**Economic and Legal Issues of a Bitcoin Actual Paradigm,
or Bitcoin: Listen, if Stars are lit it Means - There is Someone Who Needs it**

**Fetisova T.V.**

*Department of Finance and Credit, Lobachevsky State University of Nizhni Novgorod,*

*Nizhny Novgorod, Russia*

*Candidate of Economic Sciences, Associate Professor*

Fetisova T.V.: ORCiD: 0000-0002-0413-0115; tatyana@mail.ru

**Abstract:** The paper gives the author's understanding of the real matter of a bitcoin actual paradigm, economic and legal issues related to bitcoin functioning are investigated, perspectives of bitcoin evolution in Russia are observed on the basis of the systematic approach. In conclusion recommendations for the payment system in Russia are given.

**Keywords:** Russia, bitcoin, economic and legal issues, bitcoin industry stakeholders, stability of payment system.

**Introduction**

It was not the best time when the digital economics tide came to Russian shores with local reality characterized by:

- low GDP growth[[1]](#footnote-1);

- weak national currency;

- decrease of the population's real disposable income[[2]](#footnote-2);

- high socio-economic differentiation of the population[[3]](#footnote-3);

- growth of terrorism and criminality connected to it[[4]](#footnote-4).

Against this background the digital era has brought new possibilities and new dangers to the financial field. The emergence of new payment mechanisms, so-called cryptocurrency and its most famous and successful representative, bitcoin, became a phenomenon of the digital epoch.

For its nine-year history the bitcoin has demonstrated an intensive growth and endeavors of expansion in various fields of financial policy and management: it's value grows fast (on 2 November 2017 the price of a bitcoin has passed $7,000 [2], bitcoin market capitalization came up to more than $124 billion [3]). Hundreds of scientific papers and much more articles and news about bitcoin have appeared in media in 2017 only. Theorists and practicing economists, financiers and lawyers, statesmen and politicians, public officials express their opinions on bitcoin with the estimation varied from rave to distinctly negative.

In such conditions it would be actual to look through the bitcoin actual paradigm, its true matter, and to carry out a full-scale analysis of economic and legal issues connected to its functioning, and thus to probe the future of bitcoin in Russia.

**Methods and sources**

In this paper logical, empirical, system and comparative methods of cognition are used along with analysis and synthesis methods. By these means an objective content of the bitcoin actual paradigm is reviewed and substantiated, main economic and legal issues connected to bitcoin functioning are revealed, prospects of bitcoin as a new payment mechanism in Russia are determined. The research is led on the basis of the analysis of the Russian legislation, theoretical and practical studies, research papers, reports and guidelines of FATF, data of the Federal State Statistics Service, the Central bank and other authorities.

**Results**

An objective content of the modern bitcoin paradigm, economic and legal issues connected to bitcoin functioning, bitcoin industry stakeholders, and the prospects of bitcoin in Russia are revealed in the paper. Recommendations for Russian payment system sustainability are given.

**Research (Discussion)**

* financial fraud,
* short-time economic bubble,
* lose-lose lottery for people with little knowledge or experience of currency operations,
* robbery tool

**Global Ponzi scheme**

(conservative conceptual framework)

**New currency**,

a revolutionary innovation,

new "gold standard"

(bitcoin adepts conceptual framework)

**BITCOIN**

* decentralized currency (private money),
* no intermediaries in operations,
* no fees, fast operations, guaranteed transactions acceptance,
* independence from inflation (21 million BTC),
* independence and security,
* privacy, anonymity (the blockchain technology, each user has his own copy of the archive),
* unlimited transaction opportunities (any business partner, any place, any reason for the transaction – only connection is required),
* no forging, no rollbacks,
* well-developed infrastructure (wallets, mining, keys, passwords),
* no taxes

Controversy of actual bitcoin paradigm may be characterized by the following (Fig. 1):

Fig. 1 — Actual concepts of bitcoin

Such an impression one can get on the basis of a popularized opinion of bitcoin advocates and opponents. What is the real content of the paradigm in question? We will try to represent it in figures 2, 3. An objective study of the true content of bitcoin actual paradigm testifies that the merits of this payment mechanism are not so evident, whereas some essential elements of a Ponzi scheme are obvious [4].

**Bitcoin as a global Ponzi scheme**

1. Bitcoin is a speculative tool, a hope investment

(historical examples of Ponzi schemes in Russia and overseas, short life of an economic bubble).

1. Too active bitcoin promotion,

 involving people ready to leave their earnings in chase for easy money;

cultivation of fear to be left behind the innovative ways:

* the use of a wide range of rhetorical tricks in reports,
* links to the results of sociological research, successful businessmen fabulous forecasts, celebrities' personal experience.
1. Artificial rise of the bitcoin rate in order to maximize profits (on 2 November 2017 the price of a bitcoin has passed $7,000).

4. Bitcoin is ensured by its creators' ingenuity.

Fig. 2 — True content of a bitcoin paradigm as a Ponzi scheme

Fig. 3 — True content of a Bitcoin paradigm as a new currency

**Bitcoin as a new currency**

1. Legal status of bitcoin is not defined in Russia - informal financial law.

2. Bitcoin is decentralized, there is no issuer, and no one interested in rate stability.

3. Instead of banks-intermediaries, the intermediaries are:

* wallet providers,
* virtualcurrency payment processor or merchant payments processor,
* bitcoin ATMs [5, p. 79-81].
1. Instead of bank fees there are transaction fees related to bitcoin rate growth.

5. Relative security:

* blockchain vulnerability (types of attacks: attack from afar, bribery attack, age accumulation attack, precomputation attack, Sybil attack, double-count attack, DoS-attack etc. [6, p. 19-35], [7];
* wallet owners vulnerability to cheaters.

6. No password recovery, irreversible transactions.

7. The anonymity is relative (it is technically possible to spot the transaction parties by a professional, including law enforcement agencies [8]).

8. High volatility of the bitcoin rate, bitcoins are not redeemable.

9. Risks and real cases of using bitcoins in money laundering and financing terrorism [5].

10. Tax evasion . shortfall in budget revenues.

Here is the analysis of issues that may result from the use of bitcoin in Russia from the point of view of an integrated economic and legal approach (Fig. 4).

 **Economic and legal issues of bitcoin**

**Legal**

Civil law

Financial law

Administrative law. Criminal law

**Financial and economic**

* Determination of bitcoin as an object of civil rights as:

 - money substitute?

- а security?

- a specific good in the barter contract?

- a conventional unit?

* Consumer rights protection

Constitutional law

* Determination of legal status in monetary, budgetary and tax law
* Determination of the tax base:

- VAT;

- income tax;

- etc.

* Determination of administrative and penal measures in case of law infringement in case of:

- bitcoin legalization;

- refusal of bitcoin legalization .

* Protection and realization of constitutional rights of privacy (collecting, keeping, using and spreading private information without one's consent is prohibited).

Lack of backing, individuals, organizations, municipal and government financial resources loss risk

Impossibility of proper money functions implementation

National currency weakening threat

Money supply and inflation regulation issues

Bitcoin is a tool for illegal capital withdrawal and shadows financial transactions

**National economic security threat**

Fig. 4 — Economic and legal issues of actual bitcoin paradigm in Russia

 Evidently, bitcoin can be reasonably treated as a national economic security threat. Why then such a disputed payment mechanism does demonstrate such a runaway growth? Who needs it? Who is the main stakeholder stimulating this triumphant procession of bitcoin? We will generalize main bitcoin industry players and figure out the system of bitcoin industry stakeholders (Fig. 5).

**Bitcoin industry stakeholders**

**Founders, creators and**

**"sponsors" of bitcoin idea**

**Speculative investors**

Hardware engineers and sellers (a sharp increase in sales of mining-friendly hardware)

Internet providers

**Financial intermediaries**

**(transaction fees, service fees)**

Software engineers and sellers (evolution of applications and expansion of their sales)

**Individual representatives of the mobile economy** [9]

Electricity sellers (a sharp increase in the electricity consumption for mining)

Mining hardware lenders (evolution of "cloud-mining industry")

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 Fig. 5 — The system of bitcoin industry stakeholders

In figure 5, there is a bunch of direct and indirect stakeholders of bitcoin industry, but finance losses of people involved shouldn't be neglected. As far as bitcoin does not create value, some players win at the expense of the others' defeat, so global redistribution of the resources of financially unskilled agents in favor of stronger ones (super-rich managers and founders, sponsors of a bitcoin idea and their surroundings) is happening. Whether a bundle of legal issues would be solved by civil, financial, administrative and criminal law studies (a number of studies are being carried out, e.g. [10]), then a short-term solution to financial and economic issues is doubted.

Taking into account the warnings of the Central bank and the Federal Financial Monitoring Service about the risks connected to cryptocurrencies, a business ombudsman and experts of Stolypin Institute of Economics of Growth have sent to the Central bank, State Duma, and Sberbank propositions of legal control of cryptocurrency circulation in Russia. They suggest that cryptocurrencies should be classified as guaranteed and others. All legal requirements against money laundering and financing terrorism should be met, including identification of parties and taxation [11].

In our opinion, actual conditions require a wait-and-see attitude towards legal regulation of cryptocurrencies, including bitcoin, and taking time in question of their "legalization". The research has shown multiple questions and issues where a thorough investigation is required.

**Conclusion**

In conclusion it should be mentioned that a superficial overview of the real content of the bitcoin actual paradigm may lead to hasty, inefficient and even erroneous solutions at all levels of the financial system, that, in its turn, may have bad socio-economic after-effects. To prevent them in the near future it would be feasible:

- to take up a wait-and-see attitude to the "legalization" of cryptocurrencies and thus to reduce risks for the national currency;

- to develop a scientifically grounded system of state control over crypto-currencies;

- to provide: the growth of Russian banking system efficiency; the evolution of bank products and services that would compete with cryptocurrencies;

- to brisk up the work on improving financial literacy of population in the field of cryptocurrencies;

- to add " Finances of individuals " into secondary and higher education curricula [12], [13], to ensure the transparency of natural persons' presence at financial markets, including cryptocurrency market as well, to popularize alternative and less risky objects for investment;

- to include cryptocurrencies-related topics into finance and law courses at universities;

- to pay more attention to cryptocurrencies in briefing programs for the personnel responsible for the implementation of laws to prevent money laundering being used to finance terrorism.

Implementation of the foregoing recommendations would facilitate a more efficient financial policy of the citizens, organizations and the government, the national payment system stability, and the socio-economic growth of the country. On the contrary, extension of the cryptocurrencies popularization and fast "legalization" course (bitcoin included) would expand economic factors for involvement into speculative activities, the unlawful cryptocurrencies use, and would decrease the efficiency of supervisory work of controlling bodies in the field of prevention of money laundering and financing terrorism.

**References**

1. Social and economic situation in Russia. January-September 2017. 1. Access mode: http://www.gks.ru/free\_doc/doc\_2017/social/osn-09-2017.pdf
2. Price analysis ВТС/USD – 4 november 2017. Access mode: https://bitnovosti.com/2017/11/04/analitika-tsen-btc-usd-4-noyabrya-2017/
3. Capitalization of the cryptocurrencies market exceeded 200 billion dollars. Access mode: <https://economics.unian.net/finance/2225796-kapitalizatsiya-rinku-kriptovalyut-perevischila-200-milyardiv.html>
4. Watch out! Ponzi scheme! Access mode: https://35.мвд.рф/press/consultation/Ostorozhno\_Finansovie\_piramidi
5. Guidance for a risk-based approach. Virtual currencies. Access mode: http://www.mumcfm.ru/biblioteka/mezdunarodnye-dokumenty/fatf
6. Kolesnikov P., Beketnova U, Krilov G. The blockchain technology. Analysis of attacks. Protection technology. LAP LAMBERT Academic Publishing, 2017. Access mode: <http://www.mumcfm.ru/biblioteka/materialy-setevogo-instituta/monografii>
7. [Divesh Aggarwal](https://arxiv.org/find/quant-ph/1/au%3A%2BAggarwal_D/0/1/0/all/0/1), [Gavin K. Brennen](https://arxiv.org/find/quant-ph/1/au%3A%2BBrennen_G/0/1/0/all/0/1), [Troy Lee](https://arxiv.org/find/quant-ph/1/au%3A%2BLee_T/0/1/0/all/0/1), [Miklos Santha](https://arxiv.org/find/quant-ph/1/au%3A%2BSantha_M/0/1/0/all/0/1), [Marco Tomamichel](https://arxiv.org/find/quant-ph/1/au%3A%2BTomamichel_M/0/1/0/all/0/1). Quantum attacks on Bitcoin? And how to protect against them. Access mode: https://arxiv.org/abs/1710.10377

# Katasonov V., Scam Instrument from intelligence agencies of the USA/ <https://svpressa.ru/economy/article/177852/>

# Study "Mobile Economy of Russia 2017": the main results. Access mode: http://raec.ru/live/raec-news/9823/

1. Kucherov I.I., Havanova I.A. Tax consequences of the use of alternative means of payment (theoretical and legal aspects) // Bulletin of Perm University. Juridical sciences. 2017. Issue 35.C.66–72. DOI:10.17072/1995-4190-2017-35-66-72.

# Experts proposed to introduce a division of cryptocurrency by a type of regulation in the Russian Federation into two types. Access mode: <https://1prime.ru/finance/20171103/828098973.html>

Fetisova T.V. Finances of individuals. Conceptual framework: monograph / T.V. Fetisova.– М.: UNITY-DANA, 2012.- 231 p.

Fetisov V.D., Fetisova TV Financial management of individuals: a scientific publication.– М.: UNITY-DANA, 2009.- 167 p.

1. GDP physical volume index for the first six months of 2017 in comparison with the first six months of 2016 is verified at the level of 101.5% [1, p. 7]. [↑](#footnote-ref-1)
2. A decrease by 1.2% in January – September 2017 in comparison with the same period in 2016 [1, p. 193]. [↑](#footnote-ref-2)
3. [1, p. 206]. [↑](#footnote-ref-3)
4. Increase of the number of registered terrorist acts by 5.6%, acts of aiding terrorism by 22.3% in January – September 2017 in comparison with the same period of 2016 [1, p. 226]. [↑](#footnote-ref-4)