

The Effect of Debt to Equity Ratio and Firm Size on Price to Book Value Through Return on Equity on LQ45 Index In Indonesia Stock Exchange

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Abstrak. Penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh *Debt To Equity Ratio* dan *Firm Size* terhadap *Price To Book Value* melalui *Return On Equity* pada Indeks LQ 45 di Bursa Efek Indonesia Periode 2015-2019. Sampel penelitian ini adalah perusahaan yang terdaftar dalam indeks LQ 45 pada periode 2015-2019, dengan menggunakan metode purposive sampling dimana ada dua puluh satu perusahaan yang memenuhi kriteria sebagai sampel penelitian. Analisis data dalam penelitian ini menggunakan analisis jalur (*path analysis*) dengan software SPSS. Hasil penelitian ini menunjukkan bahwa: 1) *Debt to Equity Ratio* dan *Firm Size* secara simultan berpengaruh signifikan terhadap *Return on Equity*. 2) *Debt to Equity Ratio* dan *Firm Size* secara parsial berpengaruh signifikan terhadap *Return on Equity*. 3) *Debt to Equity Ratio* dan *Firm Size* secara simultan berpengaruh signifikan terhadap *Price to Book Value*. 4) *Debt to Equity Ratio* dan *Firm Size* secara parsial berpengaruh signifikan terhadap *Price to Book Value*. 5) *Return on Equity* berpengaruh signifikan terhadap *Price to Book Value*. 6) *Debt to Equity Ratio* melalui *Return On Equity* secara tidak langsung memiliki pengaruh signifikan terhadap *Price to Book Value*, sedangkan *Firm Size* melalui *Return On Equity* secara tidak langsung tidak berpengaruh signifikan terhadap *Price to Book Value*.

Kata kunci: *Debt To Equity Ratio*, *Firm Size*, *Price To Book Value* dan *Return On Equity*.

Introduction

The stock exchange gives a big role for the country's economy because it has two functions, namely providing facilities to move funds from investors to issuers, investors expect to get a return from the invested funds. The Stock Exchange is useful for improving the country's economy, namely (1) improving the composition of corporate capital, (2) Long-term financing sources, (3) supporting the realization of a healthy economy, (4) increasing state income. The existence of a stock exchange is needed for investors to contain the means of investing, namely obtaining dividends for shareholders and floating interest to bond owners. To minimize risk, investors can invest in a portfolio. Investment is a commitment to a number of funds or other resources at this time with the aim to obtain profits in the future. The world of investment is getting wider one of which is stock investment, stock investment is an investment in the financial sector. In investing the problem that arises is the extent to which the company's performance is able to affect the stock market value in the capital market and the value of the company becomes one of the determining factors that make investors interested in investing.

A company's value is the sum of the equity market value of a company with debt. The addition of the amount of the company's equity to the company's debt may reflect the value of the company. The value of the company can be influenced by several factors, among others: funding decisions, dividend policies, investment satisfaction, company growth, and firm size. These factors have a relationship and influence on inconsistent company values. According Afzal (2012) Price to Book Value describes how much the market values a company's stock books. The higher the Price to Book Value means the market believes in the company's prospects. Price to Book Value also shows how far a company is able to create a company's value relative to the amount of capital invested and can also indicate whether the price of a traded stock is overvalued or undervalued the book value of the stock. The stock price is a function of the value of the company. If the company's performance goes public, the value of the company will be higher as well. On the stock exchange, it will be appreciated by the market in the form of an increase in its stock price. Conversely, bad news about a company's performance will be followed by a decline in its share price in the capital markets. This is what underlies why the relevant stock price changes are used as the basis for assessing the company's performance to go public. Investors in predicting changes in stock prices, can use financial statements in the form of financial ratios. Factors that are likely to affect the value of the company are the capital structure, firm size and profitability ratio.

Capital structure is a comparison between capital and debt, the greater the use of debt will increase the payment of liabilities for the company, and can increase the risk of the company's cash flow in fulfilling obligations. Capital structure decisions are important because of the effect of these decisions on the profitability of a company. One of the factors that make a company has competitiveness in the long term because of the strong capital structure it has. So that the decision of the sources of funds used to strengthen the capital structure of a company cannot be seen as a simple decision but has strong implications in the future. In this study, capital structure was measured by the Debt to Equity Ratio (DER). DER is the ratio used to measure the level of leverage (use of debt) to the total shareholder's equity owned by the company (Ang, 1997). The Debt to Equity Ratio (DER) itself is also determined by the size of

the company where the big companies tend to have larger debts compared to small companies. Firm size is a measure, scale or variable that describes the size of a company based on several provisions, such as total assets, log size, market value, shares, total sales, total income, total capital and others. The size of the company is a scale that can be calculated with the level of total assets and sales that can indicate the condition of the company where the big company will have an advantage in the source of funds obtained to finance its investment in obtaining profits. The size of the company can be used to represent the financial characteristics of the company. The big companies that have been well established will be easier to obtain capital in the capital market compared to small companies. Because the ease of access means big companies have greater flexibility. In this study, the size of the company was measured through the total assets projected by the natural logarithm value of the company's total assets (Ln Total Assets). The size of the company can also be influenced by the profitability of the company because the higher the profit that can be obtained then the company will be able to survive, grow and develop in the face of competition in the business world, and which becomes part of profitability itself is Return On Equity (ROE).

Return on Equity (ROE) is one of the profitability ratios that shows a company's ability to generate profit after tax using its own capital owned by the company. ROE is an important indicator for investors because the higher the ROE shows the more efficient the company in using its own capital. ROE is needed by investors to measure a company's ability to earn net income related to the dividends they will receive. In this study the authors used ROE as an intervening variable. An intervening variable is an intermediate variable that has a function as a link between independent variables and dependent variables. It can also be interpreted that intervening variables are variables that can weaken and strengthen the relationship between variables (moderator variables), but cannot be measured and observed. Mediation variables or intervening variables are located between independent variables with dependents so that dependent variables cannot be directly effected by independent variables.

Method

The type of data used in this study is secondary data and to obtain the data required in this study is done in a Library Research way. The method used in this study is path analysis with the SPSS program. Path analysis is used to determine the relationship of causation, with the aim of explaining the direct or indirect influence between exogenous variables and endogenous variables. Previously, to qualify path analysis, a classical assumption test was required.

Result

Table 1
Normality test

N		Unstandardized Residual
Normal Parameters ^{a,b}	Mean	105
	Std. Deviation	,0000000
Most Extreme Differences	Absolute	,24763834
	Positive	,069
	Negative	,067
Test Statistic		-,069
Asymp. Sig. (2-tailed)		,069
		,200 ^{c,d}

Source: data process

Based on the results of the normality test it was seen that the data used in the study was normal distribution. This is evident from the results of statistical tests that have been conducted, it is seen that the value of significance is $0.200 > 0.05$.

Table 2
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	4,025	2	2,013	25,275	,000 ^b
	Residual	8,122	102	,080		
	Total	12,148	104			

Source: data process

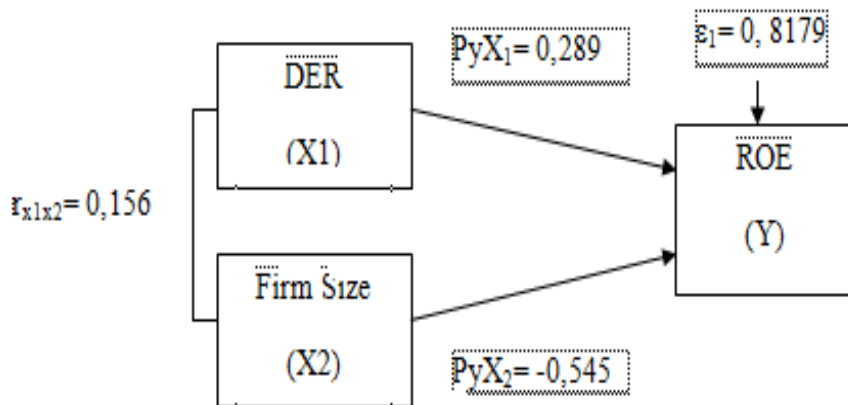
From the results of simultaneous hypothesis testing between DER and Firm Size with ROE showed that $F_{count} > F_{table}$ ($25,275 > 3,09$) with a significance level of $0,000 < 0,05$, which means DER and Firm Size simultaneously have a significant effect on ROE.

Tabel 3
Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5,533	,642		8,618	,000
LOG_DER	,303	,086	,289	3,526	,001
LOG_Firm_Size	-4,179	,629	-,545	-6,650	,000

Source: data process

Based on the results of the partial t test between DER on ROE as seen from t_{count} of 3,526 while t_{table} of 1,98350 ($3,526 > 1,98350$) with a significance level of $0,001 < 0,05$ which means DER has a significant effect on ROE. In the results of the test t partially between Firm Size and ROE as seen from t_{count} of -6.650 while the t_{table} of 1.98350 ($-6,650 > 1,98350$) with a significance of $0,000 < 0,05$ which means between Firm Size has a significant effect on ROE. Here is the results of the path analysis of structure I :



Source: data process

Picture 1
Path Structure 1

Table 4
Recapitulation of Direct and Indirect Effects of DER (X1), Firm Size (X2) on ROE (Y) (in %)

Variable	Direct	Indirect		Total
		X1	X2	
DER (X1)	8,35		-2,46	5,89
Firm Size (X2)	29,70	-2,46		27,24
Effects of X1 dan X2				33,13
Influence of Other Variables				66,87

Source: data process

Based on table 4, it is known that DER, Firm Size has a value of 33.13% on ROE, while the remaining 66.87% is influenced by other variables outside the variables studied.

Table 5
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5,557	2	2,779	16,522	,000 ^b
Residual	17,155	102	,168		
Total	22,712	104			

Source: data process

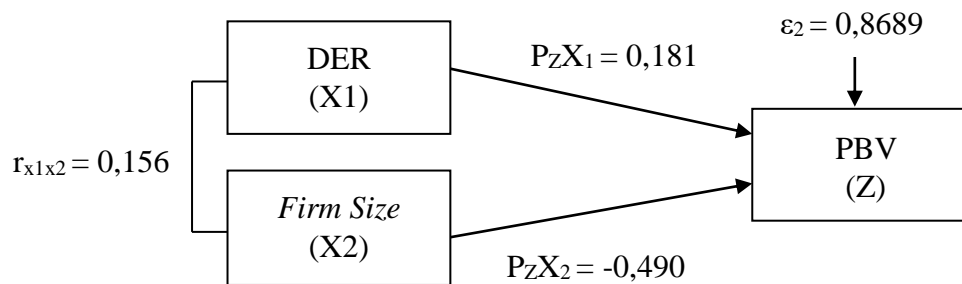
From the results of simultaneous hypothesis testing between DER and Firm Size with PBV showed that $F_{count} > F_{table}$ ($16,522 > 3,09$) with a significance level of $0.000 < 0.05$, which means DER and Firm Size simultaneously have a significant effect on PBV.

Table 6
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	5,695	,933	6,104	,000
	LOG_DER	,259	,125	,181	,041
	LOG_Firm_Size	-5,134	,913	-,490	,000

Source: data process

Based on the results of the test t partially between DER on PBV seen from t_{count} of 2,072 while then t_{table} of 1,98350 ($2,072 > 1,98350$) with a significance level of $0.041 < 0.05$ which means der has a significant effect on PBV. In the results of the test t partially between Firm Size with PBV as seen from t_{count} -5.620 while the t_{table} of 1.98350 ($-5,620 > 1.98350$) with significance of $0.000 < 0.05$ which means Firm Size has significant effect on PBV. Here is the results of the path analysis of structure II :



Source: data process

Picture 2.
Path Structure II

Table 7
Recapitulation of DIRECT and Indirect Effects of DER (X1), Firm Size (X2) on PBV (Z) (in %)

Variable	Direct	Indirect		Total
		X ₁	X ₂	
DER (X ₁)	3,28		-1,38	1,90
Firm Size (X ₂)	24,01	-1,38		22,63
Effects of X ₁ dan X ₂				24,53
Influence of Other Variables				75,47

Source: data process

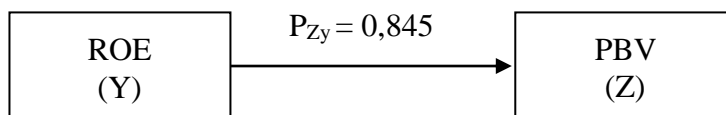
From table 7, it is known that DER, Firm Size has a value of 24.53% on PBV, while the remaining 75.47% is influenced by other variables outside the variables researched.

Table 8.
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	-,993	,092	-10,740	,000
	LOG_ROE	1,155	,072	,845	,000

Source: data process

Based on table 8, it shows that the t_{hitung} of roe is 16.024 while the t_{tabel} is 1.98350 ($16.024 > 1.98350$) with a significance level of $0.000 < 0.05$, meaning ROE has significance effect on PBV. Here is the results of the path analysis of structure III :



Source: data process

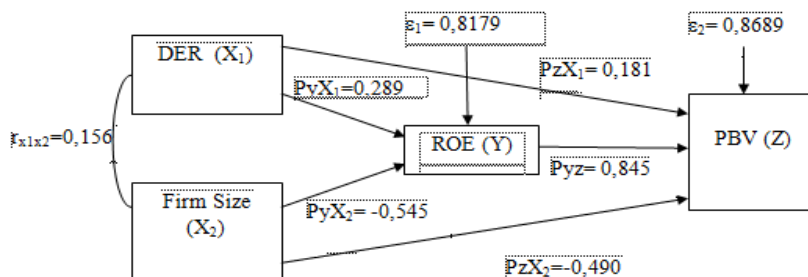
Picture 3
Path Structure III

Table 9
Recapitulation of the Effect of ROE (Y) on PBV (Z) (in %)

Variabel	Langsung	Tidak Langsung		Total
		X ₁	X ₂	
ROE (Y)	71,40			71,40
Pengaruh ROE				71,40
Pengaruh Variabel Lain				28,60

Source: data process

From table 9, it is known that ROE has a value of 71.40% on PBV, while the remaining 28.60% is influenced by other variables outside the variables researched.



Picture 4
Path Structure IV

The direct effect of DER on PBV is 3.28%, while indirect effect of DER through ROE on PBV is 24.42%, showed that indirectly DER through ROE has significant effect on PBV. Direct effect of Firm Size on PBV is 24.01%, while indirect effect of Firm Size through ROE on PBV is -46.05%, showed that firm size indirectly through ROE has no significant effect on PBV.

Conclusion

Based on the results of research and discussions that have been described above, it can be concluded from this research as follows :

1. Debt to Equity Ratio and Firm Size simultaneously have significant effect on Return on Equity.
2. Debt to Equity Ratio and Firm Size partially has significant effect Return on Equity.
3. Debt to Equity Ratio and Firm Size simultaneously have significant effect on Price to Book Value.
4. Debt to Equity Ratio and Firm Size partially has significant effect on Price to Book Value.
5. Return on Equity has significant effect on Price to Book Value.
6. Debt to Equity Ratio through Return On Equity indirectly has significant effect on Price to Book Value, while Firm Size through Return On Equity indirectly has no significant effect on Price to Book Value.

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