MONETARY INDICATORS OF THE FINANCIAL STABILITY OF THE REPUBLIC OF MOLDOVA

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Abstract: *The greatest threat to the financial stability of the Republic of Moldova's transition economy are considered the shocks in the banking sector which could destabilize fiscal and payment system, leading to higher inflation and demonetization of the economy. This can cause a detrimental impact on the rate of the national currency and exacerbate the political situation within the country. An analysis of the international practice concerning monetary system regulation for financial sustainability has been conducted by the authors. In order to assess financial stability on the money market of the Republic of Moldova the following indicators have been used: monetary aggregates; level of monetization of the economy; the level of ensuring the monetary base level of international reserves (gold & external reserves - GER); level of inflation and exchange rate.*

Keywords: *financial stability, monetary indicators, inflation targeting, banking crisis, financial soundness indicators.*

JEL Classification: *D53, E51, G01.*

1. Introduction

Crisis episodes due to imbalances in the financial market of Moldova are associated not only with significant direct losses of financial institutions, but also with a slowdown in economic growth, a decrease in public confidence in the financial system, difficulties in implementing monetary policy and other issues. In a developing market economy, any shocks in the banking sector are the greatest threat to financial stability, since they are able to destabilize the fiscal and payment system leading to high inflation and demonetization of the economy, disastrously affecting the exchange rate of the national currency and aggravate the political situation.

In order to achieve a certain level of financial stability for the Republic of Moldova it is important to study and to know the international experience for taking best practices and adapting them to the conditions of Republic of Moldova.

2. Analysis of financial stability of the Republic of Moldova

According to the definition of the European Central Bank (ECB), financial stability occurs when:

- The economy is characterized by the presence of monetary stability (stability of the value of money, maintaining inflation at an acceptable level);
- Economy is formed close to the "natural" level of employment;
- The economy has confidence in the operations of key financial institutions and markets;
- Within the economy, there are no relative changes in the prices of real or financial assets that would violate the first two conditions (Central Bank of Bahrain, 2008).

A significant number of works by such authors as: J. Tobin, F. Mishkin, M. Demirgook-Kunt, E. Detragiache, S. Lysondo. G. Kaminski, K. Reinhart, and others are devoted to the study of the causes of crises, the analysis of the money market and the determination of financial stability indicators. By monitoring the indicators of financial stability it allows to determine the level of future risks and threats, to identify the sources of their spread. The approach proposed by G. Kaminski, S. Lizozondo and K. Reinhart became the most common one in identifying crisis factors. Several studies show that all indicators denote the approach of the financial crisis approximately 1 - 1,5 years before its beginning. Thus, banking instability leads to instability in the financial market in 19 months; Change in the national currency rate in 17 months; Growth of M2 in 16 months; Decrease in gold and foreign exchange reserves, Change in balance M1, Outflow of depositors' funds from banks in 15 months; Reduction of M2 (M3) to the level of reserves after 13 months; The growth of domestic credit relative to GDP in 17 months after the appearance of the first signal (Kaminsky, Lizondo and Reinhart,1998, p.22).

Economists of the IMF and the Bank for International Settlements summarized the available data on the crises and concluded that in nearly all cases the over-production of money, the credit boom and poor regulation of the financial sector led to the economic downturn (IMF, 2010).

Based on empirical research, the best monetary indicators of financial stability in the banking sector were identified:

- The growth rate of monetary aggregates,
- Dynamics of money supply and demand in the economy;
- Inflation rate;
- Exchange rate volatility;
- The level of providing the monetary base with gold and foreign reserves (GER);
- Other.

Analysis of international practice shows an increase in the nominal value of monetary aggregates for a year and a half before the crisis.

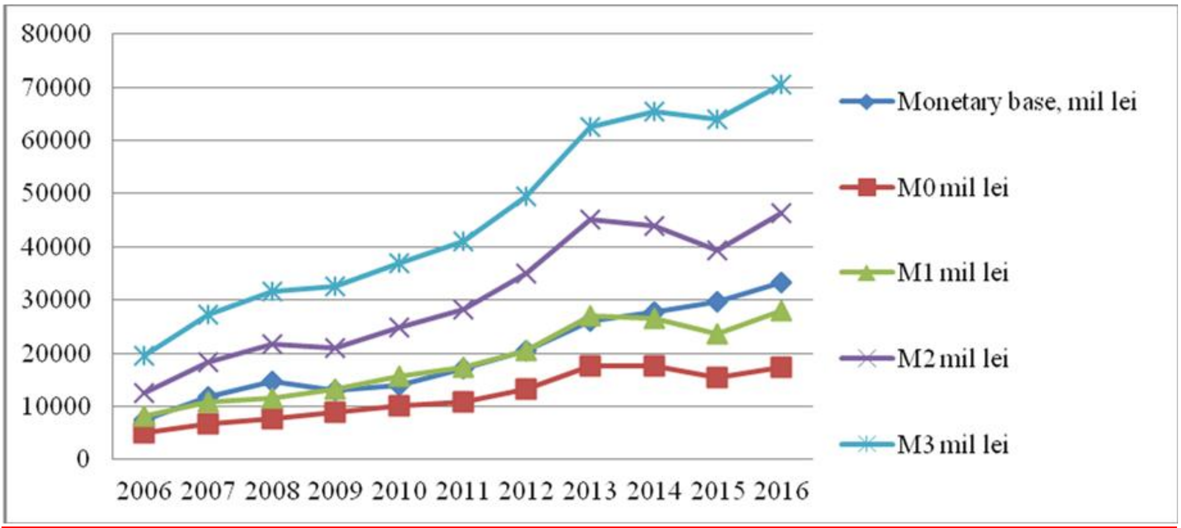

Figure no.1. Dynamics of monetary aggregates growth, mil. Lei

Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

In Moldova, there was a significant increase in the money supply in 2013 (two years before the country's 2015 financial crisis). With the growth of the monetary base, the money supply in the country increases, and vice versa. In the crisis of 2015 there was a sharp decline in the amount of money in circulation and the growth of reserves in commercial banks and other financial assets. Nevertheless, anti-inflationary measures did not lead to inflation curbing, but caused the economic recession.

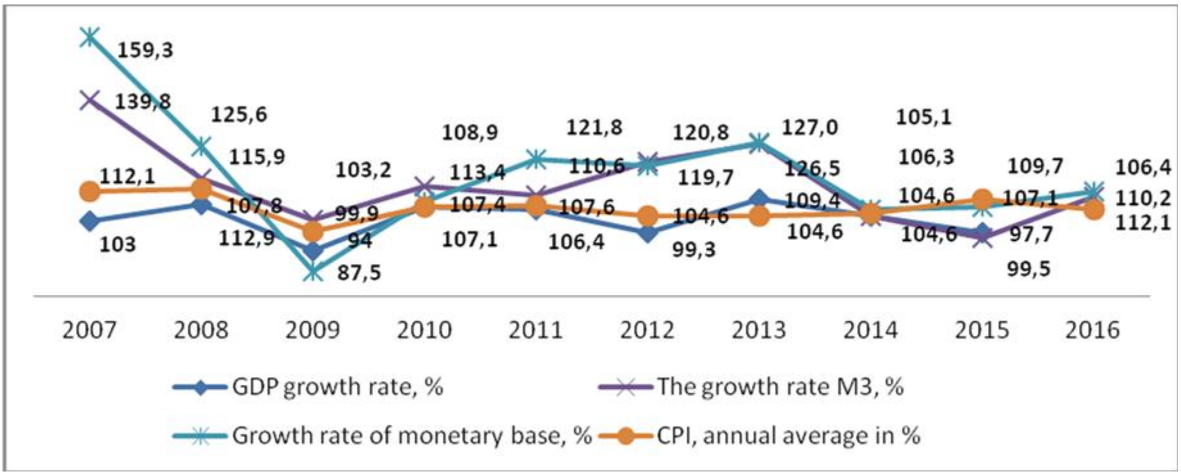

Figure no. 2. Dynamics of changes in money supply and demand in the economy of the Republic of Moldova, %

Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

Changes in money supply and demand in the RM economy are caused either by excessive expansion of the money supply, or, on the contrary, by its contraction. Contraction of the money supply has a depressive effect on the economy of the Republic of Moldova. ***If the absolute value of the relative deviation of the money supply is more than 10%, then this is an indicator of a significant change in the volume and structure of money supply and demand in the economy*** (Экономическая безопасность России, 2005). Before the economic crisis in 2009 and in the pre-crisis period of 2014 there was a contraction in the broad money supply. In the crisis year 2009, the GDP fell by 13.8 pp, - the money supply M3 - by 25.6 ppt, inflation fell to 0%. In 2015, the economic decline in GDP was accompanied by a contraction of the money supply by 32.7pp and a significant increase in average annual inflation, by 9.7%.

As the level of economic development increases, the level of monetization of the economy by monetary aggregates should grow. The countries with developed or rapidly developing financial markets are characterized by a liberal regulatory regime (100% or more) and have the highest level of monetization by broad money. The theoretical threshold level of monetization for a broad money supply in a transition economy should be at least 60% of GDP (Пелих, 2011).

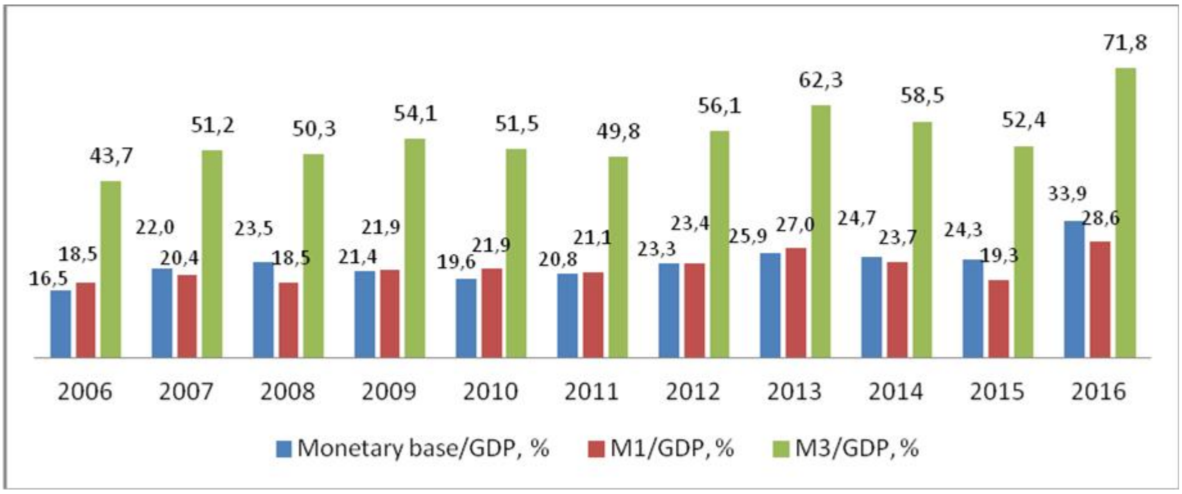

Figure no.3. The level of monetization of the economy (in % of GDP)
Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

In Moldova, the level of monetization of the economy rose to the edge by 2013, which is considered necessary and sufficient for the effective development of economy, but fell back to 53.1% of the GDP in 2014. Practice shows that the level below 60% of GDP leads to a situation where it is impossible to conduct expanded reproduction. Nevertheless, comparative indicators of the level of monetization of the economy by monetary aggregates (M3 / GDP above M1 / GDP) indicate the unrealized financial potential for the development of the Republic of Moldova economy.

On the recommendation of the IMF, the state should maintain the growth rate of the money supply at the level of the average growth rates of real GNP, then the price level in the economy will be stable (Adaptive rule[1]). At low inflation rates, inflation and GDP growth are positively correlated. In some countries, the adaptive rule is better able to perform work on stabilizing the economy and avoiding inflation rather than policy based on forecasts.

Inflation is closely connected with the dynamics of money supply growth in circulation and devaluation of the national currency. To assess financial stability, it is necessary to take into account that in the banking system, the sharpest drop in inflation, with its subsequent growth, is the first indication of the future crisis. The IMF estimates "the threshold level of inflation, above which inflation significantly slows growth, at 1-3% for industrialized countries, and 11-12% for developing countries". In turn, the dynamics of the exchange rate and the money supply are determined by the fluctuations of each other and the previous dynamics of inflation.

[1] "Adaptive rule", proposed by monitors, provides the adjustment of the growth of the money supply in relation to the average of the recent changes in the growth rate of output and the demand for money.

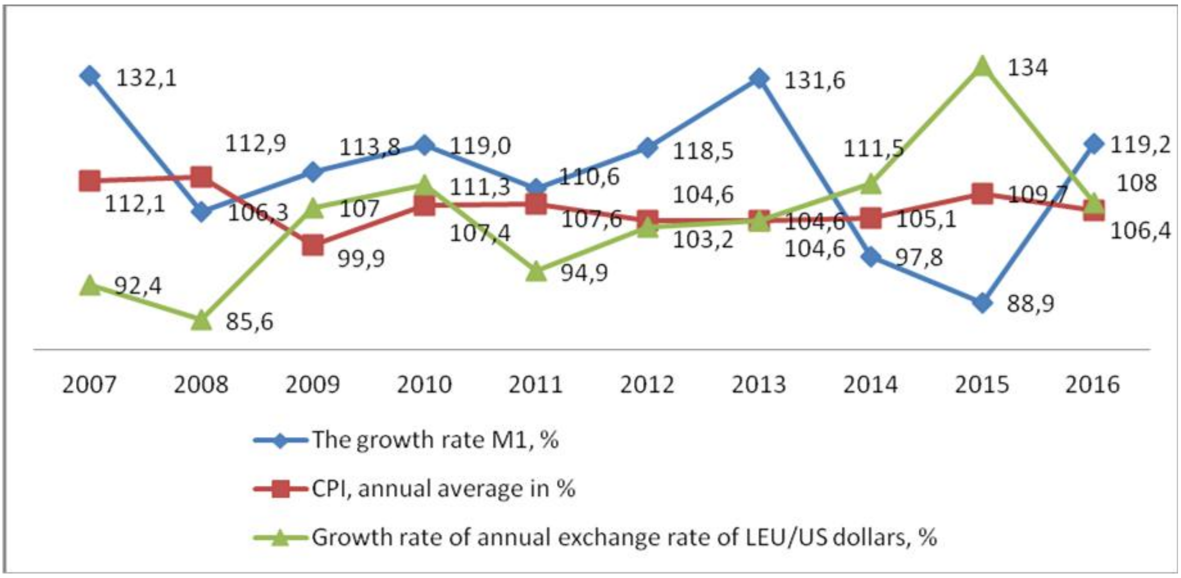

Figure no. 4. Dynamics of inflation, money supply and exchange rate of leu to US dollars (2006-2016), %

Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

The dynamics of the real exchange rate of the Leu against the US dollar has, since 2013, increased dramatically in the run-up to the currency and financial crisis of 2015. During the period under review, the Leu depreciated against the US dollar by 54.7%. The dependence of the national economy on the external economic situation makes it difficult to regulate and predict the demand for money.

Cash-money issue (increase in the monetary base) should be provided with a corresponding increase in gold and foreign exchange reserves (Экономическая безопасность России, 2005). Since 2009 NBM buy up foreign currency that are coming in large volumes from those working abroad and in this way actively increased international reserves and money supply.

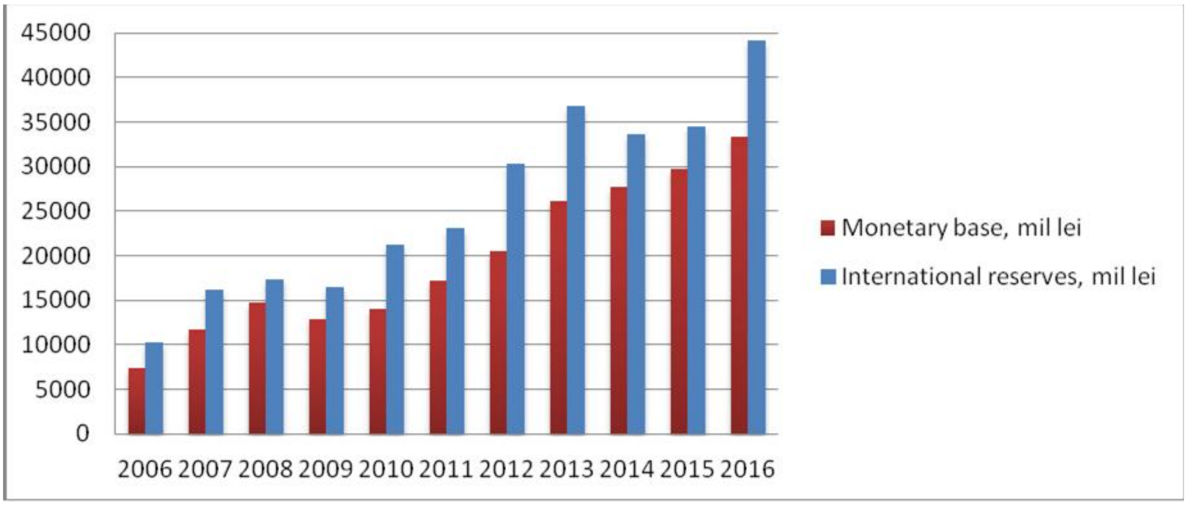

Figure no. 5. Dynamics of growth of official reserves in comparison with the short-term monetary base, mil. Lei

Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

The indicator of the level of providing the monetary base with gold and foreign reserves (GER) assesses the adequacy of reserves for ensuring a stable exchange rate, regulating inflation and financial stability.

Two indicators of the banking sector's activity can testify the high probability of a banking crisis: the amount of loans to the private sector and the growth of the ratio of broad money reported to gold reserves (IMF, 2010).

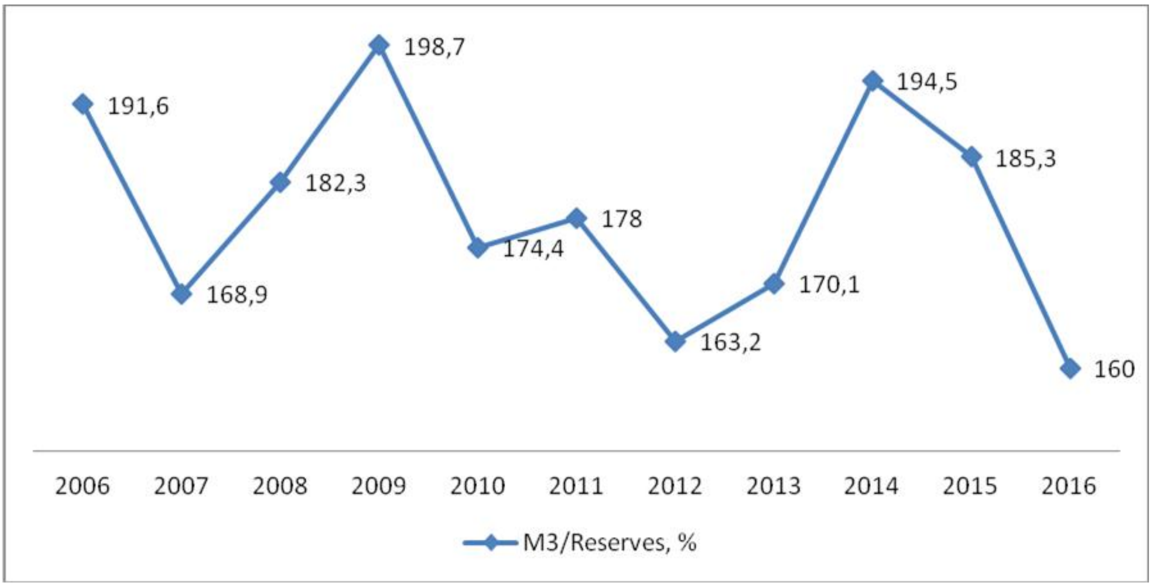

Figure no. 6. Dynamics of the ratio of money supply reported to gold reserves, %
Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

In Moldova, the growth of the money supply outpaces the growth of official international reserves, but during the crisis of 2009 and before the currency and financial crisis of 2015 this indicator was much higher than its average value in the calm period.

Reducing the level of coverage of gold and currency reserves of broad money (M3) leads to a risk increase of financial crisis.

Figure no.7. The level of coverage of gold reserves with broad money, in %
Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

Decrease in the level of gold reserves coverage of broad money indicates a financial imbalance that in 2009 and in 2014 became a signal for foreign investors to reduce the solvency of borrowers and led to an outflow of capital from Moldova.

An important factor affecting fluctuations in the real sector of the economy, especially in adverse periods, is the amount of loans to the private sector.

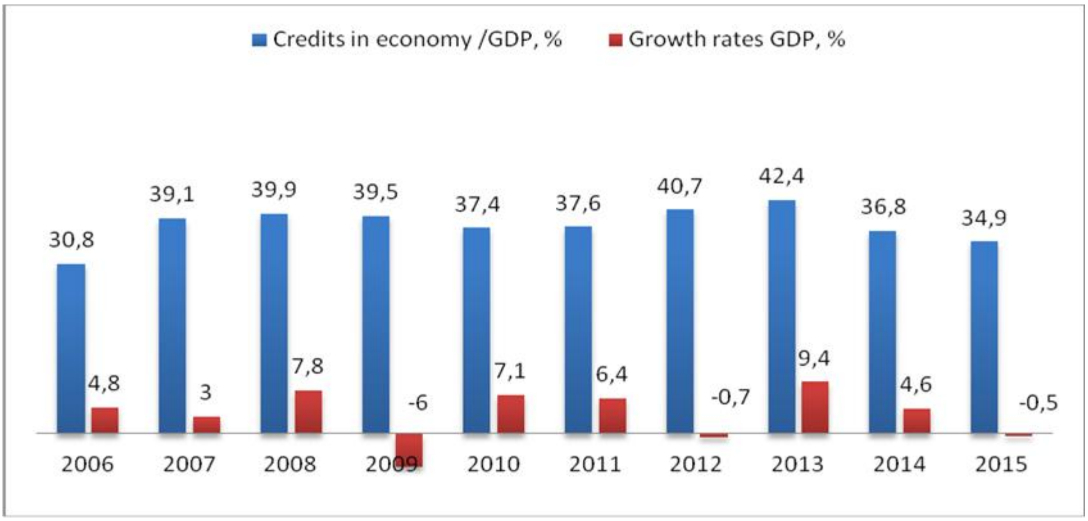

Figure no. 8. Dynamics of growth of loans to the private sector in comparison with GDP growth, in %.

Source: elaborated by the authors based on the NBM data (National Bank of Moldova, 2017)

In Moldova, the growth rate of lending is much faster than GDP growth. The growth of credit twice of GDP growth can be considered a signal of a potential threat of a banking crisis (IMF, 2010). The active growth of the money supply and the volume of the lending capacity of the banking market were not aimed at funding the ultimate borrowers and economic growth. As a result, the financial resources are not used for investment in the real economy, leading to the breakdown of the financial system and economy of financial instability.

3. Conclusions

Thus, the analysis of indicators of the financial market shows that a sharp change in the growth rates of the analyzed indicators indicates the transition of the financial system to an unstable state. Thus, the monetary and financial crisis of 2015 in the Republic of Moldova is manifested in the fall of economic growth, in a significant devaluation of the national currency; Decrease in the level of official foreign exchange reserves of the country; Decrease of trust in state institutions and banks.

Monitoring of financial stability indicators for the purpose of early detection of vulnerabilities allows the timely identification of policy measures to mitigate risks and prevent the onset of a systemic crisis. For more accurate forecasts, you need to track a much larger list of financial stability indicators. In this regard, in international practice is used risk modeling based on simulation and ***crisis early warning systems (CEWS***). The introduction of CEWS is a necessary basis for minimizing risks and implementing anti-crisis measures and measures to strengthen the financial stability of the Republic of Moldova.

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