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# FACTORS AFFECTING PROFITABILITY OF GENERAL INSURANCE COMPANIES IN INDONESIA

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# **ABSTRACT**

This research work shows the impact on profitability by Return on Assets (ROA) on capital adequacy measured by Risk Based Capital (RBC), Return on Investment (ROI) and Solvency by Debt Equity Rate (DER) measured). Then prove the RBC and ROI effect on DER, then demonstrate the RBC 's influence on ROA through DER, demonstrate the ROA impact on the general insurers reported upon on Indonesian Stok Exchange 2015-2018. The design of the research was causal research. Technical sampling using a deliberate method of sampling. During the four-year observation period, eight companies were obtained using this method that met the criteria of 14 companies. 32 samples in total. Study of linear regression model and path analysis is utilized in data analysis process. ROI has a positive and significant ROA effect, and DER has an adverse effect and important to ROA; The report's result shown that RBC has no significant ROA impact. Then RBC has an impact on DER, but ROI has a positive and important effect on DER. RBC via DER then has no significant impact on ROA, whereas ROI via DER has a positive and substantial impact on ROA. RBC has a significant negative effect on DER, and ROI has a significant and positive effect on DER. Then RBC by DER does not have a significant ROA effect, while ROI by DER has a positive and significant ROA impact. RBC then has a significant negative impact on DER, while ROI has a positive and important impact on DER.

**Contribution/Originality:** This research is one of the first empirical studies to examine the profitability factors of general insurance policyholders in Indonesia. The study findings reveal these factors and their importance in terms of profitability for insurance companies.

# 1. INTRODUCTION

Based on finance minister No.53 / PMK.010/2012, Financial Health Law of the indonesian, Reinsurance Societies and Enterprises, each insurance company is required to have a Risk-Based Capital (RBC) of at least 120%. RBC is directed to see the level of security that can be provided by companies to policyholders to provide high trust to the public towards insurance companies; a high RBC shows a high level of capital adequacy for insurance companies in meeting their obligations.

High investment results will increase the number of profits obtained by the company so that if the company makes a profit, the Profitability will increase so that the company's capital boost in order to maximize the amount of business properties.

The higher the solvency ratio, the more the business costs must bear in meeting its obligations. From these underlying assumptions, the relationship between Profitability and solvency is negative.

During the period 2015-2018, ROA experienced a drastic decline from 2015 to 2017 and then began to stabilize in 2018. In contrast to the RBC, which rose from 2015 to 2017 then declined in 2018. While ROI has decreased from 2015 to 2018 and DER tends to decrease from 2015 to 2017 then moved up in 2018.

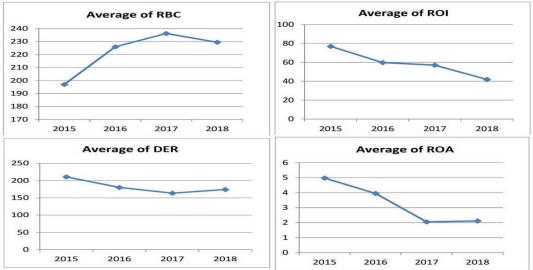


Figure 1. Development of RBC, ROI, DER and ROA General insurance companies for the period 2015 - 2018.

Based on Figure 1, the phenomenon above shows the non-linear relationship between RBC, ROI, DER, and ROA, so this is interesting enough to be studied to prove how the relationship between these variables.

# 2. LITERATURE REVIEW

Capital Adequacy. Based on the regulation of the finance minister number 53 / PMK.010 / 2012 concerning the financial health of insurance companies, Risk-based capital (RBC) provides one way for an insurers agency to assess financial health by understanding the extent of its equity demands in accordance with threat companies' rates in the way they handle their resources and liabilities to guarantee the execution of coverage obligations.

**Investment Results.** According to Sutrisno (2001) It is a capability of an organization to produce income for expenditure released. Return on Investment shows the ability of profit or loss resulting from Investment to the amount of money invested.

**Solvency.** Is the organization able to fulfill spending obligations, both short - term and long commitments if the corporation has been expropriated. According to Horne and John (2005) indicators of the solvency ratios most frequently used in research are DAR, and DER. DER It exemplifies to what conditions the shareholder 's capital is capable of covering foreign debt and is a ratio used to measure how much capital is sponsored by businesses.

**Profitability ratio.** Profitability analysis is very important for all users, especially equity investors and creditors. According to Khasmir (2013) one way to analyze the level of Profitability to assess the level of Profitability is to use ROA. ROA is a ratio showing the capability of the organization to produce income from the used properties. Sukirno Sadono (2008) states that ROA is one of the best indicators to measure company performance, where ROA can be determined by a series of company policies and influenced by environmental factors. A high level of corporate Profitability shows an excellent managerial performance of the company.

**Research Framework and Hypothesis.** This analysis aims to investigate the impact of Capital Adequacy measured through RBC, Investment returns measured through ROI on Profitability measured through ROA with Solvency measured by DER. The research model is as follows:

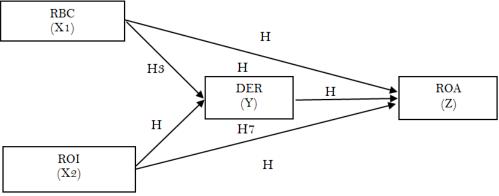


Figure-2. Framework.

**Hypothesis.** The hypotheses shown in this analysis are focused on context knowledge, research questions and framework:

H1: RBC influences ROA.

H2: ROI influences ROA.

H3: RBC influences DER.

H4: ROI influences DER.

H5: DER influences ROA.

H6: RBC through DER influences ROA.

H7: ROI through DER influences ROA.

## 3. RESEARCH METHODOLOGY

**Types of research.** This research was conducted using a quantitative research approach with a casual design that states a causal relationship or influence. The aim is to assess the impact of this research independent variables (RBC, ROI, and DER) on the dependent variable (ROA).

**Population and Sample.** There were consisting of 14 insurance companies in the 2015-2018 period that were classified on IDX. Common parameters shall be used for purposeful sampling. Eight general insurance issuers meet the requirements (sample size).

**Data collection process.** Quantitative collected data from the Indonesian Stock Exchange (IDX) are the form of information shown in this analysis. Obtained from data storage are documents or strategies for archiving. Overanalyze (time series and cross sections) is displayed in tables.

Type of data analyzes. Descriptive statistical research, models, regular assuming tests were accompanied by (multicollinearity and heteroscedasticity), data analysis was conducted. Several correlation coefficient experiments, value of the R coefficient value, simultaneous testing (F testing), partial testing (F-testing) and other analyses are all performed.

**Testing Model.** In this analysis the classic inference test involves a normality test, the multi-channel test, the hetero-control test and the automatic correlation test.

Classical Assumption Test. Multicollinearity and heteroscedasticity tests are the main assertion tests shown in this analysis. The multicollinearity test tests whether the correlation between the independent variables interferes with the results. The heteroscedasticity test tests whether the variance condition is not present in all findings.

## 4. RESULTS AND DISCUSSION

**Descriptive Analysis**. The data analysis estimation outcomes indicate an independent and dependent variable mean, average, maximum, minimum and standard deviation. Table 1 presents the results.

Table-1. Descriptive Statistics.

	N	Minimum	Maximum	The mean	Std. Deviation		
ROA	32	-10.00	9.43	3.2944	3,34025		
DER	32	8.6139	22.2070	13.083639	3.3778159		
RBC	32	11.4018	19,5704	14.740477	2.2503529		
ROI	30	1.2450	4,7958	3.247848	.8777819		
Valid N (listwise)	30						

According to top table is obtained an overview of the data collected, namely, for ROA, the maximum value is 9.43, namely for ABDA companies in 2015, and the minimum value is -10, namely for AHAP companies in 2017, while the average is 3.2944. For DER, the maximum number is 22.2070, which is the 2015 ASDM company, and the minimum number is 8.6139, which is the 2015 AMAG company, while the average is 13.083639. For RBC, the most significant number was 19.5704, which was the ABDA company in 2017, and the lowest number was 11.4018, which was the 2017 ASBI company, while the average was 14.740477. Furthermore, ROI is known that the most significant number is 4.7958, which is the 2015 ASRM company, and the lowest number is 1.2450, which is AMAG company in 2018, while the average is 3.247848.

**Data Normality Test.** The test is used to evaluate the normal distribution or not of population data. This test can be conducted by analyzing the Kolmogorov-Smirnov value using the Lilliefor test. Data shall be declared as customary if the value is greater than 0.05 (Prayitno, 2010). The results of the normality test can be found in the table below:

Table-2. One-sample kolmogorov-smirnov test.

Description	Unstandardized Residual	
N		30
Normal Parameters, b	The mean	0.00 million
	Std. Deviation	0.40329889
Most Extreme Differences	Absolute	0.130
	Positive	0.130
	Negative	-0,082
Kolmogorov-Smirnov Z		0.712
Asymp. Sig. (2-tailed)		.692

Note:

b. Calculated from data.

The Kolmogorov – Smirnov column demonstrates this from the previous performance and the value of Asymp is clear. Meaning across all parameters above 0.05, Prayitno (2010). Population naturally is spread, it can be inferred.

**Heteroscedasticity Test.** A heteroscedasticity check is used to assess whether the residuals are present or not in the model of correlation. A heteroscedasticity testing is conducted in this analysis by gazing in the accompanying diagram at the sequence of figures on line graphs:

a. Test distribution is Normal.

# Scatterplot Dependent Variable: ROA Regression Studentized Residual Regression Standardized Predicted Value

Figure-3. Heteroskedasticity test results with scatterplot.

According to the above outcome, the dots should not form vibrant trends and on the Y axis individuals are irregularly above and below the number 0. It can therefore be inferred that in the multivariate regression there is no question of heteroscedasticity.

Multicollinearity Test. This multicollinearity test is to find out whether there is a perfect inter-correlation between some independent variables used in the model. The results of multicollinearity test in this study are as follows:

Table-3. Multicollinearity test results

		Unstandardized Coefficients						Collinearity	Statistics
	Model	В	Std. Error	Beta	t	Sig.	Tolerance	VIF	
1	(Constant)	.341	.840		.406	688			
	DER	-371	.31	701	-11,850	.000	.535	1,871	
	RBC	.053	.040	.067	1,314	.200	.727	1,375	
	ROI	2,393	108	1,149	22,140	.000	695	1,438	

Note: a. Dependent Variable: ROA

Based on Table 3 shows a tolerance value> 0.10 for the DER variable that is 0.535, for the RBC variable 0.727, then for the ROI variable is 0.695. In comparison, the VIF value is less than 5 for all these independent variables, namely, 1,871 for the DER variable, 1,375 for the RBC variable, then 1,438 for the ROI variable. Therefore it can be concluded that the independent variable used in the regression model of this study is not experiencing multicollinearity (Ghozali, 2011).

Autocorrelation Test. Autocorrelation test is used to determine whether there is a correlation between residuals in observation with other observations in the regression model. The results of the autocorrelation test in this study are as follows:

Table-4. Autocorrelation test results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	0.975a	.951	0.946	0.42593	1,355	

a. Predictors: (Constant), ROI, RBC, DER.

b. Dependent Variable: ROA

From the output above, the DW value obtained from the regression model is 1.355. While from the DW table with a significance of 0.05 and the amount of data (n) = 32, k (independent variable) = 3, the value of dl was 1,2437, and du was 1,6505. Because the DW value (1.355) lies between dl and du, it does not produce conclusions about autocorrelation in this model. Ghozali (2011).

# 4.1. Hypothesis Testing Results

# a. RBC, ROI and DER Multiple Linear Regression Analysis of ROA

Testing the influence of variables, namely RBC (X1), ROI (X2) and DER (Y), on ROA (Z) from the results of data processing can be seen in the table as follows:

**Unstandardized Coefficients Standardized Coefficients** Sig. Model Std. Error Beta  $\mathbf{T}$ (Constant) .341 .840 .406 688 DER -371 .31 -.701 -11,850 .000 **RBC** .053 .067 1,314 .040 .200

1,149

22,140

.000

Table-5. Linear Regression (X1, X2, and Y with respect to Z).

ROI 2,

From Table 5 above we can arrange the regression equation as follows:

Z = a + b1X1 + b2X2 + b3Y3 + et

Z = 0.341 + 0.053X1 + 2.3393X2 - 0.371Y, meaning;

2,393

a) A value = 0.341 means that if X1, X2 and Y value is 0, then Z (ROA) value is 0.341.

108

- b) Variable regression coefficient X1 (RBC) of 0.053; meaning that if the value of X1 (RBC) has increased by 1 unit, then Z (ROA) will decrease by 0.053.
- c) Variable regression coefficient X2 (ROI) of 2,292; meaning that if the value of X2 (ROI) increases by 1 unit, then Z (ROA) will increase by 2.339.
- d) Y variable regression coefficient (DER) of -0.371; meaning that if the value of Y (DER) has increased by 1 unit, then Y (ROA) will decrease by 0.371.

While the number of correlation coefficient and determination coefficient can be seen in the Summary Model table as follows:

**Table-6.** Summary Model (X1, X2, and Y with respect to Z)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.975a	.951	0.946	0.42593

Note: a. Predictors: (Constant), ROI, RBC, DER

Guidelines for providing the interpretation of the correlation coefficient as follows:

0.00 - 0.199	= very low
.20 - 0.399	= low
0.40 - 0.599	= moderate
0.60 - 0.799	= high
0.80 - 1,000	= very high

From the results of data processing (output) obtained correlation coefficient (R) of 0.975, it can be concluded that there is a high category of the relationship between RBC, ROI, and DER on ROA in global insurance companies listed on the Indonesia Stock Exchange (BEI) in the 2015 period - 2018. Furthermore, seen from the coefficient of determination (R2) of 0.951 or 95.1%, it can be said that the percentage contribution of the influence of the independent variable (RBC, ROI, and DER) on the dependent variable ROA of 95.1% while the remaining 4, 9% are influenced or explained by other factors not included in this model.

# b. Analysis of RBC Multiple Linear Regression and ROI against DER

The results of testing the effect of RBC and ROI variables on DER are in the following table:

Table-7. Linear Regression RBC and ROI towards DER.

		Unstandardized Coefficients		Standardized Coefficients		
	Model	В	Std. Error	Beta	t	Sig.
1	(Constant)	16,650	4,041		4,120	.000
	RBC	-626	.216	<b>-</b> 418	-2.904	.007
	ROI	1,797	.566	.457	3,173	.004

Note: a. Dependent Variable: DER

From Table 7 above we can arrange the regression equation as follows:

$$Y = a + b1X1 + b2X2 + et$$

Y = 16,650 - 0,626X1 + 1,797X2, meaning;

- a) A value = 16,650 means that if X1 and X2 value is 0, then Y (DER) value is 16,650.
- b) Variable regression coefficient X1 (RBC) of -0,626; meaning that if the value of X1 (RBC) has increased by 1 unit, then Y (DER) will decrease by 0.626.
- c) Variable regression coefficient X2 (ROI) of 1.797; meaning that if the value of X2 (ROI) has increased by 1 unit, then Y (DER) will increase by 1.797.

# c. RBC Linear Regression Analysis through DER, ROI through DER and DER against ROA

The results of testing the influence of variables, namely RBC through DER, ROI through DER, and DER on ROA can be seen in the table as follows:

Table-8. Linear Regression RBC through DER, ROI through DER, and DER towards ROA.

		Unstandardized Coefficients		Standardized Coefficients		
	Model	В	Std. Error	Beta	T	Sig.
1	(Constant)	9,789	.715		13,689	.000
	RBC.DER	.004	.005	.101	.916	368
	ROI.DER	.176	.013	2,097	13594	.000
	DER	-1,095	.92	-2,068	-11,955	.000

Note: a. Dependent Variable: ROA

From Table 8 above we can arrange the regression equation as follows:

$$Z = a + b1(X1.Y) + b2(X2.Y) + b3Y + et$$

Z = 9,789 + 0,004 (X1.Y) + 0,176 (X2.Y) - 1,095Y, which means:

- a) A value = 9.789 means that if (X1.Y), (X2.Y) and Y the value is 0, then Z (ROA) value is 9.789.
- b) The regression coefficient of the variable X1.Y (RBC through DER) was 0.004; meaning that if the value of X1.Y (RBC through DER) has increased by 1 unit, then Z (ROA) will decrease by 0.004.
- c) X2.Y variable regression coefficient (ROI through DER) of 0.176; meaning that if the value of X2.Y (ROI through DER) has increased by 1 unit, then Z (ROA) will increase by 0.176.
- d) Y variable regression coefficient (DER) of -1.095; meaning that if the value of Y (DER) has increased by 1 unit, then Y (ROA) will decrease by 1.095.

# 4.2. T-Test Results

The T-test measures whether the predictor variables affects the dependent variable partially. When t is greater than t table value (for good attributes), the variable of independence affects the variable based and vice versa. The judgment parameter depends on the statistical value in terms of negative values: unless the significance level exceeds the value of the t-table, the independent variable determines the dependent variable, and vice versa.

T-test results are as follows:

- a. Testing the effect of RBC variables on ROA. By using a significance level of 0.05 because of the two-sided test, then 2.5% and n = 32 obtained t table of = 2.04841. In contrast, t arithmetic seen from the data processing output is 1.314 Table 5 (t arithmetic <t table) then based on this t-test it is concluded that RBC has no significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018.
- b. Testing the effect of ROI variables on ROA. By using a significance level of 0.05 because of the two-sided test then 2.5% and n = 32 obtained t table of = 2.04841. While t arithmetic seen from the data processing output is 22,140 Table 5 (t arithmetic > t table) then based on this t test it is concluded that ROI has a positive and significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period of 2015 2018.
- c. Testing the effect of DER variables on ROA. By using a significance level of 0.05 because of the two-sided test, then 2.5% and n = 32 obtained t table of = 2.04841. In comparison, t arithmetic seen from the data processing output is -11,850 Table 5 (t arithmetic <t table) then based on this t-test it is concluded that DER has a negative and significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the 2015 period 2018.
- d. Testing the effect of the RBC variable on DER. By using a significance level of 0.05 because of the two-sided test, 2.5% and n = 32 obtained t table of = 2.04532. While t arithmetic seen from the data processing output is 2,904 Table 7 (t arithmetic> t table) then based on this t-test it is concluded that RBC has a negative and significant effect on DER of general insurance companies listed on the Indonesia Stock Exchange (BEI) for the 2015 period 2018.
- e. Testing the effect of ROI variables on DER. By using a significance level of 0.05 because of the two-sided test, 2.5% and n = 32 obtained t table of = 2.04532. While t arithmetic seen from the data processing output is 3,173 Table 7 (t arithmetic > t table) then based on this t-test it is concluded that ROI has a positive and significant effect on DER of general insurance companies listed on the Indonesia Stock Exchange (BEI) from 2015 to 2018
- f. Testing the effect of RBC variables through DER on ROA. By using a significance level of 0.05 because of the two-sided test, then 2.5% and n = 32 obtained t table of = 2.04841. At the same time, t arithmetic seen from the data processing output is 0.916 Table 8 (t arithmetic <t table) then based on this t-test it is concluded that RBC through DER has no significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) from 2015 through 2018.
- g. Testing the effect of ROI through DER variables on ROA. By using a significance level of 0.05 because of the two-sided test, then 2.5% and n = 32 obtained t table of = 2.04841. In contrast, t arithmetic seen from the data processing output is 13,594 Table 8 (t arithmetic <t table) then based on this t-test it is concluded that ROI through DER has a positive and significant effect on ROA in global insurance companies listed on the Indonesia Stock Exchange (BEI) period 2015 2018.

This study has shown the results of the influence of RBC, ROI, DER, on ROA, the effect of RBC and ROI on DER, the effect of RBC through DER on ROA, the effect of ROI through DER on ROA in general insurance companies listed on the Indonesia Stock Exchange (BEI) period 2015 - 2018. The test results can be explained as follows:

a. Effect of RBC on ROA. Based on the analysis of the first hypothesis above, it can be said that RBC has no significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 - 2018. The research findings are consistent with the Ningrum (2014) which concluded that RBC did not affect on Profitability, as well as the results of researchLeviany and Wiwin (2014); Budiarjo (2015) and Rahayu and Mubarok (2017) which also states that RBC has no significant effect on Profitability. This result is also consistent with Elisabeth and Mulyana (2019) who also suggest that RBC does not affect net profit

- margins. For practice, if the effects of the calculation in a high liquidity ratios, the probability of failure will increase, but the profitability will also be important. Conversely, if the liquidity ratios of a business is lower, the risk of failure is also lower, particularly when the economy is dropping (Khasmir, 2013).
- b. Effect of ROI on ROA. Analyses of the alternative experiment above indicate that the effect of ROI on the insurance companies listed mostly on BEI in the period 2015-2017 is positively significant. The findings of the analysis refer to the work carried out by Sastri, SE Edy, and NI Kadek (2017) which concludes partially the Investment returns positive effect on the income of insurance companies in the period 2011 2015. Mulyadi (2001), ROI is the ratio of earnings to investments used to generate profits. Thus it can be concluded that the Rate of Return on Investment (ROI) is usually used as a basis for financial investment decisions. Investors can see potential investments by comparing investment gains and losses.
- c. Effect of DER on ROA. On the basis of the above study, it can be assumed that for general insurance companies listed on the Indonesian Börse (BEI) in the period of 2015-2018 DER has a negative and substantial impact on ROA. This study's findings are consistent with Aprilino (2014) research, which found that solvency has a negative effect on earnings. Ullah, Faisal, and Zuhra (2016) concluded the Solvency Impacts on ROA. The higher the solvency level, according to Myers (1984) the better the expense to the organization to fulfill its obligations. This growing the company's productivity. The higher the company's solvency, the less revenue the company can be.
- d. Effect of RBC on DER. Based on the above analysis, it can be said that RBC has a negative and significant effect on DER of general insurance companies listed on the Indonesia Stock Exchange (IDX) for the period 2015 2018. This means that the higher the RBC is determined, the greater the company's capital and logically will undoubtedly reduce the Debt to capital ratio (DER). Based on the regulation of the minister of finance number 53 / PMK.010 / 2012 concerning the financial health of insurance companies and reinsurance companies, risk-based capital is one method of measuring the level of solvency levels required in the law in measuring the financial health level of an insurance company to ensure the fulfillment of obligations insurance and reinsurance by knowing the magnitude of the company's capital needs following the level of risk faced by the company in managing its wealth and obligations.
- e. Effect of ROI on DER. Based on the above analysis, it can be said that ROI has a positive and significant effect on DER of general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018. This means that the higher the ROI, the greater the ratio of Debt to capital (DER), this can be explained, namely, by the increasing amount of profits obtained, the company management can be interested in adding or expanding its business so that it can result in additional Debt.
- f. Effect of RBC through DER on ROA. Based on the above analysis, it can be said that RBC through DER has no significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018. This means that DER does not strengthen or weaken the influence of RBC on ROA. The results of this study are in line with the research of Ningrum (2014) which concluded that RBC has no effect on Profitability, as well as the results of research Leviany and Wiwin (2014); Budiarjo (2015) and Rahayu and Mubarok (2017) which also states that RBC has no significant effect on Profitability.
- g. Effect of ROI through DER on ROA. Based on the above analysis, it can be said that ROI through DER has a positive and significant effect on ROA in global insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015-2018.

Following the research framework and the results of hypothesis testing above can be displayed with the following picture:

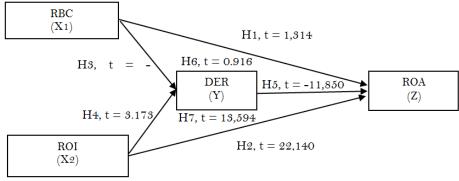


Figure-4. Hypothesis test results framework.

Based on Figure 4 above, it can be explained that for hypothesis 1 with the direction of a positive relationship, namely t arithmetic <t table, which means there is no significant effect of RBC on ROA. Then hypothesis 2 can be said that ROI has a positive and significant effect on ROA. For hypothesis 3 it is stated that RBC has a positive and significant effect on DER, then hypothesis 4 states that investment growth has a positive and significant effect on DER. Furthermore, hypothesis 5 stated that DER had a negative and significant effect on ROA, and hypothesis 6 stated that RBC through DER with a positive relationship direction did not significantly influence ROA. While hypothesis 7 states that ROI through DER has a positive and significant effect on ROA.

# 5. CONCLUSIONS AND SUGGESTIONS

Based on the results of the study, the following conclusions are obtained:

- 1. Based on the results of the partial regression test, it was concluded that RBC although the direction was positive, it did not have a significant effect on ROA for general insurance companies listed on the Indonesia Stock Exchange (IDX) for the period 2015 2018, t-test results supported this found that t count> t table significance figures above 0.05.
- 2. Based on the partial regression results it is concluded that ROI has a positive and significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018, t-test results support this found that t arithmetic> t table of significance figures below 0.05.
- 3. Based on the results of the partial regression test, it was concluded that DER had a negative and significant effect on ROA for general insurance companies listed on the Indonesia Stock Exchange (IDX) for the period 2015 2018, t-test results supported this found that t count> t table of significance figures below 0.05.
- 4. Based on the results of the partial regression test, it was concluded that RBC had a negative and significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018, t-test results supported this found that t count> t table of significance figures below 0.05.
- 5. Based on the partial regression results it is concluded that ROI has a positive and significant effect on DER of general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018, t-test results support this found that t arithmetic> t table of significance figures below 0.05.
- 6. Based on the results of the partial regression test it was concluded that RBC through DER with a negative relationship direction, but no significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018, this is supported by the results of the t test found that t arithmetic> t table of significance figures above 0.05.
- 7. Based on the partial regression results it is concluded that ROI through DER has a positive and significant effect on ROA on general insurance companies listed on the Indonesia Stock Exchange (BEI) for the period 2015 2018, this is supported by t test results found that t arithmetic> t table number significance above 0.05.

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**Competing Interests:** The authors declare that they have no competing interests.

Acknowledgement: All authors contributed equally to the conception and design of the study.

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