



---

## DEVELOPMENT OF INNOVATIONS IN BANKING SECTOR ALONGSIDE WITH GLOBALIZATION

**MIRSALIEV ERKIN ERGASHEVICH**

*Tutor of the Corporate Governance faculty, Tashkent State University of Economics,  
Tashkent, Uzbekistan*

**NURSEITOV MIRZABEK RASHIDOVICH**

*Student of Corporate Governance faculty, Tashkent State University of Economics,  
Tashkent, Uzbekistan*

**Abstract:** *The article summarizes the ongoing styles of banking invention and, as a result, the sweeping metamorphosis of the current position of technological development and the gradational transition to Industry 4.0 and the digitalization of the frugality. The transition to the ultimate is insolvable without the development of the FinTech assiduity, which is an element of a number of introductory end-to-end technologies, Big Data analysis, robotics, artificial intelligence, the Internet of Things, gamification, and biometric technologies. different interdisciplinary technologies comprehend neurotechnologies, assorted registration systems, quantum technologies, modern manufacturing technologies, robotics and sensor components, and virtual and stoked reality technologies. In this article, financial globalization is considered by the author as a financial and investment process with qualitative changes in business technologies based on information and network tools that reduce risks.*

**Keywords:** *banking sector, innovations, globalization, FinTech, technologies, Neobanks, trends, Big Data.*

### **Introduction**

Today, there are fundamental interchanges in the demeanor of the banking business. The advancement of modern banking technologies is already having a subversive influence on the international banking industry. In conformity with the dynamically ever-changing conditions of economic activity, novelties in banks have become a consideration for the acknowledged functioning of any commercial-grade bank. Banks that practice innovative technologies in their effort appeal more clients and entertain more prospects and occasions to gradate their activities. Clients' prerequisites for the standard of service are changing: today, purchasers of banking services prefer mobile channels, anticipate personal, timely and accessible service. New technologies are changing the usual ways of providing banking services.

**1. The term "banking innovation"** has a certain specificity. It is proposed to define innovation as the result of research and technical results aimed at improving modern products and technological development. An extended interpretation of banking innovation involves supplementing the definition with the following parameters: the scale of novelty; the pace of implementation; the nature of the needs met; object of innovation; appointment; performance.

A commercial bank, as a result of applying an adaptive approach to designating its innovative position and strategic plan in the market, by examining its technological activities, as well as taking into account the above types of classification, understands its competitive advantage and can understand how to position itself in the market in the future.

For many commercial banks in Uzbekistan, the creation of modern banking services requires significant transformation and improvement of the development strategy. They need to be targeted at service segments: individuals and legal entities, as well as individual and corporate units. Based on this, the latest innovations are formed that meet all the desires and needs of both the client and the bank.

Thus, innovations are an important component of business processes. Based on international practice, innovations are the end results of innovative activities, which are new or technologically advanced products integrated into the market of practical activities of the financial sector. In addition, innovation can be defined as the result of the formation and improvement of a previous analogue of a product, service or technology.

All innovations, newness and modifications, first of all, should symbolize the presence of novelty in the form of technical and technological shifts, organizational or managerial changes, since novelty, production continuity and commercial feasibility are the main properties of innovations. In addition, in order for innovations to be considered innovations, it is necessary that technologies be introduced into business processes and production, as well as be implemented and in demand in the market. Only in this case, subject to the above parameters, innovations can be considered innovations.

## **2. Current trends in the development of banking innovations.**

Today, innovative technologies (digital, biometric, etc.) are reshaping the world of financial services, actively replacing traditional players and conservative business models. The introduction of innovative financial models allows changing the structure of consumption, reducing the cost of functionality (customer base processing, loyalty programs, etc.), increasing the efficiency and quality of business processes (targeting, scoring, etc.). In addition, to influence the stability of the development of the core business. Ultimately, the financial technology (or FinTech) industry is progressively turning into a separate and actively developing sector of the modern economy.

Today, the modern financial technology market can be safely called one of the most progressive in the world. According to experts, the number of users of financial technologies in the world is increasing annually by 15-20%, of course, all this is due to the active penetration of the Internet into the world.

According to McKinsey research, venture capital is one of the fundamental sources of financing FinTech projects in the world and its share is more than 75%. In addition, we should not forget about the traditional ways of raising capital, such as mergers and acquisitions, and alternative ones, such as crowdfunding, crowd investing, P2B lending, online factoring. Based on KPMG data, in 2019, FinTech venture projects were able to raise a record amount of funds from private investors from around the world - more than \$ 120 billion.

For example, large overseas banks BBVA, Citi and Santander have set up their own venture capital, but this is quite expensive, likely north of \$100 million to be really serious. If you are not a global banking player, this will be quite difficult, but there are options. Increasingly, smaller banks are joining as limited partners or strategic investors with FinTech-themed VC funds, such as the fund created by SBI Group (formerly known as Softbank Investments) or Anthemis Group. This puts them in a network of like-minded investors and gives them priority access to selected FinTechs in portfolio.

The development of financial technologies and innovations is impossible without a foundation - the Internet, on which, in fact, these technologies are based. The progress of the

Internet in the world certainly contributes to the acceleration of the process of technological development of digitalization, which has covered almost all spheres of human life, including the banking sector.

Today, a huge range of innovative technologies have an impact on the financial market, which are directly interconnected with the Internet. The main examples of innovative technologies that are fundamental to ensure the further development of the financial sector:

1. Mobile technologies - the interaction of mobile technologies with various programs and applications is developing at a rapid pace. At the moment, we are witnessing the transformation of a mobile bank into a full-fledged niche for conducting transactions, offering banking services to the end user using: a smartphone, tablet, smart watch, etc. In addition, specialized mobile devices are being created by commercial banks in order to increase loyalty clients. For example, payment smart rings, key fobs, bracelets, physical aggregators of plastic cards, etc.
2. Big data arrays (Big Data) - is a huge amount of raw information, used for the purpose of their processing and use, methods of searching for the necessary information in large arrays. With the help of big data analysis, financial institutions have the opportunity to identify new consumer categories, as well as develop personalized services, etc.
3. Artificial intelligence is a technological platform that is able to perform creative functions and adapt to given parameters. With the help of artificial intelligence, banks and financial institutions are able to be proactive and technologically advanced, while reducing costs.
4. "Blockchain" technology - a distributed database. An increasing number are interested in financing the development of "Blockchain" in order to further optimize their activities. Blockchain technology increases the level of information reliability when concluding contracts and making payments and transfers, which contributes to raising confidence in the country's banking system as a whole. "However, the idea of blockchain in the financial markets turned out to be so overheated and misunderstood that it led to a dead end. Many banks are now wondering where the return on their investments in blockchain is and are disappointed in such projects. Blockchain, if used wisely, has no less transformative potential than the Internet. However, the use of distributed blockchain registries is more associated with the coordination of new infrastructure management models, for example, with the replacement of basic payment systems such as SWIFT and Visa, and not with technologies as such," writes K. Skinner [7, p.127- 128].
5. P2P lending - modern information development expands the possibilities of lending between economic entities without the participation of intermediaries. In this regard, fundamentally new forms of financing for small and medium-sized companies are emerging, thanks to the organization of P2P lending platforms. The result of the development of P2P lending is the active spread of "crowdfunding" financing. According to PwC analysis, the market size will reach \$150 billion by 2025. Analysts also give more positive estimates of the market size of \$1 trillion. dollars by 2025.
6. Biometric technologies are based on the characteristics of an individual person. This refers to behavioral and physiological parameters. Behavioral features include voice, gestures, gait, etc. Physiological features include fingerprints, facial geometry, retina, etc. In the banking services market, biometric technologies are used to identify and

authenticate, as well as to provide secure access to personal data and conducted transactions and operations.

In addition, it is necessary to highlight the activities of FinTech companies, as well as to note the influence of the FinTech industry on the development of the global financial market. The success and progress of FinTech companies increases competition and forces banks to reconsider business processes and policies for the development of innovative technologies. The development of personalized products is increasing against the background of simplification of access to digital products. Over time, financial products are a kind of proposal associated with the lifestyle of the client, setting new standards. New business models are being launched and progressed, allowing to operate in new market niches. For example, due to the development of the FinTech industry, P2P platforms have become a defining form of new relationships.

According to the assessment of the head of the Spanish bank BBVA Francisco Gonzalez, the global banking sector is under threat, based on the rapid development of FinTech companies, according to him, about half of the banks around the world may cease their activities due to the transformation and absorption of the market of the fintech industry. And for example, according to the American bank Citi, the further growth of FinTech startups will lead to the fact that by 2025, 30% of bank employees (1.7 million) of the global banking system are at risk of losing their jobs.

An important aspect reflecting the level of development of the fintech market is the level of penetration of fintech services in the region. The global fintech industry is a leader in dynamic development, including the reach of end users, according to research estimates, this indicator is increasing by 15-20% annually.

FinTech is a rapidly growing industry that is based on innovative technologies and is a representative of financial services. The segments for the development of FinTech today are: lending, payment processing, financial assets and securities, mobile payments and money transfer services, information security and cybersecurity, financing of the medical sector, small and medium-sized businesses, technology robotization, blockchain, insurance technologies, etc. With the development of innovative technologies in its own activities, FinTech is gaining momentum and is truly an actively competing niche along with the banking sector.

According to Ernst & Young research for 2019, China (87%), India (87%) and the Russian Federation (82%) became the leading countries in terms of penetration of financial services - the size of the share of users of fintech services in the total population actively using digital technologies. At the same time, the level of penetration of FinTech services in the United States, where the largest technology companies in the world are located, amounted to only 34% (24th place in the ranking). Such strong performance in emerging markets can be explained more by demographic factors than by the massive use of technological finance by the population. We are talking about relatively regular use of services. A sufficiently high level of users of FinTech services of all categories can be considered as a potential source of development for the emerging market.

### **3. Implementation of FinTech services in the world.**

FinTech services have become widespread in many countries of the world, in particular, almost everywhere it is possible to instantly register a bank or mobile phone account on your phone in a matter of minutes. In countries such as China, Kenya, Canada, USA, UK, Australia, Thailand, Singapore, Hong Kong and all over Europe, you can pay by tapping your phone or by scanning a barcode. You can instantly send money to your friends online in over 190 countries. You can pay your bills in real time, and increasingly just let your phone or bank account keep track of those payments. True first principles thinking in banking does not originate in established, developed economies.

For example, in China, mobile payment transactions reached 10 trillion yuan (1.45 trillion US dollars) in 2016 and 112 trillion yuan (17 trillion US dollars) in 2018. By comparison, the equivalent figure for mobile payments in the US was a meager \$8.71 billion in 2016 and \$120 billion in 2018. Whether aggregating specifically within the financial services space or aggregating other services, increasingly technology-based aggregators will play a critical role as next-generation gatekeepers. In China, Alipay and WeChat have become de facto payment aggregators, and this has become a major problem for banks in China and increasingly around the world.

Smartphone operating systems and app stores are natural technology aggregators today, as are voice platforms like Alexa. In 2015, JPMorgan Chase, Bank of America (BofA) and Wells Fargo sparked a battle between big banks and popular personal finance and aggregation services like Intuit/Mint, Geezeo, MX/Money Desktop, Yodlee and others. BofA, Wells and JPMorgan Chase have argued that the reason for slow responses to queries from these sites is security related. Since then, however, customer demand for these services has only accelerated, resulting in more and more data sharing agreements between banks and aggregators.

The distribution of financial services in China has changed dramatically because of TechFin. For example, ICBC, the largest operating bank in the world, is located in China. Due to the massive dominance of Alibaba and TaoBao, they have been forced to launch their own Alibaba e-commerce competition in recent years called Rong E-Gou ("buying easy") - today, more than 10,000 merchants sell their products and services through this platform, generating more 1.27 trillion yuan (\$184 billion) in sales in 2018. Rong E-Gou sold over 100,000 iPhones in 2018, the trick is that ICBC also offered funding for these online purchases. In 2018, ICBC added business services to Rong E-Gou, and to date, 3,000 companies have sold US\$218 billion worth of products, including products as diverse as office supplies, all the way to robotics. More than a quarter of a million buyers have used the platform. In this case, ICBC is not building a banking platform or channels, but building ways to incorporate banking utility into day-to-day business operations.

In 2018, China's mobile payment activity overtook global plastic payments. This rapid growth depends on several factors, but primarily on the fact that China is currently dominated by non-banking mobile payments, which are massive and large-scale due to non-banking ecosystems. The mobile payment market in China is growing at 40-60 percent year on year, with Ant Financial (Alipay) and Tencent (WeChat/WePay) claiming more than 92 percent of that volume today. It is also worth emphasizing that Ant Financial is not primarily a financial company.

It is a technology firm focused on using technology to improve society and the economy. Alipay does not have physical branches to accept deposits. It is the largest money market fund in the world today, surpassing JPMC's US Treasury market fund. This is a good example that the most successful channel in the world for receiving deposits is not a branch, but a mobile phone. Something that can only be viable when used first principles of thought. This sparked a war on mobile deposits and payments, with Apple, Tencent, UnionPay and

Baidu launching their own competing initiatives. The WeChat online savings fund raised \$130 million on its first day of operation. The downside for Chinese banks is that now that a quarter of all deposits have moved to technology platforms, the value of liabilities and risk on deposits has increased by 40%.

With the world's largest mobile deposit product, access to over 80 countries, investments in Moneygram in the US, Kakao Pay in Korea, GCash (Globe Telecom) in the Philippines, Paytm in India and others, Ant Financial is no longer just an internet payment network in China. Today, Ant Financial is on track to become the largest single financial institution in the world.

Within 10 years, based on current growth, Ant Financial will be valued at more than \$500 billion, and by 2030 is likely to approach \$1 trillion in market capital value. This would make it four times the size of the largest bank in the world today, ICBC China. Today, Ant Financial is worth about the same as UBS and Goldman Sachs. Ant Financial has a first-mover advantage as a true first-mover financial institution built on a mobile communications utility. Ant Financial is not a bank, but a FinTech company, more precisely TechFin is a technology company specializing in financial services. Ant Financial believes that in the near future, cameras in restaurants, subways and airports are likely to automatically determine your credit status. People will be able to go out without a mobile phone, cash or even an ID. They can go anywhere using only their face as an authentication system.

On the example of AliPay, we can conclude that the development of FinTech companies and the scale of implementation of innovative technologies is a driver of the development of the financial market. Today, essentially all traditional financial companies and commercial banks have realized that the use of innovative technologies is an integral part of the competition and development of the financial sector and the global economy. Regarding partnerships with companies in the fintech industry, according to expert research, American banks (for example, JP Morgan, Goldman Sachs) are actively investing in startups, opening up APIs and platforms for third-party developers. European banks (for example, ING, UniCredit) also aim to actively develop the fintech direction, but at the moment they are focused on forming their “own strategy”.

The key challenges, eras of digitalization that classic banks face can be divided into three groups - fin-tech, neo-banks and big-tech. One of the most important unifying properties of new players in the financial market is the speed of product delivery (time-to-market), and at the same time, this is the weakest side of classical banks (see Table 1).

	Definition	Examples	Advantages	Disadvantages	Perspectives
<b>Fintech</b>	High-tech startups: P2P, FX, crowdfunding, cryptocurrency and blockchain	Ripple, Stripe, WeFinance	Time2market, quality, convenience, price for the client	Client trust, financing, banking expertise and business scalability	Bank/Big-Tech Vendors
<b>Neobanks</b>	High-tech startups with a banking	Starling, Monzo,	Time2market, quality, convenience,	Funding and business	Part of banking

	license. Independent or part of large companies	Revolut	price for the client, banking license	scalability	ecosystem
<b>Big-tech</b>	Global or local technological giants	Amazon, Google, Apple, Facebook, Alibaba, Yandex	Time2market, quality, scalability, customer base, Big Data, banking business is not the main one	Trust of clients and expertise in the banking industry	Competitors for banks

There is a certain trend that in most financial companies it is not necessary to have a physical infrastructure in the financial market of banking services. According to Deutsche Bank estimates, for 2010-2015. in Germany, 6.5% of banks were closed, and according to the forecast until 2030, for example, 44 million individuals in Germany will use online banking, similar figures in 2015 - 28 million individuals. This trend is relevant all over the world. In particular, two German companies - FinTech Group and Rocket Internet - will soon cooperate to create a pan-European digital bank and provide digital banking services throughout Europe [10].

It is logical that partnerships between banks and FinTech should be much more common today than they really are. Some employees have experimented with the possibilities that FinTech partnerships can offer them, but statistically this is only true for a small fraction of banks around the world. The question is to try to understand how to work with each other as partners, given that they both bring different strengths and advantages. FinTech companies tend to have a faster and cheaper innovation process and are extremely customer-focused - qualities that are probably not available to all banks today. On the other hand, the benefits that banks bring to a possible partnership, such as revenue (for FinTech), customers (scale), and brand, are also extremely compelling. That is why it is highly likely that we are about to see a wave of cooperation between FinTech and banks which will accelerate changes in the industry.

#### References,

1. Kulikov NI Banks go to the Internet / NI Kulikov, Yu. V. Kudryavtseva // Finance and credit. - 2016. - Issue. No. 29. - P. 2–11.
2. The person is digital. The fourth revolution in human history that will affect everyone / Chris Skinner; per. from English - M.: Mann, Ivanov and Ferber, 2019. -- 384 p.
3. Okhlopkov A.V. Banking innovations and peculiarities of their implementation in the modern banking sector of Russia. // Initiatives of the 21st century. - 2011 - No. 1-2
4. Banking management. Textbook / Ed. Doctor of Economics, prof. O.I. Lavrushin. 3rd ed., Rev. and add. - M.: KnoRus, 2016. -- 658 p.
5. Vikulov V.S. Typology of banking innovations // Financial management. - 2014. - No. 6. - P. 12–19.
6. Zolotova E.A. The current situation on the consumer lending market in the Stavropol Territory // Finance and Credit. - 2017. - No. 32 (272) - p. 23–30.

7. Banks and banking / Ed. Doctor of Economics, prof. I.T. Balabanov. - SPb: Peter, 2016. -- 452 p
8. Activities of commercial banks: Textbook / Under. ed. A.V. Kaltyrina. 2nd ed., Rev. and add. - Rostov n / a: Phoenix, 2016. -- 596 p.
9. Bank employees will face massive layoffs [Electronic resource] – Access mode: <http://psm7.com/news/bankovskix-sotrudnikov-zhdut-massovyesoskrashheniya>.
10. Review: the banking sector in 2018 [Electronic resource]. - Access mode: <https://www.banki.ru/news/research/?id=10890092>
11. Allayarov, Sh. PhD; Mirzamakhmudov, M.; and Mirzamakhmudova, M. (2020) "ANALYSIS OF REGULATORY SANDBOX IN THE NETHERLANDS THAT PROMOTE DEVELOPMENT OF INNOVATIVE FINTECH STARTUPS"// International Finance and Accounting: Vol. 2020 : Iss. 3 , Article 34. Available at: <https://uzjournals.edu.uz/interfinance/vol2020/iss3/34>
12. Allayarov, Sh.PhD. (2020) Strengthening tax discipline in the tax security system: features and current problems//South Asian Journal of Marketing & Management Research (SAJMMR). <https://saarj.com>. ISSN:2249-877X, Vol. 10, Issue 11, November 2020, Impact Factor: SJIF 2020=7.11, pp. 124-128.
13. Allayarov, Sh.PhD. (2020) The improvement of tax control in order to strengthen tax discipline in the republic of Uzbekistan// TRANS Asian Journal of Marketing & Manajment Research (TAJMMR). <https://tarj.in> ISSN:2279-0667, Vol 9, Issue 11, November 2020, Impact Factor: SJIF 2020=7.209, pp. 57-62.
14. G. Shamborovskyi, M.Shelukhin, Allayarov Sh, Y.Khaustova, S. Breus. (2020) Efficiency of functioning and development of exhibition activity in international entrepreneurship// Academy of Entrepreneurship Journal (Print ISSN: 1087-9595; Online ISSN: 1528-2686) Volume 26, Special Issue 4, 2020 pp. 1-7.
15. L.Shaul'ska, S.Kovalenko, Allayarov Sh, O.Sydorenko, A.Sukhanova (2021). Strategic enterprise competitiveness management under global challenges // Academy of Strategic Management Journal, JEL Classifications: M5, Q2/ Volume 20, Issue 4, 2021