



## THE EFFECT OF ROA, DPR, EPS, AND TATO ON THE FIRM VALUE ON BANKING COMPANIES LISTED ON BEI 2018-2020 PERIOD

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**Abstract:** The company's long-term goal is to maximize the value of the company, price to book value (PBV) ratio is one of the financial ratios used to quantify company worth, and it is employed in this study to represent firm value. The goal of this research was to see how return on assets, dividend payout ratio, earnings per share, and total asset turnover affected the value of banking companies listed on the Indonesia Stock Exchange from 2018 to 2020. Purposive sampling was employed to gather a total sample of 10 samples over three years, resulting in a total of 30 data points in this study. Multiple linear regression analysis methods with a significant level of 5% are employed in the technical study of the data (0.05). The findings show that return on assets and earnings per share have a positive and considerable impact on the value of a company (price to book value). The dividend payment ratio and total asset turnover variables, on the other hand, have no bearing on the firm's value. The independent variable's ability to explain the link between the dependent and independent variables, namely the firm value of 0.814 or (81.4 %).

**Keywords:** Dividend Payout Ratio; Earning Per Share; Price to Book Value; Return on Assets; Total Assets Turnover

### INTRODUCTION

Every business exists to make a profit. Companies that have gone public must also optimize their company value, which is represented in the market price of the company's stock (Martha et al., 2018). The company's value is a reflection of the public's recognition of the company. The book value, liquidation value, or share value of a company can all be used to estimate its worth. In this study, the price-book value firm value ratio will be applied (PBV). The price to book value ratio is a ratio that compares the market price per share to the book value per share. This metric is used to assess whether a stock is overvalued or undervalued. Many metrics can be used to estimate a company's worth, including financial and market information, as well as stock ratios, which can have a direct impact on the price to book value. Price to book value, which is widely used by stock market gurus, has been welcomed by value investors for decades. Value investors traditionally look for equities with book values below 3.0, indicating that the company may be undervalued (Chiu et al., 2021). The research covers an examination of profitability ratios represented by return on assets, as well as an examination of financial ratios with a dividend policy (dividend payout ratio). Analysis of market ratios, as measured by earnings per share, and activity ratios, as measured by total asset turnover.

Return on assets (ROA) is a profitability ratio defined by Suryasari & Artini (2020) as one of the profitability ratios that measure a company's capacity to increase net income by employing all of its assets. The higher the return on assets (ROA), the better, because the profit created by the company through asset management is increasing. According to the research of Pioh et al. (2018), the return on assets has a partial impact on company value. In research by Widodo (2019), ROA does not affect the firm value variable and is not significant. As a result, in this study, we use return on assets (ROA) as a proxy for the probability ratio analysis of banking organizations listed on the Indonesia stock exchange.

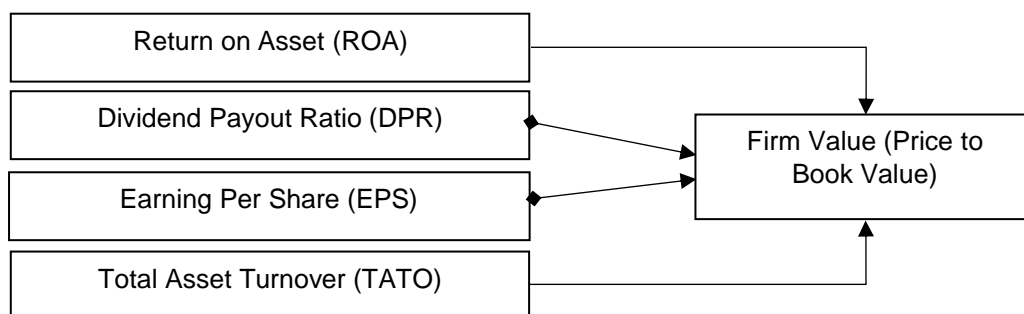


The dividend policy of a firm determines whether profits made will be given to shareholders as dividends or will be held as retained earnings for future investment financing. A comparison between dividends and profits available to common stockholders yields the dividend payout ratio. Dividends are one of the main reasons why people invest in stocks, therefore if the quantity of dividends isn't what they expected, they're less likely to buy a company or sell one they already own (Firdaus, 2020). The regression results demonstrate that the dividend payout ratio (X3) variable can reduce the influence of financial instrument assets on company value, similar to Suwaldiman & Ramadhan, (2019) research. Because previous research by Susanto & Viriany (2019) showed that the dividend payout ratio had no significant effect on firm value, the dividend payout ratio was chosen to represent financial ratio analysis in this study.

Earnings per share are the ratio between profits and shares outstanding, this ratio will provide an overview to shareholders about the profits to be obtained (if the bank will invest in shares). Earnings per share is the ratio used to measure the size of the earnings per share given to shareholders (Pakpahan et al., 2019). In this study earning per share is a measure of firm value by looking at the company's ability to generate profits from per share outstanding.

Other characteristics that can affect the value of a corporation in this study include total assets turnover, in addition to earnings per share, dividend payout ratio, and earnings per share (TATO). TATO has been used in research as a factor that influences firm value. One of these is a study by Misran & Chabachib (2017), which found that total asset turnover has a positive and significant impact on business value (price to book value). Utami & Prasentiono (2016) conducted another study that found total assets turnover has a favorable effect on firm value.

This study was conducted to examine the ratios; return on assets, dividend payout ratio, earnings per share, and total asset turnover that affect firm value (price to book value) in banking companies listed on the Indonesia Stock Exchange. Based on the sample of this study, there are 10 (ten) banking companies that are the object of research. Based on the explanation above, the framework of this research can be seen in Figure 1.



**Figure 1. Frame Work**  
Source: (Ibrahim et al., 2021)

## METHODS

The research method employed in this study was quantitative research. Quantitative research focuses on putting hypotheses to the test by utilizing numbers to measure study variables and statistical processes to analyze data (Sudarmanto et al., 2021). This type of research is descriptive. This study uses an analytical unit in the form of groups, namely the banking sub-sector listed on the Indonesia Stock Exchange for the 2018-2020 period. The population in this study are all banking sector companies



listed on the Indonesia Stock Exchange in the observation period used during 2018-2020 or for three (3) years. The sample used is *purposive sampling*, to obtain a total sample of 10 samples for 3 years so that the data amounted to 30 in this study.

Technical analysis of the data used is the multiple linear regression analysis method with a significant level of 5% (0.05). Before using multiple linear regression analysis, this study used the classical assumption test first. Then the hypothesis test is used to find out whether each independent variable affects the dependent variable.

The number of samples was determined by using purposive sampling. The criteria for sampling using purposive sampling in this study are as follows: (a) Banks operating during the observation period because what is observed in the research are financial statements and financial ratios ending in December 2020; (b) The Bank has completed, clear, and open financial statements during the observation period; (c) Banks have information about financial ratio data related to the measurement of other variables required; (d) The selected bank distributes dividends during the study period.

Based on the above criteria, the sampling in this study can be described in the following table: Banks that do not have complete information on financial ratio data are related to the measurement of other variables needed in this study. Banks that did not distribute dividends during the study period.

**Table 1. Tabulation Sample**

<b>Population</b>	<b>44</b>
Banks that do not have clear, complete, and open financial statements during the observation period (to fulfill the measurement of research variables).	(10)
Banks that do not have complete information on financial ratio data are related to the measurement of other variables needed in this study.	(10)
Banks that did not distribute dividends during the study period.	(14)
<b>Sample used</b>	<b>10</b>

Source: Processed data (2021)

Based on the population selection in table 1 above, the sample in this study was 10 (ten) banking companies that met the sampling criteria in the 2018 to 2020 period, so the amount of data in the study was 30 (thirty) for each variable.

## **RESULTS AND DISCUSSION**

The normality test is used to see if the regression model, independent variable, dependent variable, or both variables have a normal or abnormal distribution. This study used the One-Sample Kolmogorov Smirnov normality test (exact monte Carlo).



**Table 2. Normality Test Result**

		One-Sample Kolmogorov-Smirnov Test					
		ROA	DPR	EPS	TATO	PBV (Firm Value)	
N		30	30	30	30	30	
Normal Parameters <sup>a,b</sup>	Mean	2,0120	,3053	382,9563	,0643	1,7590	
	Std. Deviation	,86154	,11640	312,21006	,02046	,98001	
Most Extreme Differences	Absolute	,139	,118	,175	,178	,156	
	Positive	,139	,118	,175	,158	,156	
	Negative	-,099	-,089	-,131	-,178	-,118	
Test Statistic		,139	,118	,175	,178	,156	
Asymp. Sig. (2-tailed)		,145 <sup>c</sup>	,200 <sup>c,e</sup>	,020 <sup>c</sup>	,016 <sup>c</sup>	,060 <sup>c</sup>	
Monte Carlo Sig. (2-tailed)	Sig.	,633 <sup>d</sup>	,933 <sup>d</sup>	,333 <sup>d</sup>	,333 <sup>d</sup>	,500 <sup>d</sup>	
	99% Lower Confidence Bound Interval		,407	,816	,112	,112	,265
	Upper Bound		,860	1,000	,555	,555	,735

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Based on 30 sampled tables with starting seed 2000000.

e. This is a lower bound of the true significance.

Source: Data processed with SPSS (2021)

Based on table 2, the results of the normality test using the nonparametric test (one sample Kolmogorov Smirnov test) can be seen from the results of the exact monte Carlo significance value (sig) of each variable > 0.05. It can be concluded that the data is normally distributed. The Tolerance and Variance Inflation Factor (VIF) values were used to perform the multicollinearity test in this study. The multicollinearity test is used to see if a correlation exists between independent variables in a regression model.

**Table 3. Multicollinearity Test Result**

Model		Coefficients <sup>a</sup>		t	Sig.	Collinearity Statistics	
		Unstandardized Coefficients B	Standardized Coefficients Beta			Tolerance	VIF
1	(Constant)	,279	,342	,814	,423		
	ROA	,733	,144	5,093	,000	,466	2,146
	DPR	,133	,895	,016	,883	,660	1,515
	EPS	,001	,000	,445	,000	,636	1,572
	TATO	-8,846	4,973	-,185	,087	,691	1,446

a. Dependent Variable: PBV (Firm Value)

Source: Data processed with SPSS (2021)

In this study, based on the results of the multicollinearity test in table 3, above, it is known that the value of the VIF variance (Variance inflation factor) of the ROA, DPR, EPS, and TATO variables has an Inflation Factor Variant value smaller than 10 and a tolerance greater than 0.1. So, in this study, there were no cases of multicollinearity.



The heteroscedasticity test is used to determine whether the regression model has inequality invariance from one observation to the next. In this study, the heteroscedasticity test is spearman's rho.

**Table 4. Heteroscedasticity Test Result**

		Correlations					
			ROA	DPR	EPS	TATO	Unstandardized Residual
Spearman's rho	ROA	Correlation Coefficient	1,000	,549 <sup>**</sup>	,451 <sup>*</sup>	,459 <sup>*</sup>	-,015
		Sig. (2-tailed)	.	,002	,012	,011	,936
		N	30	30	30	30	30
	DPR	Correlation Coefficient	,549 <sup>**</sup>	1,00	-	,418 <sup>*</sup>	,016
		Sig. (2-tailed)	,002	.	,846	,022	,933
		N	30	30	30	30	30
	EPS	Correlation Coefficient	,451 <sup>*</sup>	-	1,00	-	,015
		Sig. (2-tailed)	,012	,846	.	,831	,936
		N	30	30	30	30	30
	TATO	Correlation Coefficient	,459 <sup>*</sup>	,418 <sup>*</sup>	-	1,00	,010
		Sig. (2-tailed)	,011	,022	,831	.	,958
		N	30	30	30	30	30
	Unstandardize Residual	Correlation Coefficient	-,015	,016	,015	,010	1,000
		Sig. (2-tailed)	,936	,933	,936	,958	.
		N	30	30	30	30	30

\*\* . Correlation is significant at the 0.01 level (2-tailed).  
 \* . Correlation is significant at the 0.05 level (2-tailed).

Source: Data processed with SPSS (2021)

Based on table 4 of the Heteroscedasticity test, we can see that the significance (sig) of each independent variable is not problematic because the unstandardized residual of the sig of each variable is > 0.05, where ROA has a sig of 0.936, DPR has a sig of 0.933, EPS has a sig of 0.936, TATO has a sig of 0.958. This means that in this research variable there is no heteroscedasticity.

The autocorrelation test in this study uses the Durbin Watson (DW) value. Criteria in this test are  $dU < DW < 4-dU$ .

**Table 5. Autocorrelation Test Result**

Model	R	Model Summary <sup>b</sup>			
		R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,902 <sup>a</sup>	,814	,784	,45554	1,682

a. Predictors: (Constant), TATO, EPS, DPR, ROA  
 b. Dependent Variable: PBV (Firm Value)

Source: Data processed with SPSS (2021)



Based on the table of autocorrelation test results above and the results of  $dI$  and  $dU$  obtained from the Durbin-Waston table, the following calculations can be obtained;

$$\begin{aligned} D_w &= 1,682 \\ d_U &= 1,542 \\ 4 - d_U &= 4 - 1,542 \\ &= 2,458 \end{aligned}$$

Based on table 5 and the results above, it can be explained that the  $dU$  value of  $1.542 < DW$  of  $1.682 < 4-dU$  of  $2.458$ . So, it can be seen that the results of the autocorrelation test using Durbin Watson in this study did not occur autocorrelation.

The analytical technique used in this study is multiple linear regression analysis to find out the description of ROA, DPR, EPS, and TATO on PBV (Company Value). The results of the regression analysis for this study can be seen in Table 6 below:

**Table 6. Multiple Linear Regression Analysis Test Result**

Model	Coefficients <sup>a</sup>				t	Sig.
	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta			
1 (Constant)	,279	,342			,814	,423
ROA	,733	,144	,644		5,093	,000
DPR	,133	,895	,016		,149	,883
EPS	,001	,000	,445		4,112	,000
TATO	-8,846	4,973	-,185		-1,779	,087

a. Dependent Variable: PBV (Firm Value)

Source: Data processed with SPSS (2021)

Based on Table 6, it can be seen that the multiple linear regression equation in this study is:  $PBV = 0,279 + 0,733X_1 + 0,133X_2 + 0,001X_3 - 8,846X_4 + e$ .

From this equation it can be explained as follows:

Constant (a) = 0.279 indicates a constant value, where if the value of the independent variable is equal to zero, then the firm value variable (Y) is equal to 0.279.

The coefficient of  $X_1$  ( $\beta_1$ ) = 0.733, indicates that the variable Earning Per Share ( $X_1$ ) has a positive influence on firm value (Y). This means that if the other variables are fixed in value and the capital structure variable is increased by one unit, the firm value will decrease by 0.733. The coefficient of  $X_2$  ( $\beta_2$ ) = 0.133 indicates that the Dividend Payout Ratio ( $X_2$ ) has a positive effect on firm value (Y). This means that if the other variables are fixed in value and the company's growth variable is increased by one unit, it will increase the value of the company by 0.133. The coefficient of  $X_3$  ( $\beta_3$ ) = 0.001 indicates that Earning Per Share ( $X_3$ ) has a positive effect on firm value (Y). This means that if the other variables have a fixed value and the company growth variable is increased by one unit, it will increase the company value by 0.001. The coefficient of  $X_4$  ( $\beta_4$ ) = - 8.846 indicates that Total Asset Turnover ( $X_4$ ) harms firm value (Y). This means that if the other variables have a fixed value and the company growth variable is increased by one unit, the company value will decrease by 8.846.

R-Squared is a statistical measure of fit that indicates how much variation of a dependent variable is explained by the independent variable(s) in a regression model.



**Table 7. R-Square Test Result**

Model	R	Model Summary <sup>b</sup>		
		R Square	Adjusted R Square	Std. Error of the Estimate
1	,902 <sup>a</sup>	,814	,784	,45554

a. Predictors: (Constant), TATO, EPS, DPR, ROA  
 b. Dependent Variable: PBV (Firm Value)

Source: Data processed with SPSS (2021)

Based on table 7, the value of R Square (R<sup>2</sup>) is 0.814, which means 0.814 or 81.4% of the independent variables (ROA, DPR, EPS, and TATO) can explain PBV (firm value). While the remaining 19.6% is influenced or explained by other variables that are not included in the research model. The F-test is performed to determine the effect of return on asset, dividend payout ratio, earning per share dan total asset turnover to firm value (price to book value).

**Table 8. F-Test Result**

Model		ANOVA <sup>a</sup>				
		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22,664	4	5,666	27,304	,000 <sup>b</sup>
	Residual	5,188	25	,208		
	Total	27,852	29			

a. Dependent Variable: PBV (Firm Value)  
 b. Predictors: (Constant), TATO, EPS, DPR, ROA

Source: Data processed with SPSS (2021)

Based on table 8, the results of the F statistical test in this study, the F value is 27.304 with a significance value of  $0.000 < 0.05$  which means that all independent variables (ROA, DPR, EPS, and TATO) simultaneously and significantly affect the Firm Value variable (Price to Book Value). With  $F_{count} 27.304 > F_{table} 2.74$  obtained from table f with df 1 (for the numerator) =  $k - 1$  and Df 2 (for the denominator) =  $n - k$ , it can be concluded that the regression model obtained is appropriate. This means that the independent variable simultaneously affects the PBV (firm value) as the dependent variable in the study. A T-Test (partial) was conducted to determine the effect of each independent variable on the dependent variable.

**Table 9. T-Test Result**

Model	Coefficients <sup>a</sup>					
	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	
						B
1 (Constant)	,279	,342		,814	,423	
	ROA	,733	,144	,644	5,093	,000
	DPR	,133	,895	,016	,149	,883
	EPS	,001	,000	,445	4,112	,000
	TATO	-8,846	4,973	-,185	-1,779	,087

a. Dependent Variable: PBV (Firm Value)

Source: Data processed with SPSS (2021)



Based on table 9, the results of the t-test (partial test) are known that the t-table in this study is 0.68404, which is obtained from the t-table 26 with a significant 5% by calculation;  $0.05/2$  and  $nk - 1$ . The interpretation of the results is as follows:

Return on Assets (ROA) has a value of  $t_{count} 5.093 > t_{table} 0.68404$  and significant at  $0.000 < 0.05$  then  $H_1$  is accepted, which means Return on Assets is a partially positive and significant effect on the price to book value (firm value). DPR has a value of  $t_{count} 0.149 < t_{table} 0.68404$  and is significant at  $0.883 > 0.05$  then  $H_2$  is rejected, which means the Dividend Payout Ratio partially has no positive and insignificant effect on the price to book value (firm value). Earning Per Share has a value of  $t_{count} 4,112 > t_{table} 0.68404$  and significant at  $0.000 < 0.05$  then  $H_3$  is accepted, which means earning per share is a partially positive and significant effect on the price to book value (firm value).

Total assets turnover the partial test coefficient value of total assets turnover has a value of  $t_{count} -1.779 < t_{table} 0.68404$  and is significant at  $0.087 > 0.05$  then  $H_4$  rejected, which means Total Assets Turnover is partially not positive and insignificant effect on the price to book value (firm value).

### CONCLUSION

Based on the test results that have been described previously, the conclusions in this study are; Simultaneously, the independent variables consisting of return on assets, dividend payout ratio, earnings per share, and total asset turnover have a positive and significant influence on the company value (price to book value) of banking companies listed on the Indonesia Stock Exchange for the period 2018 – 2020.

Partially, the return on assets and earnings per share have a positive and significant effect on the value of the company, which means that any increase in the return on assets and earnings per share of banking companies listed on the IDX for the period 2018-2020 can increase the value of the company which can encourage investor confidence in the market. capital. While the dividend payout ratio has a positive but not significant effect, which means an increase in dividend distribution or company profits does not significantly affect the value of banking companies listed on the IDX. Total asset turnover has a negative and insignificant effect on the value of banking companies listed on the Indonesia Stock Exchange for the period 2018-2020, which means that the amount of turnover of company assets from the profits earned does not affect the value of banking companies listed on the Indonesia Stock Exchange for the period 2018-2020.

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