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Risk-Culture in the Bank's Digital DNA: the Foundation of Sustainable Development

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Abstract

The article focuses on the key aspects of digitalisation of the banking sector of Ukraine, which is the driving force behind the development of the national economy. The main stages of digital transformation, the introduction of the concept of "digital DNA" of the bank and its key components are considered. Particular attention is paid to the formation of a risk-culture in the context of the spread of innovative technologies such as artificial intelligence, blockchain and machine learning. The main risks associated with digitalisation are analysed, including cyber threats, operational, reputational and legal risks. The author highlights the importance of developing a proactive corporate culture, implementing modern risk management systems and investing in cybersecurity. A comprehensive approach to digitalisation will contribute to the sustainable functioning of the banking sector and its competitiveness in the face of global challenges.

Keywords

Digitalisation, banking sector, digital DNA of the bank, risk-culture, cybersecurity, risk management, innovative technologies, digital development strategy.

The Ukrainian banking sector is actively transforming, becoming a driving force behind the digitalisation of the national economy. As a result of the joint efforts of the National Bank of Ukraine and the Ministry of Digital Transformation, financial services are becoming more accessible, convenient and transparent for citizens. This transformation is an integral part of the strategy for the development of a digital state, which aims to integrate modern technologies into all aspects of public life. For banks, digitalisation opens up new opportunities to optimise internal processes: the use of big data and artificial intelligence helps analyse customer behaviour, predict risks and develop products that best meet customer needs; blockchain technologies ensure transparency of financial transactions and protection against fraud. Scientific papers [1, 2] identify five main stages of banking business digitalisation: 1) emergence of digital channels; 2) creation and implementation of digital products; 3) change in business models of banks; 4) creation of artificial intelligence; 5) building digital DNA.

At the moment, the improvement of bank digitalisation management lies in the implementation of the concept of the bank's "digital DNA" [3], which is based on a comprehensive management system for the integration of new technologies and provides for the establishment of a new coordinate system for making strategic decisions throughout the bank's life cycle, in particular:

1. Revision of the bank's business model and operating model - aims to increase the level of product digitalisation to improve the bank's performance.
2. Building an ecosystem of partnerships with companies that create new digital innovations.
3. Modernisation of customer interaction, which involves a transition to a customer-centric approach in the development of services and a focus on comprehensive customer service rather than the sale of individual products.

4. Formation of the data architecture of the bank and all its divisions to ensure flexible and multifunctional use.

The digital DNA of a bank (Table 1) includes the integration of new technologies, such as artificial intelligence, machine learning, and blockchain, to improve process efficiency and customer experience. Researchers [4, 5] emphasise that the introduction of such technologies requires a corresponding transformation of corporate culture focused on understanding and minimising risks. After all, the digitalisation of the banking sector, despite its many advantages, carries a number of significant risks, including cybersecurity (hacker attacks, viruses and malware, social engineering), operational risks (software errors, equipment failures, human errors), reputational risks (loss of customer confidence, outflow of funds), legal risks (non-compliance with regulatory requirements, lawsuits), etc.

Table 3
Key components of the bank's digital DNA

Components	Characteristics	Basic elements
Values and mission	fundamental principles that guide the bank in its activities	products and services offered to customers, mechanism of interaction with customers and employees
Strategy	a long-term plan for the bank's development in the digital environment	goals, priorities and ways to achieving them
Technologies	a set of tools and platforms used by the bank to provide its services in a quality manner	mobile banking, internet banking, blockchain, artificial intelligence, cloud technologies, APIs
Data	information collected and analysed by the bank	any asset that allows the bank to better understand its customers and make more informed decisions
Bank's risk-culture	a set of norms, values, behaviours and habits that are typical for bank employees and are aimed at avoiding risk	the ways employees interact with each other, make decisions, solve problems and treat business

Therefore, in the future, the role of risk-culture as a key factor in bank sustainability is expected to increase. According to the World Economic Forum (2023) [6], banks that successfully integrate risk-culture into their digital DNA will have significant competitive advantages.

The risk-culture of a bank is defined as the nature of the perception of the importance of risk management by bank employees, as well as the peculiarities of their behaviour when making decisions under conditions of uncertainty [7]. In the context of the digital transformation of the banking sector, risk-culture is of particular importance, as digital technologies simultaneously open up new opportunities and pose potential threats. Given the insufficient level of digital literacy of employees, lack of sufficient resources to invest in new technologies and risk management systems, political instability, and economic crises, the basic principles of risk-culture development in Ukrainian banks may include:

1. Proactive corporate culture - creating an atmosphere where employees are ready to identify, report and prevent risks.
2. Effective control systems - implementing modern risk monitoring and control systems, including the use of data analytics.
3. Investments in cybersecurity - regular software updates, pentesting, and employee training.
4. Cooperation with the regulator - active participation in the development and implementation of new regulatory requirements of the NBU.
5. Transparency and openness - ensuring transparency of decision-making processes related to risk management.

Thus, the digitalisation of the banking sector creates unique opportunities for expanding access to financial services, increasing their efficiency and improving customer experience. At the same time, however, new challenges arise from cyber threats, regulatory risks, and other aspects of the use of

digital technologies. To ensure the sustainable functioning of the country's banking system, it is important not only to create a developed risk-culture but also to integrate it into all levels of the organisational structure of banks. It is necessary to implement modern risk management systems that include automated tools for monitoring and analysing threats, as well as to use advanced technologies such as artificial intelligence and blockchain to ensure transparency and data protection. In addition, continuous upskilling of employees, including their awareness of potential risks associated with digital innovation and the development of skills to manage these risks, is an important aspect. A comprehensive approach that combines technology development, strengthening of risk-culture, and staff training will allow Ukraine's banking sector not only to successfully adapt to the challenges of the digital age, but also to become an example for other countries in implementing sustainable and secure digital financial ecosystems.

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Digital Technologies for Mitigating Risks and Threats in Foreign Economic Activity

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Abstract

The article examines the integration of digital technologies into foreign economic activity, highlighting their crucial role in modern management by providing innovative solutions for mitigating risks and threats. The study demonstrates that the application of key digital tools, including Blockchain, Big Data, the Internet of Things, Geographic Information Systems, simulation software, machine learning, and cloud technologies, plays a pivotal role in risk management within foreign economic activity. The study identifies the benefits of implementing these technologies, including cost reduction, increased operational speed, risk minimization, and product quality improvement. Special attention is given to the role of Big Data, with a detailed examination of its implementation stages and its impact on informed decision-making, profitability, and resilience in global market conditions. The findings emphasize the necessity of integrated digital systems for Ukrainian exporters to ensure stability and competitiveness amidst global instability.