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ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

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NAS RK is pleased to announce that Bulletin of NAS RK scientific journal has been accepted for indexing in the Emerging Sources Citation Index, a new edition of Web of Science. Content in this index is under consideration by Clarivate Analytics to be accepted in the Science Citation Index Expanded, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. The quality and depth of content Web of Science offers to researchers, authors, publishers, and institutions sets it apart from other research databases. The inclusion of Bulletin of NAS RK in the Emerging Sources Citation Index demonstrates our dedication to providing the most relevant and influential multidiscipline content to our community.

Қазақстан Республикасы Ұлттық ғылым академиясы "ҚР ҰҒА Хабаршысы" ғылыми журналының Web of Science-тің жаңаланған нұсқасы Emerging Sources Citation Index-те индекстелуге қабылданғанын хабарлайды. Бұл индекстелу барысында Clarivate Analytics компаниясы журналды одан әрі the Science Citation Index Expanded, the Social Sciences Citation Index және the Arts & Humanities Citation Index-ке қабылдау мәселесін қарастыруда. Web of Science зерттеушілер, авторлар, баспашылар мен мекемелерге контент тереңдігі мен сапасын ұсынады. ҚР ҰҒА Хабаршысының Emerging Sources Citation Index-ке енуі біздің қоғамдастық үшін ең өзекті және беделді мультидисциплинарлы контентке адалдығымызды білдіреді.

НАН РК сообщает, что научный журнал «Вестник НАН РК» был принят для индексирования в Emerging Sources Citation Index, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Вестника НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному мультидисциплинарному контенту для нашего сообщества.

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METHODS FOR IMPROVING THE SOCIO-ECONOMIC EFFICIENCY OF STATE REGULATION OF INSURANCE ACTIVITIES IN THE DIGITAL ECONOMY

Abstract. The article examines the features of the organization of the country's system and the trend of development of international insurance in the digital economy. The development of the insurance market in Azerbaijan and the factors affecting it are assessed, the analysis with the CIS countries, the EAEC is conducted. Proposals on the main directions of development of the national market are being put forward.

Key words: national economy, insurance market, financial sector, market instruments, cyber risks, cyber insurance, digital economy.

Insurance services, considered one of the leading branches of the economy. The development of the insurance market is estimated by the specific weight of the country's insurance markets in GDP. On the other hand, this indicator also determines the level of development of market institutional systems in different countries, and also expresses their attitude to insurance. The level of development of insurance services in socio-economic life is still not satisfactory. It is extremely important to effectively use the existing potential for the insurance market, increase the insurance premium systematically and consistently strengthen the insurance sector in Azerbaijan.

At present, the insurance market of Azerbaijan is at the very beginning of the development process. That is, despite the fact that today's insurance market and the potential of the country's economy are higher than in the current situation, the insurance market in recent years is experiencing a recession. According to world insurance experts, in countries with a stable economy at least 2% of GDP (gross domestic product) should be insurance premiums. In our case, given the fact that Azerbaijan's GDP in 2016 is 63 billion manat, it is logical that the volume of the insurance market should be at least 1.2 billion manat. Last year, given that the insurance market amounted to 485 million manat, this indicator shows that the GDP is 0.8%.

It should be noted that an important part of measures to improve financial services falls on the insurance market. The insurance segment, which is distinguished by its uniqueness, is based on market freedoms, but state regulation has always been necessary. Practice shows that the problem of the regulatory role of the state in the market system of economic relations has always been in the focus of scientific and public opinion throughout the history of the world economy. Representatives of many leading economic schools (neoclassical, institutional, institutional) expressed different views on the essence, purpose, form of state regulation of the economy and other issues. The search continues for the optimal balance between state regulation and self-regulatory economic instruments.

The insurance market in each country is estimated by the volume and rate of growth of real insurance premiums, that is, the funds that insurance companies receive from the sale of policies. In 2016, the world leaders in this indicator were the US - \$ 1.35 trillion of insurance premiums a year, Japan – \$ 471 billion, and China – \$ 466 billion. Data on the results of 2017 yet, but analysts believe that China is likely to take the second line in the ranking, pushing back Japan. Part of this success is due to the fact that the Chinese government has consistently taken measures to stimulate the purchase of insurance policies.

Another important indicator of the world market is the share of insurance premiums in the GDP of a country or region. In this parameter, Taiwan leads, where insurance premiums provide 19% of GDP, Hong Kong (17-18%), South Africa (14%), South Korea (13%) and Finland (12%).

The data of a major international insurer Swiss Re for the year 2016 revealed the following trends in the insurance market:

Continental China is the leader in the growth rate of the insurance market among developing countries. The growth is mainly due to the life and health insurance market, which has increased by 9.6% over the year.

Among the developing countries, India is considered the second most promising insurance market, largely due to the fact that the economy of the country showed in 2016 the highest growth rate in the world. Due to the active reforms of the Prime Minister of India, growth will slow in the next few years, but the same reforms will have a positive effect on the insurance market in the long term.

The markets of Mexico, Spain, Indonesia, Turkey, Vietnam and Morocco show significant growth. The markets of Russia and Kazakhstan are also growing, but at a slower pace. Growth is provided mainly by life and health insurance, in contrast to Western Europe, where a small increase shows only the property and liability insurance market.

Negative trend, that is, a reduction in the volume of insurance premiums received, is evident in Argentina, Ecuador, Australia, Japan, Peru, Nigeria, Algeria, Sweden, Lithuania and Saudi Arabia. Of the major countries, Nigeria and Argentina are worst off - 11.4% and minus 16.8% of insurance premiums compared to 2015. Sensitive changes occur in Japan, which is traditionally one of the leaders in the insurance market, while at the same time in 2016 showed a decrease in the volume of insurance premiums by 5.1%. In the same year, cases in Australia and Sweden were not very good, minus 5.8% and minus 5%, respectively, but Australia is likely to show growth in 2017.

The market of insurances, not related to life and health, is growing mainly due to the sale of policies for cars. Another notable driver in the developing part of the world is infrastructure investment in Southeast Asia. Nevertheless, the United States remains the leader in property and liability insurance, which occupies 46% of the world market.

A long-term trend in all countries - the transfer of sales policies online and the significant costs of insurance companies to create an IT infrastructure. First of all, the most standardized products are transferred to the Internet: insurance for cars and real estate. In this area, the leader can be called Britain, in which more than 50% of policies for cars and about 25% of insurances for real estate individuals buy online. Mobile services are most rapidly developing in countries of Africa, Asia and South America, where many residents can access the Internet only from the phone.

Nevertheless, in general, the process of digitalizing the insurance market is slow. This is due not only to poverty and limited Internet access in developing countries, but also to legislative restrictions and, for example, the reluctance of small insurance companies in America to bear the costs of providing an IT infrastructure. In addition, direct online sales of policies hamper the existing network of brokers, which creates problems for insurance companies in developed countries. In addition, there is a cultural problem: in the case of complex products, in particular, health insurance, many buyers are easier to discuss the conditions and features of the policy with the broker than to study the issue on the Internet. Perhaps this problem will be resolved through the introduction of bots-assistants: according to the Accenture survey, 71% of people are ready to use the advice of the bot when choosing insurance online.

The global insurance industry is affected by the global macroeconomic and financial environment and thus exposed to weak economic growth, low inflation rates, volatile financial markets and the persistent low interest rate environment. Since the crisis, premium growth has generally remained below pre-crisis levels. Underwriting is under pressure, but remains profitable. The protracted low-yield environment is eroding life insurers' capital positions, particularly for companies offering products with long-term guaranteed rates and big duration mismatches between assets and liabilities. Non-life (re)insurance is subject to soft market conditions, which partly can be regarded as an unintended consequence of the current low interest rate environment, reflecting the convergence of capital and insurance markets.

The study of the systems of state regulation of insurance markets evidently demonstrates that the use of financial regulation tools is based on these systems. The main goal of state financial regulation is to ensure the sustainable development of national insurance markets in order to enhance social and economic stability in society.

The main goals and objectives of the new reforms in the field of sustainable economic development are, first of all, strengthening the national insurance system and improving its financial services in accordance with the requirements of the Strategic Roadmap.

Today, insurance companies must solve new problems in financial markets, since they are the most active elements of the financial system and must acquire new spaces and technologies. Because in our time financial services are becoming more and more digitized, in other words, they are switching from offline to online. Of these processes aimed at digitization, technology, the insurance system can not be abolished.

The main element of income from insurance business are insurance premiums. The insurance premium is the price of the real estate of the insurance company. The collection of insurance premiums by insurance companies is determined by a number of objective factors. These include the level of inflation, the legislative framework, the tax system, the competitiveness of the insurance market, the dynamics of interest rates of banks, the level of development of the social protection system and other factors.

The ideology of the development of international and national insurance systems is based on such a fundamental basis that the larger the insurance market is able to provide quality services, it can attract as much money and financial resources as possible. Since the effective management of cash flows in the modern world largely depends on the development of companies and the insurance market in general. To achieve a harmonious integration of the national insurance market into the global insurance industry, first of all, deep qualitative changes in the country's insurance system must be achieved.

Modernization of the mechanism of the insurance market in this direction determines the activities of both the state and the insurer. As external experts note, the need to increase the role of the state in the insurance industry requires a scientifically based, purposeful new insurance strategy. To implement this strategy, first of all, the principle of the sovereignty of consumers of consumer services should be put forward, in order to achieve the latter in the insurance market, it is necessary to ensure the formation of an appropriate insurance interest. From this point of view, first of all, a real competitive environment should be created between insurance organizations. The insurer considers the insurer's interests an objective reality. To ensure the quality of this interest, a healthy competitive environment should be created between the insurers and the attractiveness of the insurance business.

In 1995, the American computer scientist Nicholas Negroponte (Massachusetts University) introduced the term "digital economy". Now this term is used all over the world, it has become common practice for politicians, entrepreneurs, journalists. Last year, one of the World Bank's main reports contained a report on the state of the digital economy in the world (the report was entitled "Digital dividends").

The share of the digital economy in the GDP of developed countries increased from 4.3% to 5.5% between 2010 and 2016, and in developing countries GDP from 3.6% to 4.9%. In the G20 countries, this indicator has grown over five years from 4.1% to 5.3%. The world leader in the share of the digital economy in GDP is Great Britain - 12.4%.

The European Union identifies three supports for the digital market:

– the best access conditions for consumers and businesses in Europe;

– creation of common legal terms and equal competitive opportunities for digital networks and innovative services;

– maximize the potential of the digital economy growth.

According to a study by analysts at International Data Corporation, published in 2016, the total world cost of digital transformation technology will grow by 16.8% annually and reach 2.1 trillion US dollars by 2019.

According to the forecasts of the consulting company Accenture, the use of digital technologies should add 1.36 trillion US dollars in 2020, or 2.3% of GDP in the total GDP of dozens of the world's leading economies. The GDP of developed countries will grow by 1.8% from the digital economy and 3.4% from the GDP of developing countries. The Boston Consulting Group forecasts that the digital economy could reach 16 trillion US dollars by 2035.

The Eurasian Economic Union (EAEU) is actively discussing the common digital agenda. The next step will be an elaboration of strategic initiatives in establishing the digital economy, so it is essential to understand what neighboring countries gained positive and negative experience. At the seminar - presentation "European experience in building a single digital market", the Member (of the Board -
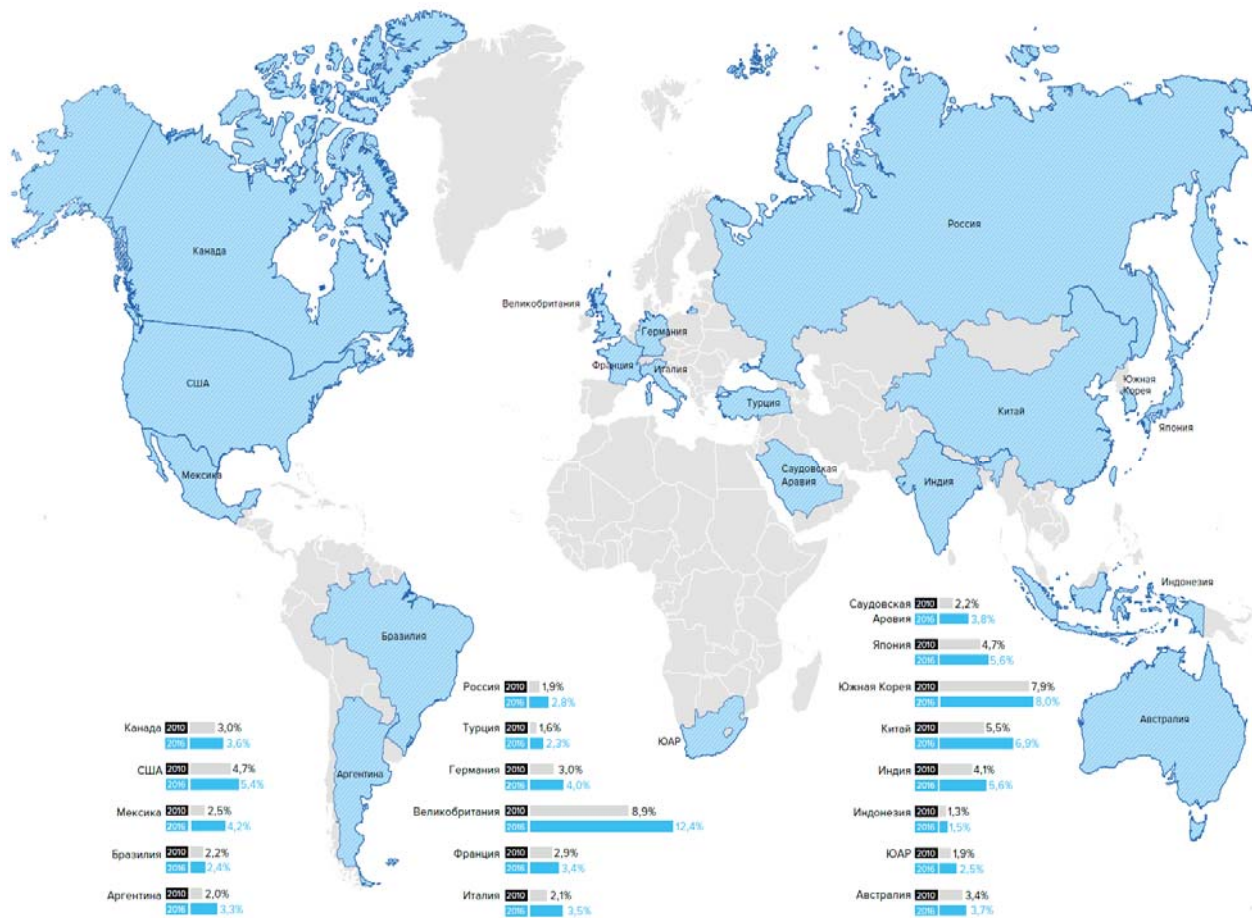
The growth of the share of the digital economy in the GDP of G20 countries from 2010 to 2016

Minister in charge of Domestic Markets, Information Support, Information and Communication Technologies of the EEC, Karine Minasyan, noted the interest of the EAEU in the use of international experience in implementation of the digital agenda, the best practices in this area and digital initiatives.

According to the information of the International Telecommunication Union, in the period from 2000 to 2015, the proportion of Internet users in the world has increased almost sevenfold – from 6.5 up to 43% of the population. According to Internet World Stats Agency, as of June 2016, the number of Internet users in Armenia reached almost 70%, in Belarus - 59%, in Kazakhstan - 54.3%, in Kyrgyzstan - 36.2%, in Russia - 75.5%.

One of the challenges on the way of digital economy development is providing security in cross-border purchases in terms of providing guarantees for the protection of personal data of consumers.

According to Dmitry Medvedev, within the union it is necessary to include three elements in digital integration:

EAEU of Data X – a single subsystem of transfer and data exchange in electronic form. It is the platform which can be used for the exchange of information, and eventually – for the exchange of legally significant protocols between private companies.

EAEU of ID – single space of electronic trust. It includes services for the identification, authentication, authorization, digital archive. It will allow issuing, for example, references to citizens of one country in the territory of another in a digital format.

EAEU of Geo – a geographic information system and services of a cartographical basis which promotes simplification of control of transportation and traceability of goods.

Share of the digital economy in GDP

Country	2010	2016
Great Britain	8,3%	12,4%
South Korea	7,3%	8,0%
China	5,5%	6,9%
India	4,1%	5,6%
Japan	4,7%	5,6%
US	4,7%	5,4%
Mexico	2,5%	4,2%
Germany	3,0%	4,0%
Saudi Arabia	2,2%	3,8%
Australia	3,4%	3,7%
Canada	3,0%	3,6%
Italy	2,1%	3,5%
France	2,9%	3,4%
Argentina	2,0%	3,3%
Russia	1,9%	2,8%
South Africa	1,9%	2,5%
Brazil	2,2%	2,4%
Turkey	1,6%	2,3%
Indonesia	1,3%	1,5%

Cybersecurity risks have become more significant as critical consumer financial and health information is increasingly stored in electronic form. As people become more reliant on electronic communication, and as businesses collect and maintain ever more granular pieces of information on their customers, the opportunity for bad actors to cause difficulties for business and the public is exploding. The demand for insurance has increased significantly in response to sharply heightened risk awareness. The insurance industry has reacted to cyber threats and to the corresponding demand for risk cover by launching specific cyber policies. These relatively new types of policies can be used to insure against IT and cyber risk exposures in private, commercial and industrial environments. The cyber insurance market is only small at present, but expected to grow dramatically over time. Marsh estimates the U.S. cyber insurance market was worth around USD 2 billion in gross written premiums in 2014 (0.3% of the U.S.

non-life market). Currently, the U.S. market dominates the global volume of these type of products, with the majority of the business written being against U.S. risks. The European cyber insurance market is expected to get a boost from expected reform of EU data protection rules that force companies to disclose breaches of customer data. A PwC study reported the global market could grow to USD 5 billion by 2018 and USD 7.5 billion by 2020.

Heads and representatives of central banks of member countries of the Eurasian Economic Union (EAEU) during the meeting in Moscow discussed issues of realization of monetary policy and formation of the general system of cybersecurity, the press service of National bank of Kazakhstan reported.

According to the press service, the head of the National Bank of Kazakhstan Daniar Akishev during the working visit to Moscow participated in the 16th meeting of Consulting council for monetarist policies (KSVP) of state members of EEU. Heads and representatives of central banks of Russia, Armenia, Tajikistan, Kyrgyzstan, and Belarus also participated in a meeting. They discussed problems and solution in entirely new area cybersecurity and cyber threats.

A major challenge facing insurers selling these insurance products is to set risk-adequate premiums. This is in part due to the inherent complexity of the risk, given that the definition of cyber risk is evolving and rapidly expanding. Moreover, although many costly cyber events have occurred, there is still a lack of historical data for cyber risk, making it difficult for insurers to write and price policies appropriately. Finally, expected claims in the commercial and industrial area tend to be low frequency events with possibly highly severe impact, given that cyberattacks have the potential to be massive and wide-ranging. Risk accumulation – in which a single event spans multiple risks affecting companies, countries, industries and lines of business – is a growing concern and creates the potential for catastrophic risk.

Insurers are exposed to cyber underwriting risk directly through prudential risks that emanate from underwriting specific cyber policies (affirmative) and indirectly through insurance policies where cyber risk is not clearly excluded (silent). Affirmative policies include, for example, data breach covers. Silent policies might include casualty, marine, aviation, transport, motor and home contents policies that either cover all risks, or do not clearly exclude cyber risks. In a recent consultation paper, the Bank of England has expressed concern about the loss potential of silent cyber risk and has identified material shortcomings in its management. Cyber insurance products have to be embedded in adequate control structures to prevent potentially incorrect assessments from escalating into a threat to the insurance companies concerned. An IAIS working group has recently published an issues paper on cyber risk, which builds on a 2015 survey of members on their approaches to cyber risk.

Within the framework of the global world "Digital economy" a program is being prepared to create a large-scale market of insurance against cyber risks. The information security policy can become mandatory since 2020 for all strategic industries - from banking to engineering. The plan envisages the introduction of an industry standard for mandatory audit of information security by 2020 - and the requirement of compulsory insurance of such risks by enterprises of certain sectors of the economy.

First of all, the service of cyber insurance is in demand by banks and financial organizations, the second - by providers, the third - by companies engaged in the processing of personal data. In the insurance company "Alliance", insuring customers from cyber nails, noted that after the spread of viruses WannaCry and Petya recorded an increase in demand for insurance services against cyber threats - according to the company, the global turnover of this market is $ 2.5 billion.

REFERENCES

[1] Fogelson Yu.B. Insurance Right Theoretical bases and practice of application. INFRA-M REGULATION. M., 2012.

[2] Shatalova T.N. Foreign insurance. Orenburg: GOU OGU, 2006.

[3] Timofeeva E.M. Features of marketing of insurance products. Business. Education. Right. 2013. http://marja.az/news/13351

[4] Eurasian Economic Integration. 2017. Saint Petersburg: EDB Centre for Integration Studies, 2017. P. 88.

[5] Digitalisation and the digital economy: Trade union key messages (February 2017) on https://www.ituc-csi.org/digitalisation-and-the-digital?lang=en

[6] Organisation for Economic Cooperation and Development (2016a). Development aid in 2015 continues to grow despite costs for in-donor refugees. 13 April. Paris. Available from http://www.oecd.org/dac/stats/ODA-2015-detailed-summary. pdf

[7] Organisation for Economic Cooperation and Development (2016b). 2016 Global aid prospects and projections: from words to action. Paris. Available from http://www.oecd.org/dac/financing-sustainable-development/developmentfinance-standards/FSS%202016%20flyer.pd

[8] http://www.vestifinance.ru/articles/46771
[9] https://www.kommersant.ru/doc/3450079
[10] https://ria.ru/analytics/20170922/1505297429.html
[11] https://wiki-org.ru/wiki/Список _стран_по_ВВП_(ППС)
[12] https://fins.az/sigorta/906540/
[13] Robin Pearson. The Development of İnternational insurance.
[14] Julian Burling and Kevin Lazarus. Research Handbook on International Insurance Law and Regulation.
[15] https://vc.ru/31955-globalnyy-rynok-strahovaniya-obzor-tekushchey-situacii
[16] http://www.1news.az/
[17] http://eurasiancenter.ru/news/20180330/1004463851.html

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**МЕТОДЫ УЛУЧШЕНИЯ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОЙ ЭФФЕКТИВНОСТИ
ГОСУДАРСТВЕННОГО РЕГУЛИРОВАНИЯ СТРАХОВОЙ ДЕЯТЕЛЬНОСТИ
В РАМКАХ ЦИФРОВОЙ ЭКОНОМИКИ**

Аннотация. В статье исследуется особенности организации системы страны итенденции развития международного страхования в рамках цифровой экономики. Оценивается развитие страхового рынка в Азербайджане и факторы влияющих на нее, проводится анализ со странами СНГ, ЕАЭС. Выдвигаются предложения по основным направлениям развития национального рынка.

Ключевые слова: национальная экономика, страховой рынок, финансовый сектор, рыночные инструменты, киберриски, киберстрахование, цифровая экономика.

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**ЦИФРЛЫҚ ЭКОНОМИКАНЫ ЖАҚСАРТУ ӘДІСТЕРІ
ӘЛЕУМЕТТІК-ЭКОНОМИКАЛЫҚ ТИІМДІЛІГІН ЖӘНЕ
МЕМЛЕКЕТТІК САҚТАНДЫРУ ҚЫЗМЕТІН РЕТТЕУ ШЕҢБЕРІНДЕ**

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