A Series of Macroindicators Relevant for the Identifycation of Potential Tensions on Money Market in Romania

Alina Georgeta Alinca[1]

Abstract: Financial and monetary stability represent elements of maximum importance at international and national levels, through risks borne by neglecting this subject, both for practitioners and for academic environment and researchers. Lack of financial and monetary stability can lead to the manifestation of tensions, vulnerabilities and risks which might seriously affect the process of financial intermediation and even growth. The problem of tensions can be formulated by the reverse analysis of monetary and financial stability, covering multiple aspects of institutional nature, of payment systems, but also of the sphere of financial markets functioning. For this reason, an exogenous-endogenous analysis, allowing the identification of internal and external tensions, vulnerabilities and risks of money market, plays a crucial role in ensuring financial and monetary stability, monetary indicators being able to contain, in their developments, stabilizing or destabilizing elements for monetary and financial markets and for economy. Therefore, this article seeks to analyze, both temporally and in some cases between countries, a series of macro indicator of money market in Romania to see whether and to what extent they may involve tensions which might affect the country's monetary and financial stability. The obtained results don't indicate important imbalances of the Romanian money market, although this faces a number of issues.

Keywords: monetary stability; financial stability; monetary indicators; vulnerabilities, risks;

JEL Classification: E44; E5; G01

1 Introduction

If about uncertainty, vulnerabilities and risks, in the context of the stability or financial instability, there are numerous studies, about tensions which might evolve in risks doesn't speaks or when it does, "tensions" means rather an exogenous factor of economic sphere (e.g. geopolitical, social, religious, cultural tensions, etc.) or from outside of the territory of a country, but from in the same field (tensions that occurs between countries) or a vague concept. For this reason, could be considered extremely important an analysis of the potential tensions that manifests on Romania's money market.

[1] Centre for Financial and Monetary Research "Victor Slăvescu", Romania, Address: Casa Academiei 13, Calea 13 Septembrie, Building B, 5th floor, Bucharest, 050711, Romania, Tel.: +4.021.318.24.19, Fax: +4.021.318.24.19, Corresponding author: alina.glod@gmail.com.

Thus, the present article[1] analyzes mainly endogenous potential tensions that may occur in the money market in Romania, which are elements with rather a structural valence, with direct or indirect connection with the formation of demand and supply of the local currency. However, it should be noted that internal developments can not be removed from general international image, especially that the chosen period 2000 - 2013 (when the 2013 data were not available, the analysis was done until 2012) included at least three important moments generating instability: - global economic and financial crisis - the manifestation of the sovereign debt crisis (in 2010-2011) and the increase of sovereign debt crisis (in 2012-2013) and - cooling of relations between Ukraine and Russia and political and military tensions in Ukraine. The strongest effects have been observed for the onset of the global financial and economic crisis, but also other crisis can be viewed as having a significant impact on the money market in Romania, albeit at a reduced scale rather regional or local. General context, including global or regional should not be excluded, but a close look at national level can facilitate the identification of the causes and the effects of positive or negative manifestation of certain phenomena that have shaped the current structure of the national economy and the money market developments in Romania and can help us identify possible tensions, vulnerabilities or risks that may occur on it.

Thus, this article seeks to analyze a series of macroeconomic indicators that can help identifying potential instability generating tensions in the money market from Romania.

2. Literature Review

Numerous studies deal with the concepts of stability, instability, vulnerability, risk, fluctuation. For example, Mishkin (1999) defines financial stability in report to the presence or absence of pronounced episodes of stress and significant disruptions in the functioning of the financial system. Padoa-Schioppa (2003) notes that the financial stability must confer resistance of the financial system to external shocks. On the contrary, Schinasi (2004) believes that the financial system itself can be a source of shocks and confidence in financial contractual relations play an important role in ensuring financial efficiency, but is also an element of fragility of the system.

But financial instability, being better observed and more concrete, can be defined more easily than financial stability. For example, Borio & Drehmann (2009a) define financial instability as a „situation in which normal-sized shocks to the financial system are sufficient to produce financial distress, i.e. in which the financial system

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is “fragile”. Financial stability is then the converse of financial instability.” Furthermore, they found that „the performance of ex ante measures of financial instability is generally rather poor, although some are more useful than others. Most techniques provide thermometers rather than barometers of financial distress”.

Multiple definitions of financial instability are making almost impossible a consensus on what should be the concrete operational manner in order to ensure financial stability or to diminish financial instability.

A temporal evaluation, which takes into account the signals of monetary and financial markets, can allow on the one hand finding moments of instability from the past, and on the other hand, based on a structural fragility of the financial system, the extent to which instability episodes may occur now or in the future. Therefore, there are a number of indicators that take into account financial market signals and signal monetary or financial instability adversities such as: indicators that indicate excessively low risk premiums, credit expansion and the boom in asset prices (Borio & Lowe, 2002a,b). However, it should be noted that there is still no satisfactory models and tools for measuring financial instability, many of them being unable to contain and explain elements of behaviour (Upper, 2007).

There may be periods when the fragility and instability unfold, some tensions and vulnerabilities might be present at that time but shocks do not occur (only after several years) (Borio & Drehmann (2009a). Furthermore, there may be a so-called “paradox of instability” in which fragility is masked and financial system seems strong though is not (Knight, 2007). Early identification of tensions, vulnerabilities and risks, taking into account certain structural weaknesses, may provide efficiency to the strategies and policies of financial (in) stability management.

3. Problem Description and Methodology

The article aims at achieving a practical study on the most important indicators of monetary market (and not only) of Romania, in order to identify tensions generating instability. The paper uses the database of the National Bank of Romania (NBR) and the World Bank and the information is analyzed during the years 2000 - 2012 or 2013, depending on data availability. The methodology consists of using statistical analysis, comparative in time and space, sometimes descriptive, in order to grasp the most relevant developments in the indicators analyzed. Thus, the article treats: the evolution of the gross savings and gross capital formation as the percentage of GDP, the evolution of the money and quasi-money growth rate, the monetization of the economy (%), the financial depth (%), the coverage of monetary aggregates through international reserves (%), the bank capital to assets ratio (%),the bank nonperforming loans to total gross loans (%), the real interest rate (%), the risk premium on lending (%), the interest rate spread (%).

Based on the analyzed indicators can be signalled some problems, tensions and vulnerabilities to financial stability in Romania, at the same time being useful information for managers responsible for macroeconomic policies, which have between their responsibilities financial stability issues.

4. The Analysis and Results

Analysing the gross savings relative to the gross capital formation (as % of GDP) (or the investment rate) (see Figure 1), we see that although the two rates fit on the same trend, the internal saving do not fully supports the investment process. The aspect can be seen as a decoupling of financial intermediation from the domestic saving process, knowing that financial intermediation facilitates the transfer of capital and risks between creditors and debtors. Lately, there has been a considerable improvement in domestic savings, which allows financing the economy to a lesser extent through foreign liabilities. This is especially gratifying, in the context of evolution of foreign liabilities which suffered a strong decrease after the expiration of Vienna Agreement I, in the spring of 2011. The agreement stipulated that the most important nine banks[1] with foreign capital of Romania, were obliged by the IMF, European Commission and the National Bank of Romania to maintain there level of exposure on the Romanian market at the level of March 2009 (when the agreement was signed) and their subsidiary solvency ratio above 10%.

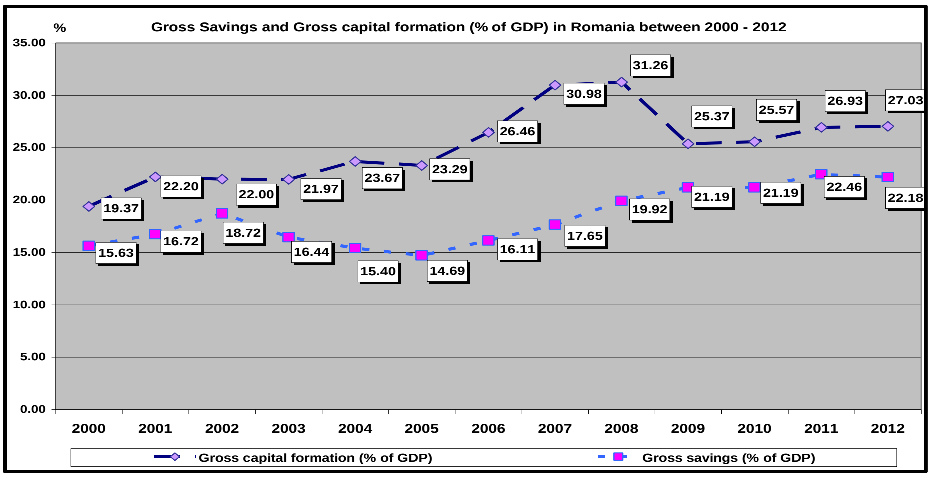

Figure 1

Source: World Bank data, author's processing

[1] The nine banks were: Erste Bank, Societe Generale, Raiffeisen International, National Bank of Greece, Alpha Bank, UniCredit, Volksbank, Piraeus Bank and Eurobank EFG.

So if we look at the evolution of the growth rate of monetary aggregates (see Figure 2), we can say that although until 2007 it was extremely erratic and stood at significant levels, during the manifestation of economic and financial crisis it has considerably reduced and somewhat stabilized, in 2013 being back on an upward trend, while the evolution of the indicator for Germany continued to have a negative value.

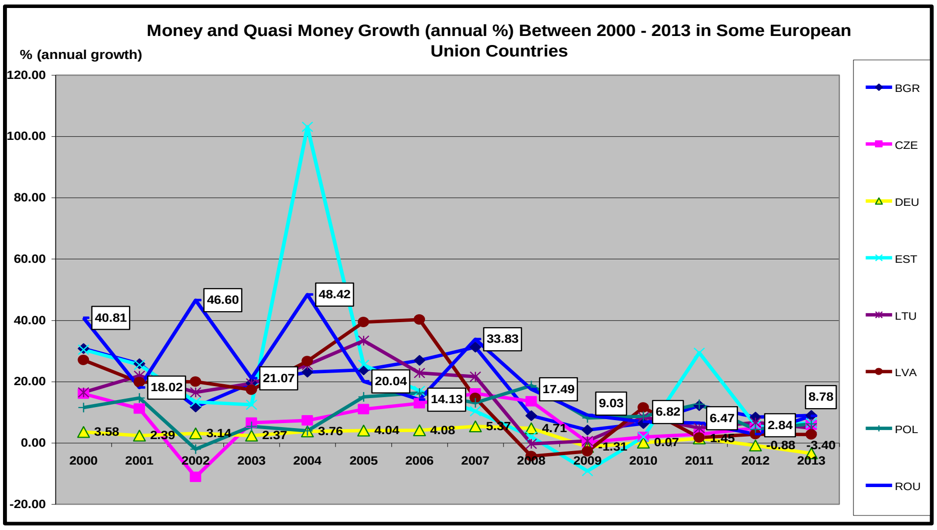

Figure 2

*Source: World Bank, author's processing, Notations: BGR - Bulgaria, CZE - Czech Republic, DEU – Germany, EST - Estonia, LTU - Lithuania, LVA - Latvia, POL - Poland, ROU - Romania; * Data in frame are for Romania, data for Germany are borderless*

As we know, the growth rate of the money should be appropriate, on the one hand, to the supporting real GDP growth and secondly to maintaining inflation at low levels. So if we look monetization of an economy (see Figure 3), we can say that a low level of monetization, including at the level of the monetary base which is the responsibility of the central bank, implies currency substitution from national currency to foreign currency, increasing the currency risk and producing undesirable phenomena such as dollarization or euroisation of the economy. The phenomenon of euroisation must be correlated with currency savings structure, namely at the level of banking system - an analysis of currency bank deposits, but also with the confidence of individuals and companies in the national currency and with the foreign currency remittances. However, it should be noted that at the time of an external shocks, such as the case of global financial and economic crisis, the foreign currency inflows can record some dramatic decreases, which can lead to a rapid increase in the price of foreign currency or an exchange rate increase in a unexpected, unpredictable and hard to be accustomed manner with the internal money and currency markets.

It should be noted that in times of instability, both the population and companies will focus on having assets in currencies whose rates are stable or are perceived to be stable over time. If the currency with maximum internal stability is the national one, then the deposits are formed mainly in national currency, while loans will be directed to the currencies with high volatility in the sense that it is predicted depreciation or keeping at the same level of these currencies over time. However, for high-value loans and/or with an extended period of repayment, the national currency can be attractive, but only in the case where interest rates are attractive as well.

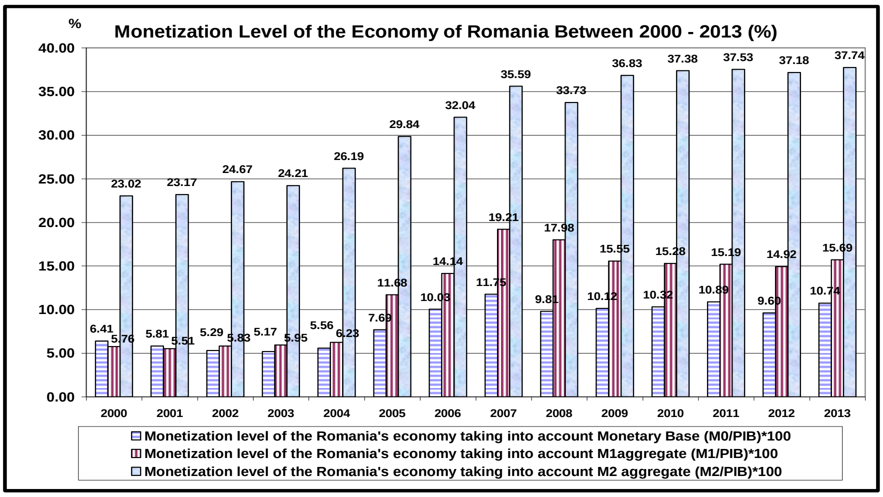

Figure 3

Source: NBR, author's processing

Thus, when analyzing the situation of the financial depth in Romania (see Figure 4) we see that it has increased from relatively lower levels (15%) in the early 2000's to over 50% in the momentum of the crisis (after the year 2009) indicating either, on the one hand, the accumulation of significant imbalances in the economy or, on the other hand, a normal process of increasing financial intermediation and the living standard of the population. One aspect that should be noted is the fact that before 1989, Romania was still under the auspices of the communist regime, when there was not any usefulness and motivation for credit, and the goods, implicitly the durable goods, on the one hand, did not impose the need for change them periodically being built to last throughout life, on the other hand, these goods were in limited quantities and of similar quality and there was no option for imported goods. Therefore, it is to some extent understandable why gradually, and especially after 2000, Romanians' appetite for credit increased, implicitly credit of consumption, being motivated also by some orientation to Western-style behaviour. However, it should be noted that a rapid increase and/or significant growth of domestic credit in GDP, even if it is a transition economy, can not be neglected as a risk indicator or at least an increase of the financial turmoil (Borio & Drehmann, 2009b and Drehmann

& Juselius, 2013); situation observed in the case of Romania, when in 2004-2007 period the indicator increased by over 20 percentage points.

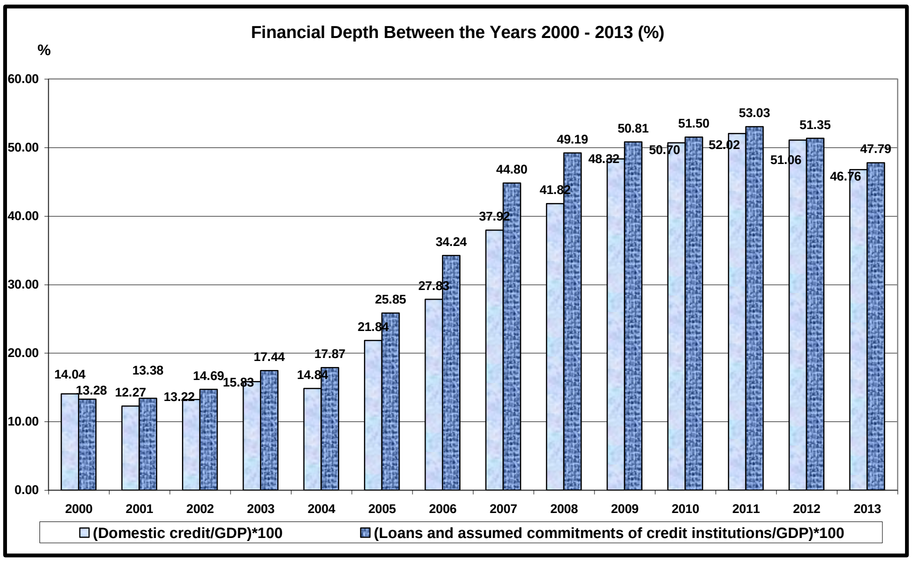

Figure 4

Source: NBR, author's processing

Another indicator that could signal potential tensions, vulnerabilities and risks of the banking system as a whole and especially liquidity problems of credit institutions is the share of money in international reserves. Monetary aggregates can be considered a set of assets with variables liquidity, being the constituent components of money supply, issued and managed by various banking and financial institutions, while international reserves (gold reserves and foreign exchange reserves) are an important element of international liquidity which may constitute a guarantee to cover the state debt, while characterizing the economy of a country in ensuring economic and financial credibility. If we look at the evolution of this indicator for Romania (see Figure 5), we find that although the coverage of monetary aggregates through international reserves declined between 2000 to 2013, however, are at significant levels which can indicate a sufficient coverage of monetary aggregates through international reserves. Note that the decrease of the coverage of monetary aggregates through international reserves may indicate a perception of foreign investors in the sense of a weakening of the economy and especially of the credibility of financial institutions. Thus, this indicator can capture to a certain extent the possible tensions, vulnerabilities and risks to Romania's financial stability.

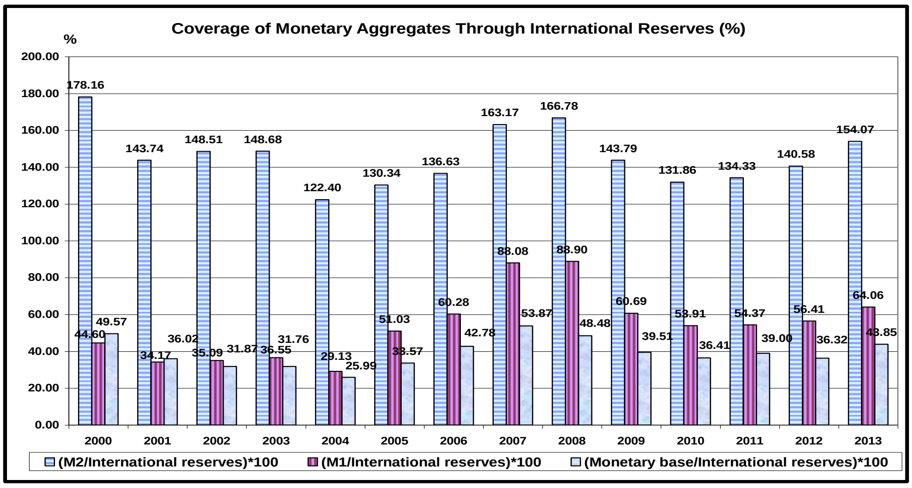

Figure 5

Source: NBR, author's processing

However, the structure of the Romanian banking system is not so adequate, despite good prudentially. For example, if we follow the bank capital to assets ratio (see Figure 6), according to the World Bank, Romania has seen a downward trend of the indicator in the period 2000 to 2013, reaching 7.5%, while many other countries in the region have registered an upward trend with values above Romania (i.e. Lithuania, Slovakia, Latvia, Estonia and Poland). Although the euro area, the European Union and countries like Germany and Spain are still below the level of Romania, but above 3% required by the relevant regulations on leverage, the situation could worsen given that the indicator for Romania will keep the present trend.

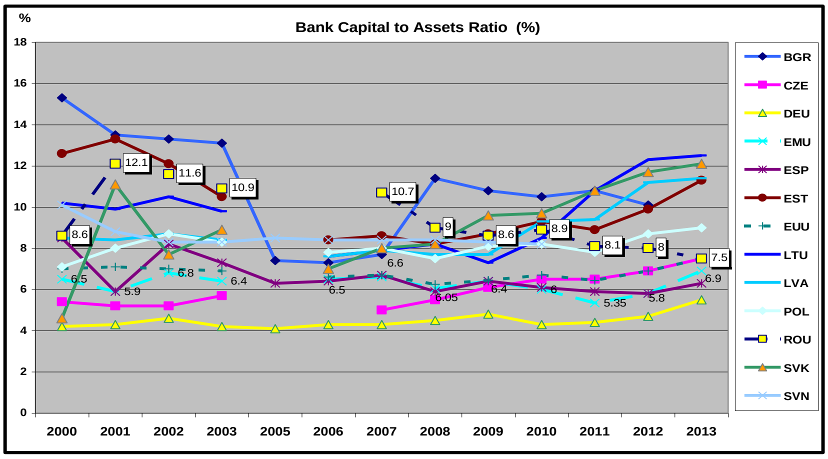

Figure 6

*Source: World Bank, author's processing, Notations: BGR - Bulgaria, CZE - Czech Republic, DEU – Germany, EMU – euro area, ESP – Spain, EST - Estonia, EUU - European Union, LTU - Lithuania, LVA - Latvia, POL - Poland, ROU – Romania, SVK – Slovak Republic, SVN – Slovenia; * Data in frame are for Romania, data for euro area are borderless*

Likewise, the existence of a significant share of borrowers with a net income below the national average, so with a high degree of indebtedness, may indicate the emergence of tensions, vulnerabilities and even significant risks to the banking system, contributing importantly, especially when the economic cycle is unfavourable, to the increase in non-performing loans (see Figure 7).

Although it can be said that the rhythm of growth of non-performing loans slowed down in the last two years of analysis, and the Romanian banking system solvency and liquidity are beyond prudential requirements, however profitability of the banking system in Romania seems to describe a "boom and bust" cycle with frequent periods of collapse especially concerning capital efficiencies.

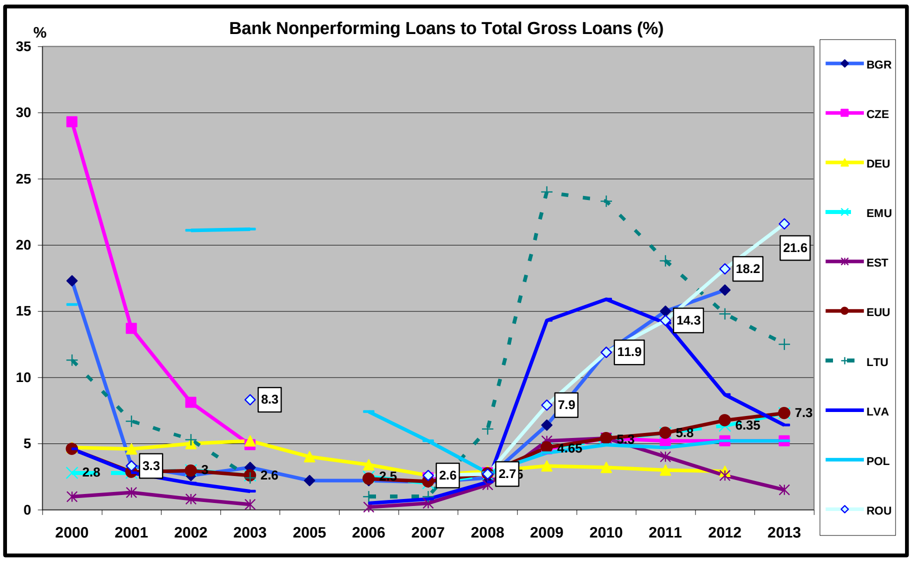

Figure 7

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It should be noted that an important role in determining savings or borrowing decision is price. In this respect, an analysis of the real interest rate on loans in some economies of the Union can provide explanations for lending developments in our country and in regional economies. In the period 2000 - 2013, the real interest rate (the rate adjusted with inflation and measured by the GDP deflator) had a fluctuating trend for most economies analyzed, but especially for Romania. It can be found relatively sudden increase (in years 2002, 2004 and 2009) and rather gradual slowdown trend (2004-2007 and 2009-2012) (see Figure 8). The year 2007 marks a shift in negative territory even for real interest rates on loans in Romania, placing thus the nominal interest rate at a very low threshold. A threshold of nominal interest rates very low, zero or even in a negative territory may signal the beginning of the problems for the banking system. The situation is even more pronounced in the case of Lithuania, Estonia and Latvia. There are opinions that support the idea that it takes negative interest rates to reduce unemployment and even bubbles, or there is the idea that in a time of economic booms inflation should be "pushed" up and kept there, but these ideas can encounter conservative perceptions of central banks or the naturally social perception that it should be a positive rewarding on savings from deposits. If interest rates are approaching or entering into a negative territory for a long time, the economy could be pulled in the "liquidity trap" and savings would be a loss for the economy and not the engine or future resource for development. We can see what happened in the economy in the period 2007 - 2014, including at the global level and the effect of negative real interest rates on loans was not at all the solution, but itself one of the problems of this situation: strong manifestation of the crisis and difficult post-crisis recovery.

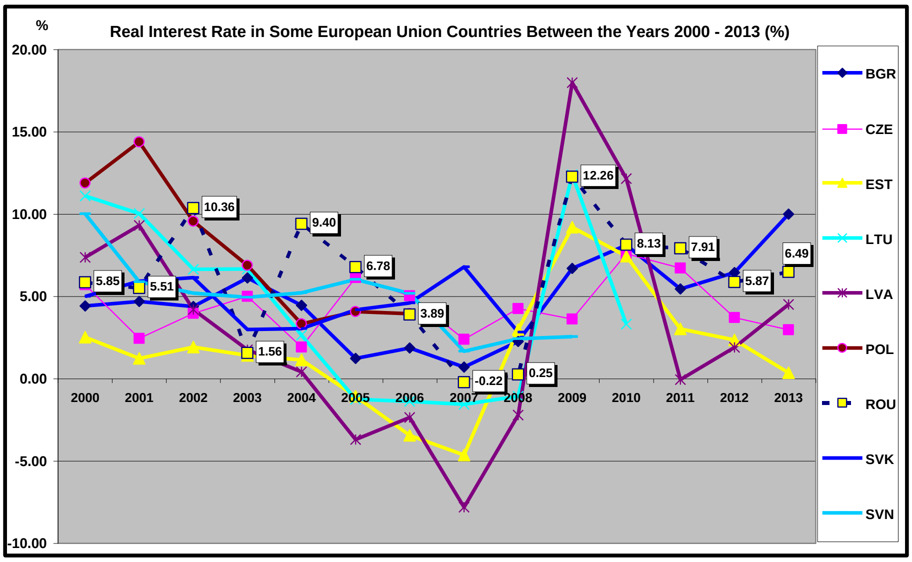

Figure 8

*Source: World Bank, author's processing, Notations: BGR - Bulgaria, CZE - Czech Republic, EST - Estonia, LTU - Lithuania, LVA - Latvia, POL - Poland, ROU – Romania, SVK – Slovak Republic, SVN – Slovenia; * Data in frame are for Romania, data for euro area, UE, Spain and Germany are missing*

Along with the real interest rate on loans should be analyzed also the evolution of risk premium on lending. This indicator reflects the difference between the lending interest rate and the interest rate on treasury bills, for which the reduction of this indicator in time represents a signal of a smooth evolution of lending, carrying less risk (see Figure 9). In Lithuania, in 2009, the risk premium on lending has become slightly negative, which indicates that the market believes that some customers in the sphere of non-financial corporations presents a much lower risk than the government, in this case treasury bills being perceived as risk-bearing. If we look at developments in the risk premium on lending in Romania, we can see that is well aligned with the indicator at regional level (in particular with that of Latvia and of the Czech Republic) and can be considered a sign some normality.

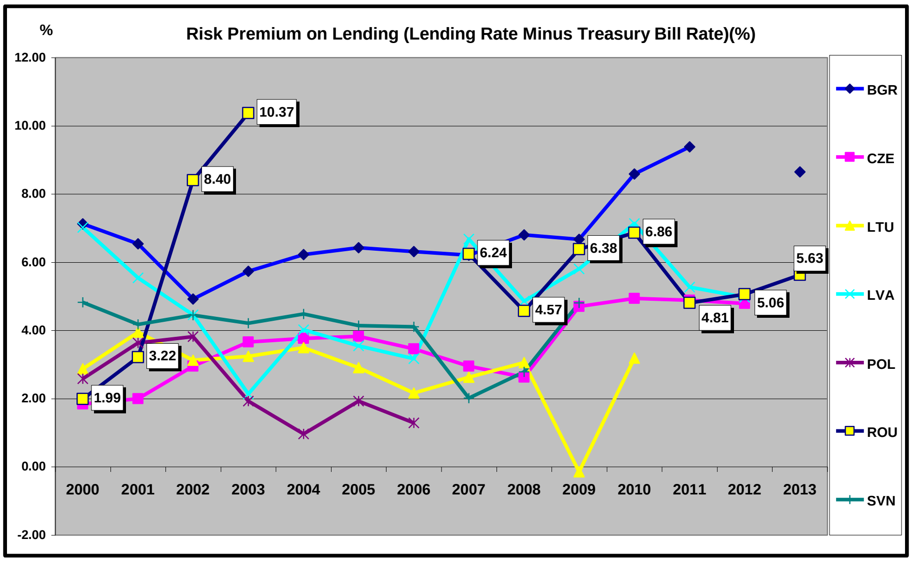

Figure 9

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In addition to the indicator of real interest rate and risk premium on lending, interest rate spread analysis, or more precisely the difference between the interest rate on loans and deposits, is an important indicator for the analysis of the existence of tensions on money market from Romania. According to the World Bank (see Figure

10), it can be seen that during 2000-2012 there was a decrease in the interest rate differential between loans and deposits by more than 14 percentage points in the case of Romania. This reduction in the interest rate differential is positive signal in assessing the financial stability from the perspective of loans and deposits price developments, leaving a smaller place for the manifestation of possible tensions in the monetary market in Romania.

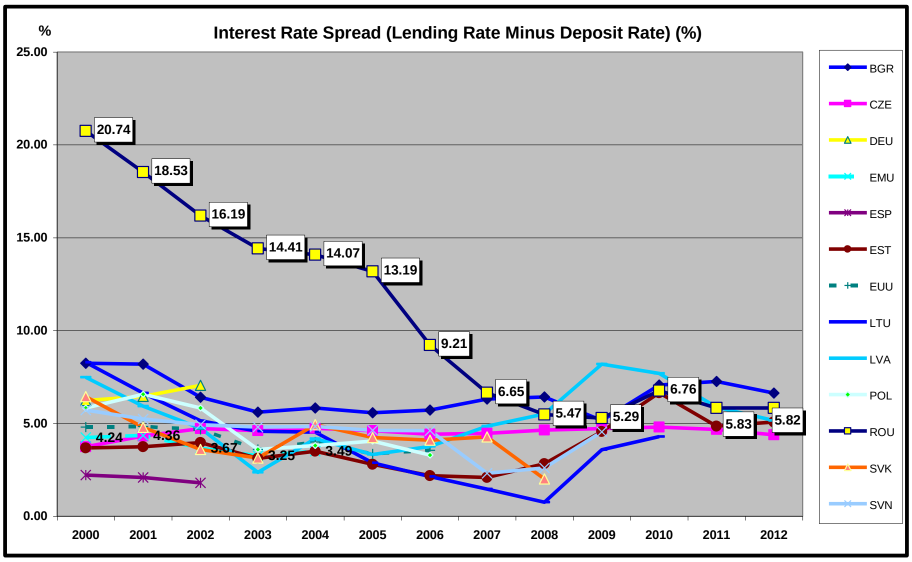

Figure 10

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However it is possible to improve this situation, especially because in some countries in the region and at the level of euro area this interest rate spread is lower than in Romania. Although the transmission mechanism of monetary policy signals appears to have improved over time (the lowering of interest rates on the interbank sector being transmitted satisfactorily on interest rates on new loans and new deposits and the differential between interest rates on new loans in lei and in currency narrowing in recent years), however, in Romania the average interest rate on loans continues to significantly exceed interbank interest rates. This comes outside partly from the configuration of the region, perhaps also because of the relatively high margins between interest rates on loans to non-financial corporations and interbank quotations.

5. Conclusions

Although there is a decoupling of financial intermediation in the domestic saving, lately there has been a substantial improvement in domestic savings, which allows financing the economy to a lesser extent by foreign liabilities, which were narrowed after 2011, amid the expiration of the Vienna Agreement I.

The growth rate of monetary aggregates was strongly fluctuating until 2007, mitigating in 2007-2009 period and afterwards it was swinging again, in 2013 was standing at 8.78%, while in the Western European countries this indicator was showing negative values. Monetization of the Romanian economy after 2007 shows a modest increase of the monetary base, reflecting an adequate behaviour of the central bank leaving to the banking system more liquidity but also a decrease of the share of M1 monetary aggregate in GDP. This phenomenon can be explained by a higher reluctance of using the national currency and its replacement with a stronger currency.

In Romania, the financial depth reflects a tremendous growth in 2000-2007, indicating either, on the one hand, the accumulation of significant imbalances in the economy or, on the other hand, a normal process of increasing the financial intermediation and the need to obtain much higher living standards. In the period 2007 - 2013, the indicator reflected a somewhat fluctuating trend but tempered, in the year 2013 financial depth hovering at around the 2008 year's value. It should be noted that a rapid and/or a significant increase of domestic credit in GDP, such as in the period 2004-2007 for Romania, can be an indicator element of risks or at least of the financial and economic tensions and vulnerabilities. The contribution of monetary aggregates in international reserves may signal a number of potential tensions, vulnerabilities and risks of the banking system as a whole and especially liquidity problems of credit institutions. For example, although the M1 monetary aggregate was in 2013 at the considerably higher level than in 2000, referring to the M2 component, the indicator reflected a decrease of more than 14 percentage points. This may signal a less positive perception of foreign investors in the sense of an economy with a still weak credibility, especially concerning the financial institutions. This fact is somewhat understandable considering the secondary consequences of the global economic and financial crisis in Europe.

Another possible factor that may signal tensions, vulnerabilities and risks to financial stability is the rate of bank capital to assets ratio. According, the World Bank, Romania has recorded a downward trend of the indicator in the period 2000 - 2013, reaching 7.5%, while many other countries in the region have registered an upward trend with values above Romania. Although the euro area, the European Union and countries like Germany and Spain are still below the level of Romania, considering that Romania will maintain the current trend the indicator situation could worsen.

Another source of vulnerability and tensions for monetary and financial market in Romania is the evolution of the share of bank nonperforming loans to total gross loans, which was increasing over 8 times in 2007-2013 period. The existence of a large number of borrowers with a high degree of leverage can lead to the increase of non-performing loans, also taking into account the adverse developments of exchange rates of currencies which are serving the lending process (ex. the growth episode of RON/CHF exchange rate from the beginning of the year 2015, which increased spectacularly the amounts that must be repaid by borrowers in Swiss francs).

Overall, after a general analysis based on macro indicators selected, we can say that there are some problems that may indicate potential tensions, vulnerabilities and even risks on money market in Romania, but can not be classified as dramatic or alarming imbalances that might raise serious questions on the functioning of the Romanian banking system.

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