NATURALISTA CAMPANO
ISSN:1827-7160
Volume 28 Issue 1,2024

The Essence Of Transformation Of The Banking Sector In The Context Of The Implementation Of Modern Financial Technologies

Gulbakhor Matyakubovna Bakoeva

PhD on economic sciences, Associate Professor of "International finance and Investments" department, University of World Economy and Diplomacy
gbakoeva@uwed.uz, gulibakoeva@gmail.com

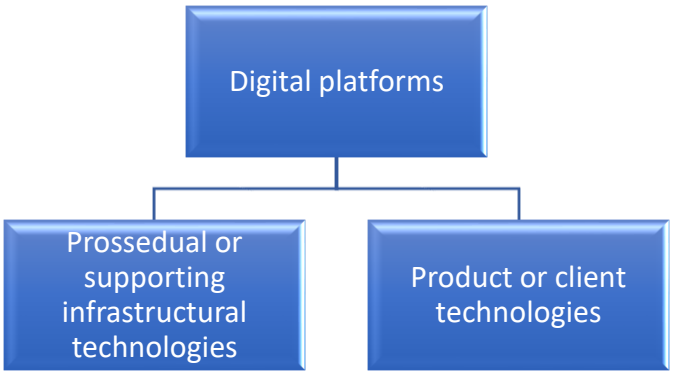
Abstract. The article focuses on the possibilities of implementation of modern financial technologies in banking activities in terms of transformation of this sphere. The main tendencies and measures, concerned to digitalization of banking and financial operations were researched.

Keywords: digital platforms, neobanks, Regtech, Suptech, digitalization, bank capitalization, emission, bank transactions, financial services.

1. Introduction: Currently, there is a transition to digital technologies at all stages of economic activity: production, exchange, distribution and consumption of goods. One of the main conductors of technological innovation in the economy is the banking industry. Its role comes down not only to consuming the achievements of the digital economy, but also to financing them.

The role of financial technology in the banking sector is of scientific interest for a number of reasons. Firstly, the uniqueness and value of digital technologies lies in ensuring the efficient functioning of all segments of financial markets, including banking, by overcoming the main obstacles: reducing information asymmetry and reducing transaction costs of searching for information. Secondly, it should be noted that the level of competition in the banking sector has increased due to the emergence of new market participants - fintech companies, which means reducing prices for the services of financial intermediaries and increasing their accessibility to the population. As a result, we can talk about accelerating the socio-economic development of society in countries that are actively introducing digital technologies. Thirdly, the participation of banks in the creation of intangible assets in the field of financial technologies allows increase their market capitalization. Fourthly, there has been a significant increase in population demand for fintech services. According to a study by the consulting company Ernst & Young , from 2015 to 2019, the share of residents of the world's 29 leading economies who use the services of fintech companies increased from 16% to 64%.[1] An IT platform in the broadest sense of the word is a software code that creates an interface for computer devices (computers, tablets, mobile phones) and is designed to solve a specific set of tasks for the end user, creates interaction rules for its constituent modules or services, and provides integration with external platforms.

Often in the scientific literature the term "platform" is used to refer only to two-sided platforms or digital marketplaces, which are an electronic platform where economic agents can exchange benefits by rules platform owner.



Drawing 1. Classification digital platforms in economy
Source: compiled by the author

The following types of digital platforms are used in the banking sector :

- Platforms/products aimed at improving the internal processes of the bank as a participant in the financial market.
- Platforms for direct provision of financial services to bank clients (front office). Such innovations are called product, customer, main ones.

The terminological equivalent of "digitalization of the financial market" is "the introduction of financial technologies (fintech) in the financial market".

In scientific publications you can find different definitions of financial technologies. Often there are definitions of this phenomenon in a broad interpretation, namely, fintech is defined as an emerging industry that will displace traditional institutions from the financial services market. For the purposes of this study, "financial technology" in the narrow sense of the word: a unique technology that allows the creation of innovative products in the financial sector of the economy.

Among financial intermediaries, banks are the primary beneficiaries of technology implementation, due to the following factors:

The coverage of the population with banking services is much higher than with other financial services (insurance, brokerage, depository, etc.). The frequency of interaction between the bank and the client is comparable only with telecommunications operators, that is, in order to maintain competitive advantages, it is important for banks to provide convenient access to daily banking services.

- As a result, the volume of the banking services market and the level of sector margins make the industry attractive to new participants (Fig. 1.2). So, for comparison by condition for 2021 in the United States, the average net profit rate of commercial banks was 29.79%, while for companies providing life insurance services the net profit rate was only 8.36%, for non-life insurance companies - 21 .02%, real estate companies – 11.69%. At the same time, barriers to entry into the market for IT companies are being removed by weakening regulation in some segments of banking, for example, in payments.
- The presence of free niches in the market that can only be filled with the help of remote banking services. Thus, in developing countries, a fairly low proportion of the adult population has at least 1 bank account, for example, in Argentina - 71.6%, Kazakhstan - 81%, South Africa - 85.4%, Brazil – 84%, Russia – 89.7% of residents over 15 years of age had a bank account as of 2021, while in developed countries this value is 95-100%. [2]

Financial technologies are the end products created using financial technologies, that is, their

derivatives, for example, electronic payment systems, electronic money, tokens, crowdlending and crowdfunding platforms, contactless payments, smart contracts, mobile banking applications, Regtech and Suptech . All of the above should be classified as digital financial technology products.[3]

It is worth noting that all genuine technologies are universal and applicable in many sectors of the digital economy. These include: artificial intelligence and machine learning, big data technology, distributed ledger technology (including blockchain), cloud technologies, virtual reality technologies, Internet of things, mobile technologies and the Internet.

Industry segmentation of fintech companies operating in the banking sector may look like this (Table 1).

Table 1. Industry segmentation fintech companies

Segment fintech (types provided services)	**Description fintech companies, working in the segment**
Universal digital bank / fintech project by providing digital banking services	A company that provides clients, individuals and legal entities, with all basic banking services - accepting funds for deposits, lending, making payments - and does not have branches.
Payment fintech	Companies that provide value transfer services between economic agents (individuals and legal entities) using technology. The segment includes, but is not limited to the following services: processing payments and transfers of clients between their accounts, accepting payments on the website / mobile application; payments and transfers using QR code; secure settlements (analogous to escrow accounts) in real estate purchase and sale transactions, when concluding lease agreements; splitting of payments (most often applicable in payments for housing and communal services); electronic tipping, etc.
Credit fintech	Companies that use a technology platform to lend their own funds or that provide intermediary services in the field of online lending for borrowers (showcase of available loans, loan payment calculator, electronic mortgages and guarantees, etc.), and lenders (showcase of crowdlending projects, automatic calculation of credit rating, etc.).
Control personal finances	Companies that provide the population with technologies for analyzing and monitoring current spending, savings, assessing the level of creditworthiness and tax optimization.

Investment management	Companies that provide services for remote opening and maintenance of brokerage accounts, performing transactions for the purchase and sale of securities on the stock market using remote communication channels, automated analysis and monitoring of an investment portfolio, as well as consulting services to improve investment efficiency.
Institutional fintech	Companies that provide banks with technologies to automate general administrative and methodological issues, as well as transaction support (back office): customer authentication, cybersecurity, media monitoring, customer acquisition, customer activity analysis.
Regulatory fintech	Companies that provide software for financial market participants allowing you to automatically perform
	regulatory requirements (regtech) and/or carry out supervisory and control functions (suptech). The tasks that regulatory fintech solves include, but are not limited to, automated collection and analysis of mandatory reporting, verification of clients and personnel (KYC), risk management, and detection of fraudulent transactions.

Source: compiled by the author

Additionally, consulting companies and global organizations include not only banking but also insurance services in the financial technology market; services traditionally provided by depositories, registrars, management companies, etc.

Universal digital bank or fintech project for provision of digital banking services (digital challenger bank) unlike other types of fintech companies, provides an expanded line of banking services, rather than specializing in one banking product. The key product is a bank checking account to which a real debit or virtual prepaid card is linked. Digital banks can be created on the basis of a technology company independent of the bank (venture digital banks) and can be part of a banking group. In the following, the term “digital bank” will refer only to those projects where the company has a banking license or operates under a bank license with which it has she has investment relationship. Also in the literature you can find other Name such credit organizations – neobank .[4]

Cases where a fintech company provides an IT platform, even under its own brand, but the license provider is a bank (a partnership between a fintech company and a traditional bank), will be referred to as a “ fintech project for the provision of digital banking services.”

Thus, banking financial technologies are a set of banking techniques, methods, ways of organizing banking activities, mainly using IT technologies, to meet the needs of clients, shareholders and bank staff in the process of increasing the bank’s efficiency from the position of achieving the optimal balance of profitability, liquidity and risk.

The above technologies influence on bank sector in the following way.

1.1. The institutional transformation of the banking sector reflects the trend towards

disintermediation of the financial market, the partial exclusion of financial intermediaries, including banks, from transactions between borrowers And owners temporarily free monetary funds. New participants are entering the banking services market: fintech startups that can offer financial services that are more efficient in terms of cost, speed and quality of delivery, as well as IT companies (bigtech or techfin companies), retailers, social networks, telecom operators who seek to obtain additional income from the resource they have - their customer base. Mobile technologies play the greatest role in this situation .

1.2. Transformation of channels for providing banking services and methods of processing banking transactions involves an internal transformation of the bank's activities, increasing the range and volume of services provided Not only through familiar channels service clients – offices, but also in the process of remote interaction with clients. What more more important, is happening changing the bank's place in the value chain, the approach of meeting the needs of clients in the context of their life needs, which was developed back in the 1920s, begins to prevail. United financial company Services Automobile Association .[5]

In parallel with the development of new channels for providing banking services, the quality of operational business support is improving:[6]

- introduced remote identification And authentication clients using biometrics for the client to receive banking services remotely;
- the speed of data processing or operations increases, including making credit decisions;
- Some routine operations of the same type are automated, for example, a chatbot is built into a mobile bank or on the bank's website to process customer complaints and requests; filling out forms automatically using photographs of documents, etc.

At the current stage of development of financial technologies, the bank pays special attention to cybersecurity and uninterrupted customer service.

1.3. The transformation of the business model of traditional banks reflects the change in the formation of bank balance sheets and profits and how financial technologies help V decision tasks transition on new business- and financial model, which, according to the Basel Committee on Banking Supervision, is an integral part of financial technology.[7]

Recent decades have seen significant growth in banking sector assets, driven primarily by the loan portfolio and high-risk financial investments, an approach that has significantly increased the dispersion of bank net income during periods of economic growth and crisis.[8] Therefore, after the Global Financial Crisis of 2008-2009. The principle of stability and reliability of the banking system, a risk-oriented approach to the formation of assets and liabilities of a commercial bank, prevails. Not the least role in the formation of an objective approach to the magnitude of risk - based on the principle of strict logic - is played by information technology.[9]

Currently, the issuance of digital bank cards is a unique service, that is, the volume of issue of such cards depends not only on demand, but also on the number of banks that can offer such a service, so it is better to exclude them from the analysis.

So, in terms of passive banking operations, an indicator of the population's demand for digital banking services is the number of settlement (current) accounts opened through remote servicing channels, deposits of individuals and deposits of legal entities (time and on demand) in rubles and foreign currency, as well as customer accounts in precious metals.

In terms of active banking operations, the demand of the population can be assessed through the number of applications for consumer loans and credit cards received through remote service channels to commercial banks, microfinance organizations, as well as to crowdlending platforms. Since currently a small number of banks can issue car loans and mortgage loans remotely, it is proposed to analyze only consumer loans from banks or microloans. The emphasis on analyzing the number of applications, rather than issues, is due to the fact that issues take into account the possibilities of supply from banks. It is proposed to take into account obtaining loans from all types of financial intermediaries, since potentially the entire volume of lending could come from the banking sector if banks had no restrictions on the level of accepted credit risk.

Over the past 10 years, banks have become active investors in the venture capital market. This can be explained by two possible reasons:

1. Global economic crisis of 2008-2009. increased the tendency for investments in financial assets to dominate over investments in real assets (what some academic literature calls the " financialized accumulation regime" capital"), accelerated development venture markets, as a more profitable, but also riskier alternative to the traditional stock market, due to the formation of a regulatory environment with low interest rates, which resulted in a decrease in the value of many financial assets.
2. The increasingly popular non-capital-intensive segments of the digital economy, primarily fintech companies that receive resources from venture markets to implement product ideas, enter national markets, and expand into foreign markets, mean the emergence of high-tech competitors to traditional banks.

On the other hand, the initial business model of many startup companies is to create value for consumers or generate profit.

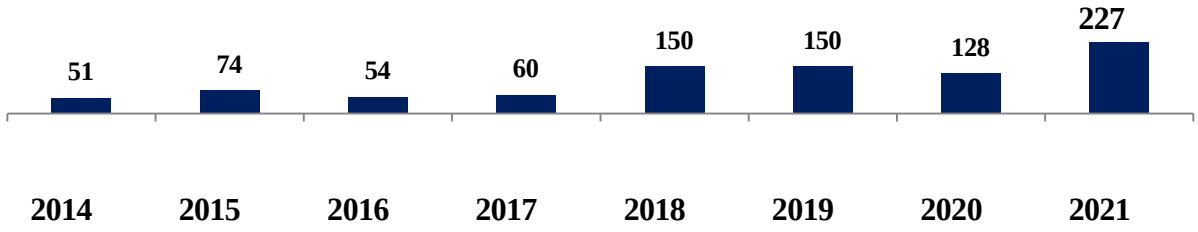


Figure 2 . Volume world venture investment in fintech for 2014-2021 years (billion US dollars)

Source : compiled by the author By according to KPMG[10]

It is important to note that financial technologies fit into both paradigms of banking goals: the paradigm of maximizing the value of capital, since increasing the innovativeness of a company, which is measured by the number of patent applications, leads to an increase in the market value of shares, which has been proven in empirical studies, and a paradigm shift in maximizing customer satisfaction.[11] Thus, achieving the main goal of banking is the motive for including the technological transformation of a financial institution in its long-term development program.

Thus, the transformation of the banking sector under the influence of financial technologies is structural changes in the banking sector as a result of the introduction of digital technologies, which affect both organizational and financial aspects of banking .

To measure the level of transformation of the national banking sector in each of the designated areas, a set of indicators is proposed, calculated primarily based on financial bank statements:

- Increased competition in the industry, caused by the institutional transformation of the banking sector, can be measured using price indicators, changes in banking sector assets, as well as indicators of the overall level of profitability (return on assets and equity).
- The transformation of service delivery channels can be observed in the share of customers receiving services through remote channels and the share of transactions performed in digital channels.
- When assessing banking sectors by the degree of change in their financial stability, indicators of operational efficiency, the share of household funds in bank liabilities and the share of net commission income in net operating income were used.

References:

1. Bolonin A.I. Financial innovations, financial engineering and financial technologies: risks or new opportunities? Innovations and new financial technologies in the practice of banking / A.I. Bolonin, I.B. Turuev, V. Balykin // Financial markets evolution. From the classical model to the ecosystem. Challengers, risks and new features. - Palgrave Macmillan. - 2021. -P. 129- 141.
2. Chen M.A. How valuable is fintech innovation? / M.A. Chen, Q. Wu, B. Yang // Review of financial studies. - 2019. - Vol. 32(5). - P. 2062–2106.
3. Haddad C. The emergence of the global fintech market: economic and technological determinants / C. Haddad, L. Hornuf // Small business economics. - 2019. - Vol. 53. - P. 81-105.
4. Weqar F. Measuring the impact of intellectual capital on the financial performance of the financial sector of India / F. Weqar, A. Khan, M. Raushan, S. Haque // Journal of knowledge economy. - 2021. - Vol. 12. -P. 1134-1151.
5. https://www2.deloitte.com/uk/en/pages/innovation/articles/a-tale-of-44-cities- global-fintech-hub-federation-gfhf-connecting-global-fintech-hub-report- review.html .
6. Assets of financial sector institutions in China total $45.12 trillion at end of 2019. URL: https://www.chinabankingnews.com/2020/03/25/assets-of-financial-sector- institutions-in-china-total-45-12-trillion-at-end-of-2019/
7. Implication of fintech developments for banks and bank supervision // Basel Committee on bank supervision. - 2017. - 48 p.
8. Pulse of fintech. Biannual analysis of global fintech investments [Electronic resource]//KPMG. — URL: https://home.kpmg/xx/en/home/industries/financial- services/pulse-of-fintech.html
9. Frost J., Gambacorta L., Huang Y., Shin HS, Zbinden P. Bigtech and the changing structure of financial intermediation // Economic Policy. — 2019. — Vol. 34, Iss . 100. - P. 776.
10. Weill P., Woerner S.L. Thriving in an increasingly digital ecosystem // MITSloan Management Review. — 2015. — Vol. 56, No. 4. - P. 30.
11. Global financial inclusion [Electronic resource] // DataBank . — URL: https://databank.worldbank.org/source/global-financial-inclusion
12. Global fintech adoption index [Electronic resource] // Ernst&Young .—URL: https://www.ey.com/en_gl/banking-capital-markets/how-fintech-is-fueling-an-ecosystem-future-in- Europe