

IMPROVEMENT DIRECTIONS OF THE MONETARY POLICY OF THE NATIONAL BANK OF THE REPUBLIC OF MOLDOVA WITH THE PURPOSE OF DEVELOPMENT OF THE NATIONAL ECONOMY

MOLDOVA CUMHURİYETİ ULUSAL BANKASI'NIN ULUSAL EKONOMİNİN GELİŐMESİ AMACINA YÖNELİK PARA POLİTİKASINI İLERLETME YÖNERGELERİ

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Abstract

The monetary policy of the central bank influences the amount of currency in circulation, the level of interest rates, foreign exchange rates and other economic-monetary indicators in order to achieve the general objectives of the economic policy, such as ensuring price stability by maintaining the inflation at an optimal level, the growth and the economic development of the country by stimulating economic activity, employment, etc.

The uncertain nature of the evolution of the world economy and the high degree of openness of the economy of the Republic of Moldova denotes a multitude of major risks that endanger the assurance and maintenance of the price stability. In the medium term, these remain to be large fluctuations in prices for food and energy resources, fluctuations in exchange rates of major currencies and of the capital flows. To cope with these situations, an important challenge for the monetary policy promoted by the NBM is to maintain inflationary expectations well anchored within the inflation target range.

Keywords: Central Bank, Inflation Targeting, Interest Rates, Monetary Instrument, Monetary Policy, Open Market Operations, Policy Effects, Reserve Requirements, Stabilization, Economic Development, Growth.

JEL Classification Codes: E5, E51, E52, O1

Öz

Merkez Bankası'nın para politikası, ülkenin ekonomi politikasındaki genel hedeflere ulaşmak için enflasyonu en uygun seviyede koruyup piyasa fiyatlarının sabitliğini garantiye alarak, ülkenin gelişimi ve kalkınması için ekonomik faaliyetleri canlandırıp işe alımlar sağlayarak tedavüldeki para akışını, faiz oranlarının seviyelerini, döviz kuru oranlarını ve diğer ekonomik parasal göstergeleri etkisi altına almaktadır.

Enflasyonun Dünya ekonomisindeki belirsizlik özelliği ve Moldova Cumhuriyeti ekonomisindeki yüksek açılış derecesi teminat ve fiyat tutarlılıklarında tehlike yaratan çeşitli büyük riskler olduğunu göstermektedir. Orta vadede bu durumlar yiyecek ve enerji kaynaklarının fiyatlarında, büyük miktardaki dövizlerin kur oranlarında, sermaye akışında geniş oranda dalgalanmalar yaratmaktadır. Bütün bu şartların üstesinden gelmek için para politikasına önemli bir mücadele göstergesi olarak Ulusal Moldova Bankası tarafından desteklenen ise uygun bir şekilde enflasyonun hedef sınırında devam eden enflasyona dair beklentileri belli bir düzeyde korumaktır.

Anahtar Kelimeler: Merkez Bankası, Enflasyon hedefi, Faiz oranları, Para senetleri, Para politikası, Serbest piyasa operasyonları, Politika etkileri, Stok gereksinimleri, Dengeleme, Ekonomik gelişme, büyüme.

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1. Introduction

Since ancient times, the monetary policy of a state has played the most important role in shaping and guiding the running of an economy. We can say with certainty that monetary policy plays the most important role among the economic policies of the state because it has the necessary tools to direct the course of an economy in one direction or another.

The fact remains that the monetary policy has the weapons of direct or indirect targeting of the economy. Whether we speak of direct measures and instruments or indirect measures such as "window guidance", for example, the monetary policy drives the economy towards an expanding or more restrictive environment because through it the Central Bank acts on the demand and supply of money in the economy.

Under the impact of the globalization phenomenon (Bernanke, 2007: 3), there is a need to standardize monetary policies as an essential component of economic policies in all the countries of the world in order to achieve beneficial forms of collaboration for all participants to the international trade. For several decades, the activity of central banks was based on neoclassical synthesis, exposed in the manuals of macroeconomics (Economics).

The fundamental postulate of this synthesis, in which the contributions to the development of the economic science of some great economists, such as: I. Fisher, JM Keynes and M. Friedman (Friedman, 1968: 6), have been integrated, is that the stability of the economic growth is related to the neutralization of the price movements, respectively prices should neither increase or decrease. As a result, to ensure stable economic growth and without major fluctuations, it is necessary to ensure price stability. The implication is that the main public service that a central bank can do to the economy and the society to which it belongs is to provide them with a quality currency, that is, a currency whose value does not change over time, which would mean that prices are relatively constant.

Currently, these monetary policy principles are being called into question. Among the prestigious authors, who have expressed critical views on monetary policy based on this concept, we can mention the IMF's chief economist, O. Blanchard (Blanchard, 2010: 5) and the former governor of the Bank of France, J. Larosière. (Larosière, 2010: 58).

Looking back on things, the fact that central banks did not react to the excessive credit growth that led to the crisis is now evident. However, even before the crisis broke out, some economists, such as the famous N. Roubini (Roubini, 2006: 99), showed that central banks are facing with effects of financial globalization without having the necessary cooperation mechanisms to prevent the negative consequences of this process.

Therefore, the recent economic literature highlights that a low level of inflation is not a sufficient condition for long-term financial stability. In contemporary economies, a low and stable level of inflation has led to the creation of a new economic climate, which requires rigorous reconsideration of the relationship between price stability and financial stability.

In this regard, the experience of some Asian countries from 1997-1998 and the current economic and financial crisis lead to the reconsideration of the extent to which the central bank has the capacity to ensure simultaneously the price stability and the financial stability in case their implementation requires the adoption of conflicting measures.

The experience of the financial crisis forces central banks to accept what they have generally rejected in the past, namely that financial stability must be an objective of monetary policy. They are forced to develop and implement a broader monetary policy in terms of both objectives and instruments. From here, more problems result. First, it is necessary to define a new operational objective, namely the one regarding financial stability. Or, financial instability is caused by the gradual deterioration of the financial situation of the entire private sector, which is masked by rising asset prices because of credit expansion. The objective must therefore be the moderation of the credit expansion, because microeconomic incentives determine banks to maximize their investments. This action is a deliberately counter-cyclical intervention.

Secondly, it is necessary to establish the instrument that will be used to achieve the stated objective. As I mentioned, the main instrument used by central banks in the last period is the interest rate. However, credit expansion in the face of a boom of financial markets is less sensitive to the interest rate. In addition, the aforementioned instrument is not optimal, and is contraindicated for achieving two objectives, namely financial stability and price stability. This is because there are situations in which these two objectives are contradictory and the use of a single instrument to achieve them both is impossible. Therefore, an instrument is needed that will influence the volume of the loan. However, under the conditions of liberalized financial markets, it is no longer possible to resort to the direct ceiling of the credit, because, the action of this instrument is shortened by the securitization operations.

There is a need for another instrument, undoubtedly compelling, but which act not as a prohibition but as an incentive for banks to limit their credit offer. It was proved that the lending potential was greatly amplified by the innovations that allowed banks to work with very little own capital. It is therefore necessary a tool to prevent banks from increasing their lending capacity. Such an instrument is a regulation that obliges banks to have a

minimum countercyclical capital, a capital that is dependent on the aggregate level of credit to which all banks contribute; hence, the name of "macro-prudential" which could be used to designate this minimum level of capital. The long-term objective of monetary policy must be to achieve low and stable inflation. Over the years, it has been observed that low and stable inflation helps sustainable long-term economic growth. As a result, low and stable inflation is both a goal in itself and a means of achieving sustainable economic growth. However, we must also mention the inverse relationship.

The effectiveness of monetary policy in achieving this objective is limited if there is no financial stability. One of the basic macroeconomic principles states that financial friction substantially influences the business cycle. Today, worldwide, this is very obvious. The world's central banks are trying to maintain financial stability and avoid economic recession and depression.

2. Applied methods

The main objective of monetary policy is to ensure and maintain price stability, for which central banks use a number of tools to control the amount of money in the economy.

The central bank use the banking system to implement its monetary policy, so there is no direct influence on the activity of the economic agents. The central bank uses an intermediary link - banks, to influence the quantity and cost of the currency, in order to influence the evolution of the economy and to keep prices stable.

Monetary policy decisions are transmitted to the economy through transmission channels. The monetary policy transmission mechanism represents the totality of the channels through which the central bank, using a varied set of monetary policy instruments, can influence the dynamics of aggregate demand and prices in the economy. The central bank uses four monetary variables to influence economic processes: currency, credit, interest and exchange rate. Specifically, central banks control the supply or quantity of money in the market, act on the volume of credit in the economy, and act on interest rates and of course, on the exchange rate.

The central bank uses commercial banks to implement the monetary policy, interacting on the money market and on the currency market. The money market is the place where commercial banks place their surplus of liquidity, respectively, ensuring their temporary liquidity needs. In addition to the fact that commercial banks adjust their cash flow imbalances, the money market is used by the central bank to supply the primary currency banking system, through bilateral transactions between the central bank and commercial banks with various types of debt (generally state securities, bank receivables, private securities and others) in exchange for availability in the account or cash. For this reason, the money market is also known as the primary (central) currency market.

We must mention that the National Bank of Moldova has a direct influence on the monetary base or the primary currency, through which it achieves its immediate monetary policy objectives. The monetary base in the broad sense includes: the money put into circulation by the National Bank of Moldova (except cash in the house of the National Bank of Moldova), the bank reserves in lei (maintained in the correspondent accounts at the National Bank of Moldova), the obligatory foreign currency reserves, the "Overnight" deposits of banks and sight deposits of other organizations at the National Bank of Moldova.

Although the National Bank of Moldova is the only primary currency provider, two major players are involved in the process of supplying money on the market: The central bank, which issues the currency, and banks, which have the power to assimilate the issued currency through the current activity and multiply it, process for which a notion of money creation will be strengthened. In the process of realizing the monetary policy, such banks have an attribution equivalent to that of the central bank, perhaps even higher, because their ability to raise money is bigger than the capacity of a central bank to issue them. In this respect, I consider that these banks need to be oriented to activate and carry out their activity in a consistent manner with the objectives of monetary policy.

In this way, if the central bank wants to reach a certain level of the money market interest rate, it changes the level of the monetary base. For example, if the bank wants to increase the interest rate on the money market, the central bank will reduce the supply of primary currency. The supply of currency, being reduced compared to the demand for currency, will lead to higher interest rates, which makes it easier for economic agents to access more expensive bank loans, which will have the effect of reducing investments, production and rising unemployment. We can say that this measure, of reducing the money supply, leads to the attenuation of the economic growth.

In the opposite situation, when the supply of money exceeds the demand for the currency, the value of the money decreases, thus the interest rates will fall, the loans are more accessible to the economic agents, who will make greater investments, which will lead to the increase of the production. Increasing production automatically entails the need for additional staff, which increases employment or reduces unemployment. Decreasing the interest rate will also drive the population to a higher consumption, i.e. the demand for goods and services increases. However, if the domestic supply of goods and services does not cover the demand, the prices increase, i.e. inflation. Failure to meet the domestic demand by the domestic supply will stimulate imports, which will lead to the depreciation of the national currency.

Banks, which, in the light of their specific attributions, have the capacity to create money, play in the modern economy an indispensable role for sustainable economic growth, by providing the economy with the necessary

financial resources. These represent, in essence, the only institutions that realize the interconnection between the monetary authorities and the real economy through the transmission of the monetary policy impulses, a relation dependent on the capacity of banks to respond to the demand of money received from the real sector and the stimulating or restrictive influences of the monetary authorities. In this context, the inefficiency of the monetary policy promoted by the monetary authorities may not always be accounted for by the inadequate policy instruments, but in some cases, it may be explained by the banks' lack of interest in collaborating with the central bank in the process of creating money.

The control of the money supply from the economy influences a number of variables related to the activity of the economic agents: the volume of the means of payment available to the population and of the economic agents for the payment of goods and services; the level of investments made by economic agents, through the interest rate at which they are financed, with a direct impact on the volume of production; the level of unemployment, or in other words, in a more positive sense, the level of employment; the external activity of the economic agents, namely the volume of imports and exports of a country.

Under the conditions of a more prudent supervision and regulation regime, the impact of monetary policy instruments on the volume of money in circulation is felt with a delay of about two years. For example, the decrease of the monetary policy rates in the Eurosystem since 2003 led to the increase of the monetary mass, only in 2005, the liberalization and decentralization of the financial market creating conditions for the redirection of the currency created for purposes other than the credit of the real economy.

Developments that are more recent have shown that the effects of the promoted monetary policy can be improved at the same time as the policy governing the banking activity. Thus, in crisis conditions, the relaxation of the monetary policy does not immediately lead to an increase of the rhythm of increase of the monetary mass, but, on the contrary, it decreases from inertia. The explanation comes, on the one hand, from the worsening during the crisis of the financial situation of the real sector of the economy, the main generator of currency demand, whose solvency and reduced payment capacity diminish the demand for loans, and on the other hand, the situation generated by losses from previous investments in toxic assets, which diminishes their ability to create currency and increases their money supply

The importance of the quickly response of monetary policy by adopting the most appropriate tools to respond to the various turbulences on national or international markets has become more and more awareness over time and continues to be a major challenge for the central banks.

3. Results and discussions

In the Republic of Moldova, as in other countries of the Central and Eastern Europe, the objectives of the National Bank are represented by the perspectives of price stability and national currency stability. In this regard, a special attention is paid to the activity of the National Bank of the Republic of Moldova, which has been oriented on the elaboration and promotion of an effective monetary policy, as well as towards the optimal use of the instruments of the monetary policy in order to create the necessary conditions for sustained economic growth.

The monetary policy framework applied to the monetary supply started in 1993 when the national currency was introduced. During the period of 1993-2006 in the Republic of Moldova, the influence on the quantity of currency in circulation and the ability to generate this currency by the banking system was pursued. The monetary policy being oriented on the targeting of the monetary aggregates, the National Bank of Moldova focused on the quantitative factors existing on the monetary market, mainly influencing the functional capacity of the banks' ability to create money.

In 2006, with the signing of the Republic of Moldova - European Union's action plan and the emergence of the need to harmonize the national legislation with European Union legislation, the National Bank of Moldova reoriented its monetary policy on targeting prices, the fundamental objective was modified from, "achievement and maintenance of stability of the national currency" to "ensuring and maintaining price stability". (NBM, 2020). This has led the national monetary authority to select an optimal monetary policy regime to achieve the new objective.

Changing the fundamental objective, adopting the monetary policy regime and targeting of the inflation was achieved in line with the global trends in the field, which have been shaped in the last decades of the twentieth century.

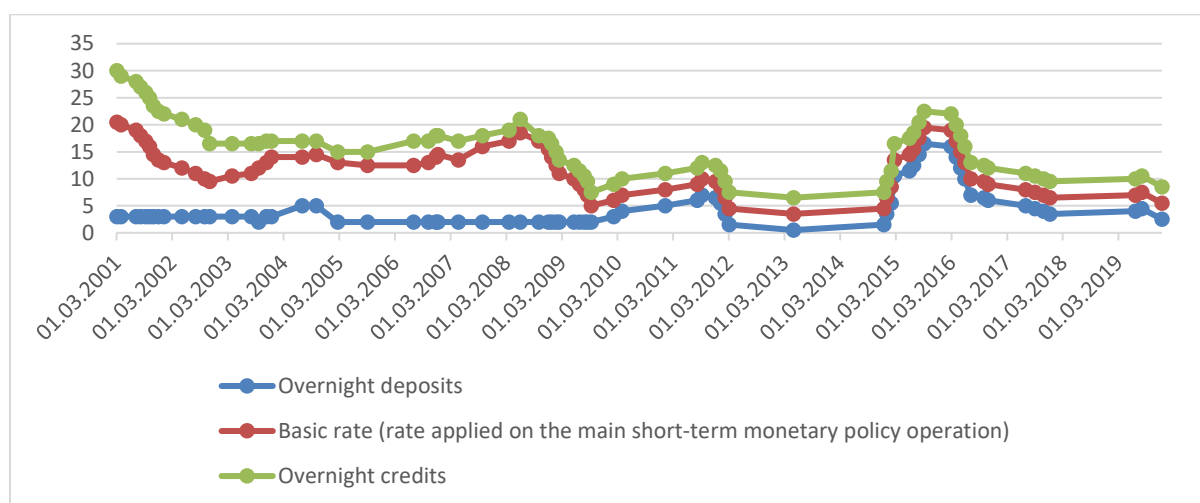
In this context, the orientation of the monetary policy shifts its focus from the supply of monetary mass more towards the demand for money in the economy. In addition to ensuring and maintaining price stability, which is the fundamental objective of monetary policy, the NBM also has other secondary macroeconomic objectives, including promoting and maintaining a financial system based on market principles and supporting the general economic policy of the state. These objectives are being pursued insofar as they do not affect the achievement of the fundamental objective of the NBM.

Currently, the set of the monetary policy tools that the NBM has and through which implements the monetary policy, can be divided according to the expected effect into two groups, namely: instruments with an impact on

the volume of money in circulation: mandatory minimum reserves; money market operations (open market) and money impact instruments: monetary policy interest rates (base rate). In order to ensure and maintain price stability over the medium term, the National Bank of the Republic of Moldova strives to maintain inflation (measured by the consumer price index) at 5.0 percent annually with a possible deviation of ± 1.5 percentage points, being considered the optimal level for growth and economic development of the Republic of Moldova in the medium term. The inflation target considers the long-term convergence of the economy of the Republic of Moldova in relation to its main trading partners, the continuous increase of productivity in all sectors of the economy and the structural transformations in the national economy.

The achieving of the target of 5.0 percent annually is realized through using the main monetary policy instrument - open market operations. At the same time, the NBM also uses the auxiliary monetary policy instruments, such as permanent facilities, the norm of mandatory reserves and interventions on the foreign exchange market. These instruments have a direct impact on the level of short-term nominal interest rates on the money market. In order to achieve the inflation target, conditions on the money market are guided by the NBM by establishing the main indicator for the short-term interbank money market - the base rate.

Figure 1. The evolution of the interest rates on monetary regulation instruments of NBM, %.



Source: Author's compilation and values obtained from NBM. [online]. [Accessed on the 18th of February 2020]. Available: <http://www.bnm.md/>.

With the transition to the inflation-targeting regime, the basic interest rate has become the main monetary policy instrument, through which the National Bank of Moldova directly influences the level of the interest rates related to interbank deposits, balancing the demand and supply on the money market. The corridor of variation of the basic rate is defined by the interest rates for the permanent facilities offered by the National Bank of Moldova, which determines the upper and lower limits of interest fluctuations on the interbank market, especially for the shorter maturities. From the data presented in the Figure 1 and Table 1, it is visible that the interest rates established for overnight credits and overnight deposits show considerable deviations from the base rate. Thus, in 2001 the interest rate set for overnight credits were 30%, constituting 10 times higher than the interest rate set for overnight deposits - 3%.

Starting with the second half of 2009 the deposit and lending facility begin a part of a symmetrical corridor of ± 3 percentage points to the base rate.

During the years 2001-2019, the NBM changed the base rate level several times. The highest level of the base rate was recorded at the beginning of 2001, of 21%, after it was gradually decreased to 3.5% in the second half of 2013, remaining at this level until the month of the December 2014, when under the influence of inflation expectations NBM resorted to its repeated increases. In September 2015, the base rate increased to 19.5% because of the economic situation in the country. This instrument had a logical impact, also explained in the economic theories on the monetary mass, because with the decrease of the basic rate, we can attest a much more accentuated increase of the monetary mass.

Table 1: Standing Facilities of the NBM

Period	Overnight credits, %	Overnight deposits, %
February 2001	30.00	3.00
January 2002	22.00	3.00
September 2003	16.50	2.00
January 2004	17.00	3.00
June 2004	17.00	3.00/5.00
February 2005	17.00 /15.00	5.00 /2.00
June 2006	15.00 / 17.00	2.00
November 2006	17.00 / 18.00	2.00
April 2007	18.00 / 17.00	2.00
September 2007	17.00 / 18.00	2.00
December 2008	18.00 / 17.50 / 16.50	2.00
January 2009	16.50 / 15.00	2.00
August 2009	10.50 / 9.50	2.00
September 2009	9.50 / 7.50	2.00
February 2010	7.50 / 9.00	2.00 / 3.00
March 2010	9.00 / 10.00	3.00 / 4.00
September 2011	12.00 / 13.00	6.00 / 7.00
December 2011	13.00 / 12.50	7.00 / 6.50
January 2012	12.50 / 11.50	6.50 / 5.50
March 2012	9.50 / 7.50	3.50 / 1.50
April 2013	7.50/6.50	1.50/0.50
January 2014	6.50	0.50
December 2014	6.50/7.50/9.50	0.50/1.50/3.50
January 2015	9.50/11.50	3.50/5.50
September 2015	20.50/22.50	14.50/16.50
February 2016	22.50/22.00	16.50/16.00
October 2016	12.50/12.00	6.50/6.00
June 2017	12.00/11.00	6.00/5.00
December 2017	10.00/9.50	4.00/3.50
June 2019	9.50/10.00	3.50/4.00
July 2019	10.00/10.50	4.00/4.50
December 2019	10.50/8.50	4.50/2.50
February 2020	8.50	2.50

Source: Author's compilation and values obtained from NBM. [online]. [Accessed on the 18th of February 2020]. Available: <http://www.bnm.md/>.

Table 1 presents all significant monetary policy decisions adopted by the National Bank of Moldova during 2001-2019. It is obvious that changes in the interest rate on overnight loans is influencing the monetary burden in the economy, respectively that its increase would decrease the volume of financial resources granted to banks.

In order to stimulate the country's economy, the National Bank of Moldova implemented a more relaxed monetary policy during 2010-2014, and as a result, a gradual reduction in the base rate was registered. This contributed to the increase in the demand for money, which led to an unjustified increase in the volume of lending. In turn, credit and financial institutions have reduced the requirements to the size and quality of collateral, relaxed lending conditions and expanded the range of potential borrowers. This was supposed to increase the volume of loans and stimulate the economic growth, but it reached the highest level of non-performing loans in the lending portfolio of banks.

It seems that the ineffectiveness of the direct inflation-targeting regime has been found to respond adequately to the manifestations of the financial crisis, to take into account the excessive fluctuations of the exchange rate and of the prices on the financial assets, due to the non-monetary factors, which helps to reduce negative consequences and ensure financial stability.

Monetary market operations (open market operations) are the most important monetary policy instrument of the NBM. These are being implemented at the initiative of the NBM, having the function of managing the liquidity conditions on the money market and influencing the short-term interest rates on the interbank money market. Money market transactions can be operated through auctions announced in advance or through direct negotiations. According to the regulations in force, the main categories of money market operations available to the NBM are:

- REPO operations;
- issuance of NBM certificates;

- attracting of deposits;
- sales / purchases of State Securities.

Currently, the National Bank of Moldova uses only the REPO operations, and the sale of NBM certificates to absorb the liquidities in the economy. In the context of which, the banks of the Republic of Moldova continue to register considerable excess of financial resources (in January 2020 the current liquidity on the banking system constituted over 51%, which is more than 2.5 times in face with the regulated indicator of the NBM - $\geq 20\%$).

Table 2: NBM Money Market Operations

Period	Repo		Sales of NBM Certificates		Deposits accepted by the NBM	
	Average interest rate (% p.a.)	Average maturity (days)	Average interest rate (% p.a.)	Average Maturity (days)	Average nominal interest rate (% p.a.)	Average maturity (days)
March 2004	-	-	13.89	29	11.89	49
January 2005	-	-	7.29	28	6.13	45
January 2006	-	-	1.57	28	2.55	112
January 2007	-	-	14.07	21	14.45	60
January 2008	-	-	15.83	14	-	-
May 2009	10.65	105	13.32	7	-	-
January 2010	-	-	4.50	7	-	-
January 2011	-	-	7.66	14	-	-
March 2012	4.75	28	4.77	14	-	-
March 2013	4.75	28	4.50	14	-	-
December 2014	4.90	28	3.78	14	-	-
January 2015	6.75	28	6.50	14	-	-
February 2015	12.03	28	8.86	14	-	-
October 2015	19.75	14	19.50	14	-	-
April 2016	17.25	14	19.00	14	-	-
January 2017	-	-	9.00	14		
January 2018	-	-	6.50	14		
September 2019	7.75	14	7.50	14	-	-
December 2019	7.75	14	6.14	14	-	-

Source: Author's compilation and values obtained from NBM. [online]. [Accessed on the 18th of February 2020]. Available: <http://www.bnm.md/>.

Table 2 shows some monetary policy decisions of the NBM regarding the modification of the interest rate based on the operations on the money market.

Analyzing the data in the Table 2, we can say that the NBM performs different operations on the money market from one period to another, according to the economic reality existing in the country. Thus, the Repo Reserves operations were used by the NBM only until the end of 2004, the average interest rate was 10-15% and the average maturity of 20-44 days. NBM granted loans to banks only for a short period: starting with March of 2009 and until December of 2010 at an interest rate of 5-11%, for a duration of 27-343 days based on banks' request for financial sources.

The next instrument applied for the management of the monetary mass in circulation, is the rate of the mandatory minimum reserves, it represents an active monetary policy instrument of the National Bank of Moldova. During the period 2006-2019 several changes of the mechanism were made, compared to the European Central Bank for which the mandatory minimum reserve is not an active monetary policy instrument. The NBM calls for the modification of the norm of the mandatory reserves for influencing the demand for short-term money and the short-term interest rate, by increasing - in order to constrain the monetary mass in circulation, and by diminishing - for the relaxation of the monetary conditions.

In the Republic of Moldova, the banks maintain the obligatory reserves separately in Moldovan lei and foreign currency (US dollars and Euro) in opened accounts at the National Bank of Moldova, allowing the NBM to transmit separate impulses to the economy, depending on the monetary mass followed (in national or foreign currencies). The norm of mandatory reserves in the Republic of Moldova has been increased, especially in the periods preceding the economic recession, at the end of 2008 (the minimum mandatory reserve rate established in MDL

and in freely convertible currency that constituted 22%), when they were made felt the effects of the global financial crisis on the real economy. From August of 2011, the norm of mandatory reserves remained practically unchanged until the beginning of 2015, when inflationary expectations and the sharp devaluation of the national currency determined the NBM to increase the norm of the mandatory reserves. During 2015, due to the strong inflationary pressure and the exit from the regulated corridor, the NBM operated several changes to the mandatory reserves, in particular the mandatory minimum reserve rate established for the accumulated resources by banks in national currency, thus in August of 2018 the mandatory minimum reserve rate in MDL registered a historical level of 42.5%. These changes have been reflected in the Table.3.

Table 3: Required reserves maintained by banks

Period	Required reserves maintained by banks in freely convertible currencies (FCC)		Required reserves maintained by banks in MDL	
	Required reserve ratio set in FCC of the means attracted in FCC (%)	Remuneration rate on required reserves* (%)	Required reserve ratio on liabilities in MDL and nonconvertible currencies, %	Remuneration rate on required reserves, %
January 2006	10	0.61	10	3.14
November 2007	15	0.43	15	2.00
August 2008	22	0.55	22	2.00
December 2008	17.5	0.46	17.5	2.00
September 2009	8	0.30	8	2.00
February 2011	11	0.10	11	5.00
July 2011	14	0.11	14	5.87
January 2015	14	0.48	16	7.46
February 2015	14	0.35	18	10.50
May 2015	14	0.41	20	11.70
June 2015	14	0.37	22	12.63
July 2015	14	0.27	26	14.50
August 2015	14	0.34	32	16.43
September 2015	14	0.35	35	16.50
March 2017	14	0.53	37	6.00
April 2017	14	0.53	40	6.00
August 2018	14	0.33	42.5	3.50
June 2019	17	0.01	42.5	4.02
December 2019	18	0.01	42	2.50
February 2020	18	0.01	42	2.50

Source: Author's compilation and values obtained from NBM. [online]. [Accessed on the 18th of February 2020]. Available: <http://www.bnm.md/>.

The Republic of Moldova, having a banking system with a money market that offers a very narrow range of instruments, on which only the state securities are traded, and on which there is no other short-term capital movement, the incidence of cost-related instruments is very low (base rate). In this respect, there is a strong correlation between the rate of mandatory reserves and the quantity of money in circulation. The mandatory reserves being the only instrument pursued and applied very actively by the NBM in regulating of the money supply due to the high degree of response (up to a certain level) of the banking system to its changes.

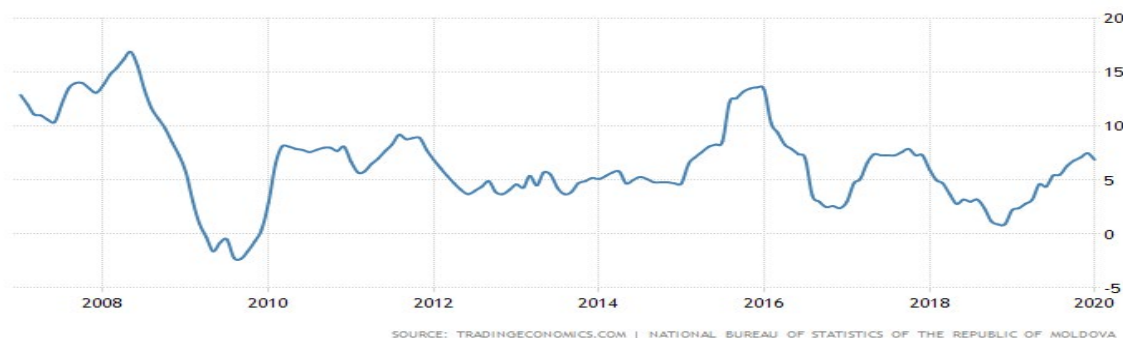
The analysis of the monetary developments in the Republic of Moldova during the last 15 years has allowed us to highlight the high capacity of the local monetary authorities to control the evolution of the monetary mass. Under the constraints of the monetary conditions, by increasing the rate of mandatory reserves, the capacity of banks supply currency in the economy decreases.

At the same time, the relaxation of the monetary conditions, by lowering the rates of the mandatory minimum reserves did not favor this process. These developments allowed us to conclude that the monetary mass in the economy had been influenced not only by the instruments of monetary policy, in particular the rate of the minimum reserves, but also by the existing prudential regulations. The impact of other monetary policy instruments, which are available to the Central Bank on the volume of monetary mass, is less marked.

The new monetary policy objective in the Republic of Moldova was adopted under conditions of increasing the share of cash in circulation in the structure of the monetary base, increasing the massive inflows of foreign currency and excessive dollarization, while controlling the monetary aggregates has become quite a difficult task. Since 2009, in order to ensure the maintenance of the price stability, after two years of adjusting the monetary policy for

the implementation of the new objective, the inflation target of 9% was set, with a deviation of $\pm 1.5\%$, from 2010 until present it was decreased to 5%, with a deviation of $\pm 1.5\%$. The adoption of the direct inflation-targeting regime in the Republic of Moldova favored the sustainable lowering of the annual inflation rate below the 10 percent threshold and overcoming the passivity of inflation expectations. Keeping inflation in a predictable corridor benefited from the relaxation of monetary policy and sustained a slight economic revival after the international financial crisis (Figure 2).

Figure 2. The evolution of the inflation, %.



Source: Author's compilation and values obtained from NBM. [online]. [Accessed on the 18th of February 2020]. Available: <http://www.bnm.md/>.

The Republic of Moldova's annual inflation rate dropped to 6.9 percent in January of 2020 from 7.5 percent in the previous month. Prices rose at a slower pace for food & non-alcoholic beverages (11.5 percent vs. 12.4 percent in December) and non-food products (3.8 percent vs. 5.2 percent). On a monthly basis, consumer prices were up 0.6 percent, decreasing from a 0.9 percent increase in the prior month.

The annual rate of inflation measured by the CPI constituted 7.5 percent in December of 2019 (food products - 12.4%, non-food goods - 5.2% and services provided to the population - 3.5%), recording an upward trajectory. The upward evolution of inflation was conditioned by the gradual increase in pressures from food prices, determined by adverse weather conditions in the region in the current year. The annual CPI inflation rate exceeded the upper limit of the variation range associated with the stationary target.

Table 4: Price indices, by sectors of economy, previous year=100

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Consumer Price Index (CPI)	112.30	112.70	100.00	107.40	107.60	104.60	104.60	105.10	109.70	106.40	106.60	103.05	104.84
Food goods	111.00	115.60	94.40	105.70	108.40	103.80	106.60	106.50	109.80	107.40	107.90	105.39	107.61
Non-food goods	113.10	108.30	99.70	107.30	105.80	104.20	104.30	105.50	111.80	106.30	104.50	102.67	104.19
Services	114.30	116.50	108.20	109.10	108.80	106.20	102.60	102.50	106.20	104.90	107.10	99.78	101.47

Source: Author's compilation and values obtained from the Statistics of the RM. [online]. [Accessed on the 18th of February 2020]. Available: <https://statbank.statistica.md/>.

An important element in the economic evolution of a country is the way in which the use and exploitation of economic resources is successful. In the formation of the gross domestic product participates: the consumption of the households, the variation of the stocks, the formation of the fixed capital, the individual consumption, but in the end - the final consumption. In addition, the net cost has a contribution, in the Republic of Moldova, we find that the imports outweigh the exports, with sufficiently high percentages; we come to the conclusion that in the activity of international economic relations, the Republic of Moldova has very high deficiencies.

Table 5: Dynamics of the main macroeconomic indicators

	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP, current prices, thousand Euro	5,260,854	6,045,995	6,777,538	7,147,343	7,164,068	6,974,510	7,291,590	8,588,386	9,700,989
GDP per capita, current prices, Euro	1,477	1,698	1,904	2,008	2,014	1,962	2,053	2,420	2,736
Annual average exchange rate, Lei/\$ US	12.3663	11.7370	12.1122	12.5907	14.0388	18.8161	19.9238	18.4902	16.8031
Annual average exchange rate, Lei/Euro	16.3995	16.3369	15.5632	16.7241	18.6321	20.8980	22.0548	20.8282	19.8442

Source: Author's compilation and values obtained from the Statistics of the RM. [online]. [Accessed on the 18th of February 2020]. Available: <https://statbank.statistica.md/>.

The analysis of the gross domestic product is an essential area of research, having a direct impact on the economic strategies and fiscal measures within a state. In the Republic of Moldova, the growth of the gross domestic product was influenced by consumption. Thus, the analysis of the link between the two macroeconomic indicators (GDP and consumption at the aggregate level) can bring clarifications regarding the efficiency of the applied economic measures.

Unfortunately, the Gross Domestic Product (GDP) of the Republic of Moldova is breaking the pace. The indicator is increasing by 5% compared to 2018, but inflation has increased as well.

At the same time, at the end of 2015, the depreciation of the national currency influenced the destabilization of prices, fueling the inflationary expectations of the population, under the pressure of prices on imported products. In response to the rising of inflationary risks, the NBM adopted a more restrictive conduct of monetary policy, compressing aggregate demand and pushing the economy toward economic decline and recession.

Analyzing the values of the gross domestic product and those of the consumption, from 2010 to 2018, we can say that between the two macroeconomic indicators, there was a direct relationship. These data outline the idea that in the Republic of Moldova people use private consumption as the main means of the economic growth. Economic measures taken during the economic crisis, through which it was intended to stimulate consumption, had the expected effect.

The GDP growth was relied exclusively on promoting a policy of stimulating consumption, especially the private one. At the same time, the measures taken during the economic and social crisis that took place in the Republic of Moldova negatively and directly affected consumption. Economic growth is the main macroeconomic objective

of a state, because it allows a better standard of living of the population, but growth based on a single component of GDP, respectively consumption, does not represent sustainable economic growth.

4. Conclusions

The problem regarding the most important monetary policy instruments is a delicate one and the same instruments cannot be applied equally in different stages of the evolution of the economy. Thus, we analyzed the monetary policy instruments used during the recent economic crisis in order to identify measures that can be taken by monetary policy in order to prevent future periods of instability.

In order to increase the efficiency of the NBM actions regarding the absorption of current liquidity, it is recommended to go beyond the use of a single monetary policy instrument, such as, for example, the rate of mandatory reserves, and to use all types of instruments to achieve this purpose. For example, the sale of NBM certificates, but not in the short term, as is currently practiced, but in the long term, for a period of more than two years, which would allow the gradual extension of the sterilization process, because otherwise he does not have the expected effect. If we use short-term, efficient instruments for a period of three months, this implies the need for repeated calls in short intervals. Respectively, their efficiency decreases. Moreover, in the econometric model we have shown that the response lag of the real economy to the effects of monetary policy instruments is around 6-9 months. For this reason, we recommend adapting the monetary policy instruments for a longer period, in order not to increase the amount of liquidity in the economy, but to allow banks to assimilate it.

Following the research conducted on the mechanism of the monetary policy in the Republic of Moldova, we believe that in order to achieve an effective monetary policy, greater independence is granted to the National Bank of Moldova in order to implement the monetary policy. In this way, the National Bank of Moldova would have at its disposal all the necessary measures to intervene in time to guide the progress of the monetary policy and respond to shocks in order to achieve the final objective.

Although we have relied on increasing the importance of the interest rate and using it as an operational objective, the window guidance measures are in the short term but the fastest solution to control the liquidity level in the market accompanied by the minimum reserves. In the long term, however, the use of the interest rate to control the level of credit and liquidity will lead to the reduced use of these measures, which may take on another character. And, as an intermediary solution, guiding banking behavior is still successful through the use of window guidance measures. Thus, given the greater freedom of the National Bank of Moldova and the improvement of the financial and banking system, these measures could continue to be used to further suggest prudent behavior of banks in granting loans and improving the management system of the risk, regardless of the economy. Guiding prudent behavior even during periods of economic boom can also lead to better management of inflation expectations.

The belief that low inflation represents and ensures financial monetary stability, has allowed this bubble to continue for many years. The crisis questioned the efficiency of the direct inflation-targeting regime as a sustainability factor of the monetary policy. This is because, despite strong economic growth and low inflation during the pre-crisis period, many developed countries have failed to provide a sound basis for financial stability and reduce tensions in financial markets. The practice questioned once again the hypothesis regarding the possibility of simultaneously achieving the economic growth and the stability of the financial and economic system. It needs to be revised to ensure financial stability, which is no longer a consequence of monetary stability.

In this regard, we consider that the instruments of monetary policy must be supplemented with the tools specific to the macro-prudential policy, which are based on two pillars: minimum countercyclical capital (to prevent systemic risk) and mandatory reserves (to put banks in the situation of being able to withstand the eventual shortage of money).

It is suggested to highlight possibilities for improving the monetary policy and its instruments, in relation to the financial regulation and for achieving both price stability and financial stability.

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