

**ACTIVITIES OF PROFESSIONAL PARTICIPANTS IN THE
INSURANCE MARKET AND ISSUES OF IMPLEMENTING DIGITAL
TECHNOLOGIES**

Goziyeva Aziza Abdusalomovna

Independent researcher, Termez State University

Tukhabayev Jamshid Sharafetdinovich

*Professor, Graduate School of Business and Entrepreneurship under the Cabinet of
Ministers of the Republic of Uzbekistan*

Abstract. *This article analyzes the role of the insurance sector in the modern economy, its importance in ensuring financial stability, and the impact of digital transformation processes on the development of the insurance market. In addition, the theoretical and legal foundations of the main institutional participants of the insurance market-insurers, insurance intermediaries (agents and brokers), actuaries, adjusters, surveyors, and assistance services-are examined. The article highlights the importance of technologies such as artificial intelligence, big data, blockchain, and the Internet of Things (IoT) in the process of digitalization of insurance services. At the same time, the advanced experience of countries such as South Korea, China, the United States, the United Kingdom, and Germany in implementing digital insurance systems is analyzed, and their role in increasing the efficiency of the insurance market is demonstrated. As a result of the research, scientific conclusions and recommendations have been developed on the widespread introduction of digital technologies in the insurance sector, the improvement of institutional mechanisms, and the enhancement of the competitiveness of the national insurance market.*

Keywords: *insurance market, digital transformation, insurance services, insurance intermediaries, insurance agents, insurance brokers, actuary, adjuster, surveyor, assistance services, artificial intelligence, big data, blockchain, IoT technologies, digital insurance.*

Introduction. Over the past decades, the insurance sector has been steadily evolving not only as one of the most important and strategic sectors of the national and global economy, but also as a significant institutional mechanism that plays a key role in ensuring financial security, strengthening stability, and mitigating economic risks in society. During this period, the increasing complexity of economic processes, the intensification of competition in global financial markets, the expansion of technological integration, and the acceleration of digital transformation have required insurance companies to fundamentally reorganize their internal and external operations, improve efficiency and transparency, and introduce a high level of individualized customer service.

The widespread implementation of advanced technological solutions such as digital technologies, artificial intelligence systems, big data analytics, blockchain technology,

and Internet of Things (IoT) devices provides insurance companies not only with opportunities to develop new services and products but also enables them to study customer needs more deeply, accurately determine risk profiles, and offer individualized and optimized insurance services.

The digitalization process offers numerous strategic advantages for companies, including the automation of internal operations, optimization of costs, improvement of operational efficiency, and effective allocation of resources. As a result, digital transformation significantly enhances customer experience by ensuring faster, more transparent, and higher-quality services, while also enabling the development of personalized insurance products tailored to specific customer needs. Artificial intelligence and big data analytics allow companies to analyze customer behavior, financial capabilities, needs, and risk profiles in greater depth, identify and manage risks, and optimize pricing policies. This enables insurance companies to forecast their activities more accurately, implement strategic planning, and manage resources in the most efficient way. At the same time, this process allows companies to respond quickly to market changes and gain significant advantages in introducing new digital services.

Blockchain technology can make insurance contracts more reliable, transparent, and immutable, significantly reducing the risk of fraud and false claims while also enabling the automation of many processes. Furthermore, IoT devices and real-time data collection systems provide opportunities to automate insurance services, develop customized options that correspond to customer needs, and significantly improve service quality. As a result, the process of digital transformation strengthens interactions between companies and customers, improves service quality, and expands the possibilities for the personalization of insurance services. Thus, technological approaches not only optimize internal processes but also enhance global competitiveness and allow insurance companies to occupy stronger and more sustainable strategic positions in the market.

Literature Review. Insurers perform the assessment of insurance risks, collect insurance premiums, form insurance reserves, determine the amount of damage or loss incurred, make insurance payments, and carry out other actions related to the fulfillment of obligations under the insurance contract (Arkhipov A.P., Gomellya V.B., Tulenti D.S., 2006).

Based on the analysis of the definitions and concepts presented above, their positive aspects, and without deviating from the general essence of the Civil Code of the Republic of Uzbekistan, the concept of an “insurer” may be defined as follows:

An insurer is a legal entity that has obtained a license in accordance with the established procedure to carry out a specific type of insurance within the territory of the Republic of Uzbekistan and, after concluding an insurance contract with the policyholder, assumes the obligation to pay insurance compensation in the event of an insured occurrence in exchange for the insurance premium.

In addition, it can be observed that different approaches to the concept of an “insurance intermediary” exist in economic and legal literature. In particular, some scholars note that insurance intermediary activity represents a professional market

participant engaged in providing insurance services to consumers and that insurance intermediaries may include insurance agents and insurance brokers (Turbinay K.E., 2003). Other researchers emphasize that insurance agents, insurance brokers, adjusters, and surveyors may act as insurance intermediaries; however, they are not direct parties to the insurance contract. Their main function is to facilitate the provision of insurance services between the insurer and the insured, assist in concluding insurance contracts, and support their implementation (Spletukhov Y.A., Dyuzhikov E.F., 2005). Another view defines an insurance intermediary as a person who concludes insurance contracts on behalf of the insurer and upon its assignment but is not an employee of the insurance company (Gvozdenko A.A., 2001).

Similarly, definitions of the term “insurance agent” provided by scholars and reflected in the legislation of foreign countries demonstrate a generally common approach. However, in some cases an insurance agent is described as a “non-staff employee.” In our opinion, the concept of a “non-staff employee” primarily applies to a natural person. Nevertheless, both national legislation and the legislation of many other countries include legal entities within the concept of an insurance agent. Therefore, the notion of an insurance agent should not be limited exclusively to natural persons. In a market economy, it is natural that insurance agents with the status of legal entities also operate in the insurance market.

Different definitions are also given for the term “broker” in the legislation of various countries and in academic literature. For example, according to the Law of Ukraine “On Insurance,” an insurance broker is defined as a business entity registered in accordance with the established procedure that conducts intermediary activities in insurance on a brokerage basis on its own behalf and for remuneration for persons seeking insurance coverage. Insurance brokers are registered business entities that do not have the right to receive or redistribute insurance payments and indemnities (Law “On Insurance” of Ukraine, 2000).

From the above, it can be seen that, unlike the national legislation of Uzbekistan, the insurance legislation of many countries allows natural persons to engage in entrepreneurial activities as insurance brokers. Therefore, the issue of granting individual entrepreneurs the status of insurance brokers remains relevant. In particular, according to M.O. Shishkhanov, an insurance broker is an insurance intermediary who advises clients (policyholders) and concludes insurance contracts on their behalf. An insurance broker must be an expert in insurance legislation and practice. As a professional, the broker should be aware of all available insurance opportunities and use this knowledge to ensure the best possible conditions and premium rates for the principal. An insurance broker acts as an agent of the insured rather than the insurer. The broker is not legally liable before the insurer, although this does not exclude moral responsibility based on the principle of good faith. In addition, the broker should not guarantee the insurer’s solvency and should not be responsible for paying damages or returning premiums (Shishkhanov M.O., 2006).

Another relatively new term among professional participants in the insurance market is “adjuster.” Various interpretations of this concept can be found in different sources.

Some define an adjuster as a specialist responsible for preparing settlements (Ortiqov A., 1996), while others describe an adjuster as a specialist who evaluates the amount of damage when an insurance event occurs (Arkhipov A.P., Gomellya V.B., Tulenti D.S., 2006). According to another definition, an adjuster is a natural or legal person who represents the interests of an insurance company in resolving disputes and objections raised during the settlement of insurance claims and assists in reaching an agreement with the insured regarding the amount of compensation payable under the insurance contract (Glossary.ru portal). In maritime insurance, an adjuster may also be referred to as a dispatcher, a specialist who calculates the distribution of losses between the ship, cargo, and freight in cases of general average (F-polis portal). The essence of these definitions is also reflected in the national legislation of Uzbekistan, particularly in Article 92 of the Law “On Insurance Activity” (2007).

Another important professional participant in the insurance market is the actuary. According to A.P. Arkhipov, V.B. Gomellya, and D.S. Tulenti, an actuary is a person who possesses a qualification certificate and, based on an employment contract or a civil contract with an insurer, performs activities related to the calculation of insurance tariffs, the formation of insurance reserves, and the evaluation of investment projects using actuarial calculations. According to J. Lemaire, Head of the Insurance and Risk Department at the Wharton School, an actuary is a specialist trained to formulate, analyze, and solve complex problems in business, finance, and social fields using mathematical methods; actuaries assess individual and corporate risks and develop financially sound insurance and pension schemes. Similarly, British scholar K. Daykin defines an actuary as a professional with specific qualifications in evaluating risks and probabilities who applies these skills to business and financial problems, particularly in insurance and demographic studies, when random events occur.

Analysis and discussion. The definitions and concepts presented above indicate that the term “actuary” belongs to the category of relatively new concepts entering modern economic and social practice, and various approaches exist in defining it. In our opinion, from a legal perspective it may be defined as follows: “An actuary is a natural person who possesses higher education in mathematics or economics and specializes in actuarial calculations.” Based on the insurance legislation of foreign countries and the opinions of scholars mentioned above, it would be appropriate to reflect this definition in national legislation.

Another professional participant in the insurance market is the “surveyor,” for which different interpretations can also be found. In particular, a surveyor (eng. *surveyor*) is defined as an expert who conducts inspections of ships and cargo, providing conclusions regarding their condition, the extent of damage after an incident, the seaworthiness of a vessel, and other related issues. A surveyor may be invited by a ship owner, charterer, cargo owner, or insurance company. A surveyor inspecting an insured object must possess sufficient knowledge and experience and be capable of professionally documenting the condition of the object or preparing a certificate of damage. This is

important because such documents may serve as evidence in potential legal disputes or in resolving issues related to compensation for damages (Legal Encyclopedia, 2001).

According to A.P. Arkhipov, V.B. Gomellya, and D.S. Tulenti, a surveyor is a highly qualified representative of the insurer who inspects and evaluates property that is intended to be insured. Based on the surveyor's conclusions, the insurer decides whether to conclude an insurance contract. In foreign practice, surveyors may include specialized organizations or firms working on a contractual basis with insurers in areas such as fire safety, occupational safety, and technical expertise. Unlike an adjuster, a surveyor inspects the property before the insurance contract is concluded (Arkhipov A.P., Gomellya V.B., Tulenti D.S., 2006).

Other sources define a surveyor as an expert who inspects ships and cargo at the request of the insured or the insurer and provides a professional opinion regarding their condition (Gvozdenko A.A., 2001), as an expert or agent responsible for inspecting insured property (Reitman L.I., 1992), or as a specialist who evaluates property intended for insurance and determines its value and the appropriate insured amount (Spletukhov Y.A., Dyuzhikov E.F., 2005).

Another professional participant in the insurance market is the "assistance service." Its legal status is also reflected in the national legislation of Uzbekistan, particularly in the Law of the Republic of Uzbekistan "On Insurance Activity" (2002). Similar definitions can also be observed in the legislation of foreign countries. For instance, according to the Law of the Czech Republic "On Insurance," assistance refers to support provided to individuals who encounter difficult situations while traveling or when they are far from their permanent place of residence.

In academic literature, assistance is described as a set of technical, medical, and financial services provided within the framework of an insurance contract when necessary. It represents targeted humanitarian support aimed at ensuring the safety of travelers abroad through services such as medical assistance, hospitalization when required, and the organization of specialized medical transportation in cases of illness or accidents. In practice, a number of specialized assistance companies operate in close cooperation with insurance companies.

In the global insurance market, South Korea stands out as one of the leaders in digital transformation due to its active technological integration, widespread use of online insurance sales, and the implementation of digital policy systems. In this country, the integration of insurance services with government digital systems significantly accelerates the processes of automatic registration and verification of insurance policies. Major insurance companies such as Samsung Fire & Marine Insurance and Hyundai Marine & Fire Insurance actively introduce innovative digital services, which contribute to improving transparency and efficiency in the national insurance market. Thus, the South Korean model represents a successful example of technological advancement and synchronization between insurance systems and state digital infrastructures in the development of digital insurance.

Table 1

Characteristics of Digital Insurance Systems in Developed Countries

No.	Country	Characteristics of Digital Insurance Systems	Companies and Platforms
1	South Korea	Wide implementation of online insurance sales and digital policies, integration with government systems, rapid verification processes	Samsung Fire & Marine, Hyundai Marine & Fire
2	China	Large digital ecosystem, development of InsurTech startups, fully digital insurance companies	ZhongAn, Ping An, Alibaba, Tencent
3	United States	Automation of processes based on artificial intelligence and data analytics, innovative insurance platforms	Lemonade, Metromile, Root
4	United Kingdom	Digital trading platforms and mobile applications, online insurance policy sales	Aviva, Prudential Digital
5	Germany	Digital management systems, online payment and policy monitoring platforms	Allianz, Munich Re

Source: Compiled by the author based on the study of international experience in the digitalization of the insurance sector.

China implements a broader and more complex strategic model in the global digital insurance market. The presence of a large digital ecosystem, the active development of InsurTech startups, and the emergence of fully digital insurance companies provide the market with innovative solutions. Companies such as ZhongAn, Ping An, Alibaba, and Tencent utilize artificial intelligence and data analytics to create insurance policies, assess damages, and meet customer needs through digital platforms. These platforms not only enhance customer convenience but also reduce the financial risks faced by insurance companies and contribute to making the digital market more transparent, efficient, and competitive. China's experience serves as a model for other countries, particularly those that are just beginning the digitalization process, in developing innovative platforms and strengthening digital ecosystems.

The United States stands out as a global center of InsurTech in the digital insurance sector. Companies such as Lemonade, Metromile, and Root widely apply artificial intelligence and automated processes to enable rapid policy creation, automated damage assessment, and the provision of personalized tariffs for customers. This approach not only reduces operational costs but also significantly improves user experience. The U.S. model creates an advanced example for the global market by enabling personalization, rapid service delivery, and data-driven decision-making in digital insurance systems.

The United Kingdom and Germany are recognized as European leaders in digital insurance systems. In the United Kingdom, companies such as Aviva and Prudential Digital have introduced digital trading platforms and mobile applications that allow

customers to purchase insurance policies and receive services online. This approach makes insurance services more convenient and faster, while also increasing the competitiveness of companies by meeting customer needs through digital channels. In Germany, companies such as Allianz and Munich Re have introduced digital management systems and online payment platforms, optimizing internal operational processes and improving the efficiency of risk management. This development strengthens digital insurance systems, increases transparency, and enhances customer trust.

Conclusion and Recommendations. In summary, the experience of the countries mentioned above demonstrates that digital insurance systems play an important role not only in technological development but also in improving strategic and operational aspects of the insurance sector. Solutions such as integration with unified automated systems, electronic policies, AI-based automation, fraud control mechanisms, and the introduction of digital services increase the efficiency of insurance companies, create greater convenience for customers, and strengthen market transparency and competitiveness.

In this context, the experience of leading countries serves as a strategic model for other nations, particularly for countries such as Uzbekistan that are at the early stages of digitalization, by providing opportunities to modernize the insurance system. In conclusion, improving regulatory frameworks and rules that take into account the types and specific characteristics of insurance services in accordance with modern requirements is an essential condition for the successful implementation of digitalization reforms in the insurance sector of our country.

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