FINANCIAL STABILITY OF THE REPUBLIC OF MOLDOVA ESTIMATED THROUGH MONETARY INDICATORS

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Abstract*:*

Financial stability is important for any economy regardless of its degree of development, because with the help of financial institutions main activities can be carried out for all economic sectors. So, the crisis of the financial system can lead to economic bottlenecks, direct losses, and respectively to lower economic growth and recession. In this paper the authors analyze the key points related to estimation of financial stability of RM through the monetary indicators.

Keywords: Financial stability, monetary aggregates, financial instability, national economy

JEL Classification: E4, E5, E6

Many studies have shown that periods of financial instability before the crisis could have basic elements in common. Measurement of financial stability is difficult to do because of its multidimensional nature (soundness of financial institutions, functioning of financial markets and of payment systems, etc.), that makes it almost impossible to focus into a single indicator. It is extremely difficult, also, to predict the evolutions of factors that contribute to financial stability. We have seen that a financial system may become unstable even if its mechanisms work properly, due to occurrence of external shocks. Evaluation of financial stability situation should not be limited to the identification of imbalances, but also to identification of risks and vulnerabilities that could destabilize the financial system in the future. Specialized literature tells that financial crisis is usually preceded by negative trends of key monetary indicators. In order to estimate the financial stability on the money market of Moldova we will calculate following indicators:

- Monetary aggregates: M0, M2, M3 and monetary base.
- The level of monetization of the economy after M0, M2, M3.
- The degree of dollarization of the economy.
- Level of assurance of the monetary base through foreign exchange and gold reserves of the state.
- Monetary base relative to official international reserves.
- M2 reported to official international reserves.
- International official reserves in dollars and months of imports.

Monetary aggregates: M0, M2, M3 and the monetary base. When calculating of M2 aggregate according to the methodology of National Bank of Moldova it does not include foreign currency deposits. According to the World Bank methodology M2 includes savings and foreign currency deposits of residents of all sectors with exception public administration. In the EU, M3 aggregate corresponds largely to M2 calculated according to the methodology of the World Bank. Thus, since 1998, for EU countries the cutoff value of M3 growth is established in amount of 4.5%. **According to the regulations of the countries with economies in transition growth of monetization after M2 must not exceed 3-5% annually.**

The growth rate of money supply should be sufficient on the one hand to ensure real GDP growth, on the other hand, not to invoke inflationary processes. The dynamics of monetary base significantly influence the money supply in circulation. From the analysis it is noted that the indicator of growth of the monetary base, with the exception of the crisis in 2009, is higher than cutoff. Respectively this excess is observed and at M2 and M3 aggregates. In 2013, the growth rate of M2 was 31.6 percent and M3 - 29.22% relative to previous year.

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Table 1

Dynamics of growth of monetary base and of M0, M2, M3 aggregates in%.

	2006	2007	2008	2009	2010	2011	2012	2013
growth rate of M0	12,57	29,52	13,71	16,76	14,22	7,49	21,87	32,55
growth rate of M2	12,75	32,11	6,28	13,76	19,03	10,59	18,53	31,60
growth rate of M3	12,22	47,35	18,36	-3,82	18,28	14,11	23,52	29,22
growth rate of monetary base in the broad sense	23,58	39,81	15,86	3,17	13,36	10,60	20,83	26,49

Source: Calculated by the authors according to National Bank of Moldova

Growth of monetization per capita it is significantly correlated with GDP per capita. In comparison with other countries that have similar conditions of the Republic of Moldova (the income is up to $ 3,000 per capita and financial market observes a low degree of monetization), unlike us they have lower interest rates and the inflation rate is higher (the phenomenon of cheap money).

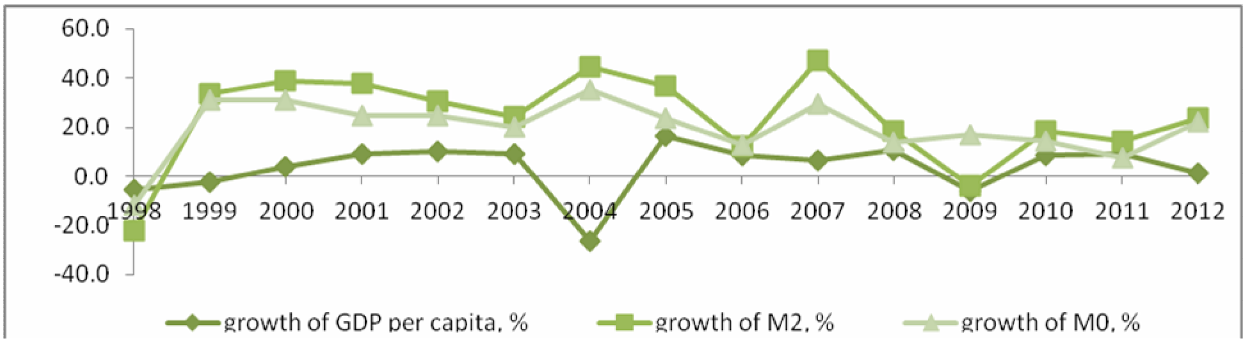

Figure 1. The dynamics of GDP per capita, of the M0 and M2 aggregates in Republic of Moldova

Source: Prepared by authors based on NBM and NBS data.

The monetization level of the economy is calculated as a ratio between broad money to GDP. Many countries with a low level of income have a degree of monetization greater than 10% calculated according to M0. In Republic of Moldova the degree of monetization by M0 was 17.57% in 2013, attesting an increase compared to the previous year. For developed countries this indicator is within 2-4%.

Another indicator is M3 relative to GDP. In Republic of Moldova critical value must be equal to M3 = 50-60% of GDP. In 2013 this indicator reached this limit, being equal to 62.7%.

In fig. 2 is shown growth of the level of monetization in correlation with IPC.

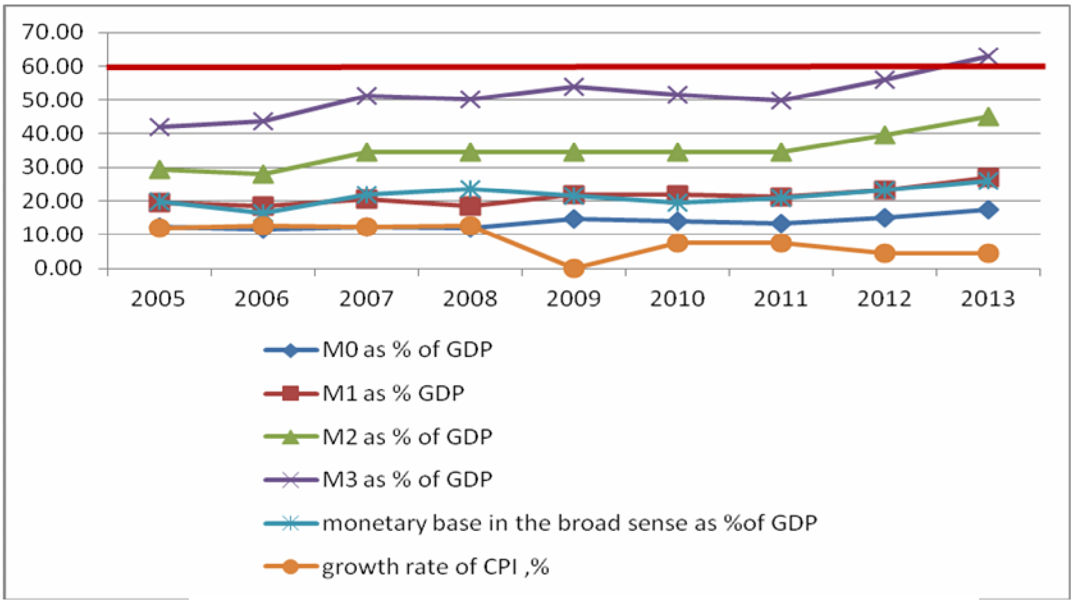

Figure 2. The monetization level of the national economy

Source: Prepared by authors based on NBM and NBS data.

After 2009 the monetization level by monetary base in the broad sense (23.4%) after M2 (39.7%) increased slightly. Theoretical value of monetization threshold by M2 must be higher than 60% of GDP for countries in transition.

In Moldova the monetization level by M2 is still insufficient to create conditions for effective growth. Practice shows that a level below 60% of GDP leads to a situation where it is impossible to massively boost the economy.

To the minimum level (at least 60% of GDP) the monetary base is substituted by foreign currency, thus takes place dollarization of the economy and removal of national currency

out of the adjustment process.

About this phenomenon attests and the next indicator - predictor of financial instability for countries in transition - **structure of economies.**

Using analogous methods, we can affirm that for Republic of Moldova **critical level of structure of savings is equal to the ratio 30:70**, so optimal structure of savings must be correlated respectively:

Savings in national currency - 70%;
Savings in foreign currency - 30%.

Disorders in mentioned correlation certify issues in the circulation of payment of the country. Moreover, this indicator shows presence currency risks for crediting system, in the case if it goes above the threshold, because all lending and investment needs are insured by foreign funds.

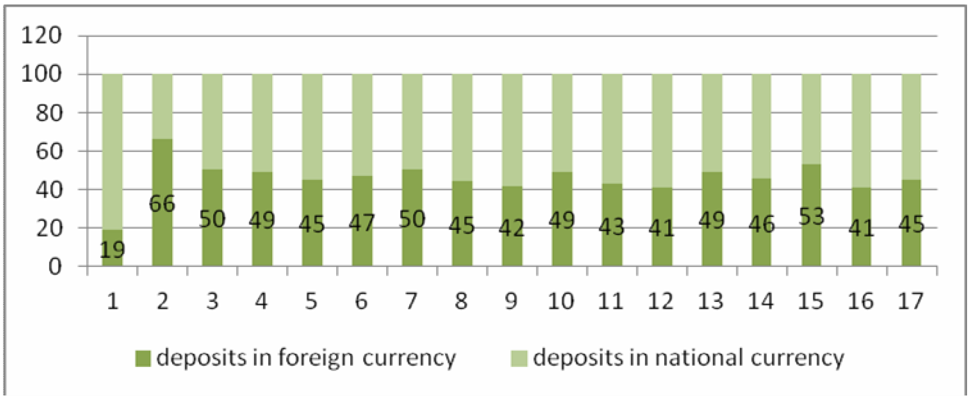

Figure 3. The structure of savings in local currency and foreign currency, in%
Source: Prepared by authors based on NBM and NBS data.

For the period under review shows a high degree of dollarization of the national economy. This can be explained by the fact that remittances are in foreign currency and the degree of distrust of the population to Moldovan Leu it is still high. In times of crisis is observed an increasing demand of foreign currency by population. Thus, in 1998 the share of foreign currency deposits rose to a critical point (66.39%). The dynamics of foreign assets is determined and by changes in reserve assets.

Another indicator from this category is correlation between deposits and money supply M2.

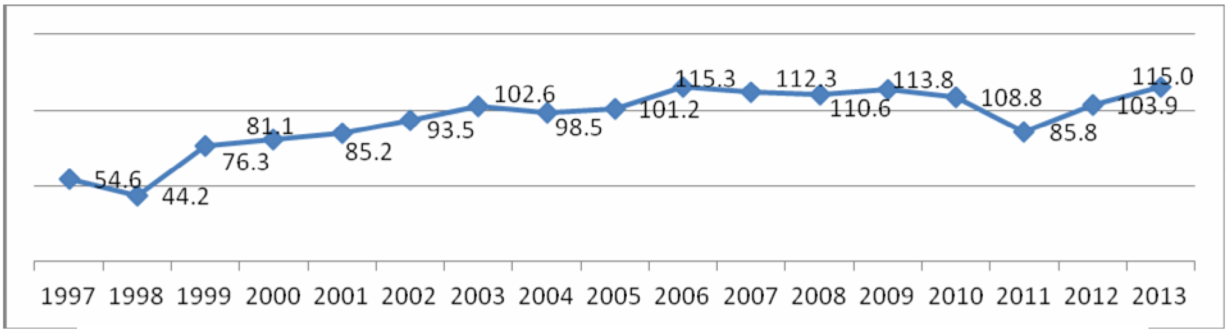

Figure 4. Dynamic of correlation between deposits and money supply (M2)%.
Source: Prepared by authors based on NBM data

The decrease of this indicator shows the decline in confidence in banking system and may lead to a possible liquidity crisis. However, this indicator can mean also and that non- banking financial institutions are efficient.

The correlation between loans and deposits indicates the ability of the banking system to obtain funds necessary to provide loans. The high value of this index indicates problems in banking sector and a low level of liquidity.

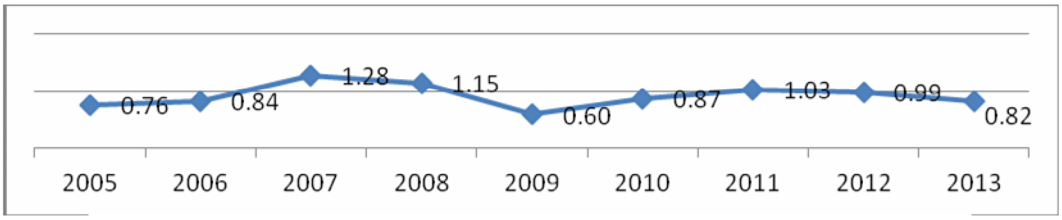

Figure 5. Dynamic of correlation between loans and deposits,%
Source: Prepared by authors based on NBM data.

When the annual growth rate of credit exceeds twice the annual growth rate of GNP is attested threat signal to the address of the banking sector increasing risk of instability.

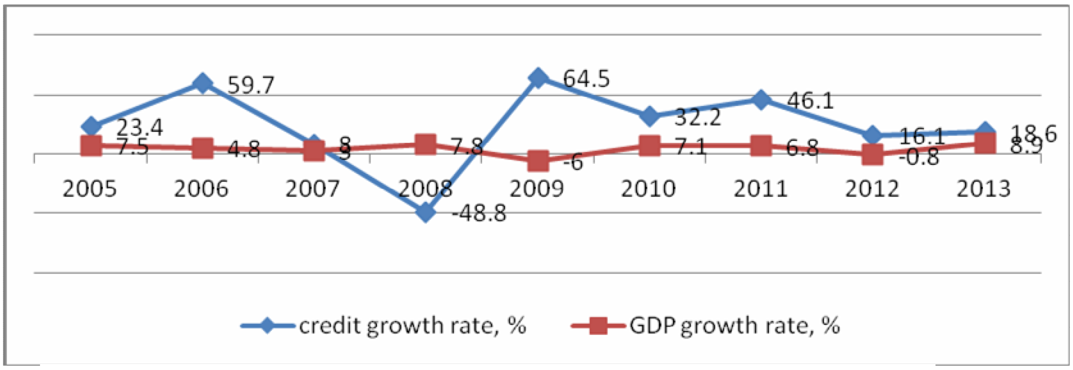

Figure 6. Dynamics of credit growth compared to GDP growth,%
Source: Prepared by authors based on NBM data.

The indicator of the level of providing monetary base through foreign exchange and gold reserves of a state it is used for the estimation of the level of insurance the stable exchange rate, regulation of inflation and ensuring financial stability. **The monetary base must be ensured through foreign exchange and gold reserves of a state, it should be at least at the level of 70-80%,** because as practice shows the methods of sterilization policy allows neutralization of only 20-30% of inflationary effect when is financed through emissions.

Choosing of the threshold of 70%, means that upper limit of financing by emission of the state and credit organizations must be within 30% of the monetary base, because only this proportion will not increase inflation over 15-20% (exceeding the 20% level of inflation already leads to fall of economic growth rate).

The growth of monetary base must be ensured with respective increase of foreign exchange and gold reserves of the state.

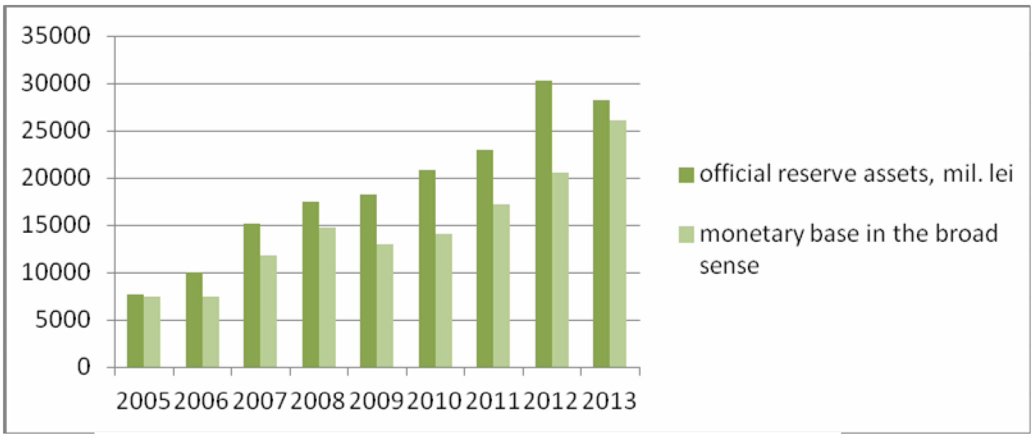

Figure 7. Indicator of level of ensuring monetary base
through foreign exchange and gold reserves of the state
Source: Prepared by authors based on NBM data.

The substantial increase in official reserve assets of the state compared to the monetary base speaks about financial stability based on this criterion.

The dependence of the national economy of the international context delays process regulating and forecasting of money demand. NBM by buying foreign currency received in large volumes out of remittances it is forced to increase official international reserves and to increase the money supply. The risk of financial crisis increase in case when occurs reduction of the level of coverage with official international reserves of M2 money supply.

Based on the indicator of correlation between M2 and foreign exchange and gold reserves is estimated liquidity risk of credit institutions. The M2 monetary aggregate can be regarded as the sum of liquid assets that can be converted into the national currency, while foreign exchange and gold reserves – as liquid asset insurance and warranty for servicing short-term loans of the state.

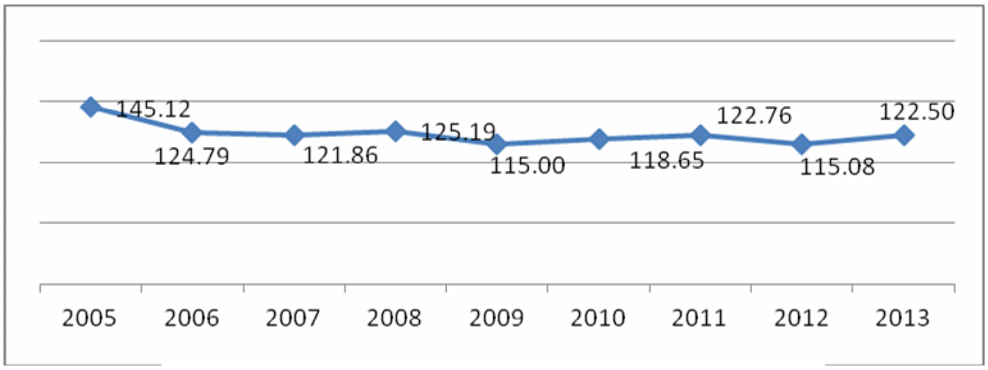

Figure 8. The level of covering of money supply with foreign exchange and gold reserves (M2 / Official reserve assets)
Source: Prepared by authors based on NBM data.

Even if during considered period occurs a significant increase in foreign exchange and gold reserves of the state, M2 growth is higher than the official reserves. For example, during the pre-crisis period in 2008, M2 growth exceeded by 25% growth official reserves. At the end of 2013 this indicator has suffered a major increase compared with 2012 and reached 122.5%. Insufficient level of coverage of money supply M2 with foreign reserves is a signal to foreign investors, meaning that occurs decrease in issuer's creditworthiness and leads to financial instability.

Official reserve assets (in mil. dollars and months of imports). For effective implementation of foreign policy, central banks are used to use its foreign assets to influence the exchange rate of domestic currency. National Bank of Moldova prevent depreciation of Leu, redeeming national currency from exchange market using its foreign reserves, or can prevent excessive appreciation of domestic currency (lei) by selling national currency against foreign currency. However, the current account deficit of the balance of payments is completed by reduction of official reserves. That is why, sensitivity of the national economy to external crisis phenomena is diminishing in terms of large foreign currency reserves. According to IMF recommendations minimal volume of official reserve assets of the NBM should be minimum in amount of 3 months of import.

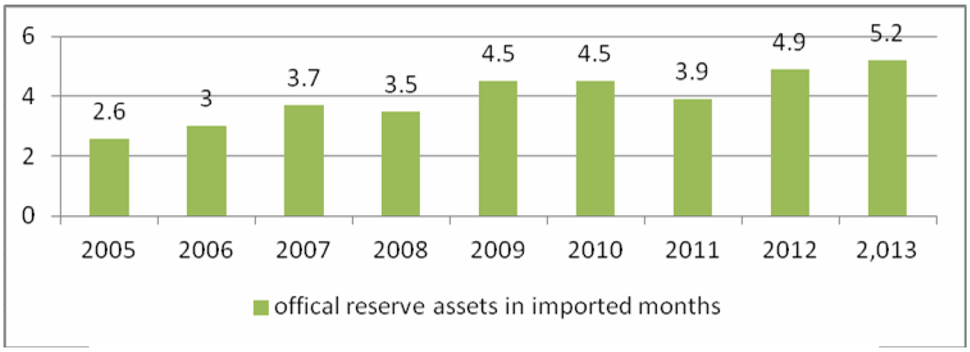

Figure 9. Volume of official reserves (months of imports)
Source: Prepared by authors based on NBM data.

At the end of 2013 volume of official reserve assets constituted 35.6% of GDP, which essentially exceeds the theoretical threshold for countries in transition (equal to 8%),while according to recommended by the IMF this indicator - corresponds to recommended level, representing 5.2 months for 2013. Foreign Exchange Reserves on 31 December 2013 amounted to 2820.6 million. dollars and increased by 12.2% compared with 2012.

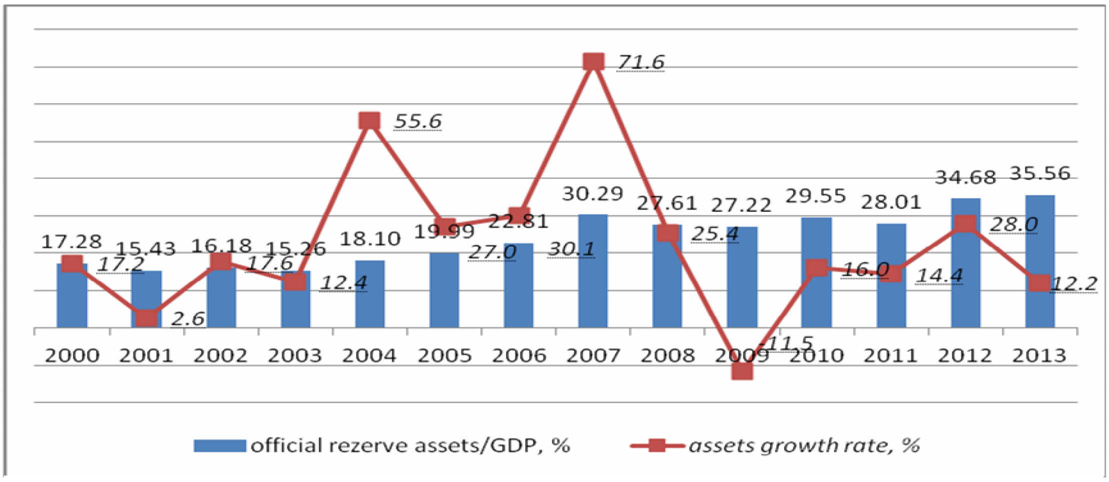

Figure 10. Dynamics of growth assets and the share of official reserves in GDP

Source: Prepared by authors based on NBM data.

Further decrease of demand for national currency will exert increasing pressure on depreciation of Moldovan leu. Exogenous shocks caused by the global financial crisis can substantially reduce the flow of foreign currency into the national economy. Therefore, the implications of this phenomenon on the leu exchange rate fluctuations and on volume of foreign reserves of BNM are imminent.

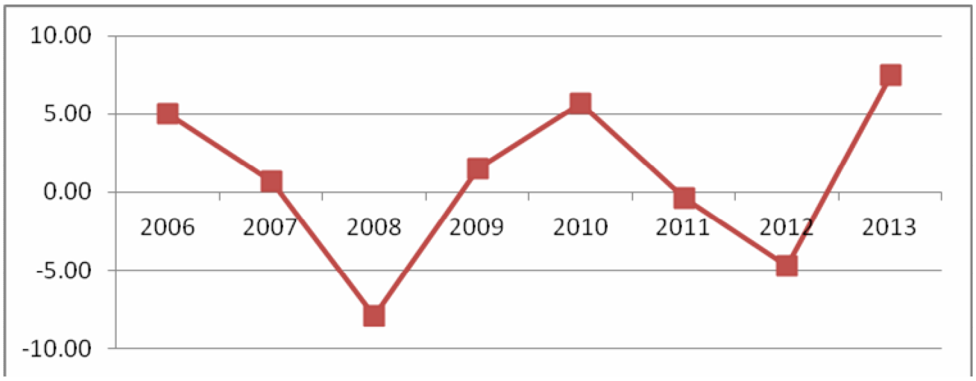

Figure 11. Dynamics of rate of increase of official average exchange rate against the Euro

Source: Prepared by author based on data NBM.

Conclusion

In the current state of socio-economic development of the Republic of Moldova actual deviations of the quantitative parameters of many indicators of threshold values indicate the degree of threat to the financial and economic security of the country as a whole. It is important not only to continuously monitor these deviations, but also to use existing possibilities to neutralize the potential negative effects.

For the Republic of Moldova efforts should be made in certain strategic directions such as: creation of conditions that allows economy to operate in regime of expanded reproduction, which means ensuring in the next decade the GDP growth rate of at least 7-10% per year; growth of population welfare, which means stable increase of their real incomes, salaries, pensions and allowances; reduction of poverty, of population migration; formation into the country of "middle class" with a high level of solvent demand; reliability of financial and banking system, and also the capacity of consolidated budget to finance social commitments of the state, should not be allowed jumps in exchange rate change of leu; sufficiency of money supply and credit resources for providing long-term high rates of GDP growth; increasing the share of manufacturing industry exported products within the structure of foreign trade; maintenance of the level of import and many other problems related to national security.

References:

1. Perciun, R. (2014), Stabilitatea financiară a statului: între teorie şi practică, Editura INCE, Chişinău, 183 p.
2. Perciun, R., Balan, M. (2013) Definirea conceptului de stabilitate financiară În Creşterea economică în condiţiile internaţionalizării: ediţia a VI-a a Conferinţei Internaţionale Ştiinţifico-Practice, Chişinău, p.200-206.