

THE EFFECTS OF FINANCIAL LEVERAGE AND OPERATING LEVERAGE TOWARDS PROFITABILITY

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Abstract---This study aims to obtain empirical evidence and find clarity of phenomena and conclusions about the influence of the two variables mentioned above towards profitability of Property and Real Estate Companies Listed in the Indonesia Stock Exchange for The Period of 2013-2017. The research was conducted using descriptive methods. This type of research is quantitative research. The study population comes from all Property and Real Estate Companies Listed on The Indonesia Stock Exchange for The Period of 2013-2017, the sampling technique uses a purposive sampling method and based on the criteria selected 41 research samples on property and real estate companies for the period 2013-2017. Testing on the research hypothesis used multiple linear regression analysis techniques. The results of the study indicates that financial leverage has a partial effect on earning per share; operating leverage does not partially effect on earning per share; financial leverage and operating leverage together or simultaneously have a significant effect on profitability (earning per share) of a Property and Real Estate Companies Listed on The Indonesia Stock Exchange for The Period 2013-2017.

Keywords---Financial Leverage, Operating Leverage, Profitability

I. Introduction

One of the sub-sectors listed on the Indonesia Stock Exchange (IDX), namely property and real estate are experiencing the development of very whether this. The that providing facilities for capital market activities in Indonesia is the Indonesia Stock Exchange (IDX). In Indonesia has tight industrial competition to the sector property and real estate. The rapid growth of property and real estate companies in Indonesia, with the increasing number of companies listed on the Indonesia Stock Exchange (IDX) from year to year which is increasing. There are 48 public-listed property and real estate companies listed on the Indonesia Stock Exchange (IDX) in 2017 (www.sahamok.com). There are several companies that shifted their sub-sectors from the property and real estate sub-sector in 2017.

In 2011 Gross Domestic Product (GDP) was at the highest level with a growth of 6.7%. Not only that, the United States dollar against the rupiah has strengthened (www.marketeers.com). In 2012 until the second quarter of 2015, business conditions for the real estate and property sector were down, because in 2012 it was a political year because every year there was a political or election property prices corrected from 20 percent to 30 percent. The development of property prices from year to year is very fluctuating, in the last two years namely 2016 and 2015 property prices have slowed.

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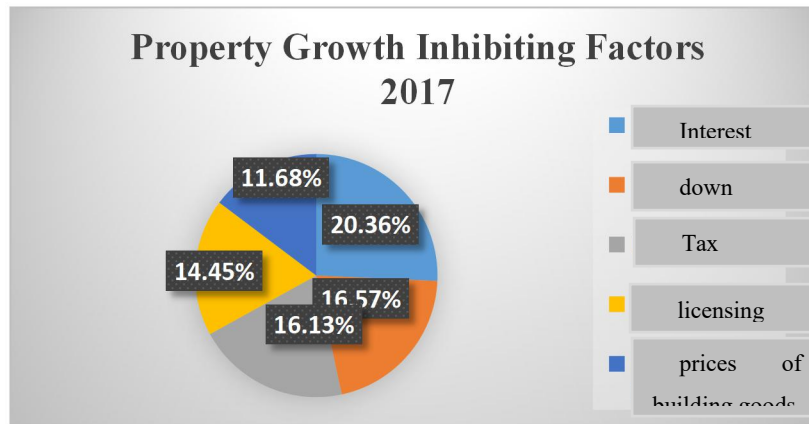
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Developments in property prices can be seen from Bank Indonesia (BI) data. The following are developments from 2013 to 2015.

In 2015, by 27.11% from the previous quarter (26.02%) prices of commercial property increased. In Makassar, the area grew by 52.27%, mainly industrial land (30.96%). In Eastern Indonesia the demand for industrial land is increasing. The hotel segment (2.77%) experienced the lowest price increase after rising in the previous quarter by 21.44%. A slowing economy is causing weak demand.



Picture 1 Property Growth Inhibiting Factor 2017

Source : www.detik.com

The survey mentioned factors that hindered the growth of the property business were mortgage interest (20.36%), down payment requirements (16.57%), taxes (16.13%), licensing (14.45%) and rising prices for construction materials (11.68%). More than 76% of consumers still rely on bank credit (KPR / KPA) to buy a house (www.detik.com).

Based on previous studies conducted by Indo Ratmana Putra (2013) found that operating leverage has no significant effect on earnings per share and financial leverage has a significant effect on earnings per share. Furthermore, Abdul Hamid's research, Bertilia Lina Kasrina and Wardoyo (2012), Okta Briliyan Men, Dwiatmanto and Fransisca Yaningwati (2013), Alvian Alvin Mubarak, Palti MT Sitorus and Anisah Firlu (2016) that influence financial leverage and operating leverage on profitability (earning) per share) earnings per share are still inconsistent with the findings, there are those who say the use of debt has an effect on earnings per share and there are also those who say otherwise.

II. Literature review

Financial Management

Leverage derived from financial activities is called financial leverage (Mardiyanto, 2009: 249). According to Musthafa (2017: 89) financial leverage is the use of assets and sources of funds by companies that have fixed costs (fixed costs) with a view to increasing the potential returns of shareholders. Based on the theories above, the synthesis of financial leverage is the use of funds with fixed expenses in the hope that it will provide benefits that will increase earnings per share.

Financial Leverage

Leverage derived from operating activities is called operating leverage (Mardiyanto, 2009: 249). According to Prawironegoro (2010: 155) operating leverage, which is the use of high technology assets to produce high quantity and quality outputs, the consequences are to bear high fixed costs, such as depreciation, asset maintenance, insurance and others. Based on the theories above, the synthesis of operating leverage is the use of fixed costs from operating activities or the company's operating expenses to determine changes in operating income as a result of changes in sales, so the company can find out the operating profit of the company.

$$DFL = \frac{\text{Presentase Perubahan EPS}}{\text{Presentase Perubahan EBIT}}$$

Source : Halim (2015:91)

Leverage Operasi (Operating Leverage)

Leverage derived from operating activities is called operating leverage (Mardiyanto, 2009: 249). According to Prawironegoro (2010: 155) operating leverage, which is the use of high technology assets to produce high quantity and quality outputs, the consequences are to bear high fixed costs, such as depreciation, asset maintenance, insurance and others. Based on the theories above, the synthesis of operating leverage is the use of fixed costs from operating activities or the company's operating expenses to determine changes in operating income as a result of changes in sales, so the company can find out the operating profit of the company.

$$DOL = \frac{\text{Presentse Perubahan EBIT}}{\text{Presentase Perubahan Penjualan}}$$

Source : Syamsuddin (2016:109)

Profitabilitas

To measure the profit level of a company, profitability ratios are used (Kasmir, 2014: 196). According to Irham Fahmi (2011: 135) profitability ratios are ratios that measure the overall effectiveness of management as indicated by the size of the level of profits obtained in relation to sales and investment. In Lukman Syamsudi (2009: 61) several indicators are used in measuring the level of company profitability, i.e : *Gross working Capital, Operating Profit Margin, Net Profit Margin, Return On Investment, Return On Equity, Return On Common Stock Equity, Earning Per Share, and Basic Earning Power.*

According to Tandelilin (2016: 374) earnings per share (earnings per share) shows the size of the company's net profit that is ready to be distributed to all shareholders of the company (Hussain et al., 2019). According to Oei (2009: 150) earnings per share is calculated by dividing earnings after tax or corporate profits after tax by the number of shares outstanding. Based on the theories above, the synthesis of earnings per share is earnings per share or net income of a company to be distributed to shareholders divided by the number of shares of a company.

$$EPS = \frac{\text{Laba bersih setelah bunga dan pajak}}{\text{Jumlah saham beredar}}$$

Source : Syamsuddin (2016:109)

Besides the formula above, we can also calculate the company's profitability (EPS) using the following formula :

$$\begin{aligned} \text{EPS} &= \text{ROE} \times \text{Value book earning per share} \\ &= \frac{\text{Earning before Interest and Tax}}{\text{Total Equity}} \times \frac{\text{Total Equity}}{\text{Total of shares has decreased}} \end{aligned}$$

III. Research Metodology

This research is a quantitative study with a descriptive verification research method. Time of research on property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) for the period of 2017. 2017. This study was conducted from January to May 2019. The population of this study are all sectors of property and real estate companies listed on the Indonesia Stock Exchange (BEI) as many as 48 companies. The sampling technique was taken by purposive sampling, which is a sampling technique with certain considerations or special selection (Siyoto and Sodik, 2015: 66). Based on predetermined criteria, 41 samples were selected from property and real estate companies listed on the Indonesia Stock Exchange from 2013 to 2017 because they have complete data that meets the requirements. Data processing using multiple linear regression analysis where the hypothesis test with the T test (partial test) and F test (simultaneous). All analyzes in this study use the application SPSS 23.

The model for the descriptive analysis is as follows:

$$Y = a + (b_1 \cdot X_1) + (b_2 \cdot X_2) + e$$

Dimana:

Y = Profitabilitas that is *Earning Per Share* (EPS)

a = constant

b₁-b₂ = The regression coefficients of each independent variable

X₁ = *Financial leverage*

X₂ = *Operating leverage*

e = *Error/residual*

IV. RESEARCH RESULTS AND DISCUSSION

Classic assumption test

Normality test

Table 2 shows the normal distribution in the regression model shown by the Asymp. Sig value. (2-tailed) of 0, 200 which is more than 0.05.

Table 2. the results Normality test *One-Sample Kolmogorov-Smirnov*

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		148
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	26,36350734
	Most Extreme Differences	
	Absolute	,061
	Positive	,061
	Negative	-,049
Test Statistic		,061
Asymp. Sig. (2-tailed)		,200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Data processing results with SPSS, 2019.

Multi-Collinearity Test

Based on Table 3 regarding the results of the multicollinearity test above, it appears that the variable degree of financial leverage (DFL) have value tolerance (T) of 0,999 and variance inflation factor (VIF) of 1,001. Variable degree operating leverage (DOL) also has a value tolerance (T) of 0,999 and variance inflation factor (VIF) of 1,001. This shows that there are no independent variables that have a value tolerance (T) less than 0,10 and no independent variable has a value variance inflation factor (VIF) more than 10.

Based on the results of the multicollinearity test, the synthesis in the regression equation model of this study does not have a multicollinearity problem and the regression equation model can be used in this study.

Table 3. The Results Test Multikolinearitas

Coefficients ^a			
Model		Collinearity Statistics	
		Tolerance	VIF
1	DFL	,999	1,001
	DOL	,999	1,001
a. Dependent Variable: EPS			

Source: Data processing results with SPSS, 2019

Test Heteroskedastisitas

Based on Table 4, it can be seen that the degree of financial leverage (DFL) variable has a significance value of 0.467 and the degree operating leverage variable (DOL) has a significance value of 0.594. Significance value on the two independent variables shows a value greater than $\alpha = 0.05$ (Sig.> 0.05). So that the synthesis in this test is not heteroscedasticity in the regression model so that it meets the requirements for multiple linear regression testing.

Table 4. The Results Test Heteroskedastisitas

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	,445	,069		6,403	,000
LG_X1	-,072	,099	-,085	-,731	,467
LG_X2	-,075	,141	-,062	-,535	,594
a. Dependent Variable: ABS RES 2					

Source: Data processing results with SPSS, 2019

Test Auto- Correlation

Based on Table 5, regarding the results of the autocorrelation test using the test Durbin-Watson, found value Durbin-Watson of 2,149. Then also obtained value dU with K=2 andN=148 is 1,744.

Value Durbin-Watson obtained is located between values dU and 4-dU or $1,744 < 2,149 < 2,256$. So it can be interpreted that the regression model that was formed was not detected by autocorrelation.

Table 5. The Results Test Autokorelasi

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,231 ^a	,054	,040	23,52446	2,149
a. Predictors: (Constant), Lag_X2, Lag_X1					
b. Dependent Variable: Lag_Y					

Source: Data processing results with SPSS, 2019

V. Results of Multiple Regression Analysis

Based on Table 6, the multiple linear regression equation model is as follows:

$$Y = 25,794 + 0,745X1 + 0,083X2 + e$$

Based on the multiple linear regression equation above can be interpreted as follows:

- 1) The constant coefficient of 25.794 with a positive value, this can be interpreted that Earning Per Share (EPS) will be worth 25,794 if each variable Financial Leverage and Operating Leverage constant or zero value.
- 2) The Financial Leverage variable has a regression coefficient of 0.745. Coefficient value positive regression shows that if every increase of one unit of Financial Leverage variable with the assumption that other variables are fixed, it will increase Earning Per Share (EPS) by 0.745.
- 3) The Operating Leverage variable has a regression coefficient of 0.083. The value of the positive regression coefficient shows that if every increase of one unit of the Operating Leverage variable assuming the other variables are fixed then it will increase Earning Per Share by 0.083.

Table 6. The Results Test Multiple Regression

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25,794	2,191		11,775	,000
	DFL	,745	,234	,255	3,182	,002
	DOL	,083	,159	,042	,525	,600
a. Dependent Variable: EPS						

Source: Data processing results with SPSS, 2019

Pengujian Hipotesis

Uji t

Tabel 7. The Results Test Hipotesis Parsial (Uji t)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25,794	2,191		11,775	,000
	DFL	,745	,234	,255	3,182	,002
	DOL	,083	,159	,042	,525	,600
a. Dependent Variable: EPS						

Source: Data processing results with SPSS, 2019

The significance value indicates a value smaller than 0.05 ($0.002 < 0.05$) which means that financial leverage has a significant effect on earnings per share so that the first hypothesis stating that financial leverage has a significant effect on earnings per share is accepted.

The significance value indicates a value greater than 0.05 ($0.600 > 0.05$) which means that operating leverage has no significant effect on earnings per share so the second hypothesis stating operating leverage has a significant effect on earnings per share is rejected.

Test F

Tabel 8. The Results Test Hipotesis Simultan (Uji F)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7401,348	2	3700,674	5,252	,006 ^b
	Residual	102170,074	145	704,621		
	Total	109571,422	147			
a. Dependent Variable: EPS						
b. Predictors: (Constant), DOL, DFL						

Source: Data processing results with SPSS, 2019

It is known that the F-calculated value of 5.252 with a significance value of 0.006. Because the significance value is smaller than 0.05 ($0.006 < 0.05$), this regression equation model can be used to predict earnings per share or it can be said that financial leverage and operating leverage together or simultaneously have a significant effect on earnings per share.

Koefisien Determinasi

Tabel 9. The Results Test Koefisien Determinasi (R²)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,260 ^a	,068	,055	26,54470
a. Predictors: (Constant), DOL, DFL				
b. Dependent Variable: EPS				

Source: Data processing results with SPSS, 2019

Based on Table. 4.8 regarding the results of the coefficient of determination (R^2) test the magnitude of the R-square value is 0.068. This means that 6.8% of earning per share (EPS) is influenced by two independent variables, namely financial leverage and Operating Leverage. While the remaining 93.2% (100% - 6.8%) is influenced by other variables not explained in this study.

VI. Conclusion

1. Based on the results of data analysis, it is stated that financial leverage experienced a very drastic increase in 2014 while 2015 to 2017 decreased. Operating leverage increased dramatically in 2016 and in 2017 operating leverage decreased again. The development of EPS has decreased and increased. The development of EPS in 2013 to 2015 fluctuates increasing every year. But from 2016 to 2017 it has decreased.
2. Based on the results of data analysis it is stated that financial leverage has a partial effect on earnings per share (EPS) on property and real estate companies listed on the Indonesia Stock Exchange during the 2013-2017 period.
3. Based on the results of data analysis it is stated that operating leverage has no partial effect on earnings per share (EPS) on property and real estate companies listed on the Indonesia Stock Exchange during the 2013-2017 period.
4. Based on the results of data analysis it is stated that financial leverage and operating leverage together or simultaneously have a significant effect on earnings per share (EPS) of property and real estate companies listed on the Indonesia Stock Exchange during the 2013-2017 period.

VII. Suggestion

1. Before investing in property and real estate companies, an investor needs to pay attention to the level of use of financial leverage, operating leverage by taking into account earnings per share (EPS) owned by the company, in order to avoid the risk of losses on capital investment.
2. The company must use the funds as well as possible to increase the level of income for the owner of the company (Saudi, 2018). Because if the company cannot obtain income from the use of these funds as much as a fixed burden that must be incurred, the greater the burden that the company bears can cause the company to default.
3. Companies must increase their sales percentage more actively so that they can also increase the company's EBIT percentage.
4. Companies must be more prudent in allocating the source of funds owned effectively and efficiently in order to achieve the company's goals, namely obtaining maximum profits.

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