



## Increasing the Efficiency of Electronic Commerce Insurance Services by Reducing Financial Losses

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### ABSTRACT

This article discusses insurance services that can be scaled up with e-commerce elements. The introduction of e-commerce into the insurance sector, the emergence of technologies using the Internet have led to significant changes in the structure of increasing the efficiency of e-commerce in insurance services. Targeted research is being carried out around the world to find scientific solutions to the problems of e-commerce development and to increase its effectiveness. Research is focused on the development of electronic forms of doing business, the transition to a digital economy, the components of e-commerce and their interconnection, the security of information and payment systems. The article analyzes complex measures for the active development of the digital economy and the widespread introduction of modern information and communication technologies in all sectors and industries.

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### Introduction.

The advent of e-commerce has had an impact on society, and it is thanks to this that it has become easier than ever for people to buy and sell products and services without having to be physically present and do it in a certain place. And, as is the case with everything new, the invention of new ways to purchase goods and services often carries some technical risks that may not have existed before the invention. Sellers using e-commerce elements can reach a global audience, and are not limited by geography, as was the case in conventional retail, but the opportunity to expand this industry more than ever before also increases the responsibility of those who are at the origins of this expansion. E-

commerce is a unique industry, so it is not surprising that the risk profile in this industry is equally unique and diverse. The e-commerce industry is growing at an incredibly fast pace, which has become the reason for the emergence of new technological services. The strategy of insurance companies dictates the degree of preparation for the numerous risks that may arise as a result of such a rapid growth of the industry. According to recent studies, retail sales in e-commerce increased to \$4.058 trillion in 2020 and accounted for more than 14% of total global spending[1]. Electronic markets allow sellers to effectively transmit relevant product information to potential buyers, which reduces their search costs. Moreover, firms can use digital technologies to increase product differentiation and mitigate price competition; differ from competitors with superior interfaces and create switching costs [8].

### **Literature review.**

The development of insurance services in e-commerce, the theoretical aspects of insurance services in e-commerce, their practical analysis in the work of scientists in our country have not been carried out sufficiently. The e-commerce infrastructure is limited to the analysis of the organizational and legal form and the analysis of the country. One of the main reasons for such rapid growth of the industry is that it is incredibly easy for any businessman to become a part of e-commerce. Analyzing the definitions of insurance, it is possible to distinguish two main aspects of it: insurance is a contract and a guarantee of covering expenses that are possible in the event of some extraordinary event. The agreement or contract consists of an insurance policy, which specifies the terms of insurance coverage. In this case, the guarantee of compensation will largely depend on a number of conditions specified in the insurance contract or the insurance rules attached to it.

In foreign literature, insurance is sometimes understood as a mechanism that provides a guarantee of partial or full financial compensation for losses in the event of a situation that does not depend on the activities of the insured party. In this case, insurance manifests itself as an economic category, the essence of which is the redistribution of risk. This approach presents insurance as a special social mechanism for reducing the level of risk by transferring it from individuals to the insurer.

### **Research methods.**

The study used methods of comparison, analysis and synthesis, a historical and logical approach, a graphical method for analyzing and comparing statistical and analytical data. Abstract-logical and observational methods were used to formulate theoretical knowledge and conclusions, as well as modern software products were used.

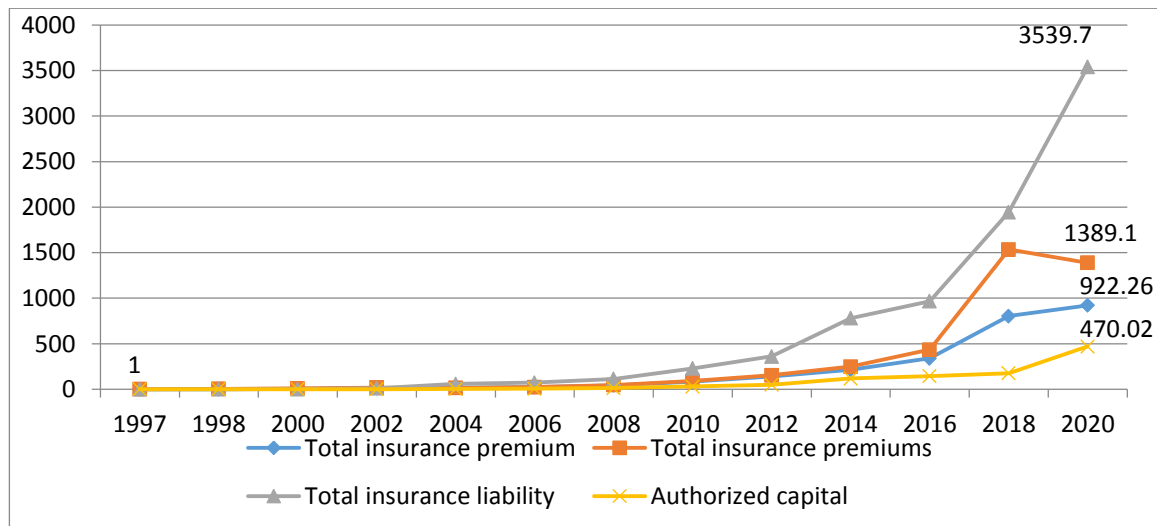
Analysis and results. The international insurance market is actively developing. In 2017, global insurance premiums exceeded \$4.9 trillion (Businesswire, 2020). Life insurance premiums increased by 2.2% in 2019, faster than 1.5% in 2009-2018, adjusted for inflation[3]. Traditional prices will be underestimated by those insurance companies that use the new Internet cost structure, although many are reluctant to fully master the Internet because they worry about the impact on their agency power[7]

The conducted research has allowed us to establish that the state of the country's market in Uzbekistan today is characterized by the following positive trends:

- high growth rates of the total insurance premium (on average 43% annually for 2017-2021) (Fig. 1);
- the presence on the market of 40 insurance companies in the general insurance industry, including three of them with state participation, which have been operating in the domestic insurance market for more than 20 years and are actually national brands – the joint-stock companies Uzagrosugurta,

Kafolat and the export-import insurance company Uzbekinvest, as well as 8 companies in the life insurance industry;

- a fairly high degree of presence of insurers through branches, representative offices and a network of insurance agents in all regions of the country;
- the presence of a large number of insurance agents (more than 7 thousand).



**Fig. 1. Dynamics of the main indicators of the insurance market of Uzbekistan (the level of 1997 is conditionally assumed to be equal to 1)**

The state of insurance as an element of the risk management system makes it possible to attribute the insurance market of Uzbekistan to the so-called "soft" insurance markets, which are characterized by a relatively large number of participants and a low level of insurance premium rates. The structure of the insurance market for 2019-2020 is shown in Table 1. In 2018, they exceeded the US\$ 5 trillion mark for the first time, which is equivalent to more than 6% of the world's gross domestic product. The overall growth was mainly based on steady growth in the insurance sector, except for this life insurance (Forinsurer, 2019). Global insurance premiums increased by 2.9%, and in 2019, adjusted for inflation, they reached the level of 6.3 trillion US dollars. Risk insurance premiums increased by 3.5% adjusted for inflation, slightly exceeding the growth rate from 2009 to 2018.

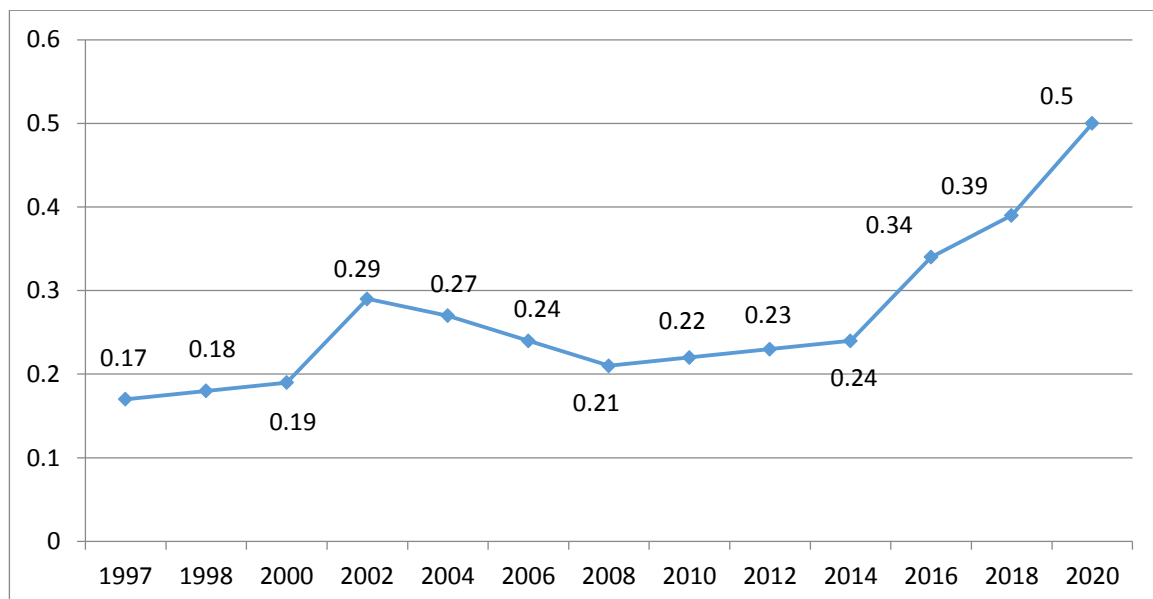
It is obvious that the use of electronic insurance tools facilitates interaction between insurance companies and customers, insurance infrastructure institutions, insurance service consumers and regulators. At the same time, this requires increasing transparency of activities, establishing effective communications and increasing social responsibility of all participants in the insurance market.

After the 2005 hurricanes, the National Insurance Crime Bureau (NICB) in the United States created a database that stores vehicle identification numbers (VIN) and boat hull identification numbers (HIN) of submerged vehicles and boats. The data is provided to law enforcement agencies, the State Anti-fraud Bureau, insurers and state departments of motor transport, the database (VINcheck) is online and accessible to everyone. This is one of the ways to solve the problem of unfair use of insurance policies[3].

Another attempt to solve the problem of title laundering is the US National Vehicle Rights Information System (NMVTIS), a database that requires warehouse operators and insurance companies to submit

monthly reports on vehicles reported as stolen. The program operates under the auspices of the U.S. Department of Justice and is administered by the American Association of Motor Vehicle Administrators. By November 2019, 96 percent of the U.S. automobile fleet was represented in the system (based on data from the Federal Highway Administration for 2019), and 46 states provided data to the system.

The most important macroeconomic indicator of the importance of insurance as an element of the risk management system of legal entities and individuals is the ratio of total insurance premiums to gross domestic product (insurance penetration indicator). The highest value of this parameter is observed in countries with a developed economic system of the United States (insurance premiums account for 14.0% of GDP), Great Britain (13.8%), France (11.5%), Germany (9.5%), Japan (7.6%). In emerging economies, it is from 5.4% to 1.7% of GDP, for example, in Malaysia 5.4%, China 4.3%, India 3.8%, Turkey 1.7%. In Latin America, it ranges from 4.0% to 1.4%, these are Chile (4.0%), Colombia (3.1%), Mexico (2.6%), Guatemala (1.4%). In post-Soviet countries, the indicator ranges from 5.8% to 0.5%, in Slovenia 5.8%, Czech Republic 2.9%, Poland 2.7%, Hungary 2.5%, Russia 1.5%, Kazakhstan 0.7%, in Uzbekistan, the value of this indicator in recent years has been in the range from 0.32 to 0.5% (Fig.2).



**Fig.2. Share of GNP in GDP (%)**

Along with the fact that digital technologies open up the possibility for fraud, at the same time it is digital technologies that help to counteract fraud. One of the most effective ways to prevent fraud and any kind of abuse and manipulation of data can be a way of full access to information and transparency of its use.

In practice, a social media analyst working alone or even in a large group will not be able to view the huge amount of information that is published daily on social media platforms.

Insurance companies in the framework of the study "The state of technology of insurance companies and the calculation of financial losses", recognized that they need to solve a number of issues related to technologies to combat financial losses. In 2022, budgets for technologies to combat financial losses from insurance using e-commerce elements will increase. Technical funds to combat financial losses in insurance via the Internet will be spent on predictive modeling; software for social networks; text data

mining; and link analysis, which is a method used to evaluate the relationships or connections between policyholders and claims.

Recently, the independent consulting company Javelin Strategy and Research released a report on the role that the applicant's behavior should play in identity verification. Their conclusion is that "verification of static identity elements is currently largely useless for fraud prevention." The answer is to replace the usual identity verification with identity identification, which will provide "confidence that not only the identity itself is valid, but also belongs to the applicant"[3].

The connection of the identity of the person at the time of online presence with accurate data about this person is the biggest problem when checking the opening of online policies. Behavior-based identity verification solves this problem by focusing on how users enter information into the app to distinguish fraudsters from genuine applicants.

The identity check examines the specific activity in the online application to prevent the risk of unfair use of the insurance policy.

To date, the electronic insurance market in our country is at the initial stage of formation and development. New technologies are spreading in the Republic of Uzbekistan, opening the way to radical changes in the programs offered by insurers. To increase their competitive advantages in the insurance market, professional participants are required to search for new approaches to scaling and search for new sales markets. In order to reduce costs, due to the changed technical conditions, with the advent of implementation opportunities in the market of insurance companies in Uzbekistan, a new type of service has appeared - the service of selling insurance policies via the Internet using information technology. Leading companies are investing heavily in technology, and customers are actively taking advantage of new advantages.

Insurance companies understand that they need to improve the technology of selling insurance services and expand the number of products offered to meet the needs of demanding customers. There have been no major changes in the demand for insurance services in society, but the market itself continues to develop in response to changes in the new century. Uzbekistan is entering a new era in the field of insurance, using a unique type of services - "Technologies of the future" - insurance on the Internet. Online insurance is a simple model of purchasing an insurance policy and customer service via the Internet and on the insurance company's website. However, the level of computer literacy of the population is quite low, and in some cases employees of insurance companies are no exception. This leads to a misunderstanding of the possibilities, advantages and usability of Internet technologies.

All this can be done even if the client and the insurance company are located in other parts of the world. So why are there still no insurance offers on the web?

One of the reasons for this is the high probability of fraud on the part of the customer. Therefore, supporters of e-commerce ideas can change the popular saying: "If you are afraid of scammers, do not enter the Internet."

In addition, there are dozens of online stores that successfully operate in different countries, on different continents.

In the insurance business, the process is a little more complicated, because usually the amount of the insurance premium is several times higher than the amount paid by the client for insurance. To ensure the smooth operation of insurance companies and reduce the cost of financial coverage in the event of an insured event, different methodologies are developed and different levels of control are applied.

Expanding the customer base with the help of e-commerce methods, insurance companies faced the problem of registering customers.

As a result of using different fonts and other technical errors, it was discovered that one client can register with different insurance companies and repeatedly receive insurance coverage for one insured event. In many cases, insurance companies do not realize that the financial coverage of the insured event exceeds the cost of the insured object. This situation arises due to the possibility of multiple insurance of the object of insurance in different insurance companies.

Next, in Figure 3, we can analyze the concluded online contracts and their structure for 2019. The structure of the concluded online contracts for 2020 can be seen in Figure 3.

After analyzing the data in the figures, we can conclude that if we take all the premiums of insurance companies received from the sale of policies via the Internet for 100%, then most of them are sales of car insurance, accidents and diseases, and in 2019, until there was a pandemic and mass diseases, sales of travel insurance. Property insurance is somewhat inferior and voluntary medical insurance and other types of insurance are in last place.

All this creates the basis for the activities of unscrupulous clients, and to date, no cases of fraud after payment of insurance premiums have been identified, which indicates a violation of the legislation on insurance activities. However, the increase in the flow of clients involved in the insurance company and the prospects for this type of activity have become a strong impetus for the development of methods for controlling the customer base.

Resolution of the Cabinet of Ministers No. 780 of December 14, 2020

"On additional measures to improve the procedure for the provision of electronic insurance services" since March 1, 2021, insurance policies for OSGOVTS in electronic format have been introduced. E-policies are equivalent to a paper insurance contract (policy)[5]. An interesting fact is that paper insurance policies also do not lose their validity and remain valid. It is important to note that the volume of Internet insurance is growing annually and the internal structure of policy sales via the Internet is changing remotely.

The COVID-19 pandemic has affected various sectors of the economy, including insurance, and has become a problem and a clear catalyst for innovation. Pandemic pointed out some shortcomings of the traditional model of interaction between insurers and their customers, such that insurance companies focused on efforts to innovate and invest in the digital future.

COVID-19 has had a different impact on the insurance market: the number of life and health insurance has increased dramatically, but there is a significant decline in travel and car insurance. Nevertheless, in all insurance companies there have been changes in the system of interaction with customers. 90% of insurance market participants can conduct business remotely, they have felt the impact of COVID-19 on attracting new and retaining old customers.

The insurance market of Uzbekistan has witnessed growth in recent years and it is possible to predict significant growth in the coming years. Today there are about 41 insurance companies in Uzbekistan. In the period of digitalization of society, in order to overcome the difficulties with fraud, which was mentioned above, it would be ideal to create a global system in which each potential client would have his own status. This kind of information should be stored in a database and be accessible to all insurance companies. The problem faced by insurance agents at the time of registration of potential customers is the lack of mechanisms to eliminate the possibility of error at the time of identification. An

insurance agent at the time of registration of an insurance policy online should be extremely attentive and careful. To date, in one insurance company, when applying for an insurance policy online, it is possible to register one client several times, in different branches, by different insurance agents. Using two alphabets in parallel - Cyrillic and Latin, technical errors when entering data led to the fact that the object of insurance can be insured several times. Often this does not happen intentionally, due to technical circumstances. This circumstance has become a way of manipulating not bona fide clients, and in some cases fraud.

Ultimately, at the time of the insured event, the premium may exceed the cost of the object itself. According to Article 937 of Chapter 52 of the Civil Code of the Republic of Uzbekistan, the amount of insurance coverage cannot exceed the amount of the cost of the object itself, the object can be insured only once. In case of insurance two or more times, the amount of the insurance premium cannot exceed the cost of the object itself[5].

In order to avoid fraud and to overcome difficulties with identification, it is necessary to use the Personal Identification Number of an individual - fourteen decimal digits, which will completely exclude the possibility of entering data on the same client several times. When entering customer data, it is the column with the PINFL number that comes first, and then the first name, last name, etc. If the client has already had an insurance policy before, then his data is automatically displayed and identified. In practice, the use of this method in the Capital-Sugurta company led to the fact that the customer base was automatically put in order, customers were identified once and there is no risk of errors and technical repetitions. The use of this method will further reduce the risks of fraud in the electronic registration of customers remotely.

In the future, the creation of a database of clients, where information about clients will be fully digitized, including information about trustworthiness, the presence or absence of debts to the tax authorities and heredity for health, etc. As a result, each potential client is assigned a rating out of a 10-point system for the reliability of an individual as a potential client of an insurance company. Based on the rating, it is possible to reduce insurance premiums. This whole system is in the near future of insurance companies. The use of PINFL as a key moment in the registration of insurance policies is the first step towards the implementation of such projects.

The use of PINFL by each client during online registration with an insurance company has shown high efficiency. This helps to eliminate the double registration of one client. Using a TIN is also effective for legal entities, since several clients cannot register more than once.

When analyzing the main indicators of the insurance market of Uzbekistan, the issues of increasing the entrepreneurial activity of individuals in this segment of the financial services market, the growth of insurance payments, increasing the capitalization of insurance companies and state control over their activities were considered. Despite this, there are a number of problems that will allow us to intensify the development of the national insurance market.

In the modern world, insurance plays an important role in the economy of our country, the importance of insurance and the coverage of various aspects of our life by insurance is constantly growing. This is a positive trend, as it indicates an increase in the general financial culture of the population, as well as an increase in the level of conscious participation of the population in insurance activities.

To date, insurance companies in our country offer new life insurance products that meet the new needs of the population of the republic. These companies carry out special measures to increase the level of financial literacy of the population. Of course, the population is aware of life insurance, but not many

people know that such insurance can also bring profit. Investment life insurance is one of such products.

Digital blockchain technology is considered a strategically important tool for insurance market participants. The new technology can help most industry participants overcome such competitive threats as low customer interest in insurance products, limited growth in developed markets and the general trend of switching to digital technologies. Below is a general description of its types, which bring the most profit when used in insurance activities. They can be divided into three categories: providing growth, increasing efficiency and reducing costs (by automating the main processes).

There are at least three ways to use blockchain, which open up new opportunities for the growth of insurance companies: increasing customer interest, offering new cost-effective products for emerging markets and developing insurance products related to the "Internet of services". The key to success is the creation of a reliable, widespread platform based on new technology, through which customers could directly work with their personal data, collective insurance policies.

Conclusions and suggestions.

In increasing customer interest, an important means of influence that can increase customer interest in the company's services is the use of blockchain tools to work with their personal data. Customers' dissatisfaction with the possibility of losing control over personal information in the process of concluding a contract with the company and the need for regular answers to the same questions can be eliminated with the help of blockchain, which gives them the opportunity to directly manage and verify personal information.

At the same time, there is no need to store personal information in the blockchain. It remains in the users' documents. The registry contains only confirmation of its authenticity, for example, a doctor's report or other related operations (medical examination with the date) are stored. In such cases, the scale of the system allows you to get the maximum benefit from the blockchain chain, since the new technology allows a large number of participants to access data at any time convenient for them. When checking the client's profile, there is no need to go through the entire verification process, he will be able to use this tool to send confirmed identification information to other companies to sign new contracts. This speeds up the process of attracting new customers and increases efficiency.

Another way to attract customers is to increase transparency, as well as provide tariff setting schemes and mechanisms for making insurance payments that are understandable to the consumer. For example, InsureETH startup demonstrated a blockchain-based scheme for passenger air insurance using smart contracts. In insurance contracts, in case of cancellation or delay of flights, insurance payments automatically begin to be made. Flight information comes from reliable sources and is processed using data from external sources using a tool called oracle, which adapts it for later use in the blockchain.

As noted by the President of our country Sh .Mirziyoyev at a meeting on the development of the insurance services market on July 10, 2019 with the heads of insurance organizations: "Insurance services are one of the tools to protect the economy from various financial risks. However, the role of these services in the financial market of our country is still small. The share of this industry in the GDP of our country is only 0.4%. For comparison: in South Korea, this figure is 11%, in Germany - 6%, in Russia - 1.5%. One of the problems of this industry is that insurance services are not attractive enough. Over the past six months, 887 billion has been collected. the sum of insurance premiums, and the amount of insurance compensation paid was only 11% of the premium. In the world, this indicator averages 50-60%" [6].



With this in mind, the time has come to completely reform the insurance services market, which is difficult to accomplish without switching to digital insurance services, without using new information platforms and introducing innovative insurance products in the insurance market of Uzbekistan

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