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MONETARY RESPONSE TO THE GLOBAL ECONOMIC CRISIS IN A SMALL, OPEN ECONOMY WITH FIXED EXCHANGE RATE - THE CASE OF THE REPUBLIC OF MACEDONIA

Trenovski Borce, PhD⁶ Tashevska Biljana, MSc⁷

Abstract

The global economic crisis imposed one of the most significant challenges for the conduct of monetary policy, which forced monetary authorities throughout the world to reach the limits of their conventional instruments and implement new sets of measures for exit of the crisis. The situation created by the global crisis presented an especially interesting challenge, not only for developed economies, but also for small economies with fixed exchange rate, which were supposed to survive this economic storm without having their anchors blown away by the "strong wind". The Macedonian economy is an example of a small open economy, highly intergrated in trade, which for a longer period maintains the fixed exchange rate as a best suited monetary regime for sustaining a stable macroeconomic environment. The monetary authority (NBRM) successfully responded to the challenges of the global economic crisis despite the specific characteristics of the Macedonian economy and the monetary regime which limits its response. Thus, we found a special challenge in elaborating and analyzing the response of the Macedonian monetary authority to the global crisis. The elaboration of the undertaken measures can be a solid ground and a guide for the creation of monetary policy in small open economies with a fixed exchange rate.

The paper is structured as follows: the first section elaborates the transmission of the economic crisis; the second section focuses on the general picture of the monetary resonse; the third section analyses the monetary authority's response at the beginning of the global crisis, when it reacted with a monetary tightening; the fourth section elaborates the monetary policy response in the peak of the crisis, characterized by monetary relaxation; the fifth section presents the macroprudential measures implemented for fighting the crisis and the last section gives summarized conclusions about the monetary response to the crisis.

Keywords: monetary policy, global crisis, monetary measures, macroprudential policy

⁶⁾ Assistant Professor, Ss Cyril and Methodius University, Faculty of Economics – Skopje, borce@eccf.ukim.edu.mk, 3286-887, R. Macedonia; CEA Senior Economist

Teaching Assistant, Ss Cyril and Methodius University, Faculty of Economics – Skopje, biljana@eccf.ukim.edu.mk, 3286-881,
 R. Macedonia

Introduction - Transmission of the global crisis to the Macedonian economy

Before we turn to the elaboration of the monetary policy response to the conditions imposed by the global crisis, we try to present in short the transmission channels through which the crisis affected the Macedonian economy. The reason behind this is that these channels are at the same time signals, determinants and limits which the monetary policy makers take into account when formulating their reaction to the current situation. More specifically, these transmission channels presented the shocks (targets/aims) towards which the monetary policy measures were directed.

The specific transmission channels of the Global economic crisis to the Macedonian economy are mainly determined by the specific features of the Macedonian economy - trade intergration, financial integration and influence of the global trends on the expectations and confidence of economic subjects. Macedonia, as a small open economy, can not achieve solid growth rates and function successfully if isolated from its environment (trade partners, foreign investors, international capital markets etc.). The large net-trade exchange of about 115% of GDP, the high level of eurozation (foreign currency deposits account for almost 45% of M4), the poorly predictable money demand and the significant import dependence of the Macedonian export sector are the main reasons for NBRM's strategy of de facto fixed exchange rate, which presents yet another determinant of the transmission mechanism. Accordingly, the current account deficit (the significance of exports), the FDI and the portfolio investments, the access to international capital markets, the movement of the world market prices are all important determinants which in the presence of a de facto fixed exchange rate, determine the stability of the Macedonian economy and the reaction of the economic policy. The main transmission channels determined by the specifics of the Macedonian economy are: first, the fall in the global economic activity (especially the economic activity of our key trade partners); the deterioration of the international capital markets and the worsening of investors' confidence in markets and their risk aversion. These main transmission channels, in the period of the bancrupcy of "Lehman Brothers", caused a decrease of Macedonian exports, due to the declilne of the foreign effective demand, limited financing sources, as well as a rise in their price, a decrease in FDI inflows, portfolio investments and private transfers (as a dominant source of finance of the current account deficit). This in turn caused a fall in the production of the export sectors (the motors/carriers of GDP growth), a lower credit activity and hence a restriction and higher costs of financing for households and businesses, a decline in the activity of the securities markets, pressures on the exchange rate etc.

Before the crisis, Macedonia experienced a period of rising GDP growth trend, low inflation rates, low or balanced budget deficits, declining trend of public debt, a slight recovery of the export sector and a modest decrease in unemployment rates (see table no.1 below). The positions of the key macroeconomic indicators represent on the one hand stabilizers (or transmission channels) of the Macedonian economy from the effects of the global crisis, and on the other hand, they are the main determinants of the key macroeconomic policies undertaken in the period when the effects from the crisis were most severe and later.

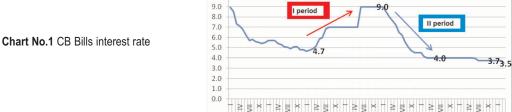
Table No.1 - Main macroeconomic indicators for Macedonia

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
GDP (%, constant prices)	4,5	-4,5	0,9	2,8	4,6	4,4	5,0	6,2	5,0	-0,9	2,9	3,1	1,0
Inflation (end of period, %)	5,8	4,0	0,8	2,7	-2,2	1,6	3,1	6,7	4,1	-1,6	3,0	2,8	2,0
Export of goods and													
services (change in %)	20,4	-15,6	-5,1	-5,9	13,1	11,0	8,3	12,0	-7,0	-15,7	24,2	10,5	5,0
Unemployment (% of total)	31,7	30,5	31,9	36,7	37,2	37,3	36,0	34,9	33,8	32,2	32,1	31,4	31,9
Public expenditures													
(% of GDP)	33,7	40,3	40,5	37,4	35,2	34,0	32,5	31,6	33,4	33,2	32,0	31,2	31,3
Budget deficit (% of GDP)	2,5	-6,3	-5,6	-0,1	0,4	0,2	-0,5	0,6	-0,9	-2,7	-2,4	-2,5	-2,5
Total public debt													
(% of GDP)	47,9	48,8	42,9	37,9	35,6	39,5	32,0	24,0	20,6	23,8	24,2	27,7	30,9
Current account deficit													
(% of GDP)	-1,9	-7,2	-9,5	-4,0	-8,1	-2,5	-0,4	-7,1	-12,8	-6,8	-2,1	-2,7	-4,0

Source: International Monetary Fund, World Economic Outlook Database, October 2012 (forecast begins in 2011)

The response of monetary policy to the challenges imposed by the global economic crisis

The fixed exchange rate regime, implemented by NBRM, relates monetary actions with the stock and flows of foreign exchange reserves (the stability of the exchange rate), which reflects the movements of inflation, economic activity, external sector, the action of fiscal policy and the expectations of economic agents. Therefore, every pressure on the exchange rate (the anchor of price stability) forces monetary policy interventions aimed at eliminating the pressures and stabilizing the situation in the foregin exchange market. This should be taken into account when analyzing the monetary policy response in Macedonia to the Global economic crisis. The general overview leads to the conclusion that the monetary response to the global economic crisis in Macedonia can be divided into two parts, which correspond to two periods (see charts no.1 and no.2):



10.0

Source: NBRM

The first period which began in the last quarter of 2007 and lasted until the beginning of 2009, characterised by the presence of upward pressures on the price level and large pressures on the exchange rate, caused an unfavorable ambient for conducting monetary policy and a conduct of a restrictive monetary policy;

2012 2013

The second period continued in the second half of 2009 (the peak of the global crisis), when the pressures on the exchange rate relaxed and the inflation pressures weakened, the expectations of economic agents stabilized, the external sector movements improved, which created favorable conditions for monetary relaxation (NBRM joined the majority of central banks in the world which already had relaxed their policy).

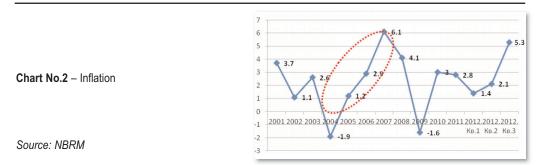
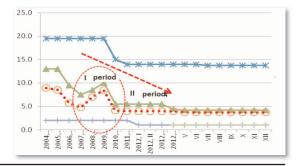


Chart No.3 - NBRM active and passive interest rates (end of period, annual base, in %)



Source: NBRM

The first response of monetary policy (first period) - monetary tightening

In the pre-crisis period the monetary policy in Macedonia was being conducted in a more favourable and relaxed macroeconomic atmosphere, characterised by positive GDP growth rates, low inflation rates, favourable external sector movements (increased export activity, positive movements of portfolio and FDI, large private transfers inflows – narrow balance of payments deficit), a stable banking sector, a continuous credit expansion in the banking sector, a prudent fiscal policy.8 In order to maintain the main goal of NBRM and to maintain the stability of the nominal exchange rate in this period through foreign currency transations, NBRM constantly purchased large amounts of foreign currencies in the foreign exchange market. However, the first signals of the coming changes began to show in the second half of 2007, when the inflation rate began to intensify as a result of the higher food price growth, reflecting the global trends. The pressures for depreciation of the domestic currency were especially evident in the last quarter of 2007, resulting from the deteriorated balance of payments situation, predominantly due to the outflow of foreign currency assets for using foreign currency rights for portfolio investments. This presents the first effects of the global economic (at the time mortgage/financial) crisis, which influenced the demand for financial intruments on the global financial markets (including the countries which were not directly involved in the toxic securities net), resulting from the increased uncertainty on the global financial markets, the worsening liquidity, the increased capital prices, the increased risk aversion.

⁸⁾ More extensively see in NBRM's annual reports for 2005, 2006 and 2007:

The real pressures which attracted the attention of the monetary policy and which were the reason for its action toward tightening, occurred during 2008 (especially in the first two guarters), as a result of the adverse economic/financial events that shook the Macedonian economy:9 the rising trend of prices of food and energy from 2007 continued, the domestic demand added oil to the fire, the inflation continued to increase, the portfolio-investments significantly decreased, private transfers fell as well, the domestic demand adjusted slowly and still contributed to worsening of the terms of trade and to deepening of the trade deficit, which started to significantly increase the pressures on the foreign exchange market. Although determined actions (elaborated below) undertaken by NBRM and the achieved capital inflows contributed to stabilization of the situation on the foreign exchange market in the third guarter and especialy towards the end of the during a period of escalating economic situation on a global level, the fear of spillover effects to the Macedonian economy and the concern over the stability of the banking system and the domestic currency caused significant psychological pressures that further contributed for the psychological channel to be the reason for an increased demand for foreign currencies. In order to catch the power of the pressure present on the foreign exchange market on the value of the domestic currency, we point to the fact that since the third quarter of 2007 until the second quarter of 2008, the foreign currency reserves were cut by \(\frac{1}{2} \), i.e. by 485,4 million euros (see chart no.4). These tendencies continued with a variable dynamics in the first half of 2009, when the uncertainty and the risks coming from the global economic crisis continued to reflect on the monetary positions of the domestic economy, causing serious pressures for depreciation of the domestic currency and forced NBRM to intervene with net-sales of foreign currencies in the first guarter of the year.

Chart No.4 - NBRM official reserves (in mil. €)



Source: NBRM

The efficiency of the monetary policy measures, the decreased uncertainty about the global developments, the adjustment of the import demand, as well as the more positive forcasts of the external position of the county in the following period (beginning in the second half of 2009), significantly eliminated the pressures on the domestic currency and created a basis for a change in monetary policy toward its relaxation. The elaborated movements and tendencies in the first period (just before the crisis and in terms of the crisis), especially the strong pressures on the general price level and on the exchange rate, beginning at the end of 2007 until the beginning of 2009, were the reason for NBRM to take a number of measures and changes in the monetary instruments in order to stabilize the expectations of economic agents, to contribute to lowering of the inflation pressures, to stabilize the situation on the foreign exchange market, to maintain the stability of the financial sectors and to achieve its main goal – maintain a stable price level.

The relaxed pre-crisis macroeconomic ambience, characterized by a credit expansion in the banking sector, by the structural excess of denar liquidity in condition of a shallow financial market and a poor portfolio of securities owned by banks (high preferences for investment in Central Bank bills) was the

⁹⁾ More details on the monetary movements in this period can be found in the Annual report of NBRM for 2008, pp.80-120, available on: http://www.nbrm.mk/WBStorage/Files/Godisen izvestaj 20085.pdf

reason for NBRM to implement a number of changes in the position of its instruments in order to remove these anomalies:

- On January 11, 2005, came into force the decision to increase the reserve requirement rate for denar and foreign currency deposits from 7,5% to 10%, in order to decrease the structural excess of denar liquidity and a larger coverage of short term foreign currency liabilities with liquid assets.
- In order to stimulate the secondary market of securities and the interbank money market, and to reduce the influence of NBRM on the primary securities market, a number of changes to positions the main monetary policy instrument (CB bills bills) were made on January 20th 2005 the every-day auctions of CB bills with maturity of 7 days were suspended/canceled and were to be hold twice a week; on March 9th 2005, after the movements on the foreign exchange market had stabilized, NBRM suspended/canceled the CB bills with 7 day maturity. As a result from the favourable macoreconomic movements near the end of 2005 (October 26th, 2005), there were conditions for NBRM to transfer from "volume tender" to CB bills auction on the principle "interest rate tender", which enables a market forming of interest rates (in this case their decrease).
- In order to promote repo-operations and to increase the security of approved money funds, NBRM at the end of September 2005 made a decision with which the approval of Lombard credit was replaced by an overnight credit, approved as a repo-transaction. Also, the daily overdraft allowed to banks for working with their daily transactions? was replaced by an intraday repo.
- With the aim to reduce the structural excess of liquidity in the period, i.e. its sterilization on a longer term, on March 7th 2006, NBRM, in agreement with the Ministry of finance, began to issue treasury bills for monetary policy purposes with a 3 month maturity. This instrument, beside the purpose of sterilization of liquidity, enabled investors to focus on the market for short term securities, as well as a more efficient liquidity management and improvement of the monetary policy transmission mechanism.
- The planned issuing of treasury bills for monetary policy purposes was done simultaneously with the lowering of the frequency of holding central bank bills auctions in order to direct the demand toward the new instrument. Therefore, in Februay 2006, NBRM reduced the frequency of the auctions for central bank bills from twice to once a week.
- During 2006, in order to adjust the interest rate of lombard credits to the market interest rates, it was cut twice, reducing it from 13% to 9,5%, and in 2007 it was further reduced to 7,5%.
- Aimed at an equal treatment and a wide scope of liabilities from banks' balance sheets, in December 2007 NBRM adopted a Decision on reserve requirements of banks (entering into force in February 2008), expanding the basis for calculation of the reserve requirements, with the inclusion of new categories of accounts from the balance sheets of banks.
- In December 2007, NBRM adopted a Decision (entering into force in January 2008), which fully liberalized the purchase of securities by nonresidents, i.e. the foreign exchange rights and the other requirements for portfolio investments by non-residents were revoked (according to the requirements under the Stabilization and Association Agreement between RM and EU).

The specific circumstances which have roots from the end of 2007, enhanced in 2008 and forced a response from the

Response to the first effects of the global crisis – monetary tightening

monetary authority, focused on eliminating the strong pressures on the foreign exchange market and stabilizing the inflation an disinflactionary expectations of economic agents:

- The significant outflow of foreign currency and the expected increase of prices caused NBRM to transform the "interest rate tenders" into "volume tenders". Additionally, NBRM increased the interest rate on Central Bank bills in 2008, from 5,08% to 5,25% in February; from 5,25% to 6% in march; from 6% to 7% in may. Also, in june 2008 a decision was made to increase the interest rate on Lombard credit from 7,% to 8,5%. The rising trend of interest rates on Central Bank bills and Lombard credit continued in the first half of 2009. In March 2009, the interest rate on Central Bank bills was increased from 7% to 9%, while the interest rate on Lombard credit from 8,5% to 10,5%.
- The inflationary pressures and the pressures on the foreign exchange market and other macro-economic disturbances, combined with the pressures in the banking sector, through the too fast credit growth, provoked an adoption of a Decision on a required deposit in NBRM, which the banks are obliged to allocate if the growth of credit to individuals exceeds the established rate of growth of this type of credit. Banks and saving houses are obliged to allocate a mandatory deposit in NBRM if their population credit growth exceeds 40% annualy (at the end of December 2008). The extraction is done once a month, for the excess amount above the established rate. NBRM pays an interest rate on the allocated amount of 1% per annum. In December 2008, the validity of this decision was extended throughout 2009.
- In may 2009, a decision was adopted on reserve requirements, in which the rate of allocated reserve requirement for banks' liabilities in foreign currency was increased (it entered into force in July 2009). The rate of liabilities in foreign currency was increased from 10% to 11,5% (and later in august 2009 from 11,5% to 13%) and also the rate of liabilities in domestic currency with foreign clause rose from 10% to 20%. This decision allowed banks to be able to fully use the extracted funds for reserve requirements for covering the daily liquidity needs. In October 2009, NBRM reached a decision prescribing that the rate of ? for reserve requirements in euros to be 0,10% per annum.

The second response of monetary policy to the gloibal crisis (second period) – monetary relaxation/loosening

The reduced uncertainty about the global economic activity and the stabilization of the external sector created conditions for relaxation of the monetary policy at the end of 2009. These economic movements continued the next year, 2010, 10: the inflation rate was kept at a low level, the domestic demand recoverd slowly, the temporary positive movements on the global markets influenced positively on the foreign effective demand/Macedonian exports in times when the import slowly adjusted, the private transfers showed a growing trend, the current account deficit was decreasing. These movements in conditions of foreign exchange rate targeting enhances the capacity for action (relaxation) of monetary policy. The created room for monetary policy in time when economic activity was slowly recovering and the movements in the financial/banking sector showed that the confidence in it slowly returns (the process of crediting/support of businesses was deteriorated) was the reason for the monetary policy to significantly relax during the year (the interest rate after a severalfold cut reached at the end of the year a record low level thusfar of 4%). The tendencies in 2010 continued in the first half of 2011, with the exception of the risks arising from the accelerated growth of inflation, which were successfully put under control by the monetary authority, not requiring large changes in monetary policy. In a dominant part the favourable climate for conducting relaxed monetary policy continued in 2012 – the inflation was on a low and controlled level, without more significant risks from acceleration, the position of the balance of payments remained favourable, which created room for monetary loosening, aimed at contributing to a larger credit growth and support to the domestic economic activity. However,

¹⁰⁾ More details on the monetary movements in this period can be found in the Annual report of NBRM for 2008, pp.80-120, available on: http://www.nbrm.mk/WBStorage/Files/Godisen izvestaj 20085.pdf

the significantly weaker economic activity in the Eurozone in that period, considering the trade integration of the domestic economy, increased the volaility of the real/export sector (there was even a recorded decrease of economic activity at the beginning of the year) and imposed a need for the events on the global scene to be seriously observed by NBRM, in order to register and eliminate on time the eventual occurrence of real risks for monetary policy.¹¹

The reduced uncertainty, the stabilized external sector, the stabilized foreign exchange market, the reduced pressure on the overall price level allowed the monetary policy to take a



new course at the end of 2009 and to begin the long time expected (and often debated about) monetary loosening. On november 30th 2009, the interest rate on CB bills was carefully reduced from 9% to 8,5%, while the interest rate on Lombard credit was reduced from 10,5% to 10%. The following years, the interest rates on CB bills and overnight credit were further reduced 7 times, from 8% and 9,5% (in march 2010) to 4% and 5,5%, respectfully (until december 2012). Due to the favourable macroeconomic conditions and climate for the monetary policy, NBRM reduced the key interest rate by 0,25 p.p., i.e. from 4% to 3,75%.

- In february 2011, with the aim to support the financial stability and improvement of the liquidity risk management by banks, NBRM introduced a new instrument a bill of six-month deposit which enabled banks to place denar funds in NBRM with 6 month maturity (and the possibility for), with the interest rate epending on the 6-month EURIBOR, increased by 0,5p.p. These funds were also acknowledged for banks to fulfil the coeficients for denar and foreign currency liquidity.¹²
- In september 2011 (in force since January 2012), with the aim to stimulate long-term savings by individuals, growth of banks' credit potential and the development of the repo-market, a change was adopted to the setting of the reserve requirement, which releases banks from reserve requirements on the liabilities toward households for time deposits with agreed maturity of over 2 years, as well for the obligations coming from repo-transactions in denars (and changes in the periods for fulfining the reserve requirement).¹³

In course of increased flexibility, more active liquidity management and enhanced support for financial markets development, in April 2012, NBRM adopted changes in the operational framework for conducting monetary policy¹⁴ - for a more favourable approach to liquidity and money market development it introduced regular weekly repo-operations for providing liquid assets to the banking system; for a more attractive application of repo-operations it reduced the frequency of the auctions of Central Bank bills to once in the period of reserve requirement and it introduced a restrictedamount of offered CB bills; for an enhanced flexibility in liquidity management in the bankinkg sector it introduced seven-day deposit facility, which are made available to banks every Wednesday, at their initiative (with a 2% interest rate p.a.).

The first unconventional measure of NBRM – on 29.11.2012 (into force since January 1st, 2013, and to be implemented until the end of 2014), NBRM adopted a new Decision on reserve requirements15,

¹¹⁾ See more details on the monetary movements and risks to the financial and real sector in this period in the quarterly reports of NBRM for 2012 (http://nbrm.mk/?ltemID=3879E6ED9740AD40BFFD41BC269831E9). See also the quarterly reports for 2012 of the Ministry if Finance of the Republic of Macedonia, available from : http://finance.gov.mk/node/692

¹²⁾ Decision for a 6-month deposit in NBRM, Official gazette of RM, no. 14/11.

¹³⁾ Decision on reserve requirements, Official gazette of RM, no. 126/2011

¹⁴⁾ See the Quarterly Report of NBRM, April 2012, available from: http://nbrm.mk/WBStorage/Files/WebBuilder_Kvartalen_izvestaj_april_2012_SP_WEB.pdf

¹⁵⁾ See Official Gazzette of RM no.153/2012

which allows for a reduction of the basis for reserve requirements of banks for the amount of newly extended credits to net-exporters and to firms for financing projects for domestic production of electric energy for own and/or commercial purpose, for investments in debt securities in domestic currency issued by the above mentioned nonfinancial companies, as well as a complete exemption from allocating reserve requirements for the liabilities of banks for issued debt securities in domestic currency and with an original maturity of at least two years. Having in mind that this measure appllies only to specified sectors and instruments and has been adopted for a defined time period, it is considered to be an unconventional/nonstandard measure of monetary policy (these unconventional measures have been an important instrument in dealing with the global crisis in the USA and the EU). This measure is aimed at facilitating and improving the conditions for crediting two key sectors for economic growth, net-exporters and companies in the energy sector, while the facilitations for investments/issuing securities is aimed at supporting the development of the capital market.

Macroprudential policies in response to the global crisis

As the effects of the global crisis became more severe, the increased need emerged for measures to support the stability and liquidity of the financial/banking pressure and by that to maintain the stable macroeconomic environment of the country (these measures entered in force since 01.01.2009).¹⁷

- In order to reduce the credit risk of the banking sector from household crediting and in order to slow down/restrain the credit expansion, NBRM, in March 2008, adopted amendments to the Decision on the methodology for determining capital adequacy. This increased the risk weight for used overdrafts based on current accounts and used credits by individuals based on credit cards.
- In order to reduce the risks imposed by the global economic crisis in terms of liquidity problems faced by many financial institutions in the world, NBRM introduced an obligation for banks to maintain at least the required lowest level of liquid assets to cover liabilities that are due in the following 30 and 180 days (especially in foreign currency and in denars).
- In order to avoid the risk of placement of foreign currency assets in the banking sector abroad in times of a global financial tsunami, a Decision on foreign currency deposits with NBRM was adopted, which entitles banks to place foreign currency funds in NBRM under interest rates equal to those in central banks in the Eurozone and the international financial institutions.

Amendments in the Decision on exposure assume the exposure of domestic banks to foreign first class banks to be included in the exposure limits in full amount instead of the former practice of 20%.

- A Decision on the type of securities that authorized banks can buy and sell abroad, which provides an increase in the lowest allowed long-term credit rating of securities in which an authorized bank can invest abroad.
- A Decision prescribing the minimum required elements for management of the interest rate of the portfolio of bank activities, as well as the way of measuring the bank exposure to this risk.
- In September 2011, aimed at larger credit support to the economy and a more rational liquidity management of banks, NBRM amended the Decision on managing banks' liquidity risk in terms of relaxing the required level of liquidity of banks – it introduced a unique liquidity rate irrespective of

¹⁶⁾ See Quatrerly report of NBRM, January 2013, available from: http://nbrm.mk/WBStorage/Files/Istrazuvanje Kvartalen izvestaj Januari 2013.pdf

¹⁷⁾ See in detail in the Annual Reort of NBRM for 2008, pp 88-89, available from: http://www.nbrm.mk/WBStorage/Files/Godisen izvestaj 20085.pdf

the currency, instead of the previous following of liquidity separately for denar and for foreign currency positions.¹⁸

• Establishing a Financial Stability Committee, comprised of representatives of NBRM and the Ministry of Finance, with a basic goal, following the example of developed economies, to analyze the events in the economy and the financial sector, to assess the risks, to propose preventive macroprudential policies and to coordinate fiscal and monetary policy. This Committee held its first meeting on 1st September 2011, when a common ascertation of the Ministry of Finance and the NBRM was reached, stating that there is no serious risk threatening the financial sector in Macedonia, neither from a systemic risk aspect, neither from external shocks and macroeconomic performances aspect.

Concluding remarks

(summary of the response of the monetary policy in times of the Global economic crisis)

- Each pressure on the foreign exchange rate (the anchor of price stability) forces interventions by monetary policy for eliminating the pressures and interventions on the foreign exchange market.
- The monetary response of NBRM to the global crisis can be divided into two parts, which refer to two periods:

The first period began in the last quarter of 2007 and lasted until the beginning of 2009, in which there were significant upward pressures on the pirce level and large pressures on the foreign exchange rate. This caused a non favourable environment for conducting monetary policy and was the reason for leading a restrictive monetary policy;

The second period, which continued from the first half of 2009 (the peak of the global crisis), when the pressures on the foreign exchange rate and the inflationary pressures weakened, the expectations of economic agents stabilized, the movements of the external sector improved, thus creating conditions for relaxation of the monetary policy;

- The first signals/effects became present in the first half of 2007, when the inflation rate began to intensify as a result of the faster growth of food prices, which resulted from the global trends. The real pressures that attracted the attention of monetary policy and triggered its action in the course of tightening emerged during 2008 from the third quarter of 2007 to the second quarter of 2008 the foreign reserves fell by 1/4, that is for 485,4 million euros more precisely.
- Reducing the uncertainty about the global economic activity, stabilization of the external sector created conditions for monetary policy relaxation at the end of 2009.

Measures of the monetary authority as a response to the global crisis

The eve of the crisis - a relaxed macroeconomic environment

On 11th January 2005 the Decision of NBRM on increase of reserve requirement for denar and foreing currency deposits from 7,5% to 10% entered into force; on 20th January the everyday auctions of seven-day Central bank bills with maturity were abolished; on 9th march 2005, after the foreign exchange market stabilized, NBRM canceled the 7-day central bank bills; NBRM moved from "volume tenders" to "interest rate tenders"; in September 2005 it replaced, by Decision, the Lombard credit with

¹⁸⁾ The Decision on liquidity risk management of banks (Official Gazzette of RM, no. 126/2011)

¹⁹⁾ See Archive of the Government of R. Macedonia: http://arhiva.vlada.mk/?q=node/7044, http://vlada.mk/node/1139

an overnight credit; on 7th march 2006, NBRM, in accordance with the Ministry of finance, began to issue 3-month treasury bills for monetary purposes; the intrest rate of the lombard credit was twice reduced, falling from 13% to 7,5%; in December 2007 the basis for calculation of the obligation for reserve requirement was expanded, by inclusion of new categories of accounts from the balance sheets of banks; in December 2007 NBRM adopted a Decision for a complete liberalization of purchase of securities by non-residents.

Response to the first effects of the global crisis – monetary tightening (I period)

February 2008 – NBRM switched from "interest rate tenders" to "volume tenders"; the interest rate on central bank bills was increased several times – from 5,08% in February 2008 to 9% in may 2009; a Decision on deposit requirement in NBRM was passed, which deposit the banks will allocate if the household credits exceed the established growth rate for this type of credit; in may 2009 a new decision was adopted for reserve requirement, increasing the rate of reserve requirement for banks' liabilities in domestic and foreign currency.

Response to the global crisis – monetary relaxing (II period)

30 november 2009 – the monetary policy relaxation took off and the interest rate of central bank bills and Lombard loans dropped from 9% and 10,5% to 4% and 5,5,%, respectively, in December 2012; in may 2012, NBRM additionally reduced the basic interest rate by 90,25 p.p., i.e. from 4% to 3,75%; NBRM introduced a new instrument – a bill for six-month deposit entering into force on January 2012; a Decision was adopted, exempting/discharging banks from allocation of reserves for their liabilities to individuals on the ground of time deposits with maturity over 2 years, as well as for the liabilities on the ground of repo-transactions in denars; in course of increased flexibility, more active liquidity management and enhanced support for financial market development, NBRM in april 2012, amended the operational framework for conducting monetary policy; the first unconventional measure of NBRM,), which addresses the selective reserve requirement, was adopted on 29.11.2012 (it entered into force on 1 january 2012

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