The article is devoted to the study of current features and trends in public debt formation in Ukraine and on this basis reasoning recommendations for resolving public debt problems in the context of debt security. The indicators of the dynamics and structure of the domestic and external public debt of Ukraine are analyzed, the level of the state's solvency in terms of official foreign exchange reserves are assessed. The risks that cause uncertainty of further prospects for the development of the situation in the field of public debt of Ukraine have been identified. Taking into account the international experience of public debt management and ensuring financial security, the main areas for improving the debt policy in Ukraine are outlined.

Key words: public debt, public debt management, domestic and foreign debt, debt policy, debt security.

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Public debt nowadays is an integral part of the financial systems of the vast majority of countries and, given the efficient use of borrowed funds, is rather an efficient tool for implementing the economic strategy of the state. The sensitivity of the national economy to the size of public debt depends on many factors, including the level of financial market development, the quality of its infrastructure, the level and historical dynamics of debt, the ability of government and central bank to solve the most acute problems of public debt management.

Alongside it, in recent decades the tendency of increasing dependence of the world's economies on domestic and foreign borrowings has been observed, which potentially increases the risk of debt crisis and reduces the level of debt security. The World Economic Forum identifies the current high level of countries’ debt as one of the most significant global risks. According to the International Monetary Fund, the level of debt burden is particularly significant in those countries whose financial sectors are systemically important for the global economy, reaching 250% of GDP. Moreover, according to Global Financial Stability Report (International Monetary Fund, 2018), over time, there is an increase in the corresponding level of debt, as far as in crisis year of 2008 it averaged 210%.

Theoretical and empirical aspects of study of the public debt formation and service, debt policy implementation and countries’ debt security assurance are presented in the scientific works of foreign and Ukrainian scholars such as T. Vakhnenko (Vakhnenko, 2007; Vakhnenko, 2015), O. Vlasyuk (Vlasiuk, Shemaieva and Londar, 2016), J. Keynes, A. Laffer, S. Londar (Londar, 2016), I.O. Lyuty (Lyuty and Zykova, 2019), L. Merenkova (Merenkova, 2018), O. Novosiolova (Novosiolova, 2013), D. Ricardo, A. Smith, V. Tereshchenko (Tereshchenko, 2016), M. Friedman etc.

However, due to a number of economic, political, social factors, Ukraine’s public debt tends to increase, and the debt security indicators of the national economy show that the situation in the debt sphere is quite volatile. That is why, despite the large number of studies in this area, the task of reasoning the recommendations for the development of a balanced debt policy in accordance with the real state of public debt and the implementation of efficient measures on public debt management to achieve its secure level remains relevant.
This study is aimed at determining the current features and trends of public debt formation in Ukraine and on this basis reasoning the recommendations towards public debt problems adjustment in the context of debt security.

Today, under the impact of internal factors and external challenges, Ukraine's financial system has suffered and continues to suffer significant losses, which is reflected in the deterioration of almost all its components, in particular, the growing imbalances of state and local budgets, some manifestations of instability of the banking system, exacerbation of debt problems, declining liquidity of the state, etc. Therefore, the importance of public debt management as an element of national economic policy is growing, which requires the formation of an efficient debt policy. Among the main reasons for the increase in public debt are the following: annexation of the Autonomous Republic of Crimea and the military conflict in the East of Ukraine, political and socio-economic crisis, the need for the governmental support of state enterprises and banks, small and medium business, destruction of infrastructure and most industrial facilities in the temporarily occupied territory of the country, financing the state budget deficit at the expense of state borrowings, growth of expenditures on health care due to the COVID-19 pandemic, etc.

The state budget in Ukraine has for many years been formed with a deficit, which requires the use of internal and external borrowing to finance the gap between revenues and expenditures. This is the main reason for the growth of public debt in nominal dimension. In addition, after the global financial crisis, the government had to issue debt instruments in large quantities, in particular, to stabilize the banking system, and to attract funding from the IMF (Lyutyy and Zykova, 2019).

The main macroeconomic factors that have led to a critical increase in the debt burden in recent years are: a sharp decline in real GDP, declining domestic consumer demand due to inflation and the lack of significant growth in household incomes, the negative impact of the real interest rate of the National Bank of Ukraine on the debt sector and the restrictions of the capital market functioning (Vlasiuk, Shemaieva and Londar, 2016; Lyutyy and Zykova, 2019).

According to I. Lyutyy, the growth of public debt in Ukraine was also influenced by a number of budgetary factors including: a sharp increase in the state budget deficit due to lower budget revenues and an increase in budget expenditures (including expenditures on security and defense, financial and social support for internally displaced persons, social support for the Joint Forces Operation participants and volunteers, etc.); the need to cover the deficit of the Pension Fund at the expense of budget revenues; the need for further budget support for state-owned enterprises and banks; increase in the state budget expenditures on the domestic government bonds service (Lyutyy and Zykova, 2019).

The Budget Code of Ukraine determines public debt as the total amount of the state debt obligations to repay received and outstanding loans (borrowings) on the reporting date, arising from government borrowing (The Budget Code of Ukraine, 2010). Government borrowings are an important tool for ensuring the performance of state functions and economic growth accelerating. However, excessive accumulation of public debt can exacerbate the problems of state solvency, lead to the impossibility of its maintenance and entail a debt crisis (Novosiolova, 2013).

Public debt formation is associated with a lack of funds in the state to perform its functions. Taking into account the sources of financing, the structure of public debt allocates domestic and external debt. Domestic public debt is the debt of the state to its citizens and legal entities, which own debt securities issued by its government. External public debt is the debt of the state to foreign lenders, mainly states, banks and international financial organizations (Lyutyy and Zykova, 2019). The maximum amount of domestic and external public debt in each budget period is set by the law on the State Budget of Ukraine.
Current debt policy in Ukraine in terms of external challenges and internal threats needs to be improved in order to ensure the stability of the national financial system. This task is especially relevant given the trend of constant increase in public and state-guaranteed debt of Ukraine (Table 1).

**Table 1**

The structure of public debt of Ukraine in 2014-2019, USD billion

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<tbody>
<tr>
<td>Public and state-guaranteed debt, total amount</td>
<td>69.81</td>
<td>65.51</td>
<td>70.97</td>
<td>76.31</td>
<td>78.32</td>
<td>84.37</td>
<td>14.56</td>
</tr>
<tr>
<td>Public debt</td>
<td>60.06</td>
<td>55.59</td>
<td>60.71</td>
<td>65.33</td>
<td>67.19</td>
<td>74.36</td>
<td>14.3</td>
</tr>
<tr>
<td>Domestic debt</td>
<td>29.24</td>
<td>21.17</td>
<td>24.66</td>
<td>26.84</td>
<td>27.49</td>
<td>35.02</td>
<td>5.78</td>
</tr>
<tr>
<td>External debt</td>
<td>30.82</td>
<td>34.43</td>
<td>36.05</td>
<td>38.49</td>
<td>39.70</td>
<td>39.34</td>
<td>8.52</td>
</tr>
<tr>
<td>State-guaranteed debt</td>
<td>9.75</td>
<td>9.91</td>
<td>10.26</td>
<td>10.98</td>
<td>11.13</td>
<td>10.00</td>
<td>0.25</td>
</tr>
<tr>
<td>Domestic debt</td>
<td>1.77</td>
<td>0.89</td>
<td>0.70</td>
<td>0.48</td>
<td>0.37</td>
<td>0.39</td>
<td>-1.38</td>
</tr>
<tr>
<td>External debt</td>
<td>7.99</td>
<td>9.02</td>
<td>9.56</td>
<td>10.50</td>
<td>10.76</td>
<td>9.61</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Source: compiled by the authors based on Ministry of Finance of Ukraine.

The total amount of public debt, denominated in national currency, in 2019 compared to 2013 increased more than three times – to UAH 1998.28 billion. At the same time, in 2019 the debt decreased compared to 2018 by UAH 170.35 billion or 7.86% (Fig. 1).

![Fig. 1. Total public debt dynamics in 2013-2019 (total debt, UAH million – left scale; growth rate, % – right scale)](image)

Source: compiled by the authors based on Ministry of Finance of Ukraine.

Alongside it, the total amount of public debt denominated in foreign currency showed less rapid growth over the same period. In 2015 compared to 2014, the indicator decreased from 73.16 to 65.51 billion dollars. Since 2016, the amount of public debt began to grow again and at the end of 2019 amounted to USD 84.37 billion. The downward trend in the amount of public debt denominated in foreign currency in 2014-2015 is not associated with the improvement of debt policy, but is explained by the rapid devaluation of the national currency.
Analysis of the external public debt structure by type of creditor (Fig. 2) shows that in 2019 securities issued on the foreign market accounted for the largest share of debt – 57% or 22.27 USD billion (56% in 2014). Debt on loans received from international financial organizations ran the second – 31% or 12.34 USD billion (36% in 2014). Debt on loans received from foreign governments, foreign banks and other financial institutions, and other types of debt accounted for a small share of debt at the level of 4%. In 2014, the country had no debt on loans received from foreign banks and other foreign financial institutions.

![Fig. 2. The structure of external public debt by type of creditor in 2014 and 2019, USD billion dollars and %](source)

The currency structure of debt is quite concentrated, as far as about 67% of public and state-guaranteed debt is denominated in US dollars (Fig. 3). The share of the Ukrainian hryvnia decreased from about 42% in 2014 to almost 5% in 2019. The current currency structure of public debt shows that the financial system is quite vulnerable to exchange rate fluctuations, which increases currency risks and poses threats to the debt stability of the economy.

![Fig. 3. Currency structure of public debt in 2014 and 2019, %](source)

In the period of 2014-2017, the situation in the sphere of the debt security of national economy significantly worsened, which is confirmed by the relative debt ratios, which exceeded the normative values. In particular, the ratio of public debt to GDP in this period exceeded 60%, reaching its maximum of 81% in 2016 (Fig. 4). Since 2018, the situation with the level of debt has begun to improve slightly, and in 2019, the ratio of total public debt to GDP was 50.3%.
The ratio of external public debt to GDP shows a similar dynamics (Fig. 5).

Fig. 5. External public debt, nominal GDP (UAH million) and the ratio of external debt to GDP (%) in 2013-2019
Source: compiled by the authors based on Ministry of Finance of Ukraine.

In 2019, some improvement is also related to Ukraine’s international liquidity. If in 2014 the official reserves covered only 19% of the external public debt (in 2013 – 54%), in 2019 the ratio of the international reserve assets to the external public debt was about 52% (Fig. 6).

Thus, one can state some improvement of the public debt indicators in 2019. Alongside it, further prospects for the development of the public debt situation are rather uncertain. This is due both to the expected worldwide slowdown in countries’ economic growth and the corresponding deterioration of the global economic situation, as well as to the formation of tighter and changing conditions in the global financial environment. The latest global non-economic factor that is shaping current challenges to debt security is the COVID-19 pandemic.
Increasing the risks threatening Ukraine's financial system and debt sustainability requires the development of a flexible adaptive system of public debt regulation.

The system of efficient public debt management should include three interrelated processes: selection of the appropriate type of financing; decision on the amount of borrowings; maintaining full reporting on government debt. The main criterion for the efficiency of public debt operations is achievement of the state budget fund savings (Lyutyy and Zykova, 2019).

According to the Medium-Term Public Debt Management Strategy for 2019-2022, approved by the Cabinet of Ministers of Ukraine, the main purpose of public debt management is to attract the necessary financing at the lowest possible cost, taking into account the risks. In this regard, four main goals of public debt management have been identified, namely: increasing the share of public debt nominated in the national currency, extending the medium maturity and ensuring a uniform schedule of public debt repayment, attracting long-term concessional financing, developing strong relations with investors and further public debt policy improving. The Strategy also contains an indicative action plan for the next two years, which provides, in particular, the possibility of issuing government bonds in euros and other currencies which don’t have a high level of correlation with the Ukrainian hryvnia, issuing government bonds in hryvnia for international investors, expanding cooperation with the international financial institutions and foreign governments on preferential financing (On approval of the Medium-Term Public Debt Management Strategy..., 2019).

In the public debt management system, considerable attention should be paid to the identification, assessment and control over the risks of debt growth. I. Lyutyy defines the following main risks of public debt of Ukraine: the risks of refinancing and liquidity, currency and interest rate risks, the risk of additional liabilities, and offers appropriate measures to minimize them. The author determines the issue of new debt instruments in hryvnia, diversification of foreign currencies in the debt portfolio of Ukraine, attracting investment financing as priority measures (Lyutyy and Zykova, 2019).

IMF experts distinguish three models of debt policy: the model of budget incentives (it provides for a coordinated budget and monetary policy to stimulate effective demand and economic growth by increasing government spending; it may result in short-term increase in

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**Fig. 6. External public debt and foreign exchange reserves in Ukraine in 2013-2019, USD billion**

*Source: compiled by the authors based on Ministry of Finance of Ukraine.*
the budget deficit); the model of budgetary consolidation (it consists in the achievement of control over the budget deficit and ensuring a reduction in the public debt growth rate; this can be achieved by a coordinated reduction of the budget expenditures and increase in the tax burden); the model of "financial suppression" (the government achieves an acceptable level of debt burden by creating a situation of simultaneous high inflation and relatively low nominal interest rates for commercial loans and government borrowing) (Vlasiuk, Shemaieva and Londar, 2016). Given the specifics of the Ukrainian economy functioning and the public debt formation, Ukraine have to develop its own model of debt management.

Taking into account international experience in implementing debt policy and ensuring financial security, recommendations of leading domestic scholars, priority areas for improving public debt management in Ukraine should include the following ones:

- development and implementation of a long-term public debt management strategy, consistent with the relevant short-term programs and medium-term strategies;
- close coordination of the public debt management system with budgetary and monetary policy;
- revision of the structure of received loans, reorientation to loans in national currency, which allow to eliminate currency risks;
- intensification of the use of macroprudential tools to regulate borrowings;
- determining the most acceptable model of debt policy for Ukraine (in particular, experts of the National Institute for Strategic Studies consider the policy of "financial suppression" as a possible option (Vlasiuk, Shemaieva and Londar, 2016);
- introduction of measures to overcome budget imbalances by continuing budget consolidation, increasing state budget revenues by improving the administration of taxes and customs payments, fighting corruption and shadow economy;
- improving the methodology for assessing the level of debt security, the implementation of the IMF methodology for assessing the debt sustainability of the economy;
- improvement of debt policy in terms of institutional regulation of state guarantees;
- transformation of sources of external financing by means of the gradual reorientation from attracting loans to foreign direct investment, which does not cause the accumulation of external debt;
- development of the financial market in general and the securities market in particular, in order to shape conditions for intensifying the processes of credit relations securitization.

The implementation of the above mentioned measures will allow to promote the debt sustainability and predictability of economic development, taking into account possible internal and external risks.

Thus, the optimization of debt policy in order to increase the level of financial security of Ukraine requires the development and implementation of a complex strategy that combines the tasks of improving the institutional support of debt policy, taking into account short-, medium- and long-term markers of public debt management, debt burden reduction, reorientation to borrowing in the national currency and the development of alternative, non-loan instruments for financing budget expenditures. At the same time, national debt policy must be flexible and adapt quickly to changing conditions of the internal and external environment.

Determining the economic effect of the implementation of debt policy measures, in particular, providing quantitative assessment of their impact on the level of debt security of Ukrainian economy can be the subject of further studies in this area.

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ФОРМУВАННЯ ТА ВРЕГУЛЮВАННЯ ПРОБЛЕМ ДЕРЖАВНОГО БОРГУ УКРАЇНИ У КОНТЕКСТІ ЗАБЕЗПЕЧЕННЯ БОРГОВОЇ БЕЗПЕКИ

Статтю присвячено дослідженню сучасних особливостей та тенденцій формування державного боргу в Україні й обґрунтуванню на цій основі рекомендацій щодо врегулювання проблем державного боргу у контексті забезпечення боргової безпеки держави. Проаналізовано показники динаміки та структури внутрішнього та зовнішнього державного боргу України. Зазначено, що необхідність удосконалення боргової політики пов’язана з зростанням державного та гарантованого державою боргу. Тенденція зменшення суми державного боргу, деномінованого в іноземній валюті, виявлена у окремі періоди, пов’язана не стільки з удосконаленням боргової політики, скільки із суттєвою девальвацією національної валюти. З’ясовано, що валютна структура боргу є досить концентрованою, оскільки близько 67% державного та гарантованого державою боргу деноміновано в доларах США. Сучасна валютна структура державного боргу свідчить про те, що фінансова система є достатньо вразливою до коливань валютного курсу, що збільшує валютні ризики та створює загрози стабільності боргу. Оцінено стан платоспроможності держави за показниками офіційних валютних резервів. Виявлено відсутність покращення показників державного боргу у 2019 році. Разом із тим, зазначено, що подальші перспективи розвитку ситуації у сфері державного боргу України є достатньо невизначеніми; наведено ризики, які обумовлюють таку невизначеність. Охарактеризовано моделі боргової політики, які виділяють експерти МВФ. З урахуванням міжнародного досвіду управління державним боргом та забезпечення фінансової безпеки визначено приоритетні напрями удосконалення боргової політики в Україні. Зазначено, що оптимізація боргової політики з метою підвищення рівня фінансової безпеки України вимагає розробки та реалізації комплексної стратегії, що поєднує завдання вдосконалення інституційного забезпечення боргової політики з урахуванням короткого-, середньо- та довгострокових завдань управління державним боргом, зменшення боргового навантаження, переорієнтацію на запозичення в національній валюті та розробку альтернативних, некредитних інструментів фінансування видатків бюджету. Водночас політика державного боргу повинна бути гнучкою та швидко адаптуватися до мінливих умов внутрішнього та зовнішнього середовища.

Ключові слова: державний борг, управління державним боргом, внутрішній та зовнішній борг, боргова політика, боргова безпека.