

## ANALYSIS OF THE PUBLIC DEBT OF BOSNIA AND HERZEGOVINA

**Kadrija Hodžić, PhD**  
University of Tuzla, Faculty of Economics  
Tuzla  
Bosnia and Herzegovina

**Alem Merdić, PhD candidate**  
University of Zenica, Faculty of Economics  
Zenica  
Bosnia and Herzegovina

**Emina Osmančević, MA student**  
University of Zenica, Faculty of Economics  
Zenica  
Bosnia and Herzegovina

### ABSTRACT

*The aim of this paper is to analyze the public debt of Bosnia and Herzegovina and identify potential problems in public debt management that may significantly jeopardize the fulfillment of basic functions of the state in the future. The World Bank's criteria for analyzing the indebtedness of economies and the criteria of public finances for membership in the European Monetary Union are used as limits to the sustainability of public debt. In the research process, Methods of induction, deduction, analysis and synthesis, as well as comparisons and proofs are applied in the research process, all in order to support the set research hypothesis. The results show that the public debt of Bosnia and Herzegovina, according to the above-mentioned criteria, is formally within the set limits of the World Bank and the European Monetary Union. However, a problem exists in managing public borrowing, which is mainly aimed at meeting social needs and financing the administrative apparatus instead of productive investment.*

**Keywords:** public finances, public debt, World Bank, European Monetary Union, Bosnia and Herzegovina.

### 1. INTRODUCTION

Recognizing the fact that the state finances all its functions from the budget, which is the basic financial document, responsible budget management is of special importance, so as not to jeopardize the fulfillment of the basic functions of the state. Due to the financial crises, serious disturbances occur in the stability of public finances, expenditures of the state treasury are increasing, and revenues are decreasing. In such conditions, the state cannot, by imposing additional forms of taxation, reimburse the amount of public revenues needed to finance public expenditures, and in these situations it reaches for borrowing or public debt. Public debt usually finances existing deficits and investments or raises funds to finance government functions in times of crisis. In general, there is a perception that the sustainable limit of public debt is not reached as long as the funds raised by public borrowing increase the country's productive capacity.

Guided by the fact that Bosnia and Herzegovina is a country in transition, and countries in transition are characterized by a steady increase in borrowing, an analysis of the public debt of Bosnia and Herzegovina was performed. According to the above, the research aims to analyze the amount and character of the public debt of Bosnia and Herzegovina according to the criteria of the European Monetary Union and the World Bank. Therefore, the subject of the paper is the research of the amount and character of the public debt of Bosnia and Herzegovina according to the criteria of the European Monetary Union and the World Bank. Based on the formulated subject of the research, the basic research hypothesis reads: "Public debt of Bosnia and Herzegovina according to the criteria of the European Monetary Union and the World Bank is sustainable."

In addition to the introduction, the second part of the paper covers the theoretical framework of public debt. The third part of the paper refers to the research methodology and data used, while the fourth part presents the research results. Conclusions and recommendations are in the last part of the paper.

## **2. BRIEF THEORETICAL FRAMEWORK OF PUBLIC DEBT**

Public debt means the total debt of the state to creditors at a given time. There are many ways to define public debt in the professional literature. Government or public debt is the accumulated amount that the government has borrowed to finance past deficits [1]. Also, public debt is defined as borrowed funds of the state, i.e. as the sum of all receivables that its creditors have against the public sector at a given time [2].

According to Blanchard, a distinction should be made between deficit and debt. Debt means the state - what the state owes due to past deficits - while the deficit is the flow, or how much the state borrows during a year. Public debt is closely linked to the budget deficit and those two terms are often used as synonyms for deficit financing. The difference between these two concepts is that the budget deficit represents the surplus of government expenditures over government revenues in a certain period, while public debt represents indebtedness at the moment [3]. Therefore, public debt is the total indebtedness of the state towards domestic or external creditors at a given time.

Public debt is financed by fiscal policy, i.e. by taxation or lending on the domestic or external financial market, by selling assets, and by cutting the deficit. Public debt is actually a form of public revenue generated by the state to cover public expenditures. Public debt includes credit obligations and all other contractual obligations of the state.

Public debt is classified on the basis of several criteria. In practice, the most frequently mentioned classification of public debt, depending on the principle of territoriality, distinguishes between internal and external public debt [4]. When the state borrows on the domestic market, we are talking about the domestic public debt in the domestic currency. Another option is external debt. External debt is the sum of all debts of a country to external creditors.

## **3. METHODOLOGY AND DATA**

For the purposes of the analysis of the public debt of Bosnia and Herzegovina, the criteria of the World Bank for the analysis of the indebtedness of the economies and the criteria of the public finances for the membership in the European Monetary Union will be used as the limits

of the sustainability of the public debt. In the research process, the methods of induction, deduction, analysis and synthesis, as well as comparisons and proofs will be applied, all with the aim of proving the set research hypothesis.

From the defined subject of the research and the set research hypothesis, the independent variable in the research are the criteria of public debt sustainability defined by the European Monetary Union and the World Bank. The dependent variable in the research is the sustainability of Bosnia and Herzegovina's public debt.

The independent variable “public debt sustainability criteria” will be identified through clearly defined public debt sustainability criteria by EMU and the World Bank. According to the criteria of the European Monetary Union [5], countries with a share of total public debt in GDP over 60% are considered over-indebted.

According to the World Bank criteria [6], over-indebted countries are those where:

- share of total public debt in GDP amounts to over 80%;
- share of total public debt in exports amounts to over 220%;
- share of annuities in exports amounts to over 30%;
- share of annuities in GDP amounts to over 8%.

Five years is the time span of the research. An effort will be made to answer the question of what is the trend of public indebtedness of Bosnia and Herzegovina in the period 2016-2020 - whether it is sustainable according to the stated criteria, i.e. whether the state will have problems repaying it.

Content analysis was applied in the data collection process. In the theoretical part of the research, secondary sources of data in the field of economic policy as well as articles and studies related to the indebtedness of Bosnia and Herzegovina were used. In the analytical part of the research, statistical publications of Bosnia and Herzegovina and the European Union, reports of the European Monetary Union and the World Bank, and reports of the Ministry of Finance and Treasury of Bosnia and Herzegovina and the Foreign Trade Chamber of BiH were used.

#### **4. RESULTS OF THE PUBLIC DEBT ANALYSIS OF BOSNIA AND HERZEGOVINA**

The results of the analysis of the public debt of Bosnia and Herzegovina are presented in this part of the paper. The first part refers to the analysis of public debt according to the criteria of public finances for membership in the European Monetary Union. The second part is an analysis of public debt according to the World Bank's criteria for analyzing the indebtedness of economies.

##### **4.1. Indebtedness analysis according to the criteria of the European Monetary Union**

The basic aggregate indicator of fiscal sustainability is the ratio of public debt to gross domestic product. For the public debt-to-GDP ratio, the most frequently mentioned sustainability threshold is 60% of GDP, which is compatible with a value of 3% of GDP of the budget deficit, according to the Maastricht criterion. The data required for the analysis were taken from the Ministry of Finance and Treasury of Bosnia and Herzegovina - information on public indebtedness of BiH [7]. The results of the analysis according to the above criteria are given in the following table:

*Table 1 Indebtedness of Bosnia and Herzegovina according to the EMU criteria (expressed in millions BAM)*

<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>State of the public debt</b>	12.098,21	11.007,54	11.106,64	11.200,33	12.154,56
<b>State of the external debt</b>	8.547,59	7.852,95	8.204,91	8.138,87	8.662,66
<b>State of the domestic debt</b>	3.550,62	3.154,59	2.901,73	3.061,46	3.491,90
<b>GDP of BiH [8]</b>	30.389,00	32.326,00	34.016,00	35.346,00	34.644,00
<b>State of the public debt/GDP</b>	39,78%	34,05%	32,65%	31,69%	35,08%
<b>External debt/GDP</b>	28,10%	24,29%	24,12%	23,03%	25,00%
<b>Domestic debt/GDP</b>	11,68%	9,76%	8,53%	8,66%	10,08%

*Source: Authors' calculation on the basis of the data from the Ministry of Finance and Treasury of Bosnia and Herzegovina*

It can be seen from Table 1 that the largest share of the total public debt is the external debt of the state. In 2020 the external debt amounted to as much as 8,662.66 million BAM out of 12,154.56 million BAM of the total public debt. According to this indicator Bosnia and Herzegovina is within the Maastricht criteria, namely the public debt in 2020 amounted to 35.08% of gross domestic product, which amounted to 34,644.00 million BAM. The percentage was obtained by calculating the ratio of total public debt in 2020 to GDP.

$$\frac{\text{State of the public debt}}{\text{GDP}} = \frac{12.154,56}{34.644,00} * 100 = 35,08\%$$

*(authors' calculation based on the data from the available reports)*

In the 2016-2019 period the public debt of Bosnia and Herzegovina was within the limits of sustainability according to the indicators of the ratio of public debt to GDP. The debt would be considered unsustainable if the share of public debt in GDP was over 60% as determined by the Maastricht criterion. Therefore, the public debt of BiH is sustainable according to the EMU criteria.

#### **4.2. Indebtedness analysis according to World Bank criteria**

This part of the paper presents an analysis of the public debt of Bosnia and Herzegovina in accordance with the criteria of the World Bank. Results of the sustainability analysis according to the World Bank methodology are given in the table below:

According to the World Bank criteria, Bosnia and Herzegovina does not belong to the group of over-indebted countries. During the 2016-2020 period, the public debt-to-GDP ratio is within the limits of medium-indebted countries. Furthermore, the public debt ratio in the export of goods and services of Bosnia and Herzegovina is within the limits of sustainability.

According to the World Bank methodology, over-indebted countries are those whose share of annuities in GDP is over 8%. Therefore, Bosnia and Herzegovina was not an over-indebted country in the observed period.

*Table 2. Indebtedness of Bosnia and Herzegovina according to the World Bank criteria (expressed in millions BAM)*

<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>State of the public debt</b>	12.098,21	11.007,54	11.106,64	11.200,33	12.154,56
<b>Annuity</b>	735,40	995,28	976,43	821,54	771,32
<b>GDP of BiH</b>	30.389,00	32.326,00	34.016,00	35.346,00	34.644,00
<b>Export of goods and services</b>	10.139,00	12.574,50	13.559,45	14.291,00	12.561,00
<b>State of the public debt/GDP</b>	39,78%	34,05%	32,65%	31,69%	35,08%
<b>State of the public debt/Export of goods and services</b>	119%	87,5%	82%	78%	96%
<b>Annuity/GDP</b>	2,40%	3,08%	2,87%	2,32%	2,23%
<b>Annuity/Export of goods and services</b>	7,25%	7,92%	7,20%	5,75%	6,09%

*Source: Authors' calculation on the basis of the data from the Ministry of Finance and Treasury of Bosnia and Herzegovina*

The ratio of debt annuities to exports of goods and services shows how much of the revenue from exports of goods and services should be set aside to pay off debt. An increase in this indicator indicates a decrease in the country's ability to repay debt regularly and a higher probability of liquidity problems. It is generally assumed that the acceptable ratio of annuities to current foreign exchange earnings is less than 10%. Therefore, the public debt according to this indicator is at an acceptable level.

## **5. CONCLUSION**

The results of the conducted analysis of the public debt of Bosnia and Herzegovina according to the criteria of the European Monetary Union and the World Bank are in line with expectations. According to the above criteria, the public debt of Bosnia and Herzegovina is sustainable. Therefore, the research hypothesis is supported.

According to the stated criteria of the EMU and the World Bank, Bosnia and Herzegovina is not an over-indebted country. However, public debt has been characterized by very rapid growth, and that is especially noticeable in the case of external debt. The way in which the money collected by borrowing is spent is especially important. Namely, in BiH there are problems with the management of funds collected through public borrowing, as such funds are mainly focused on meeting the social needs of society and financing the administrative apparatus, and not on productive investments. A state of impossibility of debt repayment can be reached this way, since public debt does not finance investments that would generate income necessary for debt repayment. It can be concluded that the public debt of Bosnia and Herzegovina is only formally sustainable.

Continuation of the situation from previous years leads to unsustainability of the fiscal position of Bosnia and Herzegovina - it can also be a brake on development and lead the economy in the opposite direction if borrowing is used in consumer activities or to service previous borrowing. In order for public debt to have a positive effect on the economic development of a country, it is necessary to use the funds collected through borrowing to achieve profitable goals.

In the context of that progress, it is extremely important to create a conceptual action program of political and economic entities for stabilization of public finances and timely signal potential problems in public debt management which may significantly jeopardize the fulfillment of basic state functions in the future. Finally, it is necessary to create measures to improve the management of public finances of Bosnia and Herzegovina, with the aim of increasing the efficiency of the use of public revenues in the future.

Regarding public finances, the analysis should be based on the consolidated budget balance and the level of government indebtedness, but also the ability of governments to create budgets with a significant development component, to ensure a higher economic growth rate than the EU average, which will in turn accelerate the convergence of the main macroeconomic indicators of the potential member country with the EU indicators. However, it is important to note that, when it comes to public finances, an analysis based on the level of indebtedness can lead to the creation of a wrong picture of the real state of public finances. Namely, it is possible that a country with a higher degree of indebtedness has more stable public finances, compared to a country with a lower degree of indebtedness, but it is necessary to take into account where the funds raised by borrowing are directed. This means that if the funds raised by borrowing generated a high level of indebtedness and at the same time served as a significant development component of the budget that will result in increased growth rate and increased public revenues, the capacity to repay debt increases and in such case the high indebtedness rate is not problematic. Nevertheless, the indebtedness rate should not be higher than 60% of GDP, as defined by the 1992 Maastricht Treaty. On the other hand, even lower indebtedness rates can lead to debt repayment problems (e.g. debt repayment by new borrowing), if the generated public debt is directed to social benefits and maintenance of the state apparatus.

## 6. REFERENCES

- [1] Samuelson, P., Nordhouse W., Ekonomija, MATE, Zagreb, 2007., p. 408.
- [2] Smilaj, D., Javni dug i gospodarski razvoj, 2004., Ekonomija/Economics, p.4. Recovered from: <http://www.rifin.com>
- [3] Blanchard, O., Makroekonomija, MATE, Zagreb, 2011., p. 196.
- [4] Stakić, B., Barać, S., Javne finansije, Beograd, 2008.
- [5] Informacija o konvergenciji Bosne i Hercegovine, Directorate for European Integration, Sarajevo, Available at: <http://www.dei.gov.ba/>, [Accessed 03.02.2021.]
- [6] Guidelines for public debt management, The World Bank, Washington, Available at: <http://www.worldbank.org/>, [Accessed 17.02.2021.]
- [7] Informacija stanju javne zaduženosti Bosne i Hercegovine 2020., 2019., 2018., 2017., 2016., Ministry of Finance and Treasury of Bosnia and Herzegovina, Sarajevo, 2021., 2020., 2019., 2018., 2017., Available at: <https://www.mft.gov.ba/>, [Accessed 05.03.2021.]
- [8] Bruto domaći proizvod prema proizvodnom, dohodovnom i rashodovnom pristupu, 2020., 2019., 2018., 2017., 2016., The Agency for Statistics of Bosnia and Herzegovina, Sarajevo, 2021., 2020., 2019., 2018., 2017., Available at: <http://www.bhas.ba/>, [Accessed 14.03.2021.]