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**DEVELOPMENT OF METHODS OF ANALYSIS SOLVENCY OF INSURERS AS A COMPONENT FINANCIAL SECURITY INSURANCE COMPANY**

**Summary.** In the article the basic conditions for ensuring the solvency of the insurance company under the laws of Ukraine. Developed a graphic model of relations with milestones resulting complex measure insurance company solvency and reasonable definition of the financial security of the insurer.

**Key words:** insurance company solvency, the financial security of the insurer.

**Problem statement.** Today's insurance market is a profitable market for financial services, and it would be inappropriate to talk about crisis management efficiency of insurance companies. However, the economic instability of the production sector, low income levels, accompanied by a decrease in insurance premiums from the insurer, imperfect legislation does not create a secure environment for sustainable economic development of insurance companies. There is a need to strengthen the financial security of insurers and ensuring the stability of their operation. Due to the complexity and variety of internal and external financial relations is the need for high-performance financial management of insurance companies, which is essential for the formation of their financial security. Such management, primarily provided through the analysis of indicators of financial stability of the insurer as part of financial security insurance company. That financial stability is one of the most important characteristics of financial security insurers with long-term position. Financial stability may be insufficient (may lead to the insolvency of the insurer, no guarantees reliable insurance protection schemes), or abnormal (presence of temporary equity funds and insurance reserves and non-investment opportunities). Accordingly, improvement of methodological approaches to ensure the financial stability of insurers, scientific substantiation approach to its evaluation and analysis of current conditions is regarded as the most important component of financial security insurance company.

**Recent research and publications analysis.** The problem of ensuring financial stability of insurers involved, especially V. Bazylevych, J. Shumelda, S. Osadets, O.Homankova, L. Orlanyuk-Malitska, V. Furman and others.

However, further research questions deserve combining individual indicators Assessing the financial condition of the insurance company, because a significant number of them in the financial analysis does not contribute to the definition of the main parameters that affect the resultant figure.

**The purpose** of this article is to develop a graphical model ties lap financial condition of the insurance company with its regulatory solvency as indicator assess the impact of the financial activities of the insurer.

**Formulation of main research material.** Insurance companies have specific actors who concentrate on his property interests insured (individuals and businesses). In this regard, the most important goal of the insurance company is to achieve and maintain its stable financial condition, which is characterized by a system of indicators that reflect the presence, location and use of capital insurer.

Analysis of the financial condition of insurance companies is based on analysis of their financial statements. The financial statements according to the Law of Ukraine "On Accounting and Financial Reporting in Ukraine" - is accounting, which contains information about the assets and liabilities of the balance sheet, results of operations, shareholders' equity and cash flows of the entity (including an insurance company) for reporting period [1].

The purpose of financial reporting is to provide users of the insurer for management decision making complete, accurate and impartial information on the health insurance company. The financial statements of insurers consists of two groups of statements.

The first group of records set for all businesses, and includes:

1. balance;

2. Report on financial results;

3. Statement of cash flows;

4. Report on equity;

5. Notes to the statements.

The second group of specialized reports, which reflects the specific nature of the insurance business. This group includes [2]:

1. Statement of income and expenses of the insurer;

2. Statement of insurance payments and the repayment of the structural units of the insurer;

3. Explanatory note to the accounting data of the insurer;

4. Declaration of Income Tax (Earnings) insurer.

Based on the information containing the above statements, we can calculate a large number of absolute and relative indicators of the financial condition of insurance companies.

The major characteristic of the financial condition of the insurer is its financial security to policyholders. It is for this reason that insurance companies in Ukraine are subject to constant supervision and control by the state through regulatory activities Designated Authority, the State Commission for Regulation of Financial Services (hereinafter - the Commission). [3]

First of all, in the interests of policyholders FSR has provided "Guidelines for the analysis of the insurers" that are designed for the purpose of analysis of the insurers and the early detection of risks of insurance companies. These recommendations in early warning tests are used to determine the level of financial soundness of insurers and implemented for the analysis of capital assets, reinsurance, insurance reserves, profitability and provided the estimate. The actual evaluation of each is determined by comparing the estimated values ​​of the corresponding school values. Total score defined as the sum of the actual estimates for individual indicators, multiplied by the corresponding coefficients [4].

A comprehensive approach to determining the financial soundness of insurance companies have offered experts of the Ukrainian Society of Actuaries [5, p. 484-485]. By this approach the reliability index is integrated and is defined as:

where: - ratio of liquid assets;

- solvency ratio;

- return ratio of the insurance company.

The higher values ​​of reliability, compared to the average for the homogeneous group of insurance companies the better their financial stability. According to the Law of Ukraine "On Insurance" financial stability of the insurance company is determined by the following conditions to ensure their solvency:

- Availability of paid-up share capital and warranty insurer;

- Establishment of insurance reserves, sufficient for future insurance claims and insurance claims;

- Exceeding the available solvency margin of the insurer on settlement required solvency margin.

To ensure long-term financial stability of insurance and, therefore, the financial soundness of insurance companies in general, it is important to have sufficient equity in insurance reserves, effectively manage assets, identify the proportion of risk-sharing between the insurer and the reinsurer.

There is a significant number of areas of financial analysis of financial reports and accounting data insurance companies [see., For example, 5, 6, 7, 8], the main of which is the calculation of solvency, determination of relative indicators, the share of individual financial statement items and more. But only a comprehensive analysis of a group of indicators gives grounds to justify conclusions regarding the financial condition of insurance companies. Calculate the extra factors complicate the analysis. In addition, a significant number of estimated parameters can lead to contradictory conclusions, because most of them are interrelated and determine each other.

Summarizing the existing terms of the classification performance of the financial condition of the insurance company by offering follow situational approach to their choice (depending on the situation). The selected indicators should not provide redundant conclusions should summarize the main characteristics of operating, investing and financing activities of the insurance company and, more importantly, selected indicators should be a basis of proposals for the financial security of the insurer.

The major characteristic of the financial soundness of the insurance company is paying capacity, which means the ability of the insurer for any - circumstances timely fulfill liabilities under the law. This is especially true of obligations under insurance agreements.

Based on the balance sheet solvency means the following - the value of the insurance company shall not exceed the value of its liabilities or equal to. If the assets of the insurer are not available in time for the payment at the request of the insured - the insurer is insolvent.

In the interests of policyholders state provides state supervision over compliance with the conditions of their insurers pay. Law of Ukraine "On Insurance" identifies the key conditions for ensuring the solvency of insurers (Table 1).

Table 1

The basic conditions for ensuring the solvency of the insurer

according to the legislation of Ukraine [3]

|  |  |
| --- | --- |
| Indicators | Characteristics of the main conditions of solvency under the law |
| 1 | 2 |
| 1. Availability paid-up share capital | - Indispensable condition for the beginning of the statutory activities of the insurer and issue him a license;  - The value of the authorized capital is fixed in the statute;  - Minimum capital of the insurer, which is engaged in other types of insurance, life insurance should be the equivalent of 1.5 million euros, life insurance - 1.5 million euro for currency exchange rate in Ukraine;  - Share capital must be paid exclusively in cash;  - The total amount of contributions to the charter capital of the insurer other insurers may not exceed 30% of its own capital, including the contribution to the share capital individual insurer may not exceed 10% |
| 2. Availability of Insurance Guarantee Fund | - Additional capital;  - Capital reserve;  - Retained earnings |

Continuation of Table 1

|  |  |  |
| --- | --- | --- |
| 1 | 2 | |
| 3. Profit reserves sufficient for future payments of insurance premiums and insurance claims | | - Insurance reserves formed by insurers to ensure future payments of insurance premiums and insurance depending on the type of insurance (reinsurance);  - These funds are not property of the insurer;  - The amount of money corresponding amount of insurance liabilities of the insurance company;  - To meet its obligations to policyholders, the insurer must keep insurance reserve funds in diversified, profitable and reliable assets that have a high level of liquidity;  - Mode of binding forming insurance reserves;  - Source of insurance reserves have attracted financial resources (premiums);  - Evaluation of the volume and dynamics of growth of insurance reserves is twofold: growth, firstly, indicating increased financial capacity of the insurance company, and secondly, the growth shows a corresponding increase in cash obligations to policyholders by the insurer concluded agreements. |
| 4. Excess available solvency margin of the insurer's settlement of regulatory solvency margin | | - Insurers according to the amount of insurance required to maintain an adequate level of available solvency margin (net assets), if the actual rate exceeds the standard, then it is about compliance with the requirements of the insurer by the legislation;  - Economic understanding comparisons of solvency is to determine how much momentum for insurance operations of the insurer meet its financial capacity;  - Turns the insurance company for the accounting period can be viewed from the perspective of the collected premiums, and the insurance payments made​​. |

So, solvency is the ability to timely meet payment requirements counterparties repay loans, for payment of insurance premiums and claims, pay taxes and payments to the budget and extrabudgetary funds to pay salaries and so on.

Solvency margin (net assets) of the insurance company determined whirlwind bath with a property value (total assets) amount the insurer intangible assets and total liabilities, including insurance. Insurance liabilities are equal in terms of the technical reserves.

On any date of the reporting period solvency margin (net assets) of an insurer exceed current required solvency margin.

The required solvency margin of the insurance company that provides insurance other than life insurance, at the reporting date is the larger of the determined values​​, namely:

first - is calculated by multiplying the amount of insurance premiums (premiums) for the previous 12 months at 0.18 (last month consist of the number of days on the settlement date). The amount of insurance payments (pre-mine) is reduced by 50 percent of insurance premiums (premiums) that are reinsured.

second - is calculated by multiplying the amount of insurance payments (refunds) for the previous 12 months at 0.26 (last month with the number of days from the date of calculation). The amount of insurance payments (compensation) decreased 50 percent pa benefits that offset reinsurers under reinsurance contracts concluded.

Detailed procedure to determine the economic content and the actual and required solvency margin shown in the literature that cover finance insurance companies [see., for example 3, p. 485-489, 4, p. 347-352, 8, p. 253-259].

For in-depth analysis of the financial soundness of the author selected financial ratios that allow to characterize:

solvency margin of the insurance company depending on the amount of insurance reserves and making insurance payments, assets, current liabilities (Table 2).

Table 2

Ratios solvency of insurance companies

|  |  |  |
| --- | --- | --- |
| Indicators | The order of calculation | Description of indicators |
| 1. Coefficient of financial capacity | (Total insurance reserves + net assets) / Total number of claims | Specifies the solvency of the insurance company to fulfill its obligations under the insurance payments |
| 2. The liquidity ratio of insurance reserves | Insurance reserves / Liquid Assets | Measures the adequacy of insurance reserves of the company, which can be used to pay off current liabilities. This ratio shows how much currency insurance reserve account for each currency liabilities under insurance contracts |
| 3. Coefficient of insurance coverage | Total insurance reserves ⋅ liquidity ratio of insurance reserves / Total number of claims | Measures the adequacy of insurance reserves of the insurance company for insurance payments. This ratio can be reduced, if the insurance company makes inefficient investments by insurance reserves |

The aim of future research is to develop a graphical model of communication lap of the resulting measure of solvency. Statement of the problem in general can be represented as economic information that circulates in the circulation of money the insurance company through insurance reserves. Communication performance in certain areas of research are presented in pic. 1.

The movement of funds

Pic. 1. Bigger communication model parameters

solvency of insurance companies

Described in the model of the situation may be more general problem concerning the links solvency indicators at this stage of research the financial soundness of the insurer. Based on the enlarged model of the indicators move to develop more detailed graphic models of solvency of insurance companies (pic. 2).

The solvency of insurance companies

The liquidity ratio of insurance reserves

Coefficient of insurance coverage

Assets

Insurance reserves

Insurance payments

Commitment

Coefficient of financial capacity

Pic. 2. Graphical model ties lap of the resulting complex measure insurance company solvency

Absolute numbers of graphic models are specific indicators on the content of which should stay separately (by the legislative framework of Ukraine).

According to the Law of Ukraine "On Insurance" the subject of direct insurers can only insurance, reinsurance and financial activities related to the formation, placement of insurance reserves and management "[3].

Insurance reserves - is the share of resources, which under normal conditions of the insurance company are sufficient to pay for insurance, that they are a necessary part of the cycle and the objective of the insurer. The concept of insurance reserves are in the Law of Ukraine "On Insurance", which states: "Insurance reserves are formed by insurers to ensure future payments of insurance premiums and insurance depending on the type of insurance (reinsurance)." Given the legislation emphasize that the formation of insurance reserves is mandatory for insurance companies. As for future growth (or decrease) in insurance reserves, then we should talk about their dual nature. In this context, we must understand that insurance reserves are not the property of the insurer - it attracted financial resources at the expense of policyholders. Therefore, their growth, on the one hand, may indicate a growing financial security insurance company, and the other - to increase the insurer's liability for insurance agreements.

The main activities of the insurance company provides not only raising funds, but also of insurance benefits. According to the insurance laws of Ukraine "Insurance payments - a sum of money paid by the insurer under the terms of the insurance contract. [3]

Current legislation provides that under personal insurance carried insurance benefits, regardless of the amount you should get insured by state social insurance and social security. By contract of property insurance is insurance indemnity under the insurance amount, which is set to the value of the property according to current prices and rates at the time of the contract.

Consider the features of the assets of the insurance company. First of all, the assets of the insurance companies and the assets of any entity are "resources controlled now as a result of past events, the use of which is expected to lead to economic benefits in the future" [9]. The most significant (by volume) source of the insurer's assets are financial assets. They have the following composition: cash in local currency, cash in foreign currency receivables, short-term investments, long-term financial investments.

**Findings of the study.** To sum up, come to the following conclusions. An important part of financial security is the solvency of the insurance company, which means the ability of the insurer for any - circumstances timely fulfill liabilities under the law and insurance agreements.

The researches allow to define the financial security of the insurance company - the ability of the insurer to fulfill assumed insurance and other obligations provided that an appropriate level of financial stability of insurance operations.

Deserve further study the selection of indicators to measure insurance and insurance process, the valuation of the insurance business as components of the financial security of the insurance company.

**References**

1. Закон України "Про бухгалтерський облік та фінансову звітність в Україні" від 16.07.1999 р. [Електронний ресурс]. - Режим доступу: http://zakon2.rada.gov.ua/laws/show/996-14.

2. Розпорядження Державної комісії з регулювання ринків фінансових послуг України "Порядок складання звітних даних страховиків" від 15.09.2005 р. [Електронний ресурс]. - Режим доступу: http://www.dfp.gov.ua/217.html.

3. Закон України "Про внесення змін в Закон України "Про страхування"-2001. від 7.11.2001 р. [Електронний ресурс]. - Режим доступу: http://on2.docdat.com/docs/64/index-19261-2.html. — 2001. — 7 листопада.

4. Розпорядження Державної комісії з регулювання ринків фінансових послуг України "Рекомендації щодо аналізу діяльності страховиків" від 17.03.2003 р. [Електронний ресурс]. - Режим доступу: http://www.dfp.gov.ua/217.html.

5. Страхування: Підручник / За ред. В.Д. Базилевича. - К.: Знання, 2008. - 1019 с.

6. Шумелда Я.П. Страхування: Навчальний посібник. Видання друге, розширене. - К.: Міжнародна агенція "Бізон", 2007. - 384с.

7. Стратегічне управління страховою компанією: Кол. моногр. / В.М. Фурман, О.Ф. Філоньок, М.П. Ніколенко, О.І. Барановський та ін.; Наук. ред. та кер. кол. авт. д-р екон. наук В.М. Фурман. - К.: КНЕУ, 2008. - 440 с.

8. Гаманкова О.О. Ринок страхових послуг України: теорія, методологія, практика : монографія / О. О. Гоманкова. - К. : КНЕУ, 2009. - 283 c.

9. Положення (стандарт) бухгалтерського обліку 2 "Баланс". Затверджено наказом Міністерства фінансів України від 31.03.1999 р. [Електронний ресурс]. - Режим доступу: http://zakon2.rada.gov.ua/laws/show/z0396-99