The impact of the threshold indication system on Ukraine’s gross public and corporate debts

Abstract

Introduction. The problems that exist in our country cannot be solved without ensuring financial security. Stabilisation of the political and economic situation requires additional permanent financial resources. In order to stabilise the economy, Ukraine is compelled to apply for additional funding, which then forms the public debt. Yet, before making such important decisions, it is essential to understand how to repay the debt and how to attract additional resources effectively.

The purpose of the article is to investigate the dynamics of Ukraine’s gross public and corporate debts and offer a system of the threshold indicators to control the volume of Ukraine’s gross public and corporate debts.

Results. The article describes a mechanism to prevent financial insecurity in Ukraine, according to which they have set thresholds controlling the growth of Ukraine’s corporate debt (a system of indicators relating to financial security in terms of the country’s gross public and corporate debts). The authors propose thresholds for the domestic corporate debt, corporate debt to non-residents, gross external debt, foreign bond issues, gross external public and corporate loans. When reaching or exceeding the values of public debt thresholds, borrowing should be discontinued.

Conclusions. The article examines issues related to threshold indicators influenced by the amount of Ukraine’s gross public and corporate debts. The authors define the structure of and changes in the country’s gross public and corporate debts, and systematise the causes associated with such changes.

Keywords: Threshold Indicators; Public Debt; Corporate Debt; Mechanism; Financial Security

JEL Classification: C43; H60; H63

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1. Introduction

The issues related to permanent increases in public and corporate debts, improvement of financial and debt policies, raising the effectiveness of public and corporate debt management are much discussed in the modern context. Such discussions are relevant because the questions of how to reduce the public debt and improve living standards in Ukraine are particularly acute. These issues are very important because they refer to economic and financial security.

2. Brief Literature Review

An overview of the modern research on financial and debt phenomena are explored in the works by foreign and domestic practitioners such as T. Kovalchuk (2012) [4]; N. Yaroshevich (2010) [9]; D. Hollo, M. Kremer and M. Lo Duca (2012) [20]; S. G. Cecchetti, M. S. Mohanty and F. Zampolli (2011) [22].

A number of works by foreign scientists such as C. Van Ewijk, J. Lukkezen and H. Rojas-Romagosa (2013) [13]; S. Gebauer, R. Setzer and A. Westphal (2017) [15]; K. Greenidge, R. Craigwell, T. Chryistol and L. Dakes (2012) [17]; T. Knedlik and G. von Schweinitz (2011) [18]; P. Lysandrou (2011) [19]; D. Hollo, M. Kremer and M. Lo Duca (2012) [20]; S. G. Cecchetti, M. S. Mohanty and F. Zampolli (2011) [22].

3. Purpose

The purpose of the article is to investigate the dynamics of Ukraine’s net public and corporate debts and offer a system of the threshold indicators to control the volume of Ukraine’s net public and corporate debts.

4. Results

An overview of the modern research on financial and debt security and threshold indicators of debt crises is shown in Figure 1.

The Law «On the Fundamentals of National Security of Ukraine» defines the debt security of the state as the level of external and internal state indebtedness considering the cost of servicing and effective using of external and internal debts and optimal ratio between them, which should be sufficient to solve the urgent socio-economic needs without threatening the sovereignty of the state and destroying the financial system [1].

A. Illarionov developed his own system of indicators, which describes the condition of economic security. He thinks that the set of indicators should be compared with current results [2].

At present, there is no single approach to using threshold indicators of financial and debt security among scientists and practitioners.

In today's world practice, the normative indicator of debt security is the threshold of the external debt index of not more than 60% of GDP, and no more than 50% of GDP according to the World Bank's methodology. O. Baranovsky recommends the threshold value of this indicator equal to 25% of GDP. S. M. Poberezhnyi proposes to set the threshold values of general amount state debt to GDP in Ukraine which is not more than 55%, with the external debt to GDP being no less than 25% [9].

An example of threshold values of the public debt is the Maastricht Treaty can be presented as a result of limit values in which the volume of domestic debt to GDP must not exceed 30%, and the amount of external debt to GDP is no more than 30%.

Methodological recommendations for calculating the level of economic security of Ukraine, approved by Order of the Ministry of Economic Development and Trade of Ukraine No. 1277 as of 29 October 2013 determine nine relevant components and their limit values, among which there are five indicators of debt security such as the ratio of the public and publicly guaranteed debt of Ukraine to GDP, the ratio of the gross external debt to GDP, the weighted average yield from public bonds on the primary market, the Emerging Markets Bond Index + Ukraine, the ratio of the official international reserves to the gross external debt. According to the methodology suggested by the Ministry of Economic Development and Trade of Ukraine, the domestic public debt must not exceed 30% relative to GDP; the foreign public debt should not be more than 25% of GDP [3].

Nowadays, many developed countries of the world use threshold indicators to manage financial security and public debt. These are the USA, Germany, Japan, France, the UK, Italy, Canada, Ukraine, Russia and other countries. The
peculiarities of the country’s threshold systems are the list and normative values of threshold indicators to assess debt security. Each country develops and has its own methods for assessing debt security, although there are recommendations from the IMF, the World Bank and European Central Bank, and individual countries should take the relevant recommendations into account when developing threshold indicators and introducing their own techniques.

**Review of actual publications about the threshold indicators of debt crises**

C. Van Ewijk, J. Lukkezen, Rojas-Romagosa in the publication “Early-warning Indicators for debt sustainability” [13] offered “an approach to assessing the sustainability of public finances through the use of early warning indicators to increase financial stability in the medium term, which includes measures to respond to debt risks through fiscal policy instruments”.

In the work by P. De Lombaerde, E. J. Sausedo Acosta “Indicator-based monitoring of regional Economic Integration” [14] was presented “the experience of the establishment of indicator systems for monitoring regional economic integration strategies, such as preferential trade zones, common markets, economic and monetary unions”.

S. Gebauer, R. Setzer, A. Westphal in “Corporate debt and investment: a firm level analysis for stressed euro area countries” [15] investigated “the connection between corporate debt and investment for a group of five peripheral countries in the Eurozone. The research results show that even moderate levels of indebtedness can have a negative impact on the investment of small firms, reducing the level of profitability”.

In the report “On Global Financial Stability” (2017, October) [16], was “analyzed the indebtedness of households and its impact on global financial stability. Empirical studies, as well as lessons from the global financial crisis, have shown that an increase in private sector loans, including household debt, may increase the likelihood of a financial crisis”.

K. Greenidge, R. Craigwell, T. Chrystol and L. Dukes in the work “Threshold Effects of Sovereign Debt: Evidence from the Caribbean” [17] investigated the issue of threshold effects between economic growth and public debt in the Caribbean countries. “The results of this study indicate the existence of a threshold level of debt in the amount of 55-56% in relation to gross domestic product. That is, the debt-to-GDP ratio at the 55-56 level is marginal, and the excess of this indicator reduces the pace of economic growth.”

T. Knedlik, von G. Schweinitz in “Macroeconomic Imbalances as Indicators for Debt Crises in Europe” [18] have published scientific results according to which “indicators of macroeconomic imbalances can be used to identify the risks of public debt sustainability in the European Union, proposed four sets of indicators to identify the early stages of debt crises using a signaling approach to formulate integrated indicators for the application of weighting factors to prevent future crises”.

P. Lysandrou [19] in the research “Debt Intolerance and the 90% Debt Threshold: Two Impossibility Theorems” argued that “there is a risk of debt intolerance as a whole: no high-debt government, including the G-7 governments, can be resistant to this threat; there is a threshold for public debt: no government, including the G-7, will be able to avoid the serious consequences of insolvency if its ratio to GDP reaches 90%, especially in the current uncertainty”.

D. Hollo, M. Kremer, M. Lo Duca, the authors of “CISS - A Composite Indicator of Systemic Stress in the Financial System” [20] proposed a new indicator “Composite indicator of systemic stress” for the definition of systemic risk, the main novelty of which is “the application of the basic portfolio theory to aggregate five market-oriented sub-indices created from fifteen individual indicators of financial stress, based on data from the EEC”.

In the D. Hollo’s publication “A system-wide financial stress indicator for the Hungarian financial system” [21] proposed a “system-wide index of financial stress, which includes the spot currency market, the secondary market of government bonds, the currency swap market, the stock market, the interbank unsecured money market, the banking segment. The results of the study indicate that the level of Hungarian financial system stress was mainly due to disruptions in the banking and currency swap segments.”

S. G. Cecchetti, M. S. Mohany, F. Zampolli in the scientific research “The real effects of debt” [22] considered “the issue of high government debt using a new set of data, which includes public debt figures in 18 OECD countries from 1980 to 2010. The obtained results of the assessment of the level of debt indicate that the limit of government debt should not exceed 85% of GDP, the marginal level of corporate debt – 90%. To create a fiscal buffer required to address emergencies, governments should support debt level significantly below the estimated threshold.”

Fig. 1: *Review of scientific research on financial and debt security on the basis of threshold indicators of debt crises*  
Source: Compiled by the authors based on [13-22]
As a result of the country's economic policy, significant changes have taken place in the structure and state of the public debt in the past years. During the 2011-2013, the ratio of general public debt to GDP was within the regulatory limits defined by the Budget Code of Ukraine, accounting for no more than 60% (for countries with developed domestic financial markets and high credit ratings (markets)). However, a lot of scientists think that the public debt must exceed 50% of GDP in countries that have a transition economy, including Ukraine [2; 4].

The restructuring of the external debt, held by the Ministry of Finance of Ukraine in 2015, has allowed reducing the loading debt and eliminating the peak loads for the budget if it is required to proceed with substantial one-time payments on foreign obligations. Owing to the abovementioned restructuring, the repayment costs related to the external public debt in 2016 amounted to USD 574 million, compared to USD 2.25 billion which Ukraine would have had to pay without the restructuring. Considering the dramatic depreciation of the hryvnia, the Ukrainian national currency, during the period of the crisis in the global economy, the external public debt denominated in hryvnia has increased significantly. The main danger of the external public debt and publicly guaranteed debt of Ukraine is that such debts are denominated in foreign currency. Due to the sharp devaluation of the hryvnia, the debt denominated in the national currency, also increased significantly. The lower the rate of the national currency is, the more hryvnias is required to service the foreign debt. The solution of this problem is that the state budget should manage the currency risk.

The country’s ability to timely pay off its debt at the level of the Government and the National Bank is not in doubt. According to the Law «On the State Budget of Ukraine for 2018», the amount of payments to cover the public debt for 2018 is UAH 175.7 billion, which is by 46.17 billion more than in 2017. According to V. Suslov [8], the situation with the debt of the corporate sector and the forced purchase of currency for the debt payment of the corporate sector has led to an increased demand for the US dollar. Along with the crisis of the banking system and the outflow of foreign currency deposits, it causes the periodic depreciation of the hryvnia, either speculative or natural.

In recent years, the negative trends have increased. First of all, this is attributable to the external corporate debt. Corporate debts are dangerous because the interest on the debt is much higher. According to the Ministry of Finance of Ukraine, the average interest rate on the external public debt amounts to 1.6% per annum in foreign currency, while the domestic debt amounts to 12.1% in local currency [7]. As for the commercial debts, it is much higher amounting to 6.5% and 12.7% in the national currency.

During the past years, in spite of stable development of the national economy, Ukrainian banks, corporations and holdings have been entering the foreign debt markets and attracting cheap money from abroad, getting loans from foreign banks and placing the bonds and even IPO due to the fact that external corporate debts have increased. Today, being unable to pay off a large number of external and internal debts, the real economy of Ukraine has faced with massive corporate defaults.

In 2015-2016, the highest level of defaults was observed among the companies of steel and mining industries accounting for 6.5%. A sharp drop in the world prices for raw materials leads to bankruptcies of Ukrainian companies. Corporate defaults of a number of large enterprises and financial institutions in 2016-2017 continued, while Ukrainian banks were facing difficulties in repaying their foreign loans, obtained in the period of 2015-2017. Correspondingly, the crisis in the corporate sector persists [8].

The growth of the external corporate debt increased the dependence of internal processes on the external environment. Furthermore, this is one of the reasons of Ukraine’s involvement in the global crisis, which has led to economic imbalances. Big banks, state-owned companies and private corporations are the main debtors. In theory, the state is not liable for corporate debts. In fact, it helps the companies to pay off their debts. The authors believe that the most significant changes in the nature of the domestic debt include: transformation of the external public debt in the corporate debt to non-residents and a sharp increase of gross corporate debt owing to lower interest credits. However, the growth of the corporate debt to non-residents will sharply decrease in the near future owing to corporate defaults in the amount of UAH 8.3 billion, with special attention to be paid to long-term growth of the entire gross debt, both public and corporate one. The situation with the gross debt has worsened due to the growth of corporate debts to non-residents.

The threshold indicators of economic security related to the public and corporate debts are shown in Figure 2.

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The authors believe that the economic security indicators related to the state and corporate debts should be defined in such a way:

The threshold value of the internal corporate debt. The ratio of the assets of the national banking system to GDP must be no less than 100–120%, the ratio of the volume of bank credits to the private sector to GDP - 70-75%. Within internal corporate loans, this threshold value must not exceed the ratio of 80% to GDP. However, such threshold exceeds the capabilities of the national banking system of Ukraine in crisis conditions.

The threshold value of the corporate debt to non-residents. In the modern conditions, only the most reliable Ukrainian companies can take loans or place their securities abroad. The availability of external corporate loans depends on the world market conditions (supply and demand for loans, level of interest rates). In this regard, the threshold value of corporate debt to non-residents must be within 40% of GDP. Ukraine should control the level of external corporate debt. It amounted 51.2% of GDP in 2016 and as of May 1, 2017 was USD 48.5 billion, which exceeded the recommended threshold indicator value. Consequently, the level of external corporate debt needs to be monitored and controlled on a permanent basis.

The threshold value for the external bonds of corporations. Its purpose is to prevent buying of a large number of securities by non-residents. This threshold value should not exceed 10% of GDP.

The threshold value for the total external state and corporate debts. Its purpose is preventing creation of the government and corporate securities’ pyramid on the foreign markets. Considering the fact that the state debt for securities is less reliable than for bank loans due to the changes of the securities’ profitability and market value, the value of the indicator must not exceed 30% of total external debt.

Consider that the limit threshold value for the external state debt is 40% of GDP, the value of the external state debt for the securities must be not more than 13% of GDP. Considering, that the threshold value for the external corporate debt must not exceed 10% of GDP, the threshold of financial security for the total external state and corporate debts must not exceed 23% of GDP.

Application of the threshold indicators data is very important in Ukraine. The volumes of state external and internal debt must fit to the threshold values. The indicative control of the threshold values of financial security in the field of state debt must be realised by the Ministry of Finance of Ukraine, and the National Bank of Ukraine. Upon the reaching or exceeding the threshold values of the indicators of the state debt, the borrowing must be reconsidered or discontinued.

To prevent threats to Ukraine’s economic security, it is essential to set thresholds of the growth of the corporate debt, i.e. security indicators to control the public and corporate debts.

In the authors’ opinion, based at the ratios from Table 2, the threshold value of the domestic public debt of Ukraine to GDP must not exceed 30% (UAH 715,131 million in 2018) in the crisis conditions, while the threshold value of the external public debt of Ukraine to GDP must not exceed 30% (UAH 715,131 million in 2018). The maximum amount of the general public debt must not exceed 60% of GDP (UAH 1,502,238 million in 2018). The threshold value of the general public debt must not exceed 50-55% of GDP at the stage of the country’s sustainable development. However, considering the indicators in the form of general threshold values of the domestic and external public debts, it is necessary to keep in mind the qualitative changes that have occurred during the past years. The external corporate was USD 49 billion, which accounted for 51.2% of GDP in Ukraine. The total amount of debt on loans to non-residents and Eurobonds of Ukrainian companies and banks as of 1 May 2017 amounted to USD 48.5 billion (USD 42.7 billion - for the corporate sector and USD 5.7 billion - for deposit-taking corporations).

5. Conclusions
1. The authors have studied the dynamics and structure of Ukraine’s public and corporate debts. The obtained results show that Ukraine’s external public debt has been steadily growing due to a large volume of loans from banks and non-financial corporations, which has led increasing dependence of the state from foreign countries.
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