E-JURNAL MANAJEMEN TSM
Vol. 2, No. 4, Desember 2022, Hlm. 209-214

E-ISSN: 2775–8370
http://jurnaltsm.id/index.php/EJMTSM

DETERMINANTS OF CAPITAL STRUCTURE: PROPERTY AND REAL ESTATE COMPANIES (IDX)

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Abstract**:** *The main purpose of this research is to test and analyze the impact of return on assets (ROA), firm size, tangibility, risk, and sale growth on capital structure. In this research, 8 property and real estate companies were used as samples listed on the Indonesia Stock Exchange with a total 9 years raging from the period of 2012 – 2020. The sample was selected based on purposive sampling technique. The data analysis method that were used in this research is descriptive statistics, panel data analysis model, data quality test, classic assumption tests, multiple linear regression, coefficient of correlation, coefficient of determination, goodness-of-fit test, and hypothesis test. The results of this research show that tangibility has a negative impact on capital structure. Whereas for return on assets (ROA), firm size, risk, and sale growth has no impact on capital structure.*

Keywords: *Capital structure, property and real estate companies, indonesia stock exchange*

INTRODUCTION

Finance is the science and art of raising, allocating, and investing money for individuals and businesses (Zutter and Smart 2019). Financing decisions are one of the most common decisions that financial managers make, or assist their colleagues in other functions in making. It's because, once businesses have decided how they want to use their resources, the next important question is where to get the money to make those investments. How companies raise the money they need for investment possibilities is determined by financing decisions. Firms require funds from investors when they are just getting started and as they grow. The money raised by businesses to fund their operations is referred to as capital. As a result, the finance decision is sometimes referred to as the capital structure decision.

Debt and equity are the two most common ways for businesses to raise funds (Brigham and Houston 2019). Although a precise methodology for evaluating a firm's optimal capital structure is not yet available to financial managers. Financial theory, on the other hand, can assist you comprehend how a company's capital structure affects its value (Zutter and Smart 2019). A bad capital structure decision could lead to financial issues and, eventually, bankruptcy (Kila and Mahmood 2008). One of the numerous objectives of corporate finance management is to ensure that the correct financial decisions are made in order to maximize the company's value (Brigham and Houston 2019). It is indisputable that growing the value of a company will increase its owners' wealth. One of the firm's goals has clearly been to increase the wealth of its shareholders (Zutter and Smart 2019).

For any company, deciding on an adequate financial structure is critical. Poor capital structure decisions, according to Zutter and Smart (2019), can affect a firm's value by increasing the cost of capital, lowering the NPVs of investment projects and

making more of them unacceptable. Effective capital structure decisions, on the other hand, can raise the value of a company by lowering the cost of capital, resulting in higher net present values (NPVs) and more appealing investment prospects. As a result of the preceding statements, proper capital structure decisions must be made in order to maximize business value and achieve its goals.

This research is a replication of a study published in a scholarly journal by Nguyen and Anh in year 2020, with the exception of the item used in this research. Data from 290 non-financial companies' financial filings on HOSE was used in the previous research. The object of this research was eight property and real estate companies listed on the Indonesia Stock Exchange (IDX). The major goal of this research is to test and analyze the impact of return on assets (ROA), firm size, tangibility, risk, and sale growth on capital structure.

This research is arranged according to the order of research writing. The first section of the introduction outlines the research's background, objectives, and past findings. Second, the research process is discussed, which includes sampling, variable definition, and measurement. Third, descriptive statistical analysis and hypothesis testing are used to explain the research findings. Finally, there's the conclusion, which includes conclusions, limitations, and suggestions for further research.

THEORETICAL FOUNDATION AND HYPOTHESIS DEVELOPMENT

Pecking Order theory, according to Gitman and Zutter (2015), is a financing hierarchy that starts with retained earnings, then debt financing, and lastly fresh stock issuance. This theory asserts that the usage of internal and external financial sources follows a set of rules. Both stock and debt are dangerous from the investor's standpoint, although equity has a higher risk level. As a result, shareholders seek a higher rate of return. For this reason, firms will prefer to finance their operations with retained earnings rather than debt.

According to several studies, ROA has a favorable impact on financial leverage (Mustilli *et al.* 2018; Sakr and Bedeir 2019). In the meanwhile, some research suggests that ROA has a detrimental impact on financial leverage (Al-Singlawi and Aladwan 2016; Trinh and Phuong 2016). Furthermore, some researches have revealed that ROA has no bearing on financial leverage (Fauzi *et al.* 2013; Sanyaolu *et al.* 2018).

H_1: Return on assets (ROA) has an impact on capital structure.

Some studies also show that the size of a company is related to its capital structure in a positive way (Trinh and Phuong 2016; Ilyukhin 2017; Akgul and Sigali 2018). There have also been studies that suggest a negative association between the size of a company and its capital structure (Handoo and Sharma 2014; Al-Singlawi and Aladwan 2016). Furthermore, several studies have found that the size of a company has no bearing on its capital structure (Guruswamy and Marew 2016; Sanyaolu *et al.* 2018).

H_2: Firm size has an impact on capital structure.

Many academics agree that tangibility and the capital structure of a company have a beneficial association (Handoo and Sharma 2014; Kiraci and Aydin 2018; Mustilli *et al.* 2018). Some researchers, on the other hand, disagree with the above statement (Trinh and Phuong 2016; Akgul and Sigali 2018; Almanaseer 2019). Furthermore, several research have found that tangibility has no bearing on capital structure (Guruswamy and Marew 2016; Pratheepan and Banda 2016).

H_3: Tangibility has an impact on capital structure.

Some research show that business risk is related to a company's financial structure in a beneficial way (Guruswamy and Marew 2016; Ilyukhin 2017; Almanaseer 2019). Some writers, on the other hand (Al-Najjar and Hussainey 2011; Al-Singlawi and Aladwan 2016; Huong 2018), have discovered that company risk is negatively associated to capital structure. Furthermore, several research have found that business risk has no bearing on capital structure (Akgul and Sigali 2018; Kiraci and Aydin 2018).

H_4: Risk has an impact on capital structure.

Some studies show that a company's capital structure is positively related to its sale growth (Fauzi *et al.* 2013; Handoo and Sharma 2014). On the other hand, some study (Al-Singlawi and Aladwan 2016; Huong 2018) suggests that the factors have a negative association. Some experts, on the other hand, suggest that sales growth has no

bearing on capital structure (Trinh and Phuong 2016; Sanyaolu *et al.* 2018).

H_5: Sale growth has an impact on capital structure.

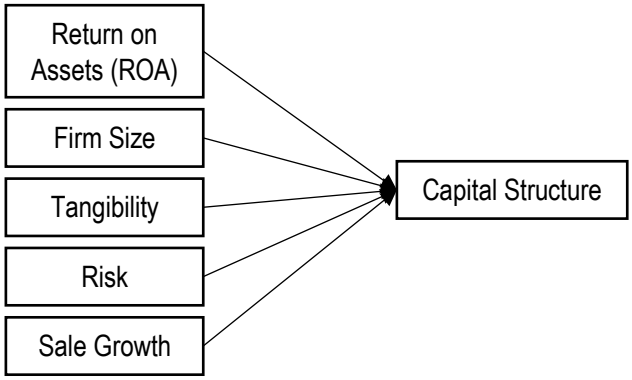

Figure 1 Research Model

RESEARCH METHOD

Purposive sampling was utilized as a sample approach in this study. The property and real estate businesses listed on the Indonesia Stock Exchange (IDX) will be the focus of this research sample for the next 9 years, from 2012 to 2020. Table 1 illustrates the sampling technique.

A company's capital structure is its combination of long-term debt and equity. Capital structure can be quantified using the formula below, according to Nguyen and Anh (2020):

$$\text{Capital Structure} = \frac{\text{Total Liability}}{\text{Total Assets}}$$

The financial ratio return on assets (ROA) is used to assess a company's ability to generate profit or profit before taxes at the level of income and assets. Return on assets (ROA) can be calculated using the method below, according to Nguyen and Anh (2020):

$$\text{ROA} = \frac{\text{Earnings after Tax}}{\text{Average Total Assets}}$$

Firm size is the value of a company is determined by its total assets, total revenues, total capitalization, and other factors. Firm size can be calculated using the formula below, according to Nguyen and Anh (2020):

$$\text{Size} = ln\ (\text{Total Assets})$$

The degree to which a company's fixed assets can be utilized as collateral for creditors when making loans is known as tangibility. Tangibility can be measured using the formula below, according to Nguyen and Anh (2020):

$$\text{Tangibility} = \frac{\text{Total Tangible Fixed Assets}}{\text{Total Assets}}$$

The risk of a company's activities is defined as its inherent riskiness. Risk can be calculated using the formula below, according to Nguyen and Anh (2020):

Risk is measured by volatility of ROA

The difference between changes in the number of sales per year is known as sale growth. According to Nguyen and Anh (2020), the following formula can be used to calculate sales growth:

$$\text{Sale Growth} = \frac{(Sale_t - Sale_{t-1})}{Sale_{t-1}}$$

RESEARCH RESULT

The following are the descriptive statistics and hypothesis results for each variable:

Table 1 Descriptive Statistics

Variable	n	Mean	Maximum	Minimum	Std. Deviation
CS	72	0.452661	0.659007	0.172992	0.139497
ROA	72	0.051452	0.126736	0.001421	0.037212
SIZE	72	29.73847	31.30110	27.90124	1.022790
TANG	72	0.061031	0.157467	0.005768	0.045477
RISK	72	0.009229	0.027390	0.000056	0.007907
S_GROWTH	72	0.092304	0.528007	-0.321113	0.192006

Table 2 t-Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.305505	1.049318	0.291146	0.7720
ROA	-0.241259	0.422159	-0.571489	0.5698
SIZE	0.007943	0.034590	0.229635	0.8192
TANG	-1.403150	0.660863	-2.123207	0.0379
RISK	0.322298	0.885380	0.364023	0.7171
S_GROWTH	0.065196	0.048621	1.340903	0.1851

From the table above, it can be concluded that the multiple linear regression equation are as follows: TDTA = 0.305505 - 0.241259 (ROA) + 0.007943 (SIZE) - 1.403150 (TANG) + 0.322298 (RISK) + 0.065196 (S_GROWTH) + ε

According to the results, the t-statistic value of H_1 is -0.571489, located in the area where the H_1 cannot be accepted, which is –t statistic > tα/2 (-0.571489 > -1.99444). This result is supported by its Prob. with the value of 0.5698, higher than the alpha value (0.5698 > 0.05). As a result, the capital structure is unaffected (no impact) by return on assets (ROA). It is in line or consistent with the research result conducted by Fauzi *et al.* (2013) and Sanyaolu *et al.* (2018). However, the results of this study contradict with the previous research conducted by Mustilli *et al.* (2018), Sakr and Bedeir (2019), Al-Singlawi and Aladwan (2016), also Trinh and Phuong (2016).

According to the results, the t-statistic value of H_2 is 0.229635, located in the area where the H_2 cannot be accepted, which is t statistic < tα/2 (0.229635 <1.99444). This result is supported by its Prob. with the value of 0.8192, higher than the alpha value (0.8192 > 0.05). Which means firm size has no impact on the capital structure. It is in line or consistent with the research result conducted by Guruswamy and Marew (2016) and Sanyaolu *et al.* (2018). However, the results of this study contradict with the previous research conducted by Trinh and Phuong (2016), Ilyukhin (2017), Akgul and Sigali (2018), Handoo and Sharma (2014), and also Singlawi and Aladwan (2016).

According to the results, the t-statistic value of H_3 is -2.123207, located in the area where the H_3 is accepted, which is –t statistic < tα/2 (-2.123207 < -1.99444). This result is supported by its Prob. with the value of 0.8192, lower than the alpha value (0.0379 < 0.05). Which means tangibility has a negative impact on the capital structure. It is in line or consistent with the research result conducted by Trinh and Phuong (2016), Akgul and Sigali (2018), and Almanaseer (2019). However, the results of this study contradict with the previous research conducted by Handoo and Sharma (2014), Kiraci and Aydin (2018), Mustilli *et al.* (2018), Guruswamy and Marew (2016), and also Pratheepan and Banda (2016).

According to the results, the t-statistic value of H_4 is 0.364023, located in the area where the H_4 cannot be accepted, which is t statistic < tα/2 (0.364023 < 1.99444). This result is supported by its Prob. with the value of 0.7171, higher than the alpha value (0.7171 > 0.05). Which means risk has no impact on the capital structure. It is in line or consistent with the research result conducted by Akgul and Sigali (2018) and Kiraci and Aydin (2018). However, the results of this study contradict with the previous research conducted by Guruswamy and Marew (2016), Ilyukhin (2017), Almanaseer (2019), Al-Najjar and Hussainey (2011), Al-Singlawi and Aladwan (2016), and also Huong (2018).

According to the results, the t-statistic value of H_5 is 1.340903, located in the area where the H_5 cannot be accepted, which is t statistic < tα/2 (1.340903 < 1.99444). This result is supported by its Prob. with the value of 0.1851, higher than the alpha value (0.1851 > 0.05). Which means sale growth has no impact on the capital structure. It is in line or consistent with the research result conducted by Trinh and Phuong (2016) and Sanyaolu *et al.* (2018). However, the results of this study contradict with the previous research conducted by Fauzi *et al.* (2013), Handoo and Sharma (2014), Al-Singlawi and Aladwan (2016), and also Huong (2018).

CONCLUSION

Based on the hypothesis test, it can be concluded that tangibility has a negative impact on capital structure, whereas for return on assets (ROA), firm size, risk, and sale growth has no impact on capital structure.

Due to the following limitations, there are still shortcomings in this research: (1) The limited number of companies utilized as samples. (2) Due to outlier, the number of companies that were used as this research sample became limited as well. (3) This research only focused at 5 variables that were thought to influence capital structure.

There are a few proposals or recommendations that could be relevant for future capital structure research: (1) The research sample can be broadened beyond the chosen sector companies listed in Indonesia Stock Exchange. (2) Include any extra variables that may have an impact on capital structure, which intended to deepen the knowledge of other potential variables relationship towards capital structure.

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