

## THE ECONOMY DEVELOPMENT WITH RATIONAL MONEY MANAGEMENT AT THE EXPENSE OF CASH PAYMENTS

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Key words: monetary policy, non-cash payments, interest rate, means of payment, bank cards, payment and settlement system, issue

**Introduction.** The modern world economy is characterized by the transition from cash transactions to non-cash transactions. In recent years, the global economy, especially after the outbreak of COVID-19, has seen a sharp increase in non-cash transactions through the use of payment instruments. Based on the above, the research work is based on the transformation of the use of cash into non-cash, which will significantly change the control and management of the money supply in the economy, as well as the speed of the money supply cycle.

Currently, in parallel with the rapidly developing payment and settlement services, the relevant standards and criteria should be developed, which will be based on payments made by bank POS and virtual POS terminals, payment cards and ATMs. It should be added that in addition to making non-cash or cash payments through payment transactions, the process of resolving disputes over payment transactions (cards or debit cards), unrealized / incorrectly executed, fraudulent and other transactions, is a resource-intensive process according to the rules of the given payment system, for example ArCa, VISA, MasterCard, etc. [VISA, 11]. Despite all this, we did not exclude payments made by electronic payment orders during the study, as the latter constitute a large share ensuring the implementation of payments / transfers between legal entities / individual entrepreneurs.

**Methodology.** The theoretical, informational and methodological basis for the research was the legal acts and norms in force in the Republic of Armenia, websites and materials published by local and international payment and settlement organizations for making non-cash payments by payment instruments, domestic and foreign professional literature, published by the Central Bank of the RA and the Statistical Committee of the RA, etc. Statistical and logical, tabular, computational, comparative, systematic and other methods were used during the research. In the Table 2, 2020 is calculated as reflected in the database "Transfers made in the banking system through non-cash payment instruments in the territory of the Republic of Armenia", published by the Central Bank of Armenia. The average index of the two quarters is calculated on the principle of four quarters, as the data does not include 2020 database starting from the third quarter.

**Literature review.** The object of research is cash and non-cash money in the economy, its impact on money circulation, ATMs served by banks, POS terminals, payment cards, electronic payment orders. A key factor for the development of non-cash transactions is that businesses are interested in making non-cash payments for services, labor and supplies, in which POS terminals provided by commercial banks have a special place. However, businesses do not fully use this method, as there are no incentives for non-cash payments; for example, reduction of the tax interest rate for non-cash payments. The main purpose of the study is to reveal the effectiveness of non-cash and cash transactions. In order to achieve the mentioned goal, we have proposed the following problems: the problem of the possibility of non-cash money, the impact of the latter on cash monetary policy instruments as a result of the transition from cash to non-cash money. In his book "Money Market. Banking System and Monetary Policy", V. Ordukhanyan reflects that the components of money supply are cash and payment deposits, which are a debt or a payment obligation. The first case is the debt obligations of the Central Bank, and the second is the debt obligations of commercial banks and saving institutions. In his book "Finance, Money Circulation and Credits", L. Badanyan comments on the money system mainly in the form of cash flow, commenting very briefly on the circulation of money through non-cash accounts, which is currently a necessary factor for controlling money in monetary policy. Non-cash means of payment are also very briefly referred to in Ghazaryan's book "Payment and Settlement System", in which, despite the fact that there are non-refundable non-cash transactions and bank cards, there is no reference to them through rational money management or interest rate stability mechanisms of monetary policy transactions.

**Analysis .** In the conditions of the modern economy, money, as the main category of the commodity economy, appears in the economy both in the form of cash transactions and non-cash transactions [CBA, the essence of money aggregators and the application scopes, 1]. Central Bank's money issue, which is the issue of securities or currency at a certain point in time, due to the issue, the money supply in the economy is increasing, through which the Central Banks are carrying out their main task - to achieve price stability. The issue can be both cash and non-cash. If cash is issued by the Central Bank, then non-cash is issued by the banking system.

In the Republic of Armenia, the majority of non-cash payments are made through payment orders (one of the reasons is that most businesses use bank business cards less), and the rest through other tools; such as receivables, checks, payment cards and recently also e-money. However, most of the recent transactions with e-money are a combination of a virtual POS terminal for depositing money into the account of an electronic money issuer, in which case a transaction is carried out through a virtual POS terminal – payment card acquiring, on the other - non-cash payment by a payment card. In the context

of all this, we have not considered the volumes of payments with electronic money in a separate way, as they are the card transactions, which are already reflected in the volumes of non-cash payments with payment cards.

Non-cash transactions have the following advantages:

➤ They are fast moving, that is why the compensation for the purchase both "national" and "international" services, goods and works is carried out in seconds or in a few days. For example, international SWIFT payment orders are processed in a matter of days, depending on circumstances, even if they are through intermediary banks; or international local P2P transfers, which take seconds depending on the time of a day and geographical location, the international P2Ps are also processed in the same way (a transaction, during which two people immediately transfer from one payment instrument to another, in the Republic of Armenia it is known as C2C (Card2Card) Transfers).

- Do not cause physical loss.
- Theft of money.
- Counterfeiting money, etc.

Through the implementation of non-cash transactions, the circulation of money in the economy becomes completely controllable, which implies control over the money: exchanged or provided between its two or more participants.

The transition from traditional money circulation (in coins, banknotes) to non-cash or electronic transfers implies control over the free money supply in the economy, the use of free non-cash money (eg. bank demand, time deposits), refinancing, monetary instrument for the purposes of market participation, liquidity management (Securing daily money demand and liquidity by banks through repo agreements or foreign exchange swaps), etc. In addition, the transfer of cash to non-cash circulation facilitates the mandatory transfer of free cash from cash to bank accounts in the form of non-cash (restrictions on cash transactions also have a major impact on cash to non-cash transfers), which contributes to the best way of ensuring the transparency of turnover by economic entities, which also ensures the control of the base for tax revenues of the state budget.

In the context of all this, a big factor in accelerating the cashless circulation is the implementation of non-cash payments through the use of payment instruments, the acquisition of services, works or goods by consumers, which are directly credited to the bank accounts of businesses or service providers through final settlement and clearing. Clearing is the process of collecting, grouping, exchanging payment documents, as well as calculating the positions of the participants of the payment system for the final settlement or including a part of them, and the final settlement is an action, which has settled liabilities [Law, 2005. 3]. The types of property by considered currency in the Republic of Armenia are the currency of the Republic of Armenia payment securities denominated in currency, foreign currency (foreign currency) payment securities denominated in

them, bank's golds, rights and liabilities arising from the currency values and liabilities of the latter expression [Law, 2005, 4]. In order to carry out cash transactions, a corresponding amount of cash is required, for the provision of which, in addition to the resources involved, the banks attract financial resources from the Central Bank of Armenia by implementing monetary policy instruments. For instance, the corresponding amount of money in the lending or cashing devices (the amounts in the devices are recorded as cash on the way, until they are not cashed as a result of the use of payment instruments, as a result of which they are not reflected in the banks' software) to ensure the attraction of funds, which was in 14.12.2021. As of today, it was 6,25% per year. In other words, we can say that the cost of the resource involved in securing cash was only at least 6,25% in terms of involvement, which does not include the cost of collection services for the performance of work (for example, banknotes and / or coins), counting, resource payments, etc. In case of non-cash payments, there is generally no attraction of additional funds, as the person ordering the payment has money invested in the bank at least in the form of a demand deposit, collection of expenses, accrual of money, etc. Looking at 2017-2021, we see that the cost of securing money by financial institutions has decreased year by year, especially from September 2020 to December 2021. In December, interest rates for raising money again increased, as a result of which banks incur higher costs for cashing on demand funds (for example, funds available on banking payment cards). The same is true of pawn repo refinancing rates (see interest rates in Table 1).

Currently, the execution of transactions with payment orders has become so automated and improved (bank payment applications, payment instruments, etc.), that for the implementation of orders the labor resource fees are being reduced day by day.

In the context of all this, it is a possible circumstance that the majority of the population will make most of the payments through non-cash methods, in which case the "fundraising" cash will not be that sensitive for financial organizations, especially banks, as it is now.

The impact of non-cash money on the economy is to reduce the cost of printing banknotes in national currency, reducing the cost of minting coins, destroying cash banknotes, reducing the risk of embezzlement and the risk of counterfeit currency (According to the "Procedure on installation, operation and implementation of financial transactions through automatic self-service devices" approved by the Board of the Central Bank of the Republic of Armenia, all automatic financial operations equipment must be equipped with inking systems. In case of theft or damage to equipment, the money in the cassettes must be inked, which, although not subject to replacement until January 1, 2022, are not considered obsolete, replaceable amounts in accordance with Regulation 9 of the Central Bank of the RA. In this case, too, there was a risk of banknote damage) [CBA, 2011, 3 and CBA, 2016, 5]. In the case of non-cash currency, counterfeit non-

cash money is almost ruled out, as banks provide cash conversion into non-cash, and both the payment and settlement system ensures non-cash transfers, payments, which are based on certification (authorization). Non-cash payments reduce the costs of issuing and maintaining money in the country, as well as reducing the costs incurred by one of the parties to the application of monetary policy tools. Despite the decision N 190 on 21 .12.2021 by the Board of the Central Bank of the Republic of Armenia, as a result of the operation of ATMs, the inked banknotes were subject to return to the Central Bank of Armenia until 2022, on January 1, which could be placed in the economy in the form of loans [CBA, 2022, 2].

**Table 1.** Interest rates published by the monetary policy provided by the Central Bank of Armenia

Date of setting	Deposite date	Lombard repo rate	Refinancing rate
14/12/2021	6.25%	9.25%	7.75%
14/09/2021	5.75%	8.75%	7.25%
03/08/2021	5.50%	8.50%	7.00%
15/06/2021	5.00%	8.00%	6.50%
04/05/2021	4.50%	7.50%	6.00%
02/02/2021	4.00%	7.00%	5.50%
15/12/2020	3.75%	6.75%	5.25%
15/09/2020	2.75%	5.75%	4.25%
16/06/2020	3.00%	6.00%	4.50%
28/04/2020	3.50%	6.50%	5.00%
17/03/2020	3.75%	6.75%	5.25%
10/09/2019	4.00%	7.00%	5.50%
29/01/2019	4.25%	7.25%	5.75%
14/02/2017	4.50%	7.50%	6.00%
27/12/2016	4.75%	7.75%	6.25%
15/11/2016	5.00%	8.00%	6.50%
27/09/2016	5.25%	8.25%	6.75%

Although it is as a result of the use of Monetary policy tools that they are "forced" to enter into contracts with the main bank to manage their liquidity and foreign exchange positions, non-cash incentives and incentives for financial institutions, such as banks, reduce Monetary policy spending itself. Finally, due to non-cash money, the volumes of "currency" and "foreign currency" in the economy are regulated and controlled, which is very important for the management of state reserves. In this context, we can say that independent money is the best mechanism to understand the more refined supply of money in the national economy, as a result of which the Central Bank of Armenia will sensitively consider the possibility of achieving targeted inflation, during which the toolkit was changed 5 times (taking into account all equal conditions), and in 2021 6 times during 12 months. We believe that the stability of interest rates on Monetary policy instruments will ensure a reduction in the bank interest rate, which has a significant impact on the deposit interest rates and, why not, on the reserve interest rate.

*General analysis of cash and non-cash transactions.* As we know, in the theory of economics, money has no clear or common definition. The inclusion of this or that financial instrument in the aggregators of money or, in other words, the definition of money circulating in the economy is closely related to the functions of money in economic processes. The following functions can be distinguished with money:

- Value size function,
- Circulation tool function,
- Accumulation or saving function [Ghushchyan, 2005, 439].

In order to understand the picture of cash and non-cash payments through payment systems, we have considered the statistical data published by the Central Bank of Armenia. Studies show that transactions are carried out in the following ways:

- Payments by electronic payment orders,
- Checks, payments with electronic money and non-cash card transactions,
- Payments by other debit instruments (data on the latter is not available).

**Table 2.** Transfers in the banking system through payment instruments in the territory of the Republic of Armenia in 2014-2019.

Types of payments	2014	2015	2016	2017	2018	2019	2020	Changes of 2020 regarding 2014	
								Absol.	Rel.
<b>E-pays with orders</b>									
Volume (tril. AMD)	18.30	19.61	21.96	24.19	23.64	31.15	29.09	10.80	59%
Quantity	9.76	11.76	14.00	15.71	18.70	22.52	25.99	16.23	166%
<b>With checks</b>									
Volume (tril. AMD)	0.007	0.012	0.005	0.009	0.018	0.003	0.005	-0.002	-26%
Quantity	0.004	0.006	0.002	0.005	0.014	0.002	0.001	-0.003	-82%
<b>With other debit tools</b>									
Volume (tril. AMD)	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Quantity	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Non-Cash card trans.</b>									
Volume (tril. AMD)	0.13	0.17	0.22	0.27	0.40	0.60	0.70	0.57	432%
Quantity	4.57	6.11	8.20	11.00	18.01	31.15	41.84	37.28	817%
<b>Total</b>									
Volume (tril. AMD)	18.44	19.78	22.19	24.47	24.06	31.76	29.80	11.36	62%
Quantity	14.32	17.87	22.20	26.71	36.73	53.67	67.83	53.51	374%
<b>Card transaction</b>									
Volume (tril. AMD)	1.28	1.36	1.38	1.56	1.86	2.41	2.42	1.14	90%
Quantity	24.83	27.94	30.00	34.82	45.13	65.42	75.61	50.78	205%
<b>Cash card trans.</b>									
Volume (tril. AMD)	1.14	1.20	1.16	1.29	1.47	1.81	1.72	0.57	50%
Quantity	20.26	21.84	21.80	23.82	27.11	34.27	33.76	13.50	67%

We have observed the study period 2014-2019 (Table 2), and to get the indicator picture for 2020 (only the data of the first two quarters of 2020 are published), we have calculated 2020 average annual result for 2020 published in the calculation of 2 quarters in 2020. A clear analysis of this indicator is not very appropriate, as there was a Lock

Down in the economy due to the Covid 19 pandemic, and a 44-day war since September, which had a significant impact on the economy. However, in 2020 we tried to reach 2014 by calculation changes in payments made through payment instruments relative to 2020 in absolute relative terms. As a result of the study of Table 2, we observe the transactions in 2020 with electronic payment orders in 2014. Compared to the previous year, payments by checks increased up to 10,8 trillion drams or about 59%, payments by checks decreased up to 0.002 trillion drams or about 26%, the volume of non-cash card transactions increased up to 0,8 trillion drams or about 532%. As a result, in 2014, cashless transactions were increased by a total of 11,36 trillion drams or about 62%. Having the volume of non-cash and total card transactions, at the end of the table we have calculated the volume of cash transactions with cards and last changes of 2020 regarding 2014. As a result, the volume of cash transactions with 2020 cards in 2014 was increased by 0,5 trillion drams or about 50%. Despite the fact that the dynamics of the indicators of the table show that in 2018 there was a sharp increase in non-cash payments, the amount of cash is still growing dynamically.

**Scientific novelty.** In the context of the above-mentioned study, we use the following scientific novelty in case of installation of non-cash payment devices and POS terminals in the regions of the Republic of Armenia. Activated licenses for servicing payment cards in cash registers allow banks to make deductions from the profit tax base in the amount of the acquisition cost, as long as they are not subject to use in the amount of their carrying amount or at a certain point in time. Do not charge commissions from businesses during this period. In the context of this proposal, the Central Bank of the Republic of Armenia should set the balance values of POS terminals for the applicable period by Regulation N2 not to reduce by more than 25% of the capital balance, but also to define clear directions of use in the amount of their values, otherwise apply the deductions defined by the Regulation.

Another new approach that will regulate the provision of tools for servicing payment instruments for independent payments. All the persons who will register organizations or become individual entrepreneurs in case of using cash register devices depending on the sector, as they apply to open accounts in Armenian banks, should apply in the same way to activate the corresponding functionality of POS terminals in cash registers. In order to ensure the control part of the latter, as an announcement on the activity is submitted to the RA State Revenue Committee, for example number 201; "Declaration on being considered a turnover taxpayer", in the same way, within 20 days, submit an announcement on the possibility of servicing payment cards, which will provide tools for businesses to service non-cash funds very quickly.

**Conclusion.** As a result of the research, we have proved that to the extent that non-cash transactions develop in Armenia, the volume of cash transactions does not decrease

at the same time. This is considered by us in the context of 2020. According to the Labor Code of the Republic of Armenia, since January 2012, economic entities with more than 10 employees are obliged to pay their salaries non-cash, which resulted in an increase in the volume of cash withdrawals made by individuals and an increase in the number of transactions. The latter does not have a completely positive impact on the financial market, as banks are required to provide additional cash at branch cash registers and / or ATMs, particularly ATMs.

Increasing the volume of non-cash transactions and reducing the volume of cash transactions will lead to the effectiveness of money supply control, which will regulate the more flexible use of Monetary policy instruments and change the interest rate infrequently.

Despite the increase in non-cash payments in the economy, cash operations continue to grow dynamically, to reduce which we propose to make a systematic investment of non-cash payments in the regions of Armenia, which will reduce cash flow, which will lead to more targeted use of resources, Monetary policy tools, such as loans, which will also create added value within the economy. In the context of all this, there may be regulations in the legislation, which will lead to a smooth transition from cash to non-cash, especially with a limit on the one-day amount of cash.

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**The economy development with rational money management at the expense of cash payments**

*Key words: monetary policy, non-cash payments, interest rate, money supply, means of payment, bank cards, payment and settlement system, issue, speed of money circulation, GDP*

The purpose of the article is to ensure the stability of interest rates on monetary policy transactions in Armenia through cash and non-cash money, which will directly lead to the clarification of interest rates on monetary policy transactions and not monthly fluctuations. Research shows that the development / promotion of non-cash payments will not only stabilize the resource savings of its users within the economy, but will also lead to control of transparency, almost the entire amount of money circulation, as well as curbing the risk of cash temptation, embezzlement or similar. In the study, we found that, in case of non-cash transactions, transition from cash to non-cash has an impact on the monetary policy, the provision of financial resources by the financial institutions of the economy. In addition, the minimum provision for devices for the use of non-cash payment instruments by businesses is a very important circumstance, which we have presented as a novelty in several regulatory areas in the conclusion of the article. As a result of the research, we have identified the following scientific innovations: not to deduct more than 25% of the POS terminals acquired by banks for the service of non-cash payments, not in operation, but to set clear directions for the use of these funds. The other new approach is for all businesses; to apply to banks for providing POS terminals or similar functionalities at cash registers, as well as to register bank accounts depending on the industry, and at the same time submit a statement to the State Revenue Committee within 20 days.