

# **Effect of Current Ratio, Capital Structure, and ROE on Company Value with Company Size as Moderating Variable in Consumer Goods Sector Companies Listed in Indonesia Stock Exchange (2015-2017)**

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## **Abstract**

This study aims to explain how the effect of the current ratio, capital structure, and ROE on firm value with company size as a moderation variable on consumer goods companies listed on the Indonesia Stock Exchange from 2015 to 2017. The sampling technique used in this research is the purposive sampling method, with 36 samples of companies that have met certain criteria. The data analysis method used is random-effects model regression analysis determined based on the results of the LM Test being run on eviews software version 9.5. The test result indicated that the current ratio has no significant impact on firm value. While the debt-to-equity ratio, return on equity, and firm size positively impacts firm value, firm size can strengthen the influence of return on equity on firm value.

## **Keywords**

Current Ratio, Debt to Equity Ratio, Return on Equity, Firm Size and Firm Value.

## **1. Introduction**

The rapid development of the business world today is evident in the many companies that go public and are listed on the Indonesia Stock Exchange. The rapid development of the business world triggered intense competition, which made the company try to increase competitiveness to not be defeated by competitors. The industry of the consumer goods sector is one of the most competitive industrial sectors in the business world, which causes consumer goods companies to struggle to maintain their position. For companies engaged in the consumer goods sector to survive and develop, company management needs to have clear corporate goals and the ability to achieve these goals.

The company established must have clear objectives.(Gitman and Zutter 2015)suggest that some of the goals of establishing a company are to maximize the wealth of the company's owner or shareholders. Therefore, financial decisions taken by management are decisions that support the company's goals of maximizing shareholder wealth.

Company value is the available price paid if the company is sold. Company value can be reflected through stock prices. The stock price is the basis of investor valuation of the company's performance. Companies with good performance or companies that release successful new products tend to have high stock prices. Therefore, the higher the stock price means, the higher the company's value(Gitman and Zutter 2015).

To increase company value, management needs to be careful in implementing financial decisions. Therefore, in decision making, careful planning needs to be done to ensure that the decisions taken are in accordance with the company's objectives. The implementation of good financial management will reflect good corporate value.

Several factors influence company value, namely funding decisions, dividend policies, and investment decisions. According to (Gitman and Zutter 2015), company value can be measured using price-earnings or price to book value ratios. The price-earnings ratio focuses on profit, while the price to book value considers the value of the stock book. This research uses proxy price to book value. The price to book value ratio indicates how investors perceive the company's financial health.

In recent years, Indonesia has experienced growth in all sectors of the economy that positively impact opening opportunities for businesses to develop in various sectors, one of which is the consumer goods sector. Consumer goods are goods used directly or indirectly by consumers for personal or household purposes that are one-time use only.

The consumer goods business is currently considered promising by investors because consumer goods products are products that are consumed by everyday people. Liza Camelia Suryanata, an analyst from PT Henan Putihrai Asset Management, said this year has made the industrial sector exciting because the government's priority is to shift from infrastructure development to increasing people's purchasing power. This is inseparable from the political years in 2018 and 2019. It is predicted that there will be a lot of money circulating in the community, making people's purchasing power and real business grow (<http://investasi.kontan.co.id>, 2018).

According to (Gitman and Zutter 2015), financial ratios are grouped into five categories: liquidity ratios, activity ratios, leverage ratios, profitability ratios, and market ratios. This research uses three independent ratios: liquidity, debt, and profitability.

The first financial ratio used in this research is the liquidity ratio. A liquidity ratio is a ratio that measures the ability of a company to pay off its financial obligations at maturity, which creditors can simultaneously use as a level of protection for repayment of debtors' liabilities. In this research, the liquidity ratio used is the current ratio.

The second financial ratio used in this research is the leverage ratio. The leverage ratio shows how much debt is used as a source of financing for the company. The proxy used in this research is the debt-to-equity ratio. This ratio shows the proportion of total liabilities and equity used to fund the company's total assets (Gitman and Zutter 2015). The third financial ratio used in this research is the profitability ratio. Profitability ratios assess how efficiently a company manager can generate profits for every sale made. This research uses return on equity as a proxy for measuring profitability ratios. Return on equity is used to measure a company's ability to generate profits from shareholders' investment in the company.

(Chen and Chen 2011) conducted research on the effect of profitability on firm value with a capital structure as a mediator along with the firm size and industry type as moderators. In this research, profitability has a positive effect on firm value. Previous research on the effect of financial ratios on firm value was carried out by (Marsha and Murtaqi 2017). The results showed that returns on total assets and current ratios positively affected firm value, while quick ratios had a negative effect on firm value.

This research was conducted because financial ratio analysis is a matter that is needed in the world of accounting and auditing to find out the company's performance. In addition, this research was conducted because many previous studies obtained different results. Therefore, this research was carried out under the title **"Effect of Current Ratio, Capital Structure, and ROE on Company Value with Company Size as Moderating Variable in Consumer Goods Sector Companies Listed in Indonesia Stock Exchange 2015-2017 Period"**.

Identification of the problems to be examined in this research are:

1. What is the effect of the current ratio on the company's value on consumer goods companies listed on the Indonesia Stock Exchange in 2015-2017?
2. How does the capital structure affect the company's value in consumer goods companies listed on the Indonesia Stock Exchange in 2015-2017?

3. What effect does return on equity have on the company value of consumer goods companies listed on the Indonesia Stock Exchange in 2015-2017?
4. How does the company's size affect the company's value in consumer goods companies listed on the Indonesia Stock Exchange in 2015-2017?
5. Can the company's size strengthen the effect of return on equity on the company's value on consumer goods companies listed on the Indonesia Stock Exchange in 2015-2017?

## 2. Research Methodology

The research object to be examined is the annual financial statements of the consumer goods sector listed on the Indonesia Stock Exchange (IDX) for 2015-2017. This type of research is causal research that aims to determine the role of independent variables in influencing the dependent variable. The type of data used in this research is quantitative. The data sources used are secondary data, namely the annual financial statements and the company's second-quarter financial statements of the consumer goods sector, which are downloaded from the IDX website.

The sample collection method used in this research uses a purposive sampling method in which criteria have been previously determined in sample selection. The sample in this research was 108 companies. Samples obtained from consumer goods companies on the IDX for the period 2015-2017 are those that have met all the criteria, namely:

1. All consumer goods companies that have been listed on the Indonesia Stock Exchange for the period 2015 - 2017.
2. Companies that were not consistently listed on the Indonesia Stock Exchange during 2015 - 2017.
3. Consumer goods companies consistently publish annual financial reports on the Indonesia Stock Exchange from 2014 to 2016.
4. All companies that inconsistently issue second-quarter financial statements on the Indonesia Stock Exchange from 2015 to 2017.

The data analysis method used in this research is multiple linear regression analysis using analysis tools or processing program data evIEWS 9.5. But before doing multiple linear tests, this method must test the classic assumptions to get the best results. Hypothesis testing is done by using a regression model through several tests, namely, seeing how well the regression model works with the coefficient of determination (adjusted R<sup>2</sup>), Simultaneous Significant test (F test), and testing of significant individual parameters (statistical test t). Multiple linear analysis is used to test the effect of two or more independent variables on the dependent variable. The following is an equation that shows the relationship between the dependent variable and the independent variable:

Notes:

$\beta_0$	: Constant
CR	: Current Ratio
DER	: Debt to Equity Ratio
ROE	: Return on Equity
D	: Dummy (Firm Size)
PBV	: Price to Book Value
$\beta_1, \beta_2, \text{ dan } \beta_3$	: Regression coefficient
$\varepsilon$	: Error
i	: cross-section
t	: time-series

A dependent variable is a variable that is explained or influenced by independent variables (Sekaran, 2013). The dependent variable in this research is company value which is proxied by price to book value. To calculate the Price to Book Value ratio of a company, the book value per share must be first calculated, which is mathematically formulated as follows:

$$\text{Book Value per Share} = \frac{\text{Total Shareholder Equity} - \text{Preferred Equity}}{\text{Total Outstanding Shares}}$$

Then PBV can be calculated using the following formula:

$$Price\ to\ Book\ Value = \frac{Market\ Price\ per\ Share}{Book\ Value\ per\ Share}$$

An Independent variable is a variable that affects or is the cause of the change or the emergence of the dependent variable. The independent variable used in this research, namely:

#### 1. Current Ratio

The current ratio compares the number of current assets and current debt. This ratio shows the extent to which current assets cover current liabilities. The greater the comparison of current assets with current debt, the higher the company's ability to cover its short-term liabilities. The following formula calculates the current ratio:

#### 2. Capital Structure

Capital structure is the relationship between various financing sources such as retained earnings, debt, and equity. This research calculates the capital structure using debt to equity ratio proxy. The following formula calculates the debt-to-equity ratio:

#### 3. Return on Equity

Return on equity is a ratio that assesses the extent to which a company uses its resources to provide a return on equity. The following formula calculates the return on equity:

#### 5. Company Size

The company's size is seen from the total assets owned by the company that can be used for company operations. The following formula calculates company size:

$$Company\ Size = \ln(\text{total asset})$$

#### 6. Moderation Variable

Moderating variable is the variable that strengthens or weakens the relationship between one variable and another. The moderating variable in this research is the company size used to strengthen the influence of Return on Equity on company value. The following formula calculates the moderating variable in this research:

$$Moderation\ Variable = ROE \times Size$$

### 3. Result and Discussion

#### 3.1 Descriptive Statistics Test

Table 1. Test results of variable descriptive statistics metrics

	PBV	CR	DER	ROE	SIZE
Mean	4.468348	2.770115	0.512265	5.480148	0.613861
Median	1.952428	2.194201	0.674655	0.536574	1.000000
Maximum	75.89387	10.25425	3.028644	83.75717	1.000000
Minimum	-126.2692	0.513906	-31.17545	-17.35039	0.000000
Std. Dev.	18.34989	1.918690	3.234633	15.13227	0.489291

- Statistical results using descriptive statistics on price to book value have the lowest value of -126,2692, and the highest is 75,89387 with an average of 4,468348 and standard deviation of 18,34989.
- Statistical results using descriptive statistics on the current ratio have the lowest value of 0.513906 and the highest of 10.25425 with an average of 2.770115 and a standard deviation of 1.918690.
- Statistical results using descriptive statistics on the debt on equity ratio have the lowest value of -31.175545 and the highest is 3.028644 with an average of 0.512265 and a standard deviation of 3.234633.

- d. Statistical results using descriptive statistics on return on equity have the lowest value of -17.35039, and the highest is 83.75717 with an average of 5.480148 and a standard deviation of 15.13227.
- e. Statistical results using descriptive statistics of size have the lowest value of 0.000000 and the highest of 1.000000 with an average of 0.613861 and standard deviation of 0.489291.

### 3.2 Data Panel Regression

#### 3.2.1 Panel Least Square Model

Panel least square model (Table 2) is the simplest method because it only combines time-series and cross-section data with the assumption that the residual components that apply are constant between cross-section and time-series.

Table 2. Panel least square model (evIEWS 9.5 output)

Dependent Variable: PBV  
 Method: Panel Least Squares  
 Date: 05/16/18 Time: 08:38  
 Sample: 2015 2017  
 Periods included: 3  
 Cross-sections included: 36  
 Total panel (balanced) observations: 101

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CR	-2.192367	0.852696	-2.571099	0.0116
DER	-1.161619	0.579472	-2.004618	0.0477
ROE	-9.468667	0.427909	-22.12775	0.0000
SIZE	-8.277612	3.649591	-2.268093	0.0254
ROESIZE	10.31267	0.381737	27.01513	0.0000
C	16.48736	7.181207	2.295903	0.0237
R-squared	0.933226	Mean dependent var	12.74252	
Adjusted R-squared	0.929952	S.D. dependent var	61.28097	
S.E. of regression	16.21892	Akaike info criterion	8.464187	
Sum squared resid	26831.45	Schwarz criterion	8.613194	
Log likelihood	-451.0661	Hannan-Quinn criter.	8.524604	
F-statistic	285.1069	Durbin-Watson stat	1.712187	
Prob(F-statistic)	0.000000			

#### 3.2.2 Fixed Effects Model

The fixed-effects model estimates panel data using a dummy variable to allow different intercepts. The fixed-effects model assumes that any applicable residual components must be modelled specifically. In this research, processing data for the fixed effects model using evIEWS 9.5 does not give results with the description of the error message "near singular matrix". This situation might occur because of the various mathematical technical problems that underlie the calculations so that data processing cannot be done by evIEWS.

#### 3.2.3 Random Effects Model

According to (Nachrowi and Usman 2015), the middle ground in the selection of estimation models between the fixed effects model and the random-effects model has been proposed by several econometrics experts who have been mathematically proven where it says that:

- A. If the panel data owned has a number of times (t) greater than the number of individuals (n), it is recommended to use the fixed effects model.
- B. If the panel data owned has a number of times (t) smaller than the number of individuals (n), it is recommended to use the random-effects model.

The random-effects model (Table 3) is a method that can improve the least square process efficiency by calculating errors from panel data.

Table 3. Random effects model

Dependent Variable: PBV  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 05/21/18 Time: 23:28  
 Sample: 2015 2017  
 Periods included: 3  
 Cross-sections included: 36  
 Total panel (unbalanced) observations: 101  
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CR	0.156334	0.164703	0.949191	0.3449
DER	3.171299	0.182825	17.34606	0.0000
ROE	0.777662	0.027990	27.78369	0.0000
SIZE	0.650192	0.932210	0.697473	0.4872
ROESIZE	0.710916	0.297904	2.386388	0.0190
C	-2.469324	0.950520	-2.597867	0.0109

  

Effects Specification		S.D.	Rho
Cross-section random		2.182843	0.7720
Idiosyncratic random		1.186253	0.2280

  

Weighted Statistics			
R-squared	0.974225	Mean dependent var	1.166784
Adjusted R-squared	0.972868	S.D. dependent var	7.400425
S.E. of regression	1.226113	Sum squared resid	142.8186
F-statistic	718.1432	Durbin-Watson stat	1.881967
Prob(F-statistic)	0.000000		

  

Unweighted Statistics			
R-squared	0.982840	Mean dependent var	4.468348
Sum squared resid	577.8240	Durbin-Watson stat	0.465159

### 3.3 Panel Data Regression Selection Test

After each model is completed for panel regression, the next step is to test the panel data model to find out which regression model is the most appropriate and has advantages compared to other panel data models. The panel data model selection test (Table 4) was carried out in this research with The Breusch Pagan LM Test. Chow and Hausman Test could not be done because there were no data processing results for the fixed-effects model.

Table 4. LM test results

Lagrange Multiplier Tests for Random Effects  
 Null hypotheses: No effects  
 Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

Test Hypothesis
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	Cross-section	Time	Both
Breusch-Pagan	6.714384 (0.0096)	0.434769 (0.5097)	7.149154 (0.0075)
Honda	2.591213 (0.0048)	-0.659370 (0.7452)	1.366019 (0.0860)
King-Wu	2.591213 (0.0048)	-0.659370 (0.7452)	-0.038857 (0.5155)
Standardized Honda	3.053471 (0.0011)	-0.330265 (0.6294)	-2.972539 (0.9985)
Standardized King-Wu	3.053471 (0.0011)	-0.330265 (0.6294)	-2.382062 (0.9914)
Gourieroux, et al.*	--	--	6.714384 (0.0135)

Based on the results of The Breusch Pagan LM Test in Table 4, the P-value LM Test is equal to 0.0075. Because P-value Breusch Pagan is smaller than  $\alpha = 0.05$ ,  $H_0$  is rejected, so the right model used for this research is the random-effects model.

### 3.4 Multicollinearity Test

Table 5. Correlation matrix

	PBV	CR	DER	ROE	SIZE
PBV	1.000000	-0.101784	0.768214	0.783817	-0.288802
CR	-0.101784	1.000000	-0.101866	-0.116895	-0.165769
DER	0.768214	-0.101866	1.000000	0.230866	-0.095426
ROE	0.783817	-0.116895	0.230866	1.000000	-0.409967
SIZE	-0.288802	-0.165769	-0.095426	-0.409967	1.000000

Based on Table 5, it is known that there is no relationship between independent variables with a value of more than 0.8, so it can be said that there is no violation of the assumption in the form of multicollinearity.

### 3.5 Heteroscedasticity Test

Heteroscedasticity testing aims to determine whether, in the regression model, variance occurs from residual inequalities of one observation to another. The heteroscedasticity tests in this research used a white test. (Table 6)

Table 6. Random effects model after white test

Dependent Variable: PBV  
 Method: Panel EGLS (Cross-section random effects)  
 Date: 05/21/18 Time: 23:28  
 Sample: 2015 2017  
 Periods included: 3  
 Cross-sections included: 36  
 Total panel (unbalanced) observations: 101  
 Swamy and Arora estimator of component variances  
 White cross-section standard errors & covariance (d.f. corrected)

WARNING: estimated coefficient covariance matrix is of reduced rank

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CR	0.156334	0.245545	0.636682	0.5259
DER	3.171299	0.040682	77.95386	0.0000
ROE	0.777662	0.028126	27.64955	0.0000
SIZE	0.650192	0.200508	3.242716	0.0016
ROESIZE	0.710916	0.101283	7.019082	0.0000
C	-2.469324	0.693100	-3.562721	0.0006

  

Effects Specification		S.D.	Rho
Cross-section random		2.182843	0.7720
Idiosyncratic random		1.186253	0.2280

  

Weighted Statistics			
R-squared	0.974225	Mean dependent var	1.166784
Adjusted R-squared	0.972868	S.D. dependent var	7.400425
S.E. of regression	1.226113	Sum squared resid	142.8186
F-statistic	718.1432	Durbin-Watson stat	1.881967
Prob(F-statistic)	0.000000		

  

Unweighted Statistics			
R-squared	0.982840	Mean dependent var	4.468348
Sum squared resid	577.8240	Durbin-Watson stat	0.465159

### 3.6 Panel Data Regression Analysis

Based on LM Test, the panel data model used in this research is the random-effects model. Thus, the regression coefficient used is the regression coefficient on the random-effects model. Therefore, the regression equation in this research is:

$$PBV = -2,4693 + 0,1563 CR + 3,1713 DER + 0,7777 ROE + 0,6502 SIZE + 0,7109 ROESIZE$$

Thus, the results of the interpretation of the random effects model regression coefficient are as follows.

- 1) The regression coefficient of intercept/constant is -2.4693. This shows that if the value of the current ratio, debt to equity ratio, return on equity, size, and ROESize is zero, then the variable price to book value is -2,4693 times.

### 3.7 Coefficient of Determination (R Square)

The coefficient of determination in panel regression analysis determines the contribution given by independent variables to the dependent variable. Based on Table 6, the R Square value of the panel regression model obtained was 0.974225. This shows that the change in the Price to Book Value variable by 97.42% can be explained by the four independent variables. The remaining 2.58% is explained by other variables outside the model.

### 3.8 Simultaneous Test of Hypotheses (F Test)

The F statistic test shows the significance of the influence of all independent variables, namely, current ratio, debt to equity ratio, return on equity ratio, firm size, and the interaction variable return on equity and firm size together or simultaneously to the dependent variable price to book value with a significance level of  $\alpha = 0.05$ .

The results of the panel regression analysis in Table 6 show that the significant value of the simultaneous test results obtained is 0.0000. Because the significant value obtained is  $<0.05$ ,  $H_0$  is rejected, and it is concluded that the variables CR, DER, ROE, SIZE and moderation of SIZE on ROE simultaneously influence the company's value.



### 3.9 Significant Individual Parameter Test (T Statistic Test)

In this research, the t-test is used to determine the effect of each dependent variable on the independent variable, provided that the other independent variables are not changed / constant (*ceteris paribus*). The test results based on the t-test based in Table 6 are presented as follows:

- 1) Current Ratio Test Results to Price to Book Value  
In this research,  $t_{\alpha}$ -table at the significance level  $\alpha = 0.05$  with the degree of freedom = 95 is 1.658. Based on Table 6, it is known that the current ratio variable has  $t_{count} < t_{\alpha}$ -table, which is  $0.636682 < 1.658$ , which means that  $H_0$  is not rejected. This means that the current ratio does not have a positive and significant effect on the price to book value.
- 2) Debt to Equity Ratio Test Results to Price to Book Value  
Based on Table 6, it is known that the debt-to-equity ratio variable has  $t_{count} > t_{\alpha}$ -table, which is  $77.95386 > 1.658$ , which means  $H_0$  is rejected. This means that the debt-to-equity ratio has a positive and significant effect on the price to book value. Debt to equity ratio has a regression coefficient of 3.171 which means that if the debt-equity ratio rises by 1%, the price to book value rises by 3.171%. At the same time, the other independent variables are constant (*ceteris paribus*).
- 3) Return on Equity Test Results to Price to Book Value  
Based on Table 6, it is known that the return on equity variable has  $t_{count} > t_{\alpha}$ -table, which is  $27.64955 > 1.658$ , which means  $H_0$  is rejected. This means that return on equity has a positive and significant effect on the price to book value. Return on equity has a regression coefficient of 0.778 which means that if the return on equity rises by 1%, the price to book value rises 0.778%. At the same time, the other independent variables are constant (*ceteris paribus*).
- 4) Company Size Test Results to Price to Book Value  
Based on Table 4.10, it is known that company size variables have  $t_{count} > t_{\alpha}$ -table, which is  $3.242716 > 1.658$ , which means  $H_0$  is rejected. This means that the company's size has a positive and significant effect on the price to book value.
- 5) Test Results of Company Size as a Moderating Variable  
Based on Table 4.10, it is known that the interaction variable return on equity and company size has  $t_{count} > t_{\alpha}$ -table, which is  $7.019082 > 1.658$ , which means  $H_0$  is rejected. This means that the interaction variable return on equity and company size has a positive and significant effect on the price to book value.

### 4. Conclusion and Suggestion

The research object to be examined is the annual financial statements of the consumer goods sector listed in Indonesia.

The results of this research can be summarized as follows:

- 1) The results of hypothesis testing indicate that statistically, the current ratio does not affect the company's value.
- 2) The results of hypothesis testing indicate that statistically, the capital structure has a positive and significant effect on company value.
- 3) The results of hypothesis testing indicate that statistically, return on equity has a positive and significant effect on company value.
- 4) The results of hypothesis testing indicate that statistically, the company's size has a positive and significant effect on company value.
- 5) The results of hypothesis testing indicate that statistically, the company's size can strengthen the effect of return on equity on company value.

Based on the results of the research, there are several suggestions, as follows:

- 1) For investors, in conducting stock analysis using the price to book value approach, it is recommended to pay attention to financial ratios, especially the debt-to-equity ratio, return on equity, and company size. These three factors can be used as considerations for investors in investing.
- 2) For company management, to increase the price to book value, the company needs to pay attention to and increase the debt-to-equity ratio, return on equity, and company size because the three factors have a positive and significant influence on price to book value.

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