

Iena NAKONECHNA

PhD in Economics, Associate Professor,

International University of Finance, Kyiv, Ukraine;

e.nakonechnaya@ukr.net

ORCID: 0000-0002-2582-3535

Olga MYKHAILYK

PhD in Economics, Associate Professor,

International University of Finance, Kyiv, Ukraine;

olga-sav@ukr.net

ORCID: 0000-0003-0526-1130

FINTECH: FEATURES OF THE BANKING BUSINESS DEVELOPMENT IN UKRAINE

Results. Modern innovative technologies are actively penetrating the financial sector of both the world and the individual country. This is directly related to the fact that consumers and customers want to get more convenient and mobile financial services. The trend of the last decade in the global market is the active development of non-physical service channels, alternative payment products based on innovative technologies, the introduction of new ways of interacting with potential customers. The forecast of the BCG consulting group (Boston Consulting Group) indicates that in the next 5 years, 30% of the world's corporate banking will go through digital channels. Banks as active market participants must meet today's conditions. The banking business in Ukraine is no exception. Therefore, the practice of monitoring financial technologies in the banking sector of Ukraine and outlining their features is the basis for forecasting the main directions of development of banking services in the new digital competitive environment.

To achieve this goal, general and special research methods are used, namely the dialectical method, the method of abstract thinking, including analysis, synthesis, comparison and analogy for substantiating the main trends in fintech development in the Ukrainian banking industry. In addition, methods of observation and generalisation are applied in order to identify the features of the current state of introducing innovative technologies in banks.

Literary review of the fintech industry in banking helped to form our own definition of the notion 'fintech' in banking. It is specific symbiosis of digital technologies and innovations in banking, which is used to create and introduce new financial products to meet the basic modern criteria of the economic environment.

The peculiarities of the fintech services development in the banking business of Ukraine are directly connected with world tendencies in the market. A study of the current state of the global FinTech market in the banking sector shows an increase in requirements for bank capital, risk management systems and for the implementation of KYC (Customer Identification, known as «Know Your Customer») and AML programs (anti-money laundering procedure). The level of penetration of fintech services into the global market indicated that developing countries are in the lead. That is, thanks to modern software, hardware and networks, FinTech encourages consumers to use new developments.

It is determined that from the standpoint of the banking business, such financial technologies as digital and peer-to-peer payments, peer-to-peer lending, crowdfunding and

Equity crowdfunding, risk management, BigData analysis and predictive modelling, security Tech are actively developing in the world.

Studies of global investments in the fintech industry found that despite the growing importance of financial resources of private investors, angel investments and venture funds, the main source of funding for FinTech companies is still their own funds.

Banks can integrate their fintech solutions through partnerships, contract acceleration and acquisitions. It is proven that the most effective strategy of relations between commercial banks and fintech companies is not competition, but the use of various mutually beneficial options of cooperation. This is confirmed by the latest research conducted by MasterCard, which shows that about 90% of banks and 75% of fintech companies in the world seek to cooperate in the future, 58% of bankers consider the possibility of introducing fintech innovations, 71% of banks intend to buy ready-made fintech solutions.

Some examples of successful cooperation between fintech companies and the banking business are also given in the research. For instance, the introduction of financial and innovation program ING Fintech Village and the creation of an investment fund for the development of start-ups in the amount of 300 million euros from ING, The Village by CA – an investment fund for start-ups in the amount of more than 100 million euros from Credit Agricole, own business incubator, an accelerator Fintech Boost of L'Atelier and an investment hub called We Are Innovation from BNP Paribas, business start-up programs called Elevator Lab partnership program, Elevator Lab Challenge and Elevator Lab Bootcamp from Raiffeisen Group, Citi FinTech Open Innovation Challenge, Global API Developer Hub, Innovation Lab from Citi bank.

The analysis of fintech segments of the global financial market determined that digital payments are in the first place by the value of transactions, followed by personal finance management and lending.

It is proven that the development of Open Banking technology is radically changing the ecosystem of financial markets; banks are becoming new operators of financial services. The level of readiness of banks and fintech companies to implement open banking is influenced by such factors as human resources, adequacy of financing, adequacy of security tools, technological responsibility and compliance with regulatory rules.

The trend in the global financial market is the transition of the world's largest banks to 'Open X Banking' (Open X). It is found that the new technology will contribute to the creation of a sharing economy, the formation of an integrated market with specialised roles for each participant, the organisation of an uninterrupted exchange of data and services, the improvement in service quality and customer satisfaction, the reduction of fraud and an increase in scalability.

Studies of the prospects for further fintech development of the global banking business indicated that competition with fintech companies might lead to a loss of traditional transaction revenues, a customer base and the redistribution of liquidity. All these changes can cause monopolisation and fragmentation of the market by large companies that have significant budgets for fintech development. The main segments of the banking market that will suffer as a result of such changes are corporate, retail, investment banking, infrastructure projects, banking transactions and payments. The forecasts for the next 10 years suggest that banks may lose up to 60% of profits in favour of new players in the financial market.

The analysis of the Ukrainian banking fintech market revealed that the development of the banking business in Ukraine differs radically from the world banking business and it contradicts global trends. This is due to the fact that Ukrainian banks do not accept digital transformation as an opportunity, but they regard it as a 'parallel reality'. The reasons for this statement are that banks have a very low level of participation in the capital of fintech

companies (87% of banks do not have shares of fintech companies), the experience of board members in the fintech industry is limited, half of banks do not even have a devised innovative strategy. In their activities, banks first of all improve IT areas to increase the level of protection of customer data and the bank itself from cyberattacks and minimise operating costs, and only then, they implement other fintech capabilities.

It is established that the absence of a sustainable FinTech ecosystem, a small number of specialists in the market, a small share of the financially literate population, insufficient coverage of the country by broadband Internet access, inflexible regulation in certain areas, low investment attractiveness for foreign investors and capital outflows in the conditions of the pandemic due to the recession hinder the development of the banking business in Ukraine.

Card payment services and back office software development and maintenance are in the greatest demand among fintech solution services provided to banks. The main trend of 2020 in the Ukrainian card market was the active transition of Ukrainians to contactless payments and payments on the Internet. Both in the global market and in Ukraine most banking institutions are actively involved in joint projects with fintech companies or plan to cooperate in the future. Such models of cooperation enable banks to reduce investment costs and minimise risks.

A study carried out by the National Bank of Ukraine and the Association of Financial Technologies of Ukraine on the extent to which domestic banks are involved in cooperation with financial technology companies indicated that all banks-respondents cooperate with fintech projects or are preparing to launch them. In most cases, they set up joint projects rather than create personal innovation centres, although such a strategy is present in the market. It is established that almost all respondents avoid investing in start-ups.

The active development of the FinTech-environment in Ukraine is evidenced by the interaction of large Ukrainian banks, including Oschadbank, Ukrgasbank, Raiffeisen Bank Aval, Alfa-Bank, Ukrsibbank, FUIB (PUMB), OTP bank and Megabank with FinTech companies. It is worth noting that 63% of projects are financed by banks with their own resources and all of them have passed the break-even point. These banking institutions have their own acceleration programs (Alfa Digital, POPCORP, Raiffeisen Digital HUB, Open Banking Lab) and are actively developing banking fintech products (Airpay, IPay, LigPAY, QR-PAYMENTS, Privat24, Chat-bot 'Online Assistant', schad PAY, schad 24/7, Alfa-mobile, PUMB online, PUMB mobile, UKRSIB online, Raiffeisen Pay, Raiffeisen Online, OTP Smart).

It is found that the most successful and potential areas of introducing FinTech into the banking sector in Ukraine are artificial intelligence, open banking, blockchain, mobile banking.

It is proven that artificial intelligence is one of the promising directions of further development of information systems and financial technologies of Ukraine. Estimates suggest that by 2030, the banking industry will be able to save about 1 trillion dollars through the use of artificial intelligence. An example of the successful implementation of projects with the use of artificial intelligence is the collaboration of Raiffeisen Bank Aval and VISA – a chatbot 'Concierge Service Business Banking', the main purpose of which is to offer advice on legal and organisational issues.

It is determined that the development of artificial intelligence for the banking business of Ukraine minimises costs, increases efficiency and income, productivity and quality of services provided. Furthermore, artificial intelligence provides an opportunity to move to more personalised service delivery. One of the most popular areas of artificial intelligence is robo-consulting, because, in addition to the fact that it can be used for various purposes, such as fraud prevention or risk management, this type of service is much cheaper compared to traditional financial counselling.

The open banking system has a similar goal in terms of greater customer orientation. Given the peculiarities of the banking sector of Ukraine (a complicated ownership structure,

transactions with related parties, lending to business beneficiaries), Ukrainian banks are not ready to disclose data, so fintech companies still find it difficult to work with them. However, taking into account the fact that open banking is a global trend, further collaboration between banks and fintech start-ups in this direction is inevitable.

Blockchain is considered one of the most important innovative technologies in various industries. In Ukraine, banking institutions are in the early stages of blockchain adoption. They either focus on developing their own blockchain strategy, or work on proof of the effectiveness of blockchain technology as a whole. An example of the use of blockchain technology in Ukraine was the fact that in 2018 the National Bank of Ukraine issued a limited amount of its own digital currency based on blockchain technology – electronic hryvnia.

It is established that the Ukrainian banking business, like the world one, is transforming and moving to a digital format. The paper identifies the main growth factors in this trend, such as convenience, time savings, availability, the reduction of cost items and cheaper transaction processes. It is determined that there are 6 digital banks in Ukraine: O.Bank, Monobank, Todobank, Izibank, Sport bank, Neobank. A comparative analysis of the cost of services of traditional and digital banks indicated that the cost of services of digital banks is lower compared to the tariffs of traditional banks due to savings in operating costs.

In order to identify prospects for the promotion of the banking business, a SWOT analysis of the development of digital banking in Ukraine was conducted. Increased profitability of operations and the expansion of the client portfolio are among the key advantages for banks. The main disadvantage of the digital transformation of banks is its significant cost. The process of the digital banks development entails such risks as loss of personal data, fraud risks, technological and operational risks. It is established that further development of digital banking will primarily depend on the improvement in IT technologies that reduce the cost of digital transformation of banking institutions, on the search for new ways to protect data in the face of cyber attacks, as well as on bridging the digital divide between urban and rural areas.

Generalisations of scientific and practical research provided an opportunity to form an adaptation scheme for the development of fintech-innovations in banking and to describe the features of the procedure for developing innovative banking products and services.

The main advantages of integrating fintech solutions into banking services are identified. They are the convenience of obtaining a banking service without being tied to branches and business schedules; the speed of operations due to automation and reduction of the human factor; the prospect of rapid scaling without the need to expand the branch network, the gradual transition from offline to the Internet and digital banking; uniqueness, the reduction of costs for banks, an increase in economic efficiency; an increase in sales; comprehensive competitive advantages in the long run. These advantages serve as a trigger for the development of potential opportunities for the banking business in the fintech market of Ukraine: the development of a cashless economy, a rise in digital and financial literacy of consumers and business, an increase in investment potential and an increase in the degree of the FinTech development, the integration of the Ukrainian FinTech ecosystem into the global financial space, further development of the digital infrastructure of the financial market. The important role of the National Bank of Ukraine in the development of financial technologies and cooperation of commercial banks and fintech companies is also highlighted.

The results of the analysis of the impact of FinTech on the banking sector made it possible to predict scenarios for creating innovative products and services for customers based on fintech solutions. It is established that the implementation of the developed measures is aimed at achieving long-term strategic goals of the bank development related to the introduction of innovative methods of work, new banking products and services in order to increase and expand the customer base, increase its competitiveness and efficiency, commercialise modern knowledge, technologies and equipment.

Further research will be aimed at an in-depth study of certain areas of cooperation between fintech and banking.

References

- Alfa-Bank Ukraine (2021). Official web-site. Retrieved from <https://alfabank.ua>.
- Boston Consulting Group (2020). Official web-site. Retrieved from <https://www.bcg.com>. google scholar.
- Capgemini. World Fintech Report (2019). Retrieved from https://www.capgemini.com/es-es/wp-content/uploads/sites/16/2019/06/World-FinTech-Report-WFTR-2019_Web.pdf. google scholar.
- Catalog of FinTech companies of Ukraine (2020). Retrieved from <http://fintechua.org/FintechCatalog20Ukr.pdf>. google scholar.
- Filing of Ukrainian banks and financial companies (2019). Retrieved from <https://www.ey.com/Publication/vwLUAssets>. google scholar.
- FS industry ready to shift from Open Banking to «Open X». Finextra (2020). Retrieved from <https://www.finextra.com/newsarticle/33935/fs-industry-ready-to-shift-from-open-banking-to-open-x-capgemini>. google scholar.
- FUIB (2021). Official web-site. Retrieved from <https://www.pumb.ua>.
- Izibank (2021). Official web-site. Retrieved from <https://izibank.com.ua>.
- Monobank (2021). Official web-site. Retrieved from <https://www.monobank.ua>.
- National Bank of Ukraine (2020), 'In Ukraine Non_Cash Transactions Predominate in Terms of Number and Amount'. Retrieved from <https://bank.gov.ua/ua/news/all/zakilkistyutasumoyuvukrayini>. google scholar.
- National Bank of Ukraine (2020), 'Strategy of Ukrainian Financial sector development until 2025'. Retrieved from <https://bank.gov.ua/ua/news/all/strategiya-rozvitku-fintehu-v-ukrayini-do-2025-roku>. google scholar.
- Nazariy, H. (2020). FinTech's Impact on the Future of Banking and Financial Services. Retrieved from <https://geniusee.com/single-blog/fintechs-impact-on-the-future-of-banking-and-financial-services>. google scholar.
- Neobank (2021). Official web-site. Retrieved from <https://all.neobank>.
- O.Bank (2021). Official web-site. Retrieved from <https://obank.com.ua>.
- Oschadbank (2021). Official web-site. Retrieved from <https://www.oschadbank.ua>.
- OTP Bank Ukraine (2021). Official web-site. Retrieved from <https://www.otpbank.com.ua>.
- Osipovskaya, A.V., Mikhailin, A.V. (2017). Development of financial technologies in the sphere of banking services: main directions. *Young scientist*, 26, 124-127. google scholar
- Raiffeisen Bank Aval (2021). Official web-site. Retrieved from <https://www.aval.ua>.
- PrivatBank (2021). Official web-site. Retrieved from <https://privatbank.ua/ua>.
- Pulse of FinTech H2'20. February 2021 (2021). Retrieved from <https://assets.kpmg/content/dam/kpmg/xx/pdf/2021.pdf>.
- Report: 'Global FinTech Adoption Index 2019' (2019). Retrieved from <https://asd-team.com/blog/global-fintech-adoption-index-2019-report-highlights>. google scholar.
- Statista (2020). Number of Fintech startups worldwide from 2018 to 2020, by region. Retrieved from <https://www.statista.com/statistics/893954/number-fintech-startups-by-region>. google scholar.
- Sportbank (2021). Official web-site. Retrieved from <https://sportbank.com.ua>.
- Survey of Ukrainian banks and fintech companies (2019), Retrieved from http://www.fst-ua.info/wp-content/uploads/2019/12/FinTech-Survey-Report_UKR. google scholar.
- Todobank (2021). Official web-site. Retrieved from <https://todobank.ua>.
- UkrGasbank (2021). Official web-site. Retrieved from <https://ukrgasbank.com>.

UKRSIBBANK (2021). Official web-site. Retrieved from <https://my.ukrsibbank.com/ua>.

UNIT.City (2018). FinTech in Ukraine: Report of the USAID ‘Transformation of the financial sector and the innovation Park’, Retrieved from http://data.unit.city/fintech/fgt34ko67mok/fintech_in_Ukraine_2018_ua.pdf. google scholar.

Vorobjov, V. (2020), ‘Fintech will change its perception of the financial services market in the future’. Retrieved from <https://yur-gazeta.com/interview/finteh-zminit-uyavlennya-pro-rinok-finansovih-poslug-u-maybutnomu.html>. google scholar.