ASSESSMENT OF THE EFFICIENCY OF INVESTMENT ACTIVITY OF INSURANCE COMPANIES IN THE REPUBLIC OF ARMENIA

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Abstract: The article analyzes the structure and efficiency of investment activities of non-life insurance companies operating in the insurance market of the Republic of Armenia, based on which it is recorded that investment policy plays a key role in ensuring the financial stability, liquidity and profitability of companies. From the investment indicators of the six insurance companies studied for 2020–2024, including the investment activity ratio, profit sensitivity ratio, ROE and ROA, it becomes obvious that the efficiency of investments varies significantly between different companies and periods due to management approaches and the market situation. The recorded trends and asymmetries indicate the need to revise asset management strategies. This study is important from the point of view of the development of the insurance sector, since the investment policy of insurance companies significantly affects their financial stability and competitiveness.

Introduction

In the modern financial system, insurance companies play a key role, serving not only as a mechanism for protecting against risks, but also as financial institutions with significant investment potential in the long term. Given the nature of insurance activities, these companies, accumulating significant financial resources, in addition to the insurance purposes themselves, can use these financial resources as investment resources, creating an additional source of income. Effective investment management not only ensures the stability of insurance companies, but also contributes to increasing their competitiveness, stable replenishment of reserves and the development of the financial market.

The insurance market of the Republic of Armenia has undergone significant changes and development processes in the last decade. Although the investment tools here are relatively limited, due to the limited volumes of the securities market and the level of

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stability of the financial environment, insurance companies should strive to use their investment potential as efficiently as possible, taking into account market conditions, regulatory restrictions and risk factors. The requirements and investment restrictions set by the Central Bank of the Republic of Armenia form a very clear framework for insurance companies, within which the construction of an investment strategy requires a balanced approach between profitability, liquidity and risk reduction. The assessment of the effectiveness of investment activities becomes a matter of strategic importance as an indicator of the overall financial and economic health of the insurance company, the quality of asset management, the flexibility of internal financial policy and profitability. This analysis allows not only the identification of existing problems, but also the outlining of possible potential improvement directions, ensuring the strengthening of the company's competitiveness in the long term. Therefore, it is necessary to conduct a comprehensive analysis of the structure and effectiveness of investment activities, based on relevant financial indicators, portfolio approaches and sectoral comparisons.

Theoretical and methodical bases of the research and methods of analysis

Evaluating the effectiveness of investment activities of insurance companies is one of the fundamental directions for ensuring financial stability and profitability. Various studies indicate that the structure of investment assets, the level of investment diversification, and the effectiveness of risk management have a significant impact on the financial results of insurance companies (Arena, M., 2008).

Heyman (Heyman W.H., 2006), Pottier (Pottier S.W., 2007), Chen (Chen X., Yao T., Yu T., 2007), Babbel (Babbel D., 2001), Thomas (Thomas S., 2005) and other authors have made important contributions to the development of the theory and methodology for organizing the investment activities of insurance companies. However, despite the relevance and practical importance of the topic, a complete quantitative and qualitative assessment of the effectiveness of the investment activities of insurance companies has not yet been fully revealed, and individual authors offer their own analytical methods.

Among the researchers, in particular, Kraus and Litzenberger (Kraus A., Litzenberger R.H., 1973), as well as Eling and Schmeiser (Eling M., Schmeiser H., 2010) emphasize that the predominance of high-risk assets can lead to instability of profitability, while a balanced portfolio policy contributes not only to an increase in profitability, but also to strengthening the financial flexibility of the insurance company.

The relationship between investment activity and profitability is also emphasized in the analyses performed by combining ROA and ROE indicators, which are widely used in studies of the efficiency of the insurance sector. Some authors propose complex assessment methodologies, including the ratio of costs and income, the profit sensitivity factor and structural changes in the portfolio (Kozmenko O., Roienko V., 2013).

Zéghal and Maaloul propose a scientific and methodological approach to assessing the investment activity of insurance companies, based on the correlation of investment indicators. The authors emphasize the importance of defining clear criteria for choosing investment strategies, linking them to the relationship between risk, profitability and asset structure (Zéghal D., Maaloul A., 2010).

The Institute of Asset Management (IAM) initially introduced the 6-Box Model to provide a structured approach to asset management, focusing on core elements such as organisation and people, asset management strategy, decision-making, lifecycle

delivery, asset knowledge enablers, and risk & review. Over time, the model evolved into the 10-Box Model, which aligns more closely with ISO 55000 standards and incorporates additional aspects such as organisational context, leadership & governance, value and outcomes, risk management, and continual improvement. This evolution reflects international best practices and provides a more comprehensive framework for effective asset management. (Asset Management Academy, 2024).

The investment activity of insurance companies in Armenia is a limitedly studied area. For this reason, combining international experience with local data not only fills the scientific gap, but also allows identifying the specifics of the local market for the development of investment policy.

Methods

The methodological basis of the research is a combined approach of quantitative analysis, which is aimed at a comprehensive assessment of the effectiveness of the investment activities of insurance companies in the Republic of Armenia. The main research objective is to assess the investment policy of insurance companies through indicators of profitability, risk management and effective asset allocation. The analysis was based on data published by the Central Bank of the Republic of Armenia, annual reports of insurance companies, as well as additional open data sources, in particular, summary analyses of the insurance market. The research period covers the years 2019-2024. Within the framework of the study, six of the seven insurance companies operating in the RA insurance market were selected for analysis, since the seventh company (Efes) entered the market only in 2024 and did not have complete data for previous years. Several indicators were calculated to assess the effectiveness of investment activities. The analysis was carried out through a two-way, spatial comparison between companies to identify best practices and differences in investment efficiency. Based on the dynamics of the same company's data over time, to identify strategic stability and development trends. In addition to some performance indicators, asset structure, profitability levels, and sensitivity ratios were also analyzed for a more visible presentation of trends. Graphical data contributed to the intuitive perception of quantitative indicators. The analysis of investment activity efficiency was conducted not only based on the structure of assets and financial indicators, but also attempted to examine the asset management practices of insurance companies. Special attention was paid to whether the companies implement the requirements of ISO 55000 standards and at which level they are positioned within the 6-Box/10-Box Asset Management Maturity Scale, considering their placement to the left or right of the midpoint in accordance with ISO 55001 requirements. This approach ensures that the analysis encompasses not only quantitative but also strategic and process-oriented components, highlighting trends and asymmetries that necessitate a revision of investment and asset management strategies.

Analysis

Let's start the analysis of the investment efficiency of insurance companies in Armenia by studying the indicators of 6 companies operating in the market, based on their investment activities. The purpose of the analysis is to assess how effectively insurance companies manage their investment assets, what factors affect their profitability and what strategies are used in the investment management process. To

analyze the investment activities of insurance companies, it is necessary to first understand the main financial flows that form the basis of investment potential. Since a significant part of the income of insurance companies is formed at the expense of collected insurance premiums, the analysis of their structure and sources of origin is an important prerequisite for a substantiated assessment of investment policy. Within the framework of this study, the average insurance premiums of the last five years of the insurance market of the Republic of Armenia by types of insurance were analyzed.
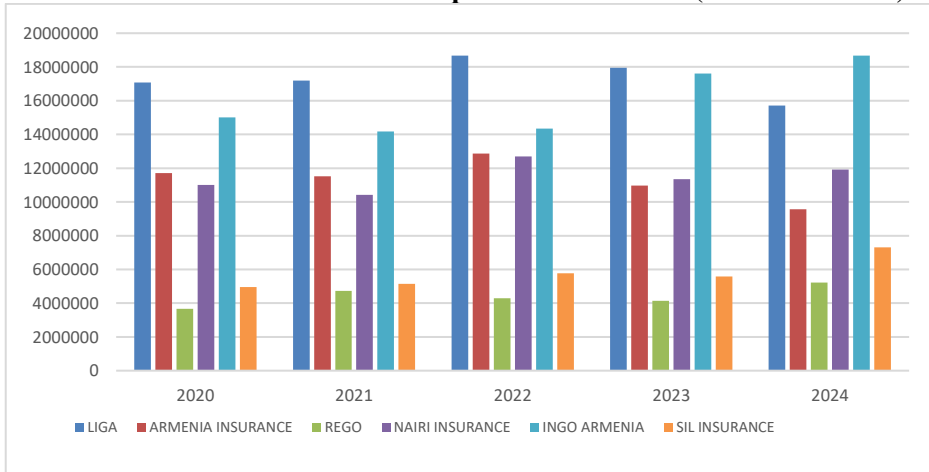
Figure 1
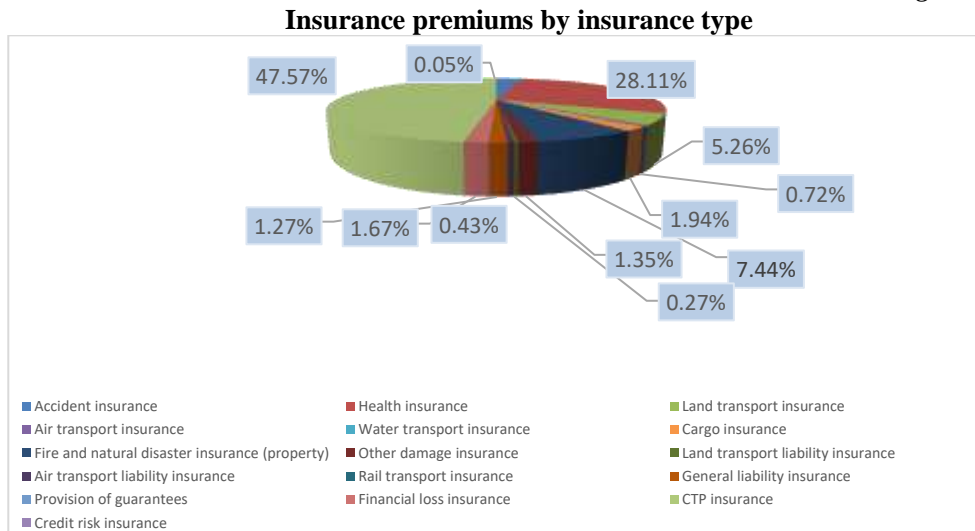
Insurance premiums by insurance type

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

The results of the study show that the majority of total insurance premiums are provided by three main directions:
• Compulsory Motor Third Party Liability Insurance (MTPLI),
• Voluntary Medical Insurance,
• Property Insurance.

The stable financial flows formed by these directions are considered the main sources of investment asset formation of insurance companies. Therefore, this structural analysis not only records the dominant areas of insurance income, but also serves as a basis for assessing how these flows affect investment strategies and risk management. At the same time, such a concentration of insurance premiums in 1-2 directions increases the riskiness of the investment policy due to possible market fluctuations in a given sector. Therefore, the company should ensure a sufficient level of diversification in the investment portfolio, differentiating not only investment instruments, but also taking into account the distribution of sources of insurance premium income. One of the important prerequisites for assessing the effectiveness of investment activities of insurance companies is the analysis of the volume of total assets of the companies. Based on the data of the last five years, a study of the dynamics of the assets of the six leading companies operating in the insurance market of Armenia was conducted.

Volume of assets of insurance companies in 2019-2024 (thousand drams)

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

In the Armenian insurance market, some companies show a steady growth in assets, while others show a decrease in assets, which indicates varying levels of adaptation to market changes. As of 2024, the leaders in terms of assets are INGO ARMENIA (18.7 billion drams), LIGA (15.7 billion drams) and NAIRI INSURANCE (11.9 billion drams), which have a larger asset base, providing broad investment opportunities. Despite a certain decrease, LIGA maintains its leading position, and NAIRI INSURANCE regained its position in the top three in 2024. ARMENIA INSURANCE, SIL INSURANCE and REGO have relatively small assets (9.6, 7.3 and 5.2 billion drams), but SIL INSURANCE has a steady trend of asset growth. Overall, large players continue to consolidate, while medium and small companies are trying to improve their asset structure.

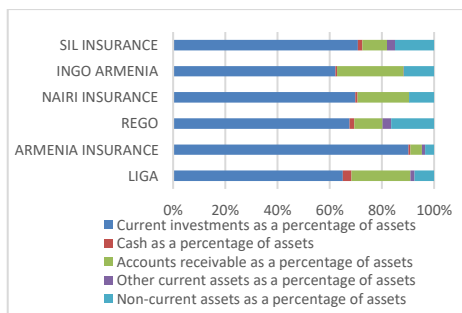**Asset Structure 2020**

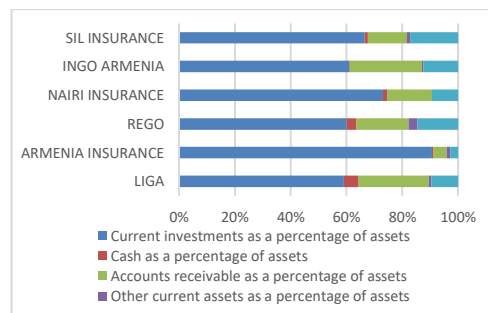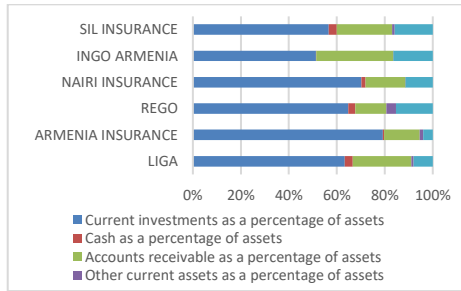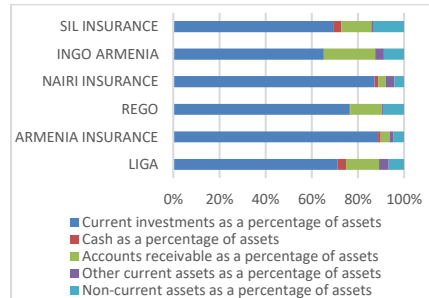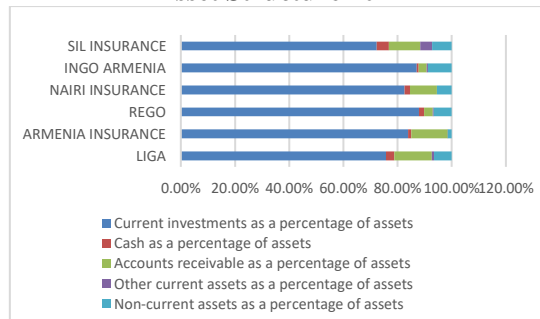**Asset Structure 2021**

Figure 5

Asset Structure 2020

Figure 6

Asset Structure 2021

Figure 7

Asset Structure 2024

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

Analyzing the asset structure of leading insurance companies during 2020-2024, several stable trends and shifts are observed, which affect both investment strategies and general market movements. Current investments have consistently dominated the composition of assets in all six companies, accounting for 50–90%.
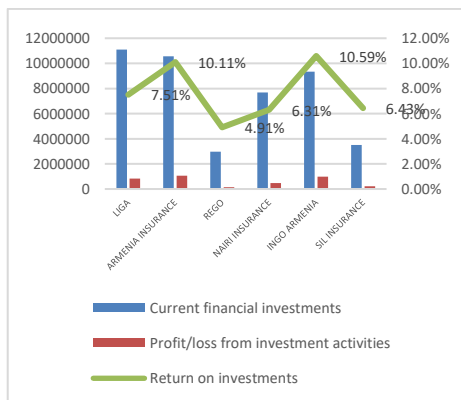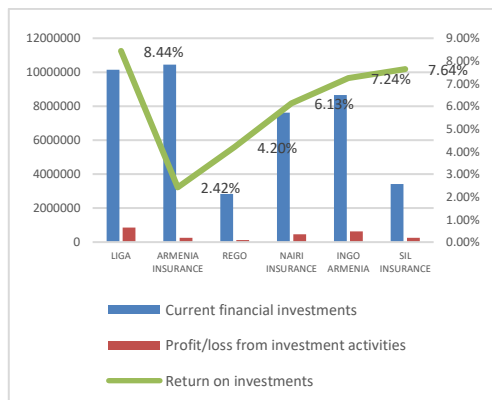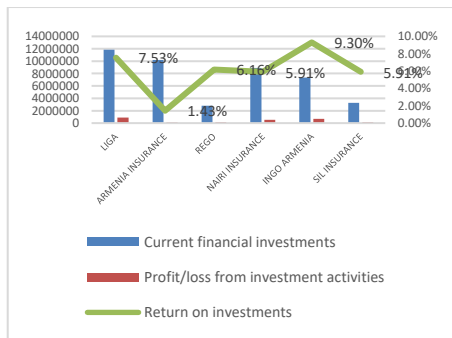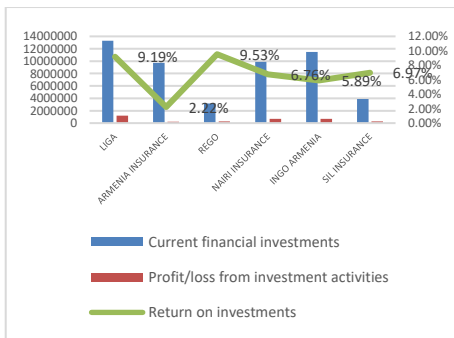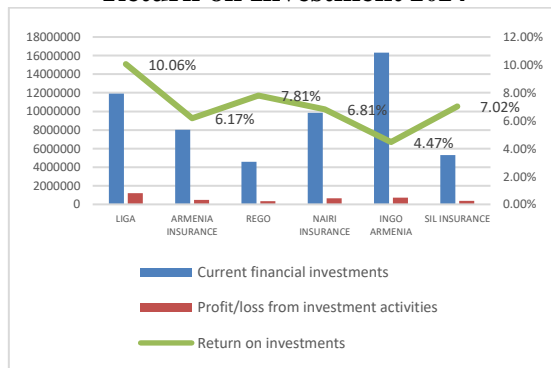
Figure 8

Return on Investment 2020

Figure 9

Return on Investment 2021

Figure 10

Return on Investment 2022

Figure 11

Return on Investment 2023

Figure 12

Return on Investment 2024

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

In 2024, the share of current investments was highest in REGO (87.90%), INGO ARMENIA (87.10%) and ARMENIA INSURANCE (83.90%), which indicates the maintenance of a short-term, low-risk investment policy. In contrast, the share of cash increased only in a few companies. In 2024, the highest cash reserves were held by SIL INSURANCE (4.50%) and LIGA (3.09%). This may be due to the need to maintain high liquid reserves or the expectation of short-term liabilities. The share of other current assets remained insignificant, amounting to 0.1%-4.4%, with the highest figure again recorded by SIL INSURANCE (4.40%). The share of non-current assets has a general tendency to decrease for all companies. If in 2020 it reached 15-17% for some companies, then in 2024 it dropped to the range of 1.4%-8.8%. The lowest non-current assets were recorded by ARMENIA INSURANCE (1.4%), which indicates the use of a strategy based on a highly liquid portfolio.

By studying the investment activities of six insurance companies, it can be noted that both the volumes of current financial investments and the profits received from them have undergone changes over the years due to changes in investment strategies, as well

as macroeconomic and market developments. LIGA has provided stable and high profitability in all years, especially in 2023 (9.19%) and 2024 (10.06%). This indicates the application of a prudent and well-diversified investment strategy. INGO had the highest profitability level in 2020, 10.59%, but in 2024 it decreased significantly, amounting to only 4.47%, although the volume of investments increased significantly and reached about 16.3 billion drams. This may indicate that the increase in the volume of investment activity was not accompanied by adequate profitability, which may be due to both increased risks and low efficiency of the investment portfolio. It is also possible that there is a time lag here: that is, the results of investments will be reflected in profitability indicators in a longer-term perspective. ARMENIA INSURANCE's profitability has significantly declined. In 2020, it amounted to 10.11%, while in 2022–2023 it decreased to 1.43%-2.22%, and in 2024, with some growth, it reached 6.17%. This may be due to a more conservative investment approach or unfavorable external market conditions. REGO has been experiencing steady growth, from 4.91% in 2020 to 7.81% in 2024, which speaks of a gradual but effective strategy and management. NAIRI INSURANCE maintains an average level of profitability, in the range of about 6–6.8%, demonstrating stable investment behavior. SIL INSURANCE's indicators have also remained in the range of 6–7%, reaching 7.02% in 2024. Generalizing the results, the leader in terms of investment profitability for 2024 is LIGA - 10.06%, followed by REGO (7.81%), SIL INSURANCE (7.02%) and NAIRI INSURANCE (6.81%). These results confirm that high profitability is not always associated with a large volume of investments, but also depends on the structure of investments, the effectiveness of risk management and the tools used in the market. In general, changes in the investment profitability of insurance companies are determined by both the general financial environment and the investment policy of the companies, which requires in-depth study to assess the effectiveness of investment strategies.

For a comprehensive assessment of the effectiveness of investment activities, the following main indicators were studied:

• The ratio of the company's expenses and income (x1), which assesses the degree of effective cost management and allows analyzing the core components of the organization's profitability.

• The investment activity ratio (x2), which expresses the share of total assets that is directed to investment activities, that is, it shows the investment size of the company's assets.

• The coefficient of sensitivity of profit/loss to changes in the results of investment activities (x3): This indicator measures the degree to which the company's total profit responds to changes in investment income. It reflects the sensitivity of overall profitability to fluctuations in the results of investment activities. Unlike the classical market Beta coefficient, which compares an asset to overall market returns, this coefficient is internal to the company, focusing specifically on how variations in investment income impact the company's profit. High values indicate greater dependency on investment results and higher financial risk, while moderate values suggest a balanced and diversified investment portfolio.

• ROE (Return on Equity) and ROA (Return on Assets) profitability indicators, which measure the company's return on equity and total assets, indicating the level of operational efficiency.

The combination of these indicators provides a multifaceted and comprehensive assessment of investment activity, which is necessary for both financial stability and risk management and profitability analysis. Below are the five-year indicators.

Table 1

Financial Performance Trends of Armenian Insurance Companies (2020–2021), %

2020	X1	X2	X3	ROE	ROA	2021-X1	2021-X2	2021-X3	2021-ROE	2021-ROA
Liga	41.30	7.3	150.1	4.61	1.99	36.60	7.8	146.9	-8.86	-3.39
Armenia Insurance	43.2	31.7	75.6	45.51	9.85	37.2	7	64.4	14.27	2.8
Rego	43.50	3.9	66.2	11.17	4.11	41.00	3.3	75	-10.52	-3.36
Nairi Insurance	37.70	6.5	28.3	38.9	12.86	34.50	5.9	54.9	23.44	6.78
Ingo Armenia	34.60	13.2	60.3	25.36	8.72	29.20	7.9	82.8	13.7	4.35
Sil Insurance	36.50	4.9	551.2	11.17	4.11	39.20	6.1	477.9	-4	-1,06

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

Table 2

Financial Performance Trends of Armenian Insurance Companies (2022–2023), %

2022	X1	X2	X3	ROE	ROA	2023-X1	2023-X2	2023-X3	2023-ROE	2023-ROA
Liga	36.30	7.1	92	11.02	4.2	39.00	9.4	235.8	5.12	2.11
Armenia Insurance	36.00	3.8	22.5	20.87	4.04	33.30	3.9	22.8	23.3	6.97
Rego	39.10	4.5	66	11.64	4.96	36.50	8.7	68.8	15.45	7.71
Nairi Insurance	31.40	5.1	30.7	33.13	10.51	34.30	5.2	83.7	14.73	5.75
Ingo Armenia	32.00	7	59.4	18.43	6.54	34.20	5.9	90	12.01	3.48
Sil Insurance	34.80	3.5	124.5	10.55	2.7	35.30	4.1	182.3	7.55	2.67

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

Table 3

Financial Performance Trends of Armenian Insurance Companies (2024), %

2024	X1	X2	X3	ROE	ROA
Liga	36.60	9.1	323.6	-5.23	-2.35
Armenia Insurance	31.50	7.1	69.90	18.09	6.18
Rego	47.60	9.4	89.3	14.60	6.53
Nairi Insurance	37.80	5.6	185.6	6.18	2.36
Ingo Armenia	31.80	9.9	218.2	4.29	1.31
Sil Insurance	33.50	4.1	437.0	3.81	1.02

Source: *Prepared by the author based on publicly available reports of Ingo Armenia, Liga, Rego Insurance, Armenia Insurance, NAIRI, and SIL Insurance.*

The evaluation of investment activity efficiency was conducted not only based on financial indicators but also by considering asset management practices to the extent that data were publicly available. It should be noted that ISO 55000 standards are not fully implemented by insurance companies in Armenia, and firms rarely disclose detailed information about their asset management processes. Asset management maturity was assessed using the 6-Box Asset Management Model, as the 10-Box model would require more detailed information that is currently unavailable. Using the 6-Box Model, the assessment focused on six key dimensions: leadership and management commitment, policy and strategy, organizational structure and responsibilities, processes and procedures, information systems and data, and asset management outcomes. Asset Management Maturity is assessed in alignment with partial ISO 55000 principles. The position relative to the ISO 55001 midpoint indicates the level of competence and process maturity. Now let's compare the data from all the indices and evaluate the investment efficiency of the companies.

Table 4

Comparative Analysis of Investment Efficiency Indicators of Armenian Insurance Companies

Company	X1: Expense-to-Income Ratio	X2:Invest-ment Activity Coefficient	X3: Sensiti-vity to Invest-ment Results	ROE	ROA	Investment Volume–Profit Link	Assess-ment	Asset Manage-ment Maturity/ ISO55000 Compliance
ARMENIA INSURANCE	31%–43% (declining)	7%–31% (high)	22%–75% (moderate)	18%–45% (high)	4%–10% (high)	High volume, good profit	High efficiency	Developing (Basic pro-cessses exist; partial ISO 55000 implementa-tion)
NAIRI INSURANCE	31%–38% (consistently low)	5%–6% (consistently moderate)	28%–185% (low–moderate)	33%–38% (high, stable)	5%–12% (high)	Moderate volume, stable profit	High efficiency	Developing (Partial risk management; some ISO-aligned processes)
REGGO	36%–47% (moderate)	3%–9% (moderate)	66%–89% (moderate)	-10%–15% (fluctuating)	4%–7% (moderate)	Growing volume, moderate outcome	Moderate efficiency	Basic (Processes not fully standar-dized; no ISO compliance)
INGO ARMENIA	29%–34% (low)	7%–13% (high)	60%–218% (high)	25%–4% (declining)	8%–1% (declining)	High volume, weak outcome	Moderate efficiency	Basic / Deve-loping (Partial risk mana-ge-ment; no full ISO 55000)
SIL INSURANCE	33%–39% (moderate)	3%–4% (low)	124%–550% (very high)	10%–3% (low)	1%–4% (low)	Small volume, high dependency	Low efficiency	Basic (High dependency on ad hoc pro-cesses; no ISO)
LIGA	36%–41% (moderate)	7%–9% (moderate)	92%–323% (very high)	-8%–-5% (unstable, negative)	Negative or low	Moderate volume, unstable profit	Low efficiency	Basic / Low (Processes unstable; ISO not applied)

Conclusion

The analysis of the investment activity of the six leading insurance companies in the RA insurance market shows that there are significant differences between the companies not only in terms of investment volumes and structure, but also in terms of their efficiency, profitability, and risk management.

• ARMENIA INSURANCE and NAIRI INSURANCE are distinguished by relatively high and stable levels of investment activity and profitability. These companies have been able to maintain a significant share of investments in total assets, ensuring a stable relationship between investment volumes and the profit received. This indicates that the investment portfolio is managed comprehensively, taking into account both diversification and risk balancing. Based on publicly available information, these companies also demonstrate a higher level of asset management maturity, with structured processes, clear responsibilities, and partial alignment with ISO 55000 principles, as well as effective oversight from management.

• REGO and INGO ARMENIA have recorded a certain increase in investment activity, but the fluctuations in ROE and ROA indicators show that the volume of investments is not yet fully converted into stable profit. This indicates the need to improve the portfolio structure and implement more adequate risk management. These companies show moderate asset management maturity, with basic or partially developed processes, some management involvement, but limited formalization of practices.

• The examples of SIL INSURANCE and LIGA show that even with some investment activity, high sensitivity and low profit levels may indicate an ineffective investment policy. In particular, the high dependence of profit on investment income, as well as negative or low ROE indicators, suggest weak risk control and suboptimal investment strategy. These companies exhibit lower asset management maturity, with undeveloped processes, minimal standardization, and limited evidence of management engagement.

Thus, the effectiveness of investment activities of insurance companies is determined not only by the volume of investments, but also by the structure of these investments, diversification, risk management mechanisms, and the level of cost management. Moreover, the assessment highlights the need for greater transparency, more structured asset management practices, and the eventual adoption of ISO 55000 standards to enhance investment decision-making and overall efficiency.

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