PhD in Economics, Associate Professor Rubanov P.M.

Sumy State University, Ukraine

FinTech Innovations as a Disruptive Technology in the National Economy

FinTech innovations are generally perceived as a positive phenomenon in the development of the national economy, as they create new opportunities for economic development, widen the involvement of households and the business sector in financial relations, increase the range of services used by economic entities. However, from the perspective of traditional financial intermediaries, including banking institutions, FinTech innovations can be seen as disruptive technologies.

Technology could be defined as "disruptive technology" if its use is fundamental to a particular disruptive innovation. The developer of the theory of disruptive innovation is Clayton Christensen. According to this theory, disruptive innovation is an innovation, employing a 'technology' in management, marketing activities and investment policy which transforms information, labour, capital, and materials into products or services of greater value, which becomes the main goal of a company, and, as a consequence, fundamentally changes the established 'rules of the game' in many industries. Thus, certain innovations can undermine existing products, firms, or even entire industries [4].

In the banking sector, FinTech technologies lead to the disruption of traditional business models and established consumer relations models, to the disappearance of certain types of financial services as a result of their digital switchover or the complete replacement of services offered by FinTech companies. The types of banking services that have been most impacted by FinTech innovations (i.e. their providers are now predominantly FinTech companies) are payments and transfers, as they are highly profitable and easily digitized.

The Capgemini report identifies the following levels of FinTech's disruptive impact on financial services [2]:

- high level: payments, personal finance management;
- medium level: lending, investments;
- low level: core banking.

The replacement or disappearance of certain services in the banking portfolio is conditioned not only by the emergence of FinTech companies as competitors to traditional banks, but also by the development of new technologies that qualitatively exceed existing approaches in traditional banking.

Examples of implementing such technologies are the growing adoption of big data, the development of better methods for identifying and quantifying risk, algorithmic investments and platforms for users to analyze and optimize their portfolios [5].

A significant desruptor of traditional approaches in financial sector is blockchain technology and its application in various areas of financial services. The first and main focus of its influence was the development of cryptocurrencies such as bitcoin, which revolutionize payments and money transfers by eliminating intermediaries and developing 'smart' contracts [5].

Examples of blockchain as a disruptive technology in the capital market are the following [1]:

1) blockchain is used for tokenisation of assets and contracts, which is led to disruption of custodians and banking: underlying assets are uniquely identified and form a database with ownership rights assigned;

2) blockchain is a universal ledger: it creates a universal record of ownership and transactions with updating in realtime with automatic reconciliation, therefore removes reconciliations from finance;

3) blockchain provides self-enforcing smart contracts (automatic settlement of financial obligations between counterparties), convert terms of transaction into 'financial code' and removes financial intermediaries in post trade;

4) blockchain is based on cryptography and updated by consensus, it has no central point of failure;

5) blockchain provides the distribution of ledger, removes multiple reconciliations and enhances peer-to-peer: participants mutually agree updates to the database, all work off copy without connectivity to a central source.

FinTech companies also focus on disruptive business models such as on-demand insurance, peer-to-peer lending and robo-advisory services. There are FinTech companies with experience in blockchain financial services that offer advanced analytics and cybersecurity services. All traditional financial services segments are experiencing this impact [3].

Thus, FinTech is a disruptive technology for the financial sector of the national economy, leading to a radical change in business models, customer interaction and financial services themselves.

Literature:

1. Brad J. Bailey (2016). Future of Fintech in Capital Markets. CAIA Association. http://caia.org/aiar/access/article-1021

2. Capgemini (2016). Top 10 Trends in Banking in 2016. URL: https://www.capgemini.com/fi-en/wp-content/uploads/sites/27/2017/07/banking_top_10_trends_2016_10.pdf

3. Capgemini, LinkedIn, and Efma (2018). World FinTech Report 2018. URL: https://www.capgemini.com/wp-content/uploads/2018/02/world-fintech-report-wftr-2018.pdf

4. Christensen, C. M., Bower, J. L. (1996). Customer power, strategic investment, and the failure of leading firms. Strategic management journal, 17(3), 197-218.

5. PwC (2016). Security challenges in the evolving FinTech landscape. URL: https://www.pwc.in/assets/pdfs/consulting/cyber-security/banking/security-challenges-in-the-evolving-fintech-landscape.pdf