The European Proceedings of
Social & Behavioural Sciences
EpSBS

Future Academy ISSN: 2357-1330

https://dx.doi.org/10.15405/epsbs.2018.12.15

RPTSS 2018
International Conference on Research Paradigsm Transformation in Social Sciences

LIQUIDITY OF CASH AND NON-CASH MONEY

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Abstract

Currently, monetary funds are a key component of the global economy and human relations. Money is used to do a business, calculate a variety of economic indices of companies, nations and public institutes. The issues of financial resources have always been topical for all spheres as any human deals with money in some way or another. For many people, money is a key value, a key equivalent as it can be changed for any good, work, service and spiritual good. Otherwise, it is useless. Money is an intermediary of the market exchange which makes it more comfortable and easier. It is axiomatic that with enough money a human can live a decent life. Money is also a good which is purchased and sold. The issues of goods liquidity are topical and relevant for all areas. In the modern information society, cash money is substituted for non-cash one in all countries and economic fields. It solves the problem of cash deficit in credit institutes, accelerates the process of non-cash money utilization.

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Keywords: Liquidity, money, deficit of liquid money, bankruptcy.

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https://dx.doi.org/10.15405/epsbs.2018.12.15
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eISSN: 2357-1330

1. Introduction

Money is a property determining the value of goods, services, works and intangible assets at a certain point of time, in a certain place and under certain economic conditions.

Money is a tool of exchange relations. It is widely accepted that money is a liquid good as it can be exchanged for any other good and measure a cost of another good.

2. Problem Statement

The article aims to analyze changes in the money liquidity level caused by changes in the structural correlation of cash and non-cash money.

3. Research Questions

The article aims to compare cash and non-cash money.

The article also analyzes causes of the disuse of cash money and describes the influence of this factor on changes in money liquidity**.**

4. Purpose of the Study

The article aims to compare liquidity of cash and non-cash money in different situations.

5. Research Methods

The article uses such methods as comparison, analysis, induction, deduction.

6. Findings

Money is a specific good with a maximum liquidity level. It can be exchanged for goods or services. It is also a unique equivalent used for evaluating costs of different goods and services. According to V.A. Malyshenko, "in Russian researches and course books, finance (money) is referred to as a sum of economic relations developing during the formation, distribution and utilization of centralized and decentralized monetary funds" (Lavrushin, 2000) According to Kastramitskaya (2017), "money is the most liquid category of assets which ensures the highest degree of company liquidity". According to Balakina and Bablenkova (2013), "finance (in Latin, *payment, income*) appeared due to the stratification of society by an income level, development of social classes and regular public relations between the elite and people. To control the society, the government needed monetary funds determined by flows of material resources".

Money is an inherent requirement of capital which occurs at the moment of distribution of the gross product. The cash flow is a sum of all monetary funds of Russian residents (except for public government authorities and credit institutes). For the purpose of economic analysis, different money aggregates are calculated (Russian central bank, 2017a).

There are four types of finance: public, corporate, community and personal.

- Public finance belongs to the state. It is all revenues and expenditures of public government authorities and budgetary institutions (hospitals, schools, universities, theatres, museums, etc.).
- Corporate finance belongs to commercial organizations which derive revenues from sales.

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- Community finance belongs to non-for-profit organizations (charity funds, political parties, etc.) which derive revenues from membership fees, gifts, etc. Non-for-profit organizations do not engage in production of goods and market services. Their economic role is insignificant; therefore, they are not a research object of the Finance Theory.
- Personal finance belongs to individuals who derive their revenues from salaries, pensions and benefits which are paid from the federal budget and special public or commercial financial funds (Deeva, 2015).

According to Belotelova and Belotelov (2011), “the money flow is an important component of the model of circulation of resources, goods, services which involves all economic subjects (households, companies, nations). Money flows mean money circulation.

According to Lavrushina (2000), money circulation is a continuous cash and non-cash money flow. The flow is referred to money rather than to different money substitutes.

Business can develop by attracting financial resources. The problem of attracting investment funds can be solved using investment tax loans stipulated in Article 66 of the Tax Code of the Russian Federation (Barasheva & Zedgenizova, 2016). Enhancement of money liquidity can be an alternative to business development acceleration. Due to increasing rates of economic growth in large countries, the Federal Reserve System of the USA and the European Central Bank can tighten financial policies (Russian central bank, 2017b)

The issues of money liquidity are topical for Russia as well. According to Borzykh (2016), inefficiency of the interest rate policy of the Russian Central Bank is an expected result under the structural liquidity surplus.

Table 1 presents characteristics of cash and non-cash money.

Table 01. Characteristics of money

Criterion	Cash money	Non-cash money
Form of money	a symbol, no internal value	
Nature	Symbols of the value	Symbols of the value and credit
Issuer	The Treasury	Banks
Guarantee	The Government	Bank guarantees (assets of issuing banks) depending on the nature of bank operations
Circulation trends	Unstable	Stable and unstable

Cash is money (banknotes and coins) which has nominal values and is issued by the National Central Bank. Credit money is a result of goods production development (credit sales).

Strict requirements to sufficient capital are a must for ensuring stability of the bank sector. However, they are not adequate (The UN News Center, 2016)

Non-cash money transactions are credit transfers using letters of credit, credit and debit cards, smart-cards, etc. Table 2 presents the share of different payment methods in the structure of money flows.

To describe quantity relations between Xi (money flow) and Yi (non-cash/ cash money), a correlation method can be applied. The dependency shows changes in a non-cash money index in relation to changes in the total money flow.

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The value of correlation coefficients X and Y (r) shows the linear relation between the variables which can be positive or negative.

The linear correlation coefficient is calculated by formula (Efimova, Petrova, & Rumyantsev, 2007).

$$r = \frac{Cov(x_i y_i)}{\sqrt{D_{x_i} * D_{y_i}}} \quad [1]$$

where $Cov\ (x_i y_i)$ is the covariation of values;

$D_{x_i}\, u\, D_{y_i}$ is the dispersion of values.

Table 02. The share of payment methods in the structure of money flows in Russia (Deeva, 2015)

Year	Money flow, billion rubles	Money flow dynamics, rate	Credit money, billion rubles	Share of credit money, %	Cash, billion rubles	Share of cash, %
2006	4353.9	-	2819.1	64.75	1534.80	35.25
2007	6032.1	138.54	4022.9	66.69	2009.20	33.31
2008	8970.7	148.72	6185.6	68.95	2785.10	31.05
2009	12869	143.46	9166.7	71.23	3702.30	28.77
2010	12975.9	100.83	9181.1	70.76	3794.80	29.24
2011	15267.6	117.66	11229.5	73.55	4038.10	26.45
2012	20011.9	131.07	14949.1	74.70	5062.80	25.30
2013	24543.4	122.64	18604.8	75.80	5938.60	24.20
2014	27329.8	111.35	21338.4	76.68	5991.40	21.92
2015	30853.7	112.89	24974.3	77.81	5879.40	19.06
2016	33751.3	109.39	27687.4	78.37	6063.90	17.97

The linear coefficient values range from от –1 to +1.

The value of correlation coefficients Xi (money flow) and Yi (cash) is 0.96, and the value of correlation coefficients Xi (money flow) and Yi (non-cash money) is 0.99. These values speak for increasing use of non-cash money. As can be seen from Table 4, the non-cash flow growth rate is higher than the cash flow growth rate in the total money flow growth rate. It also speaks for substitution of cash for non-cash money. As far as their correlation coefficient is 0.99, with regard to a decreasing cash growth rate in relation to the total money growth rate, one can conclude about an increasing cash circulation rate.

Table 03. Comparison of cash and non-cash transactions

Comparison criterion	**Non-cash transactions**	**Cash transactions**
Transaction control	Uniform legislation	
Monetary unit	Similar	
Participants	Payer, recipient, bank	Payer, recipient
Credit relations	Participants enter into relationship with banks (bank balances)	No relations with banks
Money transfer form	Money transfers are carried through banks	Cash is transferred from the payer to the recipient

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Two payment methods correspond to two forms of money. Cash payments are conducted without the participation of banks. Bank payments are conducted by transferring money from one account to another one or using e-money. There is no dead wall between cash and non-cash money. Banks conduct cash operations when they receive money from individuals, or exchange currency. Owners of plastic cards can withdraw cash using ATMs (an electronic telecommunications device that enables customers of financial institutions to perform financial transactions) (Belotelova & Belotelov, 2011).

Table 4 compares cash and non-cash money.

Table 04. Comparison of cash and non-cash money (Belotelova & Belotelov, 2011)

Indices	Non-cash transactions		Changes, %	Cash withdrawals		Changes, %
	2016	2016				
Amount, thousand, including	7113.50	8996.90	26.50%	2015	2016	2.00
Local system	103.4	68	-34.20%	1038.60	733.6	-19.40%
Internationals systems, including	7010.20	8928.90	27.40%	17327.20	17999.10	3.90%
Viza International	6037.20	7644.20	26.60%	14386.30	14100.30	-2.00%
MasterCard [illegible] Worldwide	899.1	1204.80	34.00%	2875.80	3435.00	19.40%
Volume, million rubles, including	101129.60	119965.20	18.60%	776624.80	776102.50	-10%
Local systems	3615.10	3710.20	2.60%	32747.00	24130.00	-26.30%
International systems, including	97514.50	116255.00	19.20%	743877.80	751972.50	1.10%
Visa International	84592.70	98990.70	17.00%	633179.60	612465.50	-3.30%
MasterCard [illegible] Worldwide	11380.80	15612.70	37.20%	108315.80	125948.40	16.30%

According to A.S. Neshita, cash properties depend on a payment method and a form of money (cash/non-cash). Cash transactions do not require intermediaries while non-cash transactions are carried out through banks. Forms of money storage and circulation are different (Milyakov, 2000).

“Non-cash money is stored in the form of accounting records in the balances of banks. Owners of assets transfer the possession right to banks but reserve the right to use their assets (i.e. to use money as a means of exchange) by means of orders to banks” (Milyakov, 2000). An idea of the positive influence of financial sector development on economic growth was suggested by Schumpeter (1911). The author says that banks perform mediation functions (accumulation of savings, investment project profitability assessment, risk monitoring) which are important for economic development. The idea was later developed by McKinnon (1973). They proved the existence of positive correlation between indices of financial system sizes and long-term economic growth rates based on the data of several countries (Abbas & Christensen, 2007; Acemoglu, Johnson, & Robinson, 2004).

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Table 05. Correlation of cash and non-cash money in the bank system (Lavrushin, 2000)

Indices	in 2013		in 2014		in 2015		in 2016	
	million rubles	%	million rubles	%	million rubles	%	million rubles	%
Cash money in circulation	54521.2	70.4 %	61907.2	68.1%	5787.9	67.2%	5933.7	67.7%
Non-cash money in circulation	22939.4	29.6%	29055.5	31.9%	28188.6	32.8%	27347.4	32.3

Money has one important property – high liquidity. Liquidity means how fast an asset can be turned into a payment tool. The degree of liquidity of assets depends on how fast they can be sold. Cash is more liquid than non-cash money as it is a direct payment tool.

Table 06. Liquidity of various forms of money (Balakina, 2013)

Liquidity of various forms of money	
Absolute liquidity	Cash, banknotes, treasury notes, subsidiary money, government securities (their market prices change insignificantly and they can be easily sold in financial markets).
High liquidity	Bank deposit money, bank bills, payment orders, credit cards, e-money, traveler's cheques
Low liquidity	Time deposit and on-demand account money (it returns bank deposit interest).
Lack of liquidity	Real estate (houses, premises) due to changing market prices and high costs.

Our society moves to the virtual reality digitizing everything. Internet-conferences, online workshops, distant courses or business meetings, social networks and messengers became a part and parcel of our lives. Internet resources are used by businesses as well. It caused a need for e-money which is applied in many international transactions. It reflects economic relations in the society. Unfortunately, Russia saw the need for e-money some time later. However, currently, it is a popular convenient payment means. Yandex money, Money@Mail.ru, QIWI, WebMoney are the most popular payment tools.

Table 07. E-money in social networks (Efimova, Petrova, & Rumyantsev, 2007)

No	Online payments	Popularity with social networks users, people	Popularity with Odnoklassniki users, people	Popularity with VKontakte users, people
1	QIWI	167137	22445	144692
2	Yandex Money	47004	4317	42687
3	PayPal	24571	0	24571
4	WebMoney	22441	2830	19611
5	Money@mail.ru	6443	6215	228
6	PerfectMoney	5350	29	5321

7	LiqPay	1878	888	990
8	RBK Money	1669	2	1667
9	Alertpay	1347	1344	3
10	Moneybookers	571	5	566

E-money is the same monetary unit with the same value as real cash or credit money. It can be used to purchase air or railway tickets, pay utility bills, mobile or Internet service bills, purchase goods, etc.

7. Conclusion

Thus, one can conclude that money is a universal equivalent which measures costs of businesses. Finance is an economic tool of income distribution and redistribution. A goal orientation is an important principle of financial relations. Money properties depend on a payment method and a form of money (cash or non-cash). Liquidity is transformation of assets into cash money. Non-cash rather than cash money plays a key role in the developed market system.

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