

Original Article

Analysis of problems and prospects of development of voluntary medical insurance in Ukraine

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ABSTRACT

The analysis of the dynamics of the development of the market for voluntary health insurance was carried out on the basis of insurance premiums, payments and insurance payments during 2010-2017. During the years 2010-2017, the net premiums and payments were characterized by a systematic growth. At the same time, these indicators had different growth rates by years. During the crisis period of the country's development (2014-2015), there was a significant increase (+ 24.0%) in the amount of insurance premiums, while the insurance payments showed the lowest (+ 9.0%) value of the chain rates of the growth over the entire investigated period. Indicators of the level of insurance payments had zigzag-like nature of changes. The highest value of the level of insurance payments was observed in 2010 (78.19%), and the lowest was in 2016 (53.9%). According to the analysis of insurance products, "basic" and "specialized" insurance products, which have been offered in such areas as "ambulatory", "inpatient care" for insured persons, "emergency medical care" and "dental services" and have been implemented at three price levels including ("Economy package", "full package" and "VIP-class"), have been defined. In the market, dominant positions (78.3%) are contracts for collective (corporate) health insurance lasting from 1 year or more. Of the TOP-20 insurers, compiled according to the analysis of the level of insurance payments in 2017, only eight companies had the optimal level of insurance payments (from 30.0% to 60.0%). Thus, it can be argued that voluntary health insurance remains a rather risky type of insurance for native insurers.

 $\textbf{Keywords:} \ \ Insurance \ payments, \ Insurance \ premiums, \ Health \ insurance, \ Health \ care \ system \ of \ Ukraine, \ Voluntary \ health \ insurance.$

Introduction

Health insurance is a branch of insurance activity, defined as a system of socio-economic relations to protect the interests of citizens or members of their families in case of loss of their health for any reason [1-3]. Medical insurance is financially linked to the compensation of citizens' expenses for the payment of the cost of providing medical and pharmaceutical assistance, as well as other health care expenses, for example, carrying out preventive and sanitary measures, dental prosthesis, etc. [1, 4, 5]. According to the historical conditions, the Ukrainian healthcare

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system has functioned for a long time under the conditions of strict state regulation of the industry. First of all, during the Soviet times in Ukraine, there were no market relations in health care and in the pharmaceutical-backed population. In the former USSR, an administrative-command model of Soviet medicine functioned, which was named after the prominent Soviet physician and the organizer of health protection N. A. Semashko (1874-1949) [6, 7]. All insurance activities were carried out by state organizations, and medical insurance as a socially oriented form of activity in society was absent. Only from the end of the last century, measures for the introduction of market relations were introduced in the economy of the country, which also affected the provision of medical and pharmaceutical care to the population. At present, insurance relations in the health care system are considered as an important component in the process of reforming the social component of Ukrainian medicine and the introduction of socially oriented relations in the system of pharmaceutical provision of the population [1, 2, 5, 8]. Unfortunately, since the proclamation of Ukraine's independence in 1991, insurance

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relations in the public health sector have never been implemented.

In advanced economies, health insurance has an important place in the structure of the relationship between the state and citizens [5, 9-11]. At the same time, experts noted that in the modern market of voluntary medical insurance, each year the level of social responsibility to society is significantly increasing [1, 5, 10]. So, the growing importance of health insurance comes from those categories of citizens who previously, for whatever reason, were not able to pay the cost of health insurance. Thus, for example, every year, employers 'and insurance companies' cooperation is optimized, the range of insurance services for pensioners, schoolchildren, children under 5 years, etc. is expanding significantly [11-13]. From a socio-economic point of view, the experience of implementing micro-insurance programs in the health care system of countries with low levels of economic development, as well as in the context of increasing the corruption risks in society, deserves special attention $^{[1, 5, 6, 14\text{-}16]}$. The increasing influence on the dynamics of insurance payments and the development of the market for voluntary health insurance in economically developed countries is gaining the interest of employers in shaping the insurance coverage of their employees in the event of illness [10, 17]. Implementation of micro-insurance programs in practical health care has allowed many countries to substantially increase the availability of medical and pharmaceutical assistance to socially undefenced populations [1, 16-19]. The modern market of voluntary health insurance in Ukraine should be considered as an important component of a set of measures aimed at achieving the humanistic principles of social development [8, 14, 18, 19]. Therefore, the analysis of the dynamics of the development of the market for voluntary health insurance, the definition of problems and prospects for its development in the context of the implementation of the main and additional functions of health insurance in Ukraine and raising the level of social responsibility insurance business have relevance, and scientific and practical importance.

Materials and Methods

Medical insurance performs all the functions inherent in insurance activities in general. The main ones include market, accumulation and compensation, and the additional ones include prevention and diversification. The content of these functions has been shown in Table 1. In economically developed countries, all the functions of health insurance have been interconnected with one another, and their effective implementation has allowed fulfilling all obligations imposed on insurers in accordance with the signed contracts [11, 5, 20, 21]. Therefore, in this study, the task of analyzing the effectiveness of the implementation of all five functions of health insurance was accomplished.

Table 1: The essence of the main functions of health insurance as a socially oriented and financial activity in society

society				
Function of medi- insurance	The essence of the function			
Maine functions				
Risky	Assigning the insurer certain fee liability for the consequences of the risks taken for insurance. The specified type of risk is indicated in the contract, which is concluded between the insurer and the insured. For insurance, the insurer takes only insurance risks, that is, you take risks that can only be implemented unilaterally in the direction of the insured person, material, or moral damage.			
Compensational	Carrying out insurance claims for losses caused by illness, disability, disability within the limits specified by the insurance contract.			
Accumulative - Saving money function	Formation of specialized funds at the expense of the insurer to cover losses in the event of their implementation.			
Additional functions				
Preventive	The essence of the preventive function is to organize a set of measures to prevent the implementation of an insurance event, defined by the insurance contract for example, organization of preventive measures, sanitary-hygienic education, vaccination of the population, prevention of early alcoholism, tobacce smoking, etc.			
Diversificational	Possibility of extending the financial activity of the insurer beyond the main business. For example, ar insurer can place its own free funds on the secure markets or place it at its own risk to finance national or regional health programs, decentralized measures for the provision of specialized medical and pharmaceutical assistance, etc.			

The object of research was selecting data presented on the official website of the National Commission, which carries out state regulation in the field of financial services (https://www.nfp.gov.ua/ua/law/?tag=1) and the League of Insurance Organizations Ukraine (http://uainsur.com/liga/about/info/). The League Insurance Organizations (1991) is the most influential and nonprofit association of insurance market participants in Ukraine, created to protect the interests of its members and other participants in the insurance services market. The National Commission for State regulation in the field of financial services is a state executive body that is directly subordinated to the President of Ukraine and profile committees of the Verkhovna Rada of Ukraine. The designated state body is responsible for creating conditions for the proper and efficient functioning of the markets for non-bank financial services, including insurance companies, and for strengthening systemic stability on the specified markets, ensuring the protection of the rights of consumers of non-bank financial services. In addition, the important task of the functioning of the National Commission that performs state regulation in the field of financial services is the development of effective and comprehensive integration into the world's financial space without threating national interests and economic security of Ukraine. For the analysis of the state of the domestic market of voluntary health insurance, financial indicators were selected for the operations on continuous health insurance, sickness insurance, compulsory insurance of foreign citizens, and medical expenses insurance. The data of net insurance premiums and expenses for the above types of insurance during 2010-2017 years was used. Insurance premiums have been the funds that were accumulated by the insurer under the insurance contracts, as well as the funds received under reinsurance contracts that were entered into the other insurance organizations in the market. Insurance payments characterize the amount of funds that were actually paid by the insurer under the insurance contracts to individuals who were insured in the company [4, 22]. Further, based on the analysis of insurance premiums and payments made by Ukrainian insurers for 2010-2017, the level of net insurance payments was calculated as a ratio of net insurance payments to insurance premiums (%). As indicated in the special literature, the results of the analysis of the level of insurance payments can be estimated by not only financial stability of the insurance company [2, 4, 22]. The above figure also shows the level of consumer confidence in insurance products offered in the insurance market. The optimum value of the indicator of the level of insurance payments in countries with a highly developed insurance market and high standards of provision of insurance services to the population varied in the range of values from 30.0% to 60.0% for various types of insurance activity [2, 3, 23]. In order to analyze the insurance products offered by domestic insurers to the population, the insurance programs that were presented on the official websites of domestic insurance companies have been analyzed. In addition, using the method without re-sampling, there were selected 400 active at the time of research (January-March 2017) contracts of insurance services for voluntary health insurance programs. The required sample size of insurance contracts was calculated according to the following formula:

$$n=\frac{z^2p(1-p)}{\Delta^2},$$

 z^2 – is a coefficient of confidence;

p - is expected share of the sign;

 Δ^2 - is the marginal sample error $^{[24]}.$

For the marginal sample size error ($\Delta = \pm 0,05$), the minimum sample size was equal to:

$$n = \frac{1,96^2 \cdot 0,5 \cdot (1 - 0,5)}{0.05^2} = 384,16 = 385$$

Thus, it could be concluded that the number of insurance contracts (400 contracts) that were analyzed was sufficient to obtain a marginal error of a sample of studies of no more than 5.0% ^[24]. The analysis of these insurance contracts was carried out according to the following criteria: form of insurance

(individual, collective including corporate); qualitative and quantitative range of insurance services provided to the insured person; the cost of the insurance program and the insured amount under the insurance contract; the duration of the insurance contract; the qualitative or quantitative restrictions when drawing up contracts for voluntary medical insurance; a list of cases on which insurance payments are not made or carried out with restrictions. Further, according to the analysis of dynamics of insurance premiums, payments and level of insurance companies, TOP-20 Ukrainian insurers were compiled and their compositions were analyzed. The analysis of net insurance premiums, payments, and the level of insurance payments in the dynamics of years was carried out using the chain rates of growth, and the growth (%) of indicators was calculated using the ratio of data of the following year to the corresponding indicators of the previous period of time [24, 25]. In this research, the following methods of scientific research and cognition were used: historical, logical, systemic, comparative, graphical, mathematical and statistical. In addition, economicsstatistical methods, such as sampling, grouping, comparisons of averages and relative values, etc. were used. All statistical calculations were performed using StatSoft's statistical package. Inc. (2014). STATISTICA version 12.0 and Excel spreadsheet. A p-value < 0.05 was considered statistically significant.

Results and Discussion

An assessment of the effectiveness of the functioning of national health care systems was carried out in a set of indicators, among which the average life expectancy of citizens in countries deserved special attention [2, 7, 26]. So, regarding the data of the International Bank for Reconstruction and Development, shown in Figure 1, the life expectancy of citizens since 1960 compared with the data of 2012 in many countries of the world has changed significantly [27]. Unfortunately, this can not be said about the countries in which the administrative-command model of Soviet medicine MS Semashko functioned for several decades and there was no insurance and market relations in the health care system. Thus, for example, the average life expectancy in Latvia and Ukraine was 69.3 years and 68.3 years; respectively in 1960; it was increased by 4.5 years in 2012 (increase of indicators +6.5%) in Latvia and 2.6 years (growth rate +3.8%) in Ukraine. At the same time, Western European countries have shown significantly higher growth rates of the above indicator. For example, in Poland, the indicator from 1960 to 2012 increased by + 13.4%, in Italy by 20.0%, in Germany by +16.7%, in France by 18.2%, in Switzerland by +16, 0%, in the Netherlands +10.5%. The highest average life expectancy was observed in Japan (+22.7%). Life expectancy at birth increased by 12.8% in the US, and by 14.2% in Canada. That is, it can be concluded that there have been significant disparities in the development of societies due to the different types, and nature of financing of national health systems and pharmaceutical provision of the population. Specialists noted that the lack of insurance relations in the healthcare system and pharmaceutical-backed population in Ukraine had a direct negative impact on the development of an innovative component in the healthcare system, and the construction of competitive models for providing medical and pharmaceutical assistance to the population [1, 3, 6, 8, 26]. Currently, the market for voluntary health insurance in Ukraine is developing in the conditions of political and financial instability, legal uncertainty about the process of reforming the health care system, lack of public confidence in insurers, and low solvency of most citizens of the country [2-6]. According to the National Commission for State Regulation in the Financial Services Market in Ukraine in 2017, more than 150 insurers had licenses to carry out voluntary health insurance. At the same

time, according to the data of the League of Insurance Organizations of Ukraine, the insurance market actually engaged in this type of activity of about 50 companies. Voluntary health insurance programs in Ukraine cover only 5.7% of the total population [2, 3]. The results of the analysis of the main indicators that characterize the effectiveness of the insurers' performance of the main insurance functions and make it possible to assess the financial situation of the development of the domestic market for voluntary health insurance, have been shown in Figures 2 and 3. As can be seen in Figure 2, despite the financial and economic crisis, which started in Ukraine since 2014, the amount of net insurance premiums and payments on the market has been steadily increasing.

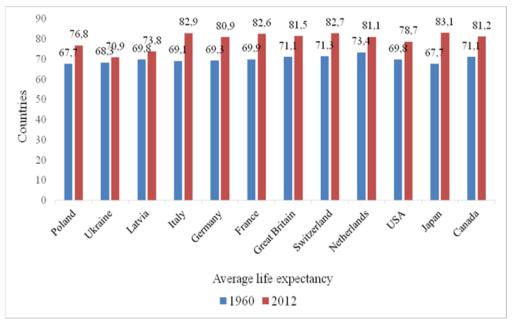


Figure 1. Comparative analysis of the dynamics of changes in the average life expectancy of citizens in different countries of the world (1960/2012 years)

It should be noted that the growth rate of insurance premiums has been slightly higher than the growth rate of insurance payments. The average growth rate of insurance premiums was +16.0%, and insurance premiums were +15.0%. The sum of insurance premiums, which were accumulated by insurers in 2017, compared with the data of 2010, increased 3.3 times, and the insurance payments were 2.6 times. The maximum value of chain rates of growth (%) of insurance premiums indicators was observed in 2011 (+ 34.0%), and the minimum was in 2014 (+8.0%). In the dynamics of insurance indices, the maximum value of chain growth rates was observed in 2017 (+25.0%), and the minimum - according to 2015, was (+9.0%). For a more detailed discussion, the dynamics of changes in insurance premiums and disbursements that were observed during 2010-2017 were analyzed. Thus, during 2010-2017, in the dynamics of growth rates of insurance premiums, which were accumulated by insurers under voluntary health insurance contracts, the following periods could be distinguished. So, from 2010 to 2014, the indicators of chain growth rates of insurance premiums fell steadily. Since 2015, insurance premiums have increased significantly (+24.0%). Already in the

next 2016, the growth rate of insurance premiums was +22.0%, and in 2017 it was +17.0%. A significant increase in the growth of the amount of insurance premiums, which was noted in 2011 to be +34,0% in a stable political and financialeconomic situation in the country, can be assessed as a positive characteristic of the development of the market for voluntary health insurance, which can not be said about 2015. As noted earlier, this year saw an increase in insurance premiums, compared with data of 2014. It was in 2015 that there was a significant depreciation of the national currency, and the average inflation rate was equal to 143.3%. [28] Undoubtedly, the instability in the financial market of Ukraine, the devaluation of the national currency in 2014 by 197.3%, in 2014 by 150.8%, and declining purchasing power of the majority of the population of the country had a very negative impact on the development of the insurance market in the general and voluntary health insurance market in particular. Unlike insurance premiums in the dynamics of insurance payments, the reduction of chain rates of growth of insurance payments continued until 2015. Only from 2016, an increase was seen in the chain rates of growth in insurance payments. So,

in 2016, the chain growth rate of insurance payments was +12.0%, and in 2017, it was +25.0%. That is, in the conditions of the devaluation of the national currency and the financial and economic crisis observed in the country from 2014, in 2015, there was a significant increase (+24.0%) of the sum of insurance premiums, and insurance payments showed the lowest (+9.0%) value of chain growth rates for the whole period studied. This has been an essential characteristic of the

development of the market for voluntary health insurance. So, in conditions of financial and economic instability in the country, insurers accumulated much faster rates of insurance premiums at the market than paid insurance indemnities under insurance contracts. The next important indicator that characterized the effectiveness of financial activity of insurers was the level of net insurance payments.

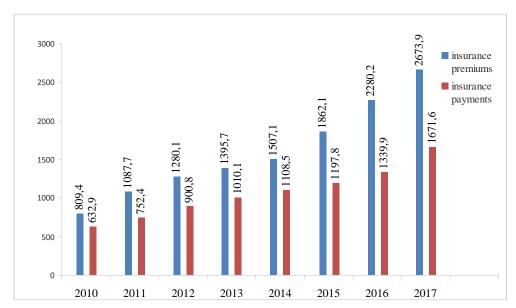


Figure 2. Analysis of dynamics of net insurance premiums and insurers' payments (million hryvnia – UAH) under voluntary health insurance programs in Ukraine

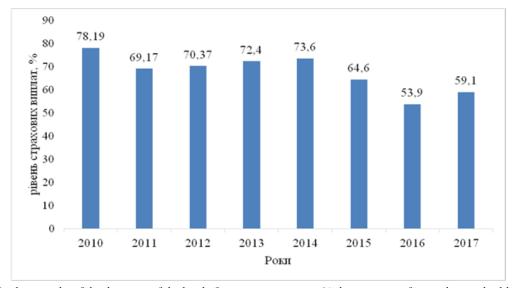


Figure 3. Analysis results of the dynamics of the level of insurance payments (%) by companies from voluntary health insurance in Ukraine (2010-2017)

Thus, it has been established that, despite the systematic increase in the amount of insurance premiums, which was observed during 2010-2017, the dynamics of indicators of the level of net insurance payments was zigzag-like. As can be seen in Figure 3, the highest value of the level of insurance payments was observed in 2010 (78.19%), and the lowest was in 2016 (53.9%). According to the data of 2011, the indicator of the level of insurance payments reduced to 69.17%, but then there

was a positive tendency to increase this indicator. After the crisis phenomena that have been observed in the domestic economy since 2014, there was a systematic reduction in the level of insurance payments to the lowest value for the entire investigated period. Only in 2017, the market was marked by the revival of the financial situation, resulting in an increase in the level of insurance payments to 59.1%. Then, the data of insurance contracts was analyzed for a set of parameters. The

results of the research carried out have been presented in Table 2. The recalculation of the cost indicators presented in the insurance contracts in US dollars was carried out according to the data of the National Bank of Ukraine [28]. According to the results of the analysis of insurance contracts for voluntary health insurance programs, the following typical features of insurance products offered on the domestic market were established. And, the "basic" and "specialized" insurance products have been conditionally allocated. Basic insurance products included the most commonly used insurance products offered in the

market for voluntary health insurance, and included the possibility of compensating for the cost of providing both medical and pharmaceutical assistance. These included insurance products of "economy package", "full package" and "VIP-class". The distribution of the most common products in the market of insurance was carried out on the basis of the analysis of the list of services compensated by the insurer under the contracts, the levels of their provision, the possibility of implementing medical and pharmaceutical services abroad, etc.

Table 2: Characteristics of insurance products offered in the market of voluntary health insurance in Ukraine during 2017

	The interval between the values of insurance amounts (per annum, in US dollars) for typical insurance products		
The name of the insurance product			
	Outpatient treatment	Stationary	Urgent medical care
Ba	asic insurance products		
Cost-insurance package	315,0-570,0	1050,0-1200,0	125,0-330,0
Full (classic) insurance package	475,0-950,0	3700,0-5500,0	250,0-660,0
VIP package	820,0-2500,0	3400,0 and over	-
Speci	ialized insurance products		
Dental treatment (therapy)	250,0-560,0	-	-
Dental care (therapy and prosthetics)	360,0-14000,0	450,0 and over	-
Pharmaceutical care (payment of the consumption of drugs) for certain	1		
drugs lists	140,0-530,0	360,0-2570,0	120,0-450,0
Highly specialized medical care, without paying the cost of drugs	460,0-1500,0	2400,0-6800,0	-
Highly specialized medical aid with payment of consumed drugs	770,0-2800,0	3570,0-13000,0	_

As can be seen in Table 2, the cost of insurance services for different types of basic products, as well as the possibility of compensation for the cost of providing medical and pharmaceutical assistance in outpatient and inpatient settings has been characterized by a significant range of values. The minimum cost for a list of basic insurance products was \$ 125, and in the list of specialized products, it was \$ 120 per year. In some cases, in agreement with the parties, voluntary health insurance programs might also include such additional options as medical supplies, payment of resort sanatorium treatment, etc. As previously indicated, specialized insurance products were presented on the market in a much smaller number, compared with basic insurance products. To specialize insurance products, programs for providing insurance services related to the compensation of the cost of dental care (therapy and prosthetics), pharmaceutical assistance and highly specialized medical care were included. In general, it should be noted that considering the qualitative composition of insurance services, which have been offered by domestic insurers, there was a low level of competition in the market. In the overwhelming majority, domestic companies on voluntary health insurance have offered the following packages of services: outpatient and polyclinic care; stationary security; emergency aid; and dentistry competition in the market has been observed

purely for price parameters. [1, 3, 4] Taking the high risks associated with health insurance in Ukrainian realities into account, insurance payments under the voluntary health insurance programs have been made exclusively within the scope of insurance amounts [2-4]. Another important characteristic of the domestic market for voluntary health insurance has been the significant domination (78.3%) of collective insurance contracts. Insurance products for collective health insurance can be divided into insurance products of family and corporate insurance. Health insurance for employees of large enterprises or representatives of individual industries now plays an important role in implementing social programs at large industrial enterprises as well as in companies with foreign capital. For example, the company "Naftogazstrakh" (year of foundation: 1995) has offered insurance products for voluntary medical insurance by corporate clients such as Donetsk, Prydniprovska, South, South-West, Lviv and Odessa railways. These have been powerful enterprises that have an extensive network of medical facilities throughout the country. Since the Soviet times and until now, the indicated medical institutions have provided services to workers working in enterprises that are subject to the State Administration of Railway Transport of Ukraine. According to the programs of corporate medical insurance, services have been provided both to the workers of the specified industry and their members of their families. Under corporate insurance contracts, insurance rates depended on the quantitative proportion of insured persons in a team of an institution or enterprise. For example, insurance companies offered discounts (from 2.5% to 10.0%) for selected programs of voluntary health insurance in the case of insurance for family members, children (over 5 years of age), employee groups, etc. The analysis of the insurance contracts that were investigated highlighted the most widespread features of their conclusion. It was established that the insurance contracts expired in the overwhelming majority of one year. The only exceptions were the contracts of corporate insurance for employees of enterprises and various foreign companies operating in Ukraine. The contracts often prescribed cases where no insurance compensation was being made. The examples of cases of providing medical care in medical institutions with which the insurer did not enter into a preliminary agreement have been moral damage and indirect losses, expenses incurred at the place of permanent residence, loss of health due to alcohol, narcotic and toxic intoxication. Under some programs for insurance of pharmaceutical provision, insurers limited the list of pharmacotherapeutic groups of medicines and assortment items of medical supplies, the cost of which was subject to

reimbursement. These have been, for example, a group of drugs, such as vitamins and their analogues, therapeutic cosmetics, homeopathic remedies, special dietary supplements, and the like. Many contracts of insurance have clearly defined cases that have not been considered in insurance. These have been, first of all, mental, cancer, dermatovenereological diseases, the consequences of self-treatment, sunburn, some gynecological and urological diseases, and cosmetic surgery. In general, it should be noted that domestic insurers quite rigorously determined the terms of the contract of voluntary medical insurance. First of all, it concerned chronic patients, elderly people (65 years and older), children under 5 years of age. So, in some companies, insurance for pensioners working in teams could only be done at double tariffs. In Ukraine, outside of voluntary health insurance programs, there have been people with socially dangerous illnesses (tuberculosis, AIDS), invalids of the first or second groups, patients with mental, hereditary, sexually transmitted diseases, oncohematological patients, etc. Next, the rating of insurance companies operating in the market of voluntary health insurance was compiled according to the data of 2017 on indicators of accumulated premiums, payments and the level of insurance payments. The research results have been presented in Figures 4-6.

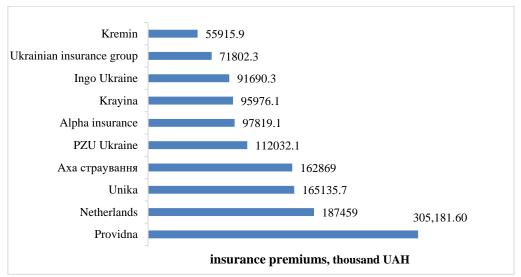


Figure 4. Top-10 insurers of voluntary health insurance in 2017 by the amount of insurance premiums

As can be seen in Figures 3 and 4, the compositions of the leading companies that occupied the first twenty positions in the rating of insurers by the sum of insurance premiums and insurance payments were fairly similar. Thus, the first three positions for the sum of insurance premiums and payments were held by such companies as «Providna», «Unika» and «Neftegazstrakh». As indicated earlier, the level of insurance payments has been one of the most important indicators of financial instability of the insurer in the market. [1, 4, 22] The presented indicators demonstrated the ability of the insurers to

faithfully carry out obligations under insurance contracts and to pay the full time insurance payments in full. Of the TOP-10 insurers represented in this rating, only eight companies had the optimum level of insurance payments (from 30.0% to 60.0%). Of particular concern about the high probability of bankruptcy was the importance of the level of insurance payments to the company "Credo" (219.82%). With the exception of indicators of the level of insurance payments for the company "Credo", all the other data fluctuated in the range of values from 49.47% to 88.39%. The value of the variational dimension was 78.67%.

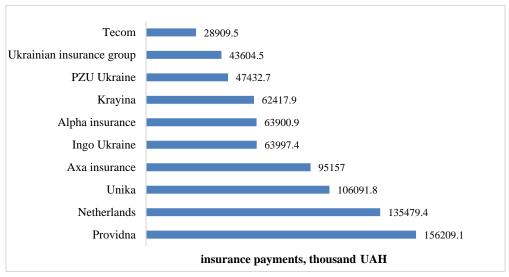


Figure 5. Top 10 insurers on voluntary medical insurance in 2017; the sum of insurance payments

The three companies that were characterized by the highest rates of insurance premiums and payments ("Providna", "Unika" and "Neftegazstrakh") in 2017 were also represented in the rating on the level of insurance payments. Thus, the value of the indicator of the level of insurance payments in the company "Providna" was 51,19% (optimal value), in "Unika", it was 64,25% (above the optimal value of the indicator), and in "Neftegazstrakh", it was 72,27%. Thus, it can be argued that voluntary health insurance has remained a rather risky type of insurance for domestic insurers.

Conclusion

The Ukrainian market of voluntary health insurance belongs to those segments of the insurance market, which develops quite slowly under the conditions of the financial and economic crisis in the country. The pace of its development does not correspond to the real needs of the population in the formation and effective implementation of insurance protection in case of loss of health. It should be noted that during the time of the existence of voluntary health insurance, some insurers have already accumulated tremendous experience in this direction and continued to optimize it in order to spread insurance services in practical health care. In order to form a positive attitude towards the introduction of insurance relationships into practical health care among ordinary citizens, insurers every year must develop and implement new insurance programs and flexible pricing policies in the market.

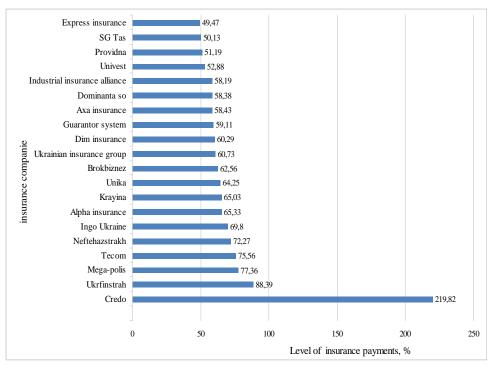


Figure 6. Insurers rating (TOP-20) by the level of insurance payments (%) in 2017

To systematize the data of insurance products offered by domestic insurers in the market of voluntary health insurance, the following should be especially emphasized. In order to form a positive attitude towards the introduction of insurance relationships into practical health care among ordinary citizens, insurers every year must develop and implement new insurance programs and flexible pricing policies in the market. To systematize the data of insurance products offered by domestic insurers in the market of voluntary health insurance, the followings should be especially emphasized. At the cost parameter, the insurance products offered by companies must meet the level of real solvency of the population. In addition, there has been a need to constantly expand the base of medical and pharmaceutical institutions that can co-operate with insurance companies. The presence of insignificant positive changes in the financial situation of domestic insurers carrying out voluntary medical insurance in 2017 did not generally affect the general low level of public confidence in insurance activities in practical health care. Of the five insurance functions inherent in insurance companies in Ukrainian realms, insurers performed only risky, compensatory and accumulation functions. According to the foreign experience of effective functioning of voluntary medical insurance abroad, this significantly reduced the effectiveness of the functioning of health insurance, narrowing the range of activities in the financial services market [10, 28-33]. Given the low level of public confidence in insurance business, and the lack of experience in the functioning of insurance relations in practical healthcare, the effective functioning of the voluntary health insurance market required the development and implementation of a range of measures by the state. The main goal of their implementation should be the harmonization of the process of reforming the domestic system of health care and pharmaceutical provision of the population with the Ukrainian realities of economic development and the peculiarities of the formation of public opinion. Given the low level of incomes and the lack of effective mechanisms for compensating the cost of provided medical and pharmaceutical services, the most promising area of insurance activity in health care has been the implementation of large-scale micro-insurance programs [18, 19, 34, 35]. Unfortunately, Ukraine currently lacks the experience of implementing micro-insurance programs in practical health care, which adversely affects the formation of a positive attitude of ordinary citizens towards insurance activities.

References

 Lysenko VS. Methodical Basis for the Development of Insurance Products for Voluntary Health Insurance. [document on the Internet]. Effective Economy. 2014;
 10: [updated 2018 June 26; cited 2019 June 30]. Available from: http://www.economy.nayka.com.ua/?op=1&z=3411

- Nechiporuk LV. Theory and Practice of Health Insurance in Ukraine. Global and national problems of the economy. 2015;6 (24): 56-60
- Zhuravka OS, Vasylchuk AYu. An analysis of the current state of the Ukrainian insurance market. [document on the Internet]. Effective Economy. 2017; 3: [updated 2018 Dec 13; cited 2018 Dec 20]. Available from: http://www.economy.nayka.com.ua/?op=1&z=5493.
- Onyshchenko VP. The level of insurance payments as an indicator of the development of the insurance market of Ukraine. Bulletin of the Chernihiv State Technological University. 2010; 43:156-163.
- 5. Rao S. Health insurance concepts, issues and challenges. Econ Polit Wkly. 2004; 39: 3835–44.
- Pakhnenko OM, Lysenko VS. Micro-insurance as the basis for the development of voluntary medical insurance in Ukraine. Biznesinform. 2014;1: 268-73.
- Sytenko OR, Kucherenko NT, Smirnova TM. Modern problems of health care system of Ukraine (analytical literatyre review). Visnik of Social Hygiene and Health Care Organizations of Ukraine. 2014;3 (61):27-31.
- 8. National strategy for reforming the health care system in Ukraine for the period 2015-2020. [document on the Internet]. Ministry of Health of Ukraine. International Renaissance Foundation. [updated 2018 Mar 03; cited 2019 Mar 09]. Available from: http://healthsag.org.ua/wp-content/uploads/2015/03/Strategiya_Engl_for_inet.pd.
- 9. E. Richard Brown. Problems of health insurance coverage and health care in the United States: public and private solution strategies'. Cad. Public Health.1992;8 (3):270-
- 10. Omar Hasan K.Kasule. Health insurance and the ethical issue of equity. Journal of Taibah University. Medical Sciences. 2012; 7 (2):61-68.
- John B.Shoven, Sita Nataraj Slavov. The role of retiree health insurance in the early retirement of public sector employees. Journal of Health Economics. 2014; 38: 99-108
- 12. Melinda Sandler. Active and retired public employees' health insurance: Potential data sources. Journal of Health Economics. 2014; 38:147-52.
- 13. Kai Liu. Insuring against health shocks: Health insurance and household choices. Journal of Health Economics. 2016; 46: 16-32.
- David MarkDror, Ruth Koren, David MarkSteinberg. The impact of Filipino micro health-insurance units on income-related equality of access to healthcare. Health Policy. 2006; 77 (3): 304-17.
- 15. Ha Nguyen, James Knowles. Demand for voluntary health insurance in developing countries: The case of Vietnam's school-age children and adolescent student health insurance program. Social Science & Medicine. 2010; 71 (12): 2074-82.

- Protecting the Poor: A Microinsurance Compendium.
 Edited by C. Churchill. ILO and Munich Re Foundation;
 2006.
- 17. Yiyan Liu Ginger, Zhe Jin. Employer contribution and premium growth in health insurance. Journal of Health Economics.2015; 39:228-47.
- 18. The role of micro-health insurance in systems of Universal Health Coverage in developing countries: peer review of practices Round table, 29 October 2015. [document on the Internet], [updated 2018 Oct 13; cited 2018 Oct 18]. Available from: http://fondation-sanofiespoir.com/download/2015-12-09-mutuelles/TABLE_RONDE_UK.pdf
- 19. The role of microinsurance in social protection: A country study of Vietnam. [document on the Internet], [updated 2018 Apr 07; cited 2018 Apr 17]. Available from: https://microinsurancenetwork.org/sites/default/files/MICRO_Network-Vietnam%20Paper%20A4%20(3)final_0.pdf
- Frank RG, Lamiraud K. Choice, price competition and complexity in markets for health insurance. J Econ Behav Organ. 2006; 72: 550-62.
- Sudano JJ, Jr & Baker D. W. Intermittent lack of health insurance coverage and use of preventive services. American Journal of Public Health. 2003; 93(1): 130-7.
- Malchik MV, Galashko SI, Pelech AI. Financial statistics: Teaching manual. Kiev: Center for Educational Literature; 2011.
- Golovach AV, Zakhozay VB, Golovach NA, Shepitko GF. Financial Statistics (Basic theory of statistics). Tteach. Manual. Kiev: MAUP; 2002.
- 24. Ermolaev OYu. Mathematical statistics for psychologists. Kiev: Osvita; 2003.
- 25. Handbook of Medical Statistics. Ji-Qian Fang, editor. China: Sun Yat-Sen University; 2017.
- Sheiman IM Theory and practice of market relations in public health. 2nd ed. Moscow: Izd. House of Higher School of Economics; 2008.

- 27. Life expectancy at birth, total (years). [document on the Internet], [updated 2018 Nob 13; cited 2018 Nob 30].
 Available at: http://data.worldbank.org/indicator/SP.DYN.LE00.IN. Title from the screen.
- 28. National Bank of Ukraine. Officianal website. Information materials. [document on the Internet]. Operative state of the foreign exchange market. Archive. [updated 2018 Oct 23; cited 2018 Oct 28]. Available at: https://bank.gov.ua/control/uk/publish/article?art_id=9628619&cat_id=9628618.
- Jonneke Bolhaar, Maarten Lindeboom, Basvan der Klaauw. A dynamic analysis of the demand for health insurance and health care. European Economic Review. 2012; 56 (4):669-90.
- Mcdonald EM, Shannon F, Edsall Kromm E, Ma X, Pike M, Holtgrave D. Improvements in health behaviors and health status among newly insured members of an innovative health access plan. J Community Health. 2012; 345:1106-12.
- Nadja Kairies-Schwarz, Johanna Kokot, Markus Vomhof, Jens Weßling. Health insurance choice and risk preferences under cumulative prospect theory — an experiment. Journal of Economic Behavior & Organization. 2017;137:374-97.
- 32. Saver, Barry G, Doescher, Mark P. To buy, or not to buy, factors associated with the purchase of nongroup, private health insurance. Med Care. 2000; 38:141-51.
- 33. La Forgia G, Nagpal S. Government Sponsored Health Insurance in India: Are you covered? Washington, DC: The World Bank Publications; 2011.
- 34. Anna D. Sinaiko, Richard A. Hirth. Consumers, health insurance and dominated choices. Journal of Health Economics. 2011; 30 (2):450-57.
- Reschovsky JD, Kemper P, Tu H. Does type of health insurance affect health care use and assessments of care among the privately insured? Health Serv Res. 2000; 35: 219-37.