INNOVATIVE TECHNOLOGIES IN THE INSURANCE SECTOR

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Abstract
The article presents key financial technologies, main financial products and services using Fintech and InsurTech technologies that influence the development and functioning of financial sectors such as insurance activities. The factors stimulating their development and the main changes in this area are identified. Considerable space is devoted to the prospects for their application, as well as an analysis of the problems that need to be solved in order to remove obstacles to their wider distribution by Fintech and InsurTech technologies.

Keywords: insurance, insurance industry, financial technologies (Fintech), insurance technologies (InsurTech), digital technologies.

Introduction
The active development of technology is spreading across all spheres of life. The financial market was no exception - a new promising direction "Fintech", or financial technologies, has emerged. Today, the financial technology market is considered one of the most dynamically developing markets, and it also acts as a driving force for other financial markets.

One of these markets is considered to be the conservative insurance market. The insurance market can hardly be called modern: it has always been conservative and focused on proven solutions that insurance companies initially used. However, the digital transformation of all sectors of financial institutions is doing its job, and the COVID-19 pandemic has become an additional impetus for the transition to online in all financial institutions, as well as insurance institutions. The insurance industry and market are evolving: Insurtech is actively being introduced into the business processes of an insurance company. Insurance market entities are implementing various IT solutions to improve the provision of quality services to consumers in the digital environment, since almost all potential clients of insurance services already use innovative financial products. If we compare insurance with other financial institutions such as financial and credit institutions, then the digitalization of the industry is fundamentally distinguished by its faster and richer applications: they are massively transformed into fintech companies. However, over the past three years, the global insurtech market has grown significantly.

2. Literature Review

The importance of digital technologies in the modern world is increasing every day. Their development has recently led to significant changes. Production cycles were shortened and simplified; Digital technologies have made it possible to expand analytics, making its processing more accessible. In the modern world, the dynamic development of markets is difficult to imagine without the existence of developed technologies. Therefore, by introducing itself into almost all spheres of human life, from the purchase of various goods to education and banking services, digitalization changes the entire economic activity of the country and society (Bikoeva 2019).

According to the definition of researchers David Lee and Kuo Chuen (2015), the concept of FinTech (Financial Technology) - arose relatively recently. Professor Patrick Schuffel believes that fintech is a completely new financial industry, the activity of which is to improve financial activities, in particular banking, through the use of new technologies and developments.

According to Skan Ju., Ryan E. (2019) the modern FinTech market is divided into segments represented by electronic platforms, banking applications, digital security and others.

According to an analysis by McKinsey & Company (2023), financial technologies can improve the efficiency of an insurance company, and there are also opportunities to introduce new methods of delivering services. In addition, there are significant opportunities for data collection and fraud detection, which can lead to better risk identification and mitigation measures.

Currently, insurers use information technology primarily when organizing sales of their insurance services. The transformation of business processes in insurance organizations concerns technological, financial, marketing processes and direct technologies for selling insurance services. The developing Internet environment is not only transforming the appearance of insurance services themselves, but also developing it, expanding the segment of Internet sales or online sales, which allows us to talk about reducing the cost of sales and the growing trend of remote sales (Kozlova 2017).

The use of FinTech and InsurTech allows you to speed up the processes of concluding insurance contracts and simplify communications with insurance agents and selling departments (Turdumambetov 2017).

Insurers are actively mastering mobile digital technologies through the peculiarities of channel competition, joining the fight for the policyholder through a more convenient and understandable recommendation of the insurer within the framework of standard programs and within the framework of flexible and customizable programs aimed at each individual policyholder. More convenient technologies are being developed in business processes aimed at communication with policyholders in terms of support of insurance contracts and settlement of losses of the policyholder (Tepkaeva 2020).

InsurTech – Insure technology is a set of new technologies related to insurance. Insurtech companies are introducing: "big data", machine learning, Internet of things (Shalbuzova 2019).

Insurance Technology is the introduction of IT innovations into the insurance industry. IT innovations usually include artificial intelligence technologies, developments in the field of cybersecurity, analysis of large volumes of data, applications for smartphones, etc. (Zakirkhodzhaeva 2023)

3. Research Methodology

Logical-structural analysis of theoretical and empirical data presented in the public domain was used as a research method. Also, analysis and synthesis, which allow, on the one hand, to highlight individual areas of development of FinTech and InsurTech, on the other hand, generalizing and linking together the main trends of their development. As a result of the study, the particular importance of FinTech in the financial sector, as well as InsurTech in the field of insurance, was identified.
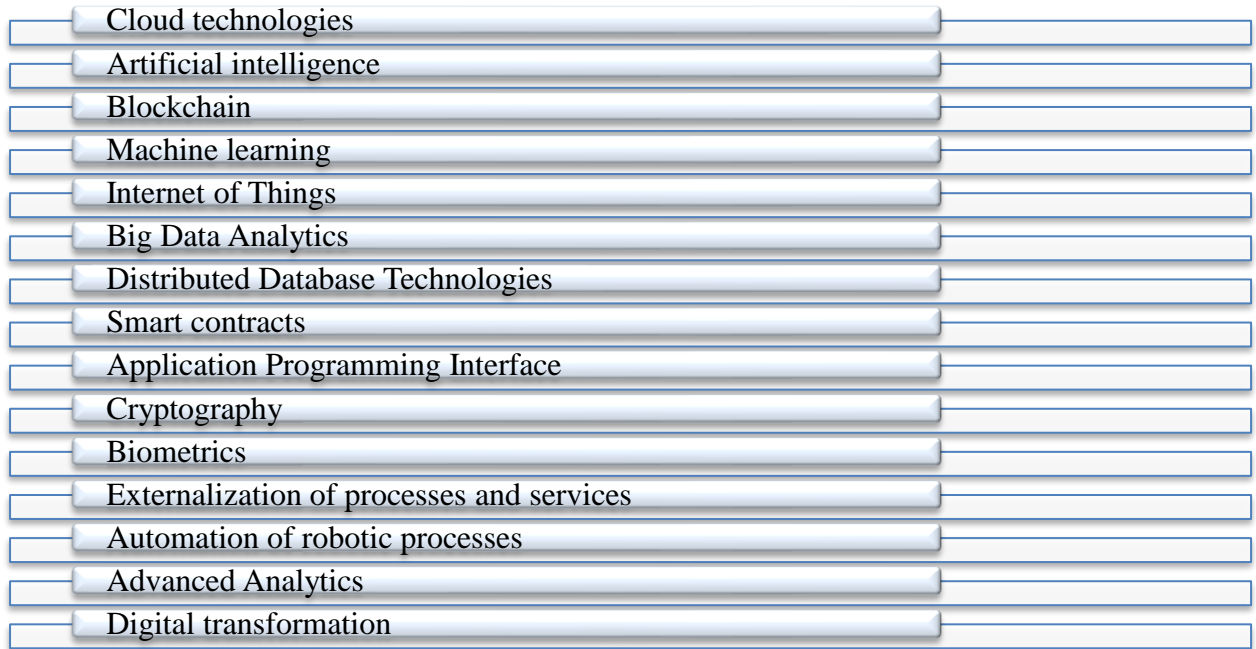
4. Analysis and Results

The active development of information technology is spreading across all spheres of life. The financial market was no exception - a new promising direction "FinTech", or as they say financial technologies, has emerged. Today, the financial technology market is considered one of the most actively growing, and it also dictates the direction in which financial institutions will develop.

According to foreign sources FinTech (financial technology) this is:

• A branch of the economy consisting of companies that use technology to provide financial services in a more efficient way. Companies in this industry are mostly start-ups created with the goal of disrupting existing financial systems and organizations that do not use software products.

• Scope of tech startups disrupting areas such as mobile payments, money transfers, loans, fundraising and even asset management.

• A business area based on the use of software products to provide financial services.

The term "FinTech" itself was coined by Silicon Valley. It was there that many IT projects were created, which later became something of an "accelerator" for modern fintechs. London is now considered the capital of FinTech due to its large number of FinTech innovations and its investment flows.

FinTech as "financial services technological innovation", including in this definition a combination of products/services (for example, digital retail payments, digital wallets, FinTech credit, robo-advisor3 and digital currencies) and their underlying technologies (Figure 1).

Cloud technologies

Artificial intelligence

Blockchain

Machine learning

Internet of Things

Big Data Analytics

Distributed Database Technologies

Smart contracts

Application Programming Interface

Cryptography

Biometrics

Externalization of processes and services

Automation of robotic processes

Advanced Analytics

Digital transformation

Picture 1. Key financial technologies [1]

The introduction of modern digital technologies will have a huge impact on the insurance market in the next five years. InsurTech is used to obtain information at all stages of the insurance life cycle, such as customer targeting, pricing, product development, and claims processing.

Today, insurance companies are actively exploring the possibilities of introducing new technologies into the company's activities. And many have already implemented a lot of financial technologies that help, simplify and speed up the work of the insurance industry. There are a large number of technologies in the insurance market, but the most used and most promising are the following:

Cloud technologies – the ability to access information and applications via the Internet. With this technology, insurance companies do not need to store information on the hard drive of their computer; workers can access it from any device with an Internet connection. And, cloud technology helps insurance companies save money, improve underwriting, claims processing, fraud prevention, customer service and business operations.

Chatbots are artificial intelligence-based virtual assistants designed to meet the needs of insurance clients. The insurance chatbot is available 24/7 to serve insurance customers every step of the way. Much like an insurance agent, the chatbot asks customers questions about their requirements and other details. Then it offers to customers personalized policy advice, help them compare two or more plans, and help them gain a clearer understanding of policy options by answering any additional questions

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[1] Prepared by the author according to research analyses.

Machine learning models are the expression of an algorithm that analyzes large amounts of data to find patterns or make predictions. Data-driven machine learning (ML) models are the mathematical engines of artificial intelligence.

Collection and processing of data from telematics devices and Internet of Things (IoT). The most common use of telematics is in car insurance, so the technology can be described as pay-as-you-drive insurance or pay-per-mile insurance. The basic idea is that you can get a discount on your car insurance if you're safer than the average driver (or if you drive fewer miles than the average yearly).

Robotic automation (RPA) is a software technology that makes it easier to create, deploy, and manage software robots that mimic human interactions with digital systems and software. Like humans, software robots can understand what's happening on a screen, press keys correctly, navigate systems, identify and retrieve data, and perform a wide range of specific actions. But software robots can do this faster and more consistently than humans, without having to get up, stretch, or take a coffee break.

Blockchain is a distributed database that is shared between nodes on a computer network. As a database, blockchain stores information electronically in a digital format. One of the key differences between a typical database and a blockchain is how the data is structured. Blockchain collects information into groups known as blocks, which contain sets of information. Blocks have a specific storage capacity and when full, are closed and linked to a previously filled block, forming a chain of data known as a blockchain. All new information that follows this newly added block is compiled into a newly formed block, which will then also be added to the chain once completed.

Transferring the full cycle of interaction with the client online. In the case of insurance companies, a full cycle of interaction with clients online means that clients of companies can not only issue and pay for an insurance policy online, but also resolve the situation in the event of an insured event.

The development, adoption and use of technology not only opens up an endless number of opportunities for insurance companies, but can also mask a number of problems that many sectors of the economy have experienced in recent years. The main problems of implementing InsurTech technologies include the following:

☐ low level of insurance culture;

☐ insufficient operational improvement of legal regulation and, as a consequence, a lag in the implementation of technologies;

☐ lack of uniform standards to improve the efficiency of online channels of insurance companies;

☐ low level of development of financial and technological knowledge among the population;

☐ increase in the number of cyber threats and cybercrimes;

☐ the costs of implementing technologies exceed the expected income.

Based on the foregoing, we can conclude that every year more and more insurers are introducing InsurTech technologies into their business processes. The technology trends described earlier will fundamentally change the insurance business, creating significant

opportunities. These shifts are already underway, meaning insurers must act now to develop a more ambitious vision for how technology can improve company operations. To harness the potential of InsurTech trends, insurers will develop their technical talent, putting technology trends and their business implications on the management agenda.

5. Conslusion

Currently, the domestic financial and insurance market needs the development of innovative tools, since it lags significantly behind the level of developed countries. This factor should serve as an additional incentive for domestic specialists and attract their attention to create financial innovations in the form of FinTech and InsurTech. This will improve the condition of not only the financial market, but also the entire economy of the country.

But it is worth noting that the digital transformation in domestic insurance began practically from scratch and many operations are still taking place "on paper"; this process is not yet fully based on analytics.

However, it should be noted that insurance, not only in Uzbekistan, but throughout the rest of the world, still remains one of the most conservative and inertial sectors of the economy. And although services related to big data analytics, artificial intelligence and biometrics are now being introduced, changes are still taking place very slowly, innovations are taking root less well, and this industry is still one of the most regulated markets with well-established but outdated operating rules.

When assessing the impact of new technologies on the financial market, two factors have recently become particularly important:

1) level of acceptance of basic technology by society;

2) the extent and prevalence of technological know-how among the general population

Thus, it can be summarized that modern FinTech and InsurTech tools have a significant impact on the economies of different countries, especially on the banking and insurance industries. They improve the quality of services provided and give impetus to their productive development towards informatization.

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