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Is the Hungarian economy crisis-proof?

Századvég Economic Research Institute
2021



In 2020, the expectations of many market analysts became reality, and the longest economic cycle in the modern history of the global economy came to an end. The healthcare measures and security restrictions imposed to curb the coronavirus epidemic caused economic slowdowns all over the world, and the pandemic brought about a crisis. Did they expect such a crisis? Certainly not. Like a war, the coronavirus suddenly froze demand and supply in the real economy. The Great Recession of 2008 was different, as its underlying causes were the internal imbalances of the financial and credit economies. As the sources of growth immediately went dry back then (lending paralysed, trust collapsed), restarting the economy was an exceptionally long process and took years. Despite the different points of departure, do we have similar outlooks today, too?

A great many wrong answers have been given to this crucial question in recent weeks. Responses which saw the signs of “the end of the world” in the “unprecedented” growth of the budget deficit or the government debt. **In times of peace, a well-managed government debt and the budget deficit are the stabilisation tools to defend against and absorb economic and social shocks during “times of war”.** One should spend in case of trouble and when help is needed. One should save and set funds aside when things go well. Not the other way around. If the government is forced to impose austerity measures, as it happened in 2008–2009, then it means that it did not manage well in times of peace, made itself vulnerable, overspent, got indebted to foreigners, etc. It lost its stabilisation tools too early.

Hungary’s crisis-resistance is much better today than it was in the 2008 crisis, meaning that it could weather the recession with less economic sacrifices. Notable reasons for optimism are that the crisis hit Hungary at the top of the economic cycle, significant investments have been made in recent years, employment has reached unprecedented levels, poverty and household indebtedness have substantially decreased, and the latter has shifted to a “healthier” structure through the elimination of foreign currency credits, and the change of the composition of the government debt has also strengthened the crisis-resistance of Hungary. The openness of the economy, the high relative weight of certain sectors or

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the narrower room for monetary policy, however, need caution and cool heads regarding the expected recovery.

The market economy is cyclical: growth is sometimes stronger, sometimes weaker, and recessions can also happen. With the gradual globalisation of the world economy, local problems (currently the pandemic that first emerged in China) spread faster and faster in the world. This is a risk to small open economies like Hungary, because it cannot insulate itself from the global economic shock. The extent of these impacts does, however, matter, just like the condition they hit our economy in.

The crisis of 2008-2009 had an especially severe impact on Hungary, the recovery lasted years, until 2014. We could not lay back for long, the next global crisis came in 2020. The long-term effects of the crisis are still unknown at the time of this study, no factual data are available regarding the total downturn in the economy (GDP) or the labour market, because the fight against the virus is still on. **At the same time, we can see that the economy is gradually restarting and that the crisis has been prevented with predominantly Hungarian and market resources, asking the IMF for credit has not been necessary.** It is still early to draw the final conclusion, but we can already report on the preparation. The next chapters will, therefore, review key macroeconomic indicators, analyse the overall condition of the economy and review risk factor trends.

Gross domestic product (GDP)

The performance of an economy is mostly measured with the GDP, its changes and levels. Although this indicator has received countless criticisms over the last years and decades, it still has remained dominant. As Hungary is not an isolated economy in the world, comparing its economic development to other countries makes sense. How has economic output changed relative to countries with similar degrees of development (e.g. the Visegrad countries)? Has the country effectively caught up to the EU average?

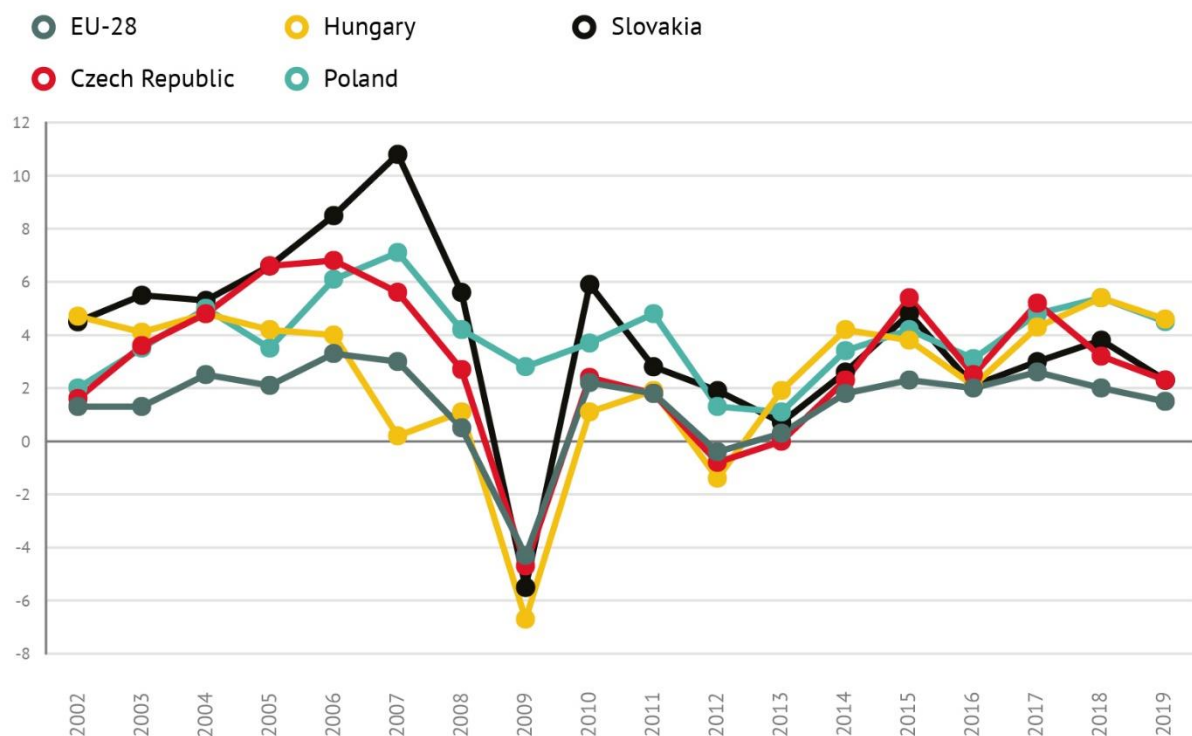
Before 2006, Hungary grew dynamically, at an annual rate over 4%. In 2003 and 2004, this corresponded to the regional average, but was below that in 2005 and 2006. Right before the crisis, in 2007, while the Slovakian economy grew by 10%, the EU average was 3.0%, the Hungarian economy was already stagnating, its growth rate was only 0.2%. Although its growth rate increased to 1.1% in 2008, which was above the EU average, but

Hungary was still the last among the Visegrad countries. In other words, the Hungarian economy entered the latest crisis in the downward trend of its economic cycle.

The recovery from the crisis of 2008–2009 was long in Hungary, but 2014 brought real growth, the rate of which was around 5% in 2018 and 2019, while the average economic growth rate in the European Union was only around 1.5-2.0% in the period under review. **Unlike in the case of the global economic crisis of 2008 and 2009, the recession caused by the coronavirus pandemic hit the Hungarian economy in the upward trend of the economic cycle, near the peak.**

Czech, Polish, Hungarian, Slovakian and EU GDP volume indices between 2002 and 2019 (%)

Figure 1



Source: Eurostat

Based on GDP per capita, adjusted for purchasing power, the level of economic development in our region does not reach the EU average. It is, therefore, an important question whether reducing this difference is possible, and if yes, then how fast. Both pre-crisis periods were characterised by catching up, even its rates in the two periods were similar. It is, however, worth comparing to the other Visegrad countries. This comparison shows that Hungary caught up at a much slower rate than its regional competitors between 2002 and 2008, while it caught up at the same or a higher rate between 2012 and 2019. It is also clear that Hungary was the second among the 4 Visegrad countries in 2002, but it was the last after the 2008 crisis, then it had managed to get ahead of Poland and Slovakia by 2019.

Table: GDP per capita, adjusted for purchasing power, as percentage of the EU average

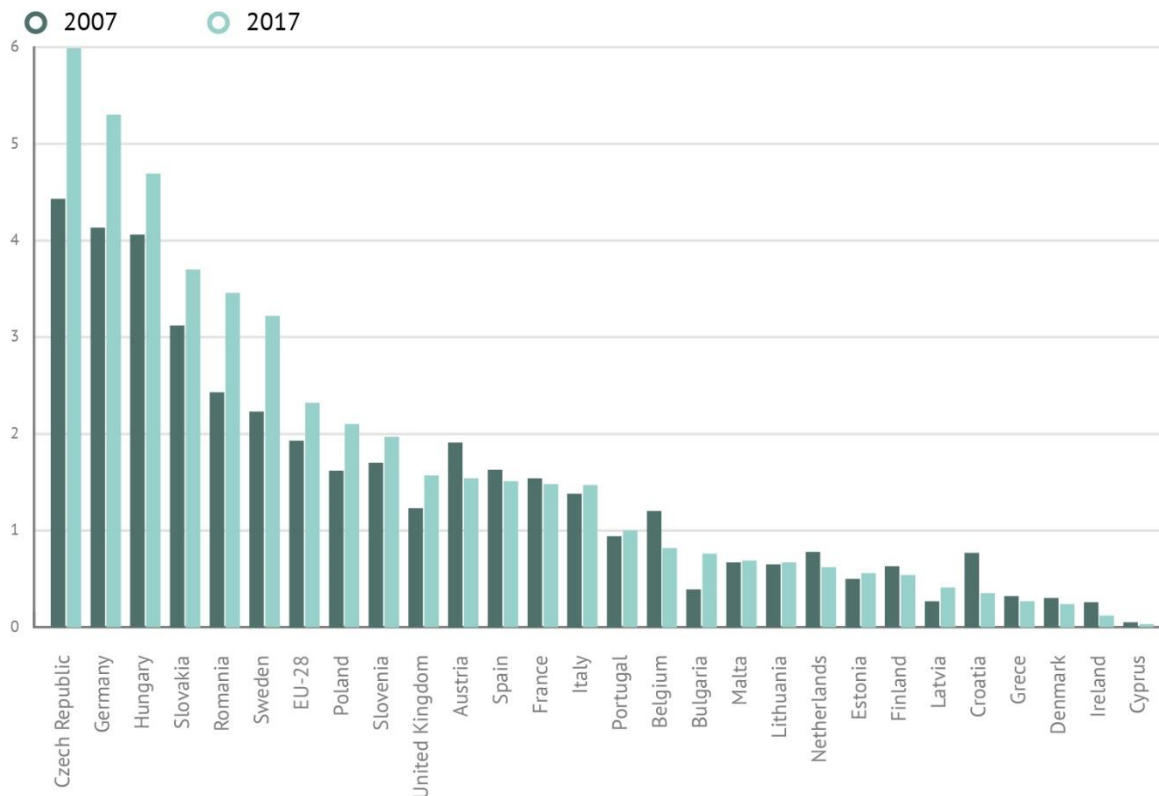
	2002	2008	2012	2019
Czech Republic	73.5	84.3	82.9	92.2
Hungary	58.5	62.6	65.8	72.7
Poland	47.5	55.4	66.5	72.4
Slovakia	53.6	71.4	76.4	69.7

Source: Eurostat

A common criticism of Hungary's economic growth is that it is mostly driven by the automotive industry, which has a large weight. This is truly an important risk factor, because the automotive industry is vulnerable to economic cycles, and its output strongly correlates with cyclical fluctuations. Therefore, while it can contribute to economic growth in times of economic boom, it faces considerable shrinkages in demand in times of crisis. Data on the share of the automotive industry in the GDP are available for most Member States up to 2017 on the Eurostat website. In 2017, the automotive industry had a 4.7% share in the Hungarian economy, and its share dropped to 4.5% by 2018, which is only slightly higher than the 4.1% share in 2007. The two figures share, however, the fact that the percentage in Hungary was the third highest in the EU in both instances. The risk, therefore, exists, but it also existed before the crisis of 2008 and 2009. The crisis is an opportunity at the same time: supporting high-added value sectors (e.g. the creative industry) during the restart could dynamise economic growth and facilitate the catching up of the economy in the long run.

The automotive industry's share in the added value in 2007 and 2017 (%)

Figure 2



Source: Eurostat

Investments

In addition to the above, the driver of growth is also important. **Before the 2008 crisis, consumption funded by borrowing was the predominant driver of economic growth; in recent years, however, investments have gained a greater role.** This was positive, because consumption can increase welfare in the short run, but investments increase capital and, therefore, facilitate catching up in the long run. Comparatively speaking, the Hungarian investment rate was 23.7% in 2007, which meant that the country was 16th in the ranking of EU Member States. By contrast, investments were 27.2% of the GDP in 2019, which does not only mean a considerable growth, but was also the second highest rate in the European Union after Ireland.

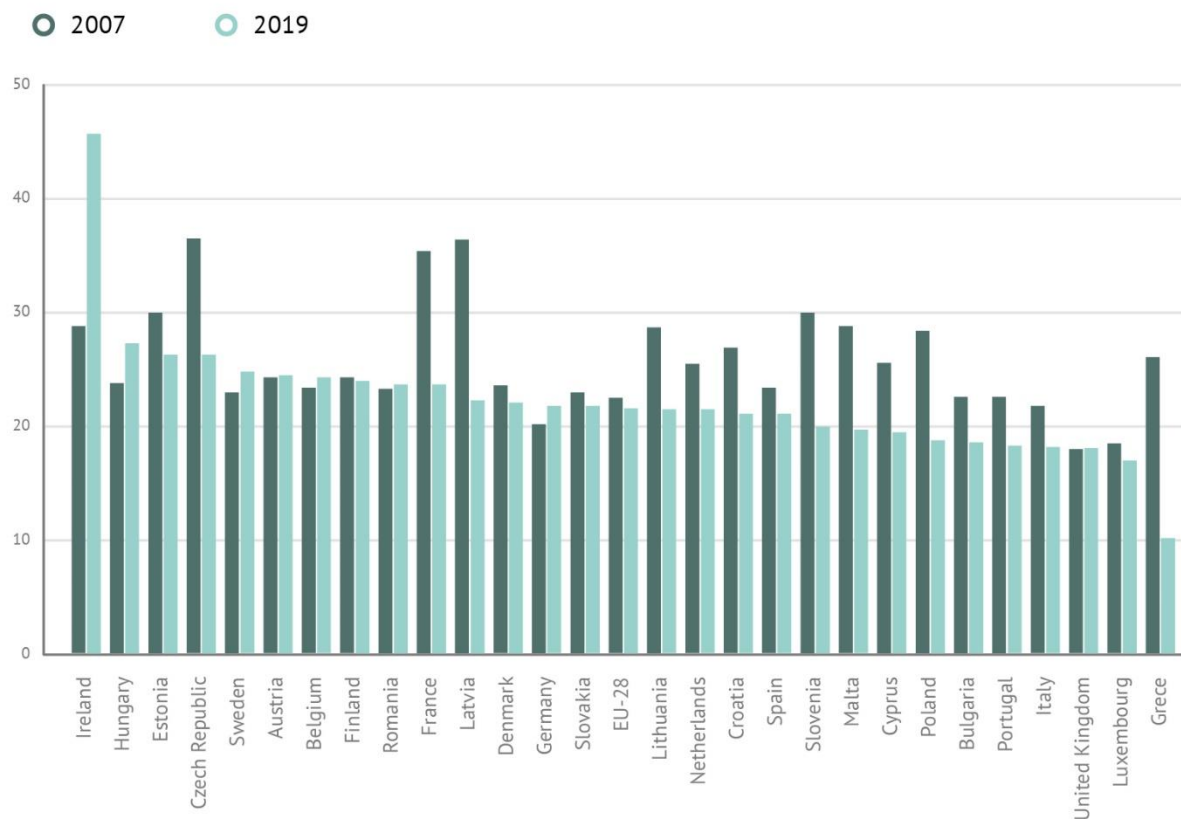
Investments are beneficial not only for economic booms but also for recoveries, either by contributing to a positive business environment in the future (infrastructural investments) or by

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expanding production capacities or shifting to a more advanced technology. The investment rate drops during times of crisis, as companies and the state have less resources to implement development projects, and companies also become uncertain whether the changing demand justifies the implementation of their planned investments. The high investment rate of previous years and the capacities created by it will, therefore, play a special role and will hopefully facilitate the recovery of the economy from the crisis.

Investment rates in EU Member States in 2007 and 2019 (%)

Figure 3



Source: Eurostat

Labour market

The employment rate among the active population and unemployment trends are crucial for a country's economy. The problems of the Hungarian labour market go back to the political changes in 1989-1990, when almost one third of previous jobs were lost. Most who dropped out from the labour market went on disability pension, became unemployed or inactive. Being dropped out from the labour market became permanent for them, determining the lives of next generations, because working has not been an example to them in their families.

The low employment rate remained characteristic until the 2008 crisis: in 2007, only 57.0% of the 15–64 age group worked. This was the second lowest rate in the European Union after Malta and the same as in Poland. This was an issue for economic performance as well as the government budget. Because if few employees generate tax revenues, but a high number of inactive or unemployed people are entitled to aid, then the result is high taxes and poor competitiveness.

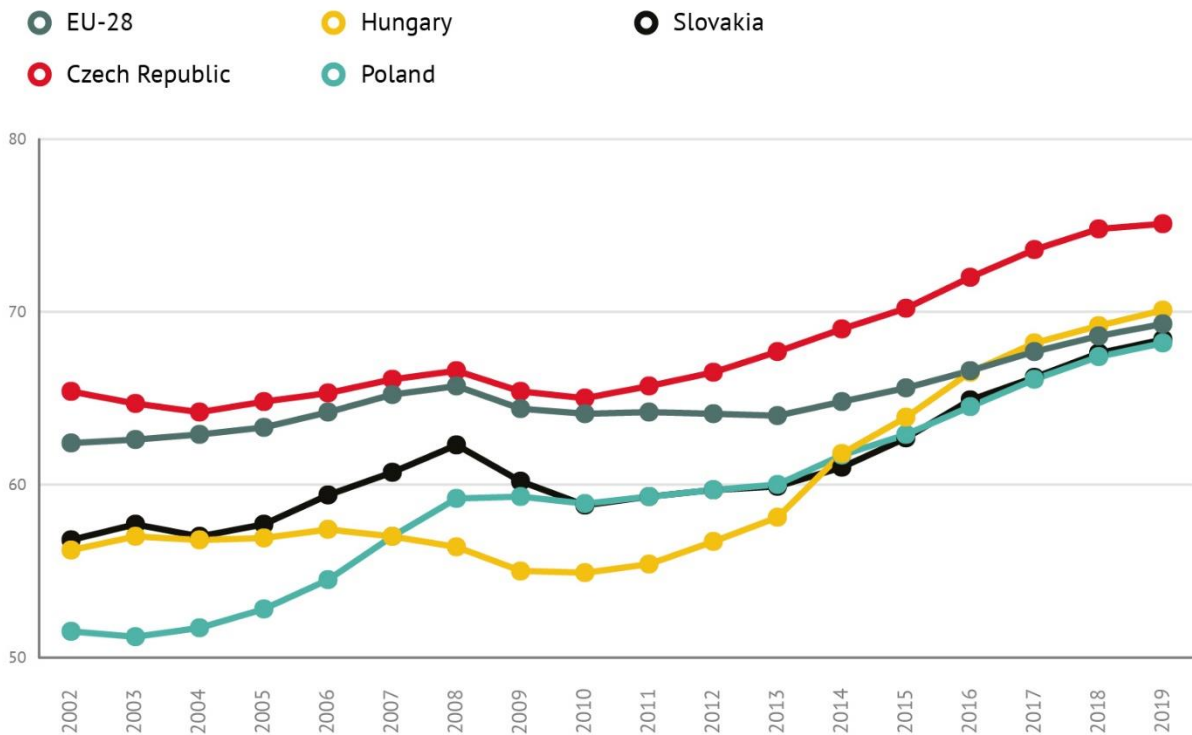
The labour-market turnaround was achieved after 2010, though it was difficult. While the employment rate in the 15–64 age group was only 54.9% in 2010 (the lowest in the European Union), it increased above 70.1% by 2019, slightly above the EU average.

What drove the increase in employment? The process was, of course, not automatic, government measures were indispensable. On the part of demand, new jobs had to be created (FDI support and development policy with a focus on jobs), and, on the part of supply, strong incentives had to be implemented such as narrowing the opportunities of early retirement, shortening the eligibility period for unemployment aid, cutting taxes and contributions on work, and preferential fiscal treatment of individual entrepreneurs.

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Changes in the employment rate in the 15–64 age brackets of the Visegrad countries and the EU between 2002 and 2019 (%)

Figure 4



Source: Eurostat

A curiosity should also be considered: although we speak most of the active-age population (people between 15 and 64 or 15 and 74 years of age), the employment of people between 65 and 74 years of age is also telling. While only 30,000 of them were employed in 2007, 76,000 of them were employed in 2019. What does this figure mean? What does the 2.5-fold increase mean? It means that older employees have had better chances on the labour market, given the increasing labour shortage. The emergence of labour shortage in recent years is attributable to several factors; on the part of demand, to the increasing demand for labour in the business sector due to the economic growth, on the part of supply, to the ageing of the population, low qualification or working abroad. At the same time, the labour shortage also means that the Hungarian labour market could have absorbed more employees in 2019, because the number of vacant jobs were also high: it was over 80,000 in the first half year of 2019. This is, however, the number of vacant jobs reported by the business sector; the actual number of vacant jobs could have been even higher.

Like growth data, employment data also often receive various founded or less-founded criticism. We would mention two of these and examine them in a broader context: public employment schemes and the role of working abroad in the growth of the labour market. Of course, both affected, although slightly, the growth described above. In the last quarter of 2019, the number of employees in public employment schemes was 108,000, and 120,000 employees worked abroad. This, therefore, does not explain the 700,000–800,000 increase in employment. Moreover, we should also note that both categories existed before 2010, the number of employees working at sites abroad was, for example, around 50,000 in 2010, while the number of employee in public employment schemes was around 90,000. The number of Hungarians who worked abroad was, of course, higher than that, their number above the 120,000 in 2019 and the 50,000 in 2010 is not included in employment statistics, because they lived abroad on a lasting basis.

Every year, the Eurostat reports the number of citizens between 20 and 64 years of age, who were born in a given country and work in the other Member States of the EU. In Hungary, their percentage was 5.8% in 2019, regarding the United Kingdom as a Member State of the EU. This is not negligible, but not outstanding. The same rate was 22.3% in Romania, 6.8% in Slovakia and 7.3% in Poland. In the Czech Republic, however, the percentage of employees working abroad is much lower, 1.8%.

Why are employment trends and the number of vacant jobs important in terms of the crisis? In times of crisis, job losses and layoffs naturally occur. However, if the employment rate has been higher beforehand, and the economy has had vacant jobs, then occupying these jobs could mitigate the growth of unemployment.

Wages

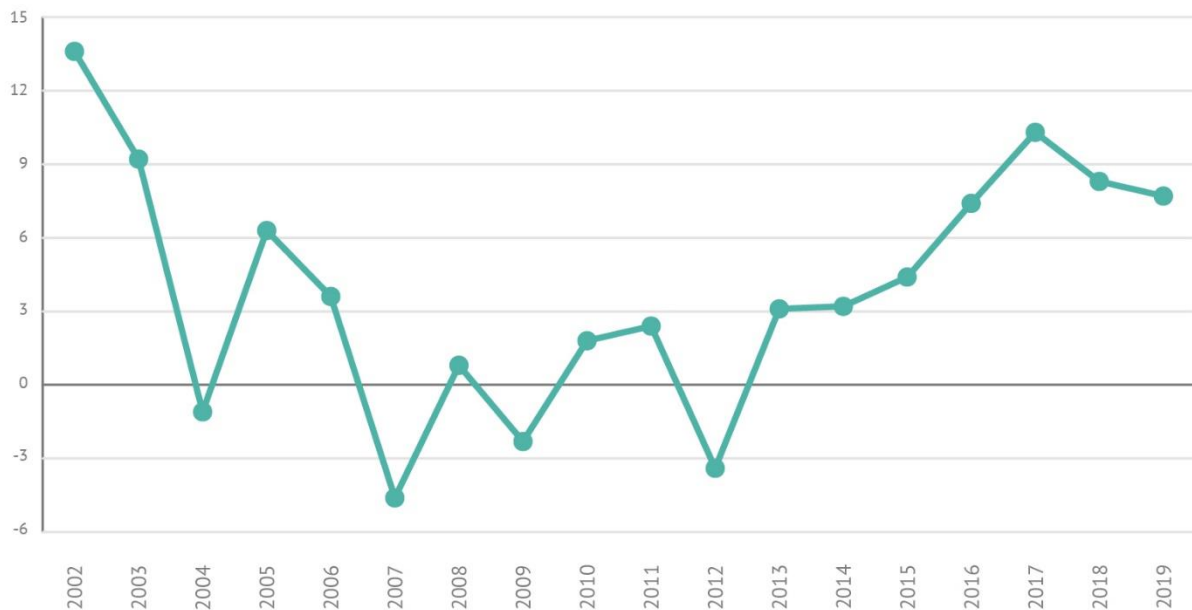
Besides employment, it is advisable to study another important labour market indicator, changes in wages, because wage dynamics fundamentally determine the welfare, i.e. consumption and saving opportunities of households. Wage dynamics trends are also good indicators of economic performance: businesses can raise wages more in the upward trend of an economic cycle, while they try to cut costs in times of recession. This chapter focuses on wage trends, and the next section will discuss differences in income, i.e. social inequalities and poverty.

The average wage is usually the point of departure for wage trend analysis, even though this indicator has several issues. One of the reservations regarding this indicator is that statistics only apply to people in employment and does not include the incomes of individual entrepreneurs. Another reservation is associated with the mathematical characteristics of average calculation, i.e. the average is exceptionally sensitive to extremities (outstandingly high wages). Analysing the median wage could perhaps be better to present the trends in “average” employee wages. The methodology of the Hungarian Central Statistical Office has, however, not been suitable for assessing the median wage until recent times, no time series are, therefore, available in this regard. On a longer timescale, however, average wage trends can still give a good insight into the wage trends in the economy.

On average, net real wages increased by 10.3% in 2017, 8.3% in 2018, and 7.7% in 2019.

Changes in net real wages in Hungary between 2002 and 2019 (%)

Figure 5



Source: HCSO

The average wage has dynamically raised in recent years. On average, net real wages increased by 10.3% in 2017, 8.3% in 2018, and 7.7% in 2019. By contrast, real wages increased by 6.3% in 2005, 3.6% in 2006, and -4.6% in 2007, i.e. its dynamics were weaker. This is, of course, closely linked to the macroeconomic situation, i.e. economic growth, employment trends, and tax policy. Stronger economic growth can facilitate wage growth, while a tighter labour market especially encourages it, i.e. if the demand for labour is higher

than labour supply, then the price of labour will go up. **Tax policy can also encourage wage growth: while pre-2010 fiscal regime encouraged grey employment through high marginal tax rates, the continual reduction of the social contribution tax induced wage growth. The significant increase of the minimum wage and the guaranteed wage minimum in the recent years also boosted wage dynamics.**

Wage growth could be important in the preparation for a crisis, because it could facilitate household savings so that consumption falls less if the labour market situation turns negative. At the macroeconomic level, this means that aggregated demand shrinks less, and, consequently, economic output also shrinks less.

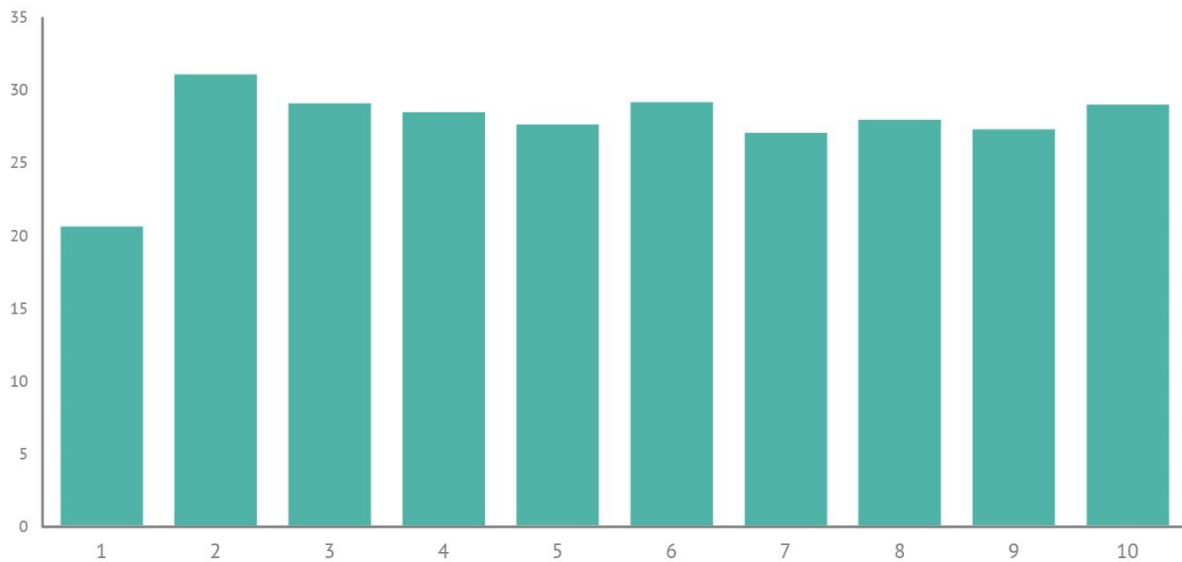
Social inequalities

Income differences are natural in a society. The extent of these differences, however, matter, just like how many qualify as poor in a society. This issue is important for the crisis, because poorer classes are hit worse by a recession, their labour market situation could deteriorate most, and their lack of savings could cause serious problems.

The databases of the Hungarian Central Statistical Office have data for the changes in household income per capita by deciles between 2010 and 2018. This time series imply that real incomes grew significantly, by between one fifth and one third, in all deciles, which is explained by the wage growth and the increase in employment.

Increase in the real value of annual income per capita in each income decile between 2010 and 2018 (%)

Figure 6



Source: Calculation by Századvég, based on HCSO data

The lowest growth rate was recorded for the bottom 10%. Adjusted for inflation, however, its growth rate was still considerable, over 20%. Nonetheless, the share of income from work in the total income is exceptionally low in this decile, while the share of income from social transfers is high. This also means that the wage growth in recent years increased the incomes in the first decile at a lower rate than that of the other deciles. We must, however, add that the reliability of income surveys is the weakest in the two extreme categories (bottom and top deciles). Positively, the highest growth rate was recorded for the second decile, which is quite good for reducing social inequalities.

The GINI indicator used to describe income inequalities measures the difference between the richest and poorest quintiles. According to Eurostat data for Hungary, its value was 24.1 in 2010, and increased to 28.7% in 2018 (it dropped to 28.0% in 2019), i.e. income differences increased slightly. Income inequalities in Hungary are still below the EU average, as the GINI coefficient of the EU was 30.5% in 2010, and by 2018 it increased minimally, to 30.8%. Compared to the Visegrad countries, however, Hungary does not

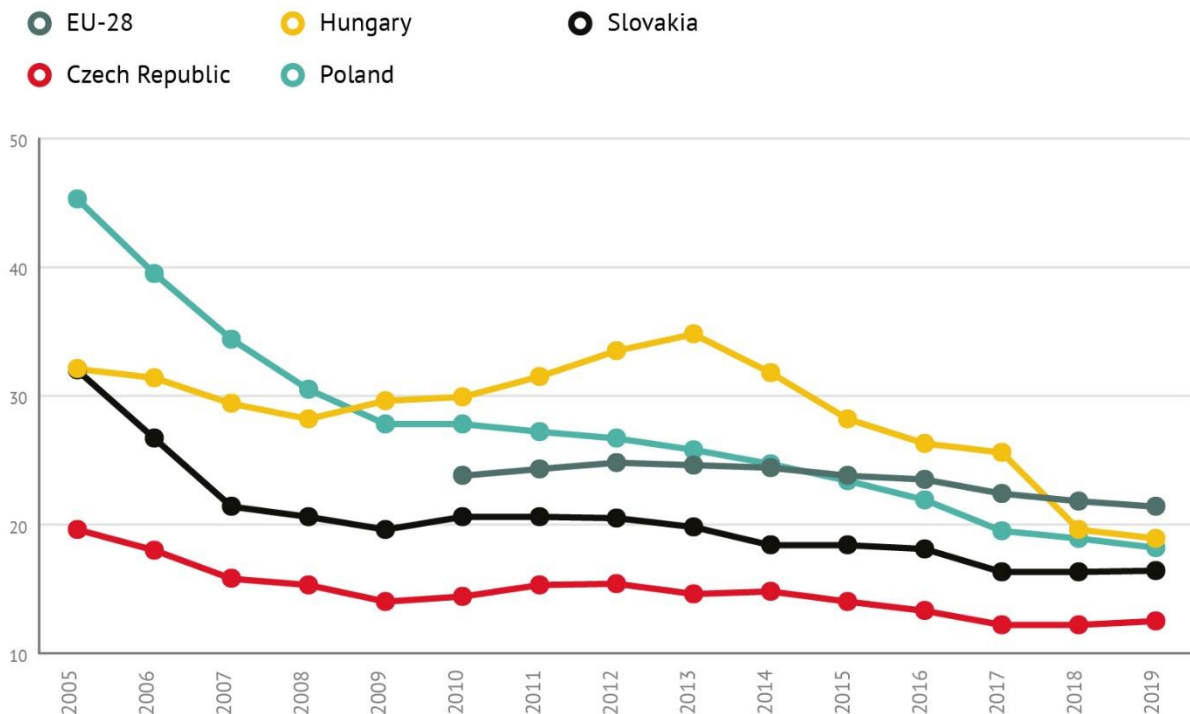
perform that well in this regard: between 2010 and 2018, the GINI indicator decreased slightly in the Czech Republic (from 24.9% to 24.0%) and significantly in Poland (from 31.1% to 27.8%) and in Slovakia (from 25.9% to 20.9%).

Real wage growth has also affected poverty indicators. According to data disclosed by the Eurostat, the percentage of people exposed to poverty in the whole population was 18.9% in 2019, which was the lowest in the time series started in 2005. Between 2005 and 2010, the indicator was around 30%, then it peaked at 34.8% in 2013 (referring to 2012) and has been continuously decreasing ever since. It should be stressed that the poverty indicator has been below the EU average since 2018. In this regard, the Czech Republic and Slovakia have always been below the EU average since the start of the EU time series in 2010, and the same happened to Poland after 2015.

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Percentage of people exposed to poverty in the entire population (%)

Figure 7



Source: Eurostat

A publication by the Hungarian Central Statistical Office in 2019¹ explains the components of the above poverty indicator. The above allows for the following important conclusions.

- The number of people living in severe material deprivation, i.e. people affected by at least 4 out of the 9 defined aspects², decreased from 1,421,000 in 2010 to 837,000 in 2018.
- The reduction of income inequalities is demonstrated by the fact that relative income poverty, i.e. the percentage of people whose income is below the 60% of the median income, dropped from 14.1% in 2010 to 12.3% in 2018.
- The percentage of households with very low work intensity, i.e. which spent less than one fifth of their potential working hours in work in the year before the survey, has dropped significantly, from 9.8% in 2010 to 3.7% in 2018.

Overall, poverty could really decrease in Hungary after 2010.

Inflation, exchange rate, monetary policy

After the 2008 crisis, the situation, tools and the room for monetary policy for manoeuvre changed considerably in Hungary. Although this change was not unparalleled, the appearance of new monetary policy tools was an international trend, a response to the root causes of the crisis and the economic situation that emerged from them.

After the 2008 crisis, the earlier and eventually failed economic policy considerably limited the monetary policy's room for manoeuvre. Although the base interest rate was 8.5% in the summer of 2008, the central bank could not react to the crisis by cutting interest rates to stimulate demand; moreover, it was forced to considerably increase it, by 3 percentage points, in October of the same year, to prevent the outflow of capital. Cutting interest rates would not have been possible during the 2008 crisis also because this would have further weakened the HUF, further weakening the

¹ <http://www.ksh.hu/docs/hun/xftp/idoszaki/hazteletszin/2018/index.html#chapter-9> (date: 08.07.2020)

² Being behind with loan repayment or occupancy-related payments; lack of proper housing heating; lack of coverage for unexpected expenses; no consumption of meat, fish or equivalent nutrition every second day; no one-week holiday spent away from home once a year; lack of a car for financial reasons; lack of a washing machine for financial reasons; lack of colour television for financial reasons; lack of telephone for financial reasons

situation of households and companies with foreign currency debts. Monetary policy could, therefore, not assist economic recovery during the latest crisis.

The turn in monetary policy could come only in the summer of 2012, when the base interest rate was still 7.0%. Comparatively, the reference interest rate of the Czech National Bank had been 1% since 2010, and hit its bottom so far, 0.05%, in the end of the same year. In the three interest rate cutting cycles during the subsequent 4 years, the Hungarian central bank reduced the base interest rate to 0.9%. It could, therefore, greatly contribute to the recovery of the Hungarian economy from the crisis and kickstarting economic growth through investment promotion and reducing the government's interest burden.

The central bank's interest policy also received great support from the external environment. Due to the globally low inflation rate, the major interest rate cuts did not increase the inflation rate, which could have jeopardised the monetary policy's steps. After 2012, the inflation rate was below the 3% target of the central bank; moreover, consumer prices could minimally decrease in 2014 and 2015, on a year-on-year basis.

However, the MNB contributed to the recovery of the Hungarian economy from the crisis not only through the base interest rate. Using its nonconventional toolset contributed to the kickstarting of growth. As this paper is limited in length, we discuss two of these tools: the Funding for Growth Scheme (FGS) and the Self-financing Programme. The first is discounted credit (with a maximum 2.5% interest rate) for SMEs, which the central bank introduced to revitalise business borrowing after the crisis. The Self-financing Programme, however, was to ensure funding the government debt from domestic sources by facilitating the purchasing of government securities by banks. The conversion of the reference instruments of the MNB to deposits and the IRS tool made this process short, consequently, the value of government securities held by the banking sector increased from HUF 3,000 billion in the end of 2013 to nearly HUF 8,500 billion in early 2019. Consequently, government interest expenditure and the percentage of securities held by foreigners could considerably decrease, which was good for economic stability.

At the same time, the role of monetary policy has also changed recently. In the second half of 2018, the inflation rate increased above the central bank's target, but still remained in the range between 2% and 4%, which the central

bank did not react to by tightening monetary conditions, but maintained its loose policy. Overall, this weakened the HUF, and the HUF/EUR exchange rate increased from the stable level of 310 of the previous years to between 320 and 330, and then above 350. Because of the conversion of foreign currency credits to HUF in the end of 2014, however, this weakening did not affect households negatively, unlike Hungarian-owned SMEs.

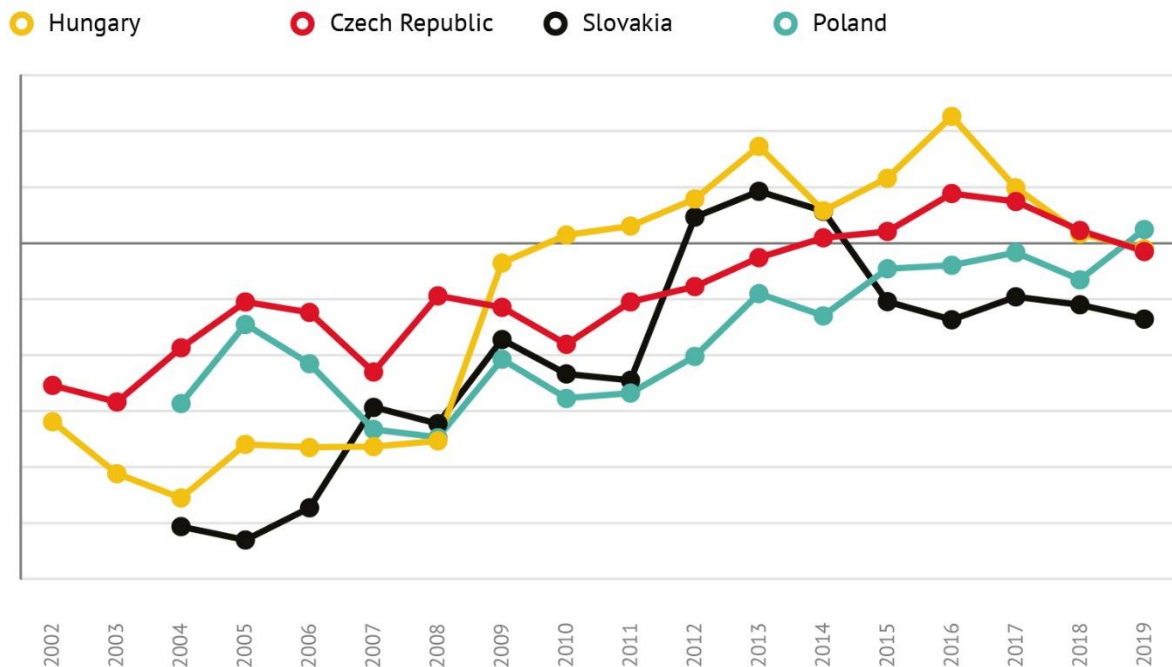
In sum of the above, how did Hungarian monetary policy enter the coronavirus crisis, what tools does it still have? As written above, the MNB could not revitalise the economy through the base interest rate after the 2008 crisis, because that would have harmed the economy more than benefit it, given the households' foreign currency debt trap from the previous years. Nowadays, interest policy still has a limited room for manoeuvre, because the central bank has kept the base interest rate near 0%. But monetary policy already has tools it did not have in the previous crisis. These include lending to businesses (FGS), and the launching of asset-purchasing programmes. Previously, the central bank did not use the latter, nonconventional tool, unlike the ECB; it may, therefore, not happen again that Hungary is hit by a global crisis and the monetary policy cannot mitigate that with its available tools.

External balance and debt

Individual countries are not alone in today's globalised economy, but have thousands of links with other economies. These links, relations deserve special attention, because they are risks in times of crisis. The analysis of external balance should primarily focus on finding an answer to the question whether the incomes a national economy realises from dealing with other countries exceed its expenditures; in other words, could it reduce its debts or does it increase them, and do other countries accumulate debt to it. Excessive indebtedness could cause problems in times of crisis, as the repayment of the accumulated debt could entail more spending cuts (as well as consumption cuts), and could make many economic operators bankrupt in worse cases.

Current account balance to the GDP (%)

Figure 8



Source: Eurostat, calculation by Századvég

The balance of the current account shows how much income from foreign trade (exports and imports of goods and services) and capital incomes (wages, interest revenue, dividend earned abroad) exceed expenses. **Before the 2008 crisis, the balance of the current account was negative on a lasting basis, the deficit was around 7% of the GDP; moreover, in 2004, it exceeded 9%.** Among the Visegrad countries, this was the second highest deficit rate after Slovakia, and we must also add that the Slovakian deficit rate went below the Hungarian one from 2007 onwards.

Events turned after the crisis, as shrinking consumption and the considerable growth of export capacities turned the Hungarian current account balance positive, which was also the highest among the Visegrad countries and reached 4.5% of the GDP in 2016. Afterwards, the indicator started decreasing because of the increasing consumption of imports and the dynamic growth of investments and turned negative in 2019, like in the Czech Republic and Slovakia. In these two countries, the current account balance had a surplus after the 2008 crisis, but their surpluses were lower than that of Hungary. The Polish

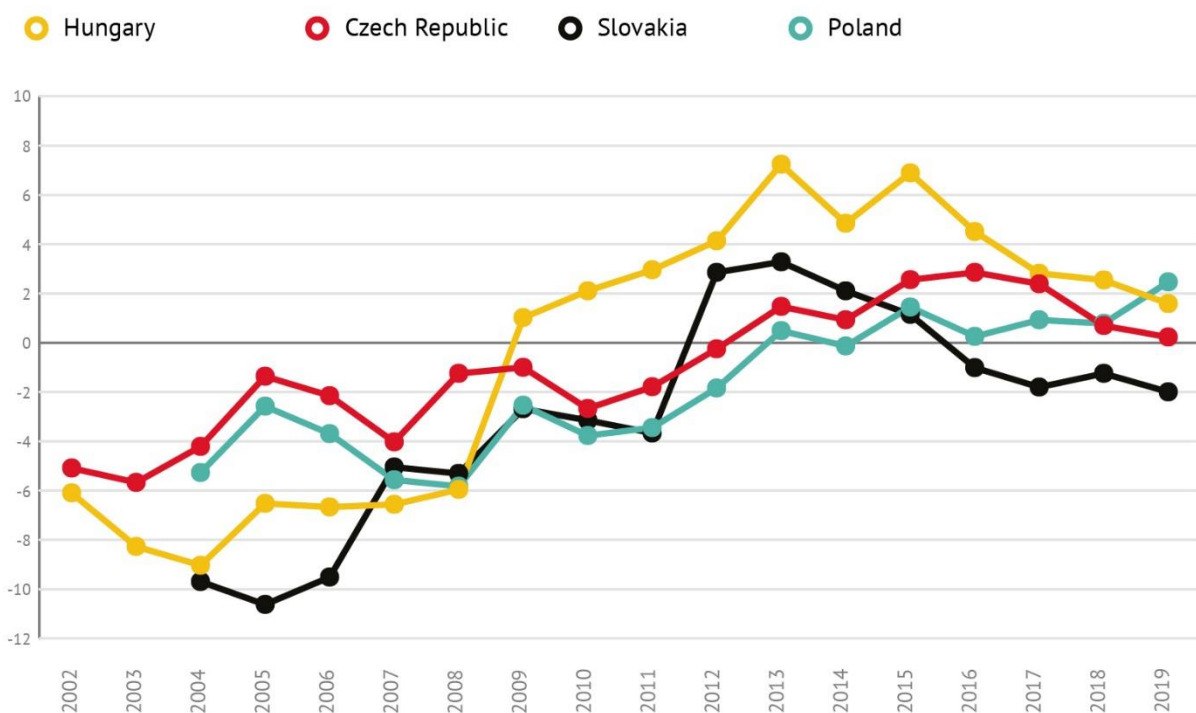
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balance also had a deficit before the previous crisis, but has been around an equilibrium in the recent years.

Adding the capital account balance, i.e. the difference between inflowing and outflowing capital, to the current account, we get net lending. Its positive value shows that more funds have flown into an economy than out from it. Its negative value shows that the country's debt is increasing or its savings are decreasing.

Net lending as a percentage of the GDP

Figure 9

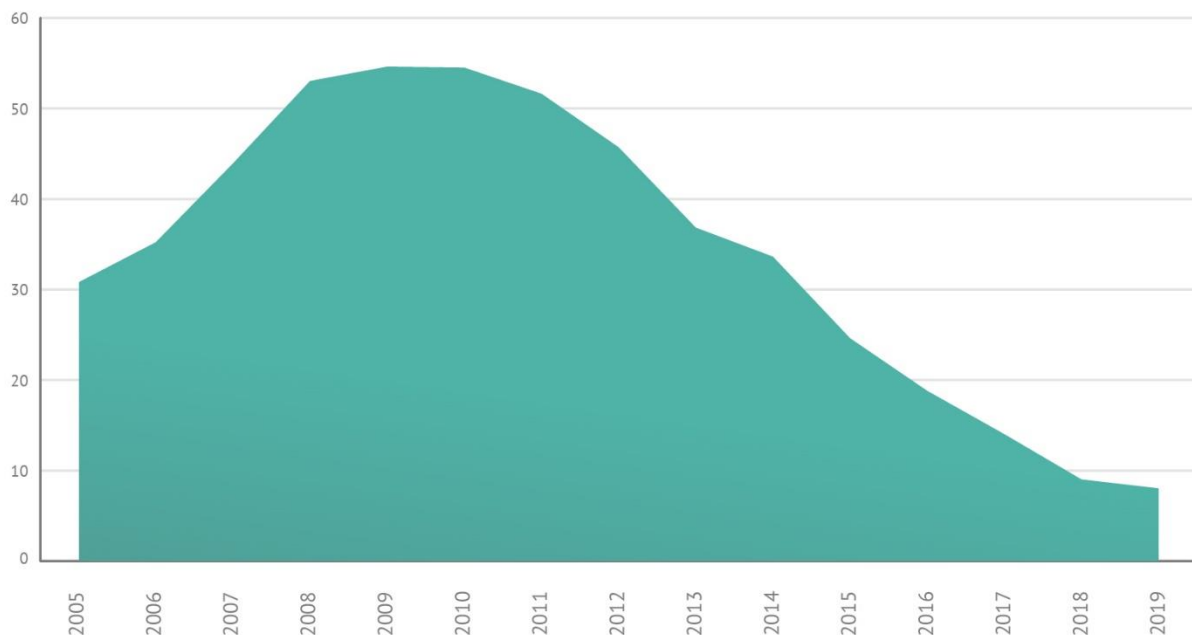


Source: Eurostat

Before the 2008–2009 crisis, Hungary accumulated a debt corresponding to 6-9% of the GDP, i.e. it was continuously forced to borrow from outside. From 2010, however, a considerable surplus started to accumulate, exceeding 7% of the GDP in 2013. The surplus existed until the end of this period, i.e. the net debt to other countries could continuously decrease. Slovakia also accumulated considerable debt before 2008, then they reduced it, although at a slower rate than Hungary did. Despite showing dynamics similar to Hungary, the Czech and Polish indicators were much closer to the equilibrium over the entire period, i.e. they neither accumulated that much debt nor reduced that so quickly.

Net external debt to GDP ratio in Hungary (%)

Figure 10



Source: MNB

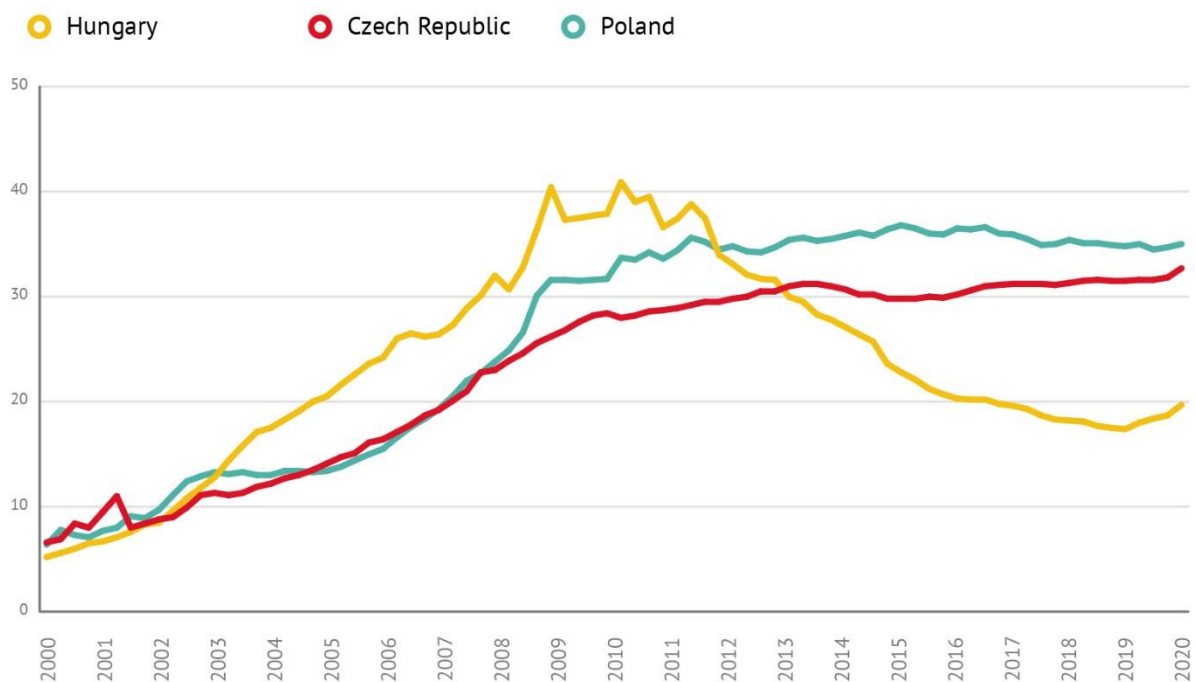
In consequence of the processes described above, the Hungarian net external debt increased from 30.8% in 2005 to 54.6% in 2009, then, after considerable reduction, it dropped to 7.9%. This means that Hungary entered the previous crisis with a substantial external debt, that had been considerably reduced by the time of the coronavirus crisis.

We should discuss household and business indebtedness separately (we will discuss the trends in government debt in the next chapter). The reason for this is that debt size materially effects crisis impacts. If households and businesses have large debts, and the crisis reduces their incomes, then they need to spend a higher share of their incomes to repay their debts, further reducing aggregated demand and deepening the crisis. The Bank of International Settlements discloses data only for the Czech Republic, Poland and Hungary among the Visegrad countries. In 2000, all three countries had a low 5-7% household debt-to-GDP ratio; afterwards, however, this ratio started to increase in all three of them, and it increased most in Hungary. Therefore, the 2008 crisis hit households when they were substantially indebted. This was further worsened by foreign currency loans, not only the volume, but the characteristics of the credits were also problematic. The crisis increased repayment instalments through the weakening of the forint,

causing repayment difficulties to many families, and thus further deepening the crisis. The indebtedness of Hungarian households decreased significantly from 2011, i.e. their crisis resistance could strengthen, while the household debt-to-GDP ratio did not change in the Czech Republic and Poland. At the end of the period under review, credits increased somewhat in Hungary, too, but only to a limited extent.

Household credits to the GDP (%)

Figure 11



Source: BIS

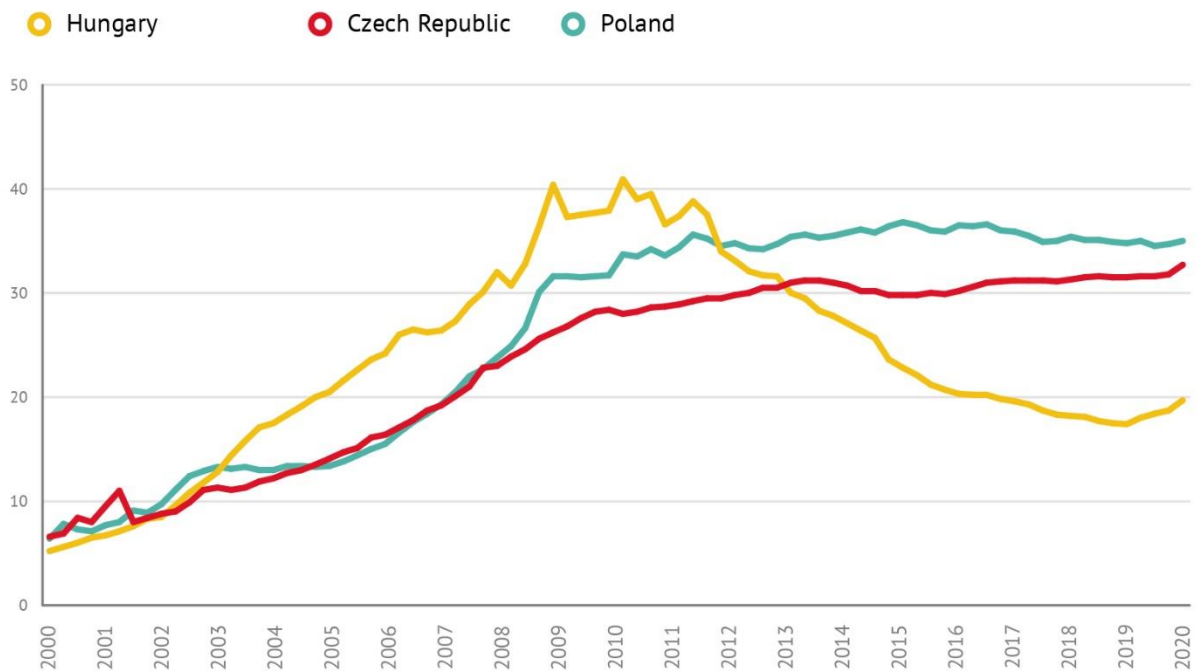
The business credit situation was different in the three countries under review in 2000: It was 66.3% in the Czech Republic, 30.7% in Poland and 49.4% in Hungary. By contrast, Hungarian companies were significantly indebted when the 2008 crisis broke out, their combined credit volume was over 90% of the GDP, while this indicator was around 50% in the Czech Republic and 40% in Poland. Companies in the two other Visegrad countries had not got as indebted as Hungarian ones had.

After the 2008 crisis, the Polish and Czech credit volumes increased first and then decreased, while Hungarian companies were continuously reducing their credits as a percentage of the GDP. They have not considerably reduced it, because the aggregate credit volume in Hungary

was still the highest among the three countries. Overall, risk exposure improved between the two crises, but this did not act as a drag on economic growth.

Business credits to the GDP (%)

Figure 12



Source: BIS

The government debt and its structure

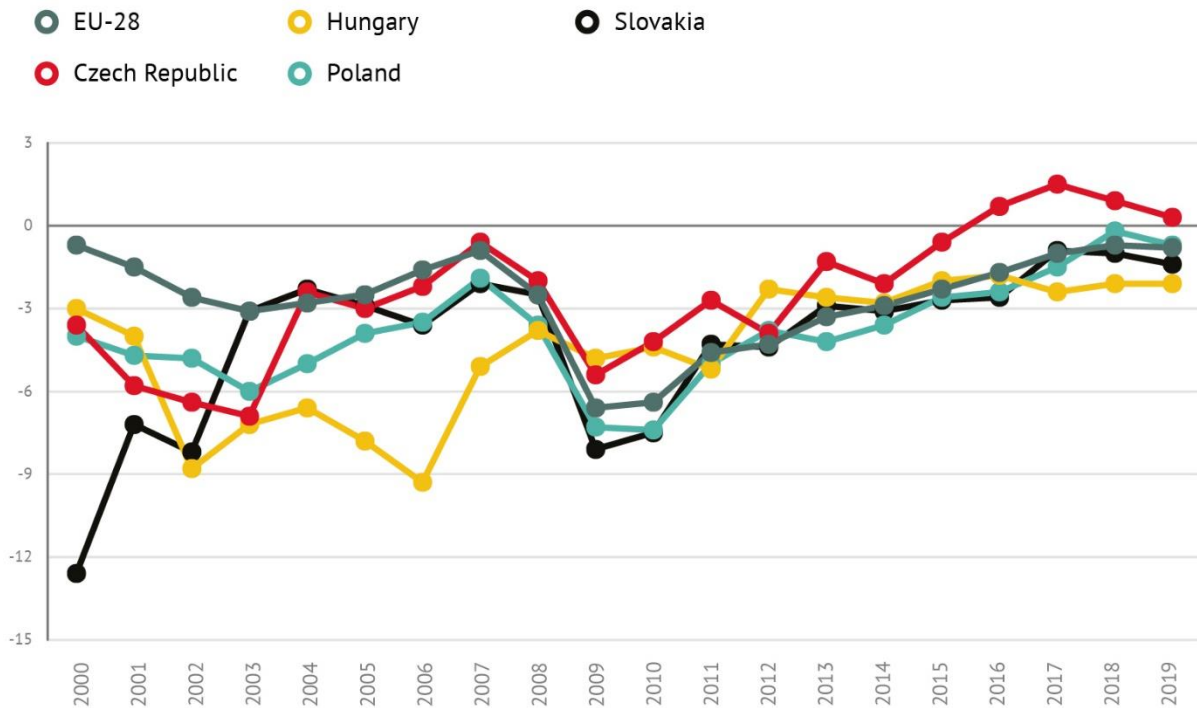
In the first part, we analysed household and corporate credits, but we should also discuss the fiscal position and government debt in detail, because the room for fiscal policy for manoeuvre is key during recovering from a crisis. Our analysis will also discuss the factors, or deterrents, that forced **Hungary not to raise funds from the market but to borrow from the IMF and the European Commission to avoid bankruptcy in 2008**. Hungary eventually used EUR 14.2 billion from the agreed-upon EUR 20 billion credit line, and it has repaid it in full since then.

Before the 2008 crisis, not only households and businesses spent more than they earned, but the government, too. And it really overspent. Because of the irresponsible and overspending economic policy, the Hungarian budget deficit peaked at 9.3% of the GDP in 2006, far exceeding the 3% Maastricht limit. Meanwhile, the other Visegrad countries kept their rates between 2% and 4%, moreover, the Czech deficit dropped to 0.6% in 2007. The Hungarian budget deficit was, however, outstanding not only in the region, but also in the EU. The deficit to GDP was the highest among EU Member States in 2006 and 2007 as well.

The Hungarian budget deficit returned below the 3% Maastricht limit in 2012 and then remained between 2% and 3%. Although this meant a considerable drop from previous Hungarian deficit levels and resulted in lower debt-to-GDP ratios, these figures still were higher than in the other Visegrad countries and the EU average. Moreover, the Czech Republic had a budget surplus in 2016. Overall, although the government had to impose austerity measures to avoid going bankrupt in the 2008 crisis, i.e. it held back economic output, the same was not necessary in the 2020 pandemic situation, given the high amount of reserves in the budget and the 1% budget target, although the room for fiscal policy manoeuvre remains limited in order to avoid overborrowing.

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Changes in the fiscal balance as a percentage of the GDP | Figure 13



Source: Eurostat

The high budget deficit increased the government debt-to-GDP ratio before the 2008 crisis. While this indicator was 52.3% in 2001, it had gone up to 65.7% by the end of 2007 and to 80.2% by the end of 2010. The Hungarian government debt to GDP ratio was not low in 2001 either, if we look at the 22.7% ratio of the Czech Republic, the 37.3% of Poland and 51.1% of Slovakia. The EU average at that time was, however, higher, 59.9%, than the Hungarian ratio. From 2006, however, the Hungarian sovereign debt-to-GDP rate was higher than the EU average.

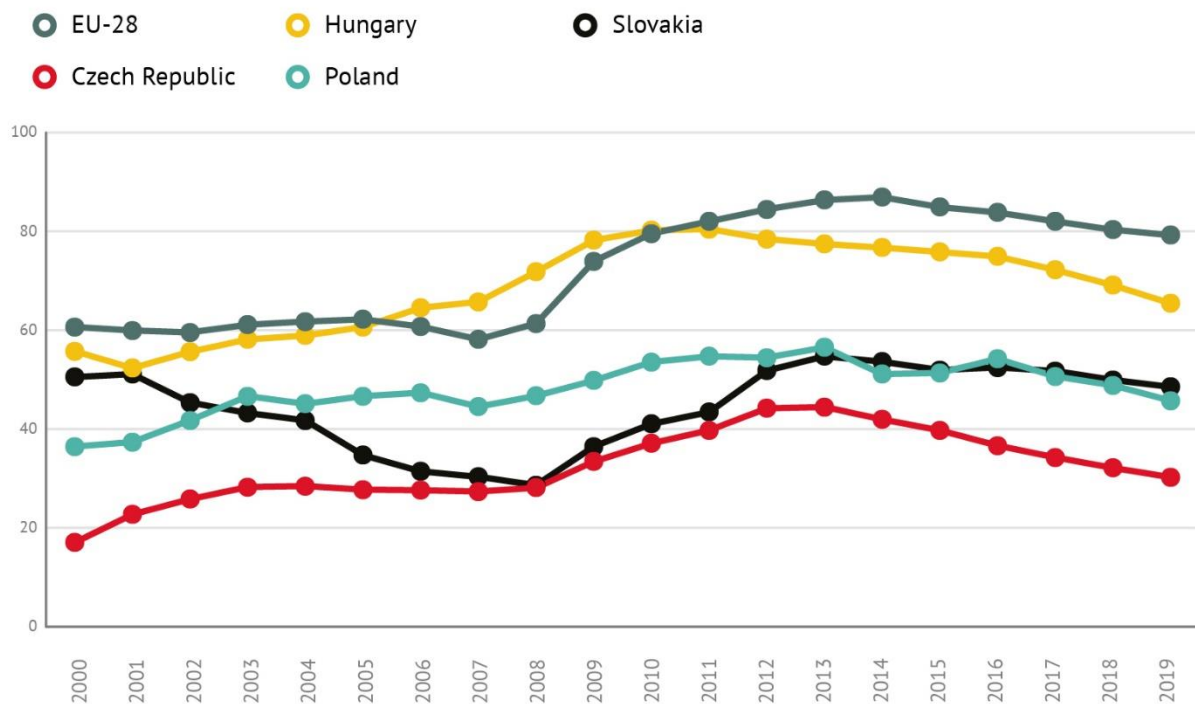
When the 2008 crisis broke out, the high debt damaged the country's risk rating and largely contributed to the emergence of financing difficulties. Although the Hungarian government debt was not among the highest in the EU; it was still substantially higher than other ones in the region; the increasing debt and the negative budgetary processes led to borrowing from the IMF, because the market would not have continued to fund Hungary.

That is the reason why reducing the government debt-to-GDP ratio became an important objective of post-2010 economic policy. As we could see, the deficit has not been eliminated, i.e. not the nominal debt was reduced, but its ratio to the GDP, i.e. the country started to "outgrow" the government

debt thanks to the dynamic economic growth. Consequently, the debt-to-GDP ratio dropped by 15.0 percentage points from its peak to 65.4% by the end of 2019. This reduction was one of the largest in the EU, although the government debt-to-GDP ratio was still slightly above the 2007 level. The difference from 2008 is, therefore, not that we would now start off from a lower debt-to-GDP ratio. **The difference is that, in 2008, the crisis hit the country while its government debt was increasing and its budget deficit was high, but, in 2020, the global recession came to Hungary while the debt was decreasing and the budget was more prudent.**

Government debt-to-GDP (%)

Figure 14



Source: Eurostat

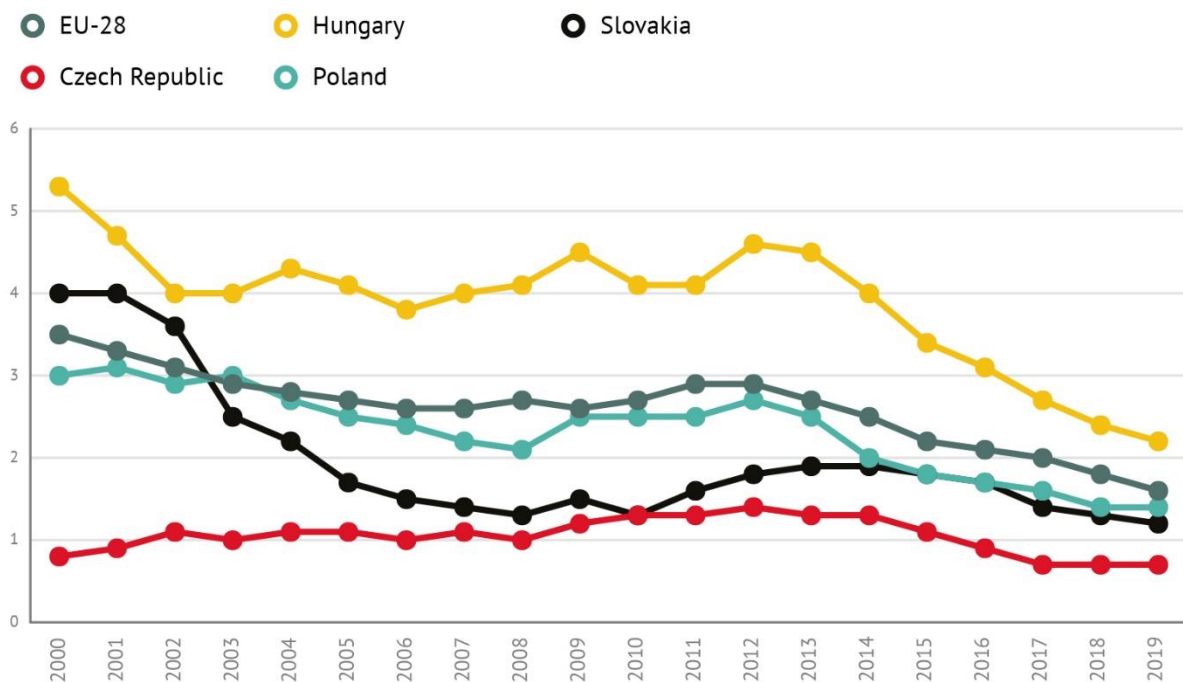
The fact that the government debt-to-GDP ratio is higher than in other countries of the region is important not only for the country's risk ranking, but also for its impact on budgetary spending. This is because higher government debt causes higher interest expenditure, not only because of the higher principal debt, but also because the higher debt damages the country's risk rating, and it can borrow only with higher interest rates. Correspondingly, in the past 20 years, Hungary has always had the highest interest burden-to-GDP ratio among the Visegrad countries, also significantly exceeding the EU average as well. In 2007, Hungary spent 4.0% of its generated income on interest payment (this increased to 4.6% by

2012), while the same rate was 1.1% in the Czech Republic, 2.2% in Poland and 1.4% in Slovakia. The other Visegrad countries could, therefore, spend the significant difference on developing their economies or improving their competitiveness.

The Hungarian interest burden-to-GDP ratio started to decrease in 2013. This is explained by several factors such as the decrease of the debt-to-GDP ratio, the new interest policy of the central bank, resulting in lower interest rates, and the improving risk rating of the country, as well as an abundance of money on financial markets. Meanwhile, the other Visegrad countries have also managed to reduce their interest expenditures. Consequently, in 2019, Hungary spent 2.2% of its incomes on interest payment, i.e. slightly over half the rate of 2007. Meanwhile, the Czech ratio was 0.7%, the Polish one was 1.4%, and the Slovakian one was 1.2%, i.e. the Hungarian government still has a lot to do to shrink the debt, even by reducing its nominal value.

Public interest expenditure to GDP (%)

Figure 15



Source: Eurostat

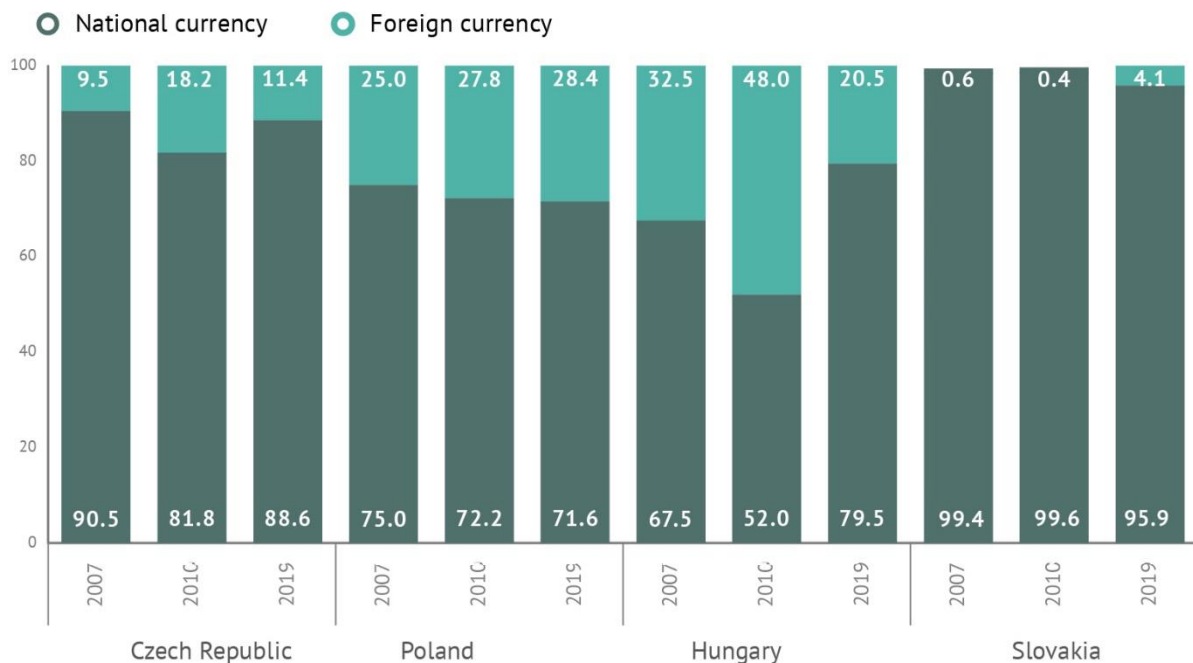
As for the sustainability of the government debt, not only the amount of debt, but also its financing structure should be considered. The next part analyses the percentage of foreign currency debt in the government debt and the share of domestic holders of government debt, comparing these figures to the data of other Visegrad countries for 2007, 2010 and 2019.

The advantage of government debt issued in the country's own currency is that its repayment does not imply any exchange rate risks. However, this implies a disadvantage, namely that government securities can often be issued only with higher interest rates. In all three years, Slovakia had the lowest risk in this regard, where the percentage of foreign currency government debt increased from below 1% in 2007 and 2010 to 4.1% in 2019. The reason for the low Slovakian data is that Slovakia has introduced the euro in 2009; its euro-denominated debt is, therefore, debt issued in its national currency.

In 2007, the percentage of national currency-denominated government securities was 67.5% in Hungary, the lowest among Visegrad countries, and it had dropped to 52.0% by 2010, as a result of the IMF credit and the weakening of the forint. By 2019, this had increased considerably, to 79.5%, which is explained by issuing less in foreign currencies.

Breakdown of the government debt by currency (domestic and foreign) (%)

Figure 16



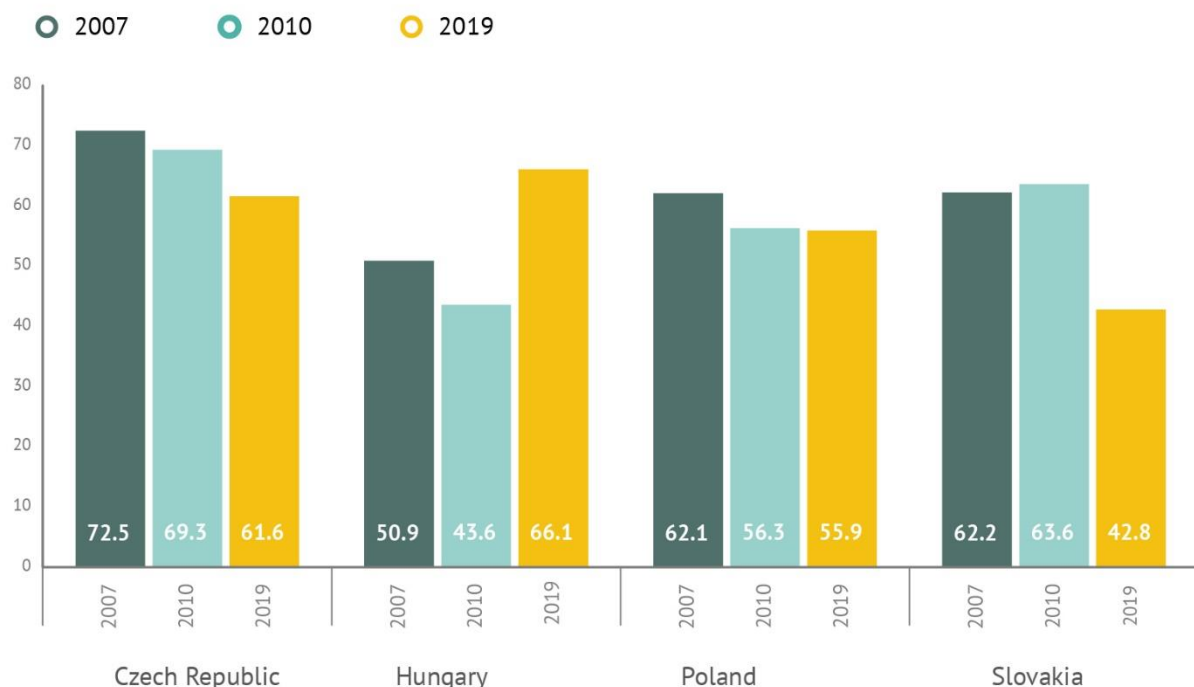
Source: European Central Bank

In 2007, the percentage of debt held by domestic investors was the lowest in Hungary among the Visegrad countries, 50.9%, which had dropped further by 2010, to 43.6%. This could be problematic in times of crisis, because international investors act much faster, they sell the government securities they hold earlier than domestic investors, i.e. the risk

of bankruptcy is much higher. **Accordingly, post-2010 objectives included increasing the percentage of government debt held by domestic investors (through the promotion of retail government securities and the Self-financing Programme of the central bank), consequently, Hungary had had the highest percentage in this regard by 2019 (66.1%).** Interestingly, the percentage of government debt held by domestic investors decreased in the other three Visegrad countries between 2007 and 2019, their associated risks have, therefore, increased.

Overall, the crisis of 2008–2009 hit Hungarian public finances in an outstandingly bad condition because of the increasing government debt, the high deficit and the poor financing structure, and these factors eventually resulted that the market was unwilling to refinance maturing securities, i.e. the country required credit from the IMF and the European Commission not to go bankrupt. By contrast, the 2020 coronavirus crisis hit the country when its government debt was decreasing and its deficit was lower, i.e. market refinancing remained an option.

Government debt held by domestic investors (%) | Figure 17



Source: European Central Bank

Tax policy

The degree of room for fiscal policy manoeuvre, the type and scale of the incentive package, and how fiscal policy can contribute to boosting the economy, if it can at all, substantially determine the recovery from the

crisis. It is also important that, in times of economic boom, fiscal policy should be able to recreate the room for fiscal policy manoeuvre (anticyclical fiscal policy), so that in times of recession, automatic stabilisers can work, and discretionary measures can be taken, if necessary, and the government debt can remain sustainable.

In times of crisis, increasing public spending is indispensable for economic revitalisation, and, given the decrease in tax revenues, it entails an increase in the budget deficit and the government debt. The structure of the fiscal regime also matters a lot, because it has a significant impact on economic decisions and could encourage certain actions and limit others. In addition, the room for fiscal policy manoeuvre is created mostly by reducing government debt from tax revenues during economic booms. Tax revenues can be increased in two ways, by increasing the taxes levied on taxpayers or by extending their scope. An important aspect of the first way is that increasing tax rates does not necessarily increase tax revenues, because higher taxes also encourage tax evasion.

After 2010, the fiscal regime was significantly redesigned with a view to recovering from the crisis, and this reflected the objectives of the new government. Partly, new taxes were levied (special taxes levied on specific sectors, the fixed-rate tax of low tax-bracket enterprises and the small-business tax), and, partly, the rates of certain taxes were also changed, i.e. the previous two-rate regime was removed and a single-rate regime was introduced for the personal income tax and later for the corporate tax. Additionally, the rate of taxes levied on employment (the personal income tax and the social contribution tax) were also substantially reduced in the end of the period under review. By contrast, the rate of the value-added tax was increased, while the scope of goods and services subject to a lower rate was always extended. The above outlines the goal of the government: to reduce taxes on labour and to increase taxes on consumption. This transformation of the fiscal regime is called fiscal devaluation, which has a neutral impact on the budget, but encourages economic activities and employment through promoting exports. When the new crisis broke out, therefore, employment was much higher than before, substantially improving not only the income situation of households but also the budget position, both being positive for the expected depth of the recession.

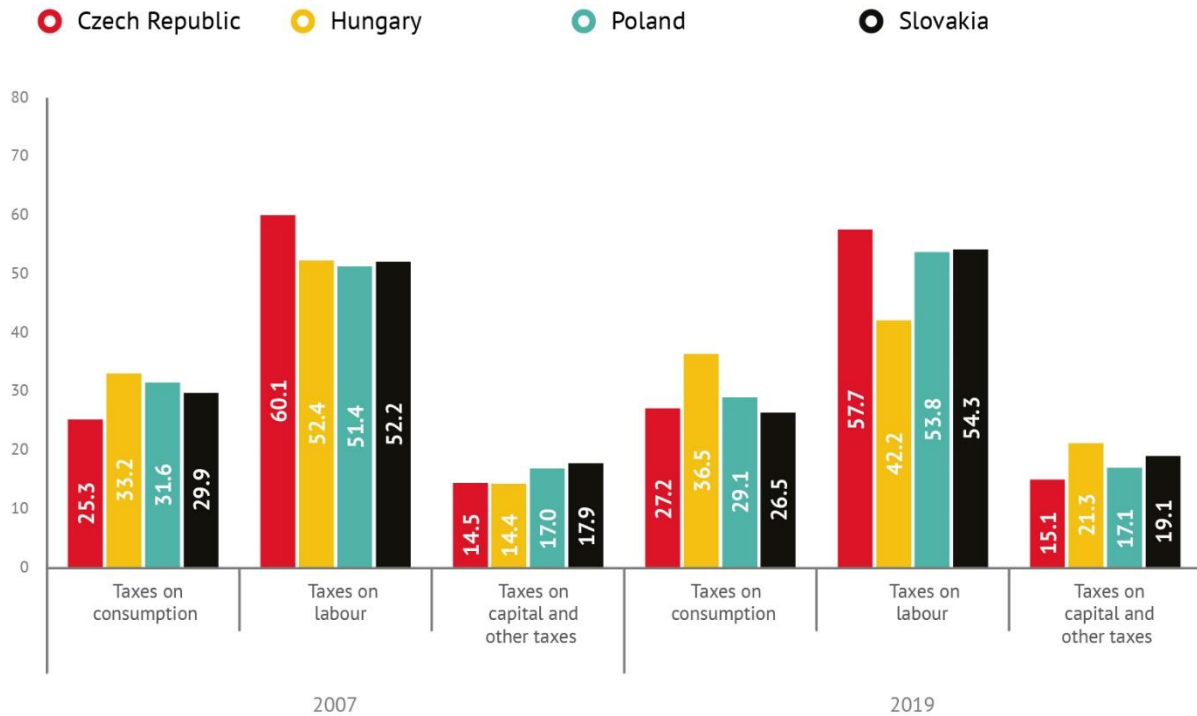
Eurostat data show that 52.4% of all tax revenues were taxes on labour and 33.2% were taxes on consumption in 2007, the percentage of taxes on labour had decreased to 42.2%, and that of taxes on consumption had increased to 36.5% by 2019. In other words, taxes on consumption were given a greater role, while taxes on labour were reduced to encourage employment and to fight the black economy, substantially increasing the country's competitive edge on the international stage.

Among the Visegrad countries, the percentage of taxes on labour was 60.1%, that of taxes on consumption was 25.3% in the Czech Republic in 2007. By 2019, the percentage of taxes on labour had reduced minimally, to 57.7%, while that of taxes on consumption had increased to 27.2%. In Poland, the percentage of taxes on labour was 51.4%, that of taxes on consumption was 31.6% in 2007. The Polish fiscal regime had not change substantially by 2019, 53.8% of tax revenues were taxes on labour, while 29.1% were taxes on consumption. In Slovakia, the percentage of taxes on labour were approximately the same as in Hungary in 2007, they were 52.2% of the total tax revenues. Revenues from taxes on consumption were, however, slightly lower, 29.9% of the total tax revenues. The percentage of taxes on consumption had dropped to 26.5% of the total tax revenues by 2019, when that of taxes on labour was 54.3% Overall, none of the Visegrad countries has shifted from taxes on labour to taxes on consumption like Hungary, and countries in our region or the EU28 have not done anything similar either.

Taxes on consumption were given a greater role, while taxes on labour were reduced to encourage employment and to fight the black economy, substantially increasing the country's competitive edge on the international stage.

Percentages of taxes on consumption, labour and capital, and other taxes in total tax revenues of the Visegrad countries

Figure 18



Source: European Central Bank

In addition to the transformation of the tax regime, tax evasion must also be mitigated, which does not only increase the revenues of the state, but also enables tax cuts. Regarding the size of the black economy, the European Commission discloses VAT gap estimates, i.e. estimates concerning the difference between the actual and potential VAT revenues, every year. This indicator is used most commonly to determine the extent of tax evasion; we must, however, note that it measures only a segment of the black economy, it does not include several illegal activities, such as black market employment. In 2007, the Hungarian VAT gap was 24%, i.e. nearly one quarter of theoretically collectible VAT revenues were not paid by economic operators. With the growth of the black economy, this indicator increased to 30% during the crisis, then it had dropped to 6.6% by 2019. Main drivers of the post-2010 decrease were the government actions to whiten the economy, such as online connection of cash registers, the electronic public road trade control system, and the introduction of online invoicing. Before the 2008 crisis, the Czech VAT gap was around 10%, and it had almost tripled by 2010 (29%). Subsequently, the Czech economy underwent

considerable whitening, so this indicator could drop to 10.8% by 2019. For the year before the crisis, one of the lowest VAT gaps in the EU, 2%, was estimated for Poland. During the crisis, it increased to 25%, from where it had dropped only by 15.0% percentage points by 2019. Before 2008, Slovakia's lowest VAT gap, 20%, was in 2005, then it gradually increased, i.e. economic operators turned towards the black economy already before the crisis. Tax evasion reached its highest level, 38%, in 2010, from where it had then decreased to 16.6% by 2019. Overall, tax evasion decreased in all the Visegrad countries, but it decreased most in Hungary. Because of the above, Hungarian public finances could enter the coronavirus crisis with a sound revenue structure, partly providing coverage for the crisis response actions.

Summary

The breakout of the 2020 crisis was not unexpected to economists, but probably nobody expected that a virus would cause it. Being an open economy embedded in the global economy, Hungary could not avoid the impacts of the crisis. The transformation of the structure of the economy and of taxation, increasing employment, increasing investment activities, and the elimination of the risk factors that existed before the 2008 financial crisis (high household and business indebtedness, foreign currency lending) in recent years increase, however, the chances of not having a long recovery from the crisis. A quick recovery is crucial for preserving the results of the recent years (increasing wages and employment, reduction of poverty, decreasing government debt) in the long run and enabling Hungary to continue to catch up to the more developed countries of the European Union.

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