The Influence of Profitability and Solvency on Company Stock Returns in the Banking Sub-Sector Included in the LQ-45 Index

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Abstract

This study aims to determine the effect of profitability and solvency ratios on *Return* Shares both partially and simultaneously in banking sub-sector companies that are included in the LQ 45 Index on the Indonesia Stock Exchange (IDX) period 2016-2022. The independent variables in this study are profitability ratios using Return On Equity (ROE) and solvency ratios using Debt To Equity Ratio (DER). While the dependent variable used is Stock Return. The sampling method used a purposive sampling method with a total sample consisting of 5 banking sub-sector companies with a research period of 7 years. In order to obtain 35 sample data. The data analysis method in this study used panel data regression analysis, classical assumption test, multiple linear regression analysis, analysis of the coefficient of determination, and hypothesis testing with the t test and f test. The research results show that partially the ROE variable has a positive and significant effect on stock returns, while the DER variable has no significant effect on stock returns. Simultaneously the ROE and DER variables have a significant effect on stock returns.

Keywords : Return On Equity, Debt To Equity Ratio, Stock Returns

Introduction

On current era This investment is something that is experiencing existence among the people in doing business, especially in Indonesia. The existence of a capital market has a big influence to accelerate development in a country.

The capital market that uses various long-term financial instruments that can be traded as equity or debt in Indonesia is called the Indonesia Stock Exchange (IDX). In investing, investors can choose various types of investment instruments offered based on needs in the capital market. One of the most popular types of investment is stocks.

Company Which registered Of Bursa Effect Indonesia divided in a number of subsector industry, Wrong only one is banking. Bank is an institution Which role as intermediary finance *(financial intermediary)* between parties Which have Money *(surplus unit)* with parties Which need Money *(deficit unit)*, and institution Which on duty expedite current payment.

Many investors invest in banking companies listed on the Stock Exchange (IDX). face relatively high risk, despite promising returnsWhich relatively high. Profit Which accepted investor when price shares up is profit Which big,anddividends Which accepted investor Also more big when two company Good when two company increased. However, banking stocks do not mean that no one has experienced a decline. Usually, if banking stocks experience ups and downs, one of them can be caused by bank stock prices, whose movements always follow market movements. This is also a consideration when investing in banking.

invest on shares (stock standard) need investment Which careful so that investor No trapped by condition harm. Hence the analysis report finance company very important before investing in the form of investment. Matter This useful for predict situation performance finance company on moment profitable.

There are several types of financial ratios that are commonly used in stock analysis, but this study uses a profitability ratio, namely Return On Equity (ROE) and a solvency ratio, namely the Debt To Equity Ratio (DER).

Method

In this research, used data type quantitative ie data that data shaped the numbers obtained from reports company finance sourced from official site company. Source data from this study is data seconds. Data seconds is data obtained from other parties and has been pre-processed. Secondary data is in the form of company financial reports banking which is always listed in the LQ index 45 at Bursa Indonesian Securities. Collection data on research it uses documentary techniques and literature studies. Literature study means researchers collect data through several media and libraries in the form of books, previous research journals and literature. Documentary technique means collecting data report company finance needed in this research which is available either from official site Indonesia stock exchange that is www.idx.co.id.

In this research, population that being focused is banking company registered on the Exchange Effect Indonesia and is included in the LQ 45 index in the period 2016 to 2022. Population is an area of generalization which includes an object or subject which has quality and certain characteristics which is the focus of research and used by researchers for the purpose of assessment and drawing conclusions Sugiyono (2013:118). sample selection in research this is done with method purposive sampling which aims to obtain a sample based on that criteria already predetermined. Sample is part of amount and characteristics that exist in the population Sugiyono (2013:118) The following is the criteria that have been set are: 1) Banking sub-sector companies in stock Exchange Indonesia is always joined in the index LQ 45 in 2016-2022 during the study period. 2) Company have data report consistent finances from 2016-2022. 3) The company owns information and complete data for needs analysis. Based on the criteria in the sampling, the company index LQ 45 recorded in stock Exchange Indonesia during the year 2016-2022 total 45 companies which becomes sample in this study as many as 5 companies. Company that enters the sample this research is:

Table 1 : Research Sample

NO	COMPANY NAME
1.	Bank Central Asia Tbk.
2.	Bank Indonesian country (Persero) Tbk.
3.	Bank People of Indonesia (Persero) Tbk.
4.	Bank State Savings (Persero) Tbk.
5.	Bank Mandiri (Persero) Tbk.

Source : www.idx.co.id

The data analysis technique in this study uses multiple linear regression analysis which is a combination of data *time-series* or time series and cross-section or cross data. The panel data regression analysis used in this study also has several advantages so that it does not require classical assumption testing (2). However, basically, whatever panel data regression model is chosen, it must always carry out the classical assumption test because the goal is to find out whether the model meets the requirements. *BLUE* or not (Sakti 2018:7) In addition, this study uses descriptive statistical analysis to present data in an easy-to-understand form.

Variable Operational Definition
Return Stock

According to Zulfikar (2016: 235) *Return* stock that is something reward on courage investor for take risk, as well as above dedication time and Money Which invested by investor. Source *Return* consists from two component ie *yield* and *capital gain (loss).*

***Return On Equity* (ROE)**

According to Alexander Thian (2022:113–114), this measurement shows the level of contribution inside equity create a net profit. If results return on equity higher, the total net profit generated will also be greater. Conversely, if the return on equity is low, the profit generated will be lower. which formula used in calculating ROE, namely:

$$Return\ On\ Equity\ (ROE) = \frac{Net\ Profit}{Total\ Equity} \times 100\%$$

Debt To Equity Ratio (DER)

According to Kasmir (2019:113) *Debt to equity ratio* is ratio for measure ratio debt to equity. Ratio This determined with compare whole debt, including debt fluent, to total equity. Ratio This useful when want to know amount days Which offered by borrower (creditor). With say other, You can use ratio This for find each rupiah owner's equity Which works as guarantee debt

which formula used in calculating DER, namely:

$$\text{Debt to Assets Ratio (DER)} = \frac{Total\,Liabilities}{Total\,Equity}$$

Result

The following are the results of the Descriptive Statistical Test on the variables used in this study, namely:

Table 3: Descriptive Statistical Test Results

Variable	N	Mean	Maximum	Minimum	Std. Dev
Return shares (Y)	35	0.010098	0.063059	-0.022900	0.018407
Return On Equity (X1)	35	15.81057	23.08000	1.000000	4.931690
Debt To Equity Ratio (X2)	35	6.874948	16.07858	4.277209	3.090213

Source: Eviews 10 (Data processed by the author, 2023)

Based on the results of the descriptive statistical test above, it shows that amount that data used in this research as many as 5 samples which is taken from Reports Annual Performance LQ company 45 listed on the IDX period 2016-2022 for a total of N = 35.

1) *Return* shares have standard deviation 0.018407 which slightly overvalued the average is 0.010098 ie denotes the result which not good because the standard deviation is more big of on average (mean) *Return* which stock indicates that there is a spread big data as well as deviations that data Enough tall. Then it can be seen that *Return* Shares with maximum value is 0.063059 which owned by Savings bank State (Persero) Tbk. Period the year 2017 marks *Return* shares company that's enough good because company share value increases, and can also be interpreted as increasing the level of prosperity of shareholders. Where as *Return* shares is -0.022900 ie owned by the Bank State Savings (Persero) Tbk. 2) Return On Equity (ROE) has lowest value (minimum) by 1.000000 percent on Savings bank Negara (Persero) Tbk period in 2019 and the highest score (maximum) by 23.08000 percent on Bank Rakyat Indonesia (Persero) Tbk year period 2016. Rate-rate ROE of 15.81057 percent. Standard ROE deviation of 4.931690 indicates the variation of the data the small one because of value it is more small of mean value (average). With data variations which is small, indicating that the company's ROE variable data is said to be good. 3) data Debt to Equity Ratio (DER) has mark lowest (minimum) of 4.277209 times at Bank Central Asia Tbk period 2019 year and grades highest (maximum) 16.07858 times at the Bank State Savings (Persero) Tbk for the 2020 period. Average DER of 6.874948 times. Standard DER deviation of 3.090213 shows data variation Which small because the value is more small of mean value (average). With small data variations, it shows that the company's DER variable data is said to be quite good.

Panel Data Regression Estimation Model

In panel data regression, there are methods used to estimate the regression model such as *common effect model, fixed effect model* and *random effect model* (Nengsih & Martaliah 2021:2–3)

1. *Common Effect Model* (CEM)

Table 1: Panel Data Regression Results with the Common Effect Model (CEM)

Variable	Coefficient	Significant
C	-0.011385	0.4535
ROE (X_1)	0.001258	0.0673
DER (X_2)	0.000232	0.8285
R- squared = 0.106133		
Adjusted R-squared = 0.050267		
Prob (F-Statistic) = 0.166098		
Durbin-Watson stat = 2.364356		

Source: Eviews 10 (Data processed by the author, 2023)

2. **Fixed Effect Model (FEM)**

Table 2: Panel Data Regression Results with Fixed Effect Model (FEM)

Variable	Coefficient	Significant
C	-0.008625	0.7334
ROE (X_1)	0.001669	0.0409
DER (X_2)	-0.001116	0.7013
R- squared = 0.160210		
Adjusted R-squared = -0.019744		
Prob (F-Statistic) = 0.515262		
Durbin-Watson stat = 2.604897		

Source: Eviews 10 (Data processed by the author, 2023)

Panel Data Regression Estimation Model Selection

According to Widarjono (2007:258) in choosing a panel data regression model, three tests must be carried out, namely the *chow*, test *hausman* and test *langrange multiplier*.

1. **Uji Chow**

Table 3: Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-Section F	0.450756	(4,28)	0.7710
Cross-Section Chi-Square	2.184188	4	0.7019

Source: Eviews 10 (Data processed by the author, 2023)

on the table Of over value probability *chi square* is 0.7019. the value located in above 0.05 up that hypothesis accepted is H0 and model chosen one is common effect models. Testing is not need to continue to test hausman and langrange test

Test the Classical Assumptions of the Panel Data Regression Model
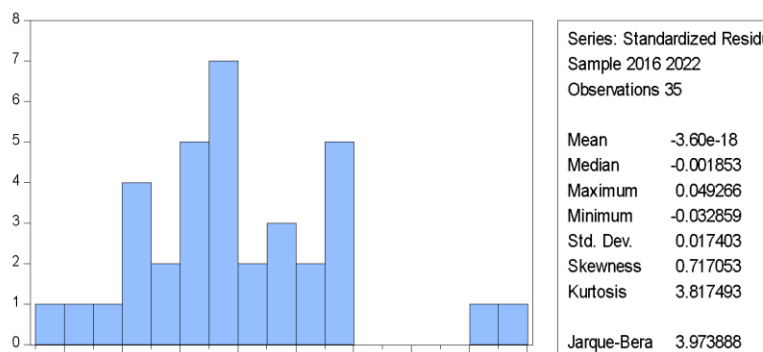1. **Normality test**

Figure 1: Normality Test Results
Source: Eviews 10 (Data processed by the author, 2023)

From the data in above can be found that probability *jarque-bera* > significance level, namely 0.137114 > 0.05 maka H0 accepted and can be concluded that data it is distributed normal.

2. **Heteroscedasticity Test**

According to Nachrowi (2006:112) the heteroscedasticity test is used to evaluate whether the variance of the residuals in the model formed is constant or not.

Table 4: Heteroscedasticity Test Results

Dependent Variable: ABS(RESID01)		
Variable	Coefficient	Prob.
C	0.005497	0.4727
ROE	0.000507	0.2795
DER	0.001580	0.4706

Source: Eviews 10 (Data processed by the author, 2023)

The probability value of all independent variables, namely ROE (X_1) = 0.2795 dan DER (X_2) = 0.4706 > 0.05 point H_0 accepted and can be concluded that data there is no heteroscedasticity problem.

3. **Multicollinearity Test**

According to (Imam Ghozali, 2012) a multicollinearity test was carried out to evaluate whether be found significant correlation between variable free (independent) in the model regression.

Table 5: Multicollinearity Test Results

	ROE	DER
ROE	1	-0.343407055409238
DER	-0.343407055409238	1

Source: Eviews 10 (Data processed by the author, 2023)

From the results test above probability value of all the independent variables it can be seen that all values the probability is less of 0.85. So can be concluded that the data meets the assumption of multicollinearity so that the data is free from problems multicollinearity.

4. **Autocorrelation Test**

According to (Imam Ghozali, 2012) test autocorrelation was used to evaluate Is there a correlation? between disruptive error (residual) on periode t by mistake bully on the previous period, namely the period t-1. This test aims to detect presence of symptoms autocorrelation in the model linear regression.

Table 6: Autocorrelation Test Results

N	K	Dw	d_{in}	d_l	4-d_{in}	4-d_l
35	2	2.305336	1.5666	1.2837	2,4334	2,7163

Source: Eviews 10 (Data processed by the author, 2023)

Based on Durbin-Watson values on of 2.305336 where this value indicates that there is no problem in the data in the classical assumption test.

Multiple Linear Regression Analysis

Table 7: Results of Multiple Linear Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.019499	0.011433	-1.705542	0.0996
ROE (X_1)	0.001798	0.000696	2.582288	0.0156
DER (X_2)	0.005471	0.003270	1.673143	0.1058

Source: Eviews 10 (Data processed by the author, 2023)

Based on regression results got the equation regression which shows impact on ROE and DER to variables depend *Return* Shares. The equation the regression is:

$Y = a + bX_1 + bX_2 + e$

$Y = -0.019499 + 0.001798X_1 + 0.005471X_2 + e$

From equation results linear regression the double states that mark constant (a) of -0.019499 which means that if all variables free i.e. ROE and DER is worth 0 for magnitude *Return* shares are -0.019499. then the ROE variable coefficient value (X_1) of 0.001798 with a positive sign which means that every addition one unit value ROE will increase value *Return* Saham (Y) of 0.001798. DER variable

coefficient value (X_2) of 0.005471 with a positive sign which means that every addition one unit DER value will increase the value*Return* Shares (Y) of 0.005471.

Hypothesis testing

1. **Individual Parameter Significance Test (t-test)**

Table 8: Partial Test Results (t-test)

Variable	t-Statistic	Prob.
C	-1.705542	0.0996
Return On Equity	2.582288	0.0156
Debt To Equity Ratio	1.673143	0.1058

Source: Eviews 10 (Data processed by the author, 2023)

Based on the test results above, the Return On Equity value is obtained t_{count}= 2.582288 with significant 0.0156. then t value$_{table}$obtained from the formula db (degrees of freedom) = n-k (35-2) = 33 and the results obtained are t_{table} = 1.68957. Because t_{count}2.582288 > t_{table} 1,68957 With significant 0.0156 < 0.05 for H_a accepted and H_O rejected. It means by Partial *Return On Equity* (X_1) significant effect to *Return* shares (Y)

And for the Debt To Equity Ratio obtained value t_{count}= 1.673143 with significant amount 0.1058 . then t value$_{table}$ obtained from the formula db (degrees of freedom) = n-k (35-2) = 33 and the results obtained are t_{table} = 1.6619. Because t_{count}1.673143 > t_{table} 1,6619. With significant 0.1058 < 0.05 then Ho is accepted and Ha rejected. It means by Partial*Debt To Equity Ratio* (X_2) no effect to*Return* stock.

2. **Simultaneous Significance Test (F-Test)**

Table 9: Simultaneous Test Results (F-Test)

Cross-Section fixed (dummy variables)

F-Statistic	3.773167
Prob. (F-statistic)	0.035891

Source: Eviews 10 (Data processed by the author, 2023)

Based on the test results above, it shows that the value of f_{count} = 3.773167 with value the F-Stat probability is of 0.035891. because f_{count}3.773167 < f_{table} 4.14 and value probability F-Stat is of 0.035891. Number it is more small of assigned significance level (0.05), so H0 got accepted. By because of that, can be concluded that variable Return On Equity dan Debt To Equity Ratio simultaneously effect on Return stock bank.

3. **Determination Coefficient Test (R^2)**

Table 10: Test Results for the Coefficient of Determination

Cross-section fixed (dummy variables)

R-Squared	0.218441
Adjusted R-squared	0.160548

Source: Eviews 10 (Data processed by the author, 2023)

Based on the test results aboveit can be seen that the value (R-Square) in the study This is 0.218441. From the results that, can concluded that equal to 21.8% of the dependent variable can be explained by both variables independent, namely Return On Equity and Debt To Equity Ratio. Meanwhile, the rest of 78.2% explained by factors others outside the variable researched in research This. If used more independent variable, then the R-Squared value gain will increase.

Conclusion

1) Result of analysis by partial shows that variabel Return On Equity significant effect against Return Shares banking sub-sector company incorporated in index LQ 45 over the year period 2016-2022.

2) DER has a negative influence on Return stock banking sub-sector company incorporated in index LQ 45 over the year period 2016-2022. 3) The results of the simultaneous analysis show that variable Return On Equity dan Debt To Equity Ratio effect on Return Company stock the Banking subsector which incorporated in index LQ 45 during the 2016-2022 period.

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