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PUBLIC DEBT IN THE WORLD ECONOMIC PRACTICE: MAIN TRENDS OF FORMATION AND MANAGEMENT FEATURES

General patterns of state debt development in some countries and Ukraine are studied. The dependence of the public debt volume on budget revenues, exports and GDP of the countries is established by the correlation analysis. The world practice of public debt management is considered. The directions to improve public debt management in Ukraine are suggested in view of the foreign practices.

Key words: *public debt management, public debt formation, public debt servicing, projects to develop the national economy, budget deficit, share of public debt in GDP*

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Problem statement. To finance the various areas of the society’s activities, all countries require significant resources. Such resources are attracted through tax and non-tax revenues which are then directed to satisfy the needs of government, i.e. to finance the complex socio-economic and cultural development of the country and some of its territories.

However, in most countries, there is an excess demand for funds from the state budget over the available resources due to a number of objective and subjective reasons. In many cases, this situation declares itself in some important areas of full-fledged functioning of the society, in particular health care, housing and communal services, education. Recovery of various facilities in these areas require substantial investments for which there is the lack of resources in the country's budget, so that these funds are borrowed creating debt of the state to domestic and foreign creditors.

The main and obvious reason for the formation of foreign debt is a budget deficit which does not allow the state to bear necessary expenses in full. Both a shortfall in the state budget, and the debt of the country formed to cover it represent substantial burden on taxpayers. In addition, public debt servicing requires significant financial resources that could potentially be spent on economic development. As a result, there is a risk of reduction in socio-economic development of the country and welfare of its population. In such circumstances, the study of peculiarities of formation and management of public debt is a topical scientific issue.

The analysis of recent researches and publications. The works of many domestic and foreign scientists are devoted to the research of public debt problems in economic practice, because every country in the world, even among developed ones, has public debt. The works of the following domestic researchers deserve special attention: T. Bogdan, V. Demyanyshyn, O. Kyrylenko, V. Kozyuk, I. Kolesov, I. Lyutyi, N. Pechenyuk, A. Sorokin, V. Fedosov, S. Yuriy et al. The following western scholars whose publications solve various aspects of public debt can be identified: Burns S., Constancio V., Kliesen Kevin L., Kotlikoff Laurence J., Thornton D. et al. In their studies, the scholars reveal the features of the formation and management of public debt, point to the advantages and disadvantages, threats to the financial stability of the country and its economic growth. It is noted that the hazards related to state debt do not hinder governments' willingness to form it for funding various expenditures. However, the impact of public debt on macroeconomic indexes of individual countries is not clearly studied and approaches to improve debt management in Ukraine in terms of international experience are not systematized.

The research paper aims at studying the characteristics and trends in the formation of public debt, approaches to public debt management in some countries in order to develop recommendations to improve the specified processes in Ukraine.

Findings. The growing needs of society in most countries, as well as the lack of effective financial policies lead to exceeding expenditure rates over income rates. Moreover, this situation is typical both for the population which actively uses credit resources and the states which involve various kinds of borrowing while fulfilling their liabilities, creating public debt. However, for developing countries, this approach is dangerous and leads to large-scale comprehensive crises [1, 35]. Developed countries are less exposed to the negative impact of public debt since through borrowing they achieve higher rates of return on the use of funds than the cost of debt servicing. Due to the fact that developed countries direct borrowings to specific national economy development projects and not to cover operating expenses, debt does not create catastrophic problems for them.

Despite the accumulation of public debt in developed countries, there are certain standards for the public deficit and borrowings involved to cover it not to exceed it. In particular, in the EU, according to the standards of association, they are oriented to debt rate not exceeding 60% of GDP, while the budget deficit of an individual country should not exceed 3% of GDP [10, 46]. Many countries outside the EU, including Ukraine, are guided by these values, because they form borrowings under the standards of Western countries. But, for example, differences in the calculation of public debt in Ukraine due to the fact that public enterprises' and local budgets' debts are not included into the cost of public debt, reduce its real amount and represents significant risks to financial stability of the country. According to some scientists, for developing countries, public debt should be less than 60% of GDP [6, 27]. IMF experts based on their own calculations indicate that the amount of external debt should be about 49.7% of GDP [9, 34]. It is advisable to develop the specific management of public debt according to these values. Public debt management is a set of interrelated activities aimed at determining borrowing needs, forecasting and approving forms, terms and conditions of repayment, as well as measures to service the national debt.

The management of public debt in the countries is influenced by a number of macroeconomic indicators, including the size of GDP, budget revenues, exports of goods and services. The country's ability to finance public socio-economic and cultural development programs depends upon the dynamics of these indicators. In case of positive GDP growth as well as exports of goods and services, budget revenues should grow, and therefore will be no substantial need to borrow.

Below, we analyze the trends in public debt volume in some countries (Table 1).

Table 1

The Dynamics of Public Debt and Its Share in GDP in Some Countries and Ukraine for 2010-2013*

* Developed by the author based on data [11]

Country	2010		2011		2012		2013	
	Public debt, bln. $	% of debt in GDP	Public debt, bln. $	% of debt in GDP	Public debt, bln. $	% of debt in GDP	Public debt, bln. $	% of debt in GDP
USA	8841.2	61.8	9994.5	67.1	11403.7	73.3	12849.7	79.7
Canada	1361.2	84.9	1460.3	87.1	1529.7	86.9	1596.0	86.3
Brazil	1198.4	54.3	1197.6	54.1	1333.8	54.4	1489.7	54.6
Japan	11599.8	199.3	12651.1	210.3	12606.9	222.4	12429.1	234.6
China	961.4	16.4	1111.8	15.4	1309.0	15.8	1511.9	16.4
Turkey	305.9	43.5	277.7	40.3	313.2	39.3	357.9	38.5
Russia	135.4	9.3	139.3	8.4	162.2	8.2	188.3	8.1
Germany	2738.8	82.3	2792.4	82.0	2795.2	82.7	2794.4	83.7
France	2136.8	82.2	2258.8	85.4	2329.0	89.3	2389.4	93.3
UK	1787.5	78.4	1996.3	85.5	2203.8	90.1	2411.1	94.4
Spain	853.4	60.1	958.7	67.2	1006.5	73.1	1045.3	78.8
Italy	2474.7	118.4	2517.1	119.9	2480.7	120.6	2431.8	121.3
Ukraine	52.6	38.9	58.6	39.1	62.4	41.3	65.9	43.9

The analysis of public debt indicators and its share in GDP over 2010-2013 shows a steady upward trend. The largest public debt over the period is observed in Japan, USA, Germany, UK and France. In most of these countries the share of public debt in GDP exceeded 60%, indicating non-compliance with EU standards on recommended values of this indicator, and therefore failures in the public debt management. In Ukraine, over the indicated period the national debt increased from $ 52.6 billion to $ 65.9 billion or 25.3%, and the share of debt in the state budget increased by 5% and amounted to 43.9% in 2013. This amount corresponds to the recommended value according to the international practice and may indicate the effectiveness of debt policy. However, the use of substantial funds for servicing public debt draws away available budgetary resources from economic development projects and thereby reduces the capacity of the country to reduce borrowing needs.

In Table 2, we consider the other indicators being formed in the process of public debt management.

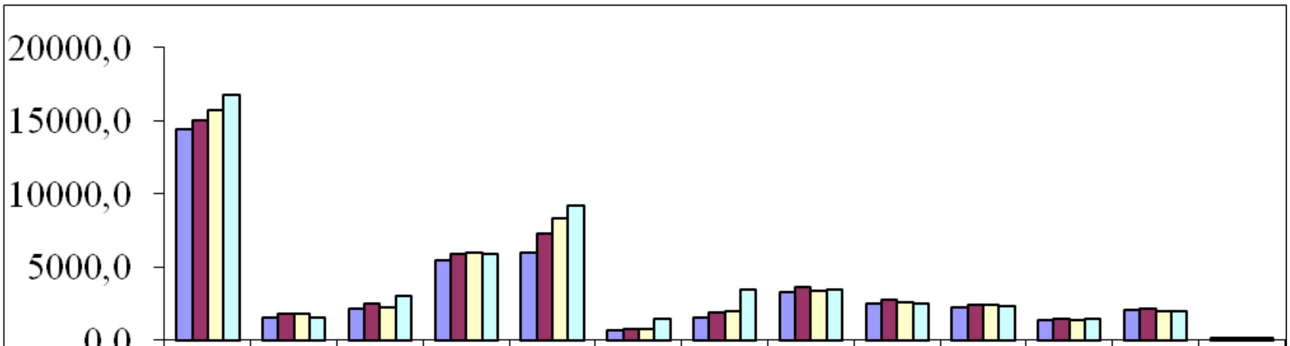
Table 2

The Dynamics of Budget Revenues and Exports in Some Countries and Ukraine for 2010-2013 *

Country	2010		2011		2012		2013	
	Budget revenues, bln UAH	Export, bln. $	Budget revenues, bln UAH	Експорт, Export, bln. $	Budget revenues, bln UAH	Export, bln. $	Budget revenues, bln UAH	Export, bln. $
USA	2094	1294	2163	1505	2461	1563	2451	1579
Canada	605.7	393.0	601.0	461.6	679.3	462.9	690.3	458.1
Brazil	464.4	201.9	822.6	256.0	911.4	242.6	875.5	242.8
Japan	1645	730.1	1785	789.9	2021	776.6	1993	715
China	1152	1582	1238	1812	1842	1974	1864	2210
Turkey	159.4	120.9	169.0	143.5	179.9	163.3	185.1	152.3
Russia	262.0	400.1	273.4	515.4	413.0	528.0	416.8	523.4
Germany	1402	1302	1436	1523	1511	1462	1533	1453
France	1243	517.2	1267	592.9	1344	567.4	1362	580.2
UK	926.7	410.2	908.0	479.1	995.9	473.0	986.1	541.1
Spain	515.8	253.0	503.8	303.3	485.1	291.6	481.9	316.2
Italy	940.3	448.4	958.9	503.1	956.6	478.9	964.3	518.4
Ukraine	41.18	52.19	39.6	69.4	53.07	70.2	55.7	78.1

*Developed by the author based on data [12]

According to these data, we can conclude that during the period under review the revenues of the countries had multidirectional dynamics. However, in most countries the budget size was growing. As regards exports of goods and services, the unsustainable growth is observed during 2010-2012, while in 2013, in some countries there was a decrease which may be due to the deepening of crisis in the global economy and reduced consumer needs and opportunities. The largest decline in exports in 2013 compared to the previous period is observed in such countries as Canada, Japan, Turkey, Germany and Spain. Given that the amount of public debt in the countries under review during 2010-2013 was constantly growing, and GDP, budget revenues and exports had different dynamics, it indicates the inefficient management of public debt and lack of purposeful use of obtained credits.



	USA	Canada	Brazil	Japan	China	Turkey	Russia	Germany	France	UK	Spain	Italy	Uktraine
2010	14423,	1579,6	2143,5	5497,5	5953,1	731,1	1524,9	3278,5	2546,8	2254,1	1379,2	2039,8	136,4
2011	14992,	1786,3	2481,9	5902,7	7312,5	774,7	1902,1	3602,5	2784,3	2448,4	1485,1	2196,2	163,4
2012	15683,	1824,2	2253,8	5963,2	8364,5	789,2	2013,6	3402,6	2615,8	2441,7	1352,6	2009,6	176,3
2013	16768,	1518,4	3012,9	5867,3	[illegible]	[illegible]	[illegible]	[illegible]	2534,5	2320,4	1488,8	2035,4	182,0

Figure 1. GDP Dynamics of Some Countries for 2010-2013, bln. $*

* Developed by the author based on data [12]

The results of our analysis (Figure 1) show an upward trend of GDP over the period under review in such countries as USA, China, Brazil, Turkey, Russia, while Canada and the EU have experienced a decline in GDP. In Ukraine, there has been an increase in GDP, but these amounts are insignificant compared to other countries. It can be noted that in countries with positive GDP dynamics, the growth in public debt was justified, whereas in the countries with negative dynamics, which include Germany, France, Japan, attracting significant loans and, accordingly, increase in public debt was inappropriate. Further we study in greater details the influence of public debt on economic growth in the countries by determining the correlation coefficient and the determination coefficient, indicating the density of ties and dependence of indicators on the size of public debt (Table. 3). The data obtained from the use of Data Analysis package of Excel software. Resultant variables are GDP volumes, budget revenues and exports analyzed in this study by countries, and factor variable is the public debt in 2013.

Table 3

The Parameters of Influence of Public Debt on the Economic Growth Indicators in Some Countries for 2013*

Indicator	Correlation between public debt and the GDP of the countries	Correlation between public debt and size of the budget revenues of the countries	Correlation between public debt and the volume of exports of the countries
Correlation coefficient	0.734	0.797	0.373
Determination coefficient	0.538	0.635	0.139
F-criterion of Fisher at F = 5.04	12.84	19.15	1.78
t-criterion of Student at t = 2.54	3.58	4.37	1.33

* Own calculations

Analysis of the data shows that there is a close correlation of public debt to the size of budget revenues and GDP, as indicated by the obtained correlation coefficients 0.797 and 0.734, respectively. According to the correlation coefficient at 0.373, the correlation between public debt and export of the countries is insufficient. The obtained determination coefficients and authenticity evaluation criteria suggest the significance of the first two factors and models studied. Thus, the study of the influence of public debt on economic indicators gives the reasons to believe that in 2013 the public debt in the countries had a positive impact on GDP and the size of state budget revenues. However, exports of goods and services in 2013 were not significantly dependent on the level of public debt.

Pursuing a prudent debt policy is an important task to be solved by special government agencies. For example, in the US public debt is managed by the Ministry of Finance of the United States. Public debt management is aimed at minimizing the possible costs to cover the deficit in the long run, that is public debt is aimed at developing of economy with gradual reduction of borrowings [8, 16]. In Japan, public debt management focuses on smooth and sustainable fundraising, management of public finances and limiting the expenditures on medium - and long-term financing to reduce the burden on taxpayers [9, 27]. This model is obviously correct, but the national debt in Japan which is 2 times greater than GDP, indicates its ineffectiveness.

There are certain features of public debt management in the European Union. For example, in the UK the system of measures for public debt management aims at minimizing costs in the long-term to cover the financial needs of the government with regard to possible risks. Attention is also paid to guaranteeing consistency of public debt management with the basics of monetary policy [7, 114]. The principal goal of public debt management in Italy is to cover budget expenditures, followed by servicing of the resulted liabilities with the minimum possible payments and debt risks control.

It should be noted that in the event of a debt crisis and its manifestation in different countries, the measures to reduce the budget deficit are intensified, the terms and conditions of debt payment are reviewed and the steps to revitalize the national economy and the stock market are made. At the same time, such countries as Poland and Greece have succeeded in the cancellation of a part of public debt by creditors. However, overcoming of debt crisis is a matter of several years by means of gradual reducing the budget deficit as well as attracting additional foreign and domestic funding. In particular, in Greece in 2010, the national debt was $ 439.9 billion representing 143.1% of GDP, while in 2014, due to the repayment and cancellation, the debt amounted to $ 297.9 billion GDP that amount 151.3% to GDP [11]. That is, due to reducing in public debt the economy stopped growing, that is a negative factor which causes lower quality of life and increase in the debt burden on existing taxpayers. These problems in the public debt management in developed countries indicate the feasibility of using only certain aspects of this experience in terms of Ukraine in order to prevent similar errors.

It's worth noting that the basic principles of debt policy in Ukraine are specified in the Medium-term Debt Management Strategy for 2012-2014:

- Meeting the needs of state for borrowed costs by means of the state budget financing at the lowest possible cost of debt servicing in view of risks;

- Maintaining of public debt at economically safe level;

- Ensuring the effective functioning of the internal market for government securities and extended access to international capital market;

- Reforming the sphere of international integration and cooperation aimed at developing an integrated and balanced foreign trade policy, increasing competitiveness and investment attractiveness of the national economy [5].

But some problems point to inefficient public debt management. To address this situation, we believe it is advisable for public authorities to implement the following measures:

- To attract foreign loans only for of national economic development projects but not to cover the budget deficit created by social, cultural or political expenditures;

- To reduce the country's dependence on foreign creditors and increase the share of domestic borrowing in local currency in order to stimulate the domestic securities market in which transparent and effective operation of the state should be a significant indicator of stability;

- Management of external debt is advisable to be focused on diversification of borrowing structure to minimize the risks of currency fluctuations, to maximize their maturity, to make a uniform repayment schedule provided the completion of investment projects but not at stages of developing loans for them;

- To improve the quality of managing debt funds during their redistribution for national economic development projects, to strictly control the process of credit development, to fairly allocate risks between the parties to the agreements and to responsibly approach to providing state guarantees for investment projects;

- To form the size of public debt that does not exceed 40% of GDP, and the budget deficit that does not exceed 3% of GDP. These figures will not cause undue pressure on the national economy associated with the diversion of funds for debt servicing;

- To strengthen the monitoring of external corporate borrowings and to develop the monitoring tools to prevent critical volume of loans which, in the event of non-payment, may result in a threat to the financial security of Ukraine;

- To continue effective cooperation with the International Monetary Fund through borrowings which can cover the budget deficit in times of crisis and restore the ability of Ukraine due to domestic borrowings to meet its obligations to the people and economy.

Conclusions. On the basis of the study it was found that the global economy is dominated by the trends towards increasing public debt which amount in most countries does not meet reasonable values. Exceeding of reasonable debt ratios poses threats to economic stability in the world, because the indicators of the most developed countries were analyzed in the research paper. The basis of public debt management is minimizing of the cost of servicing debt and reducing the risks resulted from their formation, but their available high volumes indicate non-compliance of these provisions by developed countries, so this practice is not possible to be completely applied in Ukraine.

To eliminate shortcomings and improve the efficiency of debt policy of Ukraine, we suggest the following measures: to reform the fiscal policy, in particular to reduce the share of unproductive expenditures; to increase the effectiveness of regulation of international capital flows and to limit short-term inflows; to manage public debt taking into account the projected reduction in export earnings in the medium term; to conduct state policy aimed at stimulating domestic export of science intensive industries, the development of the domestic financial market; to create favorable conditions for domestic lending; to improve the external debt repayment schedule eliminating payment peaks.

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