



## The effectiveness of public governance of Ukraine's budget security: Current state and trends

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■ **Abstract.** The problems of ensuring the full and stable fulfilment of the state's financial obligations, the need to reduce costs for its operation, and reduce the debt burden on the national economy are relevant for most countries of the world. These issues belong to the sphere of budgetary security of the state. The purpose of this study is to analyse the effectiveness of public management of the budget security of Ukraine, to identify the main problems of management and to develop proposals for minimising the existing threats to the budget security of Ukraine. The criterion for evaluating the effectiveness of public management of the state's budget security is the indicator of the level of budget security, calculated in accordance with "Methodical recommendations for calculating the level of economic security of Ukraine" approved by the order of the Ministry of Economic Development and Trade of Ukraine dated October 29,

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2013 According to the results of the study, the effectiveness of the public management of the state's budget security was at an unsatisfactory level in Ukraine during 2018-2022. On the basis of the conducted analysis, it has been proven that the most serious problem of the budget security of Ukraine is excessive amounts of public debt and payments for its maintenance. This problem is a direct consequence of the high level of shadow economic activity in the state, which causes large-scale tax evasion by business entities. To solve the existing problem, it is proposed to systematically limit the volume of shadow economic activity of economic entities, in particular large corporations, and strengthen the criminal liability of state officials for corruption and embezzlement of budget funds. The growth of the financial capabilities of the state for four years in a row by the amount of additional revenues of more than 12.2 billion dollars. The USA will have a positive effect on the social policy and population dynamics of Ukraine

■ **Keywords:** shadow economy; public debt; anti-corruption measures; information systems; development strategy

## ■ Introduction

One of the main obligations of the country's leadership is to ensure the stable fulfillment of the state's financial obligations in the face of economic and external challenges. Critical to the management of budgetary security are the reduction of public administration costs, reduction of the budget deficit and reduction of the debt burden on the economy. Compliance with the requirements of budgetary security strengthens control over the budget deficit and public debt, reducing the risks of financial crises that have repeatedly undermined the stability of the economy. The unsatisfactory efficiency of public management of budgetary security in Ukraine leads to an increase in public debt and the country's dependence on external sources of financing the budget deficit. Ukraine's dependence on international financial support obliges the state administration to comply with the requirements of the IMF and the World Bank regarding budgetary discipline. This includes control over the deficit and transparent use of public funds, which is necessary to maintain financial support and macroeconomic stability. In addition, in times of war, significant budget funds are directed to defense needs. Effective management of these resources and adherence to the principles of budgetary security allows maintaining a balance between military and other critical expenditures, ensuring economic sustainability and social stability. Under the current circumstances, the development and testing in practice of methods for comprehensive assessment of the state's budgetary security and the elimination of factors that inhibit the development of the national economy and negatively affect all sectors of the financial sphere of Ukraine is becoming increasingly relevant.

The problems of the state and effectiveness of the implementation of the state's budgetary security have been studied by many Ukrainian and foreign scholars. In their works, they emphasised the important role of financial and budgetary security in the modern realities of the functioning of the state mechanism. V. Moscovets (2022) in his study focused on the concept of budgetary security as a key component of the state's financial security. He noted that budgetary security encompasses the state of protection of the budgetary system from internal and external threats that can lead to financial destabilisation. The main goals of budgetary security management, according to V. Moscovets, are the stable fulfillment by the state of its

financial obligations, lessen of the budget deficit, reduction of the debt burden and optimisation of expenditures. Among the threats to budgetary security, he highlighted the imperfection of legal regulation, budget deficit, uncontrolled growth of public debt, corruption in the budgetary process, as well as external factors such as military actions and global economic challenges. He also highlighted the need to introduce new approaches to public finance management and improve the system of control over the use of budget funds to improve Ukraine's economic stability. V. Cable (2022) studied the issues of financial security and economic sustainability in developing countries, including Ukraine. He focused on financial and economic challenges, such as the "middle income trap" and on issues that can help the economy move towards innovation and growth. His concepts may be applicable to Ukraine, especially at the stage of its reconstruction and economic development after the crisis. In his research, V. Cable emphasised the importance of coordinating financial resources and protecting financial systems from external threats and corruption. These topics are especially relevant for Ukraine in the context of its post-war recovery and the demand for transparent management of financial resources.

O.V. Onushko (2023) studied the subject of budget security in the context of the sustainability of the budget system and the state's ability to maintain financial stability. The main theses of his scientific work are related to the analysis of the criteria for the effective use of budget resources to ensure socio-economic development and national security. The scientist focused on the need for rational attraction and use of borrowed funds, compliance with the norms of budget legislation, as well as risk control in the formation and distribution of budget resources. He pointed out the threats to budget security associated with financial instability, resource constraints and inefficient management of funds, which can lead to destabilisation of the state's economy. V.V. Sokurenko (2021) paid special attention to the budget security of Ukraine. His research focused on the challenges caused by the growth of public debt and budget deficit, which threaten the stability of the country's financial system. V.V. Sokurenko (2021) analysed how increasing debt service expenditures reduces the resources available to finance other state functions, such as social protection, defense, and security. This poses

serious risks to budget balance and is a factor in destabilising economic security.

Investigating the issue of budget security in Ukraine, O. Zahidna *et al.* (2023) emphasised that to ensure financial stability, it is important to minimise the state budget deficit and balance the revenues and expenditures of state and local budgets. They noted the key role of effective management of budget funds, especially in conditions of economic instability. Scientists paid attention to the necessity to reduce the state's dependence on external borrowing and maintain the budget deficit at a level that does not pose risks to the national economy. Zahidna's research also covered the issue of optimising the allocation of budget resources and improving the tax system to strengthen the country's financial stability, which will create the prerequisites for the government to perform its functions in the field of social protection and defense as effectively as possible.

S.O. Rybak (2020) considered the subject of fiscal security as an important component of Ukraine's financial stability, emphasising the need for adequate risk management in the budgetary sphere. In his work, he highlighted the role of state mechanisms in ensuring the safe functioning of the budgetary system, which includes reducing debt obligations and optimising the budgetary process. Author focuses on critical aspects of fiscal security, including public debt management and ensuring the stability of budget revenues and expenditures.

Although there are many scientific works on the subject of budgetary security of Ukraine, this issue remains relevant, given that the main problems in this area have not yet been eliminated. This state of affairs, in turn, gives rise to numerous discussions. The greatest disagreements among scientists occur when discussing methods for assessing the level of budgetary security. At the same time, insufficient attention is paid to the development of systemic mechanisms capable of eliminating the main threats to the budgetary security of Ukraine and, on this basis, achieving an increase in the efficiency of public management of budgetary security of Ukraine.

The purpose of the study was to study the basic theoretical principles of budgetary security, its essence and role in the financial security of the state, analyse and compare budgetary security indicators during 2019-2022, as well as propose systemic mechanisms capable of quickly eliminating the main threats to the budgetary security of Ukraine and increasing the efficiency of public management of budgetary security of the state.

## ■ Materials and Methods

In the process of conducting this study, an array of statistical, scientific and analytical materials was processed. All calculations in the study were carried out in accordance with the "Methodological recommendations for calculating the level of economic security of Ukraine" (Order of the Ministry of Economic..., 2013). Statistical data ends in 2022 due to martial law in the country. Since for 2023,

most of the data on indicators and criteria used in this study have not yet been officially published. In the course of the study, the following components of Ukraine's budgetary security were calculated for 2018-2022: the ratio of the state budget deficit (surplus) to GDP, the share of the deficit (surplus) of budgetary and extra-budgetary funds of the general government sector in GDP, the share of the deficit (surplus) of budgetary and extra-budgetary funds of the general government sector in GDP, the level of GDP redistribution through the consolidated budget of Ukraine, the ratio of the volume of aggregate payments for servicing and repaying the state debt of Ukraine to state budget revenues. To calculate the above indicators, data from the State Statistics Committee of Ukraine (Statistical Yearbook of Ukraine..., 1997; 2023), the Ministry of Finance of Ukraine (Official website of the Ministry of Finance..., n.d.) and the National Bank of Ukraine (Official website of the National Bank..., n.d.) were used. All calculations are presented in the form of tables. In order to facilitate the perception and understanding of the information obtained in the process of calculations, a graphical method of information visualisation was used. These calculations made it possible to assess the effectiveness of the government's policy on deficit control, public debt management and financing of social programs; the level of stability and autonomy of the financial system of Ukraine; identify weaknesses in the economic security of the state, such as dependence on external sources of financing and a high level of public debt.

The research used: a system-structural approach; general scientific methods of logic, analysis and synthesis; comparative and chronological-evolutionary research methods; logical methods of scientific induction and deduction; a progressive-regressive method of cognition and interpretation of the effectiveness of public management of budgetary security of Ukraine; a synergistic concept of social self-organisation and optimisation of public administration. In particular, the system-structural approach made it possible to consider budget security as a complex system, where each element (budget deficit, level of public debt, social funds, etc.) interacts with others, which helped to identify the most significant factors affecting budget security and assess their mutual impact on the main economic indicators. Comparative and chronological-evolutionary research methods, through the analysis of changes in indicators for 2018-2022, made it possible to identify trends and changes in the state of budget security in Ukraine, particularly, to estimate the impact of the pandemic, war and other external factors on budget security. The progressive-regressive method made it possible not only to assess the effectiveness of current state policies, but also to identify gaps in budget security management, as well as possible measures aimed at eliminating them. This created opportunities for objective formulation of conclusions and development of recommendations aimed at improving the practice of public management of budget security in Ukraine in order to achieve positive social transformations, notably during the war.

## ■ Results and Discussion

At the present stage, the main regulator of the socio-economic, political and cultural development of society is the state. The state ensures the development of society through the creation of a system of economic security and maintaining its effective functioning. The main indicator of the socio-economic development of the state is GDP per capita and its dynamics. In 1990, this indicator in Ukraine was about 9.5 thousand US dollars (at purchasing power parity), and in Poland this indicator was about 1.6 thousand US dollars. That is, the ratio of GDP per capita of Ukraine to Poland in 1990 was 6 to 1. Accordingly, in 1990, Ukraine had a significantly higher level of economic well-being than in Poland (Statistical Yearbook of Ukraine..., 1997). In 2022, GDP per capita in Ukraine was about 5.6 thousand US dollars (at purchasing power parity), while in Poland this indicator reached over 23.0 thousand US dollars. Thus, the ratio of GDP per capita of Ukraine to Poland in 2022 was approximately 1 to 4 (Statistical Yearbook of Ukraine..., 2023). Thus, from 1990 to 2022, the level of GDP per capita in Poland increased 24 times compared to the level of Ukraine. This information indicates significant shortcomings in the effectiveness of the implementation of the basic principles of state economic policy in Ukraine, in particular, in the field of budgetary security.

During 2018-2022, the economic security system of Ukraine was threatened by several factors. The main one was the political crisis, which manifested itself in large-scale corruption of the state leadership, which resulted in an increase in the volume of shadow economic activity, from 28% in 2019 to 31% in 2021 and 32% in 2022 (Official website of the Ministry of Economy..., n.d.), that is, the critical level of this indicator of 30% in Ukraine has been exceeded since 2021 (Order of the Ministry of Economic..., 2013). The above factors destabilise the socio-economic sphere of macroeconomics.

Public management of the state's budgetary security is a complex dynamic system. It is a system of management measures aimed at maintaining the sustainable development of the national economy, macroeconomic stability and the stability of the financial system in order to prevent financial crises and ensure the ability of the state to fulfill its financial obligations to society. In its activities, public management of budgetary security of a particular state can be compared only with its own performance indicators, based on a set of criteria that comprehensively characterise the purpose of the functioning of this particular state system. Based on scientific theories, the most common approach to characterising the effectiveness of the functioning of the public management of budgetary security of the state is its classical understanding. It consists in the fact that this is an assessment of the achievement of the system's goal – maintaining sustainable development of the national economy, macroeconomic stability and stability of the financial system. It is about obtaining a result that would correspond to the accepted values of the criteria used to assess the results of the operation of this system. A

comprehensive characteristic of the effectiveness of public management of budgetary security of Ukraine is the value of the budgetary security indicator, calculated in accordance with the "Methodology for calculating the level of economic security of Ukraine", approved by order of the Ministry of Economic Development and Trade of Ukraine.

The budgetary security of the state is a concept that encompasses the ability of the state to ensure the stability and effectiveness of its budgetary process. This process covers budget planning, execution and control. The main aspects of budget security include:

1. Financial stability, which means ensuring stable financing of public expenditures, avoiding deficits that can lead to financial crises.
2. Transparency and accountability, because it is important that the budget process is transparent to the public, and that state bodies are accountable for the use of budget funds.
3. Efficiency of resource use, which involves optimising costs and, on this basis, maximising the results from the use of budget funds to achieve declared socio-economic goals.
4. Protection from external shocks through the state's ability to respond to external economic or political changes that can negatively affect the finances of the national economy.
5. Compliance with legislation by complying with financial and budgetary norms that regulate the processes of collecting and spending public funds.
6. Social justice, which is ensured when budget expenditures contribute to the development of social infrastructure and adequately support vulnerable segments of the population.

Ensuring budgetary security is an important task for state leadership, since the overall economic stability and well-being of the population depend on it. Accordingly, the effectiveness of public management of the state's budgetary security, the dynamics of its indicators are a key indicator of the state's development.

The concept of budgetary security combines economic, political and social components. For example, T. Kolyada & M. Guz (2019) note that budgetary security is understood as a state of ensuring the solvency and financial stability of public finances. This, in turn, ensures the ability of state authorities to effectively perform the functions assigned to them. Based on the fact that the state budget is one of the most important institutions for ensuring the economic sovereignty of the state, budgetary security is one of the basic components of financial security. That is why ensuring an adequate level of budgetary security is a necessary condition for creating positive changes in the structure of the national economy, increasing social protection of the population, and developing all spheres of society. V. Moscovets (2022) emphasised that the state's budgetary security as a component of financial security is a special state of the country's solvency, which ensures the balance of income and expenditure of the state and local budgets, as

well as the effective use of financial resources of the budget system during the performance of state and local authorities of their functions by preserving the financial stability of the budget system from the influence of threats.

That is, budgetary security as an economic concept, with its appearance, completed the process of interpenetration of structural and logical elements of the theory of national security and public finances. The concept of budgetary security, having absorbed the characteristic features of political and economic directions, has a dual nature and can be considered both from the point of view of a complex of organisational and legal relations, and as an indicator of the development of the budget system and the effectiveness of the budget process, as a criterion for assessing budget policy. Almost all scientists distinguish the following approaches to interpreting the essence of budgetary security: the state of ensuring the solvency of the state; financial conditions, expressed in the volume of budget resources and the principles of their formation and distribution; state policy, focused on the implementation of the country's national economic interests; the ratio of the parameters of the formation of budget funds and the total needs of the recipients of these funds; the level of performance by the state of its functions, taking into account the balance of income and expenditure of the state and local budgets; the process of developing, adopting and controlling (monitoring) the implementation of the budget; the degree of budget balancing.

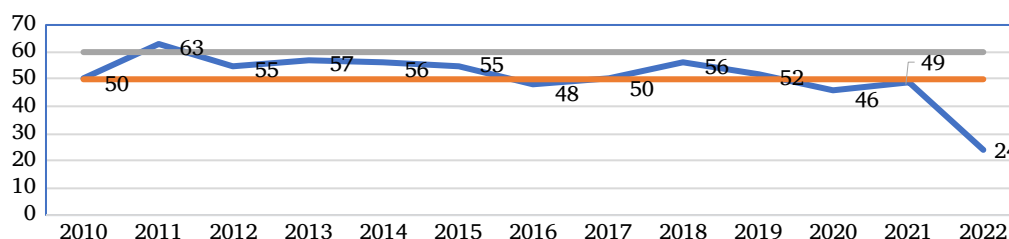
Thus, budget security characterises the state of the budget system, in which the balance of income and expenditure of the state and local budgets is achieved, a high level of asset liquidity is achieved, and there are monetary, currency and other reserves that are able to ensure the stability of the national economy. Thus, budget security is a basic component of the entire state security system, the failure to provide which will lead to the deprivation of funds for the organisation and functioning of the state

security system as a whole. The optimal level of budget security: guarantees higher solvency of the state (this, in turn, creates the prerequisites for balancing the revenues and expenditures of both local and state budgets); contributes to more effective use of budget funds in the process of performing functions by authorities of different levels; increases the financial stability of the state budget system with respect to the impact of threats.

It is advisable to highlight the following basic criteria inherent in budget security:

- ensuring the stability of the main parameters of the payment and settlement system;
- the reality of budget policy objectives, their compliance with national interests;
- based on providing sufficient financial resources, the expansion of the state's potential for implementing foreign and domestic policies is ensured;
- optimal attraction and use of credit resources to finance budget expenditures;
- identification and elimination of violations of current budget legislation. This contributes to the stabilisation of the country's socio-economic development (Order of the Ministry of Economic..., 2013).

An adequate level of budget security indicates that the state leadership performs the socio-economic and political functions and tasks assigned to it, and vice versa. That is, a low level of budget security indicates that the state leadership does not perform the social, political, and economic tasks required by the current situation in the country. According to the Methodological recommendations for calculating the level of economic security of Ukraine (Order of the Ministry of Economic..., 2013), "budget security is a state of ensuring the solvency and financial stability of public finances, which allows state authorities to perform the functions assigned to them as effectively as possible." The state and dynamics of the budget security indicator of Ukraine during 2010-2022 are shown in Figure 1.



**Figure 1.** State of Ukraine's budgetary security during 2010-2022, %

**Notes:** — indicator of Ukraine's budget security; — critical value of Ukraine's budget security indicator; — the threatening value of Ukraine's budget security indicator

**Source:** Letter-reply of the Ministry of Finance of Ukraine (2023)

According to the information shown in Figure 1, the budget security index of Ukraine during 2010-2022 decreased from 50% in 2010 to 24% in 2021, that is, by 26 percentage points, which is a negative phenomenon. At the same time, the optimal level of the budget security index is 100%, satisfactory – from 80 to 100%, unsatisfactory – from

60 to 80%, threatening – from 60 to 50%, critical – below 50%. That is, during 2016, 2020, 2021 and 2022, this index was below the critical value. Only in 2011 was the budget security index above the threatening level, since it was 63%. During the rest of the years under study, the budget security index was in a threatening state. Over the past five



years, the studied index has decreased from 56% in 2018 to 24% in 2022, which was a significant negative change.

As reported by the results of 2022, the financial challenges associated with the war had a significant negative impact on the overall state of the state budget. During 2022, there was a significant reduction in industrial production, transport, agriculture and other key sectors of the national economy of Ukraine. Russia's military aggression caused the destruction of infrastructure, the blockade of ports and the complication of logistics chains, which exacerbated budget imbalances. This resulted in an increase in state spending, in particular on defense, while simultaneously reducing revenues and increasing the budget deficit.

The state of the budget security indicator is characterised on the basis of four components (Order of the Ministry of Economic..., 2013). They reflect the specifics of a certain level of management (state, stock market, banking system, regions, sectors of the economic complex, organisations and institutions, enterprises, households and individual citizens), or its components: budget, debt, inflation, currency and investment security, security of monetary circulation.

The first component is the ratio of the deficit/surplus of the state budget to GDP. It makes it possible to assess both budgetary and macroeconomic risks in general and analyse the impact of the state's fiscal policy on the volume of domestic demand, the state of the balance of payments and the financial system as a whole. This indicator is an indicator of type "A". It is a mixed-type indicator, which will be a stimulant up to a certain value, and in case of excessive increase becomes a de-stimulator. Its value is optimal at a level from -2% to +3%.

The second component is the share of the deficit of budgetary and extra-budgetary funds of the general government sector in GDP, which covers the State Budget of Ukraine, local budgets and funds of mandatory state social and pension insurance. This indicator is calculated according to the IMF methodology and is a basic indicator of performance assessment for states that apply for a loan from the IMF. It is a mixed-type indicator. Its optimal value is zero.

The third component of budgetary security is the level of GDP redistribution through the consolidated budget. This indicator reflects the volume of the state's financial resources that are redistributed through the public finance system. This indicator characterises the level of centralisation of the state's financial system. Its optimal level is from 25% to 28%. It is a mixed-type indicator. In particular, the critical state of this indicator occurs when its value exceeds 37% or below 18%.

The fourth component of budget security is the ratio of the volume of aggregate payments for servicing and repaying the state debt to state budget revenues. It is calculated using the IMF methodology and is a disincentive indicator. That is, there is a feedback loop between the value of the indicator and the integral assessment. The optimal value is a level of 6%. Exceeding the 16% threshold signals a critical state of the state debt.

Calculations of the components of Ukraine's budget security for 2018-2022 were made. The data for the calculations were information from the Statistical Yearbook of Ukraine for 2022 (2023), the State Treasury Service of Ukraine and Letter-reply of the Ministry of Finance of Ukraine No. 3021-06/67651-09 (2023). The methodology for calculating the above indicators is shown in Table 1:

**Table 1. Methodology for calculating Ukraine's budget security indicators**

| No | Indicator name, unit of measurement   | Indicator calculation procedure  | Weighting coefficient value |
|----|---|--|-----------------------------|
| 1  | Ratio of state budget deficit/surplus to GDP, percent   | State budget deficit, UAH million / GDP, UAH million x 100   | 0.2671                      |
| 2  | Deficit/surplus of budgetary and extra-budgetary funds of the general government sector, percent of GDP | General government sector deficit, UAH million – consolidated budget deficit, UAH million / GDP x 100            | 0.2482                      |
| 3  | Level of GDP redistribution through the consolidated budget, percent                                    | Consolidated budget revenues, UAH million / GDP, UAH million x 100   | 0.2203                      |
| 4  | Ratio of total payments for servicing and repaying the state debt to state budget revenues, percent     | State debt servicing, UAH million + state debt repayment, UAH million / state budget revenues, UAH million x 100 | 0.2644                      |

**Source:** created by the authors based on Methodological recommendations for calculating the level of economic security of Ukraine (Order of the Ministry of Economic..., 2013)

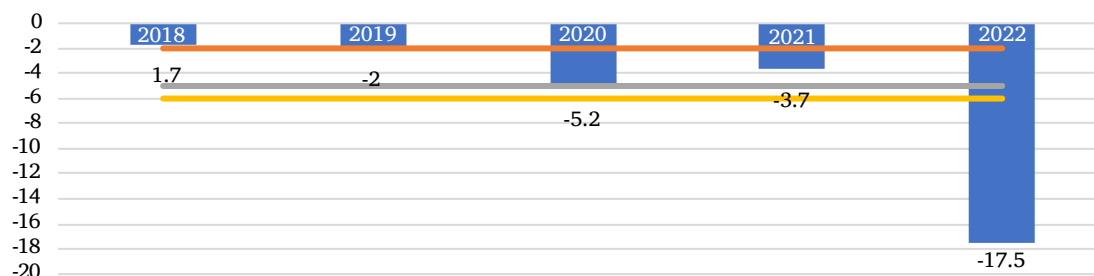
Each indicator of budgetary security has its own weight coefficient, which indicates the degree of contribution of each component to ensuring budgetary security. According to the information presented in Table 1, the most significant impact on the budgetary security of Ukraine is exerted by such components as the ratio of the state budget deficit/surplus to GDP (0.2671) and the ratio of the volume of aggregate payments for servicing and repaying the state

debt to state budget revenues (0.2644). Table 2 presents the budget indicators necessary to calculate the ratio of the state budget deficit/surplus to GDP, graphically presented in Figure 2. The optimal level of this indicator is from 3% to -2%, satisfactory from 3% to 5% and from -2 to -3%, unsatisfactory from 5 to 6% and from -3 to -4%, threatening from 6 to 8% and from -4 to -5%, critical from 8 to 10% and more and from -5 to -6% and more.

**Table 2. Indicators of the ratio of the budget deficit of Ukraine to GDP for 2018-2022**

| № | Budget indicator                                | Indicator values |         |         |         |         |
|---|---|------------------|---------|---------|---------|---------|
|   |   | 2018             | 2019    | 2020    | 2021    | 2022    |
| 1 | GDP, billion UAH                                | 3,560.3          | 3,977.2 | 4,222.0 | 5,450.9 | 5,239.1 |
| 2 | State budget deficit, billion UAH               | -59.3            | -81.0   | -217.6  | -198.8  | -914.9  |
| 3 | Ratio of state budget deficit/surplus to GDP, % | -1.66            | -2.04   | -5.15   | -3.65   | -17.5   |

Source: developed by the authors based on data Statistical Yearbook of Ukraine for 2022 (2023)

**Figure 2. Indicators of the ratio of Ukraine's budget deficit to GDP for 2018-2022, %**

Notes: — Ukraine's budget deficit to GDP ratio; — optimal level of budget deficit to GDP -2%; — satisfactory level of budget deficit to GDP optimal level of budget deficit to GDP -5%; — critical level of budget deficit to GDP -6%

Source: developed by the authors based on data from Table 2

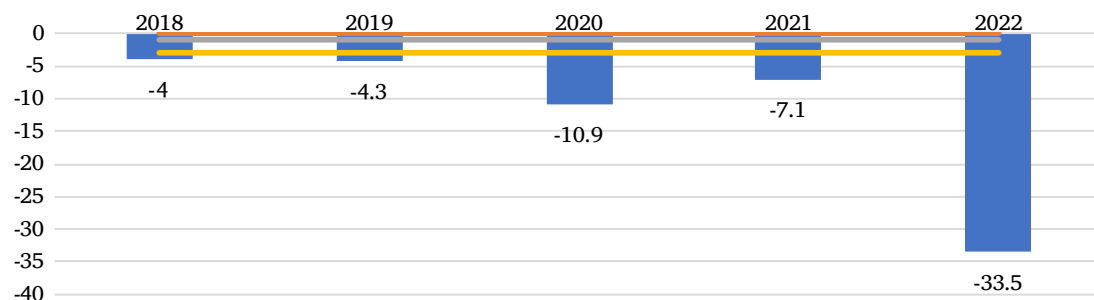
The dynamics of the ratio of Ukraine's budget deficit to GDP for 2018-2022 indicates a rapid deterioration of the budget situation in the country. As can be seen from the graph, this indicator increased from 1.7% in 2018 to 5.2% in 2020 and to 17.5% in 2022, which is more than 3 times higher than its critical level, indicating significant financial difficulties and a high risk to budget security. Such a trend may negatively affect Ukraine's economic stability, increasing dependence on external financing

and requiring urgent measures to improve budget management. Table 3 presents the budget indicators necessary to calculate the deficit/surplus ratio of budgetary and extra-budgetary funds of the general government sector. The optimal level of this indicator is 0%, the satisfactory level is 0-1% and from 0 to -1%, unsatisfactory – 1-2% and from -1 to -1.5%, threatening – about 3% and about -2%, critical – 5% and -3%. The data in the table are visualised in the graph (Fig. 3).

**Table 3. Indicators of the deficit/surplus ratio of budgetary and extra-budgetary funds of the general government sector of Ukraine for 2018-2022**

| № | Budget indicator  | Indicator values |         |         |         |         |
|---|---|------------------|---------|---------|---------|---------|
|   |   | 2018             | 2019    | 2020    | 2021    | 2022    |
| 1 | General government sector deficit, UAH billion  | 75.1             | 84.5    | 237.1   | 196.9   | 911.1   |
| 2 | Consolidated budget deficit, UAH billion  | 67.8             | 87.3    | 224.5   | 187.8   | 845.0   |
| 3 | GDP, billion UAH  | 3,560.3          | 3,977.2 | 4,222.0 | 5,450.9 | 5,239.1 |
| 4 | Deficit/surplus of budgetary and extra-budgetary funds of the general government sector, percent of GDP | 4.0              | 4.3     | 10.9    | 7.1     | 33.5    |

Source: developed by the authors based on data Statistical Yearbook of Ukraine for 2022 (2023)

**Figure 3. Indicators of the deficit/surplus ratio of budgetary and extra-budgetary funds of the general government sector of Ukraine for 2018-2022, %**

Notes: — the level of deficit of budgetary and extra-budgetary funds of the general government sector of Ukraine to GDP; — optimal level of deficit to GDP 0%; — threatening level of deficit to GDP -2%; — critical level of deficit to GDP -3%

Source: developed by the authors based on data from Table 3

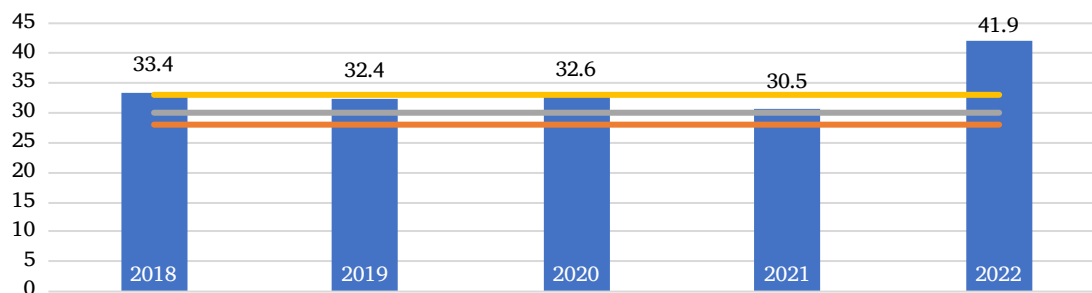
After analysing the dynamics of the deficit/surplus ratio of budgetary and extra-budgetary funds of the general government sector of Ukraine for 2018-2022, it was found that the studied indicator increased from 4.0% in 2018 to 33.5% in 2022, i.e. by 29.5 percentage points. Such dynamics indicate a significant deterioration in the financial situation. In general, the value of this indicator in the studied period of time compared to the requirements of Ukraine's budgetary security exceeded the critical level, which indicates serious risks to the financial

stability of the state. Such negative dynamics emphasises the need to introduce effective management measures to restore control over budget flows and reduce the deficit to ensure the country's economic security. Table 4 and Figure 4 present the budget indicators that are necessary to calculate the indicator of the level of GDP redistribution through the consolidated budget of Ukraine in order to assess the volume of state intervention in the economy and determine the efficiency of using budgetary resources.

**Table 4.** Indicators of the level of GDP redistribution through the consolidated budget of Ukraine for 2018-2022

| № | Budget indicator   | Indicator values |         |         |         |         |
|---|--|------------------|---------|---------|---------|---------|
|   |  | 2018             | 2019    | 2020    | 2021    | 2022    |
| 1 | Consolidated budget revenues, billion UAH                            | 1,184.3          | 1,289.8 | 1,376.7 | 1,662.3 | 2,196.6 |
| 2 | GDP, billion UAH   | 3,560.3          | 3,977.2 | 4,222.0 | 5,450.9 | 5,239.1 |
| 3 | Level of GDP redistribution through the consolidated budget, percent | 33.3             | 32.4    | 32.6    | 30.5    | 41.9    |

**Source:** developed by the authors based on data Statistical Yearbook of Ukraine for 2022 (2023)



**Figure 4.** Indicators of the level of GDP redistribution through the consolidated budget of Ukraine for 2018-2022, %

**Notes:** — level of GDP redistribution through the consolidated budget of Ukraine; — optimal level of redistribution 28%; — satisfactory level of redistribution 30 %; — unsatisfactory level of redistribution 33%

**Source:** developed by the authors based on data from Table 4

Having conducted a study of the dynamics of the level of GDP redistribution through the consolidated budget of Ukraine for 2018-2022, it was found that this indicator increased from 33.4% in 2018 to 41.9% in 2022, that is, by 7.5 percentage points. This means that the share of GDP that is redistributed through the budget significantly exceeds safe and optimal values. By 2018, this level was already in the risk zone, and by 2022 it exceeded the critical level, which indicates a serious threat to the financial stability of the state. Such negative dynamics may indicate an increase in government spending relative to GDP, which may limit economic development and threaten financial

stability, as well as an increase in the budget deficit and the risks of accumulating public debt. Therefore, the dynamics of the indicator reflects the need to revise fiscal policy and take measures to stabilise the budget burden in order to ensure the financial security of Ukraine.

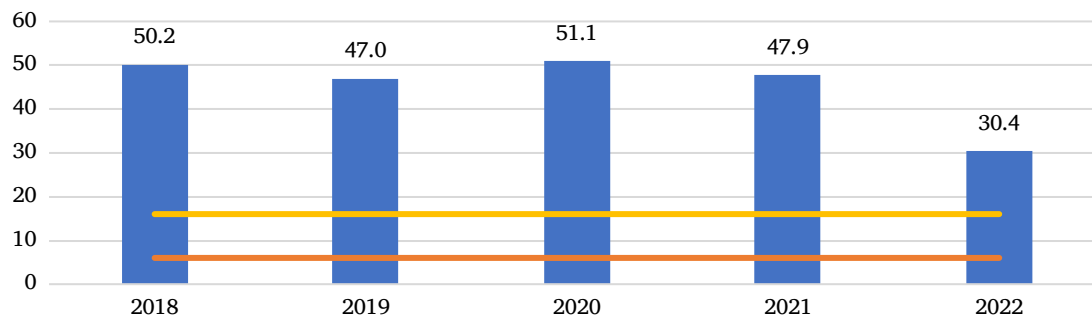
Table 5 presents the budget indicators necessary to calculate the deficit/surplus ratio of budgetary and extra-budgetary funds of the general government sector to GDP. This allows us to determine how capable the state is of ensuring the balance of its revenues and expenditures. The dynamics of the indicator are graphically shown in Figure 5.

**Table 5.** Ratio of the volume of aggregate payments for servicing and repaying the state debt to the revenues of the state budget of Ukraine for 2018-2022

| № | Indicators  | Indicator values |       |         |         |         |
|---|---|------------------|-------|---------|---------|---------|
|   |   | 2018             | 2019  | 2020    | 2021    | 2022    |
| 1 | Public debt service, UAH billion  | 116.1            | 120.1 | 158.7   | 174.3   | 186.0   |
| 2 | Repayment of public debt, billion UAH   | 349.9            | 345.2 | 385.5   | 441.1   | 355.3   |
| 3 | State budget revenues, billion UAH  | 920.8            | 989.6 | 1,065.4 | 1,284.3 | 1,778.2 |
| 4 | Ratio of total payments for servicing and repaying the state debt to state budget revenues, % | 50.2             | 47.0  | 51.1    | 47.9    | 30.4    |

**Source:** developed by the authors based on data Statistical Yearbook of Ukraine for 2022 (2023)





**Figure 5.** Dynamics of the ratio of the volume of aggregate payments for servicing and repayment of the state debt to the revenues of the state budget of Ukraine for 2018-2022, %

**Notes:** — ratio of the volume of aggregate payments for servicing and repaying the state debt to the revenues of the state budget of Ukraine; — optimal level 6%; — critical level 16%

**Source:** developed by the authors based on calculations in Table 5

Having studied the dynamics of the ratio of the volume of aggregate payments for servicing and repaying the state debt to the volume of revenues of the state budget of Ukraine for 2018-2022, it was found that the main threats to the budget policy of Ukraine are characterised by this indicator. Given that the studied indicator is more than twice as high as its critical level, it can be argued that the biggest problem of Ukraine's budget security is the excessive volumes of the state debt and payments for its servicing. This problem is a consequence of exceeding the critical level of shadow economic activity in the state by 30%, which results in large-scale tax evasion by business entities. In the studied period, the value of the indicator decreased from 50.2% in 2018 to 47.9% in 2021, and to 30.4% in 2022, which is a positive shift. The data in Table 5 indicate that the Ukrainian government, with insufficient budget revenues, spends an excessive amount of the country's financial resources on servicing and repaying the state debt.

Analysis of the indicators of budget security obtained as a result of the calculations allows us to give a comprehensive description of the current state of the state's budget security. Based on the calculations obtained, it is possible to develop ways to improve the efficiency of public administration in this sector of the state's economy. This will ensure an increase in the level of budget security of Ukraine. Based on the above assessment methods and ways to reduce existing threats, it is possible not only to improve the value of the level of budget security of Ukraine, but also to stabilise the country's economy as a whole. The most critical are the values of the level of the indicator of the ratio of the volume of aggregate payments for servicing and repaying the state debt to the revenues of the state budget of Ukraine. The state leadership, first of all, should take actions aimed at reducing the volume of the state debt and increasing budget revenues.

According to the Strategy of economic security of Ukraine for the period until 2025 (2021), the main challenges and threats in the field of budget security are: low level of budget discipline; high level of shadow economy; loss of budget revenues due to widespread phenomena of "gray" imports and smuggling, tax evasion schemes,

erosion of the tax base through the use of "low-tax" jurisdictions. The low level of budget discipline is directly related to corruption in state authorities, noted T. Brus & A. Arshinnikova (2018). According to their research, the creation of numerous anti-corruption bodies in the state with criminal legislation sufficiently loyal to corrupt acts and widespread corruption in the judicial and law enforcement branches of government allow most of the identified corrupt officials to still avoid criminal liability.

The high level of shadow economy of Ukraine has a significant impact on the budget deficit. After all, tax evasion affects the volume of tax revenues, which reduces the revenue part of the budget. Significant shadowing of economic turnover causes distortion of the basic principles of civil society and forms a negative international image of the country, inhibits the inflow of foreign investment into the state, exacerbates the problem of increasing excessive state budget deficit, increasing state debt, and worsening the living standards of the population. The growth of the state budget deficit accelerates inflation, financial crisis, and a decrease in the overall level of profitability. This, in turn, exacerbates the problem of property inequality in society. The withdrawal of significant amounts of funds from official circulation and their transfer outside the state significantly restrains the potential for economic growth of Ukraine (Ilychok, 2024).

The Strategy of economic security of Ukraine for the period until 2025 (2021) states that as of 2019, it was 28% and by 2025 it should be reduced to 25%, which is a critical level in accordance with the requirements of the "Methodology for calculating the level of economic security of Ukraine". The Cabinet of Ministers of Ukraine, the National Bank of Ukraine, the National Securities and Stock Market Commission, and the Antimonopoly Committee of Ukraine (according to their competence) are responsible for implementing this task. At the end of 2020, the level of the shadow economy in Ukraine increased to 30%, in 2021 it reached 32% of GDP, and in 2022 it amounted to 36%. For the national economy of Ukraine, this dynamics of the level of shadow economy had the following results, reflected in Table 6.

**Table 6.** Forecasted losses for the budget of Ukraine in 2019-2022, caused by the shadow economic activity of business entities

| № | Indicator  | Indicator values |         |         |         |         |
|---|--|------------------|---------|---------|---------|---------|
|   |  | 2018             | 2019    | 2020    | 2021    | 2022    |
| 1 | GDP, billion UAH   | 3,560.3          | 3,977.2 | 4,222.0 | 5,450.9 | 5,239.1 |
| 2 | Level of shadow economy, %   | 29               | 28      | 30      | 32      | 36      |
| 3 | Real GDP volume, billion UAH   | 5,014.5          | 5,523.9 | 6,031.5 | 8,016.0 | 8,186.1 |
| 4 | Volume of the shadow economy, billion UAH  | 1,454.2          | 1,546.7 | 1,809.4 | 2,565.1 | 2,947.0 |
| 5 | Consolidated budget revenues, billion UAH  | 1,184.3          | 1,289.9 | 1,376.7 | 1,662.3 | 2,196.6 |
| 6 | Actual level of GDP redistribution through the consolidated budget, percent                  | 33.3             | 32.4    | 32.6    | 30.5    | 41.9    |
| 7 | Potential volume of consolidated budget revenue, billion UAH                                 | 1,669.8          | 1,789.7 | 1,966.3 | 2,444.9 | 3,430.0 |
| 8 | The difference between potential and actual revenues of the Consolidated Budget, billion UAH | 485.5            | 499.9   | 589.6   | 782.5   | 1,233.4 |
| 9 | Basic deviation, billion UAH   | -                | 14.4    | 104.1   | 297.0   | 747.9   |

**Source:** developed by the authors based on data Statistical Yearbook of Ukraine for 2022 (2023)

According to the information provided in Table 6, in the studied period, the volume of the shadow economy in Ukraine increased from UAH 1,454.2 billion in 2018 to UAH 2,565.1 billion in 2021 and to UAH 2,947.0 billion in 2022. And the volume of the difference between the potential and actual revenues of the Consolidated State Budget increased from UAH 485.5 billion in 2018 to UAH 782.5 billion in 2021 and to UAH 1,233.4 billion in 2022. Considering that in 2022 the average exchange rate of the US dollar to the hryvnia was UAH 32.34 per 1 dollar (Statistical Yearbook of Ukraine for 2022, 2022), in 2022 the state budget received less revenue in the equivalent of USD 38.1 billion. (1,233.4/32.34). According to the results of the authors' correspondence with the National Security and Defense Council of Ukraine (Reply letter from the NSDC of Ukraine..., 2023), no top official from the state institutions responsible for its implementation was punished for the above-mentioned violations in the implementation of the Strategy for the Economic Security of Ukraine.

Solving the problem of exceeding the critical level of shadow economy of the state should be based on systematic phased changes in the work of the State Fiscal Service. The corresponding mechanism was developed by one of the authors of this study (Ilychok, 1997) and positively assessed by the leadership of the State Tax Administration of Ukraine (Reply letter from the DPA of Ukraine..., 1997). This mechanism can be applied under existing socio-economic and political circumstances in order to systematically phasedly reduce the volume of shadow turnover. In particular, the main assessment criterion when using this mechanism should be the profitability of the operating activities of corporations. This indicator should be compared with a similar indicator on average by type of activity of these corporations. Those enterprises, primarily large ones, whose indicators of profitability of operating activities will be the lowest from the average indicators for this type of activity, should become objects of intensified investigation by the fiscal service and anti-corruption bodies of Ukraine. The bulk of the oligarchic corporate sector operates with profitability of operating activities of 2-4% (Statistical Yearbook of Ukraine..., 2023). The implementation of the

proposed mechanism, according to the calculations of the authors of this study, is capable of ensuring a planned reduction in the level of shadow economy of the state by 20% during the year (Ilychok, 1997). This will ensure an increase in the revenue part of the state budget by more than 20% per year. In the realities of 2021, this means that the state budget would additionally receive 246.7 billion UAH. (20% of 1,233.4 billion UAH.), i.e. more than 7.6 billion USD (Table 6).

Taking into account the above, it was considered the prospects for improving budget policy as a whole by creating an open information space to support budget processes for authorised officials and interested public representatives. Such an information space should be easily accessible, provide a wide range of analytical and consulting services in related areas of budget processes at different levels of government, and ensure a high level of information security. In practical terms, the task of access to information is to automate and accelerate the process of processing information as much as possible by promptly obtaining it, consolidating and processing data along the entire chain from budget planning to the use of its funds and analysing the effectiveness of their use. The functional core of such a space should provide a high level of automation of the process of cash budget execution for effective management of state financial resources, which includes the optimisation of comprehensive budget accounting and financial control. In conditions of martial law, special attention should be paid to the formation and protection of national information sovereignty and the security of information resources, taking the experience of the United States as an example (International Strategy for Cyberspace..., 2011).

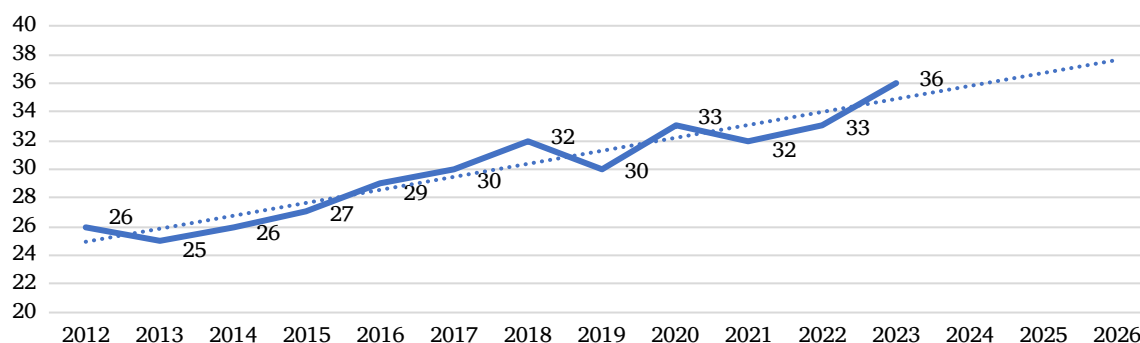
In the structures of public services of Ukraine at different levels of government, a range of highly specialised public services have been implemented and are functioning, which are directly or indirectly related to the budget processes of different levels of government, which have significantly simplified access to information data. According to unofficial data, there are approximately 350 registers in Ukraine, which represent various automated databases of structured data. The most significant and capacious

ones are supported by such state institutions as the Tax Service and the Statistics Service of Ukraine. The Treasury of Ukraine operates a comprehensive automated system for accounting for budget revenues and expenditures of all levels, which includes such modules as qualified trust services, electronic reporting "E-reporting", and the remote service system "Treasury Client – Treasury" (SDO). Access to information in such state information systems is limited and complexly structured.

To involve the general public in solving the problems of state development, over the past ten years, steps have been taken in Ukraine in such areas as ensuring access to state information; ensuring interactive access; developing the principles of universal access to information. In 2016, the Cabinet of Ministers of Ukraine approved the Concept of creating an integrated information and analytical system "Transparent Budget" (Order of the Cabinet of Ministers of Ukraine No. 92-p, 2016). As a result of this initiative, the E-data Portal (E-data, n.d.) (Single Web Portal for the Use of Public Funds) began operating, which is an official state information resource on the Internet. Information on it is published in accordance with the Law "On the Openness of the Use of Public Funds" (Law of Ukraine No. 183-VIII..., 2015). At the initiative of the Ministry of Finance, in 2018, the official state web portal Open budget (n.d.) was created, which is an integral part of the E-data in the field of public finance. At the level of territorial communities, the following software complexes have been implemented: "Integrated information system 'Social community'" (Program complex "Integrated information system...", n.d.) and "Household accounting for village and settlement councils" (Household accounting, n.d.), which accumulate and systematise data of united territorial communities. On December 4, 2019, the government approved the resolution "Issues of the Unified State Web Portal of Electronic Services and the Unified State Portal of Administrative Services 'Diya'". (Resolution of the Cabinet of Ministers of Ukraine..., 2019). With its help, the Ministry of Digital Affairs of Ukraine implemented quite convenient

mechanisms for providing public services in order to eliminate overlapping or duplication of functions inherent in numerous state bodies. In general, the digitalisation of the activities of citizens and organisations is being carried out quite successfully in Ukraine. However, these processes, which are stimulated from the top down and aimed at streamlining official communications, do not yet sufficiently contribute to increasing the socio-political activity of citizens. Only under the condition of forming a full functional space for the content familiarisation and analytical processing of budget process data, work with the budget will be maximally correlated with national and public interests, since it will be taken beyond the narrow interested high-ranking circles, whose interests are represented by highly qualified employees of the official system of financial bodies. In this case, official structures will not be able to duplicate the work of fund managers, but will perform the necessary control and analytical functions at all stages of the budget process. Of course, the first steps in this direction have been taken, as evidenced by the built-in BOOST-analysis toolkit on the Open budget web portal (n.d.).

In general, it can be stated that Ukraine is successfully implementing transformations in the field of digitalisation of state structures, a huge poorly structured information database with different target directions has been developed, a low level of universality, a low level of thematic support. The obvious way to eliminate these shortcomings is to introduce advanced information technologies. Figure 6 shows the dynamics of the average value of the anti-corruption index in Ukraine. In developed EU countries, the USA and Japan, this index ranges from 50 to 90. That is, from this figure we can conclude that the level of combating corruption in Ukraine is quite low. However, the tendency to a very slow increase in this indicator is obvious, which is a consequence of the implementation of anti-corruption reform and the work of specialised bodies. However, such a pace of combating corruption cannot be satisfactory, especially given the sharp drop in the level of state budgetary security.



**Figure 6.** Graph of the anti-corruption index for Ukraine

**Source:** compiled by the authors based on National Agency on Corruption Prevention (2023)

It should also be taken into account that the further development of information technologies can become a tool for reducing the level of the shadow economy in

Ukraine. This includes electronic payments and banking services, electronic tax systems and automation of tax processes, Big Data and data analytics, blockchain systems for

transparency and prevention of corruption, online registration and digital platforms for business, information systems for monitoring labor and employment, digital services for customs and foreign economic activity. For example, non-cash payments and electronic transactions reduce the circulation of cash, which makes tax evasion more difficult. The widespread introduction of mobile payment systems and digital banking services allows you to reduce the volume of the “black” market, making transaction volumes visible to the state. The use of IT to automate the process of tax accounting, declarations and control (in particular, through systems such as the taxpayer’s electronic account) simplifies interaction with state institutions and reduces the risk of corruption. Such platforms can ensure transparency and improve the accounting of tax revenues.

The implementation of Big Data analysis can help identify erroneous financial transactions and tax evasion schemes. After all, analytical models are able to quickly identify patterns indicating possible shadow activity and simplify the work of state control bodies. This analysis, once implemented, will emphasise the unacceptably low level of profitability of the operating activities of the most powerful corporations in Ukraine.

Blockchain technologies can ensure transparency and honesty in public administration in Ukraine and help in the fight against tax evasion on a particularly large scale through three main characteristics: transparency, data immutability and the absence of any intermediaries. For example, all data recorded in the blockchain are available to system participants, and some of this data may even be publicly available. For example, transactions related to government spending can be made available to the public, allowing everyone to see how budget spending is distributed. This reduces the risk of corruption, after which all participants (citizens, media, anti-corruption organisations) can monitor state spending. Ukrainian citizens will maintain transparent access to data, which will contribute to increasing their trust in government actions. Information recorded in the blockchain cannot be changed or deleted – this is one of the main characteristics of the blockchain. In the context of the problem of tax evasion or control of government spending, this means that after entering data about a financial transaction, it cannot be corrected. This eliminates the possibility of manipulating data, for example, to hide or correct data about expenses. Such immutability ensures that all transactions and reports remain in their original form. Blockchain also allows transactions to be carried out without the participation of a third party (intermediaries), such as banks or certain government agencies, to confirm or process transactions. This reduces the risks of corruption, as it makes it impossible to “manually” intervene in the process and reduces administration costs. In addition, blockchain can automate the fulfillment of certain conditions (for example, tax payments) using smart contracts.

In addition to the above, it should be noted that digital platforms for business registration and electronic services (e.g. for obtaining licenses) significantly reduce barriers to

legal business registration. This encourages entrepreneurs to operate legally, improves processes and reduces corruption. Employment registration and monitoring systems, such as the electronic labor register, also help reduce informal employment. After all, electronic employment registration systems allow for the creation of transparent and controlled employment conditions, which stimulates both employers and employees to comply with official requirements. This reduces the volume of informal employment, improves working conditions and ensures social protection for workers.

The implementation of digital import, export and customs clearance control systems reduces opportunities for smuggling and fictitious declarations. Digital systems allow for the automation of customs clearance and document processing, which makes processes faster, more transparent and traceable. If customs operations are automated, any attempts to change documents or circumvent rules become more difficult. Automation also reduces manual intervention, which reduces corruption risks.

The Strategy of economic security of Ukraine (2021) states that by 2025, Ukraine should implement the minimum standard of the Base Erosion and Profit Shifting Action Plan (BEPS Action Plan). Effective tax rules for controlled foreign companies must also be implemented. Since 2016, the European Union leadership has been insisting that the Ukrainian leadership implement this legislation, which should contribute to a significant reduction in the volume of offshore transactions by Ukrainian business entities.

The first step in implementing these proposals should be decisions by the Ukrainian parliament aimed at strengthening criminal liability for tax evasion by large corporations, for shifting the point of taxation to low-tax jurisdictions outside Ukraine, and for embezzlement of budget funds. Improving the efficiency of the state apparatus will contribute to increasing the volume of state budget revenues and reducing capital outflows outside Ukraine, which will significantly improve state finances. The growth of the state’s financial capabilities, in particular, the volume of additional revenues calculated above of over 12.2 billion USD per year, should have a positive impact on social policy and population dynamics in Ukraine (Ilychok, 2024).

Measures taken by the state leadership aimed at increasing the subsistence minimum to the socially necessary level will create the prerequisites for preserving and developing the human potential of Ukraine, supporting effective stimulation of people’s vital activities, existing systems of their socialisation and life support, and increasing the level of demographic security in Ukraine. The increase in the level of the subsistence minimum for citizens by the state leadership will proportionally affect the incomes of employees of the budget sector of the national economy, the growth of aggregate demand in the state, the volumes of turnover and profits of business entities, will ensure an increase in the profitability of business entities and the volumes of tax revenues to budgets of all levels (Ilychok, 2024). That is, as a result of the implementation of this mechanism, not only the financial sphere, but also the entire national economic



mechanism will gradually improve. In turn, an increase in state budget revenues and their more efficient use will create real prerequisites for a significant reduction in the volume of public debt and the costs of its servicing. This will ensure a significant improvement in the indicators of Ukraine's budgetary security.

The results of the current study are confirmed in the works of other scholars. Z. Varnaliy & T. Tomashovsky (2018) in their works emphasised the need to limit the shadow economy in Ukraine, since this sector has a negative impact on the national economy and state security. They also noted that the high level of shadowing – over 30% of GDP – increases economic and social threats. The main reasons for the spread of shadow economic activity, in their opinion, are weak state regulation, corruption, as well as the low effectiveness of measures aimed at de-shadowing the economic activities of large corporations.

V. Moscovets (2022), studying the issue of the shadow economy in Ukraine, emphasised the need to reduce its level to improve economic security and restore the international community's trust in the leadership of Ukraine. He considered the shadow economy to be one of the main threats, since its spread reduces the efficiency of financial flow management and complicates budget planning.

N.S. Sytnyk & D.Ya. Subytska (2018), studying the budget security of Ukraine, noted that the shadow economy significantly limits the country's economic development, creating significant financial losses. One of the key negative consequences of the above-critical level of shadow economic activity in Ukraine is a decrease in the revenue base of the state budget through tax evasion, which results in a significant deficit in social contributions. This situation, according to the scientist, leads to an increase in the level of corruption of top officials and destroys the economic stability of the state.

O. Ivashko (2015) studied the problem of the shadow economy in Ukraine through an analysis of its impact on economic stability and economic growth of Ukraine. The main emphasis of the scientist was on the significant level of shadowing, which covers various sectors of the economy and negatively affects the state budget. One of the key reasons for the significant level of the shadow economy in Ukraine, in his opinion, is the corruption of top officials and ineffective state regulation, which massively pushes business and citizens to engage in informal economic activities.

Research by V. Cable (2022) emphasised that global economic problems, such as corruption, can strengthen the shadow economy in countries like Ukraine. He emphasised the importance of anti-corruption measures and international support for strengthening Ukraine's economic stability.

J. Luciani (1988) and other experts have noted since the collapse of the Soviet empire that limiting the shadow economy in Ukraine is important for improving economic stability and promoting sustainable growth. The scientist's research indicates that improving the transparency of governance in Ukraine will be crucial in combating corruption and the shadow economy, since corruption and poor

quality of regulation significantly contribute to the growth of shadow economic activity. According to the scientist, reducing the then significant volumes of the shadow economy of Ukraine back in 1988 required systemic reforms in the law enforcement system, independence of the judiciary and clear anti-corruption measures. These proposals have not lost their relevance to this day, given the lack of systematic effective measures to limit the volumes of shadow economic activity in Ukraine.

Research by V. Movchan *et al.* (2009) on the shadow economy in Ukraine emphasised that a high share of shadowing is one of the main risks to the country's economic security. Supercritical volumes of shadow economic activity in the state, according to the scientist, cause obstacles to development, affect tax assessments and contribute to the emergence of social problems. T. Kolyada & M. Guz (2019), considering the volumes and causes of the shadow economy in Ukraine, proposed methods for its limitation. In his research, the scientist drew attention to the fact that the shadow economy has a significant negative impact on the state's budget revenues, and also threatens the socio-economic stability of the national economy. The studies of the scientists listed above were fully consistent with the main results of this study and confirm its relevance and effectiveness.

## ■ Conclusions

The subject of this article was the problems of Ukraine's budget security in order to minimise them and ensure the stability of public finances, increase the efficiency of the functioning of the budget system, as well as protect the state from internal and external threats that negatively affect its financial stability. In the process of conducting the study, the authors managed to specifically identify the main current problems of Ukraine's budget security, detail the causes of these problems and propose a mechanism for gradually limiting the main threats to Ukraine's budget security.

Based on official statistical information, the main four indicators of Ukraine's budget security for 2018-2022 were calculated and based on them it was proven that as a result of the reform of the national economy in 2018-2022, Ukrainian society not only did not improve the state of the state's budget security, but there was a significant drop in its level. This indicates a decrease in the efficiency of public management of the state's budget security and its unsatisfactory level. Along with Russia's military aggression, one of the main factors of such negative dynamics is the supercritical level of shadow economic activity in the state, which causes the withdrawal of significant amounts of financial resources from the national economy by large corporations, corruption of the civil service, a decrease in the volume of aggregate demand, a decrease in economic efficiency indicators, a decrease in the volume of tax revenues to the state budget. This, in turn, causes a decrease in GDP per capita, a deterioration in the social living conditions of Ukrainian citizens and depopulation of the population. The way out of the current situation is a systematic, phased limitation of the volume of shadow economic



activity of economic entities, in particular, large corporations, and increased criminal liability of state officials for corruption and embezzlement of budget funds in particularly large amounts.

Promising areas for further research into the issues of budget security in Ukraine, which are not covered in this study, may include the development of effective mechanisms for de-offshoring and combating abuses in the field of transfer pricing, which significantly affect state revenues, as well as the use of digital e-government technologies to ensure transparency of public administration. It

is also important to assess the impact of such measures on reducing the shadow economy and increasing the effectiveness of budget security.

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### ■ Conflict of interest

None.

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## Ефективність публічного управління бюджетною безпекою України: стан та тенденції змін

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■ **Анотація.** Проблеми забезпечення повного та стабільного виконання фінансових зобов'язань держави, необхідність зниження витрат на її функціонування, зменшення боргового навантаження на національну економіку є актуальними для більшості країн світу. Ці питання належать до сфери бюджетної безпеки держави. Метою даного дослідження був аналіз ефективності публічного управління бюджетною безпекою України, виявлення основних проблем управління та розроблення пропозицій щодо мінімізації існуючих загроз бюджетній безпеці України. Як критерій оцінки ефективності публічного управління бюджетною безпекою держави використаний показник рівня бюджетної безпеки. Згідно з результатами дослідження, в Україні впродовж 2018-2022 років ефективність публічного управління бюджетною безпекою держави була на незадовільному рівні. На основі проведеного аналізу доведено, що найвагомішою проблемою бюджетної безпеки України є надмірні обсяги державного боргу та платежів з його обслуговування. Ця проблема є прямим наслідком високого рівня тіньової економічної діяльності в державі, що спричиняє у значних масштабах уникнення сплати податків суб'єктами господарювання. Для вирішення наявної проблеми запропоновано системне поетапне обмеження обсягів тіньової економічної діяльності суб'єктів господарювання, зокрема великих корпорацій, та посилення кримінальної відповідальності державних чиновників за корупцію та розкрадання бюджетних коштів. Пропозиції на основі проведеного дослідження можуть бути використані при розробці політики економічного розвитку держави, податкової, бюджетної реформи та реформи кримінального права. Очікується, що впровадження запропонованих заходів сприятиме збільшенню обсягів доходів держбюджету, зниженню рівня тіньової економіки та оздоровленню фінансової системи в цілому.

■ **Ключові слова:** тіньова економіка; заборгованість держави; антикорупційні заходи; інформаційні системи; стратегія розвитку