

Financial means of life assurers in a digital economy

Odinokova T.D.

Ural State University of Economics
Yekaterinburg, Russia
tdo17@yandex.ru

Abstract — The basis of the creation and circulation of any financial instrument (deposit, credit, securities, insurance, etc.) is the demand of the population. Meeting the needs of the population with the help of a certain financial instrument will influence public stable development and the success of the financial industry in the economy. When people acquire a financial instrument, they focus mainly on the safety of their savings, especially when it comes to long-term investment. In the Russian economy, the insurance institution is still far from perfect, but its dynamic development, primarily of life insurance, demonstrates a large untapped potential. Unlocking the potential of life insurance largely depends on the actions of the state authorities, since people focus on the government policy, making investments through the long-term interest-bearing insurance contracts. The pacive factor for ensuring the trust of citizens is the financial means of life assurers, firstly, in the field of ensuring financial sustainability, including through state guarantees, and secondly, the ability to “adjust” to the conditions of digital economy.

Keywords — *digital economy, Russian insurance market, assurers, life insurance, financial sustainability, guarantee funds, public confidence*

I. INTRODUCTION

In a market economy, when insurance is one of the few tools that ensure the financial well-being of the population, the trust of citizens in assurers plays a special role. In this regard, the measures taken by the state, as a rule, are aimed at increasing the guarantee of financial solvency or minimizing violations and losses caused by assurers' bankruptcy.

However, despite the making by the state a number of significant decisions on the development of the Russian insurance market, the unstable situation in the Russian economy, because of the transformation of internal processes and reformation relations with the external environment, still does not allow assurers to become a guarantor of the financial stability of its development. In such conditions, requirement strengthening for the financial means of assurers and, first of all, to their financial sustainability, taking into account the role and importance of each player in the insurance market, seems to be rather natural. At the same time, in practice, an individual approach is carried out by the state only with regard to oligopolistic assurers due to their dominance in the market.

From this point of view, the study of legislative regulation of the conditions for ensuring the financial sustainability of assurers plays a strategic role for the population. Nowadays people choose an assurer only on the basis of their relatives', colleagues' or the assurer's clients' feedback. And many of them hardly pay enough attention for the financial means of the chosen assurer. When it comes to concluding a life insurance contract, many citizens are concerned about savings' safety and guarantees.

Currently, there are a lot of research papers on the financial sustainability of an assurer. This situation can be explained by the fact that this indicator is said to be a guarantee of assurers' fulfilment of their obligations for all participants, including consumers of insurance services. However, we should note that the research papers are mainly devoted to the state regulation of financial sustainability or are clarified from the position of management of this indicator by assurers.

The timeliness and significance of this research in the context of the government decisions is explained by the fact that one of the conditions determining public confidence in insurance products, including long-term life insurance products, is the financial sustainability of assurers. The financial sustainability means the ability of a market entity to maintain the quantity and quality of its financial resources when the environment changes [1].

The financial sustainability of assurers, its impact on the assurers' capacity rates and/or its dependence on a number of factors and conditions are considered in many research papers. Firstly, there are research papers aimed at the problems of financial condition assessment of assurers [2,3,4]. As practice has shown, the financial condition assessment of an assurer, in fact, is the final stage of managing financial sustainability for a certain period. Secondly, there are a significant number of research papers which are devoted to the problems of financial sustainability of assurers in during the global financial crisis [5, 6]. Thirdly, we should highlight the research papers on the problems of crisis management and financial modeling [7,8]. It can be explained by the fact that ensuring compliance with the state requirements of the actual financial rate is one of the main objectives of an assurer in economic insecurity. Fourth, there are research papers devoted to the system analysis of factors affecting the financial sustainability of assurers, such as the increasing degree of interrelation between banks and assurers [9,10,11], the impact of the structure and quality of asset management, ensuring the fulfillment of assurers' obligations [12, 13], which correlates with systemic risk and, ultimately, can lead to bankruptcy of both a single company and the entire financial (financial and industrial) group. Fifth,

there are research papers that are devoted to the problems of the financial means of assurers in a digital economy [14,15]

Nevertheless, despite of a large number of scientific research on various aspects, the specifics of the influence of the financial sustainability of assurers on the population's decision to conclude an insurance contract remains insufficiently studied.

The objective of this scientific research is to study the role of such an indicator as the assurer's financial sustainability when the population makes a decision to conclude a long-term insurance contract; to justify the need for state participation in improving the financial sustainability of life insurers.

II. RESEARCH METHODS

As part of the study, an analysis of the current situation in the Russian insurance market was carried out on the basis of statistical data. The use of data from a sociological survey allowed us to determine the level of citizens' interest in insurance products.

To achieve the objective of the research we used an induction method, based on a detailed study of changes in the legal conditions for ensuring the financial sustainability of assurers. This information allowed us to make proposals of creating conditions aimed at increasing public demand for insurance products.

We also used general research methods, such as: dialectical, historical, comparative.

III. RESULTS

At present, the level of consumption of insurance services in Russia is rather low. To confirm this conclusion let us refer to the data of international reports. Thus, according to Swiss Re in 2012, Russia ranked the 24th place in terms of collected insurance premiums [14], and, despite its rapid development, in 2017 the country moved to the 28th place [17]. At the same time, compared with the volume of the global insurance market, the Russian market in 2012 accounted for a share of 0.61% of the total world insurance market, although the population of Russia is 2.0% of the world's population. In 2017, this indicator decreased 0.45%. As we see, the Russian insurance market is demonstrating the slowdown of its position in the global market. However, considering the development of the insurance market from the point of domestic demand, we should highlight its growth.

The development of public demand for insurance products in Russia has been influenced by many factors:

- 1) welfare level and financial culture of the population;
- 2) public awareness of insurance and its confidence in assurers;
- 3) situation in the system of guaranteeing the safety of population' savings;
- 4) availability of insurance products at the price, place of sale; etc.

One more important factor affecting the consumption of insurance products in Russian practice is increasing consumers' confidence in insurance. In this regard, the financial sustainability problems of assurers [18] come to the fore, one of the solutions to which is to strengthen and toughen up the legal requirements for assurers.

If we talk about the risks of loss of financial sustainability of the assurer, they can be enlarged into 6 categories [19]:

- the risk of low tariff/insufficiency of premium;

- the risk of overcharging on the share of reinsurer/insufficiency of net premium;
- the risk of insufficiency of insurance reserves;
- risk of insufficiency of the guarantee/charter capital;
- risk of insufficient liquidity to ensure insurance operations/insurance payments;
- the risk of change in the exchange rate.

For assurers, ensuring financial sustainability is not only the possibility of their existence on the insurance market, but also a direct requirement of the current legislation of the Russian Federation. If in the 90s of the 20th century, in the process of the formation of the Russian insurance market, the requirements for financial sustainability were minimal (they had paid-up charter capital and insurance reserves, as well as reinsurance systems), then in the beginning of the 21st century, as insurance relations developed and insurance transactions increased, insurance products used as a "schematic" tool of minimizing the tax burden of insured enterprises led to bankruptcy of assurers and reduced public confidence in insurance products and, even more, to long-term life insurance products.

In order to suspend these negative consequences and increase the significance of the financial market, the following changes to the current legislation were made:

- 1) at the licensing stage:
 - beginning from July 01, 2006, there is a certification of insurance actuaries by the insurance authority;
 - beginning from January 1, 2008, the above-mentioned parameters of the components of the guarantee system for ensuring the financial sustainability of the assurer, which included economically justified insurance rates, were clarified and expanded; insurance reserves sufficient to fulfill the obligations of insurance, social insurance, reinsurance, mutual insurance; own funds; reinsurance;
 - beginning from January 01, 2011, the requirements for assurers' founders have been toughened up in terms of documents confirming the sources of origin of funds contributed to the charter capital;
- beginning from January 01, 2019, the registration of legal entities and licensing for insurance activity are performed by the Bank of Russia after submission of the documents with the application of the SRO of the ARIA; etc.
- 2) at the stage of performance of insurance activity:
 - beginning from January 01, 2004, the assurers are obliged to publish annual accounting reports, after auditing confirmation of the accuracy of the information contained in them, in the manner and within the deadlines established by the regulations of the Russian Federation;
 - beginning from January 01, 2006, the assurers are obliged to comply with the requirements of financial sustainability in terms of the formation of insurance reserves, the composition and structure of assets taken to cover insurance reserves, reinsurance quotas, the normative ratio of the assurer's own funds and the commitments taken, composition and structure of assets accepted to cover the assurer's own funds, as well as issuance of bank guarantees; From January 01, 2014, this clause also applies to the parent insurance organization of an insurance group on a consolidated basis;
 - beginning from January 01, 2014 the insurance authority, taking into account the minimum allowed value of the normative ratio of equity (capital) and incurred liabilities, establishes the threshold values of them;

- beginning from December 01, 2017, the assurers are obliged to transfer ten percent of the insurance compensation obligations to the national reinsurance company (RNRC) to reinsurance of the insurance payment obligation under the main insurance (reinsurance) agreements, including those subject to the terms of the obligatory reinsurance contract;

- beginning from June 04, 2018, assurers and insurance brokers are obliged to compulsory participate in self-regulatory organizations (SRO of the All-Russian Insurers Association and SRO of the Professional Insurance Brokers Association);

- beginning from July 02, 2018, the Bank of Russia is monitoring the activities of assurers using financial indicators (ratios) characterizing the financial situation of assurers and their resistance to internal and external risk factors;

-beginning from January 01, 2019, the insurance authority establishes the requirements for the calculation of insurance tariffs, including its structure and content, methods and principles for their calculating (base tariff rates and coefficients for them or limit values of these coefficients) according to the type of insurance, to the use of statistical data according to the types of insurance.

- beginning from January 01, 2019, measures to prevent assurers' bankruptcy and features of their bankruptcy are defined.

The issues of ensuring the financial sustainability of assurers are directly related to the adjustment of their bankruptcy, i.e. a set of measures aimed at preventing bankruptcy or, unless otherwise can be ensured, the liquidation of the assurer with minimal damage to policy holders and beneficiaries.

3) at the stage of completion of insurance activity:

- beginning from August 15, 2011, the insurance authority is obliged to make decisions on the appointment of a provisional administration, on suspension and on limiting the powers of the executive body of an assurer in cases and in the manner established by the Federal Law "On Insolvency (Bankruptcy)";

- beginning from August 15, 2011, measures of bankruptcy proceedings and measures to prevent bankruptcy of an assurer are defined, according to which an assurer can transfer its insurance portfolio for a particular type of insurance or several types of insurance.

In the event of insufficiency or lack of assets of the assurer for execution by the managing assurer of obligations under insurance contracts, the missing part of assets can be compensated by a professional association of funds intended to finance compensation payments in the manner and on the terms established by the insurance authority.

In connection with the toughening up of requirements for the financial sustainability of assurers and the strengthening of control over their observance by the insurance authority, carried out since 2013 by the Central Bank of Russia (CBR), the number of assurers has decreased, that could not but affect the situation in the insurance market (Table 1), and on the attitude of the population to financial institutions working on the insurance market.

TABLE I. DYNAMICS OF DEVELOPMENT INDICATORS OF THE RUSSIAN INSURANCE MARKET

Indicator	2012	2014	2017	Growth rate, %
Number of assurers, units	431	384	236	54.8

Number of branch offices, units	5,081	4,803	3,886	76.5
Charter capital, RUB bn.	196	217	213	108.7
Number of contracts concluded, mln pcs.	140	158	194	137.6
including at the expense of individuals, mln pcs.	127	141	116	91.3
Insurance premiums, RUB bn.	811	983	1,285	158.4
Insurance payments, RUB bn.	377	474	513	136.0
Payout ratio, %	46.4	48.1	39.9	86.0
Assurers engaged in reinsurance, units	317	255	158	49.8
including reinsurance only, units	11	12	4	36.4
Insurance reserves, RUB bn.	648	890	1,464	225.9
Balanced result (profit minus loss), RUB bn.	69	63	117	169.6
Share of profitable companies (of the total number), %	88.9	85.2	77.5	87.2
Profitability of profitable companies, %	5.9	11.0	6.7	113.6
The level of public confidence in assurers, %	35	38	35	100

Source: compiled by the author according to the Federal State Statistics Service of the Russian Federation, the Central Bank of the Russian Federation and data from the NAFS Analytical Center [18].

As the analysis of data on the dynamics of concluded contracts with individuals and a sociological survey showed, it is possible to talk about the positive impact of the changes in current legislation to increase the requirements for the financial sustainability of assurers. The increase in the number of contracts concluded in 2014 compared to 2012 was 111%. However, the unstable situation in the Russian economy has a strong influence on the interest of the population in concluding contracts (in 2017, compared with 2014, the growth was 82.3%).

The above stated requirements for financial sustainability should be complied with by all assurers operating in the Russian insurance market. However, we should clarify that Russia, in licensing of insurance activity, adheres to the international classification, according to which assurers are divided into life insurance companies (life assurers) and insurance companies other than life insurance (other assurers).

From the author's point of view, the division of companies should be used not only to control their activities, but also to determine the number of companies with which the state should make a public-private partnership agreement, which implies the provision of a guarantee of the safety of savings of the population in the long-term interest-bearing life insurance contracts. This proposal is connected with the fact that the population, concluding a long-term interest-bearing life insurance contract, primarily focuses on its expectations for the safety of invested savings, which largely depend on the ability of the assurer to fulfill its obligations to the policy holder to pay off the accumulated capital, the amount of which will correspond to the actual value of money at the expiration date

of the contract. Compliance with the accumulated amount of the actual value of money paid by the assurer in the form of insurance payment at the expiration of the contract depends on following factors:

- 1) opportunities and abilities of an assurer to carry out investment activities competently and efficiently, thereby protecting the funds entrusted from inflationary depreciation;
- 2) the ability of an assurer, regardless of its financial situation, to fulfill its obligations to the policy holder within the period specified in the contract;
- 3) availability and situation a state savings guarantee system, which will provide insurance protection and an investment component of long-term interest-bearing life insurance contracts in cases of withdrawal (because of financial sanctions or bankruptcy) from the Russian market of an assurer with which the policy holder had an agreement;
- 4) the real financial means of the assurer to make the policy holder (beneficiary) an insurance payment in the event of a devaluatory depreciation of money.

The last factor has a significant impact on such an indicator as the term of a contract. The citizen's interest in insurance products, including of long-term interest-bearing nature, will depend on the level of understanding and transparency of the assurer's fulfillment of its obligations (its financial soundness).

In order to improve the guarantee system in Russia, let us to consider the experience of foreign countries. Thus, the following guarantee funds have been created and remain in force in Germany: Protektor Lebensversicherungs-AG which is for life insurance; Medicalor AG which is for health insurance. In accordance with the Insurance Law (VAG), the goal of the state guarantee program for both life insurance and health insurance is to continue fulfilling obligations under insurance contracts for insolvent assurers [19].

An interesting fact is that the financing mechanisms of the life insurance guarantee fund are different from those used by the voluntary health insurance fund. Life insurance funds are formed in advance and maintained at an established level ("ex ante" approach), while health insurance assurers, on the contrary, make contributions to fund formation only after the bankruptcy of medical assurers ("ex post" approach) [21].

In the United States, at the state level, guarantee funds have also been created, which, in turn, participate in one of the national associations: (1) National Conference of Insurance Guaranty Funds (NCIGF); and (2) National Organization of Life & Health Insurance Guaranty Associations (NOLHGA).

Considering all the above mentioned, the author makes the following proposals:

- 1) social obligations must be 100% guaranteed by the law and fulfilled by assurers to clients in full within scheduled terms;
- 2) mandatory recalculation (in stable currency) of the accumulated amount under the life insurance contract in case of its irreversible depreciation, which is made by the assurer without derogating from the client;
- 3) it is necessary to make reinsurance of life insurance risks at both the national and international levels in order to eliminate the risk of non-payment of obligations to clients;
- 4) the absence of period of limitation for payments under interest-bearing life insurance contracts;
- 5) it is necessary to let down the bar on the maximum amount with which personal income tax is returned to individuals in the event of an interest-bearing life insurance

contract; thereby, the demand for this investment instrument from citizens with middle and high income will be stimulated;

6) between the state and life assurers a public-private partnership agreement should be concluded, under terms of which the state bears subsidiary liability under long-term interest-bearing life insurance contracts. To perform this issue, a state guarantee fund should be created or this liability should be transferred to the existing State Deposit Insurance Agency.

It should also be noted that the financial sustainability of assurers can and should be adjusted to take into account the adoption of digital economy technologies, such as blockchain, smart contracts, etc., the use of which will increase the assurers' ability to manage financial capital.

IV. CONCLUSIONS

Analyzing the specifics of managing the financial means of the life assurer, we should note that, ultimately, its clients should not care: how many years the company has existed on the market, whether it becomes insolvent, or merges with others - the risk that they transferred to insurance, having paid for this service, will not return to them, and they will receive insurance protection. For the policy holder, when choosing a company, only differences in the quality of the provided insurance protection should remain [22]. And to perform this "not care" situation, the support of the state is needed, which will allow Russian life assurers in the medium term to take on a substantial part of the social and pension functions of the state. The digital technologies will contribute to improving the quality of state functions transferred to assurers. Thus, the proposed conceptual approach to reforming the Russian insurance market is focused on increasing of public confidence in long-term life insurance as a financial instrument that ensures the financial well-being of citizens. However, when considering the issue of involving the state as the main guarantor of the fulfillment of the obligations assumed by life assurers, a number of essential points should be taken into account.

Firstly, the presence of a significant proportion of the population who do not have opportunities to create savings. This problem arose as a feature of the population's mentality, and with the general economic policy of the state.

Secondly, there is a shortage of qualified staff in assurers that can not only conclude life insurance contracts, but also monitor and prolong existing contracts.

Taking into account the above points, it is proposed to introduce a system of warranty programs, using international experience. Decisions on the formation of guarantee programs should rely, on the one hand, on the size of the potential benefits that can be obtained as a result of protecting the rights of consumers and in order to ensure the stability of the insurance market, and on the other hand, the costs and expenses should be weighed. Such costs are associated with both direct expenses for the direct financing of guarantee funds and indirect costs (moral hazard, unfair business practices) [21].

V. DISCUSSION OF RESULTS

Once again we would like to note that implementing of the proposed measures to increase the financial means of life assurers will create more favorable conditions for the population to make decisions on concluding long-term life insurance contracts, which will affect the development of the

Russian economy as a whole. This research confirms the opinion of other scientists engaged in similar subjects and its implementation on the example of other countries. Thus, the success of the elimination of problems in the management of the financial means of assurers will increase the confidence of the Russian population in long-term insurance products.

References

- [1] Orlanyuk-Malitskaya L.A. On the concepts and factors of financial sustainability of assurers//Bulletin of the Financial Academy. - M.: FiS; 1998, No. 1, p. 33-38
- [2] Alekseeva G.I. Features of financial condition assessment of the assurer according to IFRS reporting//International Accounting. 2013. No. 44 (290). P. 14-29.
- [3] Tsvetkova L.I. Creation of insurance payment guarantee funds as a tool for the development of the insurance market//Insurance business. 2016. No. 10 (283). P. 46-54.
- [4] Kirillova N.V. Financial condition assessment of assurers by corporate policy holders//Insurance business. 2006. No. 6. P. 34-37.
- [5] P. Duijm, S.S. Bisschop (2018) Short-termism of long-term investors? The investment behaviour of Dutch insurance companies and pension funds, *Applied Economics*, Vol. 50, Issue: 31, pp. 3376-3387, <https://doi.org/10.1080/00036846.2017.1420898>
- [6] M.F. Grace, J. Rauch, S. Wende, (2017) "The effect of monetary policy announcements and government interventions on the US insurance industry during the 2007-2009 crisis", *The Journal of Risk Finance*, Vol. 18 Issue: 5, pp.500-522, <https://doi.org/10.1108/JRF-02-2017-0039>
- [7] Kwadwo Asamoah, "On the credibility of insurance claim frequency: Generalized count models and parametric estimators. *Insurance*", *Mathematics and Economics*, Vol. 70, September 2016, pp. 339-353 <https://doi.org/10.1016/j.insmatheco.2016.07.003>
- [8] M.L. Lapishko, K. P. Danylkiv, N. M. Dobosh, (2018) "Immature - automatic simulation of processes in insurance activities", *Financial and credit activity: problems of theory and practice*, Vol 2, Issue: 25, pp. 226-235, <https://doi.org/10.18371/fcaptp.v2i25.136692>
- [9] T. Gehrig, M.C. Iannino, (2018) "Capital regulation and systemic risk in the insurance sector", *Journal of Financial Economic Policy*, Vol. 10 Issue: 2, pp.237-263, <https://doi.org/10.1108/JFEP-11-2017-0105>
- [10] Natocheeva N.N., Averchenko O.D. Methodical approaches to estimation of efficiency of integration of banks and assurers//*Insurance business*. 2016. No. 3 (376). P. 26-32.
- [11] Finogenova Y.Y. Financial mechanism for the protection of private investors through the deposit insurance system: Russian and foreign experience//*Bulletin of the Russian Economic University n.a. G.V. Plekhanov*. 2011. No. 3 (39) P. 15-21
- [12] R. Duell, F. Koenig, J. Ohls "On the exposure of insurance companies to sovereign risk-Portfolio investments and market forces", *Journal of Financial Stability*, Vol. 31, August 2017, pp. 93-106, <https://doi.org/10.1016/j.jfs.2017.06.008>
- [13] M. Bijlsma, R. Vermeulen "Insurance companies' trading behaviour during the European sovereign debt crisis: Flight home or flight to quality?", *Journal of Financial Stability*, Elsevier, December 2016 <https://doi.org/10.1016/j.jfs.2016.11.001>
- [14] Khitrova E.M., Khitrova T.I. Cognitive analysis of stability of the insurance sector//*Economy and Entrepreneurship*. 2018. No. 3 (92). P. 943-947
- [15] Adamchuk N.G. Meet the blockchain - a hit of the innovative development of insurance//*Insurance business*. 2018. No. 1 (298). P. 14-17.
- [16] World insurance in 2012: Progressing on the long and winding road to recovery /*sigma*. 3/ 2013, URL: http://media.swissre.com/documents/sigma3_2013_en.pdf
- [17] World insurance in 2017: solid, but mature life markets weigh on growth /*sigma*. 3/ 2018, URL: http://institute.swissre.com/research/library/sigma_3_2018_en.html
- [18] Khitrova E.M. Revisiting the issue of stimulating the demand for insurance services//*News of BSU*. 2012. No. 6. URL: <https://cyberleninka.ru/article/n/k-voprosu-o-stimulirovanii-sprosa-na-strahovye-uslugi> (Reference date: October 22, 2018)
- [19] Kretov M.V. The basic principles of risk allocation in the insurance company//*Finance*. 2018. No. 7. P. 56-60]
- [20] Confidence in banks, assurers and NSPFs has noticeably decreased//*Initiative all-Russian poll NAFS*. 2017. URL: <https://nafi.ru/analytics/doverie-bankam-strakhovym-kompaniyam-i-npf-zametno-snizilos/>
- [21] Finogenova Y.Y. Guarantee schemes as a tool to protect the rights of life and health policy holders in Germany and the USA//*Eurasian Union of Scientists*. 2015. No. 3-2 (12). P. 96-98. URL: https://elibrary.ru/download/elibrary_27497152_15531289.pdf
- [22] Kirilova N.V. The financial sustainability and bankruptcy of Russian assurers. Moscow, 2003. URL: https://elibrary.ru/download/elibrary_23847153_54365212.pdf