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## **KEY PROBLEMS AND DIRECTIONS OF DEVELOPMENT OF DIGITALIZATION OF THE UKRAINIAN INSURANCE MARKET**

**Fedorovych Iryna. Key problems and directions of development of digitalization of the insurance market.** The main problems of the development of digitalization of the insurance market of Ukraine were analyzed. It was argued that the main reasons for the low level of development of the insurance market digitalization are the high cost of appropriate technological upgrades, the lack of professional qualification of employees of insurance companies, the high level of insurance fraud, and the overall low level of confidence in insurance companies. It was substantiated that today the main technological trends in insurance are: chat-bots, Big Data, Blockchain, multi-channel communication, Mobile ID, Bank ID, the creation and maintenance of large information centers, the use of information technology and wireless technology in insurance. It is proved that the positive factors in the development of digitalization of the insurance market are the emergence of the possibility of using new financial instruments in the context of digitalization, the diversity of insurance products, the increase in the share of remote interaction of insurance market participants, the creation of digital insurance infrastructure. The

key areas of further development of the digitalization of the insurance market are the development of artificial intelligence and the Internet of Things, Big Data, telematics, as well as protection systems aimed at preventing the implementation of digital threats.

**Key words:** insurance market, digitizing, digitalization, InsurTech, Blockchain, Big Data, digital technology, Internet.

**Федорович Ірина. Ключові проблеми та напрями розвитку цифровізації страхового ринку України.** Проаналізовано основні проблеми розвитку цифровізації страхового ринку України. Аргументовано, що основними причинами низького рівня розвитку цифровізації страхового ринку є висока вартість відповідних технологічних оновлень, недостатній рівень професійної кваліфікації працівників страхових компаній, високий рівень страхового шахрайства, загальний низький рівень довіри до страхових компаній. Обґрунтовано, що на сьогодні основними технологічними трендами у страхуванні є: чат-боти, Big Data, Blockchain, багатоканальний зв'язок, Mobile ID, Bank ID, створення та обслуговування великих інформаційних центрів, застосування інформаційних технологій і технологій бездротового зв'язку в страхуванні. Доведено, що позитивними факторами впливу на розвиток цифровізації страхового ринку є поява можливості використання нових фінансових інструментів в умовах цифровізації, різноманітність страхових продуктів, збільшення частки дистанційної взаємодії страхових учасників ринку, створення цифрової страхової інфраструктури. Встановлено, що більшість страховиків на вітчизняному ринку пропонують клієнтам такі послуги, як купівля страхового полісу онлайн, впровадження новітніх цифрових технологій у бізнес-процеси та планування їхньої діяльності, оплата страхових послуг дистанційно. Аргументовано, що цифрові технології відкривають нові конкурентні переваги для страховиків: впровадження інноваційних технологій у бізнес, створення статистичних баз даних, технологічні цифрові сервіси для індивідуальних страхових пропозицій,

системна трансформація відносин з клієнтами. Розглянуто досвід французьких та американських компаній в контексті цифровізації діяльності страхових компаній щодо використання: технології блокчейну; платформи на базі штучного інтелекту, які замінюють людський вхід за допомогою таких функцій, як автоматичні рекомендації продуктів; вирішення запитів чат-ботами. Встановлено ключові напрями подальшого розвитку цифровізації страхового ринку: розвиток штучного інтелекту та Інтернету речей, Big Data, телематики, а також систем захисту, спрямованих на перешкоди в реалізації цифрових загроз.

**Ключові слова:** страховий ринок, цифровізація, діджиталізація, InsurTech, Blockchain, Big Data, цифрові технології, інтернетизація.

**Articulation of issue.** Nowadays, the traditional insurance business model is gradually transforming into an innovative one. Therefore, digitalization is one of the driving factors in the development of the insurance market. The introduction of modern digital products and technologies gives insurance companies a number of competitive advantages, including increased decision-making speed, new opportunities to expand the insurance portfolio, more accurate risk assessment and fraud detection. The main purpose of implementing innovative technologies for an individual insurer is primarily to improve insurance products and services, as well as to increase the efficiency of its business processes. For the whole insurance market, the digitalization becomes a massive factor in enhancing its competitiveness. Therefore, the development of the insurance market in Ukraine is increasingly dependent on the introduction of new technologies of digital economy, affecting the technology of insurance, but not changing its economic essence. As a result of the use of digital technologies in the insurance market, the efficiency and profitability of the insurance industry will increase; new services and insurance products will appear.

**Analysis of previous studies and publications.** Significant contribution to the study of the process of digitalization in the insurance market made the following

scientists: O. Agres, V. Bazylevych, V. Galushchak, O. Gudz, S. Egorycheva, O. Zhylyakova, V. Margasova, S. Osadets. Despite the large number of scientific papers in the field of digitalization of insurance, practical use of digitalization processes by Ukrainian insurers remains unresolved.

**Problem statement.** The purpose of the study is to consider the peculiarities of the development of digitalization in the insurance market of Ukraine and to provide suggestions on ways to improve it.

**Statement of the basic study data.** Digitalization of insurance is defined as a part of economic relations due to the presence of insurance interests of companies and citizens and their satisfaction by means of digital technologies. That is, digital insurance is a means of implementing insurance based on digital technology. The term “digitalization” means the transformation of analog forms of information storage into a digital form and, in fact, is synonymous with the term “digitalization” [9, p. 203].

Digitalization is also used in such processes as accounting, risk assessment, etc. The degree of development of digitalization will largely depend on the level of development of well-established blockchain technologies. Nowadays, the main problems of digitalization include: the existing competition of digital channels with other channels of services of insurers; security of access to personal data; lack of personnel; the difficulty of using digital technology due to the need to pay high costs for IT equipment and training of specialists.

Digitalization in the insurance sector requires the most effective use of various innovative computer technologies to ensure optimal interaction between insurers and policyholders. Put it another way, such action means that all functional areas of the insurance company will change. The main objectives in this case are to increase profits, optimize costs and develop new segments of the insurance market [7, p. 103].

Digitalization entry in the insurance market is facilitated by the emergence of the possibility of using new financial instruments in the conditions of digitalization; instability of the insurance service; assessment of insurance services; financial nature of insurance activities; diversity of insurance products; increase in the share

of remote interaction of insurance participants; creation of a digital insurance infrastructure.

The above positive results of the impact of digitalization on the insurance market are mainly due to the new technological capabilities: the abandonment of the circulation of paper documents, the large collection of insurance data, automatic data processing and analysis, sharing of insurance information by different parties, the possibility of selective analysis, the provision of insurance service to the customer online.

There are several stages in the development of digitalization [2, p. 16]:

The first stage is the development of individual information technologies and their use to solve specific problems, that allow improving certain aspects of any activity;

The second stage is the development and implementation of computing platforms, which are hardware and software complexes that provide a basic set of services needed to perform certain tasks. In this case, the platforms can be universal or created to perform specific management tasks;

The third stage is the development and implementation of networks at different levels (local, regional, national and international), combining different IT and individual IT platforms. Networks help to combine the necessary computing platforms, which contributes to increasing their joint functionality, as well as the creation of new business models.

The major technology trends in insurance nowadays that could revolutionize business processes are:

- Chatbots - virtual interlocutors that can take over an important part of call center functions, answering urgent questions and preparing insurance proposals;
- Big Data - analyzing and processing an extensive series of detailed information about insured persons and injured parties;
- Blockchain – a distributed data access system that increases trust in online products;

- Multi-channel communication - integration into a very convenient environment with a variety of online and offline communication channels, including all types of devices;

- Mobile ID, bank ID - digitization of the insurance policy, digital signature and remote identification;

- Liki24.com has developed special software that collects data from all pharmacies on the market and collaborates with insurance companies. Once the doctor tells the insurance company the diagnosis and the prescribed medicine, the insurance company manager can immediately see on the map which pharmacies have everything you need, which pharmacies can compare prices and automatically book or order delivery.

Meanwhile, among the latest computer technologies used by modern insurance companies should be highlighted: the creation and maintenance of large information centers, ensuring the implementation of business processes online, modern production technologies, the use of information technology and wireless communication technologies in insurance.

However, there are several factors that hinder the development of digitalization of the insurance market: the high cost of relevant technological upgrades, the low consumer demand for insurance programs, which involve the use of modern computer technology, the need for further adaptation of innovative technologies to the relevant insurance products, the lack of professional qualification of employees in the insurance industry, the high level of insurance fraud, disinterestedness of the insurance companies in the insurance industry, which may be the main reason for online insurance, due to large losses; overall low level of trust in insurance institutions and insurance culture.

However, there are several factors constraining the development of digitalization of the insurance market: the high cost of relevant technological upgrades; low consumer demand for insurance programs that involve the use of modern computer technology; the need for further adaptation of innovative technologies to appropriate insurance products; insufficient level of professional

qualification of insurance companies employees in the relevant industry; high level of insurance fraud; disinterest of insurers in large types of insurance, which may be the main reason for the Internet insurance, because of the large losses; a general low level of trust in insurance institutions and insurance culture.

At the present time most insurers offer their customers such services as online insurance policy purchase, implementation of the latest digital technologies in business processes and planning their activities, allowing the customer to pay remotely. The processes of digitalization of the insurance sector can be accelerated by further development of the use of computer technology in the insurance market, obtaining permission for intermediary activities when selling insurance policies in digital form [4, p. 5].

Most insurers offer the consumer such a service as online insurance policy purchase, are introducing the latest digital technology into their business processes, and are planning to expand this activity in the coming years by providing customers with remote settlement. At the same time, these processes in the insurance sphere can be accelerated by further development of the use of computer technologies in the insurance market, as well as by getting approval for the intermediary activities when selling insurance policies in digital form. Ukrainian insurance companies are ready to offer universal products that can be purchased both online and offline. Ukrainians are increasingly using mobile applications, because they appreciate the simplicity and convenience of such purchases. As for the connection between the two, the marketplaces perform 100%, which leads to the conversion of the interested customer.

The main benefits of digitalization in the insurance market can include: transformation of existing business strategies and expansion of the customer base; ensuring customer loyalty; creating a business image of the insurer among competitors; ensuring financial guarantees, optimal management structure and effective functioning of business processes for internal stability and financial sustainability of the insurer.

Along with this, digitalization of insurance companies improves the customer experience and reduces the cost of customer acquisition. Customers expect the right information to be transparent, easy to understand and fast. Insurers are trying to meet these demands by deploying artificial intelligence-based platforms that replace human input with features such as automated product recommendations and solving queries by chatbots. For example, Esurance, an American insurance company, is taking a direct digital approach to insurance customers, eliminating intermediary agents to offer lower and more competitive rates. At the same time, the French insurance company AXA, offers an insurance product to protect customers against flight delays based on Ethereum blockchain. Insurers use blockchain technology to reduce sales and distribution costs, and therefore offer microinsurance products with low margins, which was not possible due to high sales and distribution costs [11, p. 194].

The main areas of progress in the digital transformation of the insurance industry are:

- development of a digital risk insurance infrastructure, the purpose of which is primarily to assess the cause of the insured event;
- insurers agree on the high strategic importance of digital transformation for the success of their company, trying to unleash its full potential;
- past investments in digital self-service platforms and robotic process automation have been successful;
- insurers are aware that they need new ways to adapt their workforce to deliver a truly digital vision for the organization;
- development of artificial intelligence and the Internet;
- the quality of protective systems aimed at impeding the implementation of digital threats.

Change management is the biggest obstacle for insurance companies on the road to a digital organization. Insurers must make structural changes to ensure the lasting impact of their new technology and develop their workforce, often partnering with technology companies to address digital skills gaps.



**Conclusions.** Today's insurance market cannot function effectively without the use of digital technology; it creates new opportunities for its development. Digital technologies open new competitive advantages for insurers: the introduction of innovative technologies in business, the creation of statistical databases, technological digital services for individual insurance proposals, and the systematic transformation of relationships with customers.

Many Ukrainian insurance companies have already realized the benefits of digital insurance, as the introduction of digital innovations in the insurance market allows policyholders to understand that they work with a company that uses the latest tools and technologies to provide better services. At the same time, digitalization in the insurance market helps insurers do their jobs better, speeds up the introduction of new products into the market, and helps policyholders get better insurance terms and services.

Therefore, the continuation of the digital transformation of the insurance industry is the main driver of the Ukrainian insurance market in the near future. Digitalization of insurance business processes becomes an effective management lever.

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