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## Challenges and Threats to the Debt Security of Central and Eastern European Countries

**Abstract:** The study aims to identify the debt security weaknesses in the CEE countries and determine challenges and threats to the debt security of national economies and the CEE region. To achieve this goal, general and specific research methods have been used, including historical and logical methods, analysis and synthesis, structural and functional analysis, generalization and abstraction, a systematic approach, classification, and statistical methods.

It is found out that the situation with debt security in the CEE region is quite controversial. The average external debt indicators of the CEE countries are in the unsafe zone, while the average solvency is at a relatively safe level. The analysis of external indebtedness and solvency indicators shows that the CEE group is highly heterogeneous regarding the level of countries' debt security.

Despite some improvement in the debt security of CEE economies during 2017–2019, the prospects for the development of the debt situation are rather vague. It is due to the growing impact of external challenges and threats to the debt security of the region, including the deterioration of the global economic environment and global recession, increase in credit risks and contraction in the international lending, global economic and political imbalances, and policy divergence, growing government spending on solving problems caused by the COVID-19 and corresponding pressure on public budgets, the general growth of global debt. Given the high heterogeneity of CEE countries in terms of current debt security, the manifestation of global challenges in each national economy can be rather diverse.

**Key words:** debt security, threats and challenges to debt security, indebtedness, solvency, external debt, international reserves

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## Introduction

Uneven distribution of financial resources between countries and regions of the world, the corresponding growth of external borrowing, and cross-border lending have entailed increasing the dependence of many national economies on external loans. Consequently, at the present stage of world economic system development, one can observe a general increase in the scale of international debt, and the global economy is increasingly becoming indebted. The World Economic Forum has already recognized the high level of global debt as one of the most significant global risks in recent years. The total debt burden of the world economy today is much higher than before the global financial crisis and is estimated at 225% of GDP (*The Global Risks Report*, 2019). According to the International Monetary Fund, the debt burden in countries whose financial sectors are systemically important for the world economy remains high, accounting for 250% of GDP (in the crisis year of 2008, it was 210%) (*Global Financial Stability Report*, 2018, p. 5). This situation decreases the level of countries' debt security and potentially increases the risk of global debt crisis aggravation.

Under such circumstances, countries are to implement early debt crisis prevention systems based primarily on monitoring the main indicators of indebtedness and solvency, comparing them with thresholds, and analyzing the actual and potential threats and challenges to the national debt security.

The Central and Eastern European countries have been undergoing deep economic transformations for several decades, which required expended financing. Consequently, these countries began to acquire features of debt economies at the beginning of the transition period. The issues of debt sustainability and debt security of the CEE countries became relevant again after the global financial crisis instable the onset of the sovereign debt crisis in Europe, and undoubtedly are considerable nowadays due to the general deterioration of the global financial environment.

## Review of recent studies

Analysis of actual studies devoted to the state and threats to the debt security of Central and Eastern European economies has shown that scholars mainly study these aspects in two areas, namely, they either consider issues of ensuring national security of CEE countries and the region as a whole, or investigate debt situation in these countries.

Regarding the first aspect of studies, P. Świeżak considers the international challenges for regional security in Central and Eastern Europe and determines the priorities of Poland in the sphere of international security, concentrating mainly on the geopolitical and military challenges and threats that affect regional security. He also recognizes the important impact of economic factors on national security and points out that the “global economic crisis sharpens and accelerates tendencies that influence the international environment (Świeżak, 2012). The author also argues that the global economic crisis is a threat to economic security and a challenge that gives a chance for introducing new ideas in the security sphere.

The experts of the Ministry of National Defense of Poland prove that in the sphere of security, there are “more and more dramatic changes, not only political, but also economic, social and cultural in their nature” (*Ministry of National Defense of Poland*). They argue that the global trends largely determine the shape of the challenges and threats to national security, exacerbating the dissonance between globalization and national interests.

B. Bocka and his co-authors focus on three main aspects of the Central European countries’ security, namely: the destabilizing role of Russia for the region, aggravation of threats to energy security, international terrorism, organized crime, and weak governance (Bocka, Jovic, Petrovics, Tsanov, 2007).

O. Bulatova et al. argue that “further integration of the CEE states to the global economy will be accompanied by the increasing dependence of their economic security on global financial challenges.” Based on determining the global financial factors that impact the economic security of Central and Eastern European countries, they have reasoned the nature of changes that occur in the economic security of CEE countries under the influence of global financial transformations (Bulatova, Chentukov, Marena, Shabelnyk, 2020).

Studies of debt situations in CEE countries tend to focus on the debt sustainability of national economies. The main emphasis is made on the problems of public debt and fiscal imbalances. J. Siwińska examined the public debt structure and dynamics in the Czech Republic, Hungary, Poland, and Romania after the 1990s and tried to capture its main determinants (Siwińska, 1999). According to B. Bökemeier and A. Stoian, who study debt sustainability in Central and Eastern European countries, the “public debt still has a stable dynamic and is far from the level at which governments’ fiscal reaction reverses and becomes negative.” The authors

have found out that governments of the CEE countries are still far from the situation of insecure debt thresholds when the efforts to stabilize debt exceed the regulator's ability (Bökemeier, Stoian, 2018).

M. Wysocki examines the sustainability of public debt stock in terms of solvency in CEE countries to identify structural breaks that occurred since the global financial crisis. He argues that "despite temporal fiscal turbulences during the crisis, all Central and Eastern Europe countries have stabilized their fiscal policies" (Wysocki, 2017).

Some authors acknowledge countries' growing dependence on external borrowing and a corresponding increase in the risks of external debt accumulation in terms of the uncertainty of the economic environment. S. Manzocchi analyzes the determinants of net external borrowing in CEE countries and assesses the impact of the outstanding stock of foreign liabilities on net financial inflows. The author indicates that "external finance can provide a positive contribution to the transition process and enhance welfare, but foreign debt could exert a strong constraint on the borrowing capacity of some CEE countries" (Manzocchi, 1997).

M. Redo, providing a comparison of external exposure of Central and Eastern European states as a factor threatening the financial security of their economies, remarks that the economies under consideration have a substantial external debt level and are characterized by a high level of foreign liabilities. The strong links of these countries to the international economic and financial systems result in their dependence on foreign capital and make them vulnerable to external shocks (Redo, 2018).

Despite many studies on the national security of the CEE economies, they mainly focus on political and military aspects, and studies on economic security analyze only some of its components, including energy security, cybersecurity, etc. It is also confirmed by the authors' previous studies (Bulatova, Chentukov, Marena, Shabelnyk, 2020).

Alongside it, given the growing dependence of CEE economies on external financing, ensuring their debt security, including the sphere of external debt, must be recognized as a relevant public policy task. As the degree of integration of these countries into the world economy increases, the range of challenges and risks threatening the debt sustainability of national economies is expanding, and the impact of external threats becomes more significant. Under such circumstances, studies on the state of debt security in CEE countries and identification of actual and potential threats and challenges to the debt security of national economies and regions as a whole are becoming increasingly important.

## Methodology

This study aims to identify the CEE countries' debt security weaknesses and determine challenges and threats to the debt security of national economies and the CEE region.

To achieve this goal, general and specific research methods have been used, including historical and logical methods, analysis and synthesis, structural and functional analysis (to consider the state of indebtedness and solvency of CEE economies); generalization and abstraction, and a systematic approach (to identify and analyze contemporary challenges and threats to the debt security of CEE countries).

Using the classification and statistical methods, the nature of the CEE countries' distribution according to debt security indicators has been assessed. The calculation of the average value of the indicators allowed to obtain a generalized level of the indicator in a sample of CEE countries. Based on the analysis of its shifts, one can identify the patterns of its change in the dynamics. Evaluating the absolute degree of variation of debt security indicators based on the standard deviation calculation allowed to determine the limits of variation relative to the mean and define the degree of the CEE countries differentiation and the level of heterogeneity of their distributions (through calculation of relative variation).

Ratios that characterize the state of debt security of CEE countries, indicators of indebtedness and solvency are analyzed, including: total public debt to GDP ratio, external debt to GDP ratio, external debt to exports ratio, external debt *per capita*, international reserves to gross external debt ratio, total reserves in months of imports. The statistical data for the study is represented by the official statistical databases of the International Monetary Fund, the World Bank, the Bank for International Settlements, the World Economic Forum, UNCTAD.

## Results

Nowadays, the debt nature of national economies development has become a worldwide phenomenon. Even significant public and private debt may not have essential negative effects as long as economic growth is noted and interest rates remain relatively low. According to X. Zhu et al., in the 1980s, economic growth was observed in many developed countries of the West, which had been catalyzed by the debt and was ac-

accompanied by growing budget deficits, corporate debt, consumer lending, and trade deficits (Zhu, Lin, Wang, Wu, Qin, 2018, p. 5).

The availability of external financial resources and corresponding shaping of external debt in CEE transition economies depended on their integration in the world capital market and many domestic preconditions (Manzocchi, 1997). The external debt of the CEE countries was formed under the influence of changes in the sources of external borrowing. At the beginning of the transformation period, mainly official sources of the CEE countries' external financing dominated. In the early 1990s, a sharp deterioration in tax revenues was observed, and the countries' solvency was critically low. The insignificant scale of private lending inflows was caused by such factors as the high political and social costs of the transition process, the incompleteness of reforms in most countries of the region, and high corruption and political instability levels.

In 1992, the access of CEE countries to international credit markets was restored. The scales of private loans began to grow (by 1996, they accounted for over 70% of total external loans). The revival of private external lending was associated with improving the economic situation through the acceleration of economic reforms, the liberalization of domestic markets, and outlining prospects for EU integration.

Thus, for some time, the access of CEE countries to external financing was quite limited, and the formation of external debt of CEE countries began only in the 1990s. At the same time, some countries (Hungary, Poland, Bulgaria) managed to accumulate rather significant external debt and became the most indebted transition countries. Due to the great debt burden in these economies, experts express doubts about their ability to attract external financing soon.

Nowadays, almost all countries of the group (except Albania) belong to the European Union. Accessing the EU has intensified the external economic and financial dependence of the CEE economies, entailed by the strengthening trend of globalization and internationalization (Redo, 2018, p. 136). Simultaneously, the external risks of debt security in the region have increased. Before the global financial crisis, the average indicators of indebtedness and solvency in CEE countries were quite ambiguous. The ratio of public debt to GDP, which should not exceed 60%, in 2007, was 28% on average by a group of countries. Even in the post-crisis years, this indicator did not exceed 51% (Table 1). At the same time, the state of the external component of debt security is quite unstable. The ratio of external debt to GDP, which should be below 30%, even in the pre-crisis

period exceeded 72%, and in subsequent years reached 96%. However, according to the authors' previous studies, the average ratio of external debt to GDP in the CEE group is lower than in most of the leading developed countries (Bulatova, Chentukov, Marena, Shabelnyk, 2020). The ratio of external debt to exports of goods and services before the crisis was slightly above the recommended threshold of 140%, equaling 157% in 2007. At the peak of the crisis, the figure reached 209%, but today it has returned to the safe zone, and in 2019 the ratio was 122%.

Table 1

**Debt security indicators in 2007–2019 (average for CEE countries)**

<b>Debt security indicators</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>	<b>2013</b>	<b>2015</b>	<b>2017</b>	<b>2019</b>
Total Public Debt to GDP Ratio, percent	28.2	37.4	43.8	49.9	51.1	48.3	44.5
External Debt to GDP Ratio, percent	77.2	96.2	95.3	92.6	91.8	87.9	77.8
External Debt to Exports Ratio, percent	157.3	209.6	165.2	157.6	154.4	138.8	122.4
External Debt <i>per Capita</i> , US dollars	10739.8	13144.6	14156.2	13714.1	12392.7	13672.3	13703.8
International Reserves to Gross External Debt Ratio, percent	31.8	24.4	20.7	23.3	23.5	29.0	31.0
Total Reserves in Months of Imports, months	3.5	4.7	3.5	3.9	3.7	4.1	3.9

**Source:** Authors' calculations based on *UNCTADstat, World Bank Open Data*.

The most critically unsatisfactory is the level of external debt *per capita*. This indicator is used in international practice as one of the main indicators of external debt and debt security. Typically, external debt *per capita* should not exceed 200 US dollars. The average level of external debt *per capita* in CEE countries exceeded the regulatory threshold by 50–70 times within the analyzed period.

The average solvency ratios of CEE countries demonstrate a better situation in the field of debt security. The ratio of international reserves

to external debt shows whether a country can use its official reserves to pay off external debt, and according to international practice, it should be at least 20%. This indicator did not fall below 20% even during the crisis and in 2019 rose to 31%. The indicator of total reserves in months of imports reflects the margin of the financial strength of the state and the level of its international liquidity. The value of this indicator, which exceeds three months, is considered normal. The average indicator of reserves in the months of imports for CEE countries keeps within the safe zone, ranging from 3.5 to 4.7 months. However, some experts believe that in the current conditions of debt growth, the recommended level of this indicator should be increased to 5 months of imports.

Thus, different indicators of indebtedness and solvency ambiguously characterize the state of debt security on average in the CEE region. Alongside it, CEE economies form a highly heterogeneous group regarding the level of states' debt security. Five CEE countries (Estonia, Latvia, Lithuania, Slovakia, and Slovenia) belong to the Eurozone. These countries have special requirements for compliance with standards in key macroeconomic indicators. In particular, according to the euro convergence criteria, the ratio of public debt to GDP should not exceed 60%. In 2019, this criterion of the debt level was met in four countries – Slovak Republic (48%), Estonia (8.4%), Latvia (36.9%), and Lithuania (36.3%). Estonia continues to demonstrate the lowest level of public debt in the group of CEE countries and among all EU countries (in 2007–2019 public debt to GDP ratio was in the range of 3.8–10.2%). This indicator exceeded the normative threshold in Slovenia and was equal to 66.1% (Table 2).

Table 2

**Total public debt to GDP ratio in CEE countries, 2007–2019, percent**

Country	2007	2009	2011	2013	2015	2017	2019	Change in 2019 to 2007
1	2	3	4	5	6	7	8	9
Albania	53.6	59.7	59.4	70.4	72.7	70.2	66.3	+12.7
Bulgaria	16.3	13.7	15.2	17.1	26	25.3	20.4	+4.1
Croatia	37.4	48.7	64.4	81.2	84.3	77.8	73.2	+35.8
Czech Republic	27.5	33.6	39.8	44.9	39.9	34.7	30.8	+3.3
Hungary	65.7	78.2	80.8	77.4	76.2	72.9	66.3	+0.6
Poland	44.5	49.8	54.5	56	51.3	50.6	46	+1.5
Romania	11.9	21.8	34	37.6	37.8	35.2	35.6	+23.7
Slovak Republic	30.3	36.4	43.5	54.7	51.9	51.3	48	+17.7



1	2	3	4	5	6	7	8	9
Slovenia	22.8	34.5	46.5	70	82.6	74.1	66.1	+43.3
Estonia	3.8	7.2	6.1	10.2	10	9.3	8.4	+4.6
Latvia	8.5	36.9	43.9	40.3	37.3	39.3	36.9	+28.4
Lithuania	15.9	28	37.2	38.7	42.6	39.1	36.3	+20.4

**Source:** *World Bank Open Data*

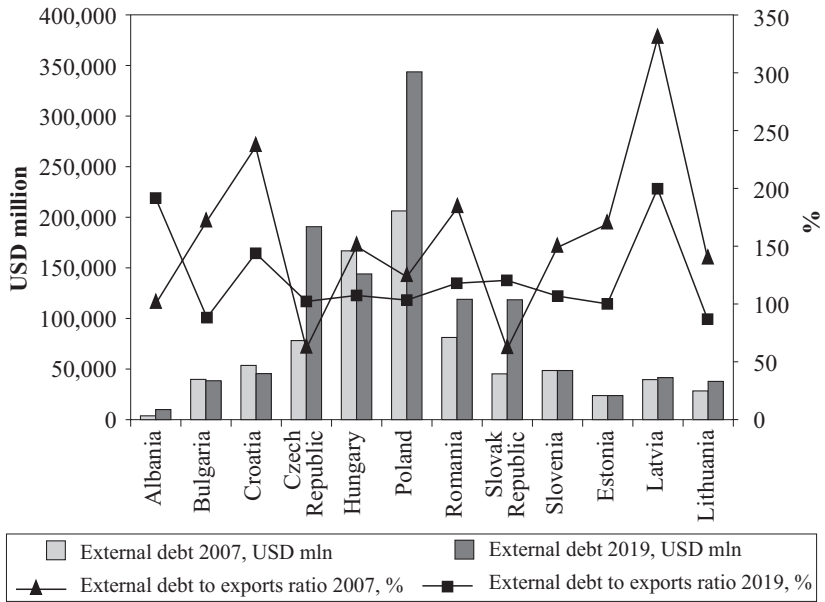
CEE countries that do not belong to the Eurozone show heterogeneous public debt situations as well. The highest level of public debt is formed in Croatia (73.2%), Albania, and Hungary (66.3%), the safest level of debt security in terms of public debt to GDP ratio is characteristic for Bulgaria (20.4%) and the Czech Republic (30.8%). Nevertheless, according to the public debt to GDP ratio, the situation with the indebtedness of CEE countries is not critical, as the maximum deviation of this indicator from the threshold level does not exceed 6–13%.

The situation is more complicated in the external debt burden on the CEE economies, which was shown by average data for a group of countries (see Table 1). In terms of gross external debt in absolute terms, the leader is Poland, whose debt in 2019 increased by 67% compared to 2007 and reached 344 billion dollars. The Czech Republic runs the second: its external debt increased by 143% and in 2019 amounted to more than 190 billion dollars (Fig. 1).

However, in terms of the relative level of external debt, other CEE countries are more indebted. The external debt to exports ratio demonstrates the relative long-term ability of the state to accumulate foreign exchange earnings without additional pressure on the balance of payments. This indicator of debt security significantly exceeds the threshold level of 140% in Albania (192.5%), Latvia (199.5%) and slightly exceeds the threshold in Croatia (143.9%). Other countries of the region show a safe level of debt security in terms of this indicator.

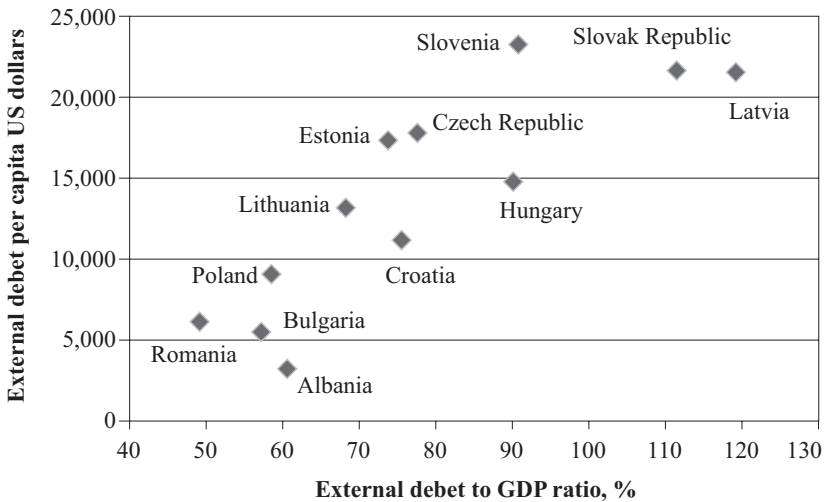
Based on the mapping of the CEE countries' positioning according to the criteria of external debt to GDP ratio and external debt *per capita*, the region's countries are grouped according to the level of external debt burden on national economies. Albania, Bulgaria, Poland, and Romania are countries with relatively low debt burdens. Countries with an average level of indebtedness include Croatia, the Czech Republic, Hungary, Estonia, and Lithuania. A high level of external debt burden is a characteristic feature of a group including Latvia, Slovenia, and the Slovak Republic (Fig. 2).

**Figure 1. External debt of the CEE countries, 2007 and 2019**



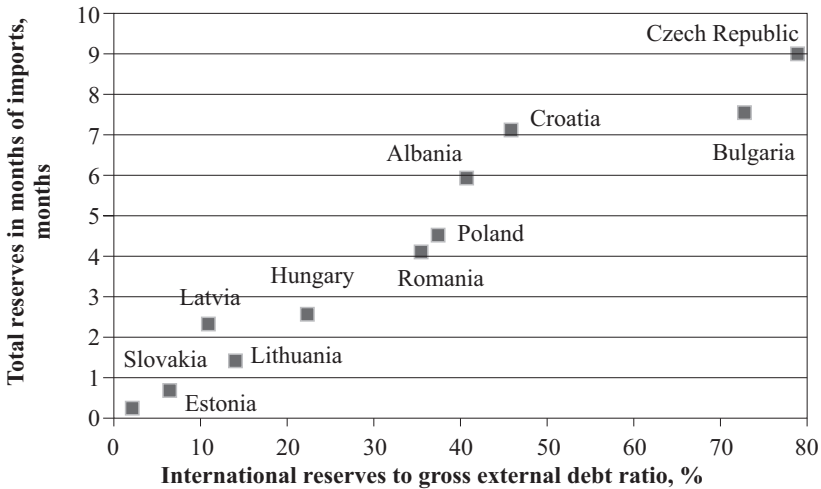
Source: UNCTADstat, World Bank Open Data.

**Figure 2. Map of the CEE economies positioning by the criteria of external debt to GDP ratio and external debt per capita, 2019**



A similar map of the CEE countries' positioning regarding their international liquidity and solvency is formed based on the criteria of international reserves to gross external debt ratio and total reserves in months of imports (Fig. 3).

**Figure 3. Map of the CEE economies positioning by the criteria of international solvency, 2019**



In terms of solvency, three groups of CEE countries are formed: economies having a high level of solvency (the Czech Republic, Bulgaria), countries having a medium level of international solvency (Albania, Croatia, Poland, Romania), countries demonstrating a relatively low level of solvency (the rest of countries of the region).

The most critical situation with debt security has been formed in those countries that are characterized by a high level of external debt burden (see Fig. 2) and at the same time show a low level of solvency (see Fig. 3). It primarily applies to Latvia, Slovenia, and the Slovak Republic. Slovenia has the biggest external debt *per capita* among CEE countries, and simultaneously its solvency in terms of the international reserves is the worst.

Given the deepening of the countries' external indebtedness and increasing financial market volatility, the need to provide economies with adequate international reserves is growing. Official reserves are the basis of the country's international liquidity necessary for external debt repayment and preventing the debt crisis development. In 2019 the CEE coun-

tries' international reserves increased by 80% compared to 2007. But the distribution of the international reserves of the region between the countries is still uneven: over 65.7% of reserves are allocated in the Czech Republic (35.4%) and Poland (30.3%) (Table 3).

Table 3

**The share of CEE states in the total international reserves of the region, 2007–2019, percent**

Country	2007	2009	2011	2013	2015	2017	2019	Change in 2019 to 2007
Albania	0.9	0.9	0.9	0.9	1.1	0.9	0.9	0.0
Bulgaria	7.5	7.0	6.0	6.3	7.9	7.1	6.6	-0.9
Croatia	5.8	5.6	5.0	5.6	5.3	4.7	4.9	-0.9
Czech Republic	14.9	15.7	14.0	17.7	23.0	37.1	35.4	+20.5
Hungary	10.2	16.6	17.0	14.6	11.8	7.0	7.5	-2.7
Poland	28.0	29.9	34.0	33.4	33.8	28.4	30.3	+2.3
Romania	17.0	16.7	16.7	15.4	13.8	11.2	9.9	-7.1
Slovak Republic	8.1	0.7	0.8	0.7	1.0	0.9	1.7	-6.4
Slovenia	0.5	0.4	0.3	0.3	0.3	0.2	0.2	-0.2
Estonia	1.4	1.5	0.1	0.1	0.1	0.1	0.3	-1.1
Latvia	2.5	2.6	2.2	2.5	1.2	1.2	1.1	-1.4
Lithuania	3.3	2.5	2.9	2.5	0.6	1.1	1.2	-2.1

**Source:** Authors' calculations based on *World Bank Open Data*.

Slovenia (0.2%), Estonia (0.3%) and Albania (0.9%) have the least shares of international reserves. Hence, the Central and Eastern European region countries have diverse levels of international liquidity and different financial capacities to ensure debt security at a safe level.

Thus, CEE countries show a high level of heterogeneity in terms of national economies' debt security. This conclusion is also confirmed by the results of statistical analysis of average indicators of indebtedness and solvency. Table 4 represents the indicators of descriptive statistics that allow assessing the nature of the CEE countries' distribution on debt security indicators. The average level of public debt to GDP increased by 58% in 2007–2019, the level of external debt to GDP remained virtually unchanged, and external debt to exports decreased by 22.2%. The amount of external debt *per capita* increased by 27.6%. The ratio of reserves to external debt decreased by 26.5% in 2013 compared to 2007 and increased by 32.7% in 2019 compared to 2013. The value of international reserves in the months of imports increased in 2007–2019 by 9.9%.

Table 4

Statistical analysis of the average indicators of indebtedness and solvency in CEE countries

Indicator	Mean			Standard deviation			Coefficient of variation, %		
	2007	2013	2019	2007	2013	2019	2007	2013	2019
Total public debt in percent of GDP	28.18	49.88	44.52	19.01	22.70	20.29	67.47	45.51	45.58
External debt in percent of GDP	77.25	92.65	77.75	32.92	27.69	21.77	42.61	29.89	28.00
External debt in percent of exports	157.28	157.60	122.35	74.43	62.31	37.66	47.33	39.54	30.78
External debt <i>per capita</i>	10739.79	13714.06	13703.76	7026.70	6813.46	6796.87	65.43	49.68	49.60
The ratio of international reserves to gross external debt	31.76	23.35	30.98	19.35	14.50	25.61	60.94	62.11	82.68
Total reserves in months of imports	3.54	3.93	3.89	1.65	2.61	2.99	46.76	66.34	76.93

Source: Authors' calculations.

According to four debt indicators, in 2019, the coefficient of variation exceeds 33%, which gives grounds to conclude about a significant differentiation of countries in the region. The highest degree of heterogeneity is formed in terms of international reserves to external debt (82.68%) and the size of international reserves in the months of imports (76.93%). The positive aspects are the reduction of the degree of variation of such indicators as the public debt and external debt to GDP ratios, the external debt to exports ratio, and the amount of external debt *per capita*.

In general, the analysis of the CEE economies' debt security shows that, on average, in the group of CEE states, there was some improvement in the debt situation in 2017–2019. However, the trend of debt security strengthening can prove to be rather unstable. On the one hand, the region's countries turned out to be highly differentiated in terms of debt security. Further deterioration of the indebtedness and solvency indicators in Latvia, Slovenia, and the Slovak Republic can entail the aggravation of the debt problems in the region as a whole.

On the other hand, with the deepening integration of CEE countries into the global economic and financial system, the impact of external challenges and threats to the debt security of the region is growing. Even before the COVID-19 pandemic, the deteriorations of the global economic environment and the slowdown in economic growth were expected in all countries (Marena, 2020). As a result of the global recession, more volatile conditions of the global financial environment were forecasted, which could entail a decline in credit supply, an increase in credit risks, and a general contraction in international lending. On the background of declining economic growth and reduced production, the ratios of public debt to GDP and external debt to GDP will increase, indicating deterioration in countries' debt security. The pandemic has only worsened forecasts towards the global economic outlook and posed a severe challenge to CEE countries' debt security. Government spending on solving problems caused by the COVID-19 has become a source of additional pressure on public budgets and has negatively impacted public finances. According to some estimates, the consequences of the COVID-19 pandemic are a greater threat to European financial systems than the Eurozone debt crisis.

A significant challenge for the prospects of debt security shaping in the CEE countries is the general growth of global debt, which could potentially provoke the development of the global debt crisis and cause the collapse of the global financial and credit system. At the same time, experts assess the threats of a global debt crisis as rather insignificant (Bohdan, 2019). It is

explained by the fact that since the global crisis of 2008–2009, the banking sector has noticeably recovered. The banking sector was the main generator of the previous global chock. According to C. Reinhart and K. Rogoff, “banking crises often precede or accompany sovereign debt crises” (Reinhart, Rogoff, 2011). However, the world banking system is more stable and profitable today than in the first post-crisis years, which is confirmed by improving the banks’ indicators of return on assets and return on capital, the key indicators of capital adequacy (Bulatova, Marena, 2019).

Global economic and political imbalances caused by policy divergence in Europe and the USA can increase tensions in the national financial markets of the CEE countries, entail an increase in the exchange rate and capital flow volatility which can cause a reduction of countries’ official reserves and international solvency. However, given the differences between CEE countries in terms of debt security level, indebtedness, and solvency, the nature and scale of the mentioned global challenges manifestation in each country of the region can be significantly differentiated.

### **Conclusions**

A study of the state of debt security in Central and Eastern European countries revealed that the region’s indebtedness and solvency are controversial. The average external debt indicators of the CEE countries are in the unsafe zone, while the average solvency is at a relatively safe level. However, individual economies’ analysis of indebtedness and solvency indicators shows that the CEE group is highly heterogeneous in terms of countries’ debt security levels. According to the public debt to GDP ratio, the situation with the indebtedness of CEE countries is not critical.

Mapping the CEE countries according to the criteria of external debt to GDP ratio and external debt *per capita* allowed to define the groups of countries in terms of external debt burden: countries having relatively low debt burden (Albania, Bulgaria, Poland, and Romania), countries having a moderate level of indebtedness (Croatia, the Czech Republic, Hungary, Estonia, and Lithuania), economies having excessive external debt burden (Latvia, Slovenia, and the Slovak Republic). In terms of solvency based on the criteria of international reserves to gross external debt ratio and total reserves in months of imports, three groups of CEE countries are formed: economies having a high level of solvency (the Czech Republic, Bulgaria), countries having a medium level of solvency (Albania,

Croatia, Poland, Romania), countries demonstrating a relatively low level of solvency (Hungary, Slovenia, Slovak Republic, Estonia, Latvia, and Lithuania). The high level of CEE countries' heterogeneity in terms of the level of debt security is also confirmed by statistical analysis of average indicators of indebtedness and solvency.

Despite some improvement in the debt security of CEE economies in 2017–2019, the further prospects for the development of the debt situation are rather uncertain and vague. It is due to the growing impact of external challenges and threats to the debt security of the region. Among the greatest challenges to the debt security of CEE countries are the following ones: the deterioration of the global economic environment and global recession, increase in credit risks and contraction in the international lending, global economic and political imbalances and policy divergence, growing government spending on solving problems caused by the COVID-19 and corresponding pressure on public budgets, the general growth of global debt. Given the high heterogeneity of CEE countries in terms of current debt security, the manifestation of global challenges in each national economy can be rather diverse.

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## Wyzwania i zagrożenia dla zabezpieczenia zadłużenia państw Europy Środkowo-Wschodniej

### Streszczenie

Celem badania jest identyfikacja słabości bezpieczeństwa długu w krajach Europy Środkowo-Wschodniej oraz określenie wyzwań i zagrożeń dla bezpieczeństwa

długu gospodarek narodowych i regionu. Aby osiągnąć ten cel, zastosowano ogólne i szczegółowe metody badawcze, w tym metody historyczne i logiczne, analizę i syntezę, analizę strukturalną i funkcjonalną, uogólnienie i abstrakcję, podejście systematyczne, klasyfikację i metody statystyczne.

Okazuje się, że sytuacja z papierami dłużnymi w regionie jest dość kontrowersyjna. Średnie wskaźniki zadłużenia zewnętrznego państw Europy Środkowo-Wschodniej znajdują się w strefie niebezpiecznej, natomiast średnia wypłacalność jest na stosunkowo bezpiecznym poziomie. Analiza wskaźników zadłużenia zewnętrznego i wypłacalności pokazuje, że grupa państw Europy Środkowo-Wschodniej jest bardzo zróżnicowana pod względem poziomu bezpieczeństwa zadłużenia krajów.

**Słowa kluczowe:** bezpieczeństwo długu, zagrożenia i wyzwania dla bezpieczeństwa długu, zadłużenie, wypłacalność, dług zewnętrzny, rezerwy międzynarodowe