



## What Determines The Capital Structure of Property, Real Estate and Building Construction Companies? Evidence From Indonesian Listed Companies

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### Abstract

This research is intended to prove the influence of financial flexibility, asset structure, firm size, profitability and business risk on the capital structure. The population on this study are property, real estate and building construction sector that are listed on the Indonesia Stock Exchange in 2009-2018. The number of samples used were 28 companies with a purposive sampling method. The data studied was obtained from the Indonesia Stock Exchange (IDX). Methods of data analysis used in this study is multiple linear regression. The results showed that financial flexibility has not significant negative effect on capital structure. Asset structure and firm size have a significant positive effect on capital structure. The profitability and business risk have a significant negative effect on capital structure. Further research is needed to use another proxies such as ROE for profitability variables or standard deviations from ROE for business risk on capital structure and add another sectors or the number of observation periods.

### INTRODUCTION

The company must be able to determine the cost of capital to fulfill their business. Capital structure is an important part of management because it shows the company's financial condition. Determining the capital structure are fundamental things that companies to finding the right combination of sources of funds to maximize firm value (Sawir, 2004). Sources of funds used in the company's operational activities can be obtained through equity or debt capital or a combination of both Brigham and Houston (2011). According to Sharma (2015), there are two types of capital structure, namely funding that comes from inside and from outside the company. Funding from within is can be retained earnings and external funding can be debt and securities through the capital market. The decision that will be made by the financial manager regarding the source of the acquisition of funds aims to determine how much debt the company will use (Hapsari, 2010).

According to Thesarani (2017), determining the right choice capital structure, the company can effectively and efficiently if the right composition can minimize capital costs. The company's purpose achieving the right composition is not to cause losses and minimize the amount of capital costs, so as to maximize firm value (Brealey et al., 2011).

Nisak and Ardiansari (2016) state that the duty of a financial manager is to be able to determine the right source of funding to use in investment and company operations. A financial manager optimizes the preparation of an appropriate capital structure through allocations in the form of capital from internal and external companies. According to Sofat and Singh (2017) making the right decision, the company will not experience the risk of loss, because the optimal capital structure is a capital structure that considers risks in its making. When managers decide to use debt, the cost of capital that risk is the interest cost charged by creditors, where as if managers use costs

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from internal sources, there will be opportunity costs from the internal funds used (Alipour et al., 2015). Therefore, determining the company's capital structure, it is necessary to consider various factors that influence capital structure.

The capital structure can be influenced by the financial flexibility factor, because this factor looks at the company's ability to take effective actions related to the timing and amount of cash flow (Rapp et al., 2014). Companies with a high level of flexibility when there are unexpected challenges, the company can overcome and take the opportunities that exist Murti et al. (2016). According to Rapp et al. (2014) the capital structure decisions taken by financial managers can be influenced by financial flexibility, the smaller the financial flexibility the company has, the higher the level of debt taken by the company in line with the pecking order theory.

According to Alipour et al., (2015) companies with high debt levels have an inflexible impact, due to the limited cash the company has to pay debts. Companies with a high degree of flexibility do not hesitate to increase their capital. Rapp et al. (2014) and Alipour et al. (2015) research provide results that companies with high financial flexibility will have low debt levels. Meanwhile, research conducted by Anderson and Carverhill (2012) suggests that the higher the level of financial flexibility, the higher the level of corporate debt.

According to Sofat and Singh (2017) Asset structure can affect capital structure decision making, asset structure can be seen by the number of tangible assets owned by the company, tangible assets with a larger amount will be easier to get sources of funds from outside parties compared to companies with value tangible assets are still low. Companies with large tangible assets can be trusted by creditors with the ability to pay debts (Alipour et al., 2015). This is in line with the Trade off theory that asset structure has a positive effect on capital structure. Previous research has found that asset structure has a positive effect on capital structure (Santika & Sudiyanto 2011; Alipour et al., 2015; Sofat & Singh, 2017). Meanwhile, other studies have shown that asset structure has a negative effect on capital structure (Kartika, 2016; Vo, 2017).

According to Sofat and Singh (2017), capital structure is also influenced by firm size, in line with the trade off theory of companies with a larger size, the bigger debt that the company will take. The larger the company size, the greater the funds needed to carry out its operational activities. A large company size will find it easier

to get funding from outside parties than a small company considering the ability and level of risk (Sofat & Singh, 2017). Research Dewi and Ramli (2016); Chandra et al. (2019) state that company size has a positive effect on capital structure. In contrast to the research results of Indriani and Widyarti (2013); Alipour, et al. (2015); Sofat and Singh (2017) stated that company size has a negative effect on capital structure.

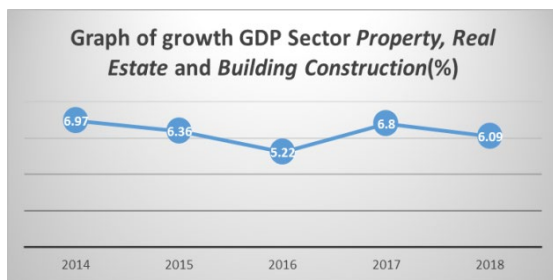
The use of profitability is an important factor in determining the capital structure. Companies with a high level of profitability will get more retained earnings, which will later be used again as company capital (Sofat & Singh, 2017). In accordance with the pecking order theory that companies prioritize internal funding in the form of retained earnings compared to external companies. Research conducted by Alipour et al. (2015); Sofat and Singh (2017) prove that profitability has a negative effect on capital structure. However, Nugroho (2014); Liang et al. (2014) proved that profitability has a positive effect on capital structure.

According to Sofat and Singh (2017), capital structure can be influenced by business risk factors. Risk is the uncertainty of an investment return. Business risks due to the volatility of earnings or the uncertain level of retraction faced by the company (Chandra, 2017). This uncertainty results in changing business risks and the resulting capital structure decisions (Hapsari, 2010). Companies with a high level of volatility will tend to reduce their level of debt (Alipour et al., 2015).

According to Nuswandari (2013), companies with high business risk will tend to avoid funding using debt compared to companies that have lower business risk. This is in line with the pecking order theory that companies with high business risk will reduce debt to avoid the possibility of bankruptcy. Research conducted by Nuswandari (2013) and Alipour et al. (2015) prove that business risk has a negative effect on capital structure. Research by (Dewi, 2014; Sofat & Singh, 2017) found different results, namely that business risk has a positive effect on capital structure.

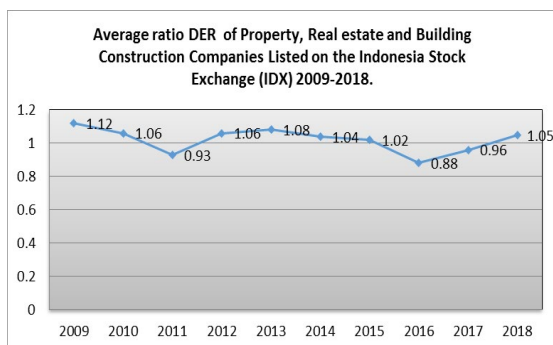
Based on data from the Indonesia Stock Exchange, the property, real estate and building construction sector is one of the most attractive sectors for investors until 2019. Shares recorded in this sector grew by 7.37% year to date (ytd), in which sector growth this is the highest compared to the other nine sectors listed on the Indonesia Stock Exchange (<http://kontan.co.id>, 2020). This is a positive sentiment for investors to invest in this sector.

In 2017, based on data from the Indonesia Stock Exchange, there is a phenomenon that the property, real estate and building construction sector index throughout 2017 fell 4.31% while the JCI actually increased by 19.99%. The property sector's performance has not proven to be improving even though Bank Indonesia interest rates have dropped and the loan to deposit ratio policy has been relaxed (<http://idx.co.id>, 2020). The sectoral growth chart released by the Coordinating Ministry for Economic Affairs of the Republic of Indonesia in 2019 in its economic outlook book shows the movement of GDP growth in the property, real estate and building construction sectors.



**Figure 1.** Graph of growth GDP Sector Property, Real Estate and Building Construction

Based on data from the Ministry of Economic Affairs in Figure 1. above, it shows that the property, real estate and building construction sector tends to experience a downward trend in GDP in 2014-2016 of 6.97% -5.22% and in 2017-2018 of 6.8% -6.09%, but based on data from the Indonesia Stock Exchange, investor interest in this sector has increased by 7.37% in 2019, so the management of the capital structure in this sector is interesting to study.



**Figure 2.** Average ratio DER of Property, Real estate and Building Construction Companies Listed on the Indonesia Stock Exchange (IDX) 2009-2018.

Figure 2. shows the average value of increase / decrease in corporate debt seen through the company's DER ratio. Based on data on the Indonesia Stock Exchange, the ratio of long-term debt to equity (DER) of property, real estate and building construction companies from 2009 - 2018 can be seen from graphical movements, the average increase / decrease ratio of debt is fluctuating every year (<http://idx.co.id>, 2020). The value that shows a positive trend indicates that the company has increased in the DER ratio. Conversely, a value that shows a negative trend indicates that the company has decreased in the DER ratio. On the average, the annual ratio experienced a decline (downward trend) from 2009 to 2011 and 2014 - 2015, namely 1.12; 1.06; 0.93 and 1.04; 1.02 but the average ratio experienced an increase (upward trend) in 2012 - 2013 and 2016 - 2018, namely 1.06; 1.08 and 0.88; 0.96; 1.05.

On the other hand, the average profitability ratio increased in 2014-2015, namely 3.18 to 3.87, but in 2016 it decreased to 3.42 and again increased in 2017-2018, namely from 4.03 and 4, 12. In Figure 1.2, where in 2015-2018 the DER ratio should be increased and decreased with the company's profitability ratio inversely proportional. This may imply that the greater the increase in company performance, the lower the debt ratio will be. Based on the data that the relationship between DER has increased and profitability has also increased, it is necessary to examine the factors that influence the decision on the company's capital structure.

Making decisions on the company's capital structure if fail will have a bad impact on the company even to the risk of bankruptcy. There have been several bankruptcy cases that occurred in several property, real estate and building construction companies in Indonesia. Based on the decision of the Mahkamah Agung No.62 / Pdt.Sus-Pailit / 2017 / PN.Niaga.Jkt.Pst PT Maha Karya Agung (MAP) was declared bankrupt by the Panel of Judges at the Central Jakarta Commercial Court on August 22, 2017. Based on the verification results of PT MAP are in debt and have a bill of Rp. 190 billion from 346 creditors, which consist of consumers, apartment buyers and suppliers. This is due to debt payments that are not in accordance with the sale of the property (<http://mahkamahagung.go.id>, 2020).

Based on the decision of the Mahkamah Agung, No.47 / Pdt.Sus-PKPU / 2017 / PN.Niaga.Jkt.Pst. PT Dinar Property was declared bankrupt by the Jakarta District Commercial Court on July 27, 2017 with a total debt value of

approximately 296 billion which is divided into creditors and tax claims. The bankruptcy decision was caused by default to creditors (<http://mahkamahagung.go.id>, 2020). Then based on the decision of the Mahkamah Agung, No.29 / Pdt. Sus-PKPU / 2017 / PN.Niaga.Sby Hardys Holding Group owned by Gede Hardy which was declared bankrupt in the decision of the Surabaya Commercial Court on November 9, 2017. The company has total debt as much as 2.3 trillion in 18 banks. This bankruptcy occurred because the Hardys Holding Group was unable to fulfill its obligation to pay due creditors. On the voting agenda on 9 November 2017, voting creditors rejected the peace proposal. So that based on the results of voting and the rejection of peace from several creditors, the company was declared bankrupt due to default (<http://mahkamahagung.go.id>, 2020).

Bankruptcy cases that occur in property, real estate and building construction companies resulting from inability to pay debts or default, are proof of the importance of a good capital structure decision for the company. Capital structure decisions can have fatal consequences for the company, namely bankruptcy and even the closure of the company. Based on bankruptcy cases that occur in property, real estate and building construction companies, researchers are interested in looking at factors that can influence capital structure decisions on the object of research for property, real estate and building construction companies.

### Hypothesis Development

Financial flexibility is a condition in which a company is in the capacity and speed to be able to manage its financial resources or take preventive, reactive, and exploitative action according to the goal of maximizing company value (Murti et al., 2016). Financial flexibility is the main determinant of optimal capital structure for a company, having a role as a substitute and complement to leverage (Alipour et al., 2015). According to Alipour et al. (2015) financial flexibility has an effect as a determining factor for capital structure. The more flexible the company's finances, the greater the opportunity for company funding to be obtained from internal companies. The consideration of the factor of financial flexibility will affect the company's funding decisions, companies with high financial flexibility choose a lower leverage or debt ratio (Rapp et al., 2014). Companies will avoid using external funding needs by increasing financial flexibility (Margaretha & Ginting, 2014). This is in line with the pecking order theory, companies with higher financial flexi-

bility will tend to have less debt. This statement is proven by the research of Rapp et al. (2014) and Alipour et al. (2015) financial flexibility has a significant negative relationship to capital structure. H1: Financial flexibility has a significant negative effect on capital structure.

According to Hardiningsih and Oktaviani (2012) asset structure is a reflection of assets, wealth, or assets owned by a company. Asset structure can be seen by comparing the total fixed assets with the total total assets owned by the company (Riyanto, 2008). Companies with large tangible assets find it easier to get external sources of funds, because large tangible assets can be used as collateral for debt (Sofat & Singh, 2017). Companies with high tangible assets tend to more easily get loans from creditors, because the risk of bankruptcy is low and they still have guarantees of debt in the form of tangible assets held (Alipour et al., 2015). Companies with high asset structures generally have a relatively small probability of bankruptcy compared to companies with small asset structures so that it is easier to make loans to banks. This is in line with the trade off theory, the higher the asset structure of a company, the easier it will be for the company to obtain debt. This is in line with research conducted by Alipour et al. (2015); Sofat and Singh (2017) which shows that there is a positive relationship between asset structure and capital structure.

H2: Asset structure has a significant positive effect on capital structure.

According to Gitman and Zutter (2012), company size is a measure of the size of the assets owned by the company. Companies with a larger total assets, the bigger the company size. Companies with large sizes will tend to use funding sources from debt, because companies with large sizes have a low risk of bankruptcy (Sofat & Singh, 2017). Companies with a low bankruptcy risk will be more trustworthy by debt lenders, so companies with large size tend to use more debt. Based on the trade-off theory, companies with large sizes will also need more funding. The size of the company will affect the capital structure, the larger the size of a company, the greater the funds needed by the company to meet the company's operational needs. This is in line with the research of Gomez et al. (2014); Chandra et al. (2019) stated that company size has a significant positive effect on capital structure.

H3: Firm size has a significant positive effect on capital structure.

According to Ridloah (2010) profitability is the net profit generated by a company in carrying out its operations. Brigham and Houston (2011) state that companies with high rates of return tend to use relatively less debt, because with high profits, the company will have an internal source of funds which is used as higher retained earnings, so it will choose to use profit. retained compared to increasing debt. Companies with high profitability tend to reduce the use of debt, because companies with high levels of profitability do not need the use of external sources of funds and prefer to use internal sources of funds (Alipour et al., 2015) In accordance with the pecking order theory, companies prefer to use internal funds then external funds. This is in accordance with the research of Alipour et al. (2015); Sharma, (2015); Sofat and Singh (2017) which states that profitability has a significant negative effect on capital structure.

H3: Profitability has a significant negative effect on capital structure.

According to Reily and Brown (2012) business risk is the uncertainty of returns caused by the nature of the company's business. Companies with a high level of business risk are likely to have a high risk of bankruptcy, which will reduce the use of debt (Sofat & Singh, 2017). Companies with a high level of business risk are more chance to bankruptcy, so looking at these factors the company will reduce the use of debt (Alipour et al., 2015). In accordance with the pecking order theory that companies with a high level of business risk will tend to reduce the use of sources of funds from debt. This is in line with the research of Gomez et al. (2014); Alipour et al. (2015); Sharma (2015) which states that business risk has a significant negative effect on capital structure.

H4: Business Risk has a significant negative effect on capital structure.

Based on a literature review and various previous research sources, the framework for this research is as follows:

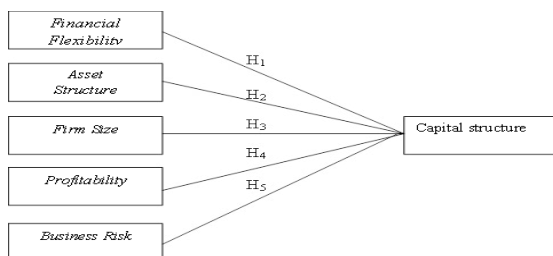


Figure 3. Research Model

**METHOD**

This research is included in quantitative research. The data used were obtained from the official website of the Indonesia Stock Exchange, namely www.idx.co.id. The population in this study were property, real estate and building construction companies listed on the Indonesia Stock Exchange (BEI) in 2009-2018. The population in this study were 82 companies. The sampling technique used in this study was purposive sampling method. Several criteria, in order to obtain a sample of 28 companies with a period of 10 years of observation, a sample of 280 observations was obtained. This study uses Eviews 9 software to perform data processing. The data analysis method used in this research is descriptive analysis, model determination, classical assumption test, Goodness of Fit test, regression analysis, and hypothesis testing. The linear regression equation in this study is:

$$D/E = \alpha + \beta_1 FLEX + \beta_2 TAN + \beta_3 SIZE + \beta_4 ROA + \beta_5 BRISK + \epsilon$$

Where:

- $\alpha$  = Constant;
- FLEX = Financial Flexibility;
- TAN = Asset Structure;
- SIZE = Firm Size;
- ROA = Profitability;
- BRISK = Business Risk;
- $\epsilon$  = Error Term.

**Research Variables and Definitions Operational**

Capital Structure according to Sudiyatno (1997) what is meant by capital structure is a balance or comparison between debt and equity. This research is a capital structure using the ratio of debt divided by equity (Debt to Equity Ratio). Referring to the research of Sofat and Singh (2017) in this study the capital structure is proxied by DER, this is because this ratio measures how much part of one's own capital is used as collateral for debt, the formula for DER is as follows:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}}$$

**Financial Flexibility**

Financial flexibility is a condition in which a company is in the capacity and speed to be able to manage its financial resources or take preventive, reactive, and exploitative action in accordance

with the objective of maximizing company value (Byoun, 2008) Financial flexibility can be proxied by the cash debt coverage ratio ( cash debt coverage ratio). The cash debt coverage ratio provides information on financial flexibility. This ratio indicates the ability of a company to pay its obligations with net cash provided by operating activities without having to liquidate assets used in operations (Murti et al., 2016).

$$\text{Cash Debt Coverage Ratio} = \frac{\text{Cash Flow from Operations}}{\text{Total Liabilities}}$$

**Asset Structure**

Asset structure is a balance or comparison between total fixed assets and total assets (Sofat & Singh, 2017). According to Hardiningsih and Oktaviani (2012) asset structure is a reflection of assets, wealth, or assets owned by a company. Asset structure can be seen by comparing the total fixed assets with the total total assets owned by the company (Riyanto, 2008). The asset structure formula can be stated as follows:

$$\text{Tangibility} = \frac{\text{Tangible Asset}}{\text{Total Asset}}$$

**Firm Size**

Company size describes the size of a company. The size of the company can be seen from the total assets, total sales, the average level of assets or the average level of sales (Seftianne & Handayani, 2011). Referring to research from Alipour et al. (2015), Sofat and Singh (2017) company size is proxied by total assets, this is because total assets have a more stable value than sales, the formula is as follows:

$$\text{Size} = \text{Total Asset}$$

**Profitability**

Profitability sees the company’s ability to earn profits. Profitability in this study is proxied by using ROA. Brigham and Houston (2011) states that the ROA ratio is the ratio of net income to total assets that measures the return on total assets after interest and taxes. Referring to Sofat and Singh (2017) calculating ROA (Return on Asset) can use the division between net income and total assets. Here is the formula for ROA:

$$\text{ROA} = \frac{\text{Profit After Tax}}{\text{Total Asset}} \times 100\%$$

**Business Risk**

Business risk is defined as the uncertainty inherent in the projected returns on future assets. Business risk is calculated using the standard deviation of ROA. Business risk is measured using the standard deviation of net income. The use of standard deviation is intended to obtain a better estimate of the volatility of risk. According to Sheikh and Wang (2011), Alipour et al. (2015) calculation of business risk can be seen how volatile the company is with a standard deviation of ROA is formulated as follows:

$$\text{Risk} = \sigma \text{ ROA}$$

**Data Processing and Data Analysis**

**Descriptive Statistic Analysis**

The following are the results of the descriptive statistical calculation output using Eviews9 in table 1 for Property, Real Estate and Building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018

**Table 1.** Result of Descriptive Statistic

	<b>DER</b>	<b>FLEX</b>	<b>TAN</b>	<b>SIZE</b>	<b>ROA</b>	<b>BRISK</b>
Mean	1.084762	0.076205	0.089776	29.01730	0.051116	0.024557
Median	0.843404	0.059876	0.056719	29.25158	0.039528	0.011655
Max.	6.685705	1.281217	0.825444	31.71245	0.495116	0.263387
Min.	0.034688	-1.674813	0.000241	25.48801	-0.102698	0.000034
Std.Dev.	0.956317	0.232804	0.113487	1.456170	0.063405	0.036674
Obs.	280	280	280	280	280	280

Based on Table 1. The results of the descriptive statistical test of the research variables above, show that the number of observations made in this study after literacy was carried out as many as 280 units of analysis during 2009-2018, it can be interpreted as follows:

The capital structure variable (DER) as a whole, the capital structure variable has an average value of 1.084762, the median of 0.843404 and a standard deviation of 0.956317. Variable financial flexibility (FLEX). Overall the financial flexibility variable has an average value of 0.076205, a median of 0.059876 and a standard deviation of 0.232804. Asset structure variable (TAN) as a whole, the liquidity variable has an average value of 0.089776, a median of 0.056719 and a standard deviation of 0.113487. The firm size variable (SIZE) as a whole, the business risk variable has an average value of 29.01730, a median of 29.25158 and a standard deviation of 1.456170. The profitability variable (ROA) as a whole, the firm size variable has an average value of 0.051116, a median of 0.039528 and a standard deviation of 0.063405. The business risk variable (BRISK) as a whole, the sales growth variable has an average value of 0.024557, a median of 0.011655 and a standard deviation of 0.036674.

**Estimation Model**

**Chow Test**

The first test carried out for the selection of the panel data model is using the chow test, which is a test carried out to determine the right model to use between the fixed effect or common effect to estimate panel data (Gujarati and Porter, 2013). Here are the results of the chow test:

**Table 2.** Output Chow test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	30.746111	(27.247)	0.0000
Cross-section Chi-square	412.350671	27	0.0000

Based on table 2 above, the value of cross section F is 0.0000 <0.05, so the Fixed Effect Model is accepted.

**Hausman Test**

The second test is the Hausman test, which is a statistical test used to select a fixed effect or random effect model, which is appropriate for panel data regression (Gujarati and Porter, 2013).

**Table 3.** Output Hausman test

Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.111873	5	0.2955

Based on table 3, it has a random cross section value > 0.05, so the appropriate model to estimate this model is the Random Effect Model.

**Lagrange Multiplier Test**

The third test is the lagrange multiplier test, which is a statistical test used to select whether a random effect or common effect model will be used.

**Table 4.** Output LM test

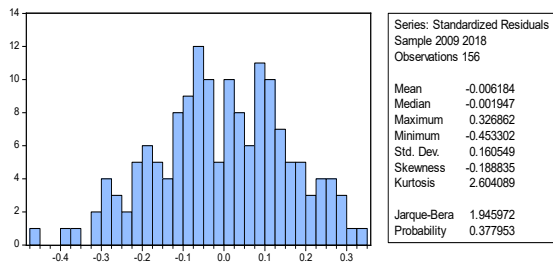
	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	637.8701 (0.0000)	0.232797 (0.6295)	638.1029 (0.0000)

Based on table 4 above, model 1 has a cross section value of breusch-pagan > 0.05, so the right model to estimate this model is the Random Effect Model.

**Normality Test**

Normality Test After the normality test was carried out, the data residuals in this study were not normally distributed, therefore the researcher eliminated some of the detected data which were outliers. The number of initial observations used in this study were 280 observations. After eliminating the outlier data, the number of observations became 156 observations. Following are the results of the normality test.





**Figure 4.** Output Normality Test

Based on the picture above, it can be seen that the probability value is  $0.377953 > 0.05$  (5%) so  $H_0$  is accepted, meaning that the data is normally distributed and it can be said that the regression model is normally distributed.

**Multicollinearity Test**

**Table 5.** Output Multicollinearity test

FLEX	TAN	SIZE	ROA	BRISK
1	-0.07	-0.10	0.43	0.15
-0.07	1	0.16	-0.12	0.00
-0.10	0.16	1	0.23	-0.07
0.43	-0.12	0.23	1	0.24
0.15	0.0	-0.07	0.24	1

Based on the results of the correlation matrix output in table 4, it can be seen that all the correlation coefficients between the independent variables are below 0.90, so it can be concluded that there is no multicollinearity.

**Heteroscedasticity Test**

**Table 6.** Output Heteroscedasticity test

Variable	Prob.
C	0.0766
FLEX	0.4014
TAN	0.5329
SIZE	0.2063
ROA	0.4026
BRISK	0.0681

Based on table 4. the results of the heteroscedasticity test show that a large significance value of 0.05 means that there is no heteroscedasticity problem.

**Autocorrelation Test**

The results of the autocorrelation test obtained DW 0.862930. The DW value will be compared with the DW numerical table with a significance value of 0.05 with 156 observations and 5 independent variables ( $k = 5$ ). Obtained dU value of 1.8048. The DW value of 0.831738 is smaller than the upper limit ( $dU = 1.8048$ ) and less than  $4-dU$  ( $4-1.8048 = 2.1952$ ). So it can be concluded that there is autocorrelation because the DW value obtained is lower than the upper limit (dU). Therefore, the researcher corrected the autocorrelation test by adding to the lag of the dependent variable Y1, namely  $Y_{t-1}$ . Following are the results of the autocorrelation test correction:

**Table 7.** Output Autocorrelation test

Mean dependent var	0.760399
S.D. dependent var	0.185886
Sum squared resid	1.264965
Durbin-Watson stat	1.912251

Based on the results of the autocorrelation test correction by adding the dependent variable lag, the DW value is 1.912251. Thus the DW value of 1.912251 is greater than the upper limit (dU) of 1.8048 and less than  $4-dU$  ( $4-1.8048 = 2.1952$ ). So it can be concluded that there is no autocorrelation problem in this study.

**Godness of Fit Test**

**Determination Coefficient Test**

This test aims to see how far the model's ability to explain the dependent variable can be seen from the Adjusted-R Square value in the table as follows:

**Table 8.** Output Goodness of fit test

R-squared	0.730434
Adjusted R-squared	0.718088
S.E. of regression	0.098266
F-statistic	59.16113
Prob(F-statistic)	0.000000



In table 6., it can be seen that the Adjusted-R Square value is 0.718088 or 71%, which means that the ability of the independent variable can explain the dependent variable by 71%. While the remaining 29% is explained by other variables outside of this research model.

**F Statistical Test**

F statistical test, to determine whether all independent variables entered into the model have a joint or simultaneous influence on the dependent variable.

**Table 9.** Output F statistical test

R-squared	0.730434
Adjusted R-squared	0.718088
S.E. of regression	0.098266
F-statistic	59.16113
Prob(F-statistic)	0.000000

Based on the results of the F-statistic test above, it can be seen that the F statistical probability value in the model is 0.000000. So it can be concluded that the F-statistical probability value in this model is <of significance  $\alpha = 0.05$ , then H0 is rejected and Ha is accepted. This means that all the independent variables used in this study have a significant effect on the dependent variable together.

**T Statistical Test**

**Table 10.** Output T statistical test

Dependent Variable: DER			
Method: Panel EGLS (Cross-section random effects)			
Variable	Coefficient	t-Statistic	Prob.
C	1.021462	2.937175	0.0039
FLEX	-0.065753	-1.180191	0.2401
TAN	0.160564	2.518372	0.0130
SIZE	0.256983	3.833941	0.0002
ROA	-0.280514	-2.434215	0.0163
BRISK	-0.283248	-2.086513	0.0389

Hypothesis testing is done using multiple linear regression using a random effect model with the following equation:

$$DER = 1.021462 - 0.065753 FLEX + 0.160564 TAN + 0.256983 SIZE - 0.280514 ROA - 0.283248 BRISK + u_{it}$$

Based on the results of the t test in table 8, it can be seen that of the five independent variables in this study that were tested partially, it shows that there are three variables, namely the asset structure (TAN), firm size (SIZE), profitability (ROA) and business risk (BRISK) variable. ) has a probability value <0.05 so that H0 is rejected, which means that the asset structure (TAN), firm size (SIZE), profitability (ROA) and business risk (BRISK) variables partially have a significant effect on the dependent variable of capital structure which is proxied by debt to equity ratio (DER).

As for the financial flexibility (FLEX) variable of > 0.05, H0 is accepted, meaning that the partial financial flexibility (FLEX) variable does not have a significant effect on the dependent variable of the capital structure which is proxied by the debt to equity ratio (DER).

**Table 11.** Result of Hypothesis test

No	Hypothesis	Coefficient	Prob.	Result
1	H1: Financial flexibility has a significant negative effect on capital structure.	-0.065753	0.2401	Rejected
2	H2: Asset structure has a significant positive effect on capital structure.	0.160564	0.0130	Accepted
3	H3: Firm size has a significant positive effect on capital structure.	0.256983	0.0002	Accepted
4	H4: Profitability has a significant negative effect on capital structure.	-0.280514	0.0163	Accepted
5	H5: Business Risk has a significant negative effect on capital structure.	-0.283248	0.0389	Accepted

## CONCLUSION AND RECOMMENDATION

### Effect of Financial Flexibility on Capital Structure

The results show that financial flexibility has an insignificant negative effect on the decision making of the capital structure of property, real estate and building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018, thus hypothesis 1 is rejected. Based on the results of statistical regression for the financial flexibility variable, it is known that the regression coefficient of financial flexibility (FLEX) is -0.065753 which shows that financial flexibility has a negative effect on the capital structure, then seen from the significance probability value of 0.2401 shows a value greater than The predetermined significance level is 0.05 ( $0.2401 > 0.05$ ), meaning that financial flexibility has no significant negative effect on the capital structure.

The results of this study do not prove that companies with high financial flexibility levels will use low debt in their capital structure decisions. This is supported by research conducted by Byoun (2008) which concluded that companies like the use of funding from within the company and still maintain safe use of debt, large companies are more likely to use internal funds to maintain financial flexibility. This means that companies having higher flexibility will maintain debt at a safe and lower level. However, there are smaller firms that prefer to issue equity and increase cash holdings despite having low leverage to overcome a lack of financial flexibility, thus reversing the hierarchy of external financing suggested by the pecking order theory.

### Effect of Asset Structure on Capital Structure

The results show that the asset structure has a significant positive effect on the decision making of the capital structure of property, real estate and building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018, thus hypothesis 2 is accepted. Based on the results of statistical regression for the asset structure variable, it is known that the asset structure regression coefficient (TAN) is 0.160564 which shows that the asset structure has a positive effect on the capital structure, then seen from the significance probability value of 0.0130 shows a value that is less than the level of significance. which has been determined previously is 0.05 ( $0.0130 < 0.05$ ), meaning that the asset structure has a significant positive effect on the capital structure.

The results of this study prove that the company will increase the proportion of debt in making capital structure decisions when the asset structure ratio owned by the company increases or increases. The results of this study are consistent with research conducted by Amidu (2007); Widodo (2014); Alipour et al. (2015); Sofat and Singh (2017), who concluded that the asset structure owned by the company affects the decision to use the company's debt in the capital structure. The positive and significant influence in this study explains that the company's asset structure is a factor that is considered related to the level of debt proportion in capital structure decisions. Companies will tend to borrow more debt if the company's asset structure increases in line with the trade off theory.

### Effect of Firm Size on capital structure

The results show that firm size has a significant positive effect on decision making on the capital structure of property, real estate and building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018, thus hypothesis 3 is accepted. Based on the results of statistical regression for the firm size variable, it is known that the firm size regression coefficient (SIZE) is 0.256983 which shows that firm size has a positive effect on capital structure, then seen from the significance probability value of 0.0002, it shows a value that is less than the level of significance that has been previously determined, namely 0.05 ( $0.0002 < 0.05$ ), meaning that firm size has a significant positive effect on capital structure.

The results of this study prove that the company will increase the proportion of debt in capital structure decisions when the size of the company is getting bigger as well. The results of this study are consistent with the research conducted by Widodo (2014); Gomez et al. (2014); Chandra et al. (2019), who concluded that firm size has a positive and significant influence on the decision to use corporate debt in the capital structure. The positive and significant effect in this study explains that firm size is a factor that is considered related to the level of debt proportion in capital structure decisions. Companies will tend to borrow more debt if the size of the company gets bigger, this is in line with the trade off theory.

### Effect of Profitability on Capital Structure

The results show that profitability has a significant negative effect on the decision making of the capital structure of property, real estate and building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018, thus hypothesis 4 is accepted. Based on the results of

statistical regression for the profitability variable, it is known that the profitability regression coefficient (ROA) is -0.280514 which shows that profitability has a negative effect on the capital structure, then seen from the significance probability value of 0.0163 shows a value that is more than the level of significance that has been previously determined, namely 0.05 ( $0.0163 > 0.05$ ), meaning that profitability has a significant negative effect on the capital structure.

The results of this study prove that the company will reduce the proportion of debt in capital structure decision making when the company's profitability increases. The results of this study are consistent with research conducted by Alipour et al. (2015); Sharma (2015); Sofat and Singh, (2017); Vo (2017), which concludes that profitability has a negative and significant effect on the decision to use corporate debt in the capital structure. The negative and significant impact in this study explains that profitability is a factor that is considered related to the level of debt proportion. In capital structure decisions, companies will tend to reduce the use of debt if the company's profitability increases, this is in line with the pecking order theory.

#### **Effect of Business Risk on Capital Structure**

The results show that business risk has a significant negative effect on the decision making of the capital structure of property, real estate and building construction companies listed on the Indonesia Stock Exchange from 2009 to 2018, thus hypothesis 5 is accepted. Based on the results of statistical regression for the business risk variable, it is known that the business risk regression coefficient (BRISK) is -0.283248 which indicates that business risk has a negative effect on the capital structure, then seen from the significance probability value of 0.0389, it shows a value that is more than the level The predetermined significance is 0.05 ( $0.0389 > 0.05$ ), meaning that business risk has a significant negative effect on the capital structure.

The results of this study prove that the company will reduce the proportion of debt in making capital structure decisions when the business risk of the company increases. The results of this study are consistent with research conducted by Nuswandari (2013); Gomez et al. (2014); Alipour et al. (2015); Sharma (2015), which concluded that business risk has a negative and significant effect on the decision to use corporate debt in the capital structure. The negative and significant influence in this study explains that business

risk is a factor that is considered related to the level of debt proportion in capital structure decisions. Companies will tend to reduce the use of debt if the company's business risk increases, this is in line with the pecking order theory.

This study was conducted to analyze and provide empirical evidence regarding the effect of financial flexibility, asset structure, firm size, profitability and business risk on capital structure. Based on the results of the research and discussion in the previous chapter, it can be concluded that financial flexibility has an insignificant negative effect on capital structure, asset structure and firm size have a significant positive effect on capital structure, profitability and business risk has a significant negative effect on capital structure. Factors such as asset structure, firm size, profitability and business risk, based on the research results, these factors significantly influence the company's capital structure so that before investing in capital participation in companies in the property, real estate and building construction sector, it is important to consider first because, The consideration of these factors is intended so that investors can read signals about the company's future prospects which are reflected in the company's capital structure. At the time of determining the capital structure, the company is expected to see the factors that significantly influence the capital structure so that the company can determine the optimal capital structure of the company, which is able to minimize the cost of capital incurred by the company. The limitation of this study lies in the financial flexibility measurement tool used, namely the research of Murti et al. (2016) measuring instrument for financial flexibility is not tested simultaneously with other independent variables, whereas in this study with the same measuring instrument for financial flexibility it is tested simultaneously with other independent variables, so suggestions for further research are to use measuring instruments. which can be combined with other independent variables. Further researchers are advised to add other proxies such as DAR or more specifically long-term debt divided by total assets and short-term divided by total assets for capital structure variables, then net-fixed assets for asset structure variables, total sales for size variables, NPM, BEP or ROE for the profitability variable and the standard deviation of ROE for business risk which affects the capital structure and increases the number of observed sectors so that the research results become more accurate.

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