

## THE MONEY SUPPLY OF THE RA, SPEED OF THE MONEY CIRCULATION AND THE “SLEEP” OF THE MONEY

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Key words: monetary policy, non-cash payments, money supply, means of payment, bank cards, speed of the money circulation, GDP.

**Introduction.** The purpose of this article is to consider the management of money supply in the Republic of Armenia, the increase in the volume of which, together with its volume, shows the level of income generation in the economy. Researchers have recently been actively considering the conversion of cash into non-cash, which we have considered in the context of money management in this study. This is more appropriate since the outbreak of COVID-19, as it was not just the outbreak of the pandemic that created the urgent need to move payments from cash to non-cash (reducing indirect cash flow has shown that non-cash goods, the implementation of services and work will lead to the correct management of the money supply), but also the practice of non-cash transfer from cash to be visible in international practice and research. Regardless of the type, cash or non-cash, it is included in the money supply, in which case the speed of its circulation is productive in the economy, and the transition from non-cash to cash is more controllable, manageable than income generating.

**Methodology.** The theoretical, informational-methodological basis for the research was the legal acts and norms in force in the Republic of Armenia, websites, domestic and foreign professional literature and articles, databases published by the Statistical Committee of the Republic of Armenia, etc. Statistical and logical, tabular, computational, comparative, systematic and other methods were used during the research. The Table 2 is based on data published by the Statistical Committee, where we are the calculation of annual GDP and money supply in 2021 was carried out using the arithmetic mean methodology.

**Literature review.** The object of research is GDP, money supply, the speed of money circulation calculated on the basis of these indicators in coefficient, absolute and relative quantities. V. Ordukhanyan refers to the quantitative theory of Fischer: calculating money from commodity money to cash as a means of circulation, savings, accumulation as a value, but no reference is made to non-cash money. In addition to using cash, H. Ghushchyan also uses checking accounts and deposits. Both authors consider Fisher's equations in the quantitative theory of money, but how fast does each unit of money pass (circulate) during a year from hand to hand has not been studied in the context of non-cash money management: for more accurate reflection of gross domestic product and money supply management. Although, no matter how much the payment system is deve-

loping globally, the population is always aiming to keep a certain level of cash or a certain amount, which is out of control and is a means of securing speculative mechanisms. In the context of all this, we have considered the supply of money, the speed of money circulation, the passivity of money - the object of study - "The Sleep".

**Analysis.** The article considers the supply of money, the speed of money circulation. To understand the velocity of money (i.e., how many times it has been used in the economy), we divide GDP by the money supply according to Fisher's equation, which is the same as money in circulation, which also includes required reserves and surpluses, i.e. the money supply (Fischer's equation:  $MV = PT$ ) [Fisher, 2004, 111]. The money supply is the total amount of money in the household, which includes cash (out of banking) demand from residents and foreign currency deposits terms. Table 1 presents GDP of the RA and money supply based on what we have calculated; the speed of money circulation in 2014 compared to 2020. Researches show that the speed of rotation in 2014 was almost 2.9 points, which decreased from year to year up to 1.8 points. This means that in 2014 one unit of money has made almost 3 revolutions in the economy, as well as in 2020. The number of revolutions has decreased up to 1.8. If we consider 2020 a force majeure year for the economy and put the measurement of equal conditions in the basis of the analysis, then we will consider also 2019, as a result of which we will also record that the number of revolutions has decreased becoming 2.1.

**Table 1.** GDP, money supply and circulation speed in RA in 2014-2020 (million AMD)

Year	GDP	Money supply	Rotation speed	The weight of money supply in GDP	
				Absolute	Relative
2020	6,181,664	3,362,038	1.8	2,819,626	46%
2019	6,543,322	3,085,464	2.1	3,457,858	53%
2018	6,017,035	2,775,095	2.2	3,241,940	54%
2017	5,564,493	2,566,502	2.2	2,997,991	54%
2016	5,067,294	2,180,098	2.3	2,887,196	57%
2015	5,043,633	1,855,676	2.7	3,187,957	63%
2014	4,828,626	1,674,196	2.9	3,154,430	65%

In addition to determining the number of revolutions, in Table 1 we also considered the weight of money supply in GDP. According to the data in the table, in 2014, in parallel with the growth of GDP in 2020, the money supply has increased, which shows that in 2014 the smaller amount of money was more money-making than in 2019, as it was in 2020, in which case it has made up a larger share of GDP. Thus, as a result of the analysis of the indicators in the table, we can conclude that the current money supply in the economy does not contribute to the growth of domestic goods or services, or that money depreciates within the economy. This means that those who own money in the country are going to save money, not to put it into circulation or to increase the volume

of goods or to improve the services provided. This means that year by year the money creates less gross domestic product in the country or the country has "caught" the way of savings. It is clear from the data in Table 1 that the increase in the money supply did not lead to a proportional increase in GDP over 7 years, that is, the money was less circulated or "Slept" with each passing year. "Sleeping" money is out of control, which in order to actively circulate at the state level, must either create and improve an investment climate, or create an environment conducive to the creation or introduction of non-manufactured goods or services, for instance; tax encourages new StartUps in the form of benefits or grants. Even today, we see active work being done to bring uncontrolled cash into the economy through non-cash flow, which will increase control over money, stabilize monetary policy interest rates and ultimately lead to price volatility. However, as a result, the measurable money supply will increase, which we will see in the published "money supply" statistics in the coming years, but without a gross domestic product environment or toolkit, we will see a slowdown in the money cycle or faster "Sleeping money". Why? The reason is that the rate of GDP creation will remain almost unchanged, as more GDP is created year by year, and at the same time the controllable supply of money will increase, almost the coefficient of about 2 will start to tend to 1, or more figuratively speaking, 1 unit of money will create 1 unit of probable GDP at best.

**Table 2.** GDP, money supply by the arithmetic mean model (million AMD, 2021)

Trimasters	GDP	Months	Money supply
1 <sup>st</sup> Quarter	1,284,690	January	3,286,760.00
-//-	-//-	February	3,375,502.00
-//-	-//-	March	3,424,972.00
2 <sup>nd</sup> Quarter	1,575,495	April	3,377,761.00
-//-	-//-	May	3,437,755.00
-//-	-//-	June	3,491,139.00
3 <sup>rd</sup> Quarter	1,900,550	July	3,548,982.00
-//-	-//-	August	3,623,104.00
-//-	-//-	September	3,605,547.00
Average annual models			
GDP	4,760,735.20	Money supply	3,463,502.44

The continuous picture of the result and the dynamic picture of the above have already been analyzed in 2021. In order to model with the available results, we have separated 2021 from the "Statistical Indicators" of the RA Statistical Committee and published the existing data to model 2021 by mathematical-logical method: the speed of rotation. The data contains the GDP data for the first 3 trimasters for 2021, for a 9-month data on money supply. To bring the available quantities to the same unit for the annual average result, we obtained an annual model using the arithmetic mean, see Table 2. To obtain the averages in Table 2, the arithmetic mean formula was used to obtain the averages of the money supply, as a result of which we got the speed of money circulation:

$$\text{Money circulation speed} = \frac{GDP}{\text{Money supply}}$$

Based on the annual average output model obtained in Table 2, we have calculated the velocity of money circulation, which is likely to be 1.37, for both the relative and absolute values of money supply the GDP is 1.297.232,76 AMD and 27.25%, respectively. As a result, we see that the gross domestic product, created as a result of 1 unit of money circulation, will decrease year by year.

**Scientific novelty.** A novelty introduced in this research is the term of "Slept money" and "Sleeping money", which shows that the money supply in the economy tends to turn less, than GDP year by year, or the ratio decreases with the same conditions as in previous years.

**Conclusion.** We may conclude that the right conversion of cash into non-cash will increase the effectiveness of monetary control in the economy, which will regulate the more flexible application of monetary policy instruments, infrequent interest rate changes and more accurate reflection of gross domestic product, as well as money supply, because no matter how much the payment process develops, the population tends always to keep a certain level of cash or a certain amount, which is out of control, providing speculative mechanisms.

As a result of this research, we have stated that the money supply in the Republic of Armenia is less circulated in the economy per year, that is: it "Sleeps" or the same thing is said when people go to savings year after year. In order to break this opinion in our minds, not only should non-cash money be targeted, which will increase control over the money in the economy, transparency and control, which will lead to more flexible, almost unchanged management of monetary policy instruments, but also a new investment environment, which will encourage savings to invest in either existing businesses or start-ups, why not StartUp business ideas, which will lead to a new share of GDP growth.

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The purpose of this article is to consider the management of the money supply in the Republic of Armenia, together with its volume the increase shows the level of income generation in the economy. As a result of the research, we concluded, that one unit of the money is less circulated in the economy in terms of GDP, which means that the population "has taken" the path of savings. As a result, the money, as a key means of ensuring turnover, is out of control and unmanageable. Analyzing the results of the research, we can state that, in order to reverse the situation, not only the non-cash money should be targeted increasing control over the money in the economy and transparency of circulation, but also a new investment network should be created, which will encourage savings. The analysis explains more clearly that in the last two years the "money sleep" is being express faster. In addition to the conclusion, we put forward the "Sleep" or the "Sleeping" money, which characterizes the annual decrease in the money supply in the economy or the savings of the population.