## Measures to prevent state default under martial law

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#### **Abstract**

Debt security is especially relevant for developing countries, because they recover from economic shocks longer than developed countries, and the consequences of such shocks are catastrophic for them. Default is one of the most undesirable consequences of defaulting on a debt security, which determines the relevance of the topic under investigation. The aim of the study was to assess the current condition and state policy on the provision of

debt security in Ukraine under martial law and to generalize measures to increase debt security and minimize the risk of default. The article used the following methods: economic statistical analysis, structural system approach and abstract logical method. The study found that, with the onset of a large-scale invasion, the share of public debt in Ukraine exceeded the recommended value by about 47 % and increased by more than 58 % compared to 2021. The conclusions of the research propose measures to increase debt security, divided into domestic and international measures.

**Keywords:** public debt; debt security; debt policy; debt strategy; public administration.

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# Medidas para prevenir el incumplimiento del Estado bajo la ley marcial

#### Resumen

La seguridad de la deuda es especialmente relevante para los países en desarrollo, porque se recuperan después de shocks económicos por más tiempo que los países desarrollados, y las consecuencias de tales shocks son catastróficas para ellos. La mora es una de las consecuencias más indeseables del incumplimiento de un título de deuda, lo que determina la relevancia del tema investigado. El objetivo del estudio fue evaluar la condición actual y la política estatal sobre la provisión de seguridad de la deuda en Ucrania, bajo la ley marcial, y generalizar las medidas para aumentar la seguridad de la deuda y minimizar el riesgo de incumplimiento. En el artículo se utilizaron los siguientes métodos: análisis estadístico económico, enfoque estructural del sistema y método lógico abstracto. El estudio encontró que, con el comienzo de una invasión a gran escala, la proporción de la deuda pública en Ucrania superó el valor recomendado en aproximadamente un 47 % y aumentó en más del 58 % en comparación con 2021. En las conclusiones de la investigación se proponen medidas para aumentar la seguridad de la deuda, divididas en medidas nacionales e internacionales.

**Palabras clave:** deuda pública; garantía de deuda; política de deuda; estrategia de deuda; administración pública.

#### Introduction

A large-scale military invasion of the sovereign territory of Ukraine had a disastrous effect for the population, infrastructure and economy of the country. The national security becomes especially important during this period, in particular, financial and debt security require increased attention. Breach of debt security is accompanied by a debt crisis, which is associated with exceeding the permissible amount of public debt and the inability to service and repay it (Fominykh and Parfenyuk, 2021).

The concept of public debt is closely related to the concept of budget deficit. The Budget Code of Ukraine defines that the budget deficit is an excess of the budget expenditures over the budget revenues for a certain year. The public debt is the total amount of the country's debt obligations for the repayment of received and outstanding loans (Verkhovna Rada of Ukraine, 2023).

Excessive growth of the budget deficit and the amount of public debt negatively affects economic growth (Law *et al.*, 2021; Semenyshyn *et al.*, 2020) and can lead to default in the country, which in the most general

sense means the inability to fully or partially meet obligations. According to the IMF and the World Bank criteria, the fact that a country has declared default is the main sign of a debt crisis along with negotiations on debt restructuring (Bogdan, 2021).

A possible declaration of default in Ukraine was repeatedly discussed in the scientific and political sphere even before the war. The underlying reason is the growth of threats to debt security because of the increased budget deficit, excessive borrowing and irrational use of funds, an unstable political situation, the financial and economic consequences caused by the COVID-19 pandemic, etc. (Sytnyk and Shutko, 2022).

However, the military invasion and its devastating effects on the economy brought default preventing to the fore. At the same time, public debt has a number of advantages (Hilton, 2021; Rahman *et al.*, 2019). It is an important source of financing, in particular during martial law, because it provides support for the economy and fulfilment of specific tasks that appear in this time before the government (Prokopenko *et al.*, 2023). Therefore, the issue of balanced borrowings and their rational use for the needs of the state during the war with the simultaneous minimization of the risk of default is a relevant objective.

So, the aim of the study is to assess the current condition and state policy on debt security in Ukraine under martial law, as well as generalize measures to increase debt security and minimize the risk of default. The aim involved the following research objectives:

- assess the current state of debt security in Ukraine;
- study the legal support of the budget process under martial law;
- analyse the effectiveness of the main areas of public debt security and default prevention policy.

#### 1. Literature review

Most Ukrainian researchers focus on the current state of debt security in the country and developing relevant recommendations. Fominykh and Parfenyuk (2021) assess the main indicators of debt security and identify the main problems of debt management and the use of borrowings. Sytnyk and Shutko (2022) assess the debt security of Ukraine under martial law and determine the positive and negative aspects of debt in the country.

As a result of the conducted research, the researchers develop measures to increase the level of debt security. In their articles, Rudyk *et al.*, (2022), Liamzina and Harbinska-Rudenko (2022) also study debt security in wartime and outline the reasons for the rapid increase in the amount of debt.

Researchers found a number of positive aspects of public debt: it is a source of investment, reduces the negative effects of a budget deficit, and accelerates economic growth. Hobela *et al.*, (2022) conduct an assessment of debt and budget security, identify the main threats and provide recommendations for improving these types of security. Kubakh and Riabushka (2022) identified the factors influencing the state of debt and financial security of countries, and also noted the lack of a unified approach to the definition of debt security and the absence of the definition in legislation.

Foreign researchers also actively study debt security aspects and the probability of default in countries with different levels of development. Aguiar and Amador (2021) note in their work that debt crises and defaults are mostly characteristic of low-income countries and developing countries. However, as the authors note, negative trends are increasingly spreading to developed countries.

Eichengreen *et al.*, (2021) substantiate the need for public borrowing, as well as the main advantages and disadvantages of using borrowed funds. It is noted that public debt opens up additional opportunities, in particular, during a crisis, such as a pandemic or the need to defend the state.

Abbas *et al.*, (2019) covers a number of theoretical aspects related to public debt, in particular: historical facts of the development of debt relations, basic definitions and concepts, motives for borrowing, debt sustainability, public debt management, sovereign default, debt restructuring, etc.

Meier *et al.*, (2021) assess the effectiveness of policy measures and reforms in ensuring the safety and soundness of the global financial system, in particular debt security. The study summarizes the causes of the crisis, the reactions to the adopted reforms, as well as whether the reforms correspond to the set goals.

Stiglitz and Rashid (2020) study the risks to the debt security of developing countries. Researchers note that the developing countries can suffer a disastrous effect from the realization of threats generated by the simultaneous effect of the pandemic and the deepening of the economic crisis. At the same time, developed countries will suffer losses, but will be much more capable of recovery.

So, it can be noted based on the results of the literature analysis that a large number of studies are focused on determining debt security indicators. However, the data for 2022 are missing in the works of Ukrainian researchers, the year that causes the most concern in the context of the breach of debt security and the probability of default. Therefore, it is appropriate, first, to update statistical debt security indicators, and, second, structure recommendations and measures to improve the state of debt security with their distribution according to the directions of future debt strategy.

#### 2. Methods

## 2.1. Research design

The study was conducted in three stages, the first of which was an assessment of the public debt of Ukraine. An economic statistical analysis of the structure and dynamics of public debt indicators was carried out.

The following indicators were analysed: the dynamics of the national debt of Ukraine for 2017-2022, the dynamics of internal and external debt as part of the public debt for 2017-2022, the dynamics of internal and external debt as part of the state-guaranteed debt for 2017-2022, the ratio of the total volume of state and state-guaranteed debt to GDP for 2017-2022.

The second stage involved the study of the legal regulation of the budget process under martial law. For this purpose, the most important changes implemented in the budget legislation by the government after the beginning of the military invasion were identified, in particular, changes directly related to the repayment and servicing of the national debt of Ukraine.

The third stage provided for summarizing measures to improve debt security and prevent default. It is proposed to generalize, arrange and divide the specified measures, or directions of their implementation, into two levels — national and international.

#### 2.2. The research methods used

The following scientific methods were used during the research: economic statistical analysis to assess the dynamics and structure of the public debt of Ukraine and determine debt security indicators; system structural method and abstract logical method in the course of arrangement and generalization of measures to increase debt security.

## 2.3. Research limitations

The research limitations are related to the lack of accurate official data on the GDP of Ukraine for 2022. This is why an approximate value of GDP was determined during the study, calculated based on preliminary data provided by the Ministry of Economy of Ukraine (Slovo i Dilo, 2023).

## 2.4. Information background

The information background of the study is academic periodicals of Ukraine and foreign countries, as well as data that are publicly available on the resources of the Ministry of Finance of Ukraine, the State Statistics Service of Ukraine, and the Decentralization Portal. Besides, the study considered a number of legislative acts: the Budget Code of Ukraine, Law No. 2120-IX of 15 March 2022, Law No. 2134-IX of 15 March 2022, Law No. 2134-IX of 15 March 2022, Law No. 2135-XX of 15 March 2022, Law No. 2142-XX of 24 March 2022, Resolution No. 252 of 11 March 2022, Resolution No. 590 of 9 June 2022, Resolution No. 165 of 28 February 2022, Resolution No. 267 of 13 March 2022.

### 3. Results

## 3.1. Evaluation of the public debt of Ukraine

The national debt of Ukraine consists of public debt and state-guaranteed debt, each being, in turn, divided into internal and external. Figure 1 shows the trend of changes in the volume of the national debt of Ukraine for 2017-2022, with its distribution by the amount of public debt and state-guaranteed debt.

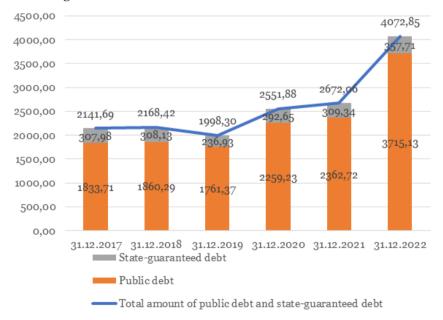


Figure 1. Dynamics of the public debt of Ukraine for 2017-2022 (billion UAH) (Ministry of Finance of Ukraine, 2023).

The trend shown in Figure 1 indicates a relatively moderate increase in the volume of public debt from 2017 to 2021. In 2019, there was some reduction in the amount of debt, but according to the results of 2020, when the world was shaken by the COVID-19 pandemic, the public debt increased by more than UAH 500 billion. However, according to the results of 2022 — the year when the war in Ukraine began — the highest jump in the amount of the state debt was recorded during the period — it increased by about UAH 1,400 billion.

For the most part, the increase was due to a significant increase in the amount of public debt – it increased by more than UAH 1,350 billion, while the state-guaranteed debt increased by UAH 50 billion. Figure 2 shows the dynamics of internal and external debt as part of the public debt for 2017-2022.

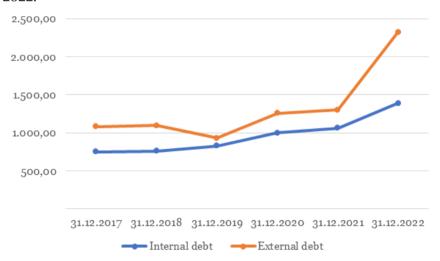


Figure 2. Dynamics of internal and external debt as part of the public debt for 2017-2022 (billion UAH) (Ministry of Finance of Ukraine, 2023)

Figure 2 gives grounds to conclude that the growth of the public debt was mostly determined by an increased external debt — by more than UAH 1,000 billion. The highest increase is characteristic of debt for loans received from international financial organizations (the increase of this element is more than UAH 637 billion compared to 2021) in the structure of the external debt (Ministry of Finance of Ukraine, 2023).

Figure 3 shows the dynamics of internal and external debt as part of state-guaranteed debt for 2017-2022.

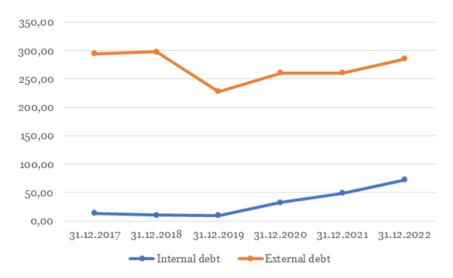


Figure 3. Dynamics of internal and external debt as part of state-guaranteed debt for 2017-2022 (billion UAH) (Ministry of Finance of Ukraine, 2023)

Sharp leaps are not characteristic of the growth of internal and external debt as part of the state-guaranteed debt for 2017-2022. The volume of internal debt as part of state-guaranteed debt in 2022 is even lower than at the beginning of the period under study.

Therefore, the analysis of the trend of the volume of public debt as a whole indicates its significant growth in 2022, however, more information can be obtained by studying the dynamics of the share of public debt in the GDP of Ukraine and comparing it with the recommended value. The ratio of the total volume of public and state-guaranteed debt to GDP is one of the main and most important indicators for assessing the country's debt security. The optimal value of this indicator is 20%, and the critical value is 60% (Fominykh and Parfenyuk, 2021). Table 1 contains the calculated values.

	GDP (Million UAH)	The total amount of public and state- guaranteed debt (Million UAH)	The ratio of the total volume of public and stateguaranteed debt to GDP (Million UAH)	Debt growth rate (Million UAH)
31.12.2017	2,983,882	2,141,690.59	71.78	-
31.12.2018	3,560,596	2,168,421.57	60.90	1.25
31.12.2019	3,978,400	1,998,295.90	50.23	-7.85
31.12.2020	4,222,026	2,551,881.73	60.44	27.70
31.12.2021	5,459,574	2,672,060.21	48.94	4.71
31.12.2022	3,799,863.504	4,072,846.62	107.18	52.42

Table 1. Ratio of the total volume of public and state-guaranteed debt to GDP.

Source: calculated by the author based on the data from (Ministry of Finance of Ukraine, 2023; State Statistics Service of Ukraine, 2023; Slovo i Dilo, 2023).

Analysing the information in Table 1 based on the available data, it can be noted that the GDP of Ukraine had a characteristic upward trend until 2021 inclusive, while it experienced a catastrophic decrease of 30.4% (+/-2% according to preliminary data) according to the results of 2022. At the same time, the amount of public debt has increased significantly, as already noted. So, the ratio of the total volume of public and state-guaranteed debt to GDP in 2022 is 107.4%, and is significantly higher than the recommended critical value of 60% – not to mention the optimal 20%.

It should be noted that even before the war, the ratio of the total amount of public and state-guaranteed debt to GDP approached, and sometimes exceeded (71.78% in 2017), the critical value. However, in 2021, this value began to decline because of a significant GDP increase. Therefore, the debt growth rate in 2022 is more than 50% (before that, the maximum growth rate for the period under study was characteristic of 2020 — the period of introduction of quarantine restrictions — and was almost 28%).

It can be concluded based on the results of the analysis that debt security in Ukraine was broken before the war, but the large-scale invasion caused the most significant threat to debt security. To date, the threat of default has increased significantly, further increasing because of the high uncertainty regarding the further development of the conflict, however, international support and a balanced policy of the Ukrainian authorities can contribute to reducing this threat. In this context, it is advisable to reveal the aspects of legal support of the budget process in Ukraine under martial law.

## 3.2. Legal regulation of the budget process under martial law

The budget policy should be aimed, among other things, at regulating the state debt. In turn, the imprudent management of the public debt can lead to its unjustified growth beyond the recommended norms. The growth of debt increases debt risks if the government is unable to service and repay it, which can cause a debt crisis and default. So, increasing or decreasing possibility of default in the country directly depends on the effectiveness of the budget process.

The budget process has its peculiarities during the war. In Ukraine, this process underwent a number of significant changes after the beginning of the military invasion, which is connected with the need to restructure revenues and expenditures for national security and defence.

In view of the significant decrease in budget revenues because of war, the government was forced to oblige state-owned enterprises and the National Bank to transfer profits ahead of time, which helped to fulfil the plan for the budget revenues for the first month of the war by 93%. Besides, most of the budget revenues during the war are formed by borrowing in the form of military bonds, borrowing from international financial organizations, the European Union, grants and free aid from other countries (Korobtsova, 2022).

In view of the foregoing, it is appropriate to outline the main changes made by the government to the budget legislation after the full-scale invasion began (Figure 4).

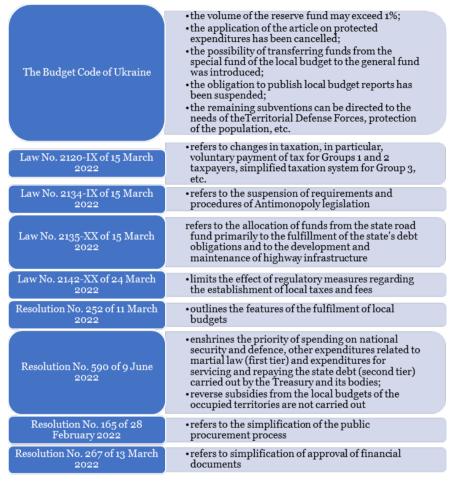


Figure 4. Changes in budget legislation introduced in connection with martial law (Decentralization, 2022).

Figure 4 does not provide a complete list of the implemented changes, because there were 248 individual changes to the budget process on the official resource (Decentralization, 2022) as of August 2022. Summarizing, we can say that the changes implemented in the budget process contribute, first of all, to the simplification of the fulfilment of budget obligations, transfer of funds between budgets, and also expand the powers of local authorities.

Besides, among the outlined changes are those related to the repayment and servicing of the state debt. In particular, expenditures on the repayment and servicing of the national debt are the second priority after the expenditures on national security and defence, and the funds of the state road fund should primarily be directed to the repayment and servicing of the public debts, as well as the development and maintenance of the road network. Other expenditures from this fund should be allocated only after fulfilling all obligations specified in Article 24 (III)(3) of the Budget Code.

## 3.3. Generalization of measures to increase debt security and prevent default

The assessment of the actual state of the state debt and changes in the legal regulation of the budget process in Ukraine enable us to proceed to making a number of recommendations regarding further courses of action. They should be aimed at increasing the country's debt security and preventing default and, in view of the results obtained in the previous sections, are divided into two levels — national and international (Figure 5).



Figure 5. The main directions of increasing debt security and countering default (created by the author).

Therefore, the results of the analysis of the legislative framework carried out in the study indicate the need to strengthen work on improving the legal provision of servicing and repayment of the national debt (both external and internal). The assessment of the national debt carried out in the article necessitates the need for constant monitoring of debt security indicators, which will allow making more balanced decisions for further debt management. The determined structure of the national debt indicates the need to stimulate the development of the domestic borrowing market, in particular, military bonds.

Besides, measures to stimulate the development of the financial market are appropriate in order to reduce the cost of borrowing for the state. It is also advisable to consider the possibility of restructuring the public administration sector, the activities of which are related to the redistribution and use of budget funds, which will increase the transparency of this process. These and other measures should form directions for building the strategy of the state debt policy, therefore the development of strategic planning and management are important.

In addition to measures at the domestic level, the strategy of state debt security should also be shaped by directions for increasing debt security at the international level. As it was established during the analysis, since the beginning of the war, the situation regarding the national debt in Ukraine has significantly worsened, reaching the limit of default. However, Ukraine has every right to count on international support in the fight against the aggressor, because it defends not only its interests, but also the interests of the entire democratic society.

Therefore, the country can expect a positive result, at least partial, when implementing such measures as: debt restructuring negotiations with the aim of changing payment terms, the total amount of debt or the interest rate; writing off part of the debt by submitting a special application to the IMF and the World Bank; appeals for non-refundable financial assistance from international partners, etc. Besides, Ukraine has the indisputable right to demand compensation for damages from the aggressor by appealing to the countries of Europe and the United States of America regarding the confiscation of the assets of the Russian Federation to repay part of the foreign debt.

#### 4. Discussion

The article determined that the volume of Ukraine's public debt as a percentage of GDP in 2022 significantly exceeds the recommended value — by about 47%. Although the country's debt security was at risk in certain periods even before the war, it was within the norm by the end of 2021 according to the indicator of the share of public debt in GDP. So, a significant growth of the national debt is determined by the full-scale military invasion of the Russian Federation on the sovereign territory of Ukraine, and occurred mostly at the expense of foreign borrowing.

The article examines the changes in budget legislation after the start of the war, and notes which of them relate to the national debt. It can be argued that the issues of improving the debt policy were not paid enough attention. Based on the results of the research, recommendations for increasing debt security are proposed and reasonably divided at the national and international levels.

Fominykh and Parfenyuk (2021) study the debt security of Ukraine in the period before a full-scale military invasion, therefore the measures to increase it suggested by the researchers are more general. The researchers recommend introducing restrictions on borrowing in foreign currency on the domestic market and regarding the total amount of public debt at the level of 50%, optimizing the ratio of short-term and long-term borrowing, measures to strengthen control, improve debt management, etc. Sytnyk and Shutko (2022) provide a number of recommendations for increasing debt security, which correspond to the directions proposed in this article: improving legal security, monitoring, building a debt security strategy, etc.

Liamzina and Harbinska-Rudenko (2022) mostly focus on the international direction, in particular, achieving financial support from other countries and organizations, restructuring or writing off part of liabilities, etc. Hobela *et al.*, (2022), in addition to the directions specified in the article, propose the reduction of debt service costs, as well as the de-offshorization of the economy as effective measures. Kubakh and Riabushka (2022) emphasize the need to increase the efficiency of the use of borrowed funds, take measures to prevent corruption, and optimize public administration.

Foreign scholars study the problems of growing public debt in both developed and developing countries, mostly in the context of aggravating conflicts, increasing crisis phenomena, and the COVID-19 pandemic. Aguiar and Amador (2021) found that debt markets are prone to frequent and repeated defaults, leading to a prolonged and costly restructuring period, with debt re-accumulating during "quiet" periods, which can lead to a new default. Stiglitz and Rashid (2020) emphasize that the consequences of a debt crisis, which is the main feature of default, are always devastating, and such consequences harm not only the country where the default occurred, but also affect the entire world society.

The researchers note unrest in the country, which is especially characteristic of countries with ethnic or other divisions or social conflicts, among the main and most frequent consequences of the debt crisis. Such disturbances often spread beyond the borders of the country, which also affects developed economies. These findings correspond to the opinion expressed in this article: Ukraine has the right to count on international support, because the fight against the aggressor, as well as ensuring the country's debt security, is a global issue.

Eichengreen *et al.*, (2021) identify the advantages of public debt: it allows the state to continue to provide the population with basic social services during periods when state revenues decrease; make effective investments; improve the country's defence in the event of a military threat; stabilize the banking system in the conditions of the financial crisis; help victims of pandemics or emergencies, etc. At the same time, public debt can cause harm if it is used irrationally.

Abbas *et al.*, (2019) summarize that, regardless of the reasons for borrowing, high levels of public debt can have a negative impact on the economy by limiting the government's ability to conduct countercyclical fiscal policies, displacing private sector investment, increasing credit constraints, and creating conditions for fiscal imbalances. Meier *et al.*, (2021) offer a number of general recommendations for increasing financial stability and debt security, including the introduction of appropriate fiscal stimulus packages, strengthening the consolidation of international cooperation and harmonization of the legal framework in the banking and insurance sectors, etc.

The combination of recommendations provided in this article and measures proposed by other researchers can become an effective basis for the further development of the strategy of public debt policy. The further research should focus on the development of an adaptation mechanism of the state debt policy to the conditions of military operations in 2023, which should contain alternative scenarios in accordance with a high level of uncertainty.

### **Conclusions**

The article outlined the structure and dynamics of the national debt of Ukraine, as well as debt security indicators. The conducted analysis found that even before the beginning of the full-scale invasion, the share of public debt in the GDP of Ukraine, as one of the main indicators of debt security, exceeded the recommended value for certain periods. However, this indicator significantly decreased in 2021, and was within the normal range.

But martial law caused the rate to increase by more than 58% compared to 2021, or 47% above the maximum allowable value. This increases the risks for the country's debt security and necessitates the development of measures to combat default in the country. A study of the legal framework for changes in budget legislation after the start of the full-scale invasion made it possible to determine that the issue of debt security was not paid enough attention.

The assessment of the national debt and the legal framework regarding changes in the budget legislation became the basis for generalizing and arranging the directions of the state policy regarding the improvement of debt security in the country and the prevention of default. Such directions are proposed to be divided according to the implementation level — national and international.

The national-level areas include: legislative support, monitoring, development of the domestic borrowing market, development of the financial market, restructuring of public administration, strategic planning. The international-level directions include: debt restructuring, partial debt write-off, non-refundable financial assistance, confiscation of Russian assets.

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