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The Effect of Financial Ratios on the Firm Value

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Abstract

This study aims to examine the effect of financial ratios on firm value in investment sector companies listed on the Indonesia Stock Exchange for the 2014-2018 period. This study uses panel data analysis method to determine financial ratios that affect firm value (Profitability, Leverage and Tangibility) in investment companies listed on the Indonesia Stock Exchange, using a sample of 8 companies selected using purposive sampling method. The results of empirical testing state that the Debt to Asset Ratio has a positive effect on firm value, while Net Profit Margin and Asset Tangibility have no effect on firm value.

Keywords: *Net Profit Margin; Debt to Assets Ratio; Tangibility.*

1. INTRODUCTION

Companies are one of the drivers of economic value that have the objective of carrying out operations in their business. There have been many companies in Indonesia that implement long term and short term companies on their goals. The implementation of short-term goals in the company is aimed at obtaining the greatest possible profit with existing resources, while the long-term goal in the company is to maximize firm value. According to Jariah (2016), the company value can maximize the welfare of shareholders if the share price increases. Darminto (2010) states that management has several functions, one of which is managing assets efficiently with the aim of improving financial performance and increasing firm value. Company value shows the value of various assets owned by the company, including the securities that have been issued. High company value will have an impact on the welfare of the company's management as managers and shareholders as the owner of the company, with high company value will also have an impact on the high price of shares owned by the company and in the end the shareholders in the coming period will increase along with the increase in share prices.

Based on the theory that to measure the level of profit of a company, the profitability ratio is used (Kasmir, 2014), according to Munawir (2010: 105), leverage is the amount of loan capital used to invest in assets to generate profits. for companies, and according to Indrajaya (2011) fixed assets can be used as collateral in making debt loans and this will further increase the capacity of debt levels that can benefit the company, so it can be concluded that financial ratios (profitability, leverage, and tangibility) can increase the value company. And based on previous research that profitability has a significant effect on firm value (research by Dzulfikar Dwi Wahyu, Mohammad Kholiq Mahfud (2018), Amalia Husna Dita and Isrochmani Murtaqi (2014), Shinta D. Manurung,

Based on these theories and journals, the achievement of company profits is a must, as stated by Tandelilin (2010) that investment activities are aimed at obtaining profits in the future,

these benefits are reflected in the development of stock market prices, according to Harjito (2012), that increasing prosperity owner of capital is defined as an increase in the company's share price, because the stock market price describes the company's performance, as stated by Gusni and Vinealda (2016), that the company value reflects the market price of a company.

2. LITERATURE REVIEW

Profitability

Profitability can be an influence on the value of the company in addition to dividend policies, debt policies and investment policies. From an investor's point of view, one important indicator to see the company's prospects in the future is to see the extent to which the company's profitability has grown. This indicator is very important to pay attention to to find out how much return an investor can receive on his investment. According to Brigham (2016: 128) profitability is a measure for investors and creditors because basically creditors and investors see how much the company's ability to earn a profit.

Leverage

Another factor that can affect firm value is leverage. Sources of funding within the company can be obtained from internal company in the form of retained earnings and depreciation and from external companies in the form of debt or issuance of new shares. Leverage shows the ability of a company to fulfill all obligations. if the company is liquidated (Agnes, 2004). So leverage is a ratio that measures how much a company uses financing that comes from debt (financial leverage) (Brigham et al, 2006). The research conducted by Yuyetta (2009) found that leverage has a negative effect on firm value. Likewise, with the research conducted by Naceur and Goaied (2002) which stated that leverage has a significant negative effect on firm value. This statement is also supported by Odongo, Leonard, and Mokoteli (2014) who state that leverage has a significant negative effect on firm value, while research conducted by Cheng and Tzeng (2011) states that leverage has a positive effect on firm value and is supported by Maryadi et al. (2012). Likewise, research conducted by Hermuningsih (2013) states that leverage has a positive and significant effect on firm value. Apart from company size and leverage, profitability can also affect firm value.

Tangibility

Tangibility of Assets (TA) is a ratio that measures the share of fixed assets from total assets. A high ratio indicates a lot of fixed assets and relatively small working capital, which can reduce the company's ability to maintain inventory and carry receivables. This has the potential to limit the company's ability to respond to greater demand for the company's products or services. However, companies can more easily borrow by mortgaging fixed assets. If the high ratio indicates that the larger the proportion of fixed assets in the company, the easier it is to raise more debt at a lower rate, as long as they pledge these fixed assets as collateral to creditors. Thus, that the Asset Tangibility can increase the Debt Ratio.

The value of the company

Before financial managers make financial decisions, an understanding of the company's financial condition is needed. To understand the company's financial condition, an analysis of financial statements is needed (Husnan, 2004). Financial statement analysis is an analytical tool for comprehensive corporate financial management, which can be used to detect or diagnose a company's health level. Financial statement analysis is generally used by capital providers, such as creditors, investors, and by the company itself in relation to managerial interests and company performance appraisals (Harmono, 2011: 104).

Evaluation of company performance can be described in the company's financial statements. Performance indicators will be reflected by ratios, for public companies these ratios will be one of the focal points in decision making, especially in assessing stock prices (Kamaludin, 2011: 33). Financial ratios are designed to help evaluate financial reports or help us identify some of the company's financial strengths and weaknesses (Kamaludin, 2011: 40).
Financial management as an activity of obtaining funds, using funds and managing assets efficiently requires several goals or objectives. To assess whether these objectives have been achieved or not, several standards are needed in measuring the efficiency of company decisions. As a normative objective, the objective of financial management is concerned with decisions in the financial sector to maximize firm value. More broadly this goal is also one of the goals of the company. For companies that have gone public, the company's value will be reflected in the market value of its shares.

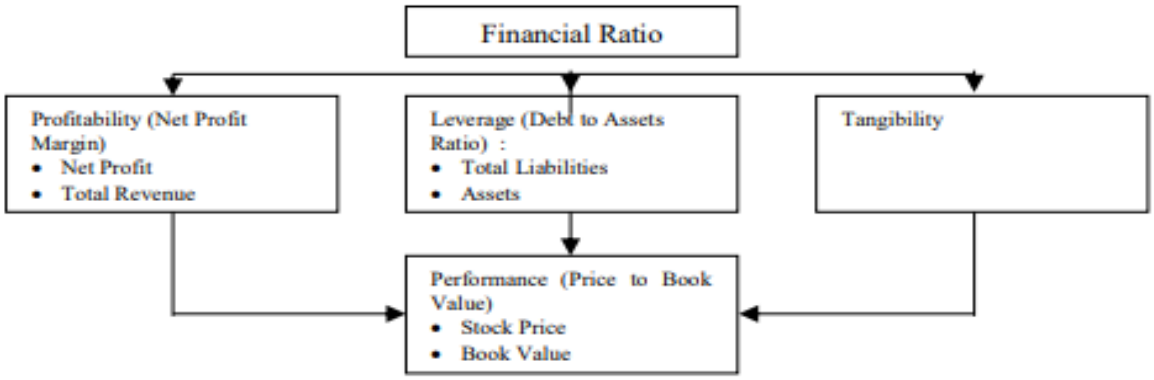

Figure 1. Framework

METHODOLOGY

Descriptive Analysis Test

Analyzing data from 8 investment sector companies on the Indonesia Stock Exchange for the period 2014-2018, descriptive data of Net Profit Margin, Debt to Assets Ratio, Tangibility, and: Price to Book Value, in the form of a minimum description. score; the maximum value, and the standard deviation.

Classic assumption test

The classical assumption test is used in research so that the conclusions obtained do not cause bias values.

Normality test

Normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables, whether the data distribution is normally distributed or not.

Autocorrelation Test

Autocorrelation test is a statistical analysis conducted to determine whether there is a correlation between the variables in the prediction model and changes in time. Therefore, if the assumption of autocorrelation occurs in a prediction model, the disturbance value is no longer paired independently, but is paired in autocorrelation.

Multicollinearity Test

Multicollinearity is a situation that shows a strong correlation or relationship between two or more independent variables in a multiple regression model. The regression model referred to in this case includes: linear regression, logistic regression, panel data regression and cox regression.

Heteroscedasticity Test
Heteroscedasticity test is a test that assesses whether there is an inequality of variance of the residuals for all observations in the linear regression model. This test is one of classic assumption test to do on linear regression.

F test
The F test is known as the Simultaneous Test or the Model / Test ANOVA, namely a test to see how all the influences are variable jointly independent of the dependent variable. Or to test whether our regression model is good / significant or not good / non-significant. This article describes the F test and T test in research.

Determination Coefficient Test
Testing how much the dependent variable Price to Book Value can be explained by the variation of three independent variables: Debt to Assets Ratio, Net Profit Margin, Tangibility. Meanwhile, how much is left can be explained by other factors that are not examined. Meanwhile, how much is left can be explained by other factors that are not examined.

Hypothesis Test (t test)
Test whether the three independent variables Debt to Assets Ratio, Net Profit Margin, Tangibility have an effect or not and are significant or not on the dependent variable Price to Book Value, by comparing t count with t_{table}.

RESULTS AND DISCUSSION

Descriptive Analysis Test
Descriptive analysis is a research method that provides an overview of situations and events so that this method intends to accumulate basic data applies. Table 1 shows the results of descriptive statistical testing for the independent variables in the study.

Table 1. Descriptive test results

	NILAI	DAR	NPM	TANGIBILITY
Mean	1.903750	0.627750	10.00350	422.9688
Median	0.530000	0.520000	3.270000	6.070896
Maximum	17.44000	1.920000	181.8300	6022.165
Minimum	-2.240000	0.160000	-176.3900	-129.3383
Std. Dev.	3.474612	0.422954	64.94306	1380.572
Observations	40	40	40	40

Source: Primary data processing results, 2020

Based on the table above, it appears that the results of data analysis obtained from testing of 8 Investment Sector Companies on the IDX for the 2014-2018 period, namely the DAR variable (X1) has a minimum value of 0.160000; maximum value 1.920000; and standard deviation 0.422954. The variable NPM (X2) has a minimum value of -176.3900; the maximum value is 181.8300 and the standard deviation is 64.94306. The TANGIBILITY (X3) variable has a minimum value of -129.3383; the maximum value is 6022,165 and the

standard deviation is 1380,572. The firm value variable (Y) has a minimum value of -2.240000; the maximum value is 17.44000 and the standard deviation is 3.474612.

Classic assumption test

Table 2. Classic assumption Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.318413	1.145577	4.642565	0.0000
DAR	-4.893998	1.502088	-3.258131	0.0025
NPM	-0.019974	0.009985	-2.000343	0.0530
TANGIBILITY	-0.000337	0.000398	-0.848283	0.4019

R-squared	0.234465	Mean dependent var	1.903750
Adjusted R-squared	0.170671	S.D. dependent var	3.474612
S.E. of regression	3.164242	Akaike info criterion	5.236344
Sum squared resid	360.4475	Schwarz criterion	5.405232
Log likelihood	-100.7269	Hannan-Quinn criter.	5.297408
F-statistic	3.675319	Durbin-Watson stat	0.769377
Prob(F-statistic)	0.020838		

Source: Primary data processing results, 2020

The classical assumption test is used in research so that the conclusions obtained do not cause biased values. The classical assumption test in this study includes normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

Normality test

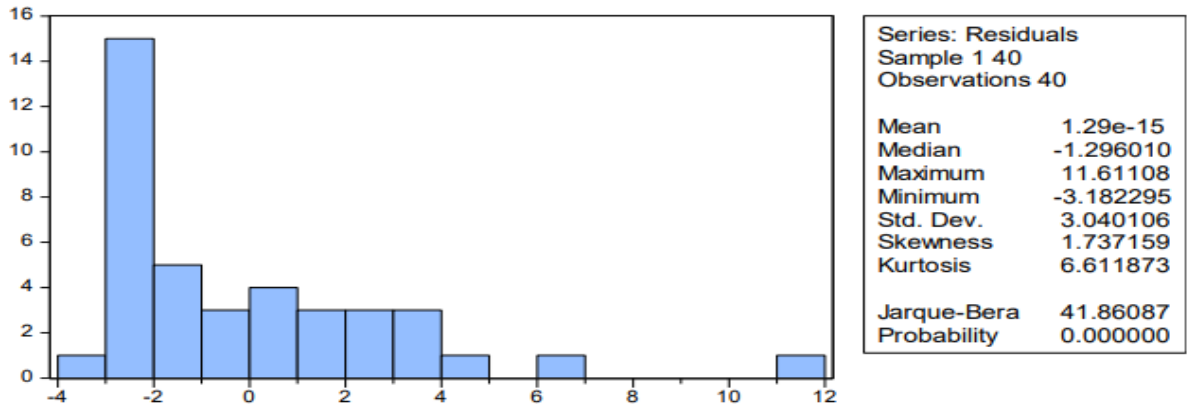

Figure 2. Normality Test Results
Source: Primary data processing results, 2020

Based on Figure 1.2. The results of the Normality Test obtained the Jarque-Bera probability value of 0.0000000. (0.000000 <0.05), that the data is not normally distributed, even though this data can still be used for further testing, in accordance with McClave's (2011) central limit argument that most of the sample population with an observation size (n)> 30 is considered to be normally distributed, from data of 40 observations.

Autocorrelation test

Table 3. Autocorrelation Test Results

R-squared	0.234465	Mean dependent var	1.903750
Adjusted R-squared	0.170671	S.D. dependent var	3.474612
S.E. of regression	3.164242	Akaike info criterion	5.236344
Sum squared resid	360.4475	Schwarz criterion	5.405232
Log likelihood	-100.7269	Hannan-Quinn criter.	5.297408
F-statistic	3.675319	Durbin-Watson stat	0.769377
Prob(F-statistic)	0.020838		

Source: Primary data processing results, 2020

Based on the data in Table 3, the results of the autocorrelation test above, there is a Durbin Watson value of 0.769377, which is then compared with the DW table with the number of observations (n) = 40 and the number of independent variables (k) = 3 with a significance level of 5%, then the value is obtained. dL =1.39083 and the value dU = 1,59999, the provisions of dU <dW <4-dU which means there is no autocorrelation, it can be seen that the provisions of dU (1.59999) <dW (1.39083) <4-dU (2.40001) indicate that the conditions are not met, which means there is an autocorrelation problem. because according to Basuki and Yuliadi (2015) the autocorrelation test has no meaning for panel data, because it is only performed on time series data.

Multicollinearity Test

Table 4. Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.312346	5.242865	NA
DAR	2.256267	5.124268	1.572175
NPM	9.97E-05	1.677794	1.637935
TANGIBILITY	1.58E-07	1.286485	1.173510

Source: Primary data processing results, 2020

Based on Table 4 Multicollinearity Test Results, VIF (Variance Inflation Factors) shows the value of each variable is less than 10 and the results of independent tolerance show that the value of each variable is greater than 0.10, so it can be said that there are no symptoms of multicollinearity between the three variables. independent.

Heteroscedasticity Test

To find out, whether in the regression model there is an inequality of variance from the residuals of one observation to another. If the residual variance from one observation to another is constant, it is called homoscedasticity. The following table is the result of the heteroscedasticity test.

From one observation to another constant observation, it is called homoscedasticity. The following table is the result of the heteroscedasticity test

Table 5. Heteroscedasticity Test Results

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	3.351565	Prob. F(3,36)	0.0295
Obs*R-squared	8.732830	Prob. Chi-Square(3)	0.0331
Scaled explained SS	19.84805	Prob. Chi-Square(3)	0.0002

Source: Primary data processing results, 2020

Based on Table 2, the Heteroscedasticity Test results obtained the probability value Obs * R-squared or the Prob value. Chi-Square (0.0331, <0.05), heteroscedasticity symptoms occur in the regression model of this study.

Table 6. F Test Results

R-squared	0.234465	Mean dependent var	1.903750
Adjusted R-squared	0.170671	S.D. dependent var	3.474612
S.E. of regression	3.164242	Akaike info criterion	5.236344
Sum squared resid	360.4475	Schwarz criterion	5.405232
Log likelihood	-100.7269	Hannan-Quinn criter.	5.297408
F-statistic	3.675319	Durbin-Watson stat	0.769377
Prob(F-statistic)	0.020838		

Source: Primary data processing results, 2020

Based on the F-test table, the significance level value is 0.020838 <0.05 (significance level), which means that the three variables of Debt to Assets Ratio, Net Profit Margin, and Tangibility have a simultaneous effect on Price to Book Value.

Table 7. The variables of the t test results are Debt to Assets Ratio, Net Profit Margin and Tangibility

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.318413	1.145577	4.642565	0.0000
DAR	-4.893998	1.502088	-3.258131	0.0025
NPM	-0.019974	0.009985	-2.000343	0.0530
TANGIBILITY	-0.000337	0.000398	-0.848283	0.4019

Based on the t-test table, the significance value (0.0035 <0.05) and the t count is greater than the t table (-3.141256> 1.68709). This means that partially Debt to Assets has a significant effect on Price to Book Value, the significance value (0.0473> 0.05) and t count is greater than t table (-2.057924 <-1.68709). This means that partially Net Profit Margin does not have a significant effect on Price to Book Value, the significance value (0.9285 <0.05) and t count is smaller than t table (-0.090448> -1.68709), it means that partially Tangibility does not have a significant effect on Prices for Book Value,
Determination Coefficient Test

Table 8. Coefficient of Determination Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.318413	1.145577	4.642565	0.0000
DAR	-4.893998	1.502088	-3.258131	0.0025
NPM	-0.019974	0.009985	-2.000343	0.0530
TANGIBILITY	-0.000337	0.000398	-0.848283	0.4019

Source: Primary data processing results, 2020

Based on the table the value of R Square is 0.341899, meaning that 21.11% Price to Book Value can be explained by variations of the three variables, namely Debt to Assets, Net Profit Margin, Tangibility, while the remaining 78.89% is explained by other factors not examined.

Hypothesis Test (T Test)

Table 9. Hypothesis Test (T Test) Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.318413	1.145577	4.642565	0.0000
DAR	-4.893998	1.502088	-3.258131	0.0025
NPM	-0.019974	0.009985	-2.000343	0.0530
TANGIBILITY	-0.000337	0.000398	-0.848283	0.4019

Source: Primary data processing results, 2020

1) T test for DAR Based on the results of the t-test table analysis, it shows that the DAR variable has a significance value of (0.0025 <0.05), which means that DAR has a significant and significant effect on PBV, besides that it is also seen that t is greater than t table, namely (-3.258131 <1.68709). This means that DER has a significant effect on PBV
2) The t test for NPM Based on the results of the t-test table analysis, it shows that the NPM variable has a significance value of (0.0530> 0.05) which means that NPM has no and no significant effect on PBV, besides that it is also seen that t is greater than t table. namely (-2.000343 <1.68709). This means that NPM on PBV has no significant effect.
3) The t test for TANGIBILITY Based on the results of the t-test table analysis, it shows that the TANGIBILITY variable has a significance value of (0.4019> 0.05), which means that NPM has no effect and is not significant to PBV, besides that it is also seen that t is greater than t table. namely (-1.848283 <1.68709). This means that TANGIBILITY has no significant effect on PBV.

Conclusion

Referring to the research results obtained and discussion of the research, the following conclusions can be drawn:

1. Description of the variables Debt to Assets, Net Profit Margin, Tangibility, and Price to Book Value during the 2014-2018 research period, there are data with high disparities in Debt to Assets Ratio, Tangibility, and Price to Book Value, while Net Profit Margin disparities are classified as low, while the highest standard deviation from the average is Tangibility, then Net Profit Margin, while the lowest is Debt to Assets, then Price to Book Value. This shows that the variable data description is quite varied,
2. The three variables of Debt to Assets Ratio, Net Profit Margin, Tangibility together have an effect on Price to Book Value, but partially Debt to Assets has a significant effect on Price to Book Value, Net Profit Margin has no significant effect on Price to Book Value and Tangibility also has no significant effect on Price to Book Value. Investors must be aware of this, especially company policies related to asset management and risk management in debt policies.
3. The low determinant coefficient of Price to Book Value by the three variables of Debt to Assets, Net Profit Margin, and Tangibility, so that issuers must work hard by prioritizing improvements in everything related to asset management and risk management in debt policy, then improving professional financial management in balancing capital structure. Likewise, for future researchers, in order to further expand research on other variables about firm value.
4. Net Profit Margin (NPM) has a negative effect on the value of companies listed in the investment sector listed on the IDX in 2014-2018
5. Debt to Asset Ratio (DAR) has a positive effect on the value of companies listed in the investment sector listed on the IDX in 2014-2018.
6. Tangibility of Assets (TA) has a negative effect on the value of companies listed in the investment sector listed on the IDX in 2014-2018.

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