

# “Government debt management: challenges and perspectives”

## AUTHORS

Rostyslav Slav'yuk  <https://orcid.org/0000-0002-0904-8970>

 <https://publons.com/researcher/AAP-2925-2020>

Nataliia Slaviuk  <https://orcid.org/0000-0002-4486-7517>

## ARTICLE INFO

Rostyslav Slav'yuk and Nataliia Slaviuk (2018). Government debt management: challenges and perspectives. *Investment Management and Financial Innovations*, 15(3), 143-156. doi:[10.21511/imfi.15\(3\).2018.12](https://doi.org/10.21511/imfi.15(3).2018.12)

## DOI

[http://dx.doi.org/10.21511/imfi.15\(3\).2018.12](http://dx.doi.org/10.21511/imfi.15(3).2018.12)

## RELEASED ON

Thursday, 16 August 2018

## RECEIVED ON

Friday, 25 May 2018

## ACCEPTED ON

Friday, 27 July 2018

## LICENSE



This work is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)

## JOURNAL

"Investment Management and Financial Innovations"

## ISSN PRINT

1810-4967

## ISSN ONLINE

1812-9358

## PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

## FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

**30**



NUMBER OF FIGURES

**9**



NUMBER OF TABLES

**0**

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10, Sumy,  
40022, Ukraine

[www.businessperspectives.org](http://www.businessperspectives.org)

Received on: 25<sup>th</sup> of May, 2018

Accepted on: 27<sup>th</sup> of July, 2018

© Rostyslav Slav'yuk,  
Nataliia Slaviuk, 2018

Rostyslav Slav'yuk, Doctor of  
Economic Sciences, Professor of  
Management, University of Silesia,  
Poland.

Nataliia Slaviuk, Ph.D., Senior  
Lecturer, Department of Finance,  
National University "Kyiv-Mohyla  
Academy", Ukraine.



This is an Open Access article,  
distributed under the terms of the  
[Creative Commons Attribution-Non-  
Commercial 4.0 International license](https://creativecommons.org/licenses/by-nc/4.0/),  
which permits re-use, distribution,  
and reproduction, provided the  
materials aren't used for commercial  
purposes and the original work is  
properly cited.

Rostyslav Slav'yuk (Poland), Nataliia Slaviuk (Ukraine)

# GOVERNMENT DEBT MANAGEMENT: CHALLENGES AND PERSPECTIVES

## Abstract

The article examines the current tendencies of the government indebtedness in the world. It proves the rapid growth of the government debt in the different countries around the world after the 2008–2009 financial crisis and analyzes the reasons for government debt increase in particular countries and its consequences. The study is devoted to the research of the government debt in developed and developing countries. Particular attention is paid to the government debt of Japan, the USA, the European Union countries. In the article, the government debt of Ukraine, its tendencies, and consequences for the economy are analyzed. The state borrowings in Ukraine are often used for financing the servicing and payment of the existing debt. Government debt can be an important investment source and used for the development of the economies. But in the conditions of its rapid and unlimited growth, government indebtedness can be a burden for the economy.

## Keywords

government debt, public debt, government indebtedness,  
debt management, sovereign debt crisis, debt reduction

**JEL Classification** H60, H63

## INTRODUCTION

Government debt is an ordinary phenomenon of the world economy. The financial crisis of the years 2008–2009 caused the rapid growth of the government debt of countries around the world. It is an ordinary element of economic crisis: economic slowdown causes the fiscal deficit, and countries are forced to borrow on the internal and external markets. The examples can be observed in many developing and developed countries as well. At the same time, the rapid growth of government debt can influence the economies of countries.

The research on the government debt increases around the world, especially in the European Union. The Eurozone crisis has affected many countries that made difficult or impossible for some of them to repay their public debt. Some countries were forced to use the resources of the European Central Bank and the International Monetary Fund. Many years have passed after the financial crises, but a range of countries still have a high level of government debt, continue to borrow. In these conditions, it is important to analyze the countries with the highest level of government indebtedness, reasons for debt growth and further risks for the countries.

## 1. LITERATURE REVIEW

The matter of public debt has been a contentious issue for centuries. The representative of classical political economy Smith (1776) stressed the negative impact of government borrowings on economic stability, the same opinion had Hume (1754); at the same time, Keynes (1935) underlined

that public debt is the only instrument of financing deficits during periods of economic slowdown.

The research of Krugman (1988), Sachs (1989) and Cohen (1992) influenced the development of the theory of debt overhang. According to it, the accumulation of external government borrowings can negatively influence the investments and economic growth.

McConnell, Brue (1996) noted that “debt – both public and private – plays a positive role in a prosperous and growing economy”, but, at the same time, they mark that “external debt is a burden”, as far as “the payment of interest and principal requires transferring some of the real output to other”.

In the last decades, there were made a lot of researches regarding the influence of government debt on the economy. Eduardo Borensztein (1990) via mathematical modelling proved the existence of the negative influence of debt on internal investments and economic growth. The research of Burnsode and Dollar (2000) revealed that external government borrowings can positively influence the economy of the country only in case of effective macroeconomic policy.

Besides the influence of government on the economy, a disputable phenomenon is the amount of debt, which is affordable for the country.

The Maastricht Treaty requires the member states of the European Union to maintain government debt at the level lower than 60% of GDP. The Budget Code of Ukraine has the same limit amount – 60% of GDP. The research of economists shows that government debt lower than 60% of GDP also can negatively influence the economic growth.

Imbs and Ranciere (2005) found out that, on average, the “debt overhang occurs when the face value of debt reaches 55 to 60 per cent of GDP or 200 per cent of exports, or when the present value of debt reaches 35 to 40 per cent of GDP or 140 per cent of exports”. They noted that a positive and significant effect of debt on growth happens at low debt levels, i.e. below 20 of GDP and 50 per cent of exports.

Reinhart, Reinhart, and Rogoff (2010) showed that economic growth slows down considerably if the

public debt-to-GDP ratio exceeds 90%. At the same time, they mentioned that high numbers of external government debt influence the economic growth more severe.

Checherita-Westphal and Rother (2010) analyzed the euro area countries and showed that for the 12 Eurozone countries, government debt-to-GDP ratios above 90-100% of GDP would have a negative effect on economic growth. Though the confidence intervals for the debt turning point suggest that the negative growth effect of high debt may start already from levels of around 70-80% of GDP.

Egert (2013) also showed that negative influence on economic growth can happen with the public debt of much lower levels (between 20% and 60% of GDP).

At the same time, in the economic theory, it is usual to consider the external government borrowings as a more vulnerable instrument than the internal debt. It is obvious, as far as external debt is more sensitive to external shocks, especially in the developing or least developed countries.

For example, Pattillo (2002) analyzed 93 developing countries over the period 1969–1998 and found that the impact of external debt on per capita GDP growth is negative for the net present value of debt levels above 35-40% of GDP. Clements (2003) analyzed 55 low-income countries in the period 1970–1999 and found out that the turning point in the net present value of external debt is at around 20-25% of GDP.

The goal of this article is not to analyze the optimal level of the government debt. There are a lot of researches that show that government debt can negatively influence the economy even with the debt-to-GDP level lower than 60% of GDP (official limits in the EU, and some other countries). The aim of the article is to analyze the current state and reasons for the government indebtedness in the countries with the high levels of government debt and its consequences for the economies.

It is important to research the current tendencies and consequences of the government debt growth in the different countries. Particular attention should be paid to the countries, which have the highest level of

the government indebtedness, like Japan, the USA, and countries-members of the European Union. It is necessary to consider the special case of Ukraine, which has increased the government debt rapidly during the last years; discover the reasons for such growth and its consequences.

One of the important problems is the difference of methods of the government debt calculation in many countries. The reason is the difference of the elements, which are included in the government debt. In some countries, state-guaranteed debt, the debt of local authorities are not included in the government debt. Even in the European Union, there are different schemes of debt calculation: ESA95 and methodology of the Maastricht Treaty (used by Eurostat). In Ukraine, for example, the debt of local authorities is not included into public debt.

The difference in methodology can cause the problems in debt comparison via countries. Also, it is important to mention that some countries can present statistics not correctly (like in the case of Greece), some information is hidden from the general public (like in the case of Ukraine). Governments in many countries can use statistics in the way it is more suitable for them, and it is hard to control them.

## 2. METHODS

The article analyzes the current state of the government indebtedness in the world. The research includes the analysis of statistical data. It pays particular attention to the countries with the high lev-

el of government debt. The methodological basis of the article is logical and comparative methods used to analyze the government debt in particular countries. State and conditions of government indebtedness in different countries are compared.

The methods of analysis and synthesis were used for the evaluation of government debt in selected countries. Analysis of the reasons for government indebtedness is conducted and the possible consequences of debt burden are analyzed. The methods of debt management, such as economic growth, fiscal adjustment, restructuring, default, inflation, are discussed.

## 3. RESULTS

The financial crisis of the years 2008–2009 has influenced the government indebtedness in many countries around the world. The government debt in relation to GDP has increased in the countries in different regions. It is worth to pay attention that the highest paces of government debt increase were observed in G7 countries (major advanced economies), advanced economies, as well as in the Eurozone and the European Union (Figure 1).

In Figure 1, a decrease of government indebtedness from the year 2013 in some regions, like the European Union (including Eurozone), can be observed, but the indicator of government debt to GDP still is much higher than it was in pre-crisis period.

Source: International Monetary Fund (2018).

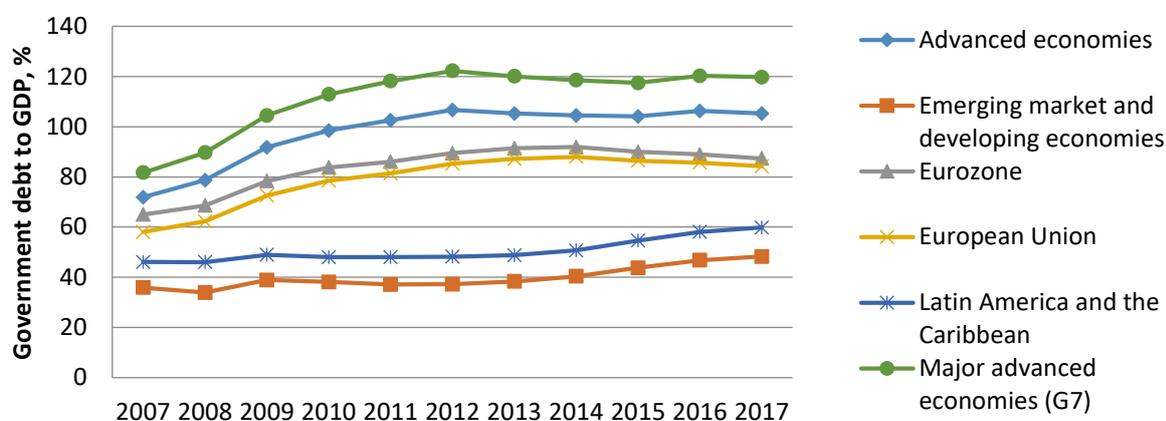
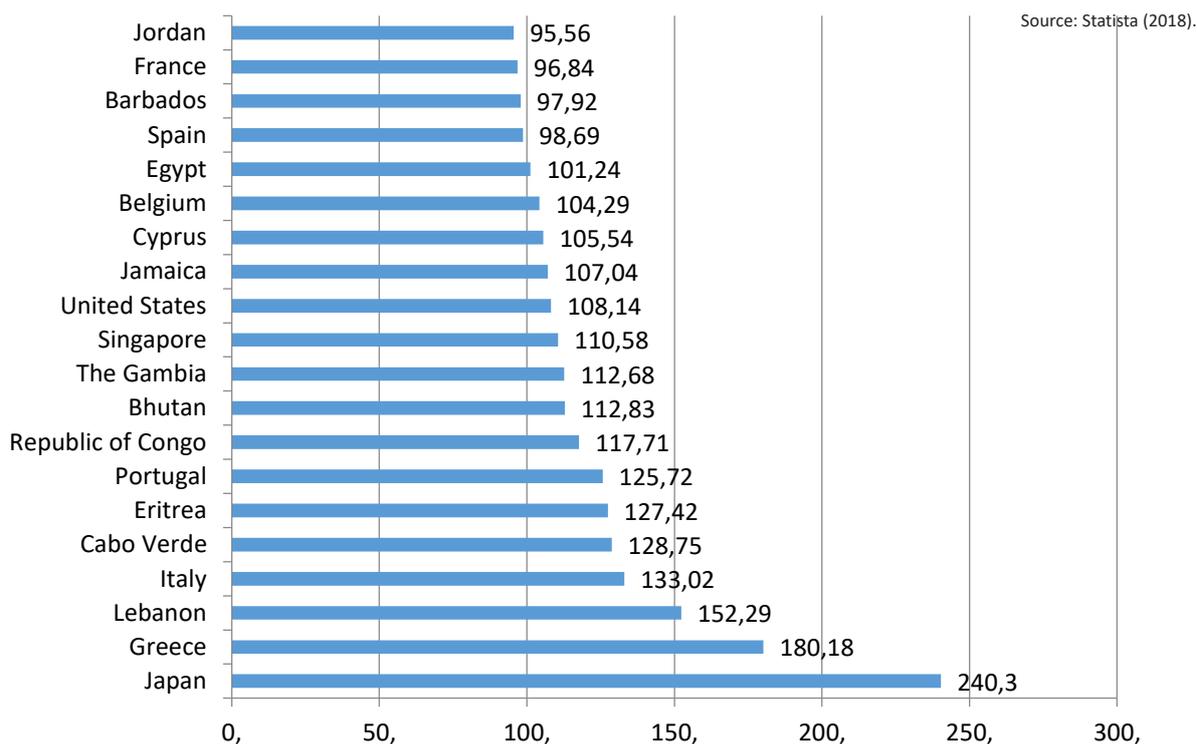


Figure 1. Government debt-to-GDP ratio in the world



**Figure 2.** Countries with the highest debt-to-GDP ratio in the world, 2017

Government debt has exploded in many countries. In Figure 2, the countries with the highest levels of government debt in relation to the gross domestic product are presented. Of course, the indicator government debt-to-GDP can't be used alone and it does not show the possibility of the country to service its debts. But it is widely used by economists as a basic indicator and helps to compare the state of government indebtedness in different countries.

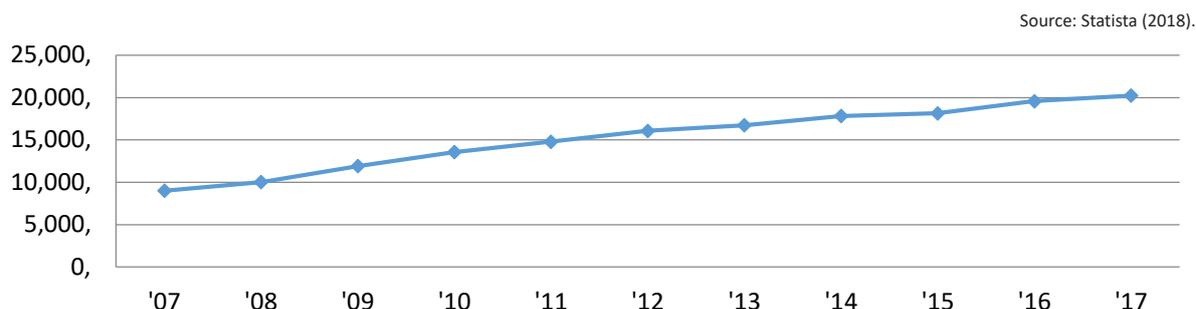
As Figure 2 shows, the highest levels of government debt-to-GDP can be observed in developed and developing countries as well.

It is impossible to analyze the government debt of all these countries, but it is important to pay attention to some of them, especially those, which can influence the global financial system and cause the instability of the financial markets.

At the present date, Japan has the highest rate of the government debt in relation to GDP in the world (Figure 2). Of course, the economy of Japan is competitive and innovative, which is a positive factor in servicing the government debt. Yields on Japanese government bonds are low, but the bond

dependency ratio in the budget in the year 2017 was 35.3% (in 2018 – 34.5%) and 24.1% of budget expenditures in the year 2017 were used for the national debt service (23.8% in 2018) (Ministry of Finance of Japan, 2018).

Effective usage is the most important element in government borrowings. If the debt resources are spent on the development of the economy, it can be a positive investment, especially in the case of low yields. But, at the same time, such huge dependence on debt instruments is a risk factor, especially in the cases of unpredictable situations, like crisis or natural disasters. It is worth mentioning that the Japanese economy is struggling with deflation and low economic growth for almost 20 years, and the program of quantitative easing is used to boost the economy. But global challenges and natural disasters can influence both the further increase of government debt and risks of inability to service it. Of course, the Japanese economy is innovative, but any models cannot predict all the factors, which can influence the economy of any country, and such a high level of the government debt is a risk factor for Japan and global financial system to some extent, as far as financial markets are highly interconnected nowadays.



**Figure 3.** Government debt of the USA, USD trillion

Another country which should be mentioned is the United States of America. The government debt of the USA is 108.14% of GDP, which does not sound so much as in Japan, but its amount is more than USD 20 trillion dollars (Statista, 2018), which is an impressive number (Figure 4). Of course, as in the case of Japan, the ability of the USA to service its debt depends on the competitiveness of the economy, economic growth. Even the default case is much more disadvantageous for the lenders than for the USA. But the huge amount of government debt is a risk factor both for the borrower and lender. Government debt of the USA continues to grow and official limits are increasing every year on the state level.

It is important to point out that the reasons for the government debt growth in different countries can be caused by many factors, but for last years, there can be observed some similar reasons of government indebtedness in many developed countries: the financial crisis of the years 2008–2009, which caused the budget deficits in a range of countries, worsening of the economic activity, low interest

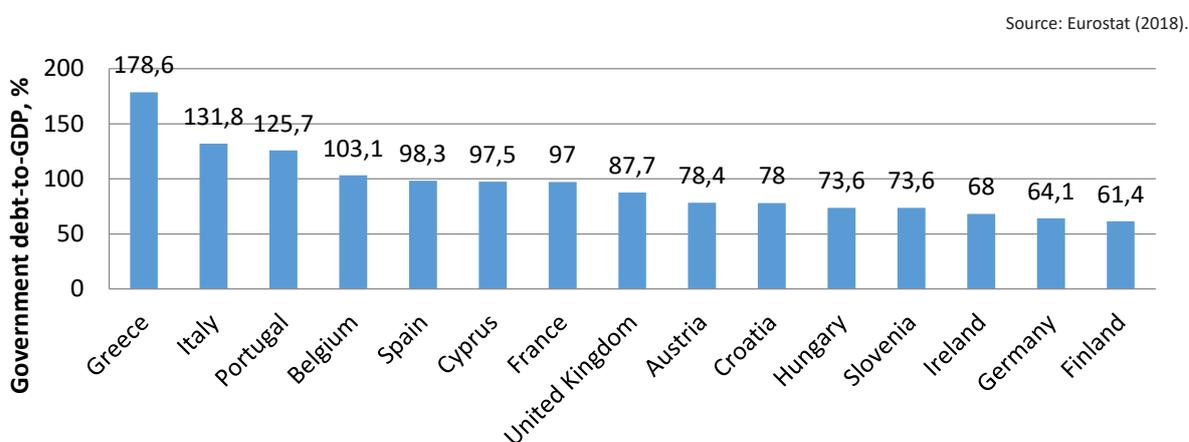
rates of the central banks, and, correspondingly, the low bond yields in most developed countries.

According to the Maastricht Treaty, the government debt-to-GDP ratio in the European Union should be lower than 60%. The average level of government debt-to-GDP in the European Union in 2017 was 81.6%, in the Eurozone– 86.7% (Eurostat, 2018).

When the Euro was launched as a single European currency, the average rate of European countries liabilities was nearly 70% of GDP.

In 2017, 15 countries of the European Union had the government debt higher than 60% of GDP (Figure 2).

Among these countries in the European Union Greece has the highest level of government debt to GDP (in the year 2017). And the problem of government burden of Greece was the most disputable in the European Union last years. Greece faced the serious problems with debt management



**Figure 4.** Countries-members of the European Union, which have the government debt-to-GDP rate higher than 60% (2017)

after the financial crisis and caused the worries in the European Union. Greece joined the European Union in 2000, and to the opinion of some researchers, its economic system was not ready for this process. At the same time, for a long period, Greece was able to borrow with very low and favourable interest rates, gaining the confidence of investors as the country-member of the European Union. In 2004, it became obvious that there was the understatement of some statistical data in Greece with the aim to join the European Union.

The main reason for Greece sovereign debt crisis is low competitiveness of the Greek economy on the European Union market. In Paul Krugman's view (2010), Europe adopted a single currency "before the continent was ready for such an experiment". There are many advantages of joining the Eurozone, but countries-members of the European Union are not able to use the instrument of currency depreciation and stimulate export.

Greece had several options in fighting the debt crisis: to default, to restructure its debt, to borrow from the European Union institutions. There were chosen two of them: further borrowing and partly restructuring. To borrow from the IMF and the EU institutions, the country had to take austerity measures, to cut government expenses, to raise taxes.

However, the research of Baldacci and Gupta (2010) shows that only 12% of countries were able to decrease the level of government debt to the pre-crisis rate 16 years after the crisis while using fiscal consolidation.

The debt repayments of Greece are large and extended to the year 2060. Though the country is starting to grow, it is important to admit that government debt is a huge burden for its economy and further development. At the same time, the government debt of Greece also became a burden and problem for the European Union and its members, influencing the stability of the European Union.

Government debt of Spain also has risen rapidly since the financial crisis of the years 2008–2009. Before the crises, Spain faced rapid growth, the huge housing boom, inflows of capital. That was combined with significant inflation, which made Spanish export competitive.

The case of Spain caused even more worries because of the size of the economy of Spain (5<sup>th</sup> in the EU) (Eurostat, 2017). Now the economy is recovering. But the political crisis in Catalonia can negatively influence the economic development.

Italy is the fourth-biggest economy in the European Union (Eurostat, 2017), together with that there is a range of economic problems. Government debt was 131.8% of GDP in 2017 (Figure 2), it is growing steadily, and another important issue is the level of banking system private indebtedness.

Economists, as well as government institutions, pay attention to the growth of government bonds in the assets of European banks, which is a problem for bank stability system and stability of the financial systems of the countries-members of the European Union.

Portugal faced a sovereign debt crisis in 2011. After a bailout program and years of the budget deficit, economists have positive forecasts about economic growth and a budget surplus.

Of course, the government debt-to-GDP ratio is higher than 60% of GDP in many countries of the European Union, but most of the attention in the EU was paid to government debt of Portugal, Greece, Spain, Italy, as these countries had difficulties with overcoming the debt crises without the help of European Union institutions, joint stability funds. And debt crises of these countries influenced the European Union and its members.

## Government debt in Ukraine

It is also important to consider the case of Ukrainian government debt for several reasons. Firstly, since 2014, Ukraine has doubled the exchange of goods with the European Union, and the financial crisis in Ukraine also can influence its trade partners. Secondly, Ukraine is very dependent on the external borrowings. Thirdly, as practice shows, the great variety of debt crises has the similar scenarios. It is necessary to compare and search the similar element to avoid the debt crises. And finally, the state of the Ukrainian economy and government debt is analyzed nowadays not only by the authors of this article, but also by many economists in

Source: International Monetary Fund (2018).



Note: \*Forecast (International Monetary Fund).

**Figure 5.** Government debt of Ukraine in relation to GDP, %

different countries to avoid losses. That is why it is impossible to consider Ukrainian government debt without connection with processes in other countries.

The government debt of Ukraine includes liabilities of state and state guarantees for business entities received from international organizations. It doesn't comprise the liabilities of local authorities.

According to the Budget Code of Ukraine, the government debt of the country should be lower than 60% of GDP (the same limit as in the European Union). During the last years, there is a tendency of rapid growth of government debt in Ukraine. As one can see from Figure 5, according to the IMF statistics, there was a rapid growth of the government debt in the years 2007–2010, and the present amount is higher than the official limit.

The rapid growth of government debt in relation to the gross domestic product from 40.5 to 70.3% can be observed in the year 2014. And this tendency continued for further years, in 2016, the relation of government debt-to-GDP reached 81.2%. In 2017, it decreased to 75.6% of GDP, and according to the IMF forecast, the rate of government debt to GDP will decrease further, but it is rather a big amount for the Ukrainian economy.

The reasons of such rapid growth in the year 2014 are as follows: (1) military operations in the Eastern Ukraine; (2) political instability; (3)

fall of GDP; (4) depreciation of national currency; (5) lack of economic reforms.

According to the investigation of the Institute of Strategic Research in the years 2013–2016, government used internal government bond issuance several times to capitalize the state banks.

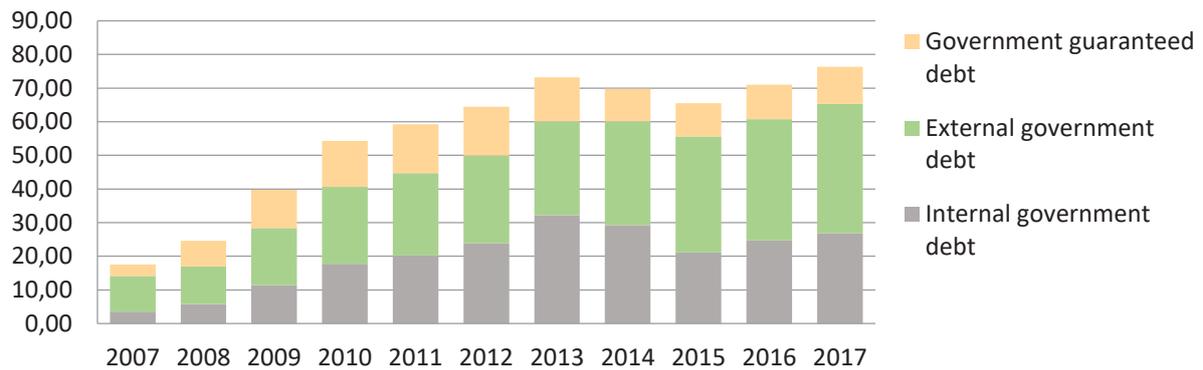
Besides, the economy of Ukraine is not enough competitive and innovative at the present date to serve the government debt higher than 60% of GDP. Research shows that the suitable level of government debt in Ukraine is not higher than 30–35% of GDP (Slaviuk, 2013).

It is worth mentioning that the indicator “government debt to GDP” cannot be used alone and be enough demonstrative for comparing the rate of indebtedness of the countries. It is important to analyze the dynamics of government debt, its structure, and schedule of payments.

For detailed research, it is useful to use indicators proposed by IMF, World Bank, INTOSAI, like external government debt to export, the relation of debt servicing to export, the relation of debt servicing to tax income, the relation of international reserves to short-term borrowings, etc. (Slaviuk, 2018).

As of December 31, 2017, the state and guaranteed debt of Ukraine was USD 76,31 billion and included state debt in the amount of USD 65,33 billion and guaranteed – USD 10,97 billion (Figure 6) (Ministry of Finance of Ukraine, 2018). It is worth to pay attention to the fact that external debt accounts for 50.44% in general structure, internal

Source: Ministry of Finance of Ukraine (2018).



**Figure 6.** Government debt of Ukraine in the years 2007–2017, USD billion

government debt – 35.18%, state guaranteed external debt – 13.76%, state guaranteed internal debt – 0.62%.

Such structure is a negative factor for the national economy, as far as external debt is vulnerable to the currency stability, which is often influenced by the economic and political situation in the country.

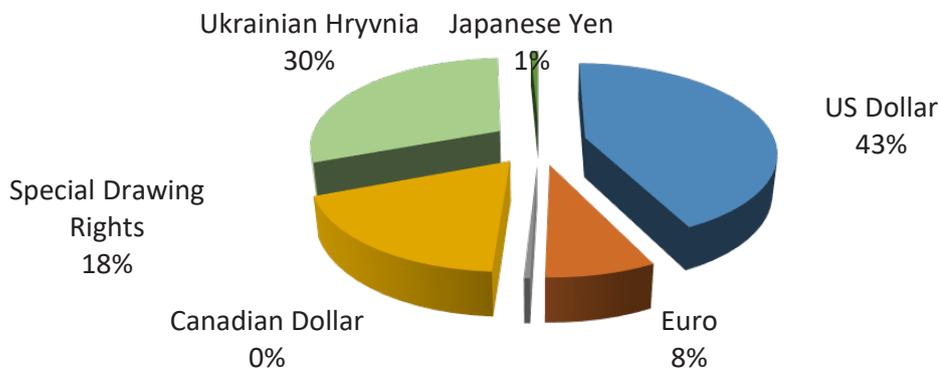
The currency structure of government debt can be observed in Figure 7. As one can see, only 30% of government debt on the date December 31, 2017 is represented in the national currency – hryvnia.

As the research shows, 14.38% of the public debt of Ukraine is a state guaranteed debt. It is a risk factor, as far as the situations of the debt insolvency are quite often. Besides, usually, external guaranteed debt is dominating in the structure of guaranteed debt (Figure 8).

In the current conditions, such a high level of government debt in Ukraine is a risk factor. Political and economic instability influence the growth of government debt. At the same time, the necessity to service existing government debt influences the further borrowing, which forms the debt spiral.

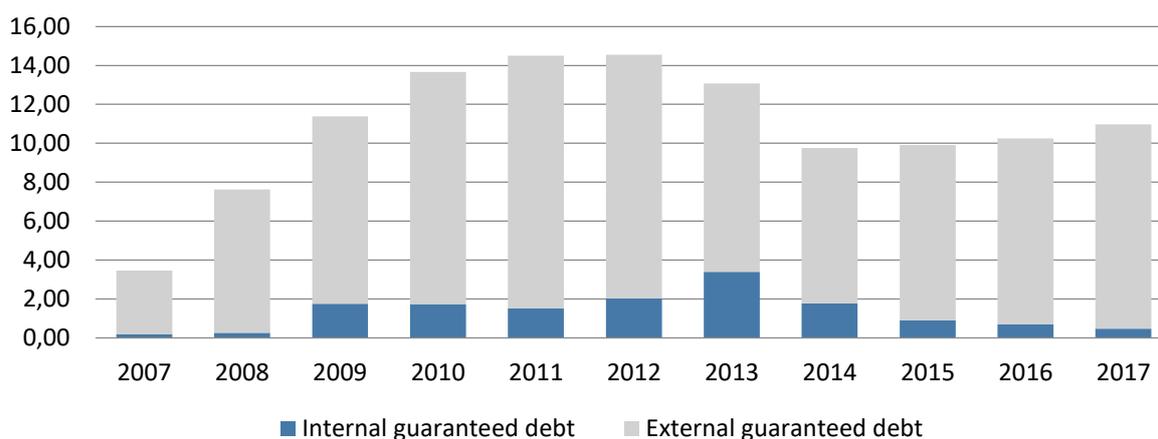
Analysis of the government debt service and payments schedule (Figure 9) shows that the sum of money, which should be returned in the further years is very high for the Ukrainian economy. For example, the budget revenues for the year 2018 are planned at the level of UAH 917,879 billion, government debt service and payments according to the Ministry of Finance in the year 2018 will amount at UAH 325,53 billion. That means that 35.43% of budget revenues should be spent on debt payment and service. Of course, it is impossible, and the government relies on the further borrowings to repay the existing debt (especially the

Source: Ministry of Finance of Ukraine (2018).



**Figure 7.** Currency structure of government and state guaranteed debt of Ukraine as of December 31, 2017

Source: Ministry of Finance of Ukraine (2018).



**Figure 8.** State-guaranteed debt of Ukraine, USD billion

credit of the IMF). But, definitely, it influences the further development of the debt spiral.

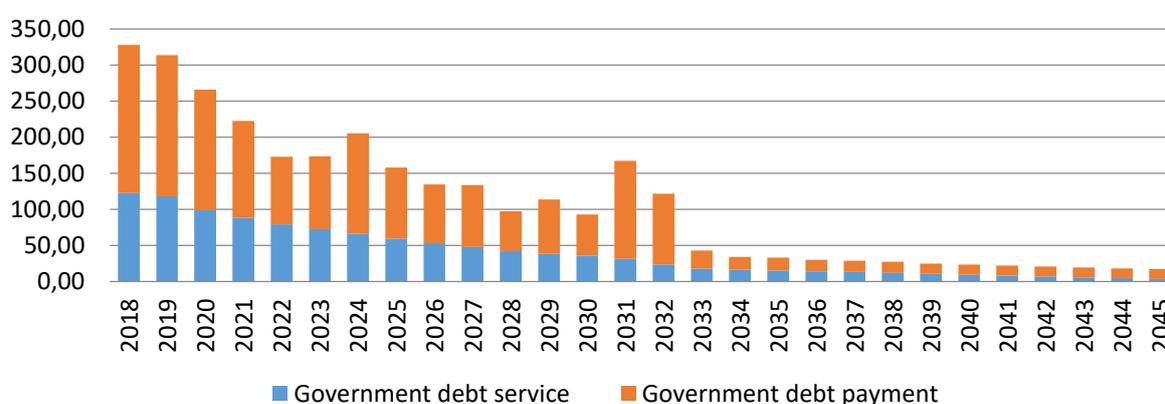
At the same time, it is worth to pay the attention that debt payment information of the Ministry of Finance is presented in the national currency (Figure 9), though, as we saw earlier, 50.44% of government debt is an external one. In the case of currency depreciation, the payments in national currency can increase and it can influence the growth of debt burden.

Dependence on the credit of the International Monetary Fund also can be a risk factor, as in the case of not fulfilling the IMF requirements, the credit resources cannot be received. And again that can influence the government debt and the stability of the national currency, which is very sensitive to the external factors, and the credits of IMF, in particular.

The great problem of the government debt of Ukraine is the effectiveness of its usage, as in the current conditions, state borrowings are used for paying the existing debt, but not for the investments and development of the economy.

The government debt of Ukraine was restructured in the year 2015 (20% of government debt was written off). But, the issuance of Value Recovery Instruments, tied to the gross domestic product growth till the year 2040, can negatively influence the economic development. The conditions of government restructuring include the necessity to pay the government debt in the case of economic growth higher than 3% of GDP. But it should be taken into consideration that after rapid decrease of the gross domestic product in the years 2014–2015 (because of the political and economic crisis), GDP can start to grow, and the necessity to pay government debt can slow this growth.

Source: Ministry of Finance of Ukraine (2018).



**Figure 9.** Government debt service and payment, Ukraine, UAH billion

The restructuring of the government debt in Ukraine prevented it default. It was necessary for the current economic conditions and allowed to avoid the additional panic among society, but, at the same time, the conditions of restructuring are disputable.

Ukraine does not face default only because of the constant inflow of the capital foreign investors. But further borrowings cannot be considered as a positive example of default avoidance. It is important to analyze the debt crises in other countries to avoid the default situation and for the effective debt management. The practice of debt crises is incredibly wide, and it is nonsense to repeat the mistakes in the debt management for Ukraine. Though, despite the great variety of research of debt management, a lot of countries face the same problems and repeat the same mistakes.

In the current conditions of rapid government debt growth in the world, the questions of effective debt management are of the high importance. It is especially important for Ukraine, as far as, as mentioned by Skvarchuk (2009), weak financial management is the most significant factor of the crisis condition of the economy.

As it was analyzed, the financial crisis has influenced the rapid increase of government debt in developed and developing countries. Debt crises do not avoid the rich countries as well. It is obvious, that government debt should be decreased in the number of countries. And not only in the case when the government debt exceeds 60% of GDP. The possibility of the country to service its debt depends on the competitiveness of its economy, the state of the current account balance of the country, the level of budget deficit, economic growth.

Countries, which have big economic potential, highly developed and competitive economy can service the higher levels of government indebtedness and can recover rapidly in the conditions of the debt crisis.

It is important to mention that the structure of government borrowings highly influences its stability. External government debt issued in

foreign currency is more vulnerable to risks in the case of currency depreciation, political and economic shocks.

Detragiache and Spilimbergo (2001) have shown that short-term borrowings increase the possibility of the debt crisis. Besides, it is hard to use short-term borrowings as the investment source.

There are usually proposed and discussed several instruments of debt reduction in the economic theory (Reinhart & Sbrancia, 2011):

- 1) economic growth;
- 2) fiscal adjustment/austerity plans;
- 3) restructuring;
- 4) default;
- 5) inflation (can be used only for the domestic debt reduction).

It is important to mention the idea of R. Musgrave who noted that unlike private enterprises, it is not obligatory for the government to repay the debt. The government can refund debt, restructure it, so the question arises not in debt payment, but in optimal debt management.

During the sovereign debt crisis in the European countries, there was used a range of methods of government debt reduction. Fiscal consolidation was the most used method, especially regarding government spending cuts. But as we mentioned before, the fiscal consolidation is a long process, which can give effects in decades.

Restructuring is used as the method of default prevention. In Greece and Ukraine, for example, the government debt was partly restructured. But still arises the question of the effectiveness of its restructuring, and it is obvious that the countries should borrow further from international institutions and service its debt for a long period.

As mentioned by Ostry, Ghosh, and Espinoza (2015): "Paying down the debt quickly involves high rates of taxation and correspondingly large distortionary costs; on the other hand, never paying it down means servicing it forever, thus incurring the distortionary costs of taxation in perpetuity".

But, also, as they mentioned, “paying down 5 percent of GDP ... in one year incurs present value welfare cost equal to about 1 percent of GDP”, and as they said “these costs are highly nonlinear: paying down 10 percent of GDP of the debt would imply a welfare cost equal to 2-3 percent of GDP, and paying down 20 percent of GDP would incur a cost of at least 6 percent of GDP”.

It is obvious that fast paying off the debt is costly for the economy, but payment for the long periods can prolong the recession in the country.

Some countries use a special mechanism of debt reduction – default. There are many researches of the default consequences. We would like to mention the interesting research of Borensztein and Panizza (2008) who defined 4 types of default consequences: loss of reputation, losses in the international trade, and losses for the national economy in the financial system, political losses. But, at the same time, economists revealed the short-term effects of defaults on the economy (usually for 4 years). It is obvious that the period of recovery depends on the economic development of the country, its position in the world markets and its perspectives.

The best option, of course, is the economic growth. According to the research of the European Central Bank, the stable and high levels of economic growth positively influence the decreasing of the level of government indebtedness.

According to researches of Baldacci, Gupta, Mulas-Granados (2010), countries, which have a budget surplus in the post-crisis period, reach faster effect in decreasing the government indebtedness. Lower interest rates stimulate investments, which positively influences the dynamics of economic development.

There were mentioned the instruments of debt reduction. But the most important in debt management is the process of prevention of debt burden. The best management of the government debt includes the limitation of government debt at special for every country level, its effective usage. Of course, in the time of economic crises,

the government debt can increase rapidly, but the effective economic policy, innovations, and reforms in the country can prevent the growth of the government debt. Some governments are using state borrowing instruments instead of economic reforms as the easiest way of financing the budget deficit, without thinking of further payments (like in the case of Ukraine).

In debt management, there are three important elements: (1) borrowings, (2) usage of debt, (3) control, and (4) debt reduction. In the cases of ineffective management and economic crises, countries should search for instruments of debt reduction (discussed before). But the best option is the prevention of debt burden growth.

Firstly, every country should have a plan of government borrowings, which includes the aim of the borrowings, choosing the best variants, defining the suitable structure (external or internal borrowings, period to form the best schedule of payments). It is important to mention that every country should have its own official limit of government borrowings. It is obvious that such countries as Japan or the USA can serve much higher level of government indebtedness than Greece, Portugal, and Spain. Even the official limit of government debt to GDP by 60% can be too high for developing countries. In the case of Ukraine, the government debt higher than 30-35% of GDP is a big burden for the economy.

In many countries, governments borrow without the long-term strategy, just to finance current needs, and payment of government debt in ten years is not the problem of current government. That becomes ordinary in many developing and developed countries as well.

Secondly, the usage of government debt is a very important element. In many cases, governments use borrowed resources to finance the budget deficit, current needs of the country. In this case, the effectiveness of borrowed resources is much lower. Purpose-oriented usage for investment projects can influence the development of the economy in perspective. Government debt can be an additional investment source for the economy, but only in the case of its effective usage and limitation of the official levels.

Thirdly, it is important to control the process of government debt usage. Control is vital to prevent ineffectively and not the purpose-oriented usage of borrowed resources. In some countries, statistics is showed not correctly (an example of Greece), or presented selective or insufficient (an example of Ukraine). Of course, it is hard to control the official institutions, but public control has positive examples in many countries in the world.

---

## CONCLUSION

The financial crisis caused different consequences for the world economy. One of them is the increase in the government debt of countries around the world. Of course, an increase of government indebtedness after the crises is a normal phenomenon. But nowadays government debt becomes a burden for many countries.

Government borrowings can be important investment source for the development of the economies of the countries and increase the level of its competitiveness, though, in the case of post-crisis recovery and existence of high levels of government indebtedness, public debt of countries is mostly used for current needs and for refinancing the existing indebtedness (like in the case of Greece, Portugal, Spain, Italy, or Ukraine).

At the same time, low amounts of government debt in the case of their effective usage and low rates can be an investment source for the economies. It is important to mention that every country can service the different amount of government debt depending on the size of its economy, its competitiveness, rates of economic growth. To analyze the possibility to service the government debt, it is also important to consider the complex of indicators (proposed by IMF, World Bank or INTOSAI), not only the rate of government debt to GDP. It is obvious that countries with the competitive economy can service a higher level of government debt (like Japan). At the same time, the most important factor always is the usage of the government borrowings, its effectiveness, and influence on economic development.

It is important to consider the fact that further globalization and fast spreading of crises make the usage of high amounts of government borrowings a risk factor. Though economists predict the financial crises, it is hard to predict their influence on every country in particular. Nowadays, possible future economic crises, climate changes, and political instability can influence economies very fast. In these conditions, high government debt in many countries, including Japan, the USA, and countries of the European Union can cause the additional problems for the economies and global financial system.

Effective management of government borrowings should include the following elements: the state strategy of government borrowings, estimation and determining the official levels of government borrowings, the formation of the suitable structure and coordination of payment, purpose-oriented usage of borrowed resources and control of the effectiveness of its usage.

Every case is special, and even the methods of debt reduction, including growth, fiscal consolidation, restructuring and even default can have a different impact on the economy in further perspective and have different consequences.

Debt management process includes different methods. The optimal model was not invented. Every country is following the mistakes of the others, though the instruments of debt management are widely known. That's why it is important to learn the experience of effective debt management and discover the mistakes which were made to avoid them in the future.

## REFERENCES

1. Amaro, S. (2018). *Greece's economic future is nearing a crucial moment*. CNBC. Retrieved from <https://www.cnn.com/2018/05/23/greece-economic-future-is-nearing-a-crucial-moment.html>
2. Baldacci, E., Gupta, S., & Mulas-Granados, C. (2010). *Restoring Debt Sustainability After Crises: Implications for the Fiscal Mix* (IMF Working Paper, Fiscal Affairs Department). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.174.9083&rep=rep1&type=pdf>
3. Borenstein, E., & Panizza, U. (2008). *The Costs of Sovereign Default* (IMF Working Paper WP/08/238).
4. Borenztein, E. (1990). Debt Overhang, Credit Rationing, and Investment. *Journal of Development Economics*, 32, 315-335. [https://doi.org/10.1016/0304-3878\(90\)90041-9](https://doi.org/10.1016/0304-3878(90)90041-9)
5. Burnside, C., & Dollar, D. (2000). Aid, Policies, and Growth. *American Economic Review*, 90, 847-868.
6. Checherita-Westphal, C., & Rother, P. (2010). *The impact of high and growing government debt on economic growth: an empirical investigation for the euro area* (ECB Working Paper, 1237). Retrieved from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1237.pdf>
7. Clements, B., Bhattacharya, R., & Nguyen, T. Q. (2003). *External debt, public investment, and growth in low-income countries* (IMF Working Paper, 03/249). Retrieved from <https://www.imf.org/external/pubs/ft/wp/2003/wp03249.pdf>
8. Dornbush, R. (1996). *Макроекономіка [Makroekonomika]*. Kyiv: Osnovy.
9. Egert, B. (2013). *Public Debt, Economic Growth and Nonlinear Effects: Myth or Reality* (CESifo Working Paper: Fiscal Policy, Macroeconomics, and Growth, 4157).
10. Eurostat (2017). *The share of Member States in EU GDP*. Retrieved from <http://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20170410-1>
11. Eurostat (2018). *General government gross debt*. Retrieved from [http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=sdg\\_17\\_40&plugin=1](http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=sdg_17_40&plugin=1)
12. Imbs, J., & Ranciere, R. (2005). *The Overhang Hangover* (World Bank Policy Research Working Paper, 3673). Retrieved from <http://documents.worldbank.org/curated/en/929321468330044143/pdf/wps3673.pdf>
13. International Monetary Fund (2018). *General government gross debt*. Retrieved from [http://www.imf.org/external/datamapper/GGXWDG\\_NGDP@WEO/OEMDC/ADVEC/EURO/EU/MAE/WE](http://www.imf.org/external/datamapper/GGXWDG_NGDP@WEO/OEMDC/ADVEC/EURO/EU/MAE/WE)
14. Kozmenko, S., & Korneyev, M. (2017). Formalization of the impact of imbalances in the movement of financial resources on economic growth of countries in Central and Eastern Europe. *Accounting and Financial Control*, 1(1), 48-58. [http://dx.doi.org/10.21511/afc.01\(1\).2017.06](http://dx.doi.org/10.21511/afc.01(1).2017.06)
15. Krugman, P. (2010). The Making of a Euromess. *The New York Times*. Retrieved from <https://www.nytimes.com/2010/02/15/opinion/15krugman.html>
16. McConnell, C., & Brue, S. (1996). *Economics: principles, problems, and policies* (13th ed.). Boston: McGraw-Hill Irwin.
17. Ministry of Finance of Japan (n.d.). *Highlights of the Draft FY2018 Budget*. Retrieved from <https://www.mof.go.jp/english/budget/budget/fy2018/01.pdf>
18. Ministry of Finance of Ukraine (2018). *Debt Statistics*. Retrieved from <https://www.minfin.gov.ua/news/view/osnovni-pokaznyky?category=borg>
19. Nicke, C., Rother, P., & Zimmermann, L. (2010). *Major public debt reductions lessons from the past, lessons for the future* (Working paper series, 1241). Retrieved from <https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1241.pdf>
20. Ostry, J., Ghosh, A., & Espinoza, R. (2015). *When Should Public Debt Be Reduced?* (IMF Staff Discussing Note). Retrieved from <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1510.pdf>
21. Panizza, U., Sturzenegger, F., & Zettelmeyer, J. (2010). International government debt. *United Nations Conference on Trade and Development, Discussion Papers*, 199, 1-28. Retrieved from <http://debt-and-finance.unctad.org/Documents/Discussion-papers/International-Government-Debt-PANIZZA-STURZENEGGER-ZETTELMEYER-2010.pdf>
22. Pattillo, C., Poirson, H., & Ricci, L. (2002). *External Debt and Growth* (IMF Working Paper, 02/69). Retrieved from <https://www.imf.org/external/pubs/ft/wp/2002/wp0269.pdf>
23. Reinhart, C., & Rogoff, K. (2010). Growth in a time of debt. *American Economic Review Papers & Proceedings*, 100, 573-578. Retrieved from [https://scholar.harvard.edu/files/rogoff/files/growth\\_in\\_time\\_debt\\_aer.pdf](https://scholar.harvard.edu/files/rogoff/files/growth_in_time_debt_aer.pdf)
24. Reinhart, C., & Sbrancia, M. B. (2011). *The Liquidation of Government Debt* (Working Paper Series, WP.11-10). Retrieved from <https://piie.com/publications/wp/wp11-10.pdf>
25. Shkvarchuk, L. (2009). Futures contracts within system of enterprise cash flow management. *Actual Problems of Economics*, 11(101), 221-228.
26. Smith, A. (2001). Про природу й причини добробуту націй [Pro pryrodu i prychny dobrotutu natsii]. Kyiv: Port-Royal.
27. The Statistics Portal (2018). *The 20 countries with the highest public debt in 2017 in relation to the gross domestic product (GDP)*. Retrieved from <https://www.statista.com/statistics/268177/countries-with-the-highest-public-debt/>

28. The Statistics Portal (2018). *The public debt of the United States from 1990 to 2017\* (in billion U.S. dollars)*. Retrieved from <https://www.statista.com/statistics/187867/public-debt-of-the-united-states-since-1990/>
29. Vlasiuk, O., Shemaieva, L., & Londa, L. (2016) *Боргова стійкість як стратегічний напрям підвищення рівня фінансової безпеки [Borhova stiikist yak stratehichniy napriam pidvyshchennia rivnia finansovoi bezpeky]*. Kyiv: Instytut stratehichnykh doslidzhen.
30. Закон України «Про Державний бюджет України на 2018 рік», № 3-4, ст. 26 [Zakon Ukrainy “Pro Derzhavnyi biudzheth Ukrainy na 2018 rik”, No. 3-4, st. 26] (2018). Retrieved from <http://zakon3.rada.gov.ua/laws/show/2246-19>