

Treasury Bond Market Segment at Bucharest Stock Exchange August 2008 – June 2012

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Abstract: The present paper aims to present the level of development reached by Romanian Treasury bond market segment at Bucharest Stock Exchange. A trial will be made to identify the determinants that contributed to the current level of development of domestic secondary government bond market and the factors that can generate a further (and improved) development. The analysis will be descriptive (the data series available for Romania are short), based on the secondary data offered by Bucharest Stock Exchange.

Key words: Treasury-bond; secondary market; liquidity; Romania

JEL Classification: H74; G18; G12; G10

1. Introduction

The development of debt market in Central and Eastern European Union countries has as main objective to encourage their respective central, regional and local governments to consider bond finance as an important way for regional and local project investments (De Haan et al., 2009). Also, a closer relationship between the local/ regional/ central authorities and the capital markets could enhance the quality and the efficiency of projects financed and encourages long term financial planning.

The literature regarding the Romanian bond market, in general, is relatively scarce and appeared only starting with 2004. One of the first studies presenting the details of Romanian municipal bond market was that of Pop and Dumbrava (2004). The study of Skully and Brown (2006) had a special section dedicated to the Romanian bond market and a subsection for the municipal bonds. Corduneanu and Milos (2008), Grecu (2008), Mosteanu and Lacatus (2008), Matei et al. (2009) are Romanian academic studies dealing with some aspects of the Romanian bond

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market. Only one study (Bunescu 2009) deals with a specific bond issue in its trial for a detailed analysis. An in-depth analysis of the Romanian municipal bond market was made by Pop and Georgescu (2011 and 2012).

2. Treasury-bond Sector at BVB¹

Since August 4th 2008, domestic T-bonds denominated in RON start listing at Bucharest Stock Exchange (BVB hereinafter). The bond market segment at BVB was launched in November 2001, with the listing of municipal bonds. The diversity of listed bonds grew with the introduction of domestic corporate bonds in May 2003, and of international (corporate) bonds in September 2006.

Table 1 presents the evolution of the BVB bond market segment, which, in average represents about 10% of the BVB main market total turnover. Graph 1 shows the dominance of the various sub-segments of BVB bond market. As it can be seen, the Treasury-bond segment became dominant starting with 2009.

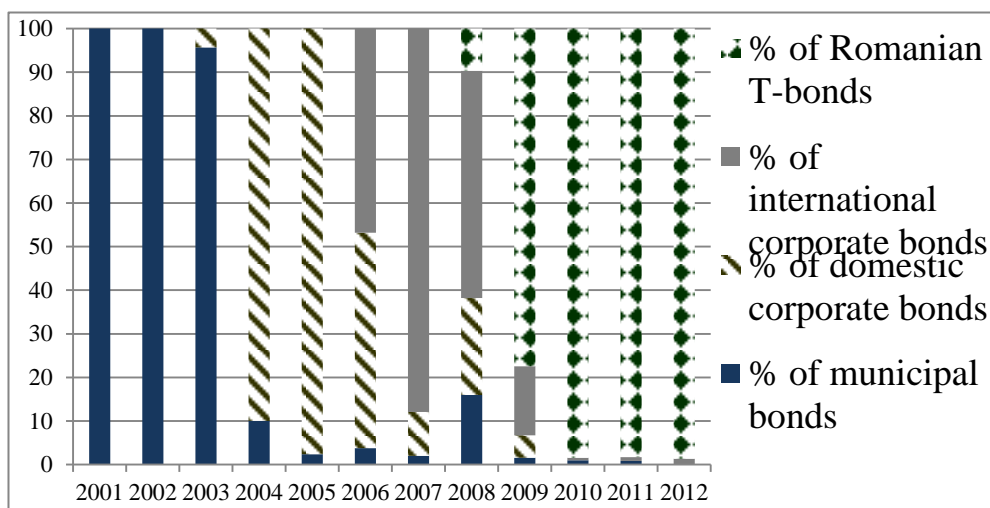
Table 1. BVB bond market (public offerings excluded)

Year	Number of trades	Volume	Value (EUR) ²	Number of listed issues (end of the year/ period)	New entries
2001	5	45	185.13	2	2
2002	10	59,050	250,295.75	4	2
2003	37	29,870	355,584.29	10	9
2004	274	118,136	13,148,120.07	25	17
2005	334	197,107	29,666,788.77	19	6
2006	319	603,208	53,877,527.98	18	5
2007	233	3,652,467	147,985,261.23	22	11
2008	547	862,927	53,465,296.51	50	34
2009	958	1,822,908	277,746,575.81	60	16
2010	540	591,511	552,865,212.24	55	7
2011	245	857,248	105,205,882.66	59	6
2012 (June 30 th)	206	183,528	185,769,995.15	61	5

Source: Authors' calculations based on BVB daily reports

¹ For the present paper the abbreviation BVB (from Romanian name Bursa de Valori/Stock Exchange Exchange Bucharest) was chosen in order to avoid any confusion with the possible abbreviation for Budapest Stock Exchange, Bulgarian Stock Exchange and Bratislava Stock Exchange.

² The exchange rates used: annual average based on the daily data provided by RNB (Romanian National Bank) available at <http://www.bnro.ro/Baza-de-date-interactiva-604.aspx>.



Graphic 1. The importance of each bond market sub segment in total turnover (total value)

Source: Authors' calculations based on BVB daily reports

In table 2 the number of listed T-bond issues is presented. As it can be seen, after the introduction of 25 Treasury-bond issues for listing in August 2008 (of which one reached the maturity in September 2008), only a relatively small number of new Treasury-bond issues were allowed to be listed on the BVB bond market segment.

Table 2. BVB Treasury-bond issues available for trading

Year	Number of listed outstanding bond issues (end of the year/ period)		
	New entries	Reached maturity	End of period
2008	25	1	24
2009	2	0	26
2010	2	10	18
2011	4	1	21
2012 (June 30 th)	5	3	23

Source: Authors' calculations based on BVB daily reports

The characteristics of domestic Treasury-bonds listed at BVB are:

- they are denominated only in RON;
- their nominal value is 10,000 RON (**2,405 EUR¹**);
- they have fixed interest rate for their entire life;
- the coupon is paid annually;

¹ Using an average exchange rate of 4.1576 RON/ EUR – the average for the period 2008 to 2012 (June)

- the principal is reimbursed only at maturity.

Table 3. Presents the evolution of the Treasury-bond market segment at BVB

Year	Number of trades	Volume	Value (EUR) ¹	Value/ Turnover (mil. EUR)	Liquidity (end of period) ² %
2008	17	2,069	5,182,444.41	5.18	0.16
2009	346	85,689	214,978,790.75	214.98	4.45
2010	435	203,724	544,126,776.96	544.13	11.18
2011	181	35,889	85,780,936.40	85.78	1.88
2012 (June 30 th)	199	79,027	183,273,745.31	183.27	3.78

Source: Authors' calculations based by BVB daily reports

Table 3 BVB Treasury bond market data (no public offerings were launched through the BVB system).

The trading volume and the turnover were not expected to reach high levels in 2008, when the Treasury-bonds were first listed. Both trading volume and turnover grew significantly during 2009, and doubled in 2010 compared with 2009. This evolution indicated that while the BVB equity market segment performed poorly (under the influence of financial crisis), the investors turned toward Treasury-bonds as alternative investments (flight to safety). During 2011 the investors' attention turned again towards the equity sector, and the Treasury-bond trading registered only a modest level, showing a sharp decrease compared with 2010. Another reason that can explain the relatively low levels of Treasury-bond trading during 2011 might be the situation at the European level regarding the public debt problems of Greece and Ireland, and the fears regarding the level of public debt and the payment capacity of Italy, Portugal and Spain. Thus Romania has a relative low level of public debt, compared with other European Union member countries, and thus the Romanian government's capacity of fulfilling its payment obligations was not a concern, the relative poor economic conditions which affect Romania also, had an impact on those looking at Romanian domestic Treasury-bonds as an investment alternative. Year 2012 is marked by an improvement which might have as cause the relative disappointing performance of the equity sector driving investors to consider Treasury-bonds as alternative for their portfolios.

Table 4 shows the trading frequency by days for Treasury-bonds. The 2008 should be taken into consideration remembering that Treasury-bond listing started only on August 4th 2008, during the holiday period, and in September 2008 the climax of

¹ The exchange rates used: annual average based on the daily data provided by RNB available at <http://www.bnro.ro/Baza-de-date-interactiva-604.aspx>.

² The liquidity was calculated as a ratio between the T-bond market segment turnover at the end of the year and the outstanding listed T-bonds total (nominal) value at the end of the year.

the global financial crisis had an important impact on the capital markets all over the world.

For 2009 and 2010, Treasury-bonds registered transactions in over 50% of the trading days, while in 2011, the interest toward Treasury-bonds transactions decreased, the trading occurring only in about 31% of the trading days, in concordance with the data presented in table 3. For 2012, the situation registered an improvement, in concordance with the data presented in table 3.

Table 4. Trading frequency for listed Treasury-bonds

Year	Number of days when trading occurred	Number of trading days at BVB
2008	11	101*
2009	137	250
2010	134	255
2011	80	255
2012 (June 30 th)	73	125

*Number of trading days for the period between August 4th 2008 and December 23rd 2008 (the last trading day at BVB for 2008)

Source: Authors' calculations based on BVB daily reports

The data presented above show an oscillating evolution of the Treasury-bond segment at BVB and its relative poor position in total BVB turnover: it represented 0.04% at the end of 2008, 1.81% at the end of 2009, grew at 5.40% at the end of 2010, decreased at 5.07% at the end of 2011 and reached a higher level of 5.76% by the end of June 2012, mainly due to a decrease in equity segment turnover.

The factors that have an influence on the relative low profile of T-bond market segment compared with BVB share market can be:

- the relative low volume per Treasury-bond issues; as graph 2 and table 5 both show, about 61% of the Treasury-bonds issues listed at BVB have a volume of less than 50,000 securities, which is not expected to generate enough liquidity for the respective issues; for 2008 and 2009 the Ministry of Finance authorities seemed to understand the need for an increased volume/ issue; but for 2010, 2011, and the first half of 2012, the volume per issue decreased again, having an impact over the marketability of the respective Treasury-bonds;
- the nominal value for the listed T-bonds is 10,000 RON (or about **2,405** EUR¹); this nominal value is almost prohibitive for any individual investor;

¹ Using an average exchange rate of 4.1576 RON/ EUR – the average for the period 2008 to 2012 (June)

at this nominal value almost only the institutional investors are those who can acquire a high enough volume/ issue to generate transactions;

- the number of Romanian institutional investors is relative low; a number of 9 private pension funds in the second pillar and 11 pension funds within the 3rd pillar are currently active¹; to these should be added the 6 domestic bond mutual funds² that are functioning and between 20 and 23 domestic diversified mutual funds³ which are likely to include Treasury-bonds in their portfolios; while a number of 19 closed-end funds are registered in Romania⁴, they have mostly international portfolios and their interest toward the domestic Treasury-bonds might be considered low or very low. Romanian banks are also important investors in Treasury-bonds (as the data of Romanian Ministry of Finance indicate, in average for the period 2000 – June 2012, about 65% of the domestic Treasury securities are held by ‘private banks and others’), but they have the secondary (inter-bank) market on which they can trade the Treasury-bonds they bought much more easily.

With such a small number of investors able to access the Treasury-bond market segment at BVB, it is easy to understand the relative low level of trading registered.

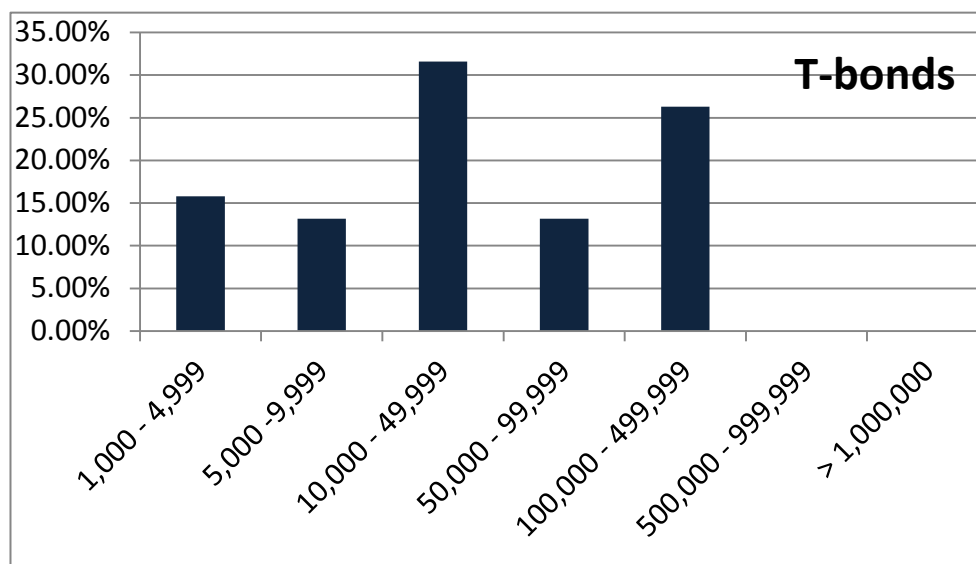
The problem of lack of liquidity through low volume/ issue might be simply solved, if the Ministry of Finance authorities will lower the nominal value at 1,000 RON; a level still high, but more affordable for small investors and which will multiply by 10 the volume/ issue, while keeping the level of public debt under control. However, until now, this alternative was not even taken into consideration by the relatively inflexible Ministry of Finance authorities.

¹ <http://www.csspp.ro/date-statistice-pilonul-2> and <http://www.csspp.ro/date-statistice-pilonul-3>

² Based on data offered by the Romanian Association of Asset Managers at <http://www.aaf.ro/>

³ Based on data offered by the Romanian Association of Asset Managers at <http://www.aaf.ro/>

⁴ Based on data offered by the Romanian Association of Asset Managers at <http://www.aaf.ro/>



Graphic 2. Treasury-bonds listed at BVB structured by volume of the issue

Source: Authors' calculations based on BVB daily reports

Table 5. The average volume for the Treasury-bond issues listed at BVB

The year when the issue was launched	T-bond issues average volume
2005	8,028
2006	No issue was launched
2007	167,445
2008	274,869
2009	423,342
2010	113,381
2011	52,229
2012 (June 30 th)	84,677

Source: Authors' calculations based on BVB data available at www.bvb.ro

Note: In August 2008, the T-bonds listed at BVB were issued during 2005, 2007 and 2008

Table 6 presents the average maturity for the listed issues, at the moment of their launching, along with the average interest rate. It can be seen that the borrowing costs increased in 2008 and 2009 as a consequence of the global financial crisis. However, for 2010, 2011, and the first half of 2012, the Romanian Ministry of Finance reduced the borrowing costs. This creates a wave of protests among the primary dealers and the other institutional investors (since the yield of Treasury-bonds decreased almost at the level of the current inflation rate for 2010 and 2011). However, the Treasury-bond issues were subscribed because they are relatively

scarce and are needed for portfolio diversification reasons mainly by the domestic pension funds, and also by the domestic bond mutual funds.

Table 6. Average maturity and interest rates for BVB listed Treasury-bonds by year of issuance

Year	Average maturity	Average interest rate (%)	Minimum (%)	Maximum (%)
2005	93.6 months (7.80 years)	7.33	6.47	8.00
2006	-	-	-	-
2007	74.7 months (6.22 years)	6.42	6.00	6.75
2008	52.0 months (4.36 years)	8.13	8.00	8.25
2009	52.5 months (4.38 years)	11.13	11.00	11.25
2010	51.0 months (4.25 years)	6.13	6.00	6.25
2011	61.5 months (5.13 years)	6.05	5.95	6.25
2012 (June 30 th)	82.0 months (6.83 years)	5.85	5.75	5.95

Source: Authors' calculation based on the information offered by BVB for T-bonds bonds

Note: In 2006 no T-bond issues was launched by the Romanian Government

Up until the end of June 2012, 38 T-bond issues were listed at BVB. Of these:

- ✓ 15 reached their maturity (1 in 2008, 10 in 2010, 1 in 2011, and 3 up until June 2012); of the expired issues, 12 were common Treasury-bond issues and 3 were benchmark issues;
 - of these expired issues, 7 were never traded; all seven were common issues.
- ✓ 23 are active issues; of the active Treasury-bond issues, 8 are common issues and 15 are benchmark issues;
 - of the active issues, 6 were never traded.

The brief data presented above are consistent with the low liquidity level of the Treasury-bond segment, as presented in table 3 and shows the preference of BVB investors toward the benchmark issues, thus these Romanian benchmark issues have none of the features of what is important at international level through such a benchmark.

The low liquidity level, in general, is consistent with the low trading frequency pattern and, mainly in the case of common issues, with the very low number of trades (between 1 and 3).

Until the trading frequency and the liquidity level will not increase, the T-bond sector at BVB will continue to have a low profile, not attracting investors.

3 Conclusions

BVB launched in November 2001 its bond market segment listing municipal bonds. As expected, not having a benchmark provided by T-bonds, the BVB bond market segment had a very slow development and up until the end of 2008 it represented less than 4% of the total BVB turnover.

In August 2008 the listing of some Treasury-bonds at BVB became in a way compulsory, since the 2nd pillar domestic pension funds was launched on the market during July 2008 and an important part of their portfolios, according to the regulations, was supposed to be formed by Treasury securities.

For the listed Treasury-bond issues the level of transparency increased, all the necessary details being provided by BVB.

The efforts of RNB (Romanian National Bank) and BVB to build a liquid and credible market for domestic government bonds should be matched by the Ministry of Finance willingness to provide an improved level of information and to increase its transparency and flexibility. Until then, for any investors in Romanian domestic government bonds, to get reliable information will be a struggle that will probably generate the abandon of such an investment. Even when the idea is not abandoned, the low level of liquidity of BVB Treasury-bond market segment and the lack of details regarding the secondary market of Treasury securities organized by RNB will prove another difficult barrier for any investor.

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