GLOBAL DIGITAL TRENDS AND THEIR IMPACT ON NATIONAL ECONOMIC PROGRESS

Monograph

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36. MARKETING OF DEVELOPMENT BANKING INNOVATIONS IN THE FINANCIAL MARKET OF UKRAINE

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Introduction. In the conditions of transformational changes in the economy of the world with a vector for the development of digital innovations in the banking sector and overcoming the crisis of the banking system, an important role is played by effective organization of movement and redistribution of society's resources in monetary terms. Global economic trends demonstrate the objective need to ensure the innovative development of banking institutions as a prerequisite for their survival in a period of financial instability, increasing economic potential. Innovative development of banking institutions that need to increase the efficiency of marketing processes, its modern concepts and components, allows the formation of new approaches to ensuring their financial stability and requires the use of marketing approaches throughout the life cycle of innovation, from finding innovative ideas to product market.

Thus, the market of banking services can positively affect the level and rate of growth of gross domestic product and the development of financial innovations in the banking sector of the economy, forming a separate direction of marketing activities in the financial market, focused on quality satisfaction of current and future needs, services and marketing technologies; to take into account the interests of stakeholders in the innovative and profitable development of banks; to gain a competitive advantage in the face of increased competition between financial intermediaries, the impact of digitalization and financial instability. At the same time, the identification of risk factors for marketing banking innovations, in particular their systematization by determining the weighted average level of marketing risk of banking innovations allows to assess their impact on banking institutions, enabling the formation of an effective system of measures to minimize negative consequences of financial instability.

Literature review. Many works of Ukrainian scientists and experts are devoted to the theoretical and practical aspects of banking marketing, its connection with the development of technological tools of the financial market. Poddubna V.G. [1] proves that financial instability in the modern market determines the need for the formation of special marketing tools for the introduction of innovations and indicates directions for the use of special marketing tools to ensure the financial stability of the banking business and the orientation of innovative activities of banks not only on their capabilities, but also to the needs of the market. L. V. Zherdetska [18], Lomachynska I. A. [16] considers the development of financial technologies as a defining feature of the banking environment in his works. Zherdetska L.V. conducts an analysis of the scale of investments in the creation of FinTech firms by region and areas of activity and substantiates the need and possible directions of partnership development between FinTech firms and traditional banks. V. M. Harabara, R. I. Greshko, and O. V. Tretyakova [18], V. I. Mishchenko, S.V. Mishchenko [19] give the essence of banking marketing and proposals for intensifying the use of marketing tools in the banking sector.

Bank marketing problems have been the subject of scientific research by foreign scholars such as Borden N. [2], Doyl P. [6], Beck Th., Chen T., Lin Ch., Song F.M. [8] and many others, because the development of the financial sphere in the conditions of digitalization of the world is always a relevant issue.

Results. Banking marketing of innovations as a socio-economic category increases the efficiency of the results of the introduction of new products and services, confirming this by increasing revenues and gross margins of banking institutions. The amount of innovation marketing financing determines the financial benefits from the introduced new products and services in the banking innovation environment that reproduces and carries out purposeful search, preparation and implementation of innovations. During the formation of the banking innovation environment, possible risks are taken into account at the stages of managing the development of innovation marketing: the risk of managing the process of creating innovations and the formation of new needs of customers of the banking institution; the risk of forming and managing the creative potential of the banking institution's staff; the risk of quality management of innovation development processes; social and psychological risks of development and implementation of the latest banking technologies, products and services. At the same time, marketing support for the implementation of banking innovations is carried out using marketing techniques that form key information about customers (existing and potential consumers of innovative banking technologies, products and services), competitors and the external environment.

Banking innovations are characterized by marketing support in the financial market with modified technologies that are interdependent with marketing methods that form a platform for the promotion of new banking products, taking into account the goals of modern marketing. Marketing of innovations is due, first, to objective, independent of the marketing activities of banking institutions (global conditions of competition under the influence of digital transformation, promising conditions for the transition to innovative banking technologies, changing the role of banking institutions in the financial market(disintermediation) intensifying the development of new banking products); secondly, the need for both the development of banking marketing and the formation of specific innovative marketing tools in the financial market; development and implementation of new banking products and services under the influence of digitalization necessitates the use of new technologies for the operation of marketing activities of banking institutions [1].

The assessment of the impact of marketing of banking innovations on the financial stability of banking institutions should be based on the conceptual model of "marketing mix 4P" and methods of its practical application [2] and supplemented by models "5P" and "7P", which according to the content load detail the model "4P" [3]. In addition, introduced a marketing complex "4C" [4], which changes the emphasis of marketing technologies from product to consumer (that is the main importance is given not so much to the product and its development, as the consumer of the product and its receipt benefits).

From the standpoint of the specifics of banking products and marketing, the complex "4C" is based on the initial elements of the complex "4P": product, price, distribution, promotion. Depending on the goals of banking marketing, additional elements are formed that help manage customer choice. The optimal complex "4P" in terms of digitalization forms a combination of marketing tools that ensure the rational use of available funds for the marketing budget of banking innovations. The relative importance of each individual element of the marketing complex depends on various factors influencing the activities of banking institutions. That is, under the influence of digitalization is the transformation of all components of "4P". In addition, digital technologies reduce banking "information asymmetry", save financial resources by reducing the cost of renting and maintaining the premises, reducing the number of staff, covering a wide range of customers, not limited to geographical location [5].

An adaptive approach to the marketing complex in the digital transformation of banking products allows you to carefully analyze the structure of each variable included in the complex "4P" taking into account the specifics of its activities and target audience. That is, the components of the complex are established, which are manageable for the banking institution and are outside the sphere of its influence, namely: basic variables (elements of the traditional marketing complex: product, price, place, promotion); independent components (components of basic variables, which, taking into account the specifics of the bank, it is logical to give an independent status); derivative variables they are constructed from combinations of independent components in the case when it is expedient (or even from combinations of basic variables) [6]. In our opinion, it is necessary to establish a functional interaction between the marketing of banking innovations and financial stability of banking institutions, highlighting the risk factors of financial instability that threaten the effective functioning of the banking system and the economy as a whole. It should be noted that the source of instability at the global and national levels are the processes of transformation of financial market actors and the reproduction of financial resources through intermediaries. These processes are dialectical in nature. On the one hand, under the influence of the digital economy, they are able to promote the formation of new powerful impulses for innovative development, and on the other due to the growth of types and volumes of digital financial technologies there are disparities that exacerbate critical contradictions in the economy (Table 1).

Table 1. Factors influencing the development of marketing of banking innovations in conditions of financial market instability

Group of factors	Characteristic
Factors of globalization nature (meta level)	The complexity of the functioning of international banking systems and the use of new financial instruments, the variety of operations and the speed of movement of financial capital, which increases the number of banking risks, their manifestations and possible consequences (the emergence of systemic risk). Requirements for new conditions for the functioning of banking institutions, through the creation of a foreign network of divisions, the introduction of common global standards of customer service. Reducing the share of traditional intermediation, reorienting cash flows to securities markets, which, thanks to new technologies, are able to provide liquidity of banking institutions, transparency, financial security and high profitability. Modification of banks' strategies due to the focus on changes in the economic situation in the world. Unification of the entire financial sector of the economy of different countries when working in both domestic and foreign markets. Lack of opportunities for the national economy to remain completely closed from foreign capital, which leads to increased competition. The growth of the share of knowledge-intensive industries in the economy leads to an increase in investment and credit resources that have low profitability and a longer period of their return and payback. Improving the level of information and computer support of banking institutions, expanding the range, improving the quality of services and competitiveness in the market.
Factors national character economic development (macro level)	The state of the economy, in which intelligence and innovative solutions determine the pace and prospects of economic development and man becomes the driving force of production, aimed at increasing his abilities and increasing the set of his needs. Development of information and communication technologies and formation on their basis of network economy in which joint projects acquire special value. Information and financial awareness of customers. Changes in the regulation of banking and the functioning of financial markets. Changing demand for banking products due to declining household incomes.
Intrabank factors (micro level)	The need to spread new communication and information technologies, global telecommunications. The level of innovation potential of banking institutions which is determined by the ability to generate, perceive and implement innovative ideas, using available and potential resources. Existence of an effective risk management system capable of objectively assessing and minimizing innovation risks together with other banking risks. The state of innovation culture that is manifested in the willingness of bank employees to innovate in all areas of the banking business and their ability to create innovative ideas. The nature of financial instability of banks, the need to implement tools and methods of macro-regulation, improvement of micro-regulatory methods.

Source: *systematized by the authors according to [7, 8]*

Financial instability as a result of irrational optimism of investors encourages overvaluation of assets, causing a sharp increase in the risk of deterioration of the banking sector of the economy. The main causes of financial instability include increased volatility of financial markets and deteriorating solvency of financial intermediaries [9].

The development of crises contributes to the spread of financial derivatives, which create conditions for a multiple increase in financial resources in the market, leads to a significant excess of credit growth compared to GDP, as the growing level of financial instability generates instability. This causes credit risk that leads to a decrease in the income of borrowers and the loss of their ability opportunities to fulfill obligations on time to banking institutions. We propose to highlight the state of the banking system depending on the level of risks and external shocks, such as stability, instability, volatility and crisis (Table 2).

Table 2. The state of the banking system depending on the accumulated risks and external shocks

<table>
<tr><td colspan="2" rowspan="2">Criteria for determining the state of the banking system</td><td colspan="4">Accumulated risks</td></tr>
<tr><td>minimal</td><td>insignificant</td><td>significant</td><td>critical</td></tr>
<tr><td rowspan="4">Level external shock</td><td>strong</td><td colspan="2" rowspan="2">Financial volatility</td><td colspan="2" rowspan="2">Financial crisis</td></tr>
<tr><td>moderate</td></tr>
<tr><td>weak</td><td colspan="2" rowspan="2">Financial stability</td><td colspan="2" rowspan="2">Financial instability</td></tr>
<tr><td>absent</td></tr>
</table>

Source: compiled by the authors according to [11]

In the absence (weakness) of external shocks, the financial condition of the banking system can be defined as "financial stability" – the banking system is able to perform its functions (payments, transformation of savings into a resource of economic growth, etc.). With a small or minimal level of risk, the state of the banking system is characterized as "financial volatility", and in this case, the violation of the functions of banking institutions will be minimal and short-term. In some cases, financial stability can be restored without the intervention of the regulator (bank risk management) [10].

Among the factors of financial instability of the banking system are financial innovations in the form of complex financial instruments CDO (Collateralized Debt Obligations), ABS (Asset Backed Securities) and CDS (credit default swaps) [12]. In addition, the complexity of financial and banking innovation limits the ability of investors to adequately assess risks [13] and weakens banks' credit standards [14]. It should be noted that the causes of financial instability are caused not only by the cyclical development of the state economy, but also by the strategy of using banking marketing, in which investors plan unrealistic expectations of profit, borrowing funds to buy assets and bringing their prices to a high level.

The negative impact of excessive competition leads to aggression in the implementation of the marketing strategy of banking institutions [15], which leads to such sources of financial instability as the transformation of terms, financial leverage and credit expansion. That is, banking institutions look for sources of increased lending activity in conditions of fierce competition, increase return on assets without adequate capital growth (expansion and reduction of leverage), as well as lending terms without changing the term of borrowing (transformation of terms), which increases credit risk and market share in the structure of the real sector of the state economy. The main sources of uncertainty in the implementation of marketing tasks of banking innovations include: uncertainty of actions of competing banks or financial intermediaries (Fintech) in the market of banking services; ambiguity of forecast estimates of the results of the introduction of new banking products and their impact on the processes of socio-economic development of the country; uncertainty of goals and criteria for the effectiveness of marketing of banking innovations, as well as the need to take into account a significant number of factors when making decisions; lack of information, especially quantitative data needed to make marketing decisions to create and promote banking innovations in the market; concepts, methods and tools of banking marketing, which occur under the influence of digitalization processes [16]. Blockchain technology, as a priority of the “blue oceans” of marketing of banking innovations allows you to save and use the resources of the participants Fintech. That is, the transaction is carried out without the participation of the main counterparty (banking institution or payment system), while providing the conditions for the creation of crypto currency by recording information about transactions.

Thus, the marketing of banking innovations can have a stabilizing and destabilizing effect on the financial condition of banking institutions or the banking services system as a whole. On the one hand, the introduction of banking innovations helps to minimize risks and increase profits; however, on the other hand, there is a destabilizing effect associated with information asymmetry, the emergence of credit risk and diversion of funds to innovation instead of increasing equity and its increase which is a necessary component in developing a marketing strategy for banking innovations.

A significant amount of banking products is sold through information technology, which, in turn, plays a key role in product differentiation and customer engagement. In the banking system of Ukraine, the digital transformation has allowed to form Digital channels (networks of ATMs, Internet banks, mobile banks, chat bots) and create effective interaction between consumers and banking institutions at the most acceptable time for them. Digital products have been introduced is “Big Data”, contactless payments, virtual cards, artificial intelligence, etc. With the help of advanced modern software, E2E (end-to-end) products have been created, which satisfy the demands of bank customers around the clock.

The creation of artificial intelligence (“Digital Brain”) which continuously automatically studies the data of all banking business segments, will contribute to a broader understanding of their capabilities and customer needs. The current cycle of digital servicing of traditional banking products through Digital services and the introduction of new digital services in the network business model of the banking system of Ukraine has influenced their competitiveness in global and global financial markets. Note that the world's banking institutions are already using artificial intelligence to experiment with personalizing their services. For example, in the USA pilot projects on use of artificial intelligence of automated consultants for interaction with clients are realized in system of artificial intelligence all procedures and mechanisms of rendering of necessary service are described, history of calls, history of use by bank services of bank etc. is formed. The peculiarity of the fifth stage is the introduction of “Digital DNA” is a new system for making priority decisions about the life cycle of a banking institution.

The development of marketing banking innovations has gained a wide range through online services [17]:

“First National Bank” (FNB) (South Africa) is recognized as the most innovative financial institution in Africa, thanks in large part to customer-focused technologies: fingerprint recognition and live chat with private bankers. FNB also offers a full suite of digital tools for small business owners, including DocTrail, a document tracking service, automatic account replenishment and linking to payments;

EVO Banco (Europe) offers the following innovative products: smart mortgage, which varies depending on market conditions and has a free year of life insurance; an intellectual account that automatically transfers money from a current account to a savings account when it reaches a certain balance; use of artificial intelligence to interact with customers;

Banking institutions that actively use the marketing of banking innovations offer a number of social and environmental initiatives: “New Zealand Banking Group” (ANZ) creates projects that help businesses reduce the risks of environmental impact;

“Banco Popular Dominicano” seeks to improve both the domestic culture and the technological infrastructure through the introduction of the most advanced goods and services in the country;

“National Commercial Bank” is the first bank in Saudi Arabia to receive an international certificate for leadership in social responsibility through women's financial inclusion;

US Bank provides services to customers to obtain financial resources through its own training center.

Marketing of innovations in banking services is impossible without careful development of a set of marketing technologies that allow timely response to changes in the internal and external environment of banks. During the implementation of new types of Internet banking, effective use of the capabilities of the bank's official websites, integrated information mobile systems, as well as the offer of new types of banking products and services, a real opportunity appears to develop a new segment - the segment of “network” bank customers [18, p. 46].

The optimal direction of further development and ensuring the stable functioning of banking marketing systems is the combination of traditional banking technologies with the advantages and technological innovations of FinTech firms, which will make it possible to form a new structure of the financial services industry and ensure the implementation of a client-oriented strategy for the development of banking business [19, p. 78]. However, the threat to the competitiveness of banking institutions can be posed by FinTech firms themselves, which use a combination of technologies with client-centric service and a flexible business structure to reduce costs, expand the client base and increase the market share of assets in the financial market [20].

New tools for marketing innovations in banking services (Fintech) undoubtedly contribute to the development of the payment sphere, strengthening competition and improving the quality of existing and creating new payment services and products. The implementation of European approaches and practices created all the conditions in Ukraine for the introduction of open banking, which involves structured and secure data exchange between payment service providers through open APIs (application programming interfaces). In 2024, the National Bank approved the Concept [21] of Open Banking, which will become operational in 2025.

In general, innovation in FinTech is a continuous process. Almost every month, the market creates and offers new financial solutions to improve the client's experience in interacting with banks. The main trends and innovations in the field of FinTech, which are relevant today, include the following four aspects:

1. Open Banking and APIs: The concept of open banking, which provides access to financial data of customers to third parties, which allows the creation of new financial products and services (open banking).

2. Hyper-personalization: “Targeting” in the banking sector, the main tools of which are the use of Big Data and technologies to provide individual services to each client, taking into account a wider range of factors such as real time, psychographics and contextual information.

3. Data privacy, security and fraud prevention: From open banking and hyper-personalization comes the need for appropriate measures to protect large volumes of personal data of customers and fight financial crimes.

4. Regulatory changes and new payment schemes: Implementation of the global standard for payment messages ISO 20022 will contribute to the globalization of financial systems and improve the efficiency of international and domestic payments. Thanks to the implementation of this standard, payment transactions will have a more structured and understandable volume of data for analysis and further personalization, which banks will operate to create hyper-personalized solutions.

Thanks to the above-mentioned trends, banks can maintain a high level of competitiveness and provide customers with new opportunities to manage their finances and receive personalized financial solutions.

Conclusion. The process of market transformation in the global space objectively stimulates the rapid development of banking institutions, which are central to the market system of economic relations and an integral part of modern world civilization, a powerful force for accumulating huge amounts of money redistributed to the economy, continuity of the reproductive resource base and, as a consequence, the increase of tangible and intangible benefits of society. Given the priority areas of formation and development of the world economy, the study of the transformation of banking in the digital economy in an unstable economy leads to the search for appropriate approaches to the organization of marketing activities with the use of banking innovations. In this case, it becomes extremely important to identify and assess the risks of marketing banking innovations. The analysis of risks of marketing of bank innovations is expedient if: the modern strategy does not correspond to new challenges and conditions of external environment (strengthening of aggressiveness of competitors); sales of banking products are sharply reduced, some sectors of banking products are lost; customers refuse to use traditional products and services.

The use of digital technologies in banking today is an objective necessity and is important in the development and implementation of its own strategy for the development of financial technologies that provides financing for high-tech digitization projects and contributes to high performance in both financial and socio-economic activities at the global level. Therefore, providing support for the functioning and digital transformation of the banking system in the formation and development of the digital economy at the state level will create a system of marketing regulators to accelerate changes in the current business model and marketing strategies to select the banking sector, promising service segment and customer satisfaction banking innovative products.

REFERENCES

1. Piddubna V. H. (2018). Tsyfrova transformatsiya marketynhu bankivs′kykh innovatsiy v umovakh finansovoyi nestabil′nosti. *Visnyk sotsial'no-ekonomichnykh doslidzhen': zb. naukovykh prats'* (ISSN 2313-4569); pid red.: M. I. Zvyeryakova (hol. red.) ta in. Odesa: Odes′kyy natsional′nyy ekonomichnyy universytet, 3 (67), 209–221. https://doi.org/10.33987/vsed.3(67).

2. Borden, N. (2001). Concept of marketing mix. Marketing Classics: A Compilation of Works That Have the Most Marketing Impact. St. Petersburg: Peter, 600 p.

3. Kotler, P., & Caslione, J. A. (2009). Chaotics: The Business of Managing and Marketing in the Age of Turbulence. New York : AMACOM, 208 p.

4. Lauterborn, B. (1990). New Marketing Litany: Four Ps Passé: C-Words Take Over. *Advertising Age*, 41, 26-34.

5. Melnychenko, O. (2013). Analiz vykorystannya al′ternatyvnykh kanaliv zbutu ta novykh tekhnolohiy u diyal′nosti bankiv. *Visnyk Natsional'noho banku Ukrayiny*, 12(19), 68-85.

6. Doyl, P. (2003). Marketing management and strategies. St. Petersburg: Peter, 544 p.

7. Caccioli, F., Marsili, M., Vivo, P. (2009). Eroding market stability by proliferation of financial instruments. *The European Physical Journal B: Condensed Matter and Complex Systems*, 71(4), 467-479. https://doi.org/10.1140/epjb/e2009-00316-y.

8. Beck, Th., Chen, T., Lin, Ch., Song, F.M. (2012). Financial innovation: The bright and the dark sides. Working Papers 052012. Hong Kong Institute for Monetary Research, 64 p.

9. Crockett, A. (1997). The theory and practice of financial stability. *GEI Newsletter Issue. Global Economic Institutions*, 203(4). Retrieved from: https://ies.princeton.edu/pdf/E203.pdf.

10. Zvyeryakov M.I., Kovalenko V.V., Serhiyeva O.S. (2016). Upravlinnya finansovoyu stiykistyu bankiv: navch. K.: Tsentr uchbovoyi literatury, 520.

11. Frait, J., Komárková, Z. (2011). Financial stability, systemic risk and macroprudential policy. *Czech National Bank*, 96-111. Retrieved from: https://www.researchgate.net/publication/254399357_Financial_Stability_Systemic_Risk_and_Macroprudential_Polic.

12. Dimsdale, N.H. (2009). The financial crisis of 2007-2009 and the British experience. *Oxonomics*, 4(1), 1-9. https://doi.org/10.1111/j.1752-5209.2009.00026.x.

13. Simkovic, M. (2013). Competition and crisis in mortgage securitization. *Indiana Law Journal,* 88(1), 214-271. Retrieved from: https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=11040&context=ilj.

14. Carbo-Valverde, S., Degryse, H., Rodríguez-Fernández, F. (2015). The impact of securitization on credit rationing: empirical evidence. *Journal of Financial Stability,* 20 (C), 36–50. https://doi.org/10.1016/j.jfs.2015.06.004.

15. Tushaj, MSc. A., Sinaj, V. (2012). What about the relationship between banking competition and financial stability? Case of Albania. Center for economic Analyses, 25-32. Retrieved from: https://ideas.repec.org/a/cmk/journl/y2012p25-32.html.

16. Lomochyns′ka I.A., Kunytsya V.S. (2018). Rol′ FinTekh v modernizatsiyi bankivs′koyi diyal′nosti v umovakh hlobalizatsiyi. *Visnyk ONU imeni I.I. Mechnykova*, 5(70), 190-195. Retrieved from: http://liber.onu.edu.ua/pdf/visn_econom_23_5(70).pdf.

17. Most innovative banks. World Finance. (2020). Retrieved from: https://www.worldfinance.com/banking-guide-2020/most-innovative-banks.

18. Kharabara V. M., Hreshko R. I., Tretiakova O. V. (2021). Osoblyvosti suchasnoho bankivskoho marketynhu. *Investytsii: praktyka ta dosvid*, 4, 43-46. DOI: 10.32702/2306 6814.2021.4.43.

19. Mishchenko V.I., Mishchenko S.V. (2018). Marketynh tsyfrovykh innovatsii na rynku bankivskykh posluh. *Finansovyi prostir*, 1(29), 75-79. Retrieved from: https://journals.indexcopernicus.com/api/file/viewByFileId/869956.pdf

20. Zherdets′ka L.V., Horodyns′kyy D.I. (2017). Rozvytok bankivs′kykh tekhnolohiy: zahrozy ta mozhlyvosti dlya bankiv. *Ekonomika ta suspil'stvo*, 10, 583-588. http://dx.doi.org/10.21272/mer.2019.86.11.

21. Kontseptsiya vidkrytoho bankivs′koho obsluhovuvannya. Natsional′nyy bank Ukrayiny. Retrieved from: https://bank.gov.ua/admin_uploads/article/Open_banking_conception_NBU_2023.pdf?v=7 (Last accessed: 07.02.2024)