

Confidential

RUSSIA

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Jacob Coakwell and Oleg Demidov report from Moscow:

CRYPTO CURRENCIES: SECURITY ISSUES AND REGULATORY APPROACHES

IN RUSSIA AND ABROAD

ANNOTATION

Crypto currencies, of which the most prevalent is the so called Bitcoin, are a new phenomenon in global finance. Serious security issues associated with them, such as possibility of financing criminal activities and terrorism, the risk of getting hacked and the potential to use Bitcoin to launder money, make regulatory efforts with respect to crypto currencies especially acute. Regulatory approaches differ: some countries have banned crypto currencies while others are introducing special licensees to regulate them.

So far, Russia's government stand has been entirely against Bitcoins and crypto currencies. Why is it so and is it likely to change? What kind of regulatory efforts are undertaken in the world and what legislation on crypto currencies is currently being crafted in Russia?

Before giving answers to these questions, the authors Jacob Coakwell and Oleg Demidov start with an observation of the basics of crypto currencies and specifically Bitcoin.

On June 11, 2015 one of Russian newspapers *Izvestia* reported that in the middle of June a meeting might take place that could dramatically change the regulatory approach towards *crypto currencies* in the country. Reportedly, it was organized by the Russian Central Bank with the major players of the national financial markets in order to discuss the legal status and legal regulatory perspective towards *crypto currencies*. Surprisingly, according to an anonymous source, the Central Bank's motivation for this meeting might be based upon its own changing attitude to *crypto currencies*, towards some regulatory concept that evolved over 2014 and might include legalization of such currencies and a certain room for their use among other legal financial instruments - e.g. for online transactions among individuals.

This would make a drastic contrast to the status quo situation with crypto currencies in Russia. So far, the Russian government has been entirely against Bitcoins and crypto currencies, emphasizing that the official Russian currency is the ruble and "the emission of monetary surrogates on the territory of the Russian Federation is forbidden," as it was stated in the press release from January 27, 2014 by the Central Bank of Russia "On the use of "virtual currencies", particularly Bitcoin, for conducting transactions", with a reference to Article 27 of Russia's Federal Law regarding the Central Bank.

To better understand the essence of the matter, one should know the basics of *crypto currencies* and what is actually *Bitcoin*.

THE BASICS OF CRYPTO CURRENCIES: WHAT IS BITCOIN?

Bitcoin is the most prevalent *crypto currency*. One of the principles behind Bitcoin is that it is a *peer-to-peer* system. This means that there is no need of a central bank that regulates transactions and how much currency is in circulation. Banks are not necessary with Bitcoin: when a transaction is made between two parties, there is a corresponding computing problem created which is sent out to a network of computers. When the computers in the network solve the computing problem, the transaction is completed while the computer that solves the problem is rewarded a certain amount of Bitcoins. Furthermore, central banks are not needed as central bodies that regulate the currency because there will never be more than 21 million Bitcoins in circulation. As the amount of completed transactions increases, the difficulty of the computing problems automatically increases, too.

In the early days of Bitcoin, the computing power that was necessary to solve the computing problems was not very high and could be done on a laptop. Now, there are entire warehouses with specially crafted computer hardware to process the Bitcoin transactions. As of 2015, there is an average of 100,000 transactions completed per day (see Chart 1).

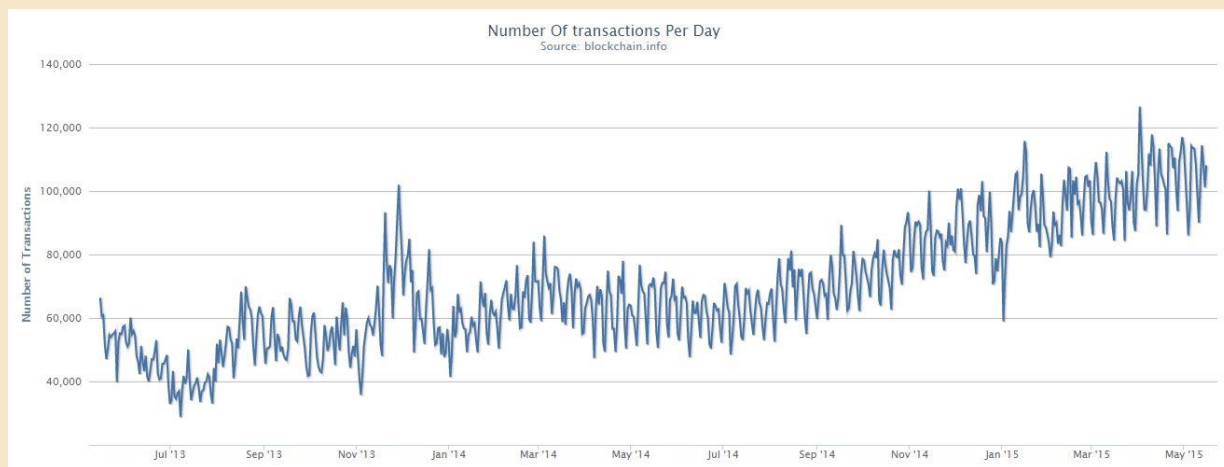


Chart 1. Number of Bitcoin Transactions Per Day. *Source:* Blockchain.info

Bitcoins are stored in a Bitcoin wallet. Wallets are entirely online and are provided by various companies such as *Bitcoin Core*, *Armory*, *Bitcoin Wallet*, *Hive*, *breadwallet*, *multiBit*, and countless others. Each user who signs up for a wallet receives a randomized code. This code is what is necessary to make transactions. You simply need to know the code of the user to whom you would like to send Bitcoins and it is like sending an email.

The major question that people pose when presented with the new phenomenon of *crypto currencies* deals with the security of its transactions. The majority of the public are familiar with computer viruses and hackers. Would it not be possible for someone to change the outcome of one of the Bitcoin transactions to actually take back the money he or she sent? This type of hack is prevented by the so called *blockchain technology*: whichever computer solves the problem first, the transaction is recorded to the blockchain after being verified by 50% of the other computers; the next solved transaction is then added on after that. For altering the blockchain, the perpetrator would have to have control of at least 51% of all the computers solving the transaction problems. Without such control, not even a super computer could alter a previous transaction and then catch up with all the transactions that are coming in.

The implications of Bitcoin are astounding: electronic units with monetary value can be transferred across the world in as quickly as seconds or minutes. This is an incredible revolution considering most electronic transactions through banks take about three days. To use Bitcoins, all you need is an internet connection. Bitcoin transactions have little to no processing fees.

Some companies, like *Microsoft* for instance, have begun to receive payments in Bitcoin. They, however, do not accumulate the Bitcoins; rather they have an agreement with a Bitcoin exchange to receive the amount in dollars or another currency. In each country there are numerous exchanges. Just recently, the first government approved Bitcoin exchange, *Coinbase*, was opened in the USA.

Like fiat currencies, Bitcoin has no fixed monetary value and merely is assigned a value based on investors and the number of investments, and it is also influenced by many economic and political factors. Bitcoin is very fluctuant. It hit a high of one coin being valued at \$1,242.00 in 2013. However, as time went on, Bitcoin started losing its value. It is now about \$240 for one Bitcoin (see Chart 2).

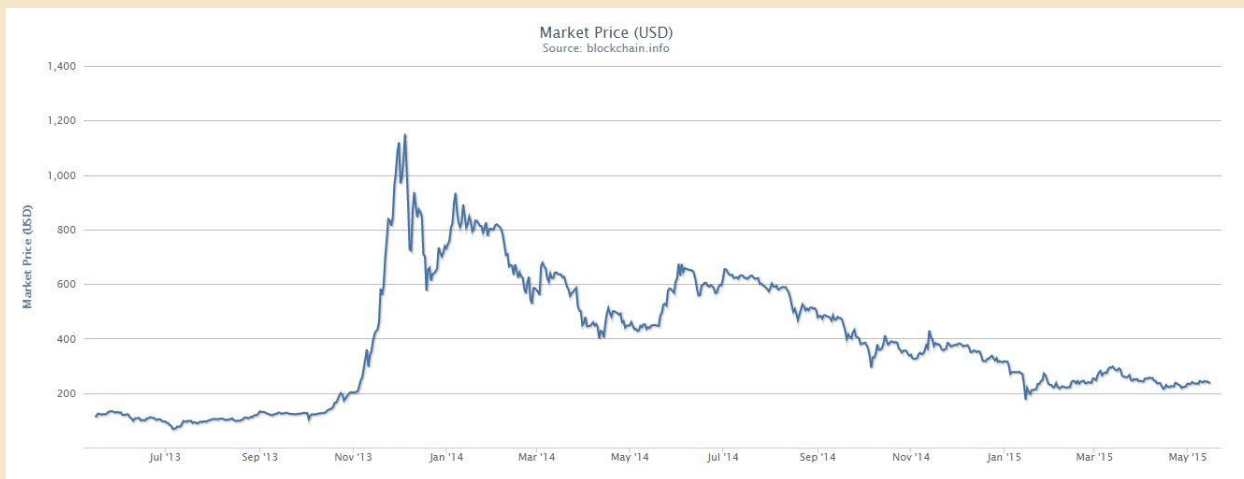


Chart 2. Fluctuations of Bitcoin Market Price (USD).
Source: blockchain.info

There are about 560 types of altcoins (Bitcoin alternatives). Altcoins typically improve on certain aspects of Bitcoin, like transaction speed. Other Bitcoins offer services that are entirely new to *crypto currencies*, like completing transactions fully anonymously. The most prominent of all altcoins is Litecoin.

SECURITY ISSUES

As previously mentioned, there is a possibility, though slight, of a 51% attack where a *miner* could alter previously completed transaction information. The incentive of receiving Bitcoins for solving the transactions prevents a 51% majority from forming. Bitcoin has some other serious security issues. The main one is **financing criminal activities and terrorism**.

Bitcoin, by nature, is an anonymous system. All you need to know is the correct code of the user to whom you would like to send Bitcoins. No names or other personal information are required. The major case in the history of Bitcoin of the use of the *crypto currency* in criminal activities was the creation of a *Silk Road* website where narcotics could be purchased using Bitcoins. Ross Ulbricht was found suspect and subsequently guilty for his role in running the website. Millions of dollars of Bitcoins were seized by the US government when they confiscated Ulbricht's laptop, and a significant portion have been auctioned off.

Another security issue is online Bitcoin wallets **getting hacked**. There have been a number of companies that have lost millions due to such breeches. One of the biggest hacks was at *Mt. Gox*, the top Bitcoin exchange in the world. In February 2014, the exchange discovered that more than \$460 million in Bitcoins had been discreetly stolen over a number of years. More recently in January 2015, about \$5 million was stolen from *Bitstamp*, a European Bitcoin exchange. The amount stolen was merely a percent of the exchange's reserve used for current transactions, the rest was stored safely of the internet exchange. As a result of these hacks and others very similar, many wallet providers advise users to keep significant amounts of Bitcoins stored on an external hard drive detached from the internet, known as a *cold wallet*.

A major concern is also the potential to use Bitcoin to **launder money**. This is again due to the anonymous character of the *crypto currency*. FINMA, the Swiss Financial Market Supervisory Authority, captured the problem in a recent report: in contrast to the money exchange of official currencies, with Bitcoin for any exchange from and to cash, it is not clear whether the receiving and giving parties are the same – due to the anonymity in these exchanges. Thus, it is hardly possible to judge whether a single exchange involves two or three parties, and if Money Exchange or Money Transmission occurred.

If people will be able to trust that their money will not be stolen and that regulations will be implemented to avoid anonymous criminal funding and money laundering, the value of a Bitcoin will stabilize and become an even more attractive option for global finance.

CRYPTO CURRENCIES REGULATION WORLDWIDE

To try to prevent the potential security issues that can be associated with Bitcoin, many governments around the world have implemented Bitcoin Licenses, while others have outright banned *crypto currencies*.

Australia makes a fine country to examine in its regulation of *crypto currencies*. Its government is not going to bother regulating *crypto currencies*. The Reserve Bank of Australia's judgment is that the current very limited use of digital

currencies means that they do not raise any significant concerns with respect to competition, efficiency or risk to the financial system. What will be curious is Australia's response once *crypto currencies* become more widely used.

In Russia, there is an impending ban on crypto currencies. The USA, on the other hand, allows Bitcoins. The federal government has yet to issue official laws – and now it is letting the states take a shot at it on the local level.

So far, New York is the forerunner in the Bitcoin regulation process. New York Department of Financial Services (NYDFS) issued a version of a possible licensing and regulation scheme for Bitcoin in July 2014. They provided a six-month commenting period for the public and experts to express their opinion of the suggested legislation. The first round of legislation entailed businesses to have the name and physical address of the Bitcoin account holders. It also laid out a rigorous auditing plan to be reported quarterly to the NYDFS. The legislation put an emphasis on consumer protection and transaction recording of the person who pays, of the person who transacts, and of the person who receives the money. The second round of the legislation, which was released in February 2015, narrowed the amount of businesses that would need to be licensed. One of the crucial adjustments is that companies operating under this legislation will only be responsible to know the personal information of their own customer (not of both parties in a transaction).

Vermont and California are also following suit in requiring Bitcoin ATMs to receive a license. Vermont has even passed a law allowing citizens to pay for their taxes in Bitcoins. States required that Bitcoin sites clearly describe the risks entailed with using *crypto currencies*. In Connecticut, the government passed a bill requiring money transmitters applying for a license to specify if they will be dealing with virtual currencies. Tennessee is in the process of approving Bitcoin donations to political campaigns. There is even a Bitcoin exchange, ItBit, that is applying for a banking license in New York. However, just like in Russia, in America there are many who are not happy with the accepting though regulated approach to *crypto currencies*.

RUSSIA'S ATTITUDE TO CRYPTO-CURRENCIES

As mentioned in the beginning, Russia's general stand is against Bitcoins and *crypto currencies*. Currently, legislation is being crafted to make it illegal to use Bitcoins in Russia.

The first draft of the legislation was so broad that it would destroy the use of gift cards and other electronic uses of money. If such legislation were passed, it would seriously weaken the economy of the country. The current round of legislation is aimed at narrowing the law to capture just Bitcoin.

The Central Bank of Russia has indeed made statements about the potential good that Bitcoin can do. In July 2014, the Bank of Russia deputy chairman Georgy Luntovsky said that "at this stage, we need to watch how the situation develops with these kinds of currencies. These instruments should not be rejected."

However, part of the legislation that is being crafted involves significant fines for the use of Bitcoins. The first round of legislation suggested fines of up to \$2500 for using Bitcoin. The second round of legislation has made significant decreases in the fines that would be imposed.

Under the new terms, individuals who disseminate money substitutes directly could be fined 20,000-40,000 rubles, down from 30,000-50,000 rubles in the original proposal. Further, those who disseminate information about money substitutes face fines of 5,000-30,000 rubles, reduced from 5,000-50,000 rubles.

Although it is not officially illegal to use Bitcoins yet, as of January 13, 2015 a number of Bitcoin sites have already been blocked by the Federal Service for Supervision of Communications, Information Technology and Mass Media (Roskomnadzor). Namely, *Bitcoin.org*, *Bitcoin.it*, *BTCsec.com* and the Bitcoin exchange, *Indacoin*. A number of Russian Bitcoin startups are speaking out against the looming ban on *crypto currencies*. *BTC-e* has no intentions on closing. Most Bitcoin businesses are trying to focus their efforts on international customers as the impending legislation on Bitcoin has scared many from the market.

- *On one hand, persistent opposition of the Russian government to the use of Bitcoin is dictated by the necessity to maintain stability of national financial system in the conditions of exacerbating economic crisis. From December 2014 to July, Russian national currency inflated by 50 per cent to USD and Euro. In real sector, national GDP in May 2015 decreased by 4,9 per cent compared to May 2014. Under these circumstances, massive proliferation of non-traditional financial instruments like Bitcoin might be regarded by the government as a potential additional trigger of destabilization of financial system, especially if current economic crisis further exacerbates.*
- *On the other hand, there are more specific security considerations. Russia does not want its citizens to use Bitcoins and then lose significant amounts of money when there are potential hacks or when speculators pump large amounts of crypto currencies into the market to lure in the imprudent to invest and then run away with the money in the market leaving the imprudent with nothing. One legislator even claimed that Bitcoin is an American conspiracy to undermine the Russian economy. The authorities are also greatly concerned about the potential Bitcoin has to fund criminal activities including terrorism.*

In the whole, it is unlikely to change anything about how the Russian government relates to *crypto currencies*. As to the worldwide efforts to regulate *crypto currencies*, the major resource of opposition here seems to be the global *fintech*, advanced user community who believes that *crypto currencies* represent a nearly perfect instrument for decentralized, instant and anonymous transactions. This community does not yet represent the majority of participants of national financial systems and in many countries remains quite limited. However, it is skillful and active enough to drive the evolution of decentralized transaction systems even further to the domain of *Shadow Internet* and other *grey zones* where enforcement bodies and regulatory authorities have quite limited capabilities. For instance, *Dark Wallet*, a Bitcoin wallet, was just developed on the premises to make Bitcoin transactions completely anonymous, which greatly undermines the efforts to regulate *crypto currencies* so they would be more appealing and safe for the public. Such struggles between decentralization and regulation will obviously have a large impact on the future of *crypto currencies*.

Edited by Julia Fetisova

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Moscow-Geneva, June 2015

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[...]

3. The rights of the Club members

3.1. Individual club members are entitled to:

3.1.3. Receive a copy of the Russia Confidential exclusive analytical newsletter by e-mail in chosen language (English or Russian). According to the Club Terms and Conditions, the transfer of the bulletin to third parties is not allowed.

[...]

3.2. Corporate Club members are entitled to:

3.2.3. Receive two copies of the Russia Confidential exclusive analytical newsletter by e-mail in chosen language (English or Russian) or in both languages simultaneously. Share the bulletin with the other representatives of the corporate member. According to the Club Terms and Conditions, the transfer of the bulletin to third parties is not allowed.

[...]

4. The duties of the Club members

4.1. All members of the Club must:

4.1.6. Not to share the Russia Confidential analytical newsletter, as well as the Password to the Club section of the PIR Center web-site with individuals and legal entities who are not members of the Club.

[...]

6. Russia Confidential

6.1. The Russia Confidential exclusive analytical newsletter is issued by the Trialogue Ltd by PIR Center's order for the Club members' private use only.

6.2. The newsletter contains exclusive analytical materials on international security, foreign and domestic policy of Russia and the CIS, prepared by the PIR Center's staff and invited experts specially for Russia Confidential.

6.3. The newsletter materials are confidential and must not be quoted and transfer to the non-members for at least 30 days since the day of issue.

6.4. 30 days after the day of issue the Trialogue Ltd can remove the exclusive and confidential status of the material, after which in such cases it is to be published in other PIR Center's editions and can be used by the Club members for quoting.

6.5. The newsletter is disseminated via e-mail between the Club members once a month in Russian or in English, depending on the choice of the Club member.

6.6. The Club member can also receive a paper copy of the newsletter in chosen language.



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We continue 2015 Club season and **invite you to prolong your membership for 2015 or 2015-2016**, if you have not done so yet.

In 2015, the *Trialogue* Club members continue to receive our exclusive information on the foreign policy priorities of the Russian Federation, and on current threats and challenges to the global security. **Five meetings of the Trialogue Club International** are planned for 2015 (four in Moscow and one abroad); Club members will receive **12 issues of the Russia Confidential exclusive analytics bulletin**, our informational and analytical newsletters.

Fees for the *Trialogue* Club membership since 2015 are as follows:

Period	Individual membership	Corporate membership
01.01.15. – 31.12.15. (1 year)	30 000 rub.	47 000 rub.
01.01.15. – 31.12.16. (2 years)	54 000 rub.	84 000 rub.

We would like to remind you that the corporate membership is based on **"1+1" scheme** when **two representatives** of the organization participate in the work of the Club.

Please, bear in mind that you can decide to pay the **two-year fee**, which would help you to get a better price.

On all questions concerning the *Trialogue* Club Internationsl membership, please contact us by the e-mail secretary@trialogue-club.ru or by phone: +7 (985) 764-98-96

Sincerely,

**Chairman,
Trialogue Club
International**

Dmitry Polikanov