

AN ANALYSIS OF THE STRUCTURE OF ROMANIAN MONETARY MASS

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ABSTRACT: *The analysis of the structure and evolution of the different parts of monetary mass is subordinated to designing future monetary policy. Sizing the monetary mass and following its evolution, of the different tendencies registered by its component assets with different degrees of liquidity, is accomplished using certain monetary indicators integrated into a monetary analysis model capable of explaining and orienting the processes and monetary policy. This is the prerogative of the monetary authority of every nation. In Romania this authority is the Romanian National Bank (BNR). This study seeks to dynamically analyse the monetary mass of Romania between 2013-2017, the categories of indicators in which it is structured, as well as monetary assets with different degrees of liquidity which are included in different monetary aggregates.*

KEY WORDS: *monetary policy, monetary mass, monetary instruments, monetary aggregates.*

JEL CLASSIFICATION: *E52; E58.*

1. MONETARY MASS – CONCEPTUAL APPROACHES

A main definition of monetary mass is that of a heterogeneous measurement consisting of the total sum of assets that can be used for procuring goods and services and for paying debts.

In other words, monetary mass is the aggregation of all means of payment and liquidity, respectively, existing at a given moment in the economy. It highlights the fact that the money which circulates inside the economy needs to have the monetary needs of economic activity as its base.

Another definition designates monetary mass as the financial aggregate or aggregates that are strongly correlated with Gross Domestic Product or with another

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indicator of economic activity. The necessary condition for defining monetary mass and for the correct evaluation of the structure of a monetary aggregate is for the set of monetary products to be easily identifiable and separable from non-monetary goods.

The majority of monetarists have assessed that in the structure of monetary mass the following assets can be included:

- effective currency or cash (banknotes and divisional currency);
- account currency – reserves in current accounts respectively;
- term deposits and for saving;
- other assets, with a greater or lower degree of liquidity.

Effective currency is solicited by economic agents, not as merchandise, but for the goods and services that can be bought with it. It is the most liquid asset, at the same time being one of the main components of monetary mass.

Account currency represents the reserves inside current or visible accounts. It has the same degree of liquidity as the effective currency. Checks can be drawn and payments can be made without notice from it. A sum deposited in an account can be considered currency because the holder of the respective account can pay their debts or procure goods and services with checks they had drawn. The assets in visible accounts have the same characteristics as the effective currency, being able to be transformed without restrictions one into another. The fulfilment of payments through transfers saves cash.

Term deposits and for saving – are included in the structure of monetary mass, because from the point of view of the influence that it exerts over the types of investments in the volume and structure of the expenditures of holders; therefore, over solvable demand there is no difference from visible deposits. From these deposits, created in banks or economy houses, checks cannot be drawn and immediate payments cannot be made, but they can be withdrawn after a notice. These time deposits are preferable over visible ones because of the bigger interest rates of these deposits, but they do have lower liquidity.

Other assets. In this category there are assets placed in different titles issued and put on the financial-monetary market, having a greater or lower degree of liquidity. Titles like these include: promissory notes, treasury bills, house and treasure vouchers which, being short-term, have a greater degree of liquidity than the ones issued mid- and long-term – shares, bonds. Investment in these kinds of titles is due to the profits they bring and due to their negotiable character, the possibility of being transformed in liquidities and the fact that they are alternatives for the placement of sums of money of economic agents and of the population.

Not all of these titles are as frequently used for current and immediate payments; consequently changing the monetary mass is a function of their degree of liquidity, three situations being possible:

a) **a minimal range of assets** – which the holders can quickly transform into currency – modifying the monetary mass. This is the case for treasure vouchers issued by the state or of bonds that can be changed at the counters of the central bank or of the state for currency. When buying from the issuer the currency is withdrawn from circulation, decreasing the monetary mass, while when selling the reverse happens, monetary mass increasing.

b) **a medium range of assets** – which can determine the liquidity of the holders, as a replacement of current without taking into account their degree of negociability or the possibility for the realization of these assets, the fact that they only circulate within the country or outside it as well, as well as the fact that the selling-buying influences the increase in monetary mass. Owning such assets, titles issued on the financial-monetary market, allows the making of payments and permits the holders a liquidity close to the one offered by the currency proper (shares, bonds etc.). These assets influence the monetary mass in the capacity that they are bought or sold by the central bank through its open-market policy.

c) **a wide range of assets** – more or less liquid, it contains all financial instruments, beside those previously mentioned that can influence liquidity and monetary mass. Not only the various forms of monetary placement should be taken into consideration, but also the other forms of wealth available, which can increase or decrease the liquidity of economic agents and therefore influence its demand for currency and goods.

It is important to note that it is hard to precisely and permanently establish the scope of monetary mass and the point where this extension should stop.

As far as the market creates new products, innovates new instruments for the placement of available monetary assets, it is natural for experts to include them, widening the scope of monetary mass.

The monetary authorities of numerous nations, like the international monetary authorities, resort to the segmentation of monetary mass and the study of its structure, as a means of identifying its effects over economic development and the situation of currency.

2. MONETARY AGGREGATES

2.1. Definition and structure

Monetary aggregates are measurements defined by the monetary authorities that serve as support for the monetary policy of the same authority.

Currency is kept by non-financial agents, family households, industrial and commercial companies, by all who intervene on the goods and services market. Even though the base principles have remained unchanged, in recent years the monetary sphere has known important changes whose incidents over the behaviour of economic agents has made necessary the division between classic forms of currency and the new types of monetary placements.

Even though monetary aggregates generally differ from country to country due to existing conditions and degree of development of the financial market respectively, due to concepts and policies which dominate the monetary scene and the immediate and long-term practical needs, they do have common characteristics which permit their classification into three categories:

1. Primary currency (base or reserve currency) which contains circulating currency, controlled by the issuing bank. It is defined as the difference between the total assets and total liabilities from the central bank's balance.

The central bank's assets generally show the ways through which it creates currency, namely:

- distribution of credit to commercial banks, to other credit institutions and to the treasury;
- rediscounting of commercial and public deeds;
- buying of foreign currency and checks.

The liability shows the growth and allocation to holders of the primary currency (banknotes, divisionary currency, reserves in the treasury's account and in the accounts of scriptural currency-creating banks etc.).

2. Currency as a means of payment – monetary mass in a narrow sense (money supply) respectively, including monetary products and the methods of payment created by the central bank and by the other banks and financial-banking institutions respectively.

3. Currency as net wealth which includes the previously mentioned monetary products, including those assets that are not currently used as means for payment, but which can be transformed into liquidities either quickly or slowly.

2.2. The composition of monetary aggregates

In a narrow or broad sense, monetary aggregates can be defined through the successive integration of monetary products created in order to guarantee the liquidity of financial and non-financial agents.

Compared to the degree of integration of different assets in the structure of monetary mass, monetary aggregates, labelled with M1, M2, M3, L were created:

The M1 aggregate regroups all methods of payment under the form of effective currency (banknotes and divisionary currency) and of deposits in currency accounts which do not carry interest and which represent the most active part of monetary mass or **primary liquidity**. This component is also known under the name of proper monetary mass or monetary base.

The M2 aggregate further from M1 includes the totality of timely placements and for the purpose of saving, susceptible to being mobilized and transformed into liquidities through the issuing of notice checks called "*quasicurrency*" or "*secondary liquidity*". These placements are made in the form of time deposits within the banks, deposits in savings accounts, deposits with a special purpose, like the deposits on bank deposit certificates, fixed-term deposits to banks and to other credit institutions, treasury bills etc. The degree of liquidity of *quasicurrency* is lower compared to the one of proper currency (M1).

The M3 aggregate includes besides M2 other assets with different degrees of liquidity and in the structure of which can be included certificates of deposit, house vouchers, medium-term savings accounts, and other titles issued by economic agents on the financial-monetary market.

The L aggregate regrouped with M3 generally contains mid- and long-term negotiable issued titles which can be quickly or slowly transformed into means of payment or in liquidities respectively.

The structure of monetary aggregates differs from nation to nation, being based

on the degree of development of the financial markets and on the degree of innovation into the domain of the financial assets of each nation.

3. THE STRUCTURE OF MONETARY MASS IN ROMANIA

The structure of monetary mass in Romania and the defining of monetary aggregates was done in conformity with the methodology of the European Central Bank.

Monetary mass in a narrow sense (narrow money - M1) includes cash in circulation (banknotes and coins), as well as deposits that can be immediately converted into cash or used for payments through bank transfers, called *overnight* deposits.

Intermediary monetary mass (intermediate money - M2) includes narrow money (M1), to which deposits with an agreed maturity of up to and including two years, including deposits redeemable at a period of notice of up to and including three months, are added. The M2 definition reflects the interest given to analysis and monitoring of a monetary aggregate which, besides cash, includes deposits with a high degree of liquidity.

Monetary aggregate in a broad sense (broad money - M3) includes intermediate money (M2), to which transactionable monetary instruments issued by the sector of monetary financial institutions, instruments of the monetary market, especially shares/units of money market funds and loans from repo operations (a higher degree of liquidity makes these instruments be substituted with deposits) are added.

Cash in circulation	M1	M2	M3
Overnight deposits			
Deposits with an agreed maturity of up to and including two years			
Deposits redeemable at a period of notice of up to and including three months			
Repurchase agreements			
Money market fund shares and units			
Marketable securities with a maturity of up to and including two years			

M1 – narrow money

M2 – intermediate money

M3 – broad money

Figure 1. The structure of monetary mass in Romania

4. ANALYSIS OF THE EVOLUTION OF MONETARY MASS IN ROMANIA BETWEEN 2013-2017

A major objective of each nation and especially of the monetary authority of the respective nation is maintaining the degree of monetization of the economy. In Romania, the National Bank is the one which structures the monetary mass and identifies, calculates and follows the evolution of economic indicators within it.

An analysis of the evolution of the structure of monetary mass and of the instruments included within it in the interval of the past five years, 2013-2017 shows

us, based on the data in Table 1, that monetary mass in a broad sense (M3) registered at the end of December 2014 a balance of 260331,9 million lei. In comparison with December 2013 the monetary mass grew by 7,8 per cent (6,9 per cent in real terms). At the end of December 2015 it registered a balance of 286 301,1 million lei, growing by 9,3 per cent (10,4 per cent in real terms) compared to December 2014. In the next year, 2016, the M3 balance was 314161,8 million lei, representing a growth of 9,7 per cent (10,3 per cent in real terms) compared to the previous year. Monetary mass in a broad sense (M3) registered at the end of December 2017 a balance of 350 580,8 million lei. Compared to December 2016 monetary mass grew by 11,6 per cent (8 per cent in real terms).

Table 1. Evolution of the structure of monetary mass in Romania between 2013-2017

Indicators	31 Dec. 2013 (mil. lei)	31 Dec. 2014 (mil. lei)	31 Dec. 2015 (mil. lei)	31 Dec. 2016 (mil. lei)	31 Dec. 2017 (mil. lei)
M1 (narrow money)	100 314,5	118 146,6	149 601,6	180 013,5	210 741,7
<i>Currency in circulation</i>	34 786,4	39906,0	46 481,7	54 749,7	63 475,6
<i>Overnight deposits</i>	65 528,1	78240,6	103 119,9	125 263,8	147 266,2
M2 (intermediate money)	241 254,0	260073,4	286 171,6	314 053,2	350 473,8
M1	100 314,5	118146,6	149 601,6	180 013,5	210 741,7
<i>Deposits with an agreed maturity of up to and including two years (including deposits redeemable at a period of notice of up to and including three months)</i>	140 939,5	141926,8	136 570,0	134 039,7	139 732,1
M3 (broad money)	241 550,1	260331,9	286 301,1	314 161,8	350 580,8
M2	241 254,0	260073,4	286 171,6	314 053,2	350 473,8
<i>Other financial instruments (repurchase agreements, money market fund shares and units, marketable securities with a maturity of up to and including two years)</i>	296,1	258,5	129,5	108,6	107,0

Source: BNR, *Press releases, Monetary indicators – December 2013- December 2017*, available on: <https://www.bnr.ro/Indicatori-monetari-4151.aspx>

We can, therefore, ascertain that in the analysed period of time, the most inclusive monetary aggregate (M3) showed a sustained dynamic, characterized by rates of yearly growth in real terms that have highlighted an ascending trajectory between 2013-2015 continued, however, by a progressively descending trajectory in the last three years of the period of time. Similar dynamics were observed in the case of monetary mass in a narrow sense (M1) and of intermediary monetary mass (M2) as well. As for the monetary aggregate with the narrowest scope (M1), despite the profile of its curve being similar to the one seen for the intermediate money (M2), the slope of the curve was much steeper, and the ascending dynamic much more sustained. The

consolidation of the majority share owned by the narrow money, from 60,2 per cent in December 2017 represents the record of the past 23 years.

At the same time, the evolution of intermediate money (M2) has faithfully described and even overlapped, during the entire analysed period, the trajectory of broad money, having the majority share of elements within monetary aggregate M2 in the total of monetary mass (M3), beginning in 2013 (Figure 2).

Therefore, if at the end of 2013 the balance of narrow money was 100 314,5 mil. lei, at the end of the analysed period it registered a growth of 110,08%.

At the same time, broad money grew at the end of 2017 by only 45,13% compared to the beginning of the period.

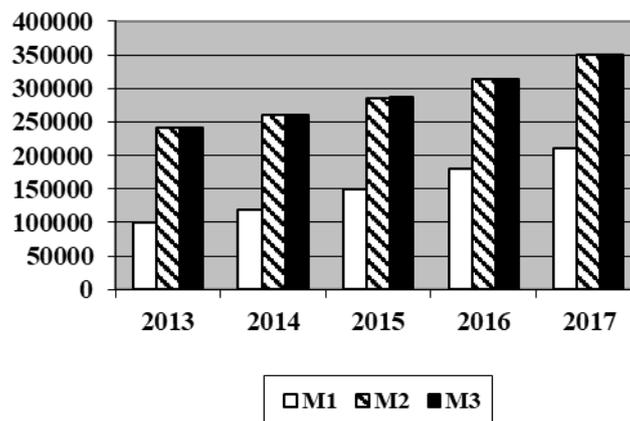


Figure 2. Evolution of Romanian monetary mass between 2013-2017 (mil. lei)

Source: Processed from existing data from the web page of the Romanian National Bank

Looking at its structure, narrow money (M1) represented in 2013, 41,52% of broad money (M3). At the end of 2017 this percentage grew, as was previously shown, to a record value.

This fact shows a dynamic of deposits with terms that decelerated beginning with 2014, mainly showing a decrease in the demand for money for precautionary purposes. A possible explanation of these successive losses of rhythm is that, despite the reason for saving remaining present in the money-owner's behavior, the reduction of deposits was more likely due to significant adjustment pressures to which a majority of income categories were subjected to.

At the same time, the growth of the percentage of narrow money within the broad money, correlated with a considerable decrease of financial instruments included in M3 (M3-M2), from 296,1 mil. lei in 2013 to 107 mil. lei in 2017, made the monetary mass from Romania, towards the end of the analysed period of time, know in its structure a growth of instruments with a high degree of liquidity.

CONCLUSIONS

One of the most important goals of monetary analysis is selecting those groups of monetary aggregates that can best respond to the demands of the character and objectives of the monetary policy, adopted by the monetary authority of a country for a period of time. Dynamic analysis, over a period of just five years, of Romania's monetary mass has shown a gradual decrease in the contribution of the least fluid monetary instruments in the domain of monetary mass in a broad sense, the fluctuating trend, rising, decreasing, and a small rise again, of term deposits included in the intermediary monetary mass and, last but not least, the ascending dynamic of the most liquid instruments inside the monetary mass, currency in circulation and especially overnight deposits.

REFERENCES:

- [1]. **Banc, P.** (2006) *Monedă și credit*, Editura Universitatea „1 Decembrie 1918” Alba Iulia
- [2]. **BNR**, *Press releases, Monetary indicators – December 2013- December 2017*, [Online], Available at: <https://www.bnr.ro/Indicatori-monetari-4151.aspx>
- [3]. **BNR**, *Statistical Report*, [Online], Available at: <http://www.bnr.ro/Raport-statistic-606.aspx>
- [4]. **BNR**, *Annual Report 2017*, [Online], Available at: <https://www.bnr.ro/Publicatii-periodice-204.aspx>
- [5]. **Dardac, N.; Vascu, T.**, *Monedă și credit – Modulul 1*, [Online], Available at: <http://www.biblioteca-digitala.ase.ro/biblioteca/carte2.asp?id=98&idb>
- [6]. **Dobre-Baron, O.** (2013) *Economie*, Editura Universitas, Petroșani
- [7]. **Popa, C.E.** (2012) *Monetary Aggregates – Instrument of the Policy Promoted by the National Bank of Romania*, Annals of the University of Petroșani, Economics, Vol. 12(IV), Editura Universitas, Petroșani, pp. 211-218
- [8]. **Popescu, D.I.**, *Analiza evoluțiilor monetare și de credit în economia românească*, National Institute of Economic Research "Costin Kirițescu", Economic Library Collection, Economic Studies and Research Series, vol. 109, Economic Information and Documentation Center, București
- [9]. **Turliuc, V.** (2013) *Monedă și credit*, Editura Universitatea AL. I. Cuza din Iași
- [10]. *** Universitatea Europeană „Drăgan” din Lugoj, *Monedă și credit*, [Online], Available at: http://www.universitateaeuropeanadragan.ro/images/imguploads/cursuri_biblioteca_virtuala/fse/moneda_si_credit.pdf, accesat în data de 10.12.2016
- [11]. *** <http://www.bnr.ro>