

## The Effect of Financial Health Level on Increasing Profitability of Insurance Companies Listed on IDX Period of 2014-2018

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### Abstract

This study examines the effect of insurance companies' financial health levels on their increasing profitability. It uses profitability as the dependent variable measured by Return on Assets (ROA), and the independent variable is financial health level measured by Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Operational Efficiency Ratio (BOPO). It is quantitative research in which the sample was taken using a purposive sampling method. It uses secondary data collected from insurance companies' annual financial reports during the 2014-2018 period. Ten companies were selected, and the data were analyzed using multiple linear regression analysis techniques with the Statistical Product and Service Solution (SPSS) program version 23. The results show that three variables—such as Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), and Net Interest Margin (NIM)—have a positive effect on Return On Assets (ROA). On the contrary, the two variables, such as Non-Performing Loans (NPL) and Operational Efficiency Ratio (BOPO), have no effect on Return on Assets (ROA).

**Keywords:** Non-Performing Loans; Loan to Deposit Ratio, Capital Adequacy Ratio; Net Interest Margin; Operational Efficiency Ratio; Return on Assets.

### 1. Introduction

Insurance companies are financial service companies that provide insurance services. Insurance itself is an alternative to prevent and control financial risk from unexpected things. An insurance company is also considered a financial institution that plays an essential role because it can protect against risk. The insurance companies collect public funds from receiving premiums. For that reason, the insurance company acts as an insurer in the insurance contract through the risk transfer mechanism. On the contrary, the customer is the insured whose risk is covered by the insurance company that provides them with the insurance product. To overcome all the customers' risks, the insurance company requires large enough funds to cover all of these risks to get their profits still. Whether the company gets the expected profit or not, of course, it can be seen from its profitability in its financial statements. In this case, profitability is the company's ability to generate profits using its assets or capital (Hermina & Suprianto, 2016)

Recent data from the Financial Services Authority (OJK) of insurance companies in Indonesia shows that at the end of 2019, commercial insurance premiums collected reached IDR 281,2 trillion (8% YoY), with life insurance premiums of IDR 179,1 trillion (4,1% YoY) and general insurance/reinsurance premiums of IDR 102,1 trillion. Likewise, the insurance

industry's assets (life insurance, general insurance, reinsurance, and compulsory insurance) also grew positively by 5,91% (YoY) from IDR862,8 trillion in 2018 to IDR913,8 trillion in December 2019. The increasing revenue in the insurance industry is in contract with the number of registered insurance companies which has decreased yearly. In 2017 the number of insurance companies and insurance supporting companies was 239 companies, decreased to 236 companies in 2018, and at the end of 2019 to only 229 companies. Those facts become an exciting factor in developing this study on the perspective of investors. Even if the number of companies is decreasing, insurance company profitability can still maintain to increase.

The study uses the ratio of Return on Assets (ROA) in measuring the companies' profitability because it can show the companies' success in generating profits. Return on Assets (ROA) can also measure the company's ability to generate profits in the past, and then it will be projected in the future. In this sense, the assets that they have obtained from their capital or foreign capital. The company has converted these assets into its assets used for their financial health in their future business operation.

Previous studies show that several factors affect profitability, such as Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Operational

Efficiency Ratio (BOPO). Some previous results show that NPL, LDR, CAR, NIM, and BOPO affect ROA, but a number of other research results show that NPL, LDR, CAR, NIM, and BOPO do not affect ROA. Those research results' inconsistency strengthens this study to confirm whether NPL, LDR, CAR, NIM, and BOPO affect Indonesia's ROA.

## 2. Literature Review

Insurance is an agreement between two parties in which one party is obliged to pay contributions or premiums. According to Rianto (2012), insurance is a protection mechanism for the insured if he is deemed to experience risk in the future in which the insured will pay a premium to get compensation from the insurer. Non-Performing Loans (NPL) are loans in arrears of more than 90 days and divided into three categories (Ismail, 2009). Loan to Deposit Ratio (LDR), according to Kasmir (2017), is a ratio used to measure the composition of the amount of credit given compared to the amount of public fund and own capital the company uses. LDR is often used as an indication to assess the company's financial health in carrying out its business activities. Capital Adequacy Ratio (CAR) According to Kuncoro (2011), it is a capital that shows financial institutions in maintaining sufficient capital and their financial management's ability to identify, measure, monitor, and control risks that arise and affect the amount of institutional capital. According to Taiwan (2010), Net Interest Margin (NIM) is the ratio between net interest income, and average earning assets. This ratio indicates the ability of financial institutions to generate net interest income by placing earning assets. The more excellent NIM's value, the better performance of financial institutions will be in generating interest income. According to Pandia (2012), the Operational Efficiency Ratio (BOPO) is used to measure management's ability to control operating costs on operating income. According to Sukeanah (2015), profitability is the net result of any company's decisions and policies. A profitability ratio is one of the techniques in financial ratios to describe the extent to which the company can generate profits through existing resources and capabilities.

The result of previous studies regarding the relationship between Non-Performing Loans (NPL) to Return on Assets (ROA) as follows:

The result of Septiani and Lestari (2016), Agustami (2011), Setiawan (2017), Susanto and Kholis (2016), Manikan and Syafruddin (2013), and Kurniasih (2016) stated that NPL has negative effect to profitability. In the other hand,

Harun (2016) stated that NPL has positive effect to profitability.

The result of previous studies regarding the relationship between Loan to Deposit Ratio (LDR) to Return on Assets (ROA) as follows:

Septiani and Lestari (2016) and Setiawan (2017) stated that LDR has a positive effect on profitability. On the other hand, Manikan and Syafruddin (2013) stated that LDR does not affect profitability.

The result of previous studies regarding the relationship between Capital Adequacy Ratio (CAR) to Return on Assets (ROA) as follows:

The result of Septiani and Lestari (2016), Susanto and Kholis (2016), Kurniasih (2016), and Sintiya (2018) stated that CAR has a positive effect on profitability. On the other hand, Setiawan (2017), Hakiim and Rafsanjani (2016), Manikan and Syafruddin (2013), and Harun (2016) stated that CAR does not affect profitability.

The result of previous studies regarding the relationship between Net Interest Margin (NIM) to Return on Assets (ROA) as follows:

The result of Setiawan (2017), Susanto and Kholis (2016), Manikan and Syafruddin (2013), and Kurniasih (2016) stated that NIM has a positive effect on profitability, but Harun (2016) stated that NIM does not affect profitability.

The result of previous studies regarding the relationship between Operational Efficiency Ratio (BOPO) to Return on Assets (ROA) as follows:

The result of Hakiim and Rafsanjani (2016), Manikan and Syafruddin (2013), and Harun (2016) stated that BOPO has a negative effect on profitability, and Sintiya (2018) stated that there is no effect between BOPO and profitability.

From this research gap or inconsistency result, these research hypotheses are as follows:

- H1: Non-Performing Loan has a significant negative effect on Return on Assets.
- H2: Loan to Deposit Ratio has a significant positive effect on Return on Assets.
- H3: Capital Adequacy Ratio has a significant positive effect on Return On Assets.
- H4: Net Interest Margin has a significant positive effect on Return on Assets.
- H5: Operational Efficiency Ratio has a significant negative effect on Return on Assets.

**3. Methods**

This research uses a descriptive method with secondary data from financial reports and annual reports of insurance companies listed on the Indonesia Stock Exchange (IDX). This study used a purposive sampling technique from 2014-2018. The total sample is ten insurance companies. The dependent variable is profitability measured by Return on Assets (ROA), and the independent variables used are Non-Performing Loans (NPL), Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Net Interest Margin (NIM), and Operational Efficiency Ratio (BOPO). Multiple linear regression analysis was used with a significance level of 5% for t-test.

The multiple regression model for this research is as follow:

$$ROA = \alpha + \beta_1 NPL + \beta_2 LDR + \beta_3 CAR + \beta_4 NIM + \beta_5 BOPO + \varepsilon$$

Notes:

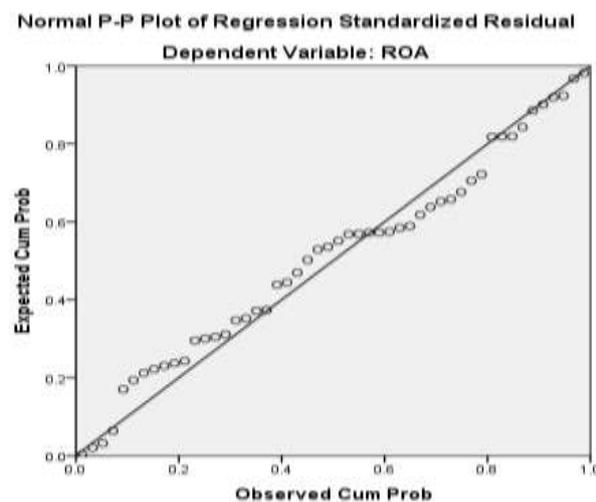
- ROA : Return On Assets
- $\alpha$  : Constant term
- $\beta$  : Regression coefficient
- NPL : Non-Performing Loans
- LDR : Loan to Deposit Ratio
- CAR : Capital Adequacy Ratio
- NIM : Net Interest Margin
- BOPO: Operational Efficiency Ratio
- $\varepsilon$  : The model's error term

**4. Result**

**4.1. Classical Assumption Test**

The classical assumption model test is used to detect the fulfillment of assumptions in multiple linear regression models and to interpret the data to be more relevant in the analysis.

**4.1.1. Normality test**



**Figure 1.** Normality Test

Figure 1 shows that the Normal P-P Plot Standardized Regression shows that the dots spread around the diagonal line and follow the direction of the diagonal line. Therefore, it can be judged that the regression model fulfills the assumption of normality. The residual normality test was done using statistical analysis tests with non-parametric statistics Kolmogorov-Smirnov (K-S). The statistical analysis of normality is presented in Table 1.

**Table 1.** Normality Test Results One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		50
Normal Parameters <sup>b</sup>	Mean	.0000000
	Std. Deviation	.01693889
	Most Extreme Differences	
	Absolute	.080
	Positive	.075
	Negative	-.080
Test Statistic		.080
Asymp. Sig. (2-tailed)		.200

a. Distribution Test is Normal.

b. Calculated from data.

In Table 1, the results of the data normality test with the Kolmogorov-Smirnov show the Asymp value. Sig. (2-tailed) 0.200 > 0.05. It can be concluded that the data is normally distributed and met the assumption of normality.

**4.1.2. Multicollinearity Test**

**Table 2.** Multicollinearity Test Results

Model	Coefficients	
	Tolerance	VIF
1 (Constant)		
NPL	.697	1.436
LDR	.415	2.408
CAR	.404	2.477
NIM	.888	1.126
BOPO	.725	1.379

a. Dependent Variable: ROA

In Table 2, it can be seen that the tolerance (TOL) value indicates that all independent variables have a TOL value > 0.10, and the calculation results of the Variance Inflation Factor (VIF) value also show that all independent variables have a VIF value < 10. So it can be concluded that the model can be said to be free from dx multicollinearity symptoms between independent variables.

4.1.3. Heteroscedasticity Test

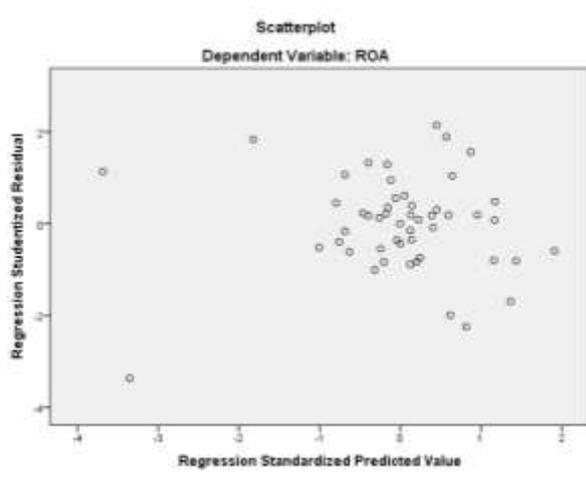


Figure 2. Heteroscedasticity Test

Based on Figure 2, it can be seen that there is no clear pattern and the dots spread above and below Figure 0 on the Y-axis. So, it can be concluded that this research does not occur symptoms of Heteroscedasticity.

4.1.4. Autocorrelation Test

Table 3. Autocorrelation Test Result

Model	Durbin-Watson
1	1.752

a. Predictors: (Constant), BOPO, NIM, LDR, NPL, CAR  
 b. Dependent Variable: ROA

Based on Table 3, it can be seen that the autocorrelation test value shows the Durbin Watson value of 1.752, located between -2 to +2. Thus, it can be said that there is no autocorrelation in this research.

4.2. Multiple Linear Regression Analysis

Table 4. Multiple Linear Regression Test Result

Model		Unstandardized Coefficients		t	sig.
		B	Std. Error		
1	(Constant)	-2.865	.739	3.877	.000
	NPL	-.082	.064	-1.275	.211
	LDR	.104	.034	3.051	.000
	CAR	1.986	.932	2.130	.039
	NIM	.176	.068	2.602	.013
	BOPO	-.006	.003	-1.830	.070

a. Dependent Variable: ROA

Based on Table 4, the Return on Assets (ROA) as described, can be entered into the multiple regression equation as follows:

$$ROA = -2,865 - 0,082NPL + 0,104LDR + 1,986CAR + 0,176NIM - 0,006BOPO + \epsilon$$

The explanation for the regression equation above is as follow:

Non-Performing Loan (NPL) coefficient is -0,082 and significance 0,211 > 0,05 means NPL has negative and not significant effect on Return on Assets (ROA). A negative relationship means if the NPL value increases, it decreases ROA and vice versa. This result is in line with research from Septiani and Lestari (2016), Agustami (2011), Setiawan (2017), Susanto and Kholis (2016), Manikan and Syafruddin (2013), and Kurniasih (2016). Therefore, the H<sub>1</sub> of this study is rejected.

Loan to Deposit Ratio (LDR) coefficient is 0,104, and significance 0,000 < 0,05 means LDR has a positive and significant effect on Return on Assets (ROA). A positive relationship means if the LDR value increases, it increases ROA and vice versa. This result is in line with research from Septiani and Lestari (2016) and Setiawan (2017). Therefore, the H<sub>2</sub> of this study is accepted.

Capital Adequacy Ratio (CAR) coefficient is 1,986 and significance 0,039 < 0,05 means CAR has positive and significant effect on Return on Assets (ROA). A positive relationship means if CAR value increases, it increases ROA and vice versa. This result is in line with research from Septiani and Lestari (2016), Susanto and Kholis (2016), Kurniasih (2016), and Sintiya (2018). Therefore, the H<sub>3</sub> of this study is accepted.

Net Interest Margin (NIM) coefficient is 0,176 and significance 0,013 < 0,05 means NIM has positive and significant effect on Return on Assets (ROA). A positive relationship means if the NIM value increases, it increases ROA and vice versa. This result is in line with research from Setiawan (2017), Susanto and Kholis (2016), Manikan and Syafruddin (2013), and Kurniasih (2016). Therefore, the H<sub>4</sub> of this study is accepted.

Operational Efficiency Ratio (BOPO) coefficient is -0,006 and significance 0,070 > 0,05 means BOPO has negative and not significant effect effect on Return on Assets (ROA). A negative relationship means if the BOPO value increases, it decreases ROA and vice versa. This result is in line with research from Hakiim and Rafsanjani (2016), Manikan and Syafruddin (2013), and Harun (2016). Therefore, the H<sub>5</sub> of this study is rejected.

5. Discussion

In the insurance industry, Non-Performing Loan (NPL) and Operational Efficiency Ratio (BOPO) have

a negative and insignificant effect on profitability. When the bad debt or problem loan increases, that decreases the company's profit because the company has more responsibility to pay/manage the loan using their total net income. Net income that should become profit turns into an amount of money paid to cover a high lousy debt. For the Operational Efficiency Ratio (BOPO), increasing the value in Operational Efficiency Ratio (BOPO) can decrease the company's profit because it should spare a number of budget to cover the operational cost that keeps increasing. However, somehow, both NPL and BOPO have an insignificant effect on profit because, despite their role as a decreasing factor, the insurance industry can still manage their bad debt and operational efficiency rather than manage other significant factors such as the total number of claims that not mention in this research.

Loan to Deposit Ratio (LDR) shows that increasing LDR value also increases its profit because the better company manages their collected funds from other parties. In an insurance company, credit is the amount of premium that has been pay. This result indicates that the higher credit is given; the company can better manage their premium. When the insurance company is known as a responsible company for paying a premium, the public sees it as an added value for its reputation in managing its assets.

An increased value of Capital Adequacy Ratio (CAR) cause the profitability of the company increase. That is because CAR shows the capability of a company to finance its operational activities using total capital. The high CAR ratio indicates that a company can protect itself from any unpredictable risks primarily related to financial risk. That gives a positive signal to outsiders (public and investors) that a company in good financial performance can put their money in the company and help increase its profit.

The higher the Net Interest Margin (NIM) of an insurance company, the higher its profit. When the NIM value is high, it indicates that the company can manage its assets effectively and efficiently and net interest income. When a company is increasing its net interest income, the profit also increases.

The managerial team can use this result to help them calculate risk at which aspect they should pay more attention to if they want to increase company profit. Understanding the variable that significantly affected can help them make a better strategy for future goals. It seems like an unimportant factor, but paying attention to the Operational Efficiency Ratio (BOPO) can help managers maximize their operational management, so the operational cost can be maintained and controlled. As a recent Indonesia issue, many insurance companies went bankrupt because they

failed to maintain premiums and risks. The managerial team can use this finding as an additional consideration in planning and strategizing their next step to achieve higher profit without neglecting their responsibility to fulfill the insured's claim.

However, more variables can be used to see better on what effected profitability in the insurance industry. This research only used five years of data, so as the study period increases, the study results might be better. The increase in research years will be better if it is accompanied by independent variables from the internal and external company as a determining factor for company profit.

## 6. Conclusions

Several factors affected insurance companies' profitability in Indonesia. Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), and Net Interest Margin (NIM) have a positive and significant effect on profitability that proxied by Return on Assets (ROA). The Non-Performing Loan (NPL) and Operational Efficiency Ratio (BOPO) has a negative and insignificant effect on the insurance industry's profitability.

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