

Conference Paper

Are Regtech, Fintech, Blockchain the Future?

Bektenova G. S.

REU G.V. Plekhanova, Chief Lecturer in "financial markets", 117997, Stremyanny per., 36, Moscow, Russia

Abstract

British Financial Supervision and Control Authority has identified new technologies as a component of fintech. These components include regtech, insurtech, blockchain. These new areas of the market development are incomprehensible to a wide range of people. However, this area attracts venture capital which is actively growing worldwide. The prospects of development of these areas are interesting for many reasons: reduction of financial costs for market participants, reduction of information processing time, security of financial transactions, information security and completeness. The article describes: objective reasons of the occurrence of such a kind of the product, risks of using these products and advantages of their introduction in all spheres of life, as well as the scope of regtech implementation.

Corresponding Author:

Bektenova G. S.

Gulmiraz002@mail.ru

Received: 11 December 2017

Accepted: 20 January 2018

Published: 13 February 2018

Publishing services provided by
Knowledge E

© Bektenova G. S.. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the FinTech and RegTech: Possibilities, Threats and Risks of Financial Technologies Conference Committee.

Keywords: Fintech, regtech, blockchain, insurtech

1. Introduction

In 2007 the financial crisis struck the United States. The regulators that poorly controlled banks were called the main cause. Banks, in their turn, in pursuit of "profit" began to give out loans to everyone, which led to the collapse.

After that the Federal Reserve Bank together with the US Treasury reviewed the industry anew and in a short time released many new laws and recommendations.

According to IBM estimates, regulators are now producing at least 20,000 new requirements per year, and a total set of rules and regulations will have exceeded 300 million pages by 2020.

Banks had to dramatically increase the costs for lawyers, consultants and software developers to match these changes. CITI Bank only has the budget of about \$ 3.4 billion per year for these services. In total, according to the American Banking Association, in the US only banks spend about \$ 70 billion per year on this expense item.

OPEN ACCESS

2. Material and Theoretical Bases of Research

The very notion of regtech appeared only in 2015 year when venture capital joined financing startups in this area. Popular at that time online lending began to lose credibility, and venture funds actively seeking new niches for development began to invest in regtech. In the eyes of investors, these startups benefited from the fact that, unlike many others which wanted to turn the industry, they became not a threat, but a partner of the traditional financial system.

During a year hundreds of startups appeared in this area and from \$300 to \$600 million were invested into them according to various estimates. In September 2016, the technology giant IBM bought Promontory for about one billion dollars (the exact sum of the transaction was not disclosed), which specialized in risk management and automation of regulatory requirements. The deal became a landmark for the industry and strengthened the interest of venture investors.

How can RegTech be applied:

1. Checking data

Identitymind or KYC-chain helps automate the operations of initial customer verification in accordance with the rules of the regulator (Know Your Customer, KYC). Some start-ups solve individual tasks within these processes. For example, Mitek and Trulioo are only concerned with verifying the authenticity of identity documents, and Plaid, in which Goldman Sachs invested \$ 40 million in 2016, is engaged in verification of customer's bank accounts.

2. Automation of reporting

Startups help to comply with the requirements of regulators when issuing loans so that different ethnic and social groups get equal access to them. In addition, they help to form periodic reporting for numerous inspection bodies.

The largest players in the market – Cappitech, Fintellix and iDisclose – already work with hundreds of customers, including the world's largest banks. In February 2017, one of the largest data analysis companies, Verisk Analytics, announced a deal to purchase Fintellix. The sum of the transaction is not disclosed.

3. Data protection

The demand of the financial institutions for cybersecurity is enormous. The number of cyberattacks and losses due to them is growing: according to Forbes, only in 2016 the losses amounted to \$158 billion in the world.

Rumors about the influence of hackers on the results of the recent elections in the US pushed the regulators to adopt new laws in this area. Now we can identify several directions:

- Multifactor identification of customers: by fingerprints (Sonavation, Transmit-Security), by the retina of the eye (HYPR), by behaviors (BioCatch, Socure) and even by smile / smart smile (Smile identity). Companies are required to use various forms of identity verification to comply with the requirements of regulators.
- Insurance from cyberattacks: Prevalent Networks, RedSeal Networks, Cyence - these companies help banks to limit the risks of losses from possible attacks by the size of the insurance premium.
- Secure data transfer: Virtru, Post-Quantum, Wickr provide data encryption and transmission of information to users in accordance with regulatory standards.
- Analysis of actions and behavior of employees: Cylance. The company was founded in 2012 and uses artificial intelligence to detect deviations in the behavior of employees, from the norms and rules adopted in the organization. Capitalization of Cylance is now more than \$ 1 billion.
- Carrying out test cyber attacks to identify weaknesses in the protection of organizations: Illusive Networks, TrapX. Such checks are now mandatory not only for the banks themselves, but also for any organization cooperating with them.
- Security in the Internet of things (IoT Security): Rubicon Labs, CyberX, Argus Cyber Security. Hacked TVs and video cameras that monitor users and transmit data to defrauders.

In general, the expectations from the new industry are enormous: the entry barriers for new players in the financial market are declining because the cost of entry is reduced, which in its turn, will lead to a sharp increase in the market for regtech itself.

Venture capitalists actively write checks and the demand for specialists in cybersecurity and data analysis is high.

Regtech prospects are taken very seriously: the British Financial Supervision and Control Authority is officially interested in new technologies and defines them as a component of the fintech. Solution of other tasks such as tracking new rules and identification of customers can facilitate regtech.

The market of legal technologies is still developing, but it has already attracted the same attention as insurance technologies (InsurTech) and fintech.

The main task of regtech is to help companies to adjust their work to the requirements of legislation. The demand for such services is growing because traditional legal processes are becoming too expensive in terms of resources and time.

It should be noted that the basis of the regtech is such modern technologies as cloud computing, machine learning, big data, blockchain.

The term "regtech" is much younger than the very idea of using technological innovations to adapt the business to current legislation. Nevertheless, an additional impetus to the development of this industry was made by achievements in the field of blockchain.

The most notable regtech start-ups in the UK are:

Onfido develops a product for fast and reliable biography verification using machine learning; such measures can be applied to both clients and potential employees. Such technologies are of particular importance in the light of constant security threats.

DueDil collects an extensive information base of registration data, trademarks and financial statements, thus increasing the transparency of the market. The startup attracted more than \$ 30 million of investments.

Percentile creates software products for risk specialists who are forced to work with huge volumes of legal documents. The main task of the startup is to automate these processes so that professionals can be engaged in more demanding tasks.

Just as insurance technologies have benefited all stakeholders, regtech will help corporations seeking to comply with the law and organizations responsible for monitoring compliance with these requirements.

The main problems of the both sides are connected with the fact that the requirements are much greater than can be effectively implemented. Banks and other similar organizations find it increasingly difficult to quickly adapt to constantly changing legal climate, and the controlling bodies experience similar difficulties. It is possible to use machine learning, which inspires enthusiasm among many market participants, because the underlying algorithms can simplify many processes in the future and make it easier for professionals in over-saturated sectors. Thus, these technologies perfectly suit for regtech.

Machine learning algorithms will help regtech solutions adapt, since the statistical analysis can be used to assess risks. The same opportunities will allow the authorities

to monitor the activities of organizations and identify abnormal behavior that may be the result of illegal actions.

Fintech is a technology that helps to develop financial processes. Meanwhile, regtech will find application in a number of industries, for example, in logistics and pharmacology. Another example of an important industry where it is required to work actively with legislation is agriculture. The ability to adapt to a wide variety of international requirements will prove to be a great help for the development of agricultural industry.

Food safety and logistics are inseparably linked with agriculture, they also require the full compliance with the requirements of regulators. The latter is a vast branch, which will be strongly influenced by insurtech and regtech, when blockchain and other modern technologies will become suitable for wide use.

Technologies also can be used for simulation, modelling and forecasting, which will help to better assess the future of legislation and at the same time respond to the situation in real time.

Potential opportunities of regtech solutions in many respects repeat the list of modern technological trends: blockchain, biometrics, machine learning, artificial intelligence and robotics [2].

In the banking sector, blockchain technology will allow the creation of banking products cheaper and faster, for example, the product that received the greatest success in these experiments is a letter of credit. The letter of credit is always accompanied by a huge number of documents, and the blockchain technology is able to make this tool more simple and secure.

Having formalized the contract of purchase and sale of goods and designating the form of payment - a letter of credit, for the seller to receive money from the buyer, that is, the buyer's bank has unblocked the letter of credit (the buyer's bank transferred this money to the seller's bank), it is necessary from the seller's side to provide the cargo certificate, customs certificates, the quality analysis of the goods (which is usually made by a well-known international player). And a lot of other information is required. The delivery and verification of documents will take a month. With the help of blockchain, forwarding and verification of documents can be done instantly. Problems with customs are also solved almost instantly.

Also, it is worth noting the consortium R3, which includes the bank Intesa. Working in the project SWIFT Global Payment Innovation, states the participation of 22 major banks from different countries, including JPMorgan, Societe Generale, Deutsche Bank, RaboBank, Sumitomo Mitsui Banking. The task of the project participants is to test the

DLT (distributed ledger) technology for cross-border payments, their monitoring and management of international accounts.

In addition, it is important that the attitude to technology is changing. For example, SWIFT. A good example is the recent SWIFT solution to open access to KYC Registry (a platform for document and customer data exchange) to any regulated financial institution, not just SWIFT customers. As for the risks in this area, today there is no current regulation or control. In particular, the International Organization for Standardization (ISO) established a committee to develop a standard for blockchain technology only in 2016. This work is at the very beginning. It is necessary to coordinate various bodies from 27 countries at the level of the European Union only. To date, regulation is carried out through compliance, anti-laundering, anti-terrorism legislation. Governments are struggling to increase fiscal discipline, toughening the fight against offshore. For this reason, the unregulated use of blockchain technology and cryptocurrency is becoming highly risky.

3. Conclusion

In Russia, the founder of Ethereum, Vitalik Buterin, represents a blockchain community that discusses the ideas of decentralization, anonymity, the absence of financial intermediaries, regulatory pressure and control. The remaining players act on behalf of the government, the regulator, state and system banks, companies that are under strict regulation.

There are many traditional financial products that can be cheaper if you transfer them to the platform of the blockchain. There are new technologies in the field of payments, P2P-lending, currency trading, investment management. The blockchain-systems of commodity traders Trafigura and Mercuria cover mining, transport and stevedoring companies and banks. Document circulation accelerates and reduces the need of traders for working capital, and, hence, their costs. As a result, the cost of raw materials for consumers decreases.

Electronic labeling of goods, smart contracts, fiscal and customs control, protection of legal producers - these are just a few areas where digital technologies based on blockchain will be in demand.

References

- [1] Andrei Alyokhin what is RegTech: a new market for \$120 billion to finance startups.
<https://rb.ru/opinion/regtech-what-is>
- [2] <https://news.rambler.ru/other/38003520-7-opredelyayuschih-aspektov-regteha/>