10.1% in Q2. Consumption growth was helped to a large extent by government measures taken at the beginning of the year, such as the reintroduction of the "13th month's pension", wage increases, the exemption from personal income tax for under-25s and the tax rebate for families. However, with the rapid phasing out of one-off measures and rising inflation, we expect consumption to fall.

In addition, investments, another component of domestic demand, increased by 13.2% in Q1 and by 6.1% in Q2. High energy and raw material prices are likely to persist in the coming quarters, which is likely to encourage companies to cut back on investment by increasing production costs. As a result, investments are expected to fall significantly, by 1.1% by 2022. Investments are expected to increase by 3.0% in 2023 and by 4.9% in 2024.

Government consumption is expected to fall in Q3 and Q4 of 2022 due to cost-cutting fiscal measures. For the year as a whole, government spending is expected to increase by 0.2%. In 2023, spending is expected to rise by 1.2%.

This year, after expanding by 5% in Q1 and 7.5% in Q2,, exports are expected to rise by another 5%. External demand is likely to remain subdued in the coming years, leading to modest export growth. For the next two years, annual export growth rates could be 2.4% and 2.5%. Imports grew by 8.2% in Q1 and 7.3% in Q2, followed by an estimated increase of 1.5% in Q3 and 3.2% in Q4. Overall, imports could increase by 5% this year. Import growth is likely to remain subdued in the next two years, due to a slowdown in domestic demand and modest export growth: We expect growth to be 0.0% in 2023 and 2.0% in 2024. Overall, we expect a positive contribution of net exports to output in the coming quarters.

Although the number of employees could fall by 5,200 per year in 2022, the trend could reverse by 2023. At the same time, rising global economic uncertainty and slowing growth also pose risks to the Hungarian labour market, and this is a key factor behind the expected moderation this year. By the end of 2022, the number of employees could reach 4,682,000, an increase of 29,000 compared to 2019. We forecast that employment could continue to grow in 2023, but at a gradually slowing rate, by 29,400. We forecast that the active population could shrink by 7,000 this year, but rise by 8,000 next year. Employment growth is expected to be entirely linked to the business sector, with services being the main contributor. Employment growth in the services sector is being helped by the end of the pandemic, but the Russo-Ukrainian War is only slowly stimulating international tourism.

The unemployment rate has gradually declined in 2022 compared to the previous year, reflecting rising employment and also expanding activity. Looking ahead, however, we expect the unemployment rate to rise and then gradually decline: By the end of 2022, 3.7% of the active population are expected to be out of work, and 3.6% in 2023. Low unemployment also means that labour shortages will remain a significant constraint on the Hungarian economy. The unemployed can be divided into two categories:

the frictional unemployed and the long-term unemployed. The former category includes those who are only temporarily out of work due to moving or changing jobs and are always present in the labour market. The latter category, on the other hand, may persist as a consequence of structural unemployment, i.e. the growing demand for skilled workers as the economy catches up, while low-skilled workers will find it difficult to find a job. Training or public employment can be a solution for them. The latter programme is expected to survive, although the number of participants may further decline over the forecast horizon, thus playing only a marginal role in the domestic labour market.

Growth in average gross wages in 2022 is likely to be concentrated in the business sector, where growth is expected to be 19.7%, which could mean real annual growth of 5.8% despite rising inflation. However, we expect this pace to slow down in the coming years. There is considerable uncertainty surrounding wage developments next year, which will be influenced by possible increases in the minimum wage and the guaranteed minimum wage, as well as the economic situation. We expect average wages in the business sector to increase by 14.9% in 2023 at the base level, but with inflation expected to be around 13.4%, this could mean a 1.5% increase in real terms.

Price indices rose in most countries around the world. In Hungary, the rise in inflation is mainly attributable to the global rise in energy and commodity prices and the severe drought: consumer prices rose by 8.2% in Q1 and by 10.6% in Q2 2022. Inflation is forecast to rise further in the next two quarters, with price increases of 15.5% in Q3 and 18.3% Q4 2022. Inflation is expected to peak in Q1 2023, followed by a gradual decline until the end of 2024: inflation is projected at 13.4% in 2023 and 5.6% in 2024. The moderation in global inflation, the consolidation of commodity prices and the tightening of monetary policy could start to have an impact as early as the second half of next year.

There are also several risks to inflation, the most important of which are the following:

+ Changes in oil prices: higher oil prices lead to higher inflation, lower oil prices to lower inflation.
+ Changes in forint exchange rates: a stronger forint exchange rate could reduce the inflation rate.
+ Agricultural yield trends: a less favourable harvest tends to push up prices.
+ External inflation developments: faster-than-expected price rises in Europe could pull inflation up, while slower price rises could pull it down.

  Higher minimum wage and minimum wage increases: higher wage increases raise costs for businesses, pushing up inflation.

The Magyar Nemzeti Bank has already tightened monetary policy in several steps to avoid the build-up of above-target inflation in expectations, but is committed to completing the tightening. Therefore, we have assumed base rate cuts on the forecast horizon from Q2 2023.

4. Századvég's forecast[1]

TABLE 1: 2022 Q3 FORECAST

	2021	2022				2022	2023				2023
	annual	Q1	Q2	Q3	Q4	annual	Q1	Q2	Q3	Q4	annual
Gross domestic product (volume index)	**7.1**	*8.0*	*6.5*	*2.2*	*1.2*	***4.5***	*0.4*	*0.3*	*3.5*	*3.1*	***1.8***
Household final consumption expenditure (volume index)	**4.6**	*13.4*	*10.3*	*6.6*	*1.1*	***8.0***	*-10.3*	*3.3*	*2.6*	*2.3*	***-0.5***
Gross fixed capital formation (volume index)	**5.9**	*12.8*	*6.4*	*-14.7*	*-9*	***-1.1***	*9.9*	*-0.7*	*1.6*	*1.2*	***3.0***
Export volume index (based on national accounts)	**10.3**	*5.0*	*7.5*	*5.1*	*5.1*	***5.7***	*2.4*	*1.3*	*4.2*	*1.8*	***2.4***
Import volume index (based on national accounts)	**8.7**	*8.2*	*7.3*	*1.5*	*3.2*	***5.1***	*-1.6*	*-1.8*	*2.7*	*1.0*	***0.1***
Balance of international trade in goods (EUR billion)	**1.9**	*-1.2*	*-1.0*	*-1.3*	*-3.2*	***-6.7***	*0.2*	*0.1*	*-0.9*	*-3.1*	***-3.7***
Consumer price index (%)	**5.1**	*8.2*	*10.6*	*15.5*	*18.3*	***13.1***	*18.8*	*16.3*	*11.4*	*7.6*	***13.4***
Central bank base interest rate at the end of the period (%)	**2.4**	*4.4*	*7.8*	*10.5*	*13.0*	***13.0***	*12.3*	*11.3*	*10.3*	*9.4*	***9.4***
Unemployment rate (%)	**4.1**	*3.7*	*3.6*	*3.7*	*3.9*	***3.7***	*4.3*	*4.5*	*4.5*	*4.7*	***4.5***
Change in the average gross monthly wage (%)	**8.7**	*20.9*	*15.2*	*19.9*	*22.8*	***19.7***	*14.2*	*20.3*	*14.7*	*10.4*	***14.9***
Current account balance as a percentage of GDP	**-3.1**					***-5.5***					***-2.9***
Net lending as a percentage of the GDP	**-0.5**					***-2.7***					***-0.7***
ESA balance of public finances as a percentage of GDP	**-6.8**					***-4.5***					***-3.7***
Sovereign debt as a percentage of GDP	**76.6**					***73.0***					***67.6***

Source: MNB, Hungarian Central Statistical Office, Századvég's calculation

TABLE 2: QUARTER-ON-QUARTER CHANGE OF OUR FORECAST

	2022			2023		
	06.2022	09.2022	change	06.2022	09.2022	change
Gross domestic product (volume index)	5.4	**4.5**	*-0.9*	4.5	**1.8**	*-2.6*
Household final consumption expenditure (volume index)	8.5	**8.0**	*-0.5*	3.5	**-0.5**	*-4.0*
Gross fixed capital formation (volume index)	5.2	**-1.1**	*-6.3*	5.4	**3.0**	*-2.4*
Export volume index (based on national accounts)	8.0	**5.7**	*-2.3*	7.8	**2.4**	*-5.4*
Import volume index (based on national accounts)	9.5	**5.1**	*-4.5*	6.5	**0.1**	*-6.4*
Balance of international trade in goods (EUR billion)	-7.7	**-6.7**	*1.0*	-5.6	**-3.7**	*1.9*
Consumer price index (%)	10.3	**13.1**	*2.8*	7.1	**13.4**	*6.3*
Central bank base interest rate at the end of the period (%)	8.00	**13.0**	*5.0*	7.10	**9.4**	*2.3*
Unemployment rate (%)	3.7	**3.7**	*0.0*	3.6	**4.5**	*0.9*
Change in the average gross monthly wage (%)	16.5	**19.7**	*3.2*	10.1	**14.9**	*4.8*
Current account balance as a percentage of GDP	-7.3	**-5.5**	*1.8*	-5.5	**-2.9**	*2.6*
Net lending as a percentage of the GDP	-4.5	**-2.7**	*1.8*	-3.4	**-0.7**	*2.7*
Balance of public finances as a percentage of GDP	-4.4	**-4.5**	*-0.1*	-3.5	**-3.7**	*-0.2*
Sovereign debt as a percentage of GDP	74.5	**73.0**	*-1.5*	72.2	**67.6**	*-4.6*

Source: Századvég's calculation

[1] Date of preparation: 30 September 2022