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## ANALYSIS OF STRUCTURE AND DYNAMICS OF UKRAINIAN EXTERNAL DEBT IN CRISIS CONDITIONS

### АНАЛІЗ СТРУКТУРИ ТА ДИНАМІКИ ЗОВНІШНЬОЇ ЗАБОРГОВАНОСТІ УКРАЇНИ В УМОВАХ КРИЗИ

### АНАЛИЗ СТРУКТУРЫ И ДИНАМИКИ ВНЕШНЕЙ ЗАДОЛЖЕННОСТИ УКРАИНЫ В УСЛОВИЯХ КРИЗИСА

*This scientific work has been devoted to research one of the most important categories of economic development, namely the government debt of Ukraine. The state budget deficit, attracting and using loans to cover this deficit has led to the formation of a significant increase in government debt in Ukraine. The current economic situation in Ukraine is characterized by threatening the growth of the debt burden, which is one of the basic factors slowdown of the economy. The main reasons for the growth of public debt are: an unprecedented political crisis and the continued military conflict in the east; deep economic recession caused by the rearrangement of economic ties with international partners and the destruction of infrastructure and industrial projects in parts of the country; funding the state budget deficit from government borrowing, which growth is largely due to increasing defense spending and public debt service. The large size of the internal and external debt, increase of costs for maintenance of this debt necessitated to solve the problem of national debt, and therefore find ways to improve its management mechanism. The more burdensome accumulated external and internal debt are for the state, the more maintenance involved in the interaction with the functioning of the economy and its financial system. Classification of external debt of Ukraine is proposed in the article, which will help to identify financial threats that Ukraine faces. It also was reviewed and analyzed the structure of external debt dynamics for the 2008-2015.*

**Keywords:** government debt, government external debt, government internal debt, government guaranteed debt.

*Наукова праця була присвячена дослідженню однієї з найважливіших категорій економічного розвитку, а саме державному боргу України. Дефіцит державного бюджету, залучення та використання позик для його покриття призвели до формування і значного зростання державного боргу в Україні. Поточна економічна ситуація в Україні характеризується загрозливим зростанням боргового навантаження, що виступає одним з базових факторів гальмування розвитку економіки країни. Основними причинами зростання обсягу державного боргу стали: безпрецедентна політична криза та тривалий військовий конфлікт на сході країни; глибока економічна рецесія, викликана перегрупуванням економічних зав'язків з міжнародними партнерами та руйнуванням інфраструктури та промислових об'єктів на частині території країни; фінансування за рахунок державних запозичень дефіциту державного бюджету, зростання якого обумовлене в значній мірі збільшенням видатків на оборону та обслуговування державного боргу. Великі розміри внутрішнього і зовнішнього боргу, а також відповідно зростання витрат на його обслуговування обумовлюють необхідність вирішення проблеми державного боргу, а відтак і пошуку шляхів вдосконалення механізму його управління. Чим обтяжливішим стає для держави нагромаджений зовнішній та внутрішній борг, тим його обслуговування активніше включається у взаємодію з функціонуванням економіки та її фінансової системи. Тому у статті була запропонована класифікація зовнішньої заборгованості України, яка дасть змогу виявити фінансові загрози, які можуть постати перед Україною. У статті також була розглянута структура та проаналізована динаміка зовнішнього боргу за 2008-2015 рр.*

**Ключові слова:** державний внутрішній борг, державний зовнішній борг, гарантований державою борг.

Научная работа была посвящена исследованию одной из важнейших категорий экономического развития, а именно государственному долгу Украины. Дефицит государственного бюджета, привлечение и использование займов для его покрытия привели к формированию и значительному росту государственного долга в Украине. Текущая экономическая ситуация в Украине характеризуется угрожающим ростом долговой нагрузки, которая выступает одним из базовых факторов торможения развития экономики страны. Основными причинами роста объема государственного долга стали: беспрецедентный политический кризис и длительный военный конфликт на востоке страны; глубокая экономическая рецессия, вызванная перегруппировкой экономических завязок с международными партнерами и разрушением инфраструктуры и промышленных объектов на части территории страны; финансирование за счет государственных заимствований дефицита государственного бюджета, рост которого обусловлен в значительной степени увеличением расходов на оборону и обслуживание государственного долга. Большие размеры внутреннего и внешнего долга, а также соответственно рост расходов на его обслуживание обуславливают необходимость решения проблемы государственного долга, а затем и поиска путей совершенствования механизма его управления. Чем обременительнее становится для государства накопленный внешний и внутренний долг, тем его обслуживания активнее включается во взаимодействие с функционированием экономики и ее финансовой системы. Поэтому в статье была предложена классификация внешней задолженности Украины, которая позволит выявить финансовые угрозы, которые могут возникнуть перед Украиной. В статье также была рассмотрена структура и проанализирована динамика внешнего долга за 2008-2015 гг.

**Ключевые слова:** государственный внутренний долг, государственный внешний долг, гарантированный государством долг.

**Introduction.** The transformation of the economic system of Ukraine related to the implementation of economic, political, financial, credit, social reforms requires financial and credit resources. Lack of them in sufficient quantities promotes the widespread use of state loans as an important method of resource mobilization.

Gaps in financial and monetary policy led to an unjustified increase of external debt. The lack of theoretical justification, perfect legal security, efficient mechanism for debt management, regular system analysis, control of external debt and its impact on national economic system led to the growth of external debt.

The accumulation of large external debt and its growing pressure on public finances need to study the nature and characteristics of public debt as the debt burden affects the national economic system functioning.

The external debt of Ukraine and its structure discussed in scientific papers of T. Vakhnenko [1] V. Kozyuk [2; 3], A. Plotnikov [4]. Methodological approaches to classification of external debt of Ukraine highlighted in works of T. Vakhnenko [5], Y. Ivanenko [6] A. Mamyshev [6]. The external debt of Ukraine in the context of macroeconomic policies analyzed by V. Zagorskyi [7], S. Lutsyshyn. The theory of external debt management was in highlighted in works of J. Stiglitz [8], P. Samuelson [9] M. Friedman, J. Hicks.

The internationalization of production, capital, sales, liberalization of international exchange, openness of national economies on the one hand and the increase in government debt around the world, on the other hand, require study and justification of the system of public debt management in conditions of market economy which will determine the prospects for settlement of debt problems in Ukraine.

**Formulation of the problem.** Nowadays, any country is becoming increasingly involved in global economic processes that affect both the macroeconomic performance of the national economy and the welfare of each resident.

One of the key economic problems today is the external debt of governments and the private sector, which is growing every year. External borrowing for our state is one of the tools of the model of outstripping growth that involves active investments in infrastructure, production facilities, technological upgrading of enterprises and the development of intellectual capital.

However, increasing of gross external debt is accompanied by significant financial risks. Thus, the external debt of the private sector, including commercial banks, was the catalyst for the financial crisis that has gripped Ukraine in autumn 2008. Hoping for permanent refinancing of loans, corporations and banks have accumulated huge amount of foreign debts. After the cessation of foreign refinancing, they found themselves in a difficult situation when it was necessary to repay the full amount of the debt at once. As completely foreign loans denominated in foreign currencies, mainly in US dollars, the need to repay

foreign loans led to a sharp increase in demand for foreign currency, the collapse of the hryvnia and final imbalances in financial markets.

Analysis of the structure of external debt based on correct classification approach makes it possible to determine the theoretical basis of external debt of Ukraine management, which is a very important component of the anti-crisis policy.

**Methodology and methods of study** based on a systematic approach to general theoretical, historical and evolutionary understanding of the features of the formation and management of external debt. Logical and dialectical methods were used to solve problems, methods of analysis and synthesis, concrete and abstract, comparative characteristics.

**The main results of the study.** In the foreign debt classification first of all must be taken into account the principles of attracting international loans and functions which they perform in the national economic system.

In Ukrainian scientific literature, the following principles to attract foreign loans are [2-4; 9; 10]:

– return: if received funds will not be returned, it is irrevocable transfer of money capital, i.e. financing;

– urgency: ensure repayment of the loan in established terms;

– paying: reflects the law of value and way of differentiated credit terms;

– provision: guarantees of repayment;

– purposefulness: involves identifying specific loan facilities (such as «tied» loans).

Foreign debt, as an important part of the financial system of Ukraine and ensuring the flow of financial resources required for its development the following functions [10; 11]:

– reallocation of loan capital between countries to meet the needs of expanded reproduction;

– economy on distribution costs;

– acceleration of the concentration and centralization of capital.

The external debt of Ukraine formed at different stages of development of the Ukrainian economy and is quite heterogeneous. The economic literature (both Ukrainian and international) has different approaches to classification of external debt. Classification for Ukraine should reflect the national economy and the level of financial relationships. Only such approach will enable to correctly reflect the nature of external debt of Ukraine.

The classification of external debt which must include a lot of features for comprehensive analysis is another important aspect. However, it is necessary to avoid inclusion in the classification extra features or too detailed division of external debt on certain grounds to have clear and understandable presentation of information.

Given the above, a classification of external debt of Ukraine on the following criteria should consist of such features [12; 13].

1. The legal form of creditor:

– debt to private firms, banks, intermediaries (brokers);

– debts to national governments;

– mixed debt, formed as a result of the participation of private enterprises and foreign countries;

– interstate loans from international and regional monetary and financial organizations.

The need for a separate group of loans from international organizations such as the IMF and the World Bank, caused by the fact that during the 90th century Ukraine received significant credit support from these organizations. Loans, including from the IMF, differ from commercial loan because they have special conditions (covenants), which impose on Ukrainian government some constraints in the implementation of economic policy. Such loans are specific and must be analyzed separately.

2. Organizational and legal form of the borrower's debt is divided into:

– external debt of the state;

– external debt of public enterprises;

– external debt of private companies (other than banks);

– external debt of commercial banks;

– other external debt.

External debt of Ukrainian banks is put into a separate group due to the rapid increase in the share of banking sector in the gross debt of Ukraine.

3. Depending on the kind of foreign trade transactions covered by borrowed funds:

– commercial loans directly related to foreign trade and services;

– financial credits used for any other purposes, including direct investment, construction of investment projects, the acquisition of securities, repayment of foreign debt, an intervention;

– mixed credits (serve mixed forms of export of capital, goods and services, such as performance contracting).

4. Currency loans are:

- payable in the currency of the borrower;
- in the currency of the lender;
- in Euro;
- in the international settlement currency unit based on the currency «basket» (SDR, ECU, etc.).

It is necessary to emphasize the need for a separate group for eurocredits, as this financing tool widely used by the Ukrainian government and private borrowers in the past to minimize interest costs. Given the low transaction costs and small euro exchange rate (compared to other forms of external lending), eurocredits are a promising tool for both state and private borrowers. Thus, there is a high probability that their share in the structure of Ukrainian external debt is steadily growing.

5. According to maturity debt can be:

- short-term – up to 1 year (over short-term – up to three months);
- long-term – over 1 year.

Many countries also produce medium-term debt, which is usually from 1 to 3-5 years. However, in modern Ukrainian realities forecasting horizon over a year is complicated and exposed to many factors, including non-economic. So, public authorities to simplify allocated only short- and long-term debt.

Short-term debt primarily secured working capital used in businesses and foreign trade, international payment transactions, serving non-commercial, insurance and speculation. Long-term debt is formed, usually as a result of investment in fixed assets, the use of new forms of international economic relations (large-scale projects, scientific research, introduction of new technology). If short-term debt prolonged for more than one year, it automatically becomes long-term.

The global economic crisis of 2008 in Ukraine became one of the most influential factors. It caused a sharp increase of external debt, so the time period from 2008 to 2015 was chosen for appropriate analysis.

Analyzing statistics (Table 1), presented on electronic resources of the Ministry of Finance of Ukraine, at the end of 2008 Ukraine's debt was 189.4 billion UAH, equal to 36 billion USD. Public external debt – 86 billion UAH – 2 times bigger than the internal debt – 44.7 billion UAH. Guaranteed debt stood at 58.7 billion UAH (11.1 billion USD).

Table 1

**Indicators of government and government guaranteed Ukrainian debt [14; 15]**

Years	Government internal debt		Government external debt		Government guaranteed debt		Government and Government guaranteed debt		GDP		Exchange rate USD to UAH
	billion UAH	billion USD	billion UAH	billion USD	billion UAH	billion USD	billion UAH	billion USD	billion UAH	billion USD	100 USD
2008	44,7	8,5	86,0	16,3	58,7	11,1	189,4	36,0	948,1	180,0	526,7
2009	91,1	11,7	135,9	17,4	90,9	11,7	317,9	40,8	913,3	117,2	779,1
2010	141,7	17,9	181,8	22,9	108,8	13,7	432,3	54,5	1082,6	136,4	793,6
2011	161,5	20,3	195,8	24,6	115,8	14,5	473,1	59,4	1316,6	165,2	796,8
2012	190,5	24,5	208,9	26,8	116,3	14,9	515,5	66,2	1408,9	180,8	779,1
2013	257,0	32,2	223,3	28,0	104,6	13,1	584,9	73,2	1454,9	182,0	799,0
2014	461,0	29,3	486,0	30,8	153,8	9,8	1100,8	69,9	1566,7	99,4	1576,0
2015	508,0	24,1	825,9	39,5	237,9	11,3	1571,7	74,5	1751,0	83,0	2109,6

During the period 2008-2015 government external debt rose to 825.9 billion UAH, which is almost in 10 times bigger in UAH and 2.8 times – in USD, government internal rose up to 508.0 billion UAH. As for the publicly guaranteed debt, it increased to 237.9 billion UAH, an increase in 4 times in local currency and in 1.02 times – in USD.

Total government and government guaranteed debt increased in 8.3 times in UAH equivalent (from 189.4 billion UAH in 2008 to UAH 1.5717 trillion in 2015) and almost in 2 times in USD.

Analyzing the structure of public debt (shown in Table. 2), we note that throughout the period in the structure of government debt dominated external debt. The exception occurs in 2013. In 2008, the internal debt amounted to 23.6% of total debt, and external – 45,4%, i.e. external prevailed in 1,9 times. In 2014, internal debt amounted to 41.9% of total debt, and external – 44,1%, i.e. external prevailed over internal in 1,1 times. So there was a tendency to reduce the disparities between the internal and external

public debt. In 2015 there were significant changes – the share of external debt in the structure increased up to 53%, so this negatively affects on the structure of debt and makes it difficult to service in the future.

During the period 2008-2015 dynamics of external debt growth is unstable, which can distinguish the following periods:

- period of the greatest growth – 2009-2010 and 2014-2015 years of the strongest financial, economic and political crisis in exacerbations in Ukraine;
- period of post-crisis slowdown (2011, 2012, 2013), which marked the emergence of a stable economic situation in the country by implementing active regional policy and a series of reforms in the tax and budget systems.

Table 2

**The structure of Ukrainian public debt in 2008-2015 [14; 16]**

Рок	Government internal debt			Government external debt			Government guaranteed debt		
	billion UAH	Share in total, %	growth (%)	billion UAH	Share in total, %	growth (%)	billion UAH	Share in total, %	growth (%)
2008	44,7	23,6	-	86,0	45,4	-	58,7	31,0	-
2009	91,7	28,8	103,8	135,9	42,7	58,0	90,9	28,5	54,9
2010	141,7	32,8	55,5	181,8	42,1	33,8	108,8	25,1	19,7
2011	161,5	34,1	14,0	195,8	41,4	7,7	115,8	24,5	6,4
2012	190,5	36,9	18,0	208,9	40,5	6,7	116,3	22,6	0,4
2013	257,0	43,9	34,9	223,3	38,2	6,9	104,6	17,9	-10,1
2014	461,0	41,9	79,4	486,0	44,1	54,1	153,8	14,0	47,0
2015	508,0	32,0	10,2	825,9	53,0	70,0	237,9	15	54,7
2015	(comparatively to 2008)		1036,4			860,3			305,3

The study enabled the following **conclusion**.

The global financial crisis has shown: if there are available areas of vulnerability that are triggered by debt process, the government should establish an effective system of debt, taking into account the complex relationship between debt policy and financial stability.

Several measures must be taken to optimize debt policy, namely:

1. improving the legislative support towards the formation, structure and public debt servicing;
2. restructuring of public debt in favor of domestic borrowing by searching conditions to interest domestic investors;
3. reforming the tax system to stimulate business activity as the main factor of GDP increasing;
4. construction of modern diagnostics debt security;
5. in the classification of Ukrainian external debt must be taken into account the principles and functions performed by the external debt in the national economy, it is also advisable to take into account the specificity and the level of financial relations in Ukraine and find the optimal balance between fullness and classification of convenience and clarity of information;
6. external debt of Ukraine should be classified according to the legal form of the creditor, the legal form of the borrower, purpose, currency loan maturity borrowing facilities maintenance.
7. correct classification of external debt of Ukraine makes it possible to analyze the financial threats that Ukraine faces in conditions of global crisis and develop a unified for all public authorities base to represent the external debt of Ukraine.

When these appropriate measures will be applied, the public Ukrainian debt covering will be carried out largely not by the growth of the tax burden but the expense of economic growth.

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## **ІННОВАЦІЙНА РЕКОНСТРУКЦІЯ ПРОМИСЛОВОСТІ УКРАЇНИ В УМОВАХ СТАЛОГО РОЗВИТКУ**

## **ИННОВАЦИОННАЯ РЕКОНСТРУКЦИЯ ПРОМЫШЛЕННОСТИ УКРАИНЫ В УСЛОВИЯХ УСТОЙЧИВОГО РАЗВИТИЯ**

## **THE INNOVATIVE RECONSTRUCTION OF INDUSTRY OF UKRAINE IN THE CONTECXT OF SUSTAINABLE DEVELOPMENT**

*Економіка сталого розвитку формує новий погляд на стратегічне і оперативне планування промислового розвитку держави. Складні економічні процеси в Україні у другому десятилітті ХХІ століття переформатовують сприйняття промисловості та окремих видів економічної діяльності. У статті зроблена спроба визначити можливості для сталого розвитку переробної промисловості у таких сферах, як машинобудування, хімічна промисловість, енерговиробництво з метою збереження та розвитку потужностей регіону утворюючих підприємств різних форм власності. В роботі наведено аналіз можливостей інноваційної реконструкції добувної і переробної промисловості України. Інноваційна реконструкція передбачає цілеспрямовані капіталовкладення для відтворення виробничої діяльності на засадах інновацій економіки сталого розвитку. У дослідженні використані дані державного комітету статистики України і підходи управління економіки сталого розвитку. В результаті виконання дослідження сформований перелік показників, які визначатимуть розвиток видів діяльності. Із застосуванням методології Форсайту сформовано матрицю вагомості напрямів диференціації і диверсифікації переробної промисловості з визначенням можливих інновацій та перспектив їх реалізації.*