

# The Effect of Profitability and Liquidity on Firms Value

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## ABSTRACT

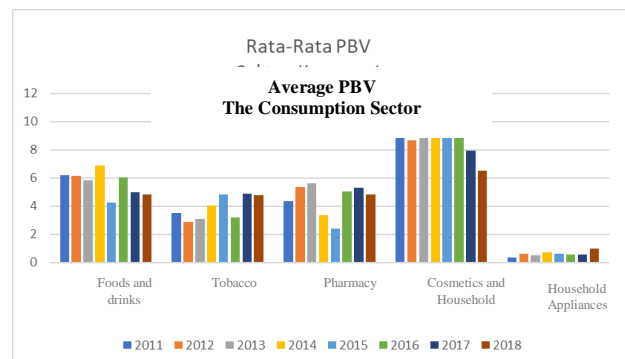
This study aims to determine the description of Profitability as measured by Return on Equity (ROE), Liquidity as measured by the Current Ratio (CR) and Firm Value as measured by Price to Book Value (PBV) and the influence between these variables. This research uses descriptive and verification research methods. This research was conducted on 4 companies in the Cosmetics and household goods sub-sector listed on the Indonesia Stock Exchange (IDX) with data ranging from 2011-2018. Samples were taken using purposive sampling technique with several criteria. Because the data are panel data, to test the effect between variables, panel regression analysis is used. The research findings show that profitability has a positive and significant effect on firm value. Furthermore, liquidity has a negative and insignificant effect on firm value. The results of the model fit test show that simultaneously profitability and liquidity have an effect on firm value.

**Keywords:** Profitability, Liquidity, Firms Value.

## 1. INTRODUCTION

Currently the goal of maximizing profits is considered inappropriate, the main goal of a company is to maximize company value and prosper shareholders [1]. Firm value is closely related to stock prices. Companies with stock prices tend to be high, which means that the company also has a high company value. Many people believe that investor confidence in the company is caused by the high value of the company. To increase the value of the company, it improves its performance through achievements shown by the increase in the company's stock price [2] The value of the company is considered absolute because it illustrates how the company's financial performance will ultimately lead to the desire of investors to invest their capital in the company [3]. High company value will provide returns for shareholders so that this value will be viewed by investors as important information [4].

The PBV ratio often changes as is happening in the consumption sector. The dynamics of PBV in more detail will be presented by looking at the percentage of each other consumption sub-sector on the IDX from 2011 to 2018 in Figure 1 below:



**Figure 1.** Average PBV of the Consumption Sector

Source: [www.idx.co.id](http://www.idx.co.id) (data reprocessed)

From Figure 1, it is known that there are fluctuations in several sub-sectors in the consumption sector. The sub-sectors that experienced increases were the pharmaceutical sub-sector and the household appliances sub-sector. Meanwhile, the sub-sectors that experienced a decline were the cosmetics and household goods sub-sector, the food and beverage sub-sector, and the cigarette sub-sector. The decline that occurred is known to coincide with the decline in the Indonesian Composite Stock Price Index (JCI). Therefore, it can be concluded that the sub-sector that experienced a decrease in PBV or the largest decline in company value was the cosmetics and household goods subsector, so the researchers decided to research these sub-sectors. Of the many factors that affect the value of the company, the factor that is considered important for investors when evaluating the company's prospects in the future, of which is understanding the company's profitability growth rate [5]. Profitability is the income earned by the company from the company's activities during a certain time. The higher the level of profitability of a business entity, the survival of the business entity will be more secure [6].

The signal theory states that a high ROE value will give managers the confidence to provide more detailed information because managers want to convince investors that the company can generate good profitability. Decision-making by analyzing the ROE ratio will be very helpful for investors. The greater the ROE value, the greater the share price, because the company will receive higher income or income so that the value of the company will increase [7]. Profitability has a significant positive effect on firm value, according to research conducted by [8];[9];[10].

In addition to profitability, liquidity is also a factor that affects firm value. Liquidity is an indicator that shows that the company can repay all short-term financial liabilities at maturity using existing capital [11]. Companies with good liquidity will be judged by investors as having good company values and will attract investors to put their capital in the company.

Liquidity is usually measured using the current ratio (CR), which is the ratio of current assets per current debt [12]. Instead, companies that have a high CR signal that the company has a great opportunity to develop their own company and ultimately increase the value of the company. High creditor confidence in providing funds is caused by information that the company to be funded has a high liquidity value, this situation will increase the value of the company [13]. Liquidity has a significant positive effect on firm value, according to the results of research researched by references [14],[15];[16].

**2. METHODS**

This study was conducted to determine the effect of profitability and liquidity on firm value. The object of this research is profitability, liquidity, and firm value. The independent variables in this study are profitability as measured by return on equity (ROE) and liquidity as measured by the current ratio (CR). While the dependent variable is a firm value measured by price to book value (PBV).

The subjects in this study were the cosmetics and household goods sub-sector companies, while the unit of analysis was the financial statements of the cosmetics and household goods sub-sector listed on the Indonesia Stock Exchange for eight consecutive years, from 2011 to 2018.

In this study, the data used is combined data between cross-section units covering 4 sub-sector companies of cosmetics and household needs listed on the Indonesia Stock Exchange and longitudinal units for 8 years, from 2011 to 2018.

This type of research is descriptive and verification research. The sampling technique in this study is purposive sampling, namely the selection of samples based on certain criteria. Based on the sampling technique, the samples in this study amounted to 4 companies. Hypothesis testing using t-test (partial significance test) and F test (simultaneous significance test). The data analysis method used is panel data regression analysis with the help of Eviews Version 10 software.

**3. RESULTS AND DISCUSSION**

The research was conducted by 4 companies in the sub-sector of cosmetics and household goods, there are PT. Martina Berto Tbk, PT Mustika Ratu Tbk, PT Mandom Indonesia Tbk, and Unilever Indonesia Tbk.

**3.1 Results**

***Descriptive Statistical Analysis***

According to Kaza et al. [17] descriptive statistics are used to summarize data in an organized manner by describing the relationship between variables in a sample or population.

**Table 1. Descriptive Statistics**

	<b>PBV</b>	<b>ROE</b>	<b>CR</b>
mean	13.40125	33.97969	350.6222
median	1.265000	8.930000	3605150
Maximum	82.44000	135.4100	1174,290
Minimum	0.210000	-37.98000	60.56000
Std. Dev.	22.97202	53.71921	244.2157

Source: *Eviews 10* output data

In the Tabel 1, the maximum value of the PBV variable is 82.44000, the minimum value of the PBV variable is 0.210000, the mean value of the PBV variable is 13.40125, and the standard deviation value of the PBV variable is 22.97202. The maximum value of the ROE variable is 135,4100, the minimum value of the ROE variable is -37.98000, the mean value of the ROE variable is 33.97969, and the standard deviation of the ROE variable is 53,71921. The maximum value of the CR variable is 1174,290, the minimum value of the CR variable is 60.56000, the mean value of the CR variable is 350.6222, and the standard deviation value of the CR variable is 244.2157.

**Assumption Test**

**Multicollinearity Test**

Multicollinearity is a phenomenon when two or more variables are correlated, if this happens, the standard error of the coefficients will increase [18]. Multicollinearity test is carried out when you want to check whether or not there are similarities between independent variables and control variables between variables in a model. A good regression model basically has no correlation between the independent variable and the control variable.

**Table 2. Multicollinearity Test.**

	ROE	CR
ROE	1.0000000	-0.586210
CR	-0.586210	1.0000000

Source: Eviews 10 output data

Based on the results of the multicollinearity test in the table, it is known that the coefficients of all X variables are low, namely less than 0.80, the researchers conclude that there is no multicollinearity in this study. This means that the profitability variable (ROE) and the liquidity variable (CR) are not related.

**Heteroscedasticity Test**

Heteroscedasticity test has the purpose to see there is the absence of unevenness variants and residuals from one observation to observation the other in the regression model. If the residual variance from one observation to another is constant, it is said to be homoscedasticity, and if the variance is different, it is said to be heteroscedasticity. The regression model is considered good if there is no heteroscedasticity or what occurs is homoscedasticity. The method used to detect heteroscedasticity in this study is to use ARCH. If hypothesis testing is done by t-test for independent variables < 0.05 then the model is declared heteroscedasticity, whereas if > 0.05 then the model does not experience heteroscedasticity.

**Table 3. Multicollinearity Test**

F- statist ics	0.192738	Prob. F(1.29)	0.6639
Obs*R- squared	0.204670	Prob.ChiSquare(1)	0.6510

Source: Eviews 10 output data

Based on the table above, the p-value is expressed by the value of Prob. Chi-square (2) on Obs \* R-squared is 0.6510. Because the p-value is 0.6510 > 0.05, the regression model is homoscedastic or does not occur heteroscedasticity.

**Multicollinearity Test**

Table 4 shows result of autocorrelation test.

**Table 4. Autocorrelation Test**

R-squared	0.841187	Mean dependent var	13.37047
Adjusted R-squared	0.830234	SD dependent var	22.98968
SE of regression	9.472360	Akaike info criterion	7.423693
Sum squared resid	2602.042	Schwarz criterion	7.561106
Likelihood logs	-115.7791	Hannan-Quinn criter.	7.469242
F-statistics	76.80218	Durbin-Watson sta t	2.197709
Prob(F-statistic)	0.000000		

Source: Data output *Eviews 10*

From the Table 4 shows that Unknown value du <D <4-du is 1.5736 <2.545144 <2.6906, and has drawn a conclusion if not there is autocorrelation in the model regression were used in the study of this.

**Test Model**

**Hausman test**

Hausmann test is to test that can be determined the test between the methods Fixed Effect and Random Effect most appropriate and will be used in modeling panel data. The hypothesis in tests Hausmann namely:  
H<sub>0</sub>: The model follows the Random Effect Model  
H<sub>1</sub>: The model follows the Fixed Effect Model

**Table 5. Hausman test**

Test Summary	Chi-Sq. Statistics	Chi-Sq. df	Prob.
Random cross-section	3.868575	2	0.1445

Source: Data output *Eviews 1 0*

From Table 5, the p-value is 0.1445. Therefore, if the test Hausmann value is greater than the critical value of

0.05, it can be stated that the data model according to the study's selected random effect model

**Panel Data Regression Analysis**

influences profitability and liquidity of the value of the company can be obtained through analysis of regression linear multiple panel data. The equation that is:

$$PBV_{it} = \beta_0 + \beta_1 ROE_{it-1} + \beta_2 CR_{it-1} + \epsilon_{it}$$

In the study of this model of regression of panel data that is selected is the Random Effect Model tested with the help of software Eviews 10. The table below is a result of the analysis of regression linear multiple of the panel data using a random effect model.

**Table 6. Results of Multiple Linear Regression Analysis Panel Data with Random Effect Model**

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	4.290146	3.342892	1.283364	0.2095
ROE	0.377206	0.030459	12.38396	0.0000
CR	-0.010570	0.006700	1.577681	0.1255
Effects Specification				
			SD	Rho
Random cross-section			0.000000	0.0000
Idiosyncratic random			7.258436	1.0000
Weighted Statistics				
R-squared	0.910505	Mean dependent var		13.40125
Adjusted R-squared	0.904333	SD dependent var		22.97202
SE of regression	7.105276	Sum squared resid		1464.063
F-statistics	147.5198	Durbin-Watson stat		2.354622
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.910505	Mean dependent var		13.40125
Sum squared resid	1464.063	Durbin-Watson stat		2.354622

Source: Data output Eviews 10

From the results of the processing of the data in the above found that the value of the constant (c) is as much as 4.290146. The coefficient of profitability with the ROE indicator has a positive effect on profitability with a coefficient value of 0.377206 and a significance level of 0.0000. Liquidity with the CR indicator has no effect on profitability with a coefficient value of -0.010570 with a significance level of 0.1255. The R-squared value of the model is 0.910505 indicates that 91.5% of profitability is affected by the variable independent in the model, while the remaining 9.5% is explained by other variables. Through this equation regression linear multiple of the panel data can be formulated:

$$PBV = 4,290 + 0,3772ROE - 0,0105CR$$

Interpretation of the equation stretcher is:

- Value constants of 4.290, meaning that if ROE (X1) and CR (X2) the value is 0 or not changed, so PBV (Y') will be worth 4,290
- The value of the coefficient of the regression of variable profitability was measured by ROE worth positive, the case is shown if the profitability of having a relationship that is in the same direction with the value of the company. So from that, if ROE experienced a rise of 1% (variable others considered fixed), then the value of the company will be increased by as much as 0.3772 or 37.72%
- The value of the coefficient of the regression of variable liquidity is measured with CR -value negative, meaning that it has a relationship that is the opposite direction to the value of the company. So that if the CR experienced a decline of 1% (variable others considered fixed), then the value of the company will rise by 0.0105 or 1:05%.

**Hypothesis testing**

Regression Significance Test (F Test)

**Table 7. Regression Significance Test (F Test)**

R- squared	0.910505	Mean dependent var	13.40125
Adjusted R-squared	0.904333	SD dependent var	22.97202
SE of regression	7.105276	Sum squared resid	1464.063
F-statistics	147.5198	Durbin-Watson stat	2.354622
Prob(F-statistic)	0.000000		

Source: Data output Eviews 10

From the results of the output of Eviews 10, the calculated F value is 147.5198 and the F table value is 3.33, so F arithmetic > F table means that H0 is rejected and H1 is accepted. Results are expressed that the relationship regression between profitability and liquidity of the value of the company means, the model's regression can be used to explain the effect of the variable independent of the variable dependent.

The procedure in sequence in the F-Test that has been carried out is as follows:

- Formulate a hypothesis

**Profitability**

Ho: 1 = 0, Profitability does not affect Firm Value

H1: 1 > 0, Profitability has a positive effect on Firm Value

**Liquidity**

Ho: 2 = 0, Liquidity does not affect Firm Value

Ho: 2 < 0, Liquidity harms Firm Value

2. Determine t table ii and t count with Eviews 10. software

#### **Profitability**

From the results of processing obtained t of 12.38396 and t-table of 1.69913 to establish the level of significance used at 0.05 (5%) df of  $(32-2-1) = 29b$

#### **Liquidity**

From the results of the processing of T as -1.577681 dan t table as much as 1.66256 to establish the level of significance that used at 0.05 (5%) Df of  $(32-2-1) = 293$ .

#### 3. Decision Criteria

Once the T value has been gained, it is subsequently compared to the t-table, and the provision of basic decisions are:

If the t count  $>$  t-table, then  $H_0$  is rejected and  $H_1$  accepted, whereas if t arithmetic  $\leq$  t-table, then  $H_0$  is received and  $H_1$  rejected.

### 3.2 Discussions

#### **Profitability**

Based on the standard test obtained by value t count 12.38396, the value of t table 1.69913 and 0.0000 probability, so significant and t count  $>$  t table, then  $H_0$  is rejected and  $H_1$  accepted, it has a sense of profitability impact positively and significantly to the value company.

The findings of this study are in line with the theory put forward [19] which states that firm value is influenced by firm profitability. In addition, this research is in line with the earlier research conducted by reference [20] which states that profitability has a significant positive effect on firm value. This means that when profitability increases, it coincides with an increase in the value of the company.

#### **Liquidity**

Based on the standard test value t of obtained t count of -1.577681 and t table amounted to 1.66256 with a probability of 0.1255 sehingga not exhibited significantly due to exceeding 0,05 and t count  $<$  t table then  $H_0$  is received and  $H_1$  rejected, meaning that the liquidity impact negatively on the value company.

The results of this study are not the same as the signal theory stated [21] if the level of ability to fulfill obligations is high, it means that the level of ratio is also high. The high liquidity ratio can also indicate the availability of company funds that are used to carry out the company's operating activities and to pay dividends.

## 4. CONCLUSIONS

### 4.1 Conclusions

The conclusion that has been successfully stated from this research is that the profitability of the cosmetics and household goods sub-sector companies listed on the IDX in 2011-2018 fluctuated from year to year, but still

showed an increasing trend. The liquidity of the cosmetics and household goods sub-sector companies listed on the IDX in 2011-2018 fluctuated from year to year and showed a downward trend. The value of companies in the cosmetics and household goods sub-sector companies listed on the IDX in 2011-2018 fluctuated from year to year and showed a trend that tends to decline with slow movements.

Profitability, as measured by return on equity, and Liquidity as measured by Current Ratio to firm value as measured by Price to Book Value, have an influence on each other. Where profitability has a positive and significant effect on firm value while liquidity has a negative and insignificant effect on firm value in cosmetics and household goods sub-sector companies listed on the Indonesia Stock Exchange in 2011 – 2018. Liquidity, as measured by the current ratio, and profitability as measured by return on equity have a simultaneous effect on firm value.

### 4.2 Suggestion

The company's management should do their best to comply with the ideal standard of industry average ROE. Profitability fluctuations as measured by ROE are caused by after-tax income and total equity. Therefore, company management should improve after-tax income to increase the percentage of profit using the company's funds.

Company management is expected to be more careful about the proportion in measuring the ability of a company to meet its current liabilities based on the company's current assets. Fluctuations in the liquidity ratio affect the company's image in the eyes of investors, therefore the management needs to maintain the stability of the short-term debt payment ratio and strive to show a positive trend.

The management possibly and carefully understands the factors that affect the value of the company, the goal for tilapia companies created as expected and has an impact on business continuity.

To researchers after the authors, if they want to research on firm value, they are expected to be able to do research by adding other factors to increase their observation period or expand their research subjects so that the results produced are better than the research.

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