

THE INTERDEPENDENCY BETWEEN THE MONETARY MASS AND THE GROSS DOMESTIC PRODUCT IN ROMANIA

Diana Viorica Lupu, Roxana Angela Calistru, A. Trifu

Universitatea "Petre Andrei" din Iași
e-mail: diana_viorica@yahoo.com

Abstract

*The aim of this article is to analyze the concepts of **monetary mass** and **GDP** in the current context, as being some of the major economic aggregates used by the state to balance the economy, and they also have been main study subjects of many economists for a long time. For this purpose, the **monetary mass** is presented as the instrument exploited by the national monetary policy to directly exercise its influence, and to accomplish Romania's compliance to the IMF standards, by imposing the use of a monetary mass structured in three monetary aggregates: M1, M2 and M3. The augmentation of the monetary mass must be directly correlated with the pace of economic growth. Methodologically, the research was carried out as an ideological and quantitative approach, using adequate interpretation and analysis techniques. Based on the data provided by the Romanian National Bank and the National Statistical Institute we have analyzed the evolution of the monetary mass and also the contribution of the demand and offer components to the Gross Domestic Product. The results of our study highlight an increase in monetary mass due to the unequal augmentation of **quasi-money** and **cash**, which resulted in a modification of its structure through the enlargement of the cash ratio, in relation to the opposite evolution of quasi-money. In Romania, this increase in monetary mass has not always been closely correlated with the ascendant movement of the GDP.*

Key words: monetary mass, monetary basis, GDP, economic growth, quasi-money

INTRODUCTION

The currency is mainly a macro-economical category representing a reference point for all economic agents in the country. It fulfills the measuring functions of the economic activity and exchange mediation. The attempt to measure the currency quantity is translated, in other words, in a stage of monetary aggregates initiation. The object of such an attempt has as result the effort to determine the potential spending capacity of the economic agents who have as main activity the intervention on the goods and service market, production, purchasing, selling, saving, that is the economic agents that by means of their actions play a major role in economic augmentation and inflation.

At another level, the main synthetic indicator included in the *production aggregates* category, and that is the object of the present analysis, is the **Gross Domestic Product**, or **GDP**. As a summary, let's say that the **Gross Domestic Product** expresses

the value of finished goods and services created inside the national economy by resident or non-resident economic agents during one year. And because we deal with economic activities of production and service performance, all these add up and are valued as money amounts.

MATERIAL AND METHOD

The currency represents an embodiment of natural persons' estate, characterized by the particularity to be used immediately in transactions for performance of various payments, without risking a value diminishing.

The formation of the monetary mass sphere, deciding its elements include taking into consideration the defining modality of the currency, and also its existent shapes. Synthesizing the various expressed opinions, there can be underlined two interpretations.

In a restricted meaning, the monetary mass represents the set of payment means that allow the owner the immediate purchase of

goods, services and performance of direct payments. According to this definition, as part of the monetary mass are two elements:

a) **Cash** (or real currency) is the most liquid element of the monetary mass. The cash is necessary for purchasing goods, services and for performance of various economic payments.

b) **Available amounts in current accounts** opened at banks, savings banks, other financial institutions, etc. are considered as currency, and so they are included in the monetary mass, so the holders of this availabilities can acquire goods, services (with help of checks, cards, etc.) and perform direct payments for due debts.

These two elements of the monetary mass are also called **real currency**.

In a broad meaning, the monetary mass reflects not only the proper payment means, but also the set of liquid financial actives appropriate to be immediately or in a short term transformed into real currency, without the risk of having significant value losses. **The monetary mass in a broad meaning comprises, besides the real currency** (cash and availabilities in current accounts) also the following elements:

- **Term deposits and savings accounts**, opened at banks, savings banks, etc., that have a reduced liquidity degree because they can't be used for performance of direct payments. Their inclusion in the monetary mass is justified also by the fact that, from the point of view of the influence these deposit types exercise over the volume and structure of the holder expenses, and therefore over the solvable demand, there are no differences against the availabilities found in the current accounts [2];

- The titles **on the financial markets considered close substitutes of the real currency**, because they are easy to negotiate and do not include a significant values loss (deposit certificates issued by banks, coupons issued by financial institutes and companies, negotiable treasury coupons issued by the state, etc.).

To sum up, the structure of the monetary mass (in a wide meaning) has a relative character, because, as new financial

instruments emerge, instruments that become substitutes close to the real currency, they will be included as part of the currency.

The balanced development of an economy supposes a good correlation between the volume of the available payment means and needs of the non-financial agents. Therefore, there is compulsory for monitoring the monetary balance, to know the available payment means and the modality these are owned by those engaged on the goods and service market. For this purpose, the monetary authorities elaborated the **monetary indicators**, named **monetary aggregates** that reflect the purchasing power of the resident non-financial agents.

The monetary aggregates represent a set of monetary actives possessed by resident non-financial agents that present the particularity that the most restrained aggregate is included in the closest aggregate superior in size, and so on, therefore the largest aggregate, the liquidity aggregate, includes all other aggregates.

If until 1980, the monetary aggregates generally comprised a reduced number of monetary actives, subsequently, as a result of reforms applied by developed countries authorities, there were created new financial products that became close substitutes of the real currency (currency in a restricted meaning) and as a result they were included in the monetary aggregates structure (for example, deposit certificates issued by banks, coupons issued by financial institutes, negotiable treasury coupons issued by the state, treasury coupons issued by companies, etc.)

In the context of Euro creation and attempt of the Romanian economy to target this area of single currency (it's true, having a horizon after 2014), the monetary authorities of the member states in the Eurozone were preoccupied with the definition of the common and harmonized monetary aggregates. For this purpose there were established the competent institutions to create and administer the currency, known under the name of financial-monetary institutions. Their structure comprises [1]:

a) **Central banks** (Central European Bank and central banks of the states found in Eurozone);

b) **Resident credit institutions** (mainly banks and savings banks), defined as "companies with an activity consisting in attraction from public of deposits and other reimbursable funds and credit granting";

c) Other **resident financial institutions**, having an activity consisting in deposit attraction and close substitutes for the entity deposits, other than financially-monetary institutions and credit granting and performance of investments of real estate value (mainly Collective Investment Organisms in Real Estate Value - OPCVM -, specialized in purchasing titles from the monetary market).

The monetary aggregates, built by successive integration of actives with monetary character which appear in the passive of the reinforced balance of the financial-monetary institutions, are [3]:

- **Close monetary aggregate (M1)**, including the fiduciary currency (bills and metallic coins) and sight deposits;
- **Intermediary monetary aggregate (M2)**, comprises, besides M1, term deposits (for a period of time of up to two years) and deposits with pre-notice of at least three months. M2 is also named **quasi-money** because it includes deposits that are available at any moment, limited by some restrictions (for example fees, penalties, pre-notice

existence, etc.), but cannot serve directly to payment performance;

- **Monetary aggregate M3** – representing the monetary mass in a wide meaning - including M2, to which is added negotiable instruments considered as substitutes close to deposits, issued by financial-monetary institutions.

On the other hand, the **economic growth is reached when the GDP per capita of a certain national economy increases year by year, or appears the increase of the useful economic effects number in a certain period of time.** The economic growth refers to continual enlargement, increase, extension, but not necessarily linear extension of the GDP, process requesting both a quantitative, and in which the currency, the monetary mass possesses an essential role, but sooner, also a qualitative aspect, as are we saying.

RESULTS AND DISCUSSIONS

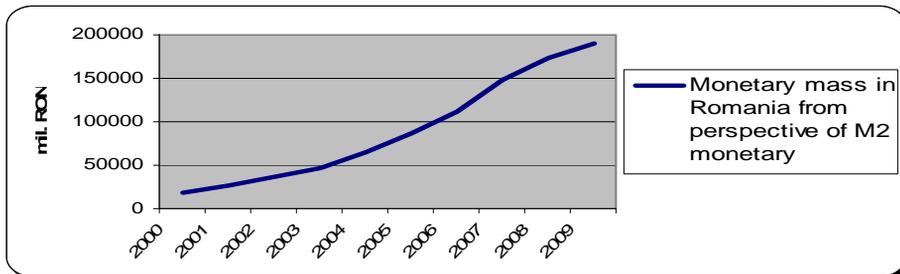
In order to analyze the comparisons, all amounts were transformed into RON, due to the Leu denomination on 1st of July 2005.

The monetary mass, from the point of view of M2 monetary aggregate followed an ascending trend, as you can see also in Table no. 1.

Table no.1 Evolution of the monetary mass in Romania from perspective of M2 monetary aggregate

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Monetary mass in Romania from perspective of M2 monetary aggregate (mil. RON)	18506	27051	37371	46075	64462	86332	111711	147918	173737	189635
Augmentation rhythm of M2 (%)	38	46,2	38,2	23,3	39,9	33,9	29,4	33,9	17,3	8,3

Figure no.1 Evolution of the monetary mass from perspective of M2 monetary aggregate



From the analysis of the monetary mass evolution in Romania, as presented in the above table and figure, we can conclude the following:

- In **2000**, the (M2) monetary mass was increased with 38 percentages, with an average monthly rhythm of 2.7%, on 31st of December reaching 18506 million RON. Having as background a nominal increase under the inflation level was produced the compression with 1.9% of the actual money stock.

- The (M2) monetary mass was increased in **2001** with 46.2%, at the end of the year reaching an amount of 27051.1 million RON. The average monthly increase rhythm (3.2%) surpassed with one percentage point the average monthly inflation rate, fact attesting the presence of the new monetization of national economy. In other words, the monetary mass grew with 12.2 percentages. But, its evolution was different during this year: if during January-June the average monthly growth rhythm was of 2 percentages, in the next period the average monthly growth rhythm was of 4.4 percentages.

- In **2002**, the (M2) monetary mass amounted 37371.2 millions RON, with 38.2% higher against the end of the prior year. In real terms, the monetary mass increased with 17.3%. During 2002, the evolution of the most comprising monetary aggregate was different; therefore, during in the first six months the growth was minimal, the average monthly rhythm being of 1.8%, in the second semester the dynamics was sensible higher, the average monthly rhythm reaching 3.7%.

- The (M2) monetary mass reached on 31st of December **2003** an amount of 46074.7 millions RON, with 23.3% higher against the end of the previous year, the average monthly growth rhythm (1.8%) being superior to the average monthly inflation rate (1.1%); in real terms, the monetary mass grew with 8.1%. As concerns the evolution of the M2 monetary aggregate, there appear two different periods of time: if in the first half of the year, the average monthly rhythm was of 0.6%, during July-December the dynamics of the monetary mass was higher, registering an average monthly growth of 2.9%.

- The monetary mass in a wide meaning (M2) increased in **2004** with 39.9%, at the end of the year reaching an amount of 64461.7 millions RON. The average monthly growth rhythm registered by the monetary mass (2.8%) surpassed with 2.1 percentage points the average monthly inflation rate (0.7%), acknowledging the reinforcement of the new monetization of national economy. In real terms, the monetary mass increased with 28%. The evolution of the monetary mass was different during the entire year; therefore, while in the first six months the growth registered an average monthly rhythm of 1.6%, in the second semester the dynamics was higher, the average monthly growth reaching the level of 4.1%.

- The wide meaning monetary mass (M2) was at the end of December **2005** of 86331.9 million RON. Against November 2005 this increased with 6.1 % (5.5% in real terms), and against December 2004 the monetary mass registered an increase of 33.9 % (23.3% in real terms).

- The wide meaning monetary mass (M2) was at the end of December **2006** of 111711 million RON. Against November 2006 this increased with 9.6% (8.8% in real terms), and against December 2005 the monetary mass registered an increase of 29.4% (23.4% in real terms).

- The wide meaning monetary mass (M2) was at the end of December **2007** of 147918.4 million RON. Against November 2007 this increased with 8.7% (8.0% in real terms), and against December 2006 the monetary mass registered an increase of 33.9% (23.5% in real terms).

- The wide meaning monetary mass (M3) was at the end of December **2008** of 174 135.5 million lei. Against November 2008 this increased with 5.7% (5.5% in real terms), and against December 2007 the monetary mass registered an increase of 17.6% (10.6% in real terms).

- The wide meaning monetary mass (M3) was at the end of December **2009** of 189 634.5 million lei. Against November 2009 this increased with 2.2% (1.9% in real terms), and against December 2008 the

monetary mass registered an increase of 9.0% (4.0% in real terms).

As concerns the economic increase, quantitatively this is quantified with help of

the macro-economical indicators, among which the most used was the Gross Domestic Product. The GDP evolution during 2000-2009 is given in Table no. 2.

Table no.2 The GDP evolution in Romania during 2000-2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
GDP (mil. RON)	80300	116700	151400	189100	238754	288176	344535	404709	503900	-
GDP growth rhythm (%)	1,6	5,7	5,1	5,2	8,5	4,2	7,9	6,2	6,5	-8

Source: INS, BNR

The re-launch of the economic increase represented a priority of the Governing Program at that time and results registered in **2001** acknowledge the justice of this orientation, but also the consistency, realism and efficiency of the implemented economic political measures. These results are so important while the economic growth in 2001 was achieved in a less favorable international context, characterized by a slowdown of the economic growth of the developed states, the main partners of Romania in international relationships. GDP increased in real terms with 5.3%, especially based on reanimation of the goods production in agriculture, industry and constructions, as a response to the increase both of the internal demand, and also of the exportation. Although in 2001 was registered a spectacular growth, there could not be compensated the diminished percentages from 1997, 1998 and 1999 when the decrease was of 11.7%. In **2003**, the Romanian economy continued the favorable tendencies from previous years concerning the economic growth, disinflation, the control of the budgetary deficit and unemployment reduction. However, the internal demand was stimulated by the rapid expansion of the credit, by increase of the real salaries, and in a certain measure, the increase of the arrears replaced the exports as main engine of growth. The evolutions registered in 2003, raised again the problem of economic growth rhythm and structure. Year **2004** registered, as a whole, positive evolutions of the main macro-economic indicators. The economic growth registered the best performance from the transition period, the GDP dynamics (8.5%) being superior with 3.3 percentage

points against the result reached in 2003. Year **2005** is distinguished in the period after 1989 by a multitude of challenges that BNR confronted in formulation and implementation of the monetary policy. GDP grew with 4.1%, its real dynamics having a decrease to less than half of the level of the previous year. The evolution was generated by the diminishing of the increase speed of the internal demand, by the presence of the demand shocks, and also by the depth of the negative contribution of net exports. In **2006**, the real GDP intensified significantly its dynamics (from 4.2% to 7.9%). The evolution supported by the internal component of the aggregated demand, while the net export of goods and services registered a substantial deterioration of the contribution to the economic growth. The position of engine for GDP dynamics was supported by the gross formation of fixed capital, which has a growth rhythm that accumulated 3.6 percentage points.

During 2000-2006 the GDP growth was robust, being found at an average of 5.6% per year, fact that lead to doubling of the GDP/capita during 2002-2006.

Slowing down of the economic increase limited in **2008** the advance of the Gross Domestic Product (GDP) to 6.5%, with 1.6% under the level of 2007. The economic growth from 2008 placed under the estimation of the National Prognosis Commission (CNP) that presented a level of the GDP real increase of 7.9%. The evolution registered in the fourth trimester by the main components of the Gross Domestic Product had an important negative impact over the

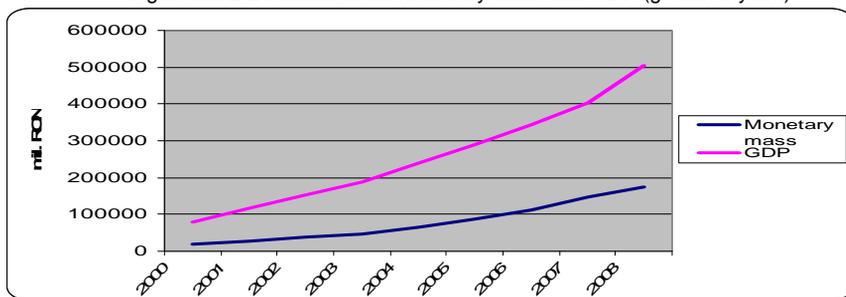
economic growth estimated for the entire 2008.

In reference with Romania, after there was registered an *economic growth*, even of 8 percentages per year, until 2008, because of the economical-financial crisis in 2009 brought a strong contraction of the national economy, recession and decrease of the monetary mass into circulation, especially by

means of the financial organism that suffered the most. The negative growth rhythm of -8% says it all.

The evolution of the two macro-economical analyzed components, the monetary mass and the economic growth can be seen in Figure no. 2.

Figure no. 2 Evolution of the monetary mass and GDP (growth rhythm)



In the analyzed period there can be observed a special attention for the decision factors, in order to keep under control the monetary mass and trying to correlate it with the economic growth dimensions, not to reach again the situation from 90, when we have to deal with an expansion of the monetary mass much over the necessary of the Romanian economy, fact that lead to inflationist phenomena.

CONCLUSIONS

By means of the currency, in a concrete situation, we consider that through the monetary emissions regulation made by the national bank there are really supported the needs of the real economy. This is achieved in close interdependence with the banking system and targets that the whole economic system to work harmoniously, mixing the individual interests of the economic agents with the general interests of society, finally ensuring the much desired increase of GDP.

The entire monetary mechanism, mass, aggregates that support the *monetary policy* of the central bank, are not enough to achieve all by themselves the economic re-launch.

In order for an economy to function normally, is necessary the monetary flow to be permanently adapted to the economic reality exigencies, and the monetary mass to be rigorous controlled. Financial-banking institutions fueling the economy with payment means fulfill this role, and they are directing the cash flows to sectors and areas with high development potential that must become, at this moment, the “engines” of the Romanian economy for stepping out of the economic recession.

REFERENCES

- [1] Bailly J.L., Caire G., Figliuzzi A., Lelievre V.: *Economie monetaire et financiere*, Breal, Paris, 2000, 74-80
- [2] Basno C., Dardac N., Floricel C.: *Monedă, credit, bănci*, Editura Didacctică și Pedagogică, București, 2001, 70-78
- [3] Turluc, V., Cocriș, V.: *Monedă și credit*, Ed. Ankarom, Iași, 1997, 157-161
- [4] Rapoartele BNR, 2000-2008