

Effect of Gross Premiums, Claims Reserves, Premium Reserves, and Payment of Claims to ROA

(A Survey Of General Insurance Companies Is Recorded In IDX)

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Abstract: This study aims to analyze the simultaneous and partial effect of Gross Premium, Claim Reserve, Premium Reserve, and Claim Payment on ROA. The samples used in this study were as many as 10 general insurance companies listed on the Indonesia Stock Exchange. Data processing with Eviews version 9, resulting in Gross Premium has a positive and significant effect on ROA. Claims Reserves have a negative and significant effect on ROA. Premium Reserves have a positive but insignificant effect on ROA. Claim payments have a negative and significant effect on ROA.

Keywords: Gross Premium, Claim Reserve, Premium Reserve, Claim Payment, ROA.

1. Introduction

Insurance Business is any business concerning insurance services or risk management, risk re-coverage, marketing and distribution of insurance products or sharia insurance products, consulting and insurance services, sharia insurance, reinsurance, or sharia reinsurance, or insurance loss assessment or sharia insurance. General Insurance Business is a risk insurance service business that provides reimbursement to the policyholders due to losses, damages, costs incurred, loss of profits, or legal responsibilities to third parties that may be suffered by policyholders or policyholders due to an uncertain event (Law of the Republic of Indonesia, 2014, p. 3).

The number of insurance companies that have a business license to operate in Indonesia as of December 31, 2017, is 391 companies, consisting of 152 insurance and reinsurance companies and 239 insurance business support companies (excluding Actuarial Consultants and Insurance Agents). Insurance and reinsurance companies consist of 61 life insurance companies, 79 general insurance companies, 7 reinsurance companies, 2 social security program organizers, and 3 mandatory insurance providers. Insurance support companies consist of 169 insurance brokerage companies, 43 reinsurance brokerage companies, and 27 insurance loss assessment companies (Otoritas Jasa Keuangan, 2018, pp. 3-4).

Insurance as a company also makes financial statements to show the information and financial position presented to interested parties. The purpose of financial statements is to

provide information on the financial position, financial performance, and cash flow of entities that are beneficial to most report users in economic decision making.

Statement of Financial Accounting Standards No. 62 financial accounting standards (SAK) is a general guideline or guidance in the preparation and presentation of financial statements for companies in Indonesia so that financial statements can be understood and compared and not misleading for those who use the financial statements. Related to this in The Financial Accounting Standard contains a statement on matters regulated so that the preparation of financial statements can be presented properly. Financial Accounting Standards contain basic concepts, methods, and accounting techniques that are guidelines in the preparation of financial statements, especially those addressed to outside parties such as investors, creditors, the government, and the public. In accounting, generally accepted accounting principles are terms widely used in detailed concepts or guidelines and practices. According to Harahap (1993: 69): Accounting principles include existing conventions, rules, and procedures drafted and approved by official institutions at any given moment, this principle was a consensus at that time on recording economic sources of obligations, capital, results, costs, and changes. In this principle, it is explained what it notes and how to disclose it in the financial statements presented. PSAK 62: Insurance Contract is a temporary Financial Accounting Standard and is not intended to significantly change the insurance accounting arrangements and practices that have been carried out by insurance.

The application of PSAK 62 (adopted from IFRS 4 Insurance Contract) is equipped with PSAK 28: Loss Insurance Accounting and PSAK 36: Life Insurance Accounting. Both PSAK provides more specific guidance related to the recognition and measurement of income, expenses, and liabilities arising from insurance contracts. A contract that has been defined as an insurance contract based on the definition of applicable laws and regulations in Indonesia may be classified as an investment contract based on PSAK 62: Insurance Contract. The definition of a contract as an insurance contract or investment contract, as stipulated in PSAK 62, is intended to determine the accounting treatment applied by insurance in the framework of preparing and presenting financial statements for general purposes and is not intended to determine.

Definition of contract type based on applicable laws and regulations in Indonesia. In general, the matters stipulated in PSAK 62 are as follows: 1. The scope of PSAK 62 regulates insurance contracts so that the entity that has an insurance contract applies PSAK 62 and the entity is not only an insurance company. Besides, financial instruments that have non-binding participation features are also included in the scope of PSAK derivatives inherent in PSAK 55: Financial Instruments: Recognition and Measurement requires entities to separate some inherent derivatives from their main contracts. However, if the attached derivative is an insurance contract then it must apply the PSAK Separation of deposit components In the insurance contract containing the deposit component or the insurance component, the insurer is required to separate the deposit component and the insurance component. However, this separation is not required for insurers who cannot measure the deposit component separately under the requirements of the PSAK Liability Adequacy Test In PSAK 62, the insurer is required to perform a liability adequacy test on the insurance contract. Insurers assess at the end of each reporting period whether recognized insurance liabilities are sufficient using current estimates of future cash flow related to insurance contracts. If the assessment indicates that the net worth of insurance liabilities (minus the associated deferred acquisition costs and related intangible assets) is insufficient.

Financial Accounting Standards Statement No. 36 provides more specific guidance regarding the recognition and disclosure of income, expenses, and liabilities arising from insurance contracts to help life insurance companies to be able to know what income, expenses, and liabilities are and how they are treated so that the income presented in the financial statements is the actual income so that the list of profit /loss and balance sheet is not misleading for the user.

General insurance provides guaranteed economic protection from risk events identified or found within a certain period. General insurance products are unique products where the payment of claims in the form of economic value protection is often unknown until the coverage period ends, while premium payments by policyholders are received before the coverage period. The identified risks include the risk of loss of property, the existence of demands from other parties, fire, illness, providing guaranteed economic protection against financial losses due to a risk that is likely to occur accidents and others. This is why general insurance is such an important protection system as it will happen (Nissim, 2010).

Some research results on profitability state that exists significantly and positively influence Capital Volume to Profitability while loss ratio and leverage ratio show a negative but significant influence on profitability (Malik, 2011). According to Yusuf & Dansu (2014), Profitability is directly correlated with Net Claims and Expense Ratio but inversely correlated with Profit and Loss. Likewise, according to Mwangi & Murigu (2015), Profitability has a positive influence on Leverage, Capital, Management Competency Index, and Size has a negative influence on ownership structure. Although many insurance companies have implemented risk-based capital fulfillment of 120%, the determination of the ratio is still considered burdensome (Merawati & Hatta, 2015).

Basuki's research (2017) shows that simultaneously underwriting affects profitability through premium income, technical reserves, and investment. Partial underwriting affects technical reserves through premium income. Underwriting affects investment through premium income. Underwriting impacts profitability through premium income and technical reserves. Underwriting affects profitability through premium income and investment. It can be concluded that underwriting affects profitability through premium income, technical reserves, and investments in general insurance companies in Indonesia.

Actuarial science plays an important role in the analysis and management of financial risks caused by *actuarial* events. Risk variables that are of concern in actuarial science are the opportunity of a claim or *event of concern (occurrence)* when a *claim (timing)*, and the cost incurred as a result of such *claims (severity)* (Klugman, Panjer, and Willmot, 2004). Based on these risk variables, an actuary must be able to calculate exactly the premium paid by the policyholder under the condition of the policyholder so that the company does not experience losses caused by too low premiums or loss of customers due to too high premiums. Calculating the premium appropriately meets the sense of fairness and fairness towards (1) shareholders (owners); (2) customers; (3) employees of the company; and insurance brokers.

Actuary status is designated whether from an internal insurance company or a consultant will affect in determining the accuracy of the reserve (Kelly, Kleffner, & Li, 2012, p. 285). Actuary independence is essential in maintaining accurate reserves, where independence is self-regulated by actuarial professional institutions (Kamiya & Milidonis, 2018, p. 1055). Actuarial consultants

who operate and provide actuarial services to public companies, insurance, and pension funds in the framework of the establishment and management of an insurance program and pension plan. Actuarial consultants themselves are inseparable from the profession of an actuary. Actuarial issues generally involve analysis of estimated future events that could have a financial impact, such as the present value of a future payment promise or the duration of a contract with uncertain timing. Until now in Indonesia, the actuary profession is a rare profession and very in need in the insurance industry. Data from OJK, until the end of 2015 in Indonesia lacks about 700 actuaries for industrial needs (aktuaris.org).

Premiums collected at the general insurance company will be used to pay the sum insured. Within a certain period, the income earned by the insurance company from premiums plus investment results will usually be much greater than the amount of sum insured that must be paid by the insurance company to the policyholder. These excess funds are then deposited as premium reserves. The premium reserves are used to pay the sum insured in the event of a claim and if the premium owned by the company is insufficient to pay the sum insured so that the insurance company does not have difficulty paying it. Insurance companies do not suffer losses caused because the company is not right in regulating its premium reserves. As a result, the insurance company is unable to pay the claim to the policyholder when the number of claims submitted by the policyholder turns out to exceed the number of previously predicted claims. This situation can be anticipated if the life insurance company has a premium reserve fund that has been prepared and calculated appropriately.

Claims in insurance operations have serious economic problems for industry and the country as a whole, if not managed properly, therefore there is a need to manage claims properly. How policyholders are entitled to the management/handling of claims during the settlement period is critical for regulators and the industry as a whole. Services provided during the claim process will determine the customer's attitude towards the insurer and their products after service (Quist, 2018, p. 3). The insurance claim is a claim from the policyholder in connection with the contract of agreement between the insurance and the policyholder who each party binds themselves to guarantee the payment of compensation by the insurer if the payment of insurance premiums has been made by the policyholder, in the event of a disaster suffered by the policyholder (Handayani, 2017).

Insurance is a term used to refer to actions, systems, or businesses where financial protection (or financial compensation) for life, property, health, and so on gets reimbursed for unexpected events that can occur such as death, loss, damage or illness, which involves regular payment of premiums within a certain period in exchange for policies that guarantee such protection.

Premium is the amount of money paid by the insured party and received by the insurer instead of damage, loss, or in case of loss of the policyholder to the insurer. The amount of how much premium can be determined from the selection of risks generated by the underwriter or if the company has selected the risk at the request of prospective policyholders so that prospective policyholders pay insurance premiums according to the level of risk based on their respective conditions. The amount of premium for participation in the insurance to be paid has been determined by the insurance company with due regard to the circumstances of the policyholder.

Actuaries can predict that future earnings can be capitalized at the desired rate of return. The selection of such a rate depends on the return on investment that the buyer wants and the risk assessment. Especially those lacking confidence in future revenue projections. The higher the risk level of return should be discounted from such projections. Because, income is available to be reinvested in a new business and/or withdrawal from the company as a shareholder dividend with two alternatives: (1) based on the principle that only dividend income is available to investors, and that is all that should be considered. In other words, the economic value of net worth is best reflected in the income it generates based on its investments in insurance operations. Accordingly, the entire assessment is based on future revenue projections and depends entirely on the specific level of risk selected; and (2) divide economic value into parts, and are the most commonly adopted in the literature. The first component, net worth, is the accounting value, available directly from the financial statements, and perhaps, depending on actuarial adjustments to reserve adequacy. It represents most of the economic value and does not depend on the level of return risk chosen. The third component, the cost of capital, recognizes that the capital and surplus needed to support insurance operations must be conservatively invested.

The insurance claim is a claim made by the policyholder to the insurer for the existence of a binding insurance agreement contract between parties in guaranteeing the payment of compensation in the event of a disaster experienced by the policyholder, which can be claimed if the premium has been paid by the policyholder. In general, a claim is a claim for rights made in connection with the rationing of the provisions of the previous insurance agreement.

Reserves in general insurance are liabilities or obligations of the insurance company to policyholders in the form of a certain amount of funds that must be prepared by the insurance company to pay claims that occur in the future on policies issued by the insurance company. Reserves are required solely for the company to run according to the specified basics. the size of the reserve depends on the development of premiums, meaning that the more number of policyholders the greater the number of reserves needed.

Profitability is one of the most important objectives of financial management because one of the objectives of financial management is to maximize the wealth of the owner and profitability is a very important performance determinant. A key indicator of the profitability of insurance companies is a return on assets (ROA), defined as pre-tax profit divided by total assets (TA) (Malik, 2011, p. 315).

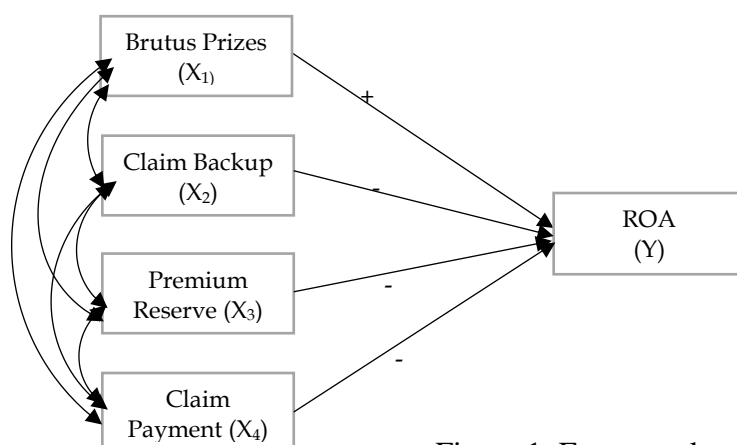


Figure 1. Framework

2. Research Method

The population is a generalization area consisting of objects or subjects that have certain qualities and characteristics set by researchers to be studied and then drawn conclusions (Sugiyono, 2012:80). Population in this National General Insurance Company, Joint Venture General Insurance Company, and Reinsurance Company registered with the Financial Services Authority (OJK) of 82 companies.

The sample is part of the number and characteristics that the population has. If the population is large, and researchers are unlikely to study everything in the population, for example, due to limited funds, energy and time, then researchers can use samples taken from that population (Sugiyono, 2012:81). The sampling technique used is *purposive sampling*, which is one of the non-random sampling techniques where researchers determine sampling by setting special characteristics that are under the objectives of the research so that it is expected to answer research problems. The characteristics in particular are general insurance companies listed on the Indonesia Stock Exchange as many as 10 general insurance companies

Table 1.

Variable Operational Definitions

No	Variable Name	Dimensions	Formula	Scale
1	Gross premium (X_1)	Net Premiums Loading (Commissions and other Acquisition Fees, Administration Fees, Safety Margin / Profit Margin)	$\text{Lnpbruto} = \text{Brutus Awards } (X_1)$ $\text{Gross Premium} = \text{Net Premium} / (1 - \text{Loading})$ Loading : <ul style="list-style-type: none"> ✓ Commissions and other Acquisition Fees ✓ Administration Fee ✓ Safety Margin / Profit Margin 	Ratio
2	Claim Backup (X_2)	Premium income Premium Commission Total premium reserves for the month Total Cadangan premium last year. Claim expectations Rata average loss ratio of the last 3 years. Reported claims Accepted claims Outstanding claims of the month running Outstanding claims last year. PAD	$\text{Lncklaim} = \text{Claim Backup } (X_2)$ <p>Claims Reserves in the process of completion. Claims that have already occurred and have been reported but are still in the process of being resolved,</p> IBNR $\text{Premium income} = \text{Premium} - \text{Commission} - \text{total reserve premium for the month} + \text{total premium reserves last year.}$ $\text{Claim expectations} = \text{Premium income} * \text{average loss ratio for the last 3 years.}$ $\text{Loss ratio} = \frac{\text{klaim yang dilaporkan}}{\text{pendapatan premi}}$ <p>Where: Reported claims = accepted claims + outstanding claims for the month running - outstanding claims last year.</p>	Ratio

No	Variable Name	Dimensions	Formula	Scale
			Premium income = premiums - commissions - total reserve premiums for the month + total premium reserves last year. IBNR=Expectation of reported claims. If the reported claim is greater than the expected claim then IBNR = 0. IBNR used = IBNR * (1+PAD) Claim Backup (Y2) = Claim backup in settlement process + IBNR	
3	Premium Reserve (X_3)	<u>Short Term (CAPYBM)</u> Insurance period that has not been lived (days) Insurance period (days) Premiums and Commissions <u>Long Term (CP)</u> N: insurance period (years) Q: the insurance period that has been lived (years) N-T: insurance period that has not been lived (years) Int (N-T): the smallest integer of the insurance period that has not been lived (years) Lapse rate: policy cancellation rate (in percentage) n : year to-remaining insurance n period Discount rate $v = \frac{1}{1+i}$ i discount interest. Premium Operating Cost Commission	Lncpremi= Premium Reserves (X_3) <u>Short Term (CAPYBM)</u> [Insurance period that has not been lived (days) / insurance period (days)] x (premium-commission). Commission based on SEOJK No.27/SEOJK.05/2017. Property business line, maximum commission 15% of the premium. Motor vehicle business line, maximum commission 25% of the premium. Other lines of business commissions are actually. <u>Long Term (CP)</u> E.g: N: insurance period (years) Q: the insurance period that has been lived (years) N-T: insurance period that has not been lived (years) Int (N-T): the smallest integer of the insurance period that has not been lived (years) Lapse rate: policy cancellation rate (in percentage) n : year to-remaining insurance n period Unearned factor reserve premium 1 = $\frac{\sum_{n=1}^{\text{Int}(N-T)} v^{n-0,5} (1 - \text{lapse rate})^n}{N}; n = 1,2,3,\dots$ Discount rate (v) is calculated by the formula $v = \frac{1}{1+i}$ i is a discount interest. If the insurance period that has not been lived is less than 1 year then Int (N-T) is worth 0 so that the unearned factor of premium reserve 1 is also worth 0.	Ratio

No	Variable Name	Dimensions	Formula	Scale
			<p>Premium reserves 1 = <i>unearned factor</i> of premium reserves 1 x (premium - operating costs + commissions) DAC (<i>Deferred Acquisition Cost</i>)1 = <i>unearned factor of premium reserves</i> 1 x commission (according to SEOJK No. 27/SEOJK.05/2017) Unearned factor of premium reserves 2 Unearned <i>factor</i> of premium reserves 2 = $\frac{v^{\text{Int}(N-T) - 0,5 + (N-T) + \text{Int}(N-T)} ((N-T) - \text{Int}(N-T))}{N}$ Reserve premium 2 = Unearned <i>factor</i> of premium reserves 2 x (premium - operating costs + commissions) DAC (<i>Deferred Acquisition Cost</i>) 2 = Unearned <i>factor</i> of premium reserve 2 x commission (according to SEOJK No. 27/SEOJK.05/2017) Total premium reserves = premium reserves 1 + premium reserves 2 - (DAC 1 + DAC 2) Premium return = $\frac{\text{masa asuransi yang belum dijalani (hari)}}{\text{masa asuransi (hari)}} \times (\text{premi} - \text{komisi})$ Refund of canceled policy premium = (lapse rate x premium return) - (lapse rate x total premium reserves) If (lapse rate x total premium reserves) is greater than (lapse rate x premium refund) then the refund of the policy premium is not worth 0. CP = Total premium reserve + refund of canceled policy premium Premium Reserves (X₃) = CAPYBMP + CP</p>	
4	Claim Payment (X ₄)	Understanding claims for compensation or compensation under the promised in the policy (Prihantoro, 2001, p. 50).	LnPkclaim= Claim Payment (X ₄)	Ratio
5	ROA (Y)	Net Income Total Asset	ROA (Y) = (net income/total assets) * 100%	Ratio

Data Analysis Method of this research uses panel data analysis as a data processing *tool* using *Eviews software version 9*. Analysis using panel data is a combination of time series *and* cross-sectional. In the information model related to both cross-section *and* time-series variables, data panel substantially able to reduce the problem of *omitted variables*, models that ignore relevant variables (Wibisono in Ajija et., al, 2011).

3. Results and Discussion

3.1. Results

Table 2.
Panel Data Regression

Dependent Variable: ROA					
Method: Panel EGLS (Cross-section weights)					
Sample: 2013 2017					
Periods included: 5					
Cross-sections included: 10					
Total panel (balanced) observations: 50					
Linear estimation after one-step weighting matrix					
White cross-section standard errors & covariance (d.f. corrected)					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	-1.396417	4.460742	-0.313046	0.7561	
Brutus Awards	0.921338	0.444903	2.070874	0.0456	
Premium Reserves	0.179299	0.210660	0.851132	0.4003	
Claim Backup	-0.281976	0.150089	-1.878719	0.0684	
Claim Payment	-0.430392	0.130864	-3.288861	0.0023	

Gross Premium has a coefficient value of 0.921 with a probability value of 0.0456. This indicates that Gross Premium has a positive and significant effect on ROA ($0.0456 < 0.05$). While the coefficient value is 0.921, which means that each increase of one unit of Gross Premium affects the increase in ROA by 0.921 units on the condition that claims reserves, premium reserves, and claims payments are of constant value.

Premium Reserves have a coefficient value of 0.1793 with a probability value of 0.4003. This indicates that The Premium Reserve has a positive but insignificant effect ($0.4003 > 0.05$).

Claim Reserve has a coefficient value of -0.282 with a probability value of 0.0684. This indicates that claims reserves have a negative and significant effect on ROA ($0.0684 < 0.10$). While the coefficient value is -0.282, which means that each increase in one unit of claim reserves affects the decrease in ROA by 0.282 units on the condition that Gross Premium, Premium Reserves, and Claim Payments are of a fixed value (constant).

Claim Payment has a coefficient value of -0.430 with a probability value of 0.0023. This indicates that Claim Payments have a negative and significant effect on ROA ($0.0023 < 0.05$). While the coefficient value is -0.430, which means that each increase of one unit of Claim Payment affects the decrease in ROA by 0.430 units on the condition that Gross Premium, Claim Reserves, and Premium Reserves are of a fixed value (constant).

3.2. Discussion

Effect of Gross Premium, Claim Reserves, Premium Reserves, and Claims Payments to ROA

Simultaneously all free variables namely: Gross Premium, Claim Reserve, Premium Reserve, and Claim Payment have a significant effect on the ROA of the general insurance

industry. This result answers the first hypothesis that Gross Premium, Claim Reserve, Premium Reserve, and Claim Payment have a significant and positive effect on ROA.

Effect of Gross Premium on ROA

Gross premiums are premiums derived from direct closing and indirect closure. Direct closing premiums include premiums earned from the closure of the shared policy. The results of the company's activities will be reflected in obtaining premiums. The greater the customer's trust in the company, the higher the premium collected. That premium is then managed by the insurance company to be invested and prepared for claim payment. The test results showed that Gross Premium had a positive and significant effect on ROA. This result answers the second hypothesis: Gross Premium has a significant and positive effect on ROA. This indicates a greater gross premium impact on the ROA increase of the general insurance industry.

Effect of Claims Reserves On ROA

Claim reserves are funds that must be provided by the company to be used to pay losses. Because at some point there will be a customer who submits the claim. Test results showed that Claims Reserves had a negative and significant effect on ROA. This result answers the third hypothesis: Claims Reserves have a significant and negative effect on ROA. This suggests that the greater the claims reserves will affect ROA reduction. Large claims reserves describe the ability of general insurance companies to be able to pay the sum insured to the insured when the number of claims submitted by the insured party. An actuary must carefully consider so that the reserved claims fund does not affect the decrease in ROA, which results in a decrease in Financial performance.

Effect of Premium Reserves on ROA

Premium reserves are the amount of money collected by the insurance company obtained from the difference in the value of compensation and the cash value of payments at a time of coverage in preparation for payment of claims. Test results showed that Premium Reserves had a positive but insignificant effect. This result does not answer the fourth hypothesis namely: Claims Reserves have a significant and negative effect on ROA. This indicates actuary expertise in calculating proportional premium reserves so as not to interfere with or impact the decrease in ROA.

Effect of Claim Payment on ROA

General insurance claims payment guarantee is a guarantee provided by the insurance company that the general insurance claim will be liquid within a certain time or under the terms of the guarantee of the respective insurance company. The test results showed that Claim Payments had a negative and significant effect on ROA. These results answer the fifth hypothesis that Claim Payments have a significant and negative effect on ROA. Mathematically, claims payments do have an impact on ROA reduction. However, the company's performance, speed, and accuracy of claim payments are necessary to maintain the satisfaction and trust of customers/policyholders.

4. Conclusion

Payments are necessary to maintain the satisfaction and trust of customers/policyholders. Premiums as the company's cash inflows must be managed as best as possible so that the needs

of expenses as part of the company's obligations can be met properly without disrupting the financial stability of the company. Premium billing and investment activities, in this case, become important because the premium received as income is sought to provide good returns to maintain the smooth cash flow of the company's operations.

The process of processing, calculation, and recording of claims reserves and premium reserves must be done properly, appropriately, and correctly. Besides, it is necessary to periodically evaluate the ratio of claims to premiums, so that the ratio remains within the company's expected limits. The high ratio of claims to premiums will have an impact on the high reserves of claims.

Maintaining a commitment to fast and timely claims payments as an effort to maintain and foster a good long-term relationship of the company with customers.

The coefficient of determination of 49.18% indicates that there are 50.82% other factors affecting ROA. So, researchers next to be able to add other variables such as Underwriting, Investment Return Ratio, and RBC.

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