

ROLE OF GOVERNMENT SECURITIES IN ECONOMIC GROWTH STIMULATION: EU PRACTICES AND PARTICULARITIES OF THE REPUBLIC OF MOLDOVA

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Abstract

In this article were investigated the main theoretical and practical aspects related to the macroeconomic and socio-economic consequences of public debt and budget deficit as well as the role of Government securities in financing of state expenditures and economic growth. Investigation was implemented based on such research methods as: general-scientific methods of cognition, logical analysis of theoretical and practical materials, documentary method, analogy and grouping, quantitative and qualitative data methods, graphical method, correlation analysis, methods of synthesis and comparative analysis. In order to implement the best international experience in the Republic of Moldova, in this study, besides domestic market, were estimated the Government securities markets from Belgium and România; was revealed, based on correlation analysis, the influence of Government securities markets on the dynamics of main macroeconomic indicators, and, using the best European practices, were elaborated the recommendations for Government securities market development in the Republic of Moldova.

Key words: *Government debt, Government securities, economic growth*

JEL: *E5, G1, H6, H7*

1. INTRODUCTION

Each country, within the framework of the state policy implementation, regardless of its size and level of economic development, is aimed at maximizing the mobilization of financial resources in order to form and timely replenish the state budget, which serves as a prerequisite and financial basis for the implementation by the state of its functions. The main objectives of the macroeconomic policy of the state are the development of the national economy and the public welfare maximization. The achievement of these goals is directly related to ensuring sustainable economic growth, full employment of labour resources, price stability, balance of the state budget, regulation of money supply, optimization of foreign economic relations, social protection of population etc. The main sources of public expenditure financing are: taxes, charges, fees and earnings, fines, but, in modern conditions, an important role has public debt, the main part of which is represented by the Government securities (GS). Government securities are the important source of budget replenishment and covering its deficit, a significant tool in regulating the level of inflation, conducting monetary policy, covering cash gaps.

In the European Union countries (EU27), during 2000-2007 both Maastricht debt and net government debt were stable; Maastricht debt was approaching the 60% threshold and net government debt was standing on average only 10.1 pp below the

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gross measure. The economic and financial crisis started at 2008 was resulted in EU countries' growing budget deficits and increasing debts to finance them, bringing gross and net debt levels to 87.6% and 72.0% of GDP, respectively. The growth rate of government debt in European developed countries was higher than in developing ones. Maastricht debt grew at a faster pace than net debt, what reflects governments' increased accumulation of financial assets as a response to the financial crisis. In particular, some governments intervened to take over failing banks, which led to an increase in their gross debt; however, governments sometimes also took over financial assets from the failing banks that had value and therefore net debt went up by less (Eurostat, 2018).

The growth of the public debt is one of the challenges for modern economies. The analysis of the role of government securities in economic growth stimulation represents the highest interest and is the subject of much debate among economists, development specialists and researchers around the world and is the *scope of this investigation*.

2.1. Research theoretical aspects

The macroeconomic and socio-economic consequences of public debt and budget deficit are the subject of a comprehensive investigation for various scientific schools of economic theory. The subject of the studies is the impact of public debt on such macroeconomic indicators as: economic growth, inflation, nominal and real interest rates, unemployment, development of financial markets, etc. Government debt is said to perform three functions: *stabilizing function*, *bridging function* and *burden-shifting function*. To *stabilize* the macro economy, government should paydown debt when the economy shows signs of overheating and should be willing to run up additional debt to fight recession. The *bridging function* describes the goal of tax smoothing. If the benefits created through spending in the current fiscal year also benefit future taxpayers, then *tax burdens should be shifted* and spread over time (GNASL, 2016). The optimal methods used to finance government deficit/spending remain a controversial topics for economists. Although most agree that government financial policies require choosing among the imposition of taxes, the sale of debt obligations and the 'printing/creation of government money' (or some combination of these), there is often strong disagreement regarding the macroeconomic consequences of these choices (Bell S., 1998).

The classical school of political economy viewed public debt as a temporary phenomenon that must be repaid, but since the J. Keynes, public debt start to be viewed as an indispensable element of an economic policy directed to maintaining a sufficient level of aggregate demand that determines levels of production and employment. To analyze the phenomenon of budget deficit and public debt and their influence on national economies were elaborated a considerable number of theories. In accordance with the *Barro-Ricardo hypothesis (Ricardian equivalence)*, the financing of public expenditure by debt is equivalent to financing them at the expense of taxes, but received in the future. Modigliani F. argued that the national debt is a burden for next generations, which comes in the form of a reduced flow of income from a lower stock of private capital (Checherita C., Rother P., 2010), he also revealed the process of ousting private investors through credit resources state. Agreeing to certain provisions of *neo-Keynesian theory*, Lerner A. pointed to the impossibility of transferring the "burden of debt" to future generations for domestic public debt. *Neoclassical concept* explains the constant existance of public debt by political factors, since its repayment

will require a significant reduction in public goods, which voters will not agree to. The *hypothesis of the irrelevance* of the budget deficit, suggests that if the amount of government loans intended to cover the budget deficit, reduce the amount of taxes, then the inflation rate will not change (Savradim V., 2016).

Some theoretical and empirical arguments were initiated to provide justifications for fiscal restraint and debt consolidation, especially in the Eurozone. Some empirical findings support that debt/GDP ratios over 90% appeared to be associated with low, or even negative growth rates (Tavani D., Zamparelli L., 2015). Another study finds evidence for a non-linear impact of public debt on per-capita GDP growth rate across. It unveils a concave relationship between the public debt and the economic growth rate with the debt turning point at about 90-100% of GDP. It means that public debt-to-GDP ratio levels above 90-100% of GDP, is associated, on average, with lower long-term growth rates at debt (Checherita C., Rother P., 2010). Based on these premises, EU governments implemented strict primary fiscal surpluses at every fiscal year. Such ‘fiscal compact’ commitments by EU countries made the already restrictive Stability and Growth Pact rules (targets of 3% deficit/GDP yearly, and a long run target of 60% debt/GDP ratio) even more stringent (Tavani D., Zamparelli L., 2015).

At the same time, other economists assert, that the substantiation of a target for a sustainable level of public debt must also consider the concept of debt intolerance. They demonstrate that emerging economies cannot sustain the same debt/GDP ratio, that countries with advanced economies, but a much lower one, mainly because of the limited access to capital markets. The phenomenon is related to the pro-cyclicality of the financial markets, that repeatedly lends large amounts to the emerging economies during the boom periods (due to the low returns in developed countries) and restrict capital flows to these when adverse shocks occur (Dumitrescu B., 2014).

Economists from the IMF emphasize that debt, poorly structured in terms of payment terms, currency, interest rate, has repeatedly been a factor that caused the economic crisis in many countries. That is why debt managers, fiscal and monetary authorities, and financial sector regulators, should share an understanding of the objectives of debt management, fiscal, monetary, and financial sector policies given the interconnections and interdependencies between their respective policy instruments (IMF, 2014).

2.2. Proposed research methods

Presented in this article investigation was implemented based on such research methods as: general-scientific methods of cognition, logical analysis of theoretical and practical materials, documentary method, analogy and grouping of quantitative and qualitative data method, graphical method, correlation analysis, method of synthesis and comparative analysis method. Analysis is grounded on the data obtained from Eurostat, European Central Bank (ECB), World Bank, Belgian debt agency, Ministry of Public Finance of Romania (MoPF), National Bank of Moldova (NBM) etc.

2.3. Research of empirical aspects

In order to analyse the effect of government securities in financing of state expenditures and economic growth stimulation, in this study was investigated Belgian and Romanian experience as well as practices of the Republic of Moldova during 2007-2016. Were analysed such indicators as: the structure of government debt

instruments, the volume of issued GS and their share in Government expenditures and GDP, the rates evolution, the types of investors and was implemented correlation analysis between the volume of issued GS as well as their weighted average rates and such macroeconomic indicators as: inflation, GDP per capita, level of employment, volume of export.

2.3.1. The role of Belgian government securities in economic growth promotion

Belgium succeeded in significantly reducing its public debt from debt-to-GDP ratio – from 130,5% in 1995 to the 87% in 2007. The global financial crisis in 2007-2008, triggered the problems in Belgian financial sector, slowed economic growth as well as growing cost of servicing an already high stock of debt, and was resulted in the debt-to-GDP ratio that steadily grew till 2014. Started from the 2015, the share of public debt in GDP has been gradually decreasing (see table 1).

The main part of Belgian public debt (93%) is formed by such Government securities as: Linear Bonds (OLOs, are medium and long term securities), Treasury Certificates and Bonds as well as State Notes. Loan agreements (Schuldschein) and other debt financial instruments (Euro Medium Term Notes) and loans constitute 7,04%. Since 2007, the state strategy is aimed at increasing the share of long-term and medium-term securities. Such, by 2016 the share of short-term securities decreased to 9.25%. The main part of GS are bonds with maturity of more than 5 years. The share of GS with fixed rate is 89.76%, the share of GS with variable rate is 10.24% (figure 1).

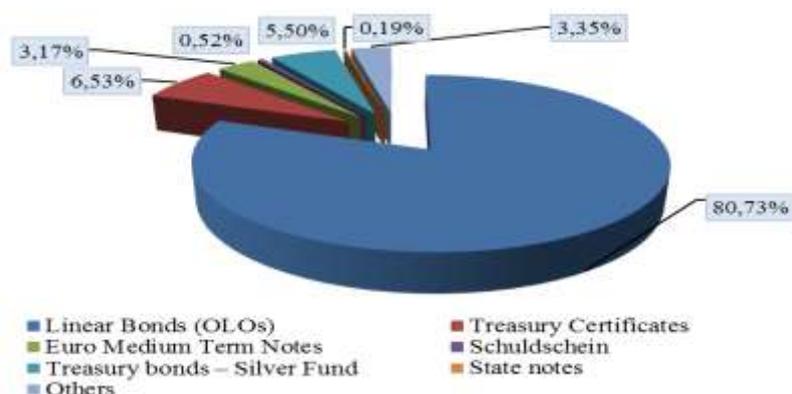


Figure 1. The structure of the Belgian' government debt instruments, 2016, %
(Source: elaborated by the authors based on Belgian debt agency, 2016)

The institutional investors actively invest their capital in GS. Thus, the share of insurance companies in the whole invested capital in the public debt market, constitutes 15,0%, the share of credit institutions is 10,7%, the share of pension funds is 12,4%. The share of foreign investors in Belgian GS from EU countries during 2007-2016 varied within the 25.6%-32.3%, the share of foreign investors from non-EU countries starting from 2010 demonstrated steadily growth and reached 24,7% in 2016.

During the analyzed period, in Belgium, the GS rates in general decreased; the most significant decline, by 50%, was registered in 2012. Besides 2015 and 2016, when the growth of inflation was caused by the rise in price of energy resources, the GS rates exceeded inflation rates. Because of this fact, as well as due to prevailing weighted average interest rate of GS under weighted average interest rate of banking

deposits, the Belgium’ GS is an attractive financial instrument for investments (figure 2).

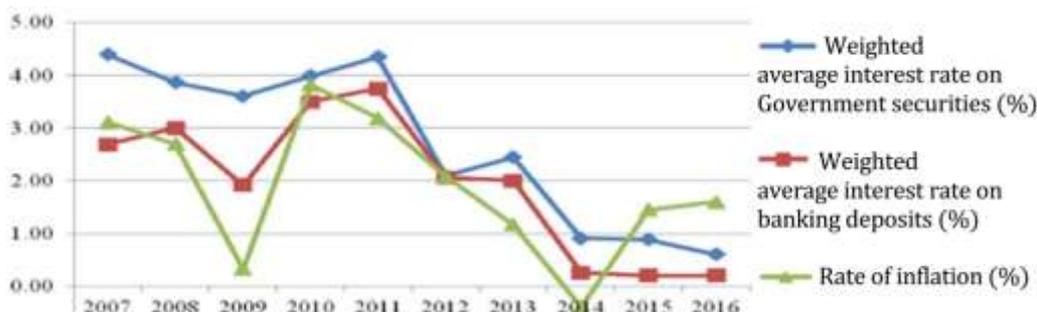


Figure 2. The evolution of the rates on the Belgian financial market, 2007-2016, %
(Source: elaborated by the authors based on ECB, 2017)

Government securities play an important role in coverage of growing Belgian public debt and expenditure, caused by the increasing social costs accounted for 37% of the country’s expenditure. The volume of issued GS and their maturity are changed in dependence from the Government debt evolution and the share of outstanding GS in Government debt, which is steady growing, reached 62,6% in 2016 (see table 1).

Table 1
The role of Government securities in coverage of Belgian public expenditure, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Volume of outstanding GS (bln EUR)	264,5	290,2	297,4	308,3	328,7	340,3	348,2	357,7	365,1	376,7
Volume of issued GS (bln EUR)	29,6	33,8	35,7	45,3	40,9	48,0	46,7	35,7	40,7	42,3
General government debt (bln EUR)	299,9	327,6	347,1	364,1	388,9	404,2	416,7	427,5	434,8	446,8
Government Debt to GDP, %	87,0	92,5	99,5	99,7	102,6	104,3	105,5	106,8	105,9	105,7
General government expenditure (bln EUR)	166,4	178,1	189,5	194,1	206,7	217,3	218,7	220,8	220,8	224,6
The share of issued GS in Government expenditure, %	17,8	18,9	18,8	23,3	19,8	22,1	21,3	16,2	18,4	18,8

(Source: elaborated by the authors based on Belgian Debt Agency, 2017)

Analysis of the Government securities market’ influence on the main Belgium macroeconomic indicators revealed, that according to the Pearson correlation coefficient, which is equal to 0,1258, interconnection between the *volume of issued GS* and *inflation rate* is weak, but the interdependence between Belgium *weighted average interest rate of GS* and *inflation rate* as well as between the *volume of issued GS* and *GDP pe capita* is strong, that confirm Pearson correlation coefficients which is 0,6464 and 0,6590, correspondingly. The strong interrelation exists between *volume of issued GS* and *level of employment*, is approved by Pearson coefficient equal to 0,6425. At the same time, the *volume of issued GS* does not influence the *volume of Belgium export* and vice versa.

2.3.2. The role of Romanian government securities in stimulation of economic growth

Romania is among the EU countries with the lowest share of government debt in the GDP. According to the Government public debt management Strategy for 2017-2019, the main objectives of the debt management of Ministry of Public Finance of Romania include: cover the funding needs of the central government and the payment obligations, while minimizing the medium and long term debt costs; limit the risks of the government public debt portfolio; development of the domestic market of government securities. At the end of 2016 Romanian government public debt amounted to EUR 61.3 bln., a deficit of the general consolidated budget was 2.4% of GDP. Implementing the Strategy, budget deficit financing was executed mainly based on allocation of GS on the domestic market and the structure of public debt continued to change in favour of internal government debt and marketable debt instruments (mainly in local currency), resulted in 52.0% of public debt contracted by resident creditors and the share of non-marketable debt (external loans contracted with international financial institutions) decreased from 48,5% in 2011 till 24,6% in 2016, with increasing the share of marketable debt instruments to 75,4%. The share of GS with medium- and long term maturity increased (figure 3).

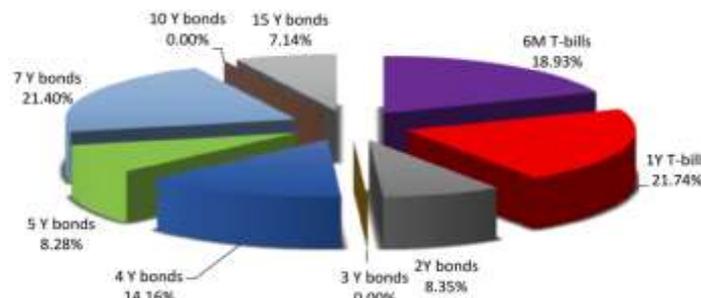


Figure 3. The structure of the Romanian government securities issued, IQ 2017, %
 (Source: elaborated by the authors based on MoPF, 2017)

The *weighted average interest rate* on Romanian GS till 2009 increased to its maximum – 8,7%, from 2010 *interest rates* on GS have decreased. During all analysed period *weighted average interest rate* on GS exceeded the *rate of inflation*, in 2016 – it was in 1,73 times. During 2007-2010 the investments in banking deposits was more profitable, then investments in GS. Starting from the 2011, the GS generates the better return then banking deposits, in 2016 *weighted average interest rate* on Romanian GS was in 3,36 times more then *weighted average interest rate* on banking deposits (figure 4).

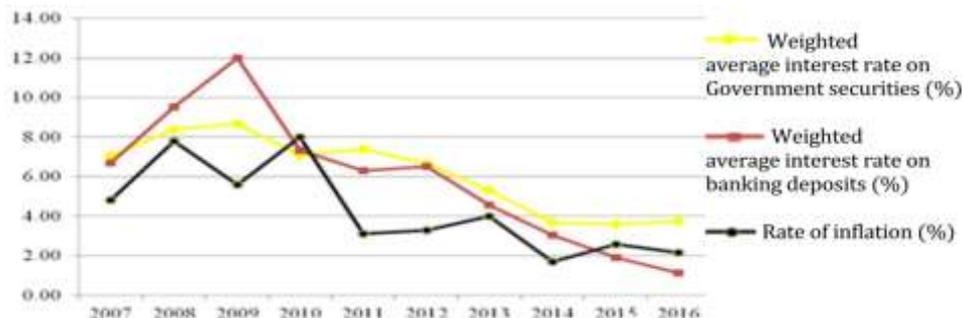


Figure 4. The evolution of the rates on the Romanian financial market, 2007-2016, %
 (Source: elaborated by the authors based on ECB, MoPF, 2017)

The above mentioned tendencies influenced the GS investors' structure, thus, the share of local commercial banks decreased in 2016 to 47,1%, but the share of the private pension funds increased to 12,8%, the share of non-residents did not change and was 17,6%. The role of Government securities in financing of growing Romanian public debt and expenditure is increasing. In 2016, GS issuance on the domestic market is amounted to RON 45,4 bln and EUR 775 mln, accounting for 68.2% of the Central Government gross borrowings, the budget deficit was financed on 77.0% from domestic sources. On the foreign capital markets through Eurobonds were attracted EUR 3,25 bln. The increase of outstanding GS was influenced by the growth of medium- and long term GS (table 2).

Table 2

The role of Government securities in coverage of Romanian public expenditure, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Volume of issued GS on domestic primary market in lei (bln EUR)	-	-	-	-	12,7	13,5	12,1	9,9	7,9	9,9
Volume of outstanding Treasury bills and bonds (bln EUR)	2,0	3,8	10,1	14,5	18,2	21,8	23,6	24,7	25,7	28,0
Volume of outstanding Eurobonds (bln EUR)	1,6	1,9	2,0	2,3	3,7	6,9	10,0	14,6	16,2	18,2
General government debt (bln EUR)	14,7	17,1	27,9	37,5	44,7	49,9	53,8	58,7	59,7	61,3
Government Debt to GDP, %	12,7	13,0	23,2	29,9	34,2	37,3	37,8	39,4	38,0	37,6
General government expenditure (bln EUR)	47,9	55,2	49,5	50,0	52,2	49,9	51,0	52,5	57,3	58,6
Share of outstanding Treasury bills and bonds in Government expenditure, %	4,2	6,9	20,4	29,0	34,8	43,7	46,3	47,0	44,8	47,8
Share of treasury bills and bonds in Government expenditure, %	-	-	-	-	24,3	27,0	23,7	18,8	13,8	16,9

(Source: elaborated by the authors based on Eurostat, MoPF, 2017)

Analysis of the influence of Romanian Government securities market on evolution of the main macroeconomic indicators demonstrates, that, according to the Pearson correlation coefficient, which is less than 0,1, interconnection between the *volume of issued GS* and *inflation rate* in Romania is weak, but interconnection between *weighted average interest rate of GS* and *inflation rate* is strong due to the Pearson coefficient is 0,7508. The investigation also revealed the strong interdependence between *volume of issued GS* and *GDP pe capita* as well as between *volume of issued GS* and *level of employment*, which is confirmed by the Pearson coefficient equal to 0,6629 and to 0,6796, respectively. The strong interdependence exists for the *volume of issued GS* and the *volume of export*, that demonstrates Pearson correlation coefficient, which is 0,9043.

2.3.3. The role of government securities in economic growth stimulation in the Republic of Moldova

The share of Central government debt in the Republic of Moldova GDP is one of the lowest in Europe, but it demonstrates a steady growth. The volume and structure (figure 5) of issued GS are influenced by different circumstances, the most important of them are connected with possibilities of budget deficit funding at the expense of domestic sources or based on external assistance.



Figure 5. The structure of the Moldavian’ government securities issued, 2016, %
 (Source: elaborated by the authors based on BNM, 2017)

Thus, in the first half of the 2016, the Ministry of Finance, to stimulate the attraction of capital, announced the increase of the volume of issued treasury bills on all maturities, but in the second half of the year, forecasting the external inflows from the IMF, the EU Commission, the World Bank institutions, as a result of signing a new Memorandum of economic and financial policies between the Republic of Moldova and IMF, the Ministry of Finance increased proposition of Government bonds, resulted in growth of their share in allocated GS from 0.32% in 2015 to 1.34% in 2016.

The *weighted average interest rate* on Moldavian GS is volatile, thus, it decreased from 19% in 2008 to 5,3% in 2013 and then increased to its historical maximum – 24,8% in 2015. During the analysed period *weighted average interest rate* on GS exceeded the *rate of inflation*, the highest difference was registred in 2008-2009. During 2008-2015 the investments in banking deposits were less profitable, then investments in GS, but starting from the 2016, *weighted average interest rate on banking deposits* prevails over *interest rate* on GS (figure 6).

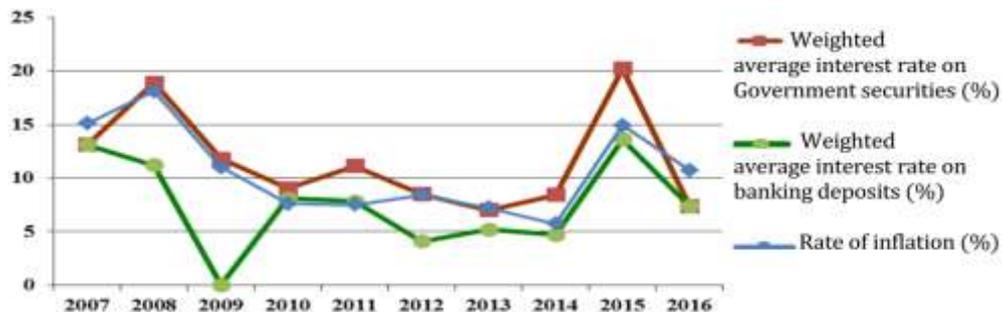


Figure 6. The rates evolution on the Moldovan financial market, 2007-2016, %
 (Source: elaborated by the authors based on BNM, 2017)

At the end of 2016 the amount of all outstanding GS in the Republic of Moldova amounted to MDL 21,5 bln or EUR 1,1 bln, including EUR 105,3 mln – convertible GS, EUR 312,0 mln – GS allocated on the primary market and EUR 680,8 mln – state securities issued for some purposes established by law (resulted in the liquidation procedures of the three commercial banks and bonds issued by Moldova’s Government 2016 to repay the central bank spent for emergency aid), that comprise domestic debt (table 3). External debt includes only loans. During the analysed period, the General government expenditure was steady increasing from MDL 22,3 bln in 2007 to MDL 48,4 bln in 2016, the growth was inregistered and for the volume of issued GS in primary market in MDL, but this tendency does not persist in EUR

due to the EUR/MDL course dynamics. The investigation revealed that during 2007-2016, the share of issued GS in GDP has grown 3 times, and the share of issued GS in Government expenditure has increased more than twice, that means the growth of GS influence in economy of the Republic of Moldova.

Table 3

The role of Government securities in Moldovan public expenditure coverage, 2007-2016

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Volume of issued GS in primary market (mln EUR)	148,2	169,1	333,3	390,6	391,7	460,8	473,6	446,7	441,5	500,5
Volume of issued GS (bln MDL)	2,5	2,6	5,2	6,3	6,4	6,9	7,7	8,5	9,2	11,2
Government Debt to GDP, %	23,2	18,4	27,6	26,3	23,7	24,3	23,7	24,8	25,4	37,8
General government expenditure (bln EUR)	1,4	1,7	1,8	1,8	1,9	2,3	2,4	2,3	2,2	2,2
Share of issued GS in GDP, %	2,3	1,9	4,3	5,0	4,3	4,8	4,3	4,6	6,2	6,9
Share of issued GS in Government expenditure, %	10,5	9,9	18,5	21,7	20,6	20,0	19,7	19,4	20,0	22,7

(Source: elaborated by the authors based on World Bank, BNM, 2017)

The main investors in Government securities in the Republic of Moldova are domestic commercial banks; the institutional investors on the GS market are represented only by insurance companies, but the share of their investments in GS market is small. Starting from the 2010, due to the growth of *weighted average interest rate* on GS, the share of non-banking investors as well as foreign investors increased, resulted in decreasing the share of commercial banks investments in issued GS till its minimum – 80,2%. Absence in the Republic of Moldova of important institutional investors as private pension funds, investment funds negatively influences the GS market development and is one of the most important reason for volatility of GS interest rates.

Estimation of the Government securities market impact on the evolution of the main macroeconomic indicators of the Republic of Moldova demonstrates that according to Pearson correlation coefficient, which is equal to 0,1265, does not exist interrelation between the *volume of issued GS* and *inflation rate*. According to the Pearson coefficient, which is 0,6530, there is interrelation between *weighted average interest rate of GS* and *inflation rate*, as well as there is an interconnection between *volume of issued GS* and *level of employment*, which is confirmed by the Pearson coefficient equal to 0,5848. The strong interdependence is between *volume of issued GS* and *GDP pe capita*, since the Pearson coefficient is equal to 0,8240, also exists an interrelation between the *volume of issued GS* and the *volume of export*, that confirm Pearson correlation coefficient, which is 0,6228.

3. CONCLUSION

In all investigated countries the GS plays an important role in public expenditures financing, budget deficit funding, realizing the goals of macroeconomic policy, regulating the level of inflation and is an effective instrument for providing monetary policy. The correlation analysis revealed that in Belgium, Romania and the Republic of Moldova the volume of issued GS positively correlated with GDP pe capita, as well as with level of employment, in Romania and Republic of Moldova exists positive influence of volume of issued GS on volume of export and vice versa. At the same time, was found out that in Belgium and Romania: the ratio of outstanding GS to GDP and to Government

expenditure, increased faster than the same ratios of issued GS, that allows authorities to implement long-term macroeconomic strategies and is a result of increasing of share of long- and medium- term Government bonds in issued GS; the interest rates on GS are less volatile and low, the secondary market of GS is developed and liquid due to the presence on the GS market the wide range of institutional investors, foreign investors, markets' high liquidity, issuance of the GS in euro etc. as well as because of stable political and macroeconomic situation in condition of transparency, predictability and credibility of national developed financial markets. In the Republic of Moldova the ratio of outstanding and issued GS to GDP and to Government expenditure is about the same, because of the dominant share of short term Treasury bills in issued GS, what has negative effect on planning of Government needs funding in long- term period; the interest rates on GS are volatile and unpredictable for long- term perspectives; the base of investors in GS is narrow with domination of domestic commercial banks, GS are not tranzactioned on Moldova Stock Exchange, the secondary market is underdeveloped etc., what determine the necessity of Moldovan GS market modernization based on the best experience of EU countries.

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