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Methods to Increase the Efficiency of Placement of Financial Resources of Insurance Companies

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***Abstract*---** *The article provides an analysis of the quality and efficiency of placement of financial resources of insurance companies, as well as proposals and recommendations to improve the efficiency of placement of financial resources of insurance companies.*

***Keywords*---** *Insurer Insured, Insurance Premium, Insurance Portfolio and Investment.*

I. INTRODUCTION

In the world economy, it is important for specialized insurance companies in European countries to earn income from investment activities when carrying out life insurance operations, which are characterized by the discounting of insurance premiums, taking into account the rate of return on investment. Therefore, the issue of liquidity in these insurance companies is secondary, as the funds attracted to insurance companies are mainly long-term funds. For example, if we look at the structure of assets of British insurance companies, they include “government securities, local government securities and foreign securities about 25%, corporate securities more than 30%, loans and mortgages 2-5%, real estate investments 3 -5% and about 35% will be directed to other areas [1].

Improving the quality of placement of financial resources and their efficiency is of paramount importance in the formation of a system of quality indicators based on improving the efficiency of investment activities of insurance companies in accordance with modern requirements.

II. THE MAIN FINDINGS AND RESULTS

Review of Scientific Research

The need for innovative development of the economy and, on this basis, its competitiveness, the need to invest in it, first of all, is a proven and justified method in world practice. In our opinion, it is very important for Uzbekistan to attract large investments in the rapid development and restructuring of the economy. Such a large amount of investment can be provided by actively attracting both domestic and foreign investment.

The importance of micro-level investment activities is also confirmed by the views of economists. Economist Y.A. Spletukhov, analyzing the activities of Western insurance companies, writes that "in a competitive environment, they receive the bulk of profits not only from direct operations, but also from investments” [2]. A similar opinion was expressed by L.A. Orlanyuk-Malitskaya, Doctor of Economics, and proofreader: In his opinion, the profit from investment activities allows an insurance company to operate at a loss from its insurance operations. This will allow it to gain a foothold in the market in a competitive environment [3]. In addition, the importance of investment activities for the insurance company is confirmed by Doctor of Economics, Professor K.E. Turbina in his

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thesis: “Investment activities of the insurance company have such a significant impact on its financial condition that Profit or loss, which is the result of a properly chosen investment policy, is a clear reflection [4]. According to Doctor of Economics, Professor T.A. Fyodorova: “The results of investment activities have a significant impact on the profits of the insurance company. At the same time, the return on investment in some types of insurance can be a source of replenishment for insurance reserves, which should cover the loss [5].

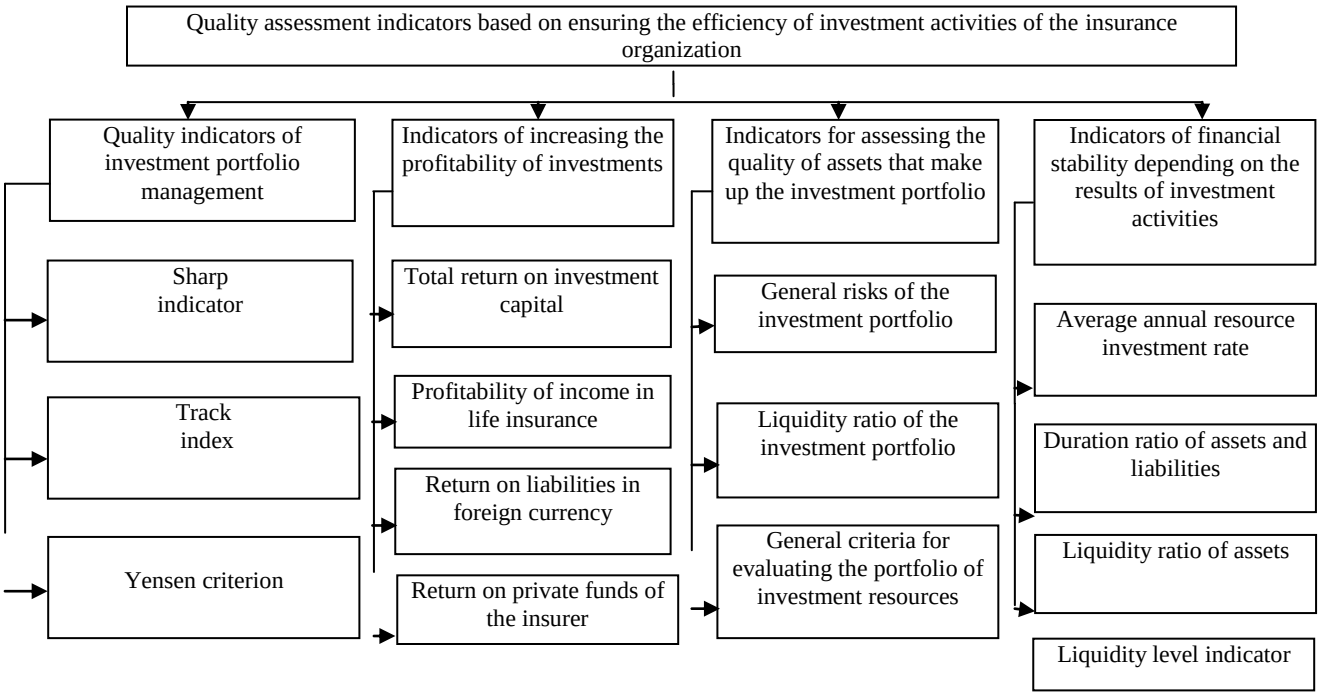
Research Hypothesis

Mechanisms for improving the investment performance of insurance companies include intensive and extensive methods to achieve an increase in the efficiency and quality of insurance activities. Extensive methods include ways to obtain the resources needed for investment by increasing private capital and insurance reserves. Intensive methods involve increasing the efficiency of investment funds through effective financial control and planning, as well as management of financial placement.

An important basic source of investment capital of an insurance company is insurance reserves. The level of convenience is especially high when this source is implemented at the expense of funds arising from life insurance contracts. Because these insurance contracts are concluded for a long time, the proceeds can be used for long-term investment projects.

Research Methodology

Quality indicators of investment portfolio management of an insurance company allow describing the active strategy and comparing the efficiency of the formed portfolio with the average indicators in the market. This creates a need for an indicator that reflects the share of net risk in revenue (see Figure).



Picture: Quality Assessment Indicators of Insurance Companies based on Ensuring the Efficiency of Investment Activities [6].

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There is an important indicator that describes the relationship between risk and return, and this indicator is the following criterion proposed by U.Sharp:

$$(R_p - R_f)/O_p - \max$$

Here, R_p – is the return on the investment resource portfolio;

R_f – Interest rate in the absence of risk;

O_p – The estimated change in the return on investment resources over the period specified in the standard.

According to his interpretation, it is necessary to compare this indicator with the indicator that determines the market efficiency, based on the model of the formation of the price of assets of a capital nature:

$$(R_m - R_f)/O_m - \max$$

Here, R_m – is the average index obtained relative to the market portfolio;

R_f – interest rate in the absence of risk;

O_m – is the standard change in the average yield relative to the market portfolio for a given period.

The Tracker Index also participates as an indicator of asset portfolio quality management and determines the amount of premium with a single risk of a systemic nature:

$$(R_p - R_f)/B_p - \max$$

Here, R_p – is the return on the asset portfolio;

R_f - interest rate in the absence of risk;

B_p - is a systemic risk indicator of the asset portfolio for a specific period.

The average market premium for each risk, which has a structural character, serves as a basis for comparing the formed investment portfolio, such as the Sharp criterion:

$$(R_m - R_f)/B_m - \max$$

Here, the disadvantage of the Tracker Index is that it is an approximation of Criterion B for an investment portfolio that combines different types of financial resources. As mentioned, its application is effective only when the asset portfolio is divided into separate parts, depending on the type of financial resource.

The Jensen criterion is formed on the basis of analogous principles, as in the Tracker index, and determines the cases of change of the investment portfolio from the average market premium:

$$A_p = (R_p - R_f) - (R_m - R_f) \times B_p$$

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Several ratios are analyzed to interpret this indicator:

a) $A_p > 0$ – "high efficiency" - high portfolio profitability from the market;

b) $A_p = 0$ – "normal efficiency" - portfolio profitability corresponds to the average market rate;

c) $A_p < 0$ – "low efficiency" - portfolio profitability is lower than the average market.

The next set of indicators is the parameters that determine the return on investment. These indicators are important in determining the minimum requirements for investment income and are considered as an optimizer of the parameters of the portfolio of the insurance organization. In this case, the total return on investment is given above. It can be calculated using this formula: $A_p = (R_p - R_f) - (R_m - R_f) \times B_p$. This indicator estimates the total income of the insurance organization from investment operations. The minimum requirement is the market rate in the absence of risk. This requirement, for example, is related to the rate of return on government securities.

In the current situation in Uzbekistan, it is important to use an indicator that determines the value of financial resources, taking into account the inflation rate, the refinancing rate of the Central Bank, the foreign exchange rate, the rate of bank deposits. In this case, given the fact that any liabilities of the insurance organization must be profitable, it is even more important to determine the profitability of life insurance contracts denominated in foreign currency. The profitability of life insurance contracts is determined by the following formula:

$$Insurance_{life} = \frac{Rate_{life}}{T_{life}} \geq 1$$

Here, $Rate_{life}$ – is the portfolio yield consisting of life insurance reserves;

T_{life} – Technical interest rate on life insurance.

This indicator is determined by the following formula:

$$Rate_{life} = \frac{D_{life} + TP_{life} + PP_{life} + Lese_{life} + Dther_{life}}{R_{life} + (R_{lin} - T_{lin}/12) - (R_{lout} - T_{lout}/12)}$$

Here, D_{life} – interest and dividends received;

TP_{life} – used course profit;

PP_{life} – unused exchange rate profit;

$Lese_{life}$ – income from the lease of real estate;

$Dther_{life}$ – other return on investment;

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R_{life} –available funds of life insurance;

R_{lin} – additional funds of life insurance;

T_{lin} – the number of months in the portfolio of life insurance funds;

R_{lout} – deductions from life insurance;

T_{lout} – the number of months in the portfolio of funds withdrawn from life insurance;

T_{life} – Technical interest rate on life insurance.

The requirement for this indicator is that the indicator should be ≥ 1 (greater than or equal to one). This is due to the requirement that the return on an asset portfolio consisting of life insurance reserves be higher than the technical interest rate. Otherwise, the insurance company will have to change its investment policy or reduce the technical interest rate to increase the profitability of the portfolio. However, the insurance company loses its competitive position when it lowers this rate and complies with the requirement of equality of all other conditions. This situation makes it necessary for the insurance company to look for another investment object that will bring high returns.

Also, despite the fact that the Central Bank has announced a free floating exchange rate, in this case it will be necessary for the insurance company to conduct a separate analysis of the profitability of foreign currency liabilities. This figure is calculated by the following formula:

$$\frac{Rate_{cur}}{T_{cur}} \geq 1$$

Here, $Rate_{cur}$ - is the return on the asset portfolio organized in terms of foreign currency liabilities;

T_{cur} - Variability of passive currencies.

This indicator is determined by estimating the return on assets for a certain period of time, namely:

$$Rate_{portfolio} = \frac{D + TP + PP + Lease + Other}{Vo + (Vin - tin/12) - (V_{out} - t_{out}/12)}$$

Here, $Rate_{portfolio}$– is the total return on the investment portfolio;

D –interest and dividends received;

TP – realized exchange rate profit;

PP – unrealized exchange rate profit;

$Lease$ – profit from real estate lease;

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$Other$ – other benefits of investment resources;

Vo – initial investments;

Vin – additional resources involved;

tin – number of months of portfolio use of additional resources;

V_{out} – withdrawn funds;

t_{out} – Months of excluded resources in the portfolio.

The indicator under consideration allows assessing the impairment of liabilities. When this indicator is less than 1, the insurance organization should pay attention to the fact that the insurance reserves do not correspond to the previously accepted obligations. Because this situation can undermine the financial stability of the insurance company or lead to its bankruptcy. At the same time, a number of liabilities that make up the private capital of an insurance organization have a net value, and it is important to determine the profitability of these values:

$$\frac{Rate_{eg}}{T_{eg}} \geq 1$$

Here, $Rate_{eg}$ – is the return on the investment portfolio consisting of the private capital of the insurance organization, determined by the following formula:

$$Rate_{eg} = \frac{D_{eg} + TP_{eg} + PP_{eg} + Lease_{eg} + Other_{eg}}{R_{eg} + (R_{eg} - t_{eg}/12) - (R_{eg} - t_{eg}/12)}$$

TP_{eg} – value of private capital of the insurance organization.

This indicator is important for the clients and shareholders of the insurance company due to its ownership. Its high level allows an insurance company to increase its competitiveness and financial stability, as well as increase the volume of investment assets.

The urgency of the analysis of the parameters of the assessment of the asset portfolio of the insurance organization will increase with the abolition of regulatory coefficients and the emergence of procedures for the placement of insurance reserves. The total risks of the asset portfolio of the insurance organization reflect the level of risk of the investment policy, which is determined by the following formula:

$$O_{portfolio} = \sqrt{\sum_{i=1}^{N}\sum_{j=1}^{N} a_i a_j V_{ij}}$$

Here, $O_{portfolio}$–is the total risk of the investment portfolio;

a_j – the active part of the placed investment of the insurance organization;

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V – return matrix of used assets.

Liquidity of the asset portfolio of the insurance organization is determined by the following formula:

$$I_{tportfolio} = \sum_{i=1}^{n} I_{ti} \times d_i$$

Here, $I_{tportfolio}$ – is the total liquidity of the investment resource portfolio;

I_{ti} –i - asset liquidity in the asset portfolio;

I_{ti} – asset portfolio i - asset liquidity;

The assessment of these indicators allows you to determine the investment policy of the insurance company. This is especially useful in determining the rating of insurance companies and comparing them. The following formula can be used to systematically analyze the asset portfolio of an insurance organization:

$$K_{portfolio} = Rate_{portfolio} \times D_{rate} + 1/O_{portfolio} \times D_o + I_{tportfolio} \times D_i$$

Here, $K_{portfolio}$– are general criteria for evaluating the portfolio of insurance assets;

Coefficients in the investment portfolio of a D-insurance organization, indicating its reliability, liquidity, profitability.

$$\sum_{i=1}^{3} d_i = 1$$

In addition, in the general system of assessing the quality and efficiency of investment activities of the insurance organization, it is necessary to consider the indicators that determine the financial stability arising from its investment activities. To do this, consider the following features:

a) the average annual level of invested resources;

b) the ratio of the duration of assets (sensitivity to changes in interest rates) to the duration of liabilities;

c) asset liquidity ratio;

g) level of liquidity.

The average annual level of invested resources is determined by the following formula:

$$K_i = \frac{\sum_{n>1}^{5} V_n / 5}{\sum_{n-1}^{5} A_n / 5}$$

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Here, K_i – is the average annual investment ratio;

V_n – quarterly and annual volume of invested resources;

A_n – quarterly and annual volume of resources invested, less the share of reinsurance in insurance reserves and the amount of losses. This indicator allows you to determine the share of the insurance organization's assets in investment assets. The ratio of indicator K_i to the value of annual insurance reserves together with the share of reinsurers shows the degree of their full placement. The ratio of the duration of assets to the duration of liabilities determines its position in life insurance in relation to interest rate risk and is calculated by the following formula:

$K_{DU} = \frac{D_{ua}}{D_{u1}} = 1$ should be approximately equal to 1.

Here, D_{ua} – is the duration of assets;

D_{u1} – Duration of liabilities.

An important principle of the insurance organization's activity is that it can fulfill its obligations in a timely manner. To do this, the analysis of asset liquidity plays an important role:

$$D_{u1} = \frac{A_1}{R} \geq 1$$

Here, D_{u1} – is the asset liquidity indicator;

A_1 – the amount of liquid assets at market value;

R – the criterion under consideration, the amount of insurance reserves, taking into account the share of reinsurance and unearned premiums. The criterion under consideration shows that there is a link between the reliability of an insurance organization and the investment policy it pursues and the ability to build a portfolio of assets with the necessary liquidity.

III. CONCLUSION

From this it can be concluded that it is important to include in the assets of the insurance organization assets that never lose their liquidity. The next ratio, which indicates the ability of the insurance organization to accurately and timely fulfill its obligations, is the level of liquidity, which differs from the ratio of liabilities of the insurance organization to liquid assets. This is determined by the following formula:

$$L_k = \frac{L}{A_1} \leq 105$$

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Here, L_k – is the liquidity level of the insurance organization;

L – the sum of the obligations assumed by the insurance organization;

A_1 – is the sum of the depreciable amount of liquid assets of the insurance organization, which does not take into account market fluctuations. Liquid assets are funds in the form of cash, insurance company accounts, bank deposits, real estate and securities, but not more than 5% of existing liabilities. The requirement of this indicator to be 105 can be explained by the fact that the analysis of the activities of bankruptcies in the insurance market shows that the liquidity level of the insurance company has increased over the past 3-5 years. As a result, a system of indicators for assessing the quality of the insurance organization's performance, based on improving the efficiency of investment activities, allows you to assess the effectiveness of an active investment strategy.

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