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Article

Development of the Insurance Market of Uzbekistan Based on Financial Technologies (Insurtech): Prospects and Directions

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Abstract: The article examines the prospects and key directions for the development of the insurance market of Uzbekistan based on the implementation of financial technologies (InsurTech). In the context of digital transformation of the financial sector, InsurTech solutions are considered an important tool for improving the operational efficiency of insurance companies, expanding insurance coverage, and enhancing insurance risk management. The study systematizes the main directions of InsurTech application in insurance activities and analyzes quantitative indicators of their implementation in the insurance market of Uzbekistan in 2024. The results indicate an increase in the share of online insurance sales, a reduction in claims settlement time, and a decrease in operational costs of insurance companies. The paper concludes that financial technologies have significant potential for the modernization of the insurance market, provided that digital infrastructure and the regulatory environment continue to be improved.

Keywords: Insurance Market, Insurtech, Financial Technologies, Digital Insurance, Insurance Companies, Online Insurance Sales, Cyber Insurance.

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1. Introduction

The development of the insurance market is a crucial element in the stability of the financial system and the country's economic security. Amid the digital transformation of the global economy, traditional insurance models are gradually losing their effectiveness due to increased competition, changing consumer behavior, increasingly complex insurance risks, and the increasing volume of information processed. In this context, financial technologies are becoming a key tool for modernizing the insurance sector and enhancing its competitiveness.

Insurance financial technologies, also known as InsurTech, represents all IT solutions ranging from automated underwriting, online sales of insurance products to big data, Artificial Intelligence, blockchain technologies and digital platforms for insurance processes. They are transformational in nature and can dramatically reduce operating costs, improve transparency of insurance operations, bolster customer experience, and enable more accurate assessment of insurance risk.

InsurTech application is a topical area for the insurance market of Uzbekistan. Over the last couple of years, the country has been carrying out large reforms in order to develop the financial sector, digitalize services and increase the insurance market penetration among citizens and businesses. Whilst on the other hand, the insurance market is still characterized by a low insurance penetration, limited portfolio and low digital

maturity of individual market players. And the financial technologies are regarded as an important direction towards rapid advancement of this structure.

The use of InsurTech in the insurance market of Uzbekistan is of great prospects, increasing the effectiveness of the insurance company, increasing the number of insurance consumers, improving the quality of risk management, as well as increasing confidence in the insurance institution. Nonetheless, this has a number of associated problems such as regulatory limitations, cyber hazards, lack of workforce, and adaptation of international practices to national realities.

This article aims to analyze the prospects and main directions of development of financial technology-oriented insurance market (InsurTech) of Uzbekistan, as well as to determine the main factors that affect the efficiency of implementation of these technologies in national insurance practice. The general purpose of this study is to analyze theoretical approaches to InsurTech, to evaluate the current status of the insurance market, and to develop feasible recommendations for the application of financial technologies in insurance activities.

Literature Review

The development of financial technologies in insurance (InsurTech) is the subject of active academic research in international and regional economic literature. Most authors view InsurTech as a key factor in transforming traditional insurance company business models and improving the efficiency of the insurance market.

According to Schmidt, InsurTech refers to technology-driven innovations designed to enhance the efficiency of the insurance industry, by digitizing underwriting, insurance products sales, and claims settlement processes. The implementaion of a digital platform and online sales channels reduces transaction costs and increases customer access to insurance services, the author highlights [1].

Research by Bohnert, Fritzsche, and Gregor emphasizes the role of digital technologies in optimizing internal processes at insurance companies. According to the authors, the use of Big Data and analytical tools can significantly improve the accuracy of insurance risk assessment and reduce information asymmetry in the insurance market [2].

In the works of the Swiss Re Institute, InsurTech is considered as a driver for increasing the resilience of the insurance sector in the digital economy. The authors note that the use of artificial intelligence and machine learning contributes to the development of personalized insurance products and increased customer trust [3].

OECD emphasizes the importance of financial technologies for expanding insurance coverage and developing inclusive insurance. According to the study's findings, digitalization of insurance services is particularly important for developing countries, where traditional insurance channels have limited effectiveness [4].

Eling and Lehmann analyze the impact of InsurTech on the competitive environment of the insurance market. The authors conclude that financial technologies increase competition between insurance companies, stimulating innovation and improving the quality of insurance services [5].

PwC examines InsurTech from a practical perspective as a tool for transforming the customer experience. It is noted that digital customer interaction channels, mobile applications, and automated claims settlement significantly improve the operational efficiency of insurance companies [6]. Regulatory challenges and risks associated with the implementation of financial technologies in insurance are analyzed in the works of the IAIS. The authors emphasize the need to adapt supervisory mechanisms to new digital models of insurance activity and strengthen cybersecurity [7].

Regional aspects of InsurTech implementation in emerging market countries are examined in studies by the World Bank. They emphasize that the successful development

of digital insurance requires institutional support, the development of digital infrastructure, and improved financial literacy among the population [8].

Overall, an analysis of the scientific literature shows that InsurTech is viewed as a strategic direction for the development of the insurance market, contributing to increased efficiency, transparency, and sustainability [9]. At the same time, the authors emphasize the need for a comprehensive approach to the implementation of financial technologies, taking into account the national characteristics of the insurance market and the regulatory environment.

2. Materials and Methods

The study utilizes a systemic and comparative approach to analyze the prospects for implementing financial technologies (InsurTech) in the Uzbek insurance market. The theoretical framework is based on an analysis and synthesis of scientific literature and international analytical materials [10]. The empirical portion of the study is based on an economic and statistical analysis of data from international organizations and expert assessments for 2024. A tabular approach was used to systematize InsurTech trends and evaluate the results of their implementation.

3. Results and Discussion

An analysis of the current state of the insurance market shows that the introduction of financial technologies is becoming a key factor in its structural transformation. In the context of the digitalization of the financial sector, InsurTech solutions are a tool for increasing the operational efficiency of insurance companies, expanding the coverage of insurance services, and improving insurance risk management [11]. These processes are particularly important for the Uzbek market, as traditional insurance models do not yet fully meet the requirements of the digital economy and consumer expectations.

The analysis of scientific sources and international practice demonstrates that InsurTech encompasses not just individual elements of insurance operations, but virtually the entire insurance cycle—from product development and underwriting to sales and claims settlement [12]. Furthermore, the implementation of digital solutions reduces costs, increases operational transparency, and improves the customer experience, which is particularly relevant for developing insurance markets.

The study systematized the main areas of InsurTech application in insurance, which can be adapted to the conditions of the Uzbek insurance market. These areas are presented in Table 1.

Table 1. Main areas of application of InsurTech in insurance activities.

InsurTech direction	Brief description	Expected impact on the insurance market
Digital sales channels	Online platforms, mobile applications, and insurance marketplaces	Expanding the customer base, reducing transaction costs
Underwriting automation	Using Big Data and Machine Learning Algorithms	Improving the accuracy of insurance risk assessment
Personalized insurance products	Analysis of data on customer behavior and needs	Growing attractiveness of insurance products

Digital claims settlement	Online applications, automated processing of insurance claims	Reducing payment terms and increasing customer confidence
Use of artificial intelligence	Chatbots, intelligent decision support systems	Improving service quality and operational efficiency
Application of blockchain technologies	Smart contracts, secure data exchange	Increasing transparency and reducing fraud
Cyber insurance	Digital and information risk insurance	Expansion of the product line
Risk analytics and monitoring	Forecasting and monitoring insurance risks in real time	Increasing the resilience of insurance companies

Source: compiled by the author based on analytical materials from the Swiss Re Institute, OECD, World Bank, and PwC.

A review of the data presented in the table indicates that high-potential areas for implementation in the Uzbek insurance market are digital distribution channels and underwriting automation. The regions provide a significantly limited time frame for the availability of insurance services and minimize insurance companies' operating costs [13]. Additionally, the digitalisation of claims and the utilisation of AI also helps instill the much-needed customer trust, a critical enabling element of the insurance market.

That said, institutional and regulatory support is required to implement InsurTech solutions [14]. The lack of infrastructure for digitization, lack of investment resources, and lack of qualified specialists will slow down the process of digital transformation of the insurance industry. This is how the development of InsurTech in Uzbekistan should be implemented with a phased approach in consideration of the national features of the insurance market and its digital maturity level [15].

In short, the analysis shows that InsurTech is a fundamental component of the insurance market modernisation and an important instrument for enhancing the long-term efficiency, stability, and competitiveness of the market. Analysis of the most important quantitative indicators reflecting the digitalization [16]. An analysis of indicators for 2024 allows us to determine which segments InsurTech is having the greatest impact on and which areas offer the greatest potential for further development in Uzbekistan.

Table 2 presents summarized quantitative indicators for the implementation of InsurTech solutions in insurance, reflecting the current state of the digital transformation of the insurance market.

Table 2. Key indicators of InsurTech implementation in the insurance market of Uzbekistan in 2024.

Indicator	Meaning (2024)	Economic significance
Share of online sales of insurance policies, %	28–32	Increasing availability of insurance services
Share of insurance companies using digital sales channels, %	65–70	Expanding the market's digital infrastructure
Average reduction in the period for settling insurance claims, %	35–40	Increasing trust and customer satisfaction
Share of automated underwriting in retail insurance, %	25–30	Improving the accuracy of risk assessment
Reduction in operating expenses of insurance companies, %	15–20	Increased operational efficiency

Use of chatbots and AI services in customer service, % of companies	40–45	Improving customer service
Share of insurance payments initiated online, %	30–35	Improving transparency and speed of payments
Cyber insurance demand growth, % by 2023	20–25	Expansion of the product line

Source: compiled by the author based on analytical reviews of the insurance market, materials from regulatory authorities, and expert assessments (Swiss Re Institute, World Bank, OECD, PwC).

An analysis of quantitative indicators for 2024 shows that the implementation of InsurTech solutions is having a significant positive impact on the development of the Uzbek insurance market [17]. In particular, the share of online insurance policy sales, which reached 28-32%, indicates the emergence of sustainable demand for digital insurance products and a gradual shift in consumer behavior.

A significant reduction in claim settlement times (by 35-40%) confirms the effectiveness of digital tools in increasing operational transparency and reducing transaction costs. This is a key factor in increasing public trust in insurance companies [18].

Increased underwriting automation and reduced operating costs indicate that InsurTech not only improves customer service but also strengthens the financial stability of insurance companies [19]. At the same time, the increased demand for cyber insurance reflects the insurance market's adaptation to new digital risks and the development of modern insurance products.

Overall, the data in Table 2 confirm that InsurTech has become a key driver of modernization in the Uzbek insurance market in 2024. At the same time, the potential for further growth remains, particularly in the segments of risk management automation, digital claims settlement, and the development of innovative insurance products [20].

4. Conclusion

An analysis of the trends and quantitative indicators for the implementation of financial technologies in insurance operations suggests that InsurTech is becoming a key driver of modernization in Uzbekistan's insurance market. The results presented in Table 1 demonstrate that financial technologies encompass virtually all stages of the insurance cycle—from sales and underwriting to claims settlement and risk management. This demonstrates the systemic nature of the digital transformation of the insurance sector.

Quantitative data for 2024, presented in Table 2, confirm the practical effectiveness of InsurTech solutions. The growth in the share of online insurance policy sales to 28–32% and the widespread use of digital sales channels by most insurance companies indicate the emergence of sustainable demand for digital insurance services. A significant reduction in claim settlement times and a reduction in operating expenses indicate increased operational efficiency and transparency in insurance operations.

The analysis also demonstrates that underwriting automation and the use of artificial intelligence contribute to more accurate assessment of insurance risks and strengthen the financial stability of insurance companies. At the same time, the growing demand for cyber insurance reflects the insurance market's adaptation to new digital threats and the expansion of its product line in response to changing risk structures.

At the same time, the results in Tables 1–2 suggest that the potential of InsurTech in the Uzbek insurance market has not been fully realized. While some processes are automated, and digital technologies are employed, only some processes are at a mature level, while others are still at a fairly young stage of penetration in relation to the use of

blockchain technologies, advanced analytical tools. This indicates the necessity for a specific policy regarding future growth in the field of digital insurance.

Based on the results/results, the following practical recommendations are suggested.

In the first place by increasing the reach which the insurance companies will get by concentrating its work with digital sales channels and online platforms, there is a wider presence by customer component with lower transaction costs.

Second, along with the preliminary assessment of risk based on Big Data, automated underwriting processes should be scaled up which will increase accuracy levels significantly and decrease the share of loss-making insurance products. Third, it is helpful to speed up the digitalization of insurance claim settlement process that is to allow online claims and automated claims payments to boost confidence in insurance companies and improve their image.

Fourth, supervisory authorities are encouraged to facilitate an enabling environment for InsurTech growth, for instance, by improving the regulatory framework, developing regulatory sandboxes and/or supporting pilot digital insurance initiatives.

Fifth, also because of the considerable increase in cyber risks and also the expansion of the amount of digital assets in the economy, dedicated cyber insurance and digital risk management tools development should be fostered.

Overall, the study results confirm that InsurTech is an important strategic area for the development of the insurance market in Uzbekistan. Consistent and systematic implementation of financial technologies, based on the identified areas and quantitative indicators, will improve the efficiency of insurance activities, strengthen trust in insurance institutions, and ensure the sustainable development of the insurance market in the long term.

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