

Role of Investment Opportunity Set (IOS) in Moderating the Influence of Company Size, Activity, and Profitability on Capital Structure in Multi-Industry Sector Companies for the Period 2015–2019

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Abstract. Growing business competition expects companies to pay more attention to ensuring capital accessibility. Fulfillment of capital needs can be obtained both internally and externally from the company. The purpose of this research is to analyze the influence of firm size, activity, and profitability on capital structure moderated by investment opportunity set in multi-industry sector companies. The population in this research is a multi-industry sector company listed on the Indonesia Stock Exchange, with a research period of 2015 to 2019. The data analysis techniques used in this research are descriptive statistical analysis, classical assumption test, hypothesis test, and residual test for regression moderation analysis on SPSS. The results of this study showed that firm size and activity had a positive and significant effect, while profitability had a significant effect on the capital structure, Investment Opportunity Sets (IOS) play a role in moderating the influence of firm size, activity, and profitability on capital structures. The practical implications on this study, companies that have high investment opportunities it means companies have the opportunity to grow which has an impact on investors' profits in the future. For companies, it helps managers in determining optimal capital structure policies in maximizing the company's profit and creating well-being for investors.

Keywords: Investment opportunity set; firm size; activity; profitability; capital structure.

Abstrak. Persaingan bisnis yang semakin berkembang mengharuskan perusahaan lebih memperhatikan dalam menjamin aksesibilitas modal. Pemenuhan kebutuhan modal perusahaan dapat diperoleh secara internal maupun eksternal. Tujuan penelitian ini untuk mengetahui pengaruh ukuran perusahaan, aktivitas, dan profitabilitas terhadap struktur modal yang dimoderasi *investment opportunity set* pada perusahaan sektor aneka industri yang terdaftar di Bursa Efek Indonesia (BEI) periode 2015–2019. Teknik analisis data menggunakan statistik deskriptif, uji asumsi klasik, uji hipotesis, dan uji residual untuk analisis regresi moderasi berbantuan *software* SPSS. Hasil dari penelitian ini menunjukkan bahwa ukuran perusahaan dan aktivitas berpengaruh positif dan signifikan, sedangkan profitabilitas berpengaruh dan signifikan terhadap struktur modal. *Investment opportunity set* (IOS) memiliki peranan dalam memoderasi pengaruh ukuran perusahaan, aktivitas dan profitabilitas terhadap struktur modal. Implikasi penelitian ini yaitu perusahaan yang memiliki IOS tinggi berarti perusahaan tersebut berkesempatan untuk bertumbuh yang berdampak pada keuntungan investor di masa mendatang. Bagi perusahaan, membantu dalam menentukan kebijakan struktur modal yang optimal, memaksimalkan laba, serta menciptakan kesejahteraan bagi investor.

Kata Kunci: Investment opportunity set; ukuran perusahaan; aktivitas; profitabilitas; struktur modal.

Introduction

Today's business competition has forced many companies to work hard to achieve their main goals. Maximizing the company's value is one of the main goals of every company. Determining the proportion of

long-term debt and capital as a company's source of funds has a close relationship with the capital structure (Andika & Sedana, 2019). Capital structure is very meaningful in financing industrial operations. The size of the capital structure depends mainly on the energy composition obtained from external and internal industries in debt and own capital (Nasar & Krisnando, 2020).

If the company's financial manager makes correct decisions on the company's financing decisions, the company's business activities can proceed smoothly. Such a good financing decision can be seen from the company's capital structure. Capital structure is the financial decision related to the best business funding (Santoso, 2016). When the manager uses debt, it is clear that the capital costs incurred amount to interest costs charged by the creditor, whereas if the manager uses internal funds or funds themselves, opportunity costs of the funds or capital itself used will arise. Careful funding decisions will result in fixed costs in the form of high capital costs, further resulting in the company's low profitability (Prabansari & Kusuma, 2005). One of the indicators of optimal capital structure is determined by capital costs, and if the company spends high capital costs, it indicates a poor capital structure. (Wangsanangun et al., 2014).

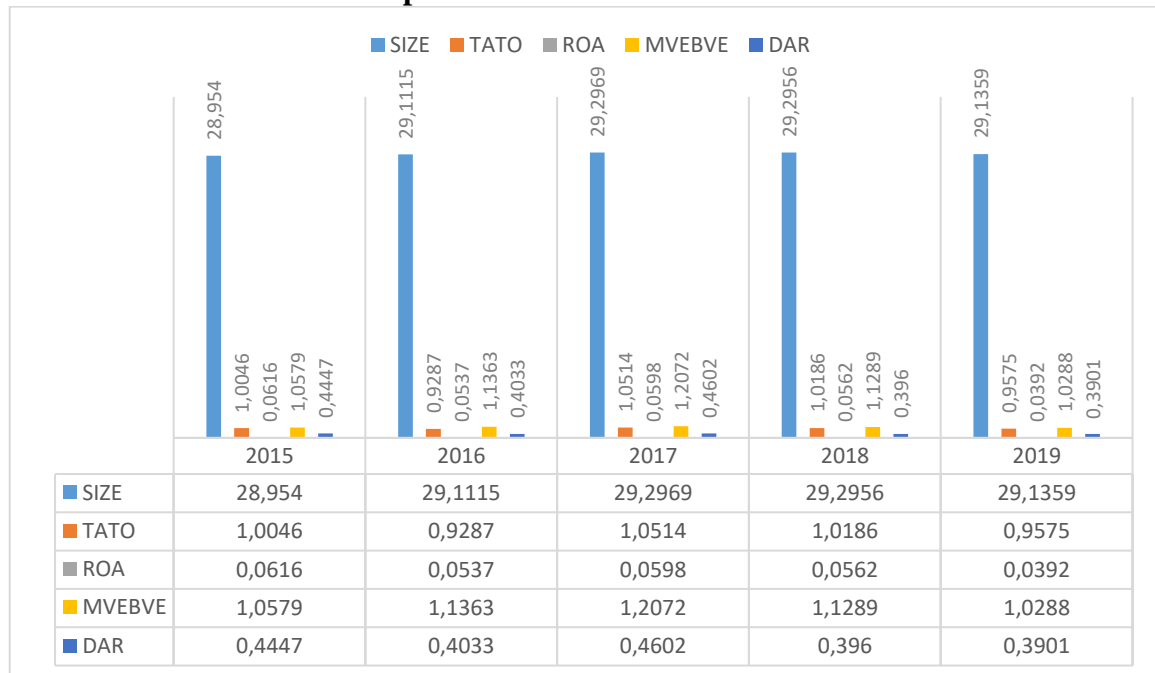
Previous research (Rustam, 2015) revealed that the optimal capital structure occurs when the balance between the amount of long-term debt use and equity with the portion of the amount of long-term debt is almost equal to the amount of equity. The research results (Sulistio & Saifi, 2017) reveals that the optimal capital structure occurs when long-term debt is smaller than its own. Whereas according to (Christhalia & Jonardi, 2019), an optimal capital structure is a capital structure that optimizes the balance between risk and returns to maximize the share price.

Most of the manufacturing companies listed on the Indonesia Stock Exchange use more capital than long-term debt. The smaller the debt, the more minor risks the company faces, including financial difficulties, failure to pay interest, and principal on loan until bankruptcy (Armelia, 2016). Multi-industry sector companies are manufacturing industry groups consisting of automotive and component sub-sectors, textiles and garments, footwear, cables, and electronics. This study is a development of previous research conducted by (Said & Jusmansyah, 2019) which examined the analysis of the effect of the current ratio, return on equity, total asset turnover, and firm size on the capital structure of automotive companies and components listed on the Indonesia Stock Exchange (Period 2013-2017). The previous difference with this research lies in the independent variables, the year of research, and the object of research. The researcher adds the investment opportunity set (IOS) as a moderating variable to strengthen or weaken the correlation between the factors studied and the capital structure. The study also infers that the larger the company shows, the higher its capital structure. So, large companies have the opportunity to invest, and it will be easier to find investors who want to invest.

Capital Structure is the permanent financing of the company between long-term debt and its capital in the company's financial structure. Debt to Total Asset Ratio (DAR) is a ratio to measure how much a company's assets are financed by debt or how much a company's debt affects the management of assets (Kasmir, 2014).

Data on firm size, activity, and profitability, as well as the capital structure of Multi-Industry Sector companies listed on the Indonesia Stock Exchange in 2015-2019 as follows:

Graphic 1. Average Firm Size, Activity (TATO), Profitability (ROA), IOS (MVEBVE), and Debt to Total Asset Ratio (DAR) in Multi-Industry Sector Companies for the Period 2015-2019



Capital Structure is the permanent financing of the company between long-term debt and its capital in the company's financial structure. Debt to Total Asset Ratio (DAR) is a ratio to measure how much a company's assets are financed by debt or how much a company's debt affects the management of assets (Kasmir, 2014). A high Debt to Total Asset Ratio (DAR) value indicates the greater the amount of loan capital used to invest in assets to obtain a profit for the company (Syamsuddin, 2016). The higher the company's DAR causes the company's financial performance to decrease so that investors believe that the company cannot afford the obligation to pay dividends to the company, because the company prefers to pay all debts, thus impacting the decline in the value of the company (Susanti et al., 2021). Pecking order theory states that companies are more likely to choose to fund from internal sources over external companies. A funding source that refers to the pecking order theory is its assets, liabilities, and capital. According to (Sudana, 2015), the debt to asset ratio is systematically formulated as follows:

$$\text{Debt to Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Firm size (SIZE) is described by the size of the company, whereas a larger company will be easier to get external loans in the form of debt and stock capital because usually, large companies are accompanied by a good reputation in the eyes of the public (Wimelda & Marlinah, 2013). The amount of total assets owned by the company shows that the company has reached the mature stage where the company's cash flow is positive and is considered to have good prospects for a relatively long period. The capital structure is determined by the company's size (Sari & Haryanto, 2013). The larger the firm size, the more foreign capital the company needs to support its operational activities, and one alternative fulfillment is with foreign capital when the capital itself is insufficient (Andika & Sedana, 2019). Studies supporting this view include (Denziana & Yunggo, 2017), (Alzomaia, 2014), and (Nguyen & Tran, 2020), which state that the bigger the company, the larger the capital structure. According to (Hery, 2015), the

size is systematically formulated as follows:

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

Based on pecking order theory and previous research, the hypothesis is as follows:

H₁ and H₄ : The firm size of the company is a positive and significant effect on capital structure and investment opportunity set.

Activity is a ratio that measures the effectiveness of a company's management in using assets owned. Total Asset Turnover (TATO) is a ratio that describes the total turnover ability of a company's assets to obtain a sale. The company's activity calculated by asset turnover is an analysis conducted on the company's level of profitability that is more focused on assessing the effectiveness of the company in generating sales (Noviandini & Welas, 2017). The higher the turnover value of the asset reflects, the higher the sales value to the total value of the asset (Ismaida & Saputra, 2016). Companies with high corporate activity result in the same sales requiring small assets. Total assets that are small or less require debt to make the capital structure smaller. It means that if the activity of a company is high, then the capital structure owned by the company will be low. This research is supported by (Said & Jusmansyah, 2019) (Nasution, 2021), who state that TATO has a positive and significant effect on the structure of capital and stated that the activity has no significant positive effect on the capital structure. According to (Fahmi, 2016), total assets turnover is systematically formulated as follows:

$$TATO = \frac{\text{Sales}}{\text{Total assets}}$$

Based on pecking order theory and previous research, the hypothesis is as follows:

H₂ and H₅: Activity positively and significantly affects the capital structure and investment opportunity set.

Profitability is the ability of management effectiveness in obtaining profits. Return on Assets (ROA) is a ratio to measure the company's ability to use its assets to profit. A high ROA value describes the company's good financial performance so that investors are confident that the company can manage the company's assets to earn a profit (Susanti et al., 2021). Increased profitability will increase retained earnings by following the pecking order theory, which has the first funding preference with internal funds in the form of retained earnings so that the capital component itself is increasing (Sari & Haryanto, 2013). Studies supporting this view include (Zuhro & Suwitho, 2016), (Chen, 2004), (Wimelda & Marlinah, 2013), and (Bhawa & Dewi S., 2015). It is found that profitability has a significant negative effect on the capital structure, where the smaller the profitability, the smaller the capital structure and vice versa if the greater the profitability, the larger the capital structure. According to (Sudana, 2015), return on assets is systematically formulated as follows:

$$ROA = \frac{\text{Earning after taxes}}{\text{Total assets}}$$

Based on previous research, the hypothesis is as follows:

H₃ and H₆: Profitability negatively and significantly affects the capital structure and investment opportunity set.

Investment Opportunity Set (IOS) is the availability of investment alternatives in the future (Sigalingging & Dewi, 2019). Investment Opportunity Set (IOS) is an investment decision that combines assets owned and investment options that will come with a net present value (Marinda et al., 2014). The Market Value Equity to Book Value (MVEBVE) ratio can be a good indicator of a company's investment opportunity set (IOS) information. MVEBVE ratio looks

at how much the market assesses the effectiveness of a company using its capital. Growing companies will have a higher market value than their assets (Masruroh et al., 2011). The pecking order theory hypothesis says the company's growth opportunities affect the capital structure (Seftianne & Handayani, 2011). Fast-growing companies require large capital and have the opportunity to borrow more, so companies with high investment opportunities must be offset by increased capital (Manurung, 2011). Studies supporting this view include (Yulia & Ifaksara, 2016), (Udayani & Suaryana, 2013), (Dadri, 2011), (Dananti, 2011), and (Lumbantobing, 2014). It is found that the investment opportunity is set positively and has a significant effect on capital structure. According to (Marinda et al., 2014), the investment opportunity set is systematically formulated as follows:

$$MVEBVE = \frac{\text{Number of shares outstanding} \times \text{Closing price}}{\text{Total Equity}}$$

Based on pecking order theory and previous research, the hypothesis is as follows:

H₇: Investment of opportunity set as a moderating variable can influence firm size, activity, and profitability on the capital structure.

Some studies have discussed factors that affect the capital structure, including (Watung et al., 2016) based on the results of CR research negatively and significantly affect DER, TATO has a positive and insignificant effect on DER, while ROA and asset structure have a positive and significant effect on DER. (Sari & Haryanto, 2013) demonstrates that ROE and CR negatively affect DER, while asset growth, company size, and asset structure positively affect DER. Situmeang et al. (2019) show that ROA and CR have no significant effect on DER, while TATO has no significant

effect on DER. The company's age is inversely proportional to the capital structure, meaning that companies operating for a very long time will use less debt. Asset structure is directly proportional to the structure of capital, meaning that the structure of assets increases, then the capital structure also increases. According to the signal theory, companies with a high asset structure use more debt. Profitability is directly proportional to the capital structure, which means that companies use current debt more than long-term debt to avoid the burden of long-term interest payments. Retained earnings have a significant negative effect on capital structure (Bandyopadhyay & Barua, 2016). Nguyen & Tran (2020) showed that growth factors and the company's size positively affected the capital structure, and profitability factors negatively affected the capital structure. The solvency factors of short-term debt, average loan interest rates, and the structure of tangible assets have nothing to do with capital structure. (Purba et al., 2020) showed that the current ratio had a significant negative effect on capital structure.

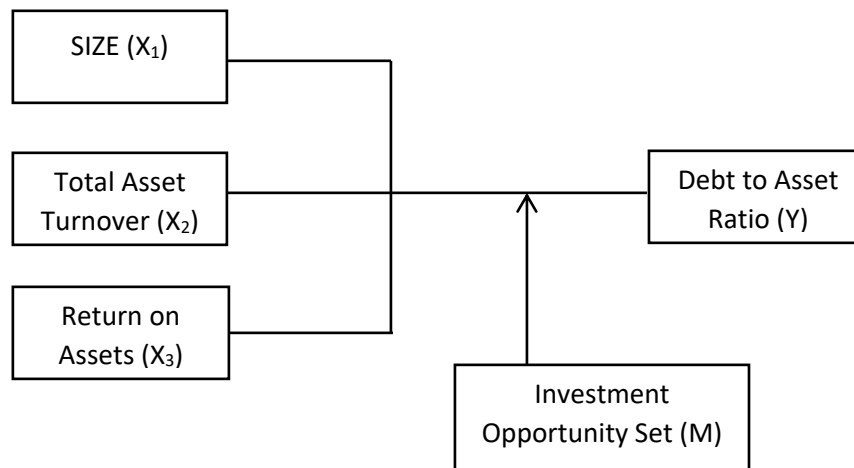
Return on assets, total asset turnover rate, and sales growth has no significant effect on capital structure. Simultaneously, the current ratio, return on assets, total assets turnover, and sales growth greatly influence the capital structure of companies listed on the Indonesia Stock Exchange. (I. Khan et al., 2015), there is an inverse relationship between firm growth and firm size. This result shows Size of the firm is negative with the firm leverage, so when larger, the firm size, so the firm utilizes less amount of debt. This research analysis is not agreed with the static trade-off theory. (Alzomaia, 2014), the study results suggest that there is a positive relationship between size, growth of the firm, and leverage on capital structure. Another side, there are negative

relationships between tangibility of assets, profitability, risk, and leverage.

Due to inconsistencies in some of these studies and the addition of previous studies, researchers are interested in conducting research using investment opportunity set (IOS) variables as

moderating variables. The study aims to find out and analyze whether investment opportunity sets (IOS) have a role in the influence of company size, activity, and profitability on the capital structure of multi-industry sector companies from 2015 to 2019.

Figure 1. Research Framework of Thought



Based on Figure 2, in this study, independent variables were firm size (SIZE) (X_1), activity (TATO) (X_2), profitability (ROA) (X_3), while dependent variables were capital structure (DAR) (Y), and moderation variable was IOS (M).

Research Method

The data used in the research is quantitative. The object of this research is

the variables of firm size, activity, profitability, investment opportunity set, and capital structure at the Multi-Industry Sector Company. To get the data and information, researchers access www.idx.co.id. The data analysis techniques used in this study are descriptive statistical analysis, classical assumption test, hypothesis test, and residual test. Population and sampling techniques are listed in Table 1.

Tabel 1. Sample Criteria

No	Sample Criteria	Totally
1	Multi-Industry Sector Company Period 2015–2019	50
2	Multi-Industry Sector Company with IPO dates above 2015	(12)
3	Multi-Industry Sector Company that did not publish financial statements during the period 2015–2019	(5)
4	Companies that suffered losses during the period 2015–2019	(21)
Total of Research Samples		12

Based on Table 1, Multi-Industry Sector Companies to the population is 50 companies. The samples in this study

used are 12 companies multiplied by five years, then the number of observations is 60.

The data analysis technique in this research is to use multiple linear analysis and residual tests.

$$Y = b_0 + b_1 X_1 \text{Size} + b_2 X_2 \text{TATO} + b_3 X_3 \text{ROA} + b_4 X_4 \text{IOS} \dots (1)$$

(Sugiyono, 2017)

$$M = a + b_1 X_1 \text{Size} + b_2 X_2 \text{TATO} + b_3 X_3 \text{ROA} + b_4 X_4 \text{IOS} + \epsilon$$

$$|\epsilon| = a + b_1 Y \text{DAR}$$

Information:

Y = Capital Structure (DAR)

b₀ = constant

b = regression coefficient

e = default error

X₁ = independent variable (Size or Firm Size)

X₂ = independent variable (TATO or Activity)

X₃ = independent variable (ROA or Profitability)

X₄ = independent variable (Investment Opportunity Set)

ε = Absolute Residual Value

Results and Discussion

Result

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SIZE (X1)	60	26,9330	33,4945	29,158785	1,6641410
TATO (X2)	60	,0059	3,4235	,992170	,5063400
ROA (X3)	60	,0000	,2044	,054118	,0503180
IOS (M)	60	,3581	3,3064	1,111813	,6725526
DAR (Y)	60	,0035	1,1069	,418872	,2271466
Valid N (listwise)	60				

As a result of Table 2, variable profitability (ROA) at a maximum value of 0.2044 and a minimum value of 0.0000, the mean value is 0.054118, and the std deviation is 0.503180. The company with the highest profitability (ROA) in 2016 was PT SMSM at 0.2044. The company with the lowest profitability (ROA) in 2017 is PT STAR at 0.0000.

The capital structure variable (DAR) at a maximum value of 1.1069 and the minimum value of 0.0035. The

Descriptive Statistics

Statistical tests in the form of tabulation are conducted to find out an overview of independent variables, which are firm size (SIZE), activity (TATO), profitability (ROA), dependent variables used are capital structures (DAR), and moderation variables are IOS on the research objects of companies in various industries.

Based on Table 2, the firm size variable (SIZE) has a maximum value of 33.4945 and a minimum of 26.9330. The mean value is 29.158785, and the std deviation is 1.6641410. The company with the highest size in 2019 is pt SRIL at 30.8938. The company with the lowest size in 2019 is PT STAR at 26.9330. The activity value variable (TATO) at the maximum value is 3.4235, and the minimum value is 0.0059. The mean value is 0.992170, and the std deviation is 0.5063400. The company with the highest activity (TATO) in 2019 is found in PT PTSN of 3.4235. The company with the lowest activity (TATO) in 2019 is found in PT STAR at 0.0059.

mean value is 0.418872, and the std deviation is 0.2271466. The company with the highest capital structure (DAR) in 2019 is located at PT PTSN of 1.1069. The company with the lowest capital structure (DAR) in 2019 is in PT STAR at 0.0035.

The variable IOS at a maximum value of 3.3064 and a minimum value of 0.3581. The mean value is 1.111813, and the std deviation is 0.6725526. The company with the highest investment opportunity set (IOS) in 2016 was found

in PT SMSM of 3.3064. The company with the lowest capital structure (DAR) in 2015 is located at PT PTSN of 0.3581.

Classic Assumption Test

Test of Normality

Before the data is used, the condition that must be met is that the data

must be distributed normally by conducting a normality test. Based on the Kolmogorov Smirnov normality test can be said to be normal when the value (sig) > 0.05 so that the data can be said to be a normal distribution. The classic assumption test is as follows:

Table 3. Test of Normality

Variable	N (Number of Samples)	Significance	Criteria
Unstandardized Residual	60	0,486	Distribute normally

Based on Table 3, asymp values. Sig (2-tailed) of 0.486 indicates that the value of unstandardized residual significance (0.486 > the sig value of

0.05 can be said to be normally distributed data.

Test of Multicollinearity

Table 4. Test of Multicollinearity

Variable	Tolerance	Variance Inflation Factor (VIF)	Criteria
SIZE (X ₁)	,920	1,087	There is no multicollinearity
TATO (X ₂)	,727	1,376	There is no multicollinearity
ROA (X ₃)	,292	3,422	There is no multicollinearity
IOS (M)	,338	2,954	There is no multicollinearity

Based on the multicollinearity tests conducted in Table 4, it shows that this regression has no multicollinearity. This can be seen in the tolerance value (TOL) for variable SIZE, TATO, ROA, and IOS > 0.10 that is. 0.920; 0.727; 0.292; 0.338; and the VIF value for variable SIZE, TATO, ROA and IOS < 10 that is 1.087; 1.376; 3.422; 2.954.

Test of Heteroskedastisity

Glejser test was conducted to determine if there are symptoms of heteroscedasticity with the significance value of independent variables > 0.05, then there are no symptoms of heteroscedasticity.

Table 5. Test of Heteroskedastisity

Variable	Significance	Criteria
SIZE (X ₁)	0,850	There is no heteroscedasticity
TATO (X ₂)	0,326	There is no heteroscedasticity
ROA (X ₃)	0,512	There is no heteroscedasticity
IOS (Z)	0,176	There is no heteroscedasticity

Based on Table 5, the heteroscedasticity test results showed no symptoms of heteroscedasticity in all research variables because the significance value of all variables was more than 0.05.

Autocorrelation Test

This autocorrelation test was conducted using the Durbin-Watson method.

Table 6. Test of Autocorrelation
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,618 ^a	,382	,337	,184970	1,605

Based on Table 6 the values $dL = 1,4797$, $dU = 1,6889$, and $DW = 1,605$, it can be concluded that $dL \leq DW \leq dU$ ($1,4797 \leq 1,605 \leq 1,6889$), so that the

research data is no positive autocorrelation (without conclusion).

Hypothesis Test I
The Coefficient of Determination for statistical testing consists of:

Table 7. Coefficient of Determination Hypothesis I

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,618 ^a	,382	,337	,184970

Adjusted R Square is worth 0.382, where the effect of firm size (SIZE), activity (TATO), and profitability (ROA) on capital structure (DAR) is 38.2%, and other variables influence 61.8%.

Hypothesis Test I
F test on SIZE, TATO, and ROA against DAR as seen in Table 9

Table 8 Test Results F Hypothesis I

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1,140	3	,380	11,173	,000 ^b
Residual	1,904	56	,034		
Total	3,044	59			

a. Dependent Variable: DAR

b. Predictors: (Constant), ROA, SIZE, TATO

Table 8 shows a sig value of 0.000 < 0.05, which means firm size (SIZE), activity (TATO), and profitability (ROA)

as large as having a significant influence on the capital structure (DAR)

Test t Hypothesis I
Results from the statistical test (Test t):

Table 9. Test Results t Hypothesis I

Model	T	Sig.
1 (Constant)	-2,513	,015
SIZE	2,997	,004
TATO	5,546	,000
ROA	-2,010	,049

From Table 9, it can be seen partially obtained results, among others:
1. The significant value of the firm size variable (SIZE) of $0.004 < 0.05$ or H_1

is accepted, firm size (SIZE) positively and significantly affects the capital structure (DAR).

2. The significant value of activity variables (TATO) of $0.000 < 0.05$ or H_2 is accepted, activity (TATO) positively and significantly affects the capital structure (DAR). < 0.05 or H_3 is accepted, profitability (ROA) negatively and significantly affects the capital structure (DAR).
3. The significant value of the profitability variable (ROA) of 0.049

Multiple Regression Results Hypothesis I

Table 10. Multiple Regression Hypothesis I

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	-1,130	,450
	SIZE	,045	,015
	TATO	,299	,054
	ROA	-1,066	,530

The Regression Model for Hypothesis I is:

$$Y = -1,130 + 0,045\text{SIZE} + 0,299\text{TATO} - 1,066\text{ROA}$$

The regression equation above can be interpreted that the firm size and

activities have a positive effect, while profitability negatively affects the capital structure.

Hypothesis II Test Test F Hypothesis II

Table 11. Test Results F Hypothesis II

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	1	.002	.050	.823 ^a
	Residual	2.800	58	.048		
	Total	2.803	59			

a. Predictors: (Constant), SIZE, TATO, ROA

b. Dependent Variable: IOS

From Table 11, it can be concluded that the value of sig. $0.823 < 0.05$ means that firm size (SIZE), activity (TATO), and profitability (ROA) are influential

and significant to the investment opportunity set (IOS) simultaneously.

Test t Hypothesis II

Table 12. Test t Hypothesis II

Model		T	Sig.
1	(Constant)	.123	.903
	SIZE	.619	.538
	TATO	-1.887	.064
	ROA	9.959	.000

1. The company size variable (Size) has a sig value of $0.538 > 0.005$ or H_4 rejected, the firm size (Size) has a positive and insignificant effect on the investment opportunity set (IOS). It means that the firm size (Size) cannot contribute to the size or small opportunity to invest.
2. Activity variable (TATO) has a sig value of $0.064 > 0.005$ or H_5 rejected, activity (TATO) negatively and not significantly on investment opportunity set (IOS). It means that the activity (TATO) cannot contribute to the large or small opportunity to invest.
3. The profitability variable (ROA) has a sig value of $0.000 < 0.005$ or H_6

received, profitability (ROA) positively and significantly affects the investment opportunity set (IOS). Profitability (ROA) can contribute to high investment opportunities using its capital.

Regression Analysis hypothesis II

Hypothesis II testing with residual testing is the investment opportunity set (IOS) to test the moderating variable. This test aims to find out whether the variable can strengthen or weaken the relationship between the firm size (Size), activity (TATO), and profitability (ROA) to the capital structure. The equation is as follows:

Table 13. Results of Company Size, Activity (TATO), Profitability (ROA) Test on Investment Opportunity Set (IOS)

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	.120	.980
	SIZE	.020	.033
	TATO	-.222	.117
	ROA	11.500	1.155

Then the regression of the first model is

$$M = 0,120 + 0,020\text{Size} - 0,222\text{TATO} + 11,500\text{ROA}$$

This model aims to obtain residual values from the first model so that the following result can be concluded whether the investment opportunity set

(IOS) variable can be said to be a moderating variable or not. If the investment opportunity set (IOS) variable is negative and significant, then the investment opportunity set (IOS) can be expressed as a moderating variable. Table 14 shows the results of the second model test as follows:

Tabel 14. Residual Test:

Model	Standardized Coefficients	t	Sig.	Correlations		
	Beta			Zero-order	Partia l	Part
1 (Constant)		5.578	.000			
DAR	-.029	-.224	.823	-.029	-.029	-.029

Residual models are as follows:

$$|E| = 0,334 - 0,028ROA$$

From the results of the test t, it is known that sig t amounted to $0.823 > 0.05$, so H_7 is accepted, which means investment opportunity set (IOS) is a moderating variable that can strengthen/weaken the influence of firm size (Size), activity (TATO), profitability (ROA) with capital structure (DAR)

Discussion**The Effect of Firm Size on Capital Structure**

The regression coefficient in Table 9 shows that the firm size in the positive direction is 2,997, and the sig value $<$ the sig level ($0.004 < 0.05$). Based on these results, the firm size positively affects and significance on the capital structure, so the first hypothesis can be accepted. The value of the coefficient in a positive direction means the unidirectional influence between the firm size and the capital structure so that if the firm size increases, it will increase the capital structure.

The results of this research show that the firm size had a positive effect on capital structure. The need for funds is increasing along with the company's growth because large companies have a large need for funds, apart from internal funding, using external funds. It is in line with the pecking order theory, which states that if internal funds are insufficient, then other alternatives are used using debt. The company is required to increase the debt to utilize the amount of debt into revenue to increase the company's total assets. Large companies choose large debts so that the capital structure is also large. Large companies with high flexibility and effective nature in funding issues tend to increase debt because of the number of assets owned by their companies that can be used as collateral in getting debt (Sari & Haryanto, 2013). The greater the company's assets, the greater the

guarantee that creditors can provide. So the company's large size is a positive signal for creditors to provide loans. By following the signalling theory, if the firm size gets bigger, the larger the company's capital structure. (Leland & Pyle, 1977) concluded that adding new debt to the company could signal that only companies with a relatively stable earnings outlook dare to add the debt.

Following the research conducted by (Nguyen & Tran, 2020), the firm size positively affects the capital structure. (Sari & Haryanto, 2013), there is a positive and significant relationship between the firm size and the capital structure. The larger the company's size indicated by the total assets, the greater the company will use a large amount of debt because large companies have a broader opportunity and easy to obtain credit. The same research conducted by (Nastiti, 2016) and (Atiqoh & Asyik, 2016) showed a positive relationship of the firm size to the capital structure, which shows that the larger a company is, the more likely it is to use external funds in the form of debt. This positive influence is due to large companies' enormous need for funds and support for their operational activities. Large companies are better able to face the crisis in running their business to minimize the risk of corporate bankruptcy. (S. Khan et al., 2021) the findings of this study suggest that banks in Saudi Arabia are highly leveraged, endorsing the fact that banks' business is different from non-banking firms. Earnings volatility, growth and bank size show positive and significant relations with book leverage. Profitability and tangibility are negatively related to the book leverage. Empirically, the explanatory variables profitability, earnings volatility, tangibility, growth and bank size have material effects on the capital structure decisions of Saudi commercial banks.

In summary, Saudi banks' capital structure determinants are the same as those of non-financial firms but are distinctive. (Haron, 2016), the findings of this study are that Indonesian firms do practice target capital structure and are influenced by firm-specific factors like profitability, business risk, firm size, liquidity and share price performance due to time-varying factors. A rapid adjustment toward target leverage is detected, thus supporting the existence of the dynamic trade-off theory (TOT). The pecking order theory (POT) also has significant influence, particularly after the new reformation of financing policy, where retained earnings are preferred as a source of financing apart from merely external financing through bank loans. There are also traces of market timing influences where firms also seem to time their equity issuance.

Different from opinion (Hakim, 2013), companies are more likely to choose funds that come from internal rather than from debt, so companies do not influence the use of external funding resources. Another possibility is whose large companies can enter the capital market more efficiently than anyone else? Furthermore, small companies cannot necessarily get funding very easily in the stock market (Morri & Beretta, 2008). show that REITs follow a pecking order theory of financing since more profitable firms are less levered and REITs with more growth opportunities have higher leverage ratios. The tangibility of assets turns out to be positively correlated with leverage, while REITs whose operational risk is high prefer a lower financial risk and consequently a lower gearing. Finally, it is unclear how size affects leverage decisions, and more diversified REITS appear to be riskier.

The Effect of Activity on Capital Structure

The regression coefficient in Table 9, the activity in the positive direction is 2,997, and the sig value < the sig level

(0.000<0.05). Based on these results, activity positively affects the capital structure, so that the second hypothesis can be accepted. The value of the coefficient in a positive direction means the unidirectional influence between the activity and the capital structure so that if the activity increases, it will increase the capital structure. It indicates that the higher the company's activity, the more effective the management will be in managing its assets to carry out its activities. The high value of asset turnover reflects the high net sales value of total assets, increasing the company's debt. If the turnover rate of the company's assets increases, then the number of trade goods purchased will also increase, leading to an increase in trade debt. This high total debt leads to an increase in total equity, while a high level of trade charcoal purchases increases total assets. Debts with different repayment maturities benefit the company because the company can use the debt before that maturity date to manage its assets as much as possible (Andriani, 2018). Ismaida & Saputra (2016), company activities calculated by asset turnover are an analysis conducted on the company's level of profitability that is more focused on assessing the effectiveness of the company and the intensity of assets in generating sales. The higher the turnover value of the asset reflects the higher value of the sale to the total value of the asset.

By following the research (Said & Jusmansyah, 2019), TATO has a positive and significant effect on capital structure. The higher TATO shows, the more effectively the company uses the overall asset to create sales and earn profits. Chaklader & Padmapriya, (2021), As the results and significance of the midcap or small-cap firms' variables are different, the managers' decisions of these firms would be separate for the capital structure of their firms. The study also infers that the factors influencing short and long-term borrowings are different. The study

determines whether managers' decision-making in such companies is different in raising short- and long-term loans. The study attempts to guide managers in considering the different variables that would influence their capital structure decisions, particularly the decision to include debt in the capital. Financial variables need not be equally important for managers belonging to small- and mid-cap companies.

In contrast, research (Susanto, 2019) impacts the results of variable analysis of total asset turnover. It has a significant negative influence. The impact of the total turnover of negative assets means the company's sales performance maintains its earnings as retained earnings and uses more external funds as capital. Purba et al. (2020) that the total asset turnover partially does not affect the capital structure. When creditors provide long-term loans, creditors do not only see the asset rotation side but many aspects are considered. (Albanes & de Lima, 2014) find evidence of market timing, but this behavior is not sufficiently persistent in the period studied to determine these firms' capital structure. We believe that Brazilian companies rarely carried out follow-on primary equity issues after floating their capital in the period analyzed due to more advantageous financing sources (mainly from the national development bank, BNDES), which explains the results. Therefore, Brazilian firms appear to be paying heed to different funding sources, searching for windows of opportunity to guide their financing decisions and determine their capital structures.

The Effect of Profitability on Capital Structure

Based on Table 9, the coefficient of profitability regression indicates a negative direction of -2,010 and the magnitude of sig > sig (0.049>0.05). It is stated that profitability does not affect the capital structure, so the third hypothesis

is rejected. In this study, profitability had no significant influence on the capital structure. Due to the company's high profitability or stable consideration in determining the capital structure, which affects the debt owed by the company, the company can meet some of the needs with the company's profit. The higher the company's profitability, it will show the higher the profit. A large amount of profit will accumulate in retained earnings. So the funds already exist and can be used for the company's operations. The higher the value of retained earnings, the greater the impact of the company's decline in needing funds from third parties (debt). The low debt will impact the low capital structure of the company. A low-value capital structure means the capital owned by the company is very strong. A strong company has a low debt-to-equity ratio, so it does not need to owe more because it has a large supply of money, which can fund its operations. Therefore, the higher the profitability, the lower the company's capital structure (Andriani, 2018).

Following (Chen, 2004) research, there is a negative relationship between profitability and debt. (2019) state that profitability does not affect the capital structure of food and beverage companies on the Indonesia Stock Exchange. It means that the increase or decrease in profitability will not affect the rise and decrease in the capital structure of beverage food companies on the Indonesia Stock Exchange. (W., 2020), from the regression outcomes, the study indicates that capital structure measured by debt to equity and long-term debt to total assets has a significant positive correlation with return on equity (ROE) and return on assets (ROA) of sampled construction companies. However, the capital structure measured by debt to assets has a significant negative correlation with ROE and ROA of sampled construction companies in Ethiopia.

Different opinion by (Thippayana, 2014) and (Denziana & Yunggo, 2017) indicates that the higher the profitability, the lower the capital structure because the greater the profit earned by the company will reduce the use of debt. At the same time, Gunawan (2011) research indicates that profitability affects the capital structure, where the higher the profitability, the value of the capital structure will also increase. (Akhtar et al., 2011), if the value of Return on Assets in the company is high, it indicates higher profitability. The effect of liquidity on capital structure means that if the company's liquidity increases, the company's capital structure will decrease. It can be said that changes in profitability will not affect changes in capital structure.

Investment Opportunity Set (IOS) Moderates the Influence of Company Size, Activity, Profitability on Capital Structure

In Table 14, from the results of the test t , it is known that $\text{sig } t$ amounted to $0.823 > 0.05$, so that H_7 is accepted, which means investment opportunity set (IOS) is a moderating variable that can strengthen/weaken the influence of a firm size (Size), activity (TATO) profitability (ROA) with capital structure (DAR). It proves that companies that grow with a high investment opportunity cost tend to fund it with internal sources. The company's growth has increased due to the company's equity (capital) caused by an increase in fixed assets (Christiani & Riduwan, 2019). It is in line with the Debt to Assets Ratio theory that the debt with assets ratio shows how much debt affects asset management. The research by (Dananti, 2011) and (Dadri, 2011), with the pecking theory order hypothesis, indicates that IOS positively affects the capital structure (DAR).

Other research by (Sigalingging & Dewi, 2019) shows that the Investment Opportunity Set variable does not affect the relationship of dividend policy with

the company's Leverage variable. It is known to have a positive and insignificant effect on the company's size, activity, and profitability, meaning that the choice or opportunity to invest today and is expected to generate more profits in the future has no impact on the company. The decision to use external funds is debt. (Abor & Bokpin, 2010) found a significantly negative relationship between investment opportunity set and dividend payout policy. However, there are insignificant effects of the various corporate finance measures, namely, financial leverage, external financing, and debt maturity on dividend payout policy. Profitability and stock market capitalization are also crucial in influencing dividend payout policy. Profitable firms are more likely to support high dividend payments to shareholders. However, firms in relatively well-developed markets tend to exhibit a low dividend payout policy.

From the discussions that have been described above, the author concluded that the role of the investment opportunity set (IOS) could moderate the firm size, activity, and profitability towards the capital structure.

The author could "bridge" between Discussion and Conclusion by adding a few paragraphs, like a closing statement.

Conclusion

The results of this study show that the company's size has a positive effect on the structure of capital. These results show that the larger the company, the higher the capital structure, the smaller the company, the smaller the capital structure. Large companies will find it easier to find investors who want to invest compared to small companies. Lenders prefer large companies to provide credit, allowing large companies to have broader opportunities. The company's size causes a tendency for the company to use its assets to obtain external funds, this condition or

statement is supported with research conducted by (Atiqoh & Asyik, 2016) and (Nguyen & Tran, 2020). In addition, the activity has a positive and significant effect on the capital structure, meaning that the higher the company's activity, the more effective the company will be in managing the company's assets to generate sales that are beneficial to the company and investors that the company can improve the company's financial performance. It is not in line with the research conducted by (Susanto, 2019). At the same time, profitability has a significant negative impact on capital structure. Companies with a high level of profitability mean high returns on debt and retained earnings, so companies tend to use internal funds to earn retained earnings and, in this case, reduce debt. It is based on research (Chen, 2004) and (Andika & Sedana, 2019). After residual testing, it was found that the Investment Opportunity Set (IOS) plays a role in regulating the impact of company size, activity, and profitability on capital structure. In other words, companies have high investment opportunities before they have the opportunity to expand, thus providing profits for investors. The company can manage additional company equity to increase productive assets, which has the potential to drive the company's growth. Therefore, companies with high market capitalization are considered reasonable by investors because they can provide good stock returns through high stock prices.

The value of the size of the company (SIZE) and activity (TATO) has a positive effect, while profitability negatively affects the capital structure (DAR). Partially the size of the company (SIZE) and activity (TATO) have a positive and significant effect, while profitability has a negative and significant effect on the capital structure. The Set of Investment Opportunities (IOS) can strengthen/weaken the impact

of corporate size (SIZE), activity (TATO), and profitability on multi-industry enterprise capital structures (DAR) during 2015-2019. The research implies that the Set of Investment Opportunities (IOS) plays a role in regulating company size, activity, and profitability on capital structure. The significance of this research is that investors who want to invest in a company can consider how many investment opportunities the company has. If the company has high investment opportunities, it means the company has the opportunity to expand, thus providing investors with income in the future. If companies want to manage their funds, they should make good planning, such as planning the use of funds for investments or dividends. This study has limitations, so researchers hope that researchers can further increase the number of other variables and increase the research year to obtain discoveries about the influence of variables on capital structure through the addition and use of moderating/intervening variables that are different from these research variables.

References

- Abor, J., & Bokpin, G. A. (2010). Investment Opportunities, Corporate Finance, and Dividend Payout Policy. *Studies in Economics and Finance*, 27(3), 180–194. doi: <https://doi.org/10.1108/10867371011060018>
- Akhtar, M. F., Ali, K., & Sadaqat, S. (2011). Factors Influencing the Profitability of Islamic Banks of Pakistan. *International Research Journal of Finance and Economics*, 66(66), 125–132. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.458.8877&rep=rep1&type=pdf>
- Albanez, T., & de Lima, G. A. S. F. (2014). Effects of Market Timing

- on the Capital Structure of Brazilian Firms. *Emerging Market Firms in the Global Economy* (Vol. 15, pp. 307–351). Emerald Group Publishing Limited. doi: <https://doi.org/10.1108/S1569-376720140000015013>
- Alzomaia, T. S. F. (2014). Capital Structure Determinants of Publicly Listed Companies in Saudi Arabia. *The International Journal of Business and Finance Research*, 8(2), 53–67. Retrieved from <http://www.theibfr2.com/RePEc/ibf/ijbfr/ijbfr-v8n2-2014/IJBFR-V8N2-2014-5.pdf>
- Andika, I. K. R., & Sedana, I. B. P. (2019). Pengaruh Profitabilitas, Struktur Aktiva, dan Ukuran Perusahaan terhadap Struktur Modal. *E-Jurnal Manajemen*, 8(9), 5803–5824. doi: <https://doi.org/10.24843/EJMMUNU.D.2019.v08.i09.p22>
- Andriani, H. (2018). *Pengaruh Profitabilitas, Aktivitas Perusahaan, Ukuran Perusahaan, Likuiditas, Cost Of Debt, dan Free Cash Flow terhadap Struktur Modal pada Perusahaan Properti dan Real Estate*. (Skripsi, Universitas Islam Indonesia, Yogyakarta, Indonesia). Retrieved from <https://dspace.uui.ac.id/bitstream/handle/123456789/8311/SKRIPSI.pdf?sequence=1&isAllowed=y>
- Armelia, S., & Ruzikna. (2016). Pengaruh Ukuran Perusahaan, Profitabilitas, Likuiditas dan Struktur Aktiva terhadap Struktur Modal Perusahaan Manufaktur Go Publik (Studi Sektor Kosmetik Keperluan Rumah Tangga). *Jurnal Online Mahasiswa Fakultas Ilmu Sosial dan Ilmu Politik Universitas Riau*, 3(2), 1–13. Retrieved from https://jom.unri.ac.id/index.php/JO_MFSIP/article/view/11250
- Atiqoh, Z., & Asyik, N. F. (2016). Pengaruh Kinerja Keuangan, Size, Pertumbuhan Penjualan, dan Kepemilikan Saham terhadap Struktur Modal. *Jurnal Ilmu dan Riset Akuntansi (JIRA)*, 5(5), 1–18. Retrieved from <http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/328>
- Bandyopadhyay, A., & Barua, N. M. (2016). Factors determining capital structure and corporate performance in India: Studying the business cycle effects. *The Quarterly Review of Economics and Finance*, 61, 160–172. doi: <https://doi.org/10.1016/j.qref.2016.01.004>
- Bhawa, I. B. M. D., & Dewi S., N. M. R. (2015). Pengaruh Ukuran Perusahaan, Likuiditas, Profitabilitas, dan Risiko Bisnis terhadap Struktur Modal Perusahaan Farmasi. *E-Jurnal Manajemen*, 4(7), 1949–1966. Retrieved from <https://ojs.unud.ac.id/index.php/Manajemen/article/view/12656>
- Chaklader, B., & Padmapriya, B. (2021). Impact of cash surplus on firm's capital structure: validation of pecking order theory. *Managerial Finance*, 47(12), 1801–1816. doi: <https://doi.org/10.1108/MF-08-2020-0417>
- Chen, J. J. (2004). Determinants of capital structure of Chinese-listed companies. *Journal of Business Research*, 57(12), 1341–1351. doi: [https://doi.org/10.1016/S0148-2963\(03\)00070-5](https://doi.org/10.1016/S0148-2963(03)00070-5)
- Christhalia, T., & Jonardi. (2019). Faktor yang Mempengaruhi Struktur Modal Perusahaan Aneka Industri yang Terdaftar di BEI. *Jurnal Paradigma Akuntansi*, 1(3), 889–898. doi:

<http://dx.doi.org/10.24912/jpa.v1i3.5593>

- Christiani, D. E. C., & Riduwan, A. (2019). Pengaruh Profitabilitas, Likuiditas, dan Kesempatan Tumbuh terhadap Struktur Modal. *Jurnal Ilmu dan Riset Akuntansi*, 8(6), 1–15. Retrieved from <http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/2127/2133>
- Dadri, P. T. (2011). *Pengaruh Investment Opportunity Set dan Struktur Modal terhadap Return Saham Perusahaan Farmasi di Bursa Efek Indonesia*. (Tesis, Universitas Udayana, Denpasar, Indonesia). Retrieved from <https://sukarsa.unud.ac.id/repository/tesis?nim=0890661025>
- Dananti, K. (2011). Sebuah Tinjauan Empiris terhadap Profitabilitas, Peluang Investasi Kepemilikan Manajerial dan Kebijakan Leverage. *Jurnal Ekonomi dan Kewirausahaan*, 11(2), 96–105. Retrieved from <https://ejurnal.unisri.ac.id/index.php/Ekonomi/article/view/58>
- Denziana, A., & Yunggo, E. D. (2017). Pengaruh Profitabilitas, Struktur Aktiva, dan Ukuran Perusahaan terhadap Struktur Modal Perusahaan pada Perusahaan Real Estate And Property yang Terdaftar di Bursa Efek Indonesia Tahun 2015. *Jurnal Akuntansi & Keuangan*, 8(1), 51–67. doi: <http://dx.doi.org/10.36448/jak.v8i1.825>
- Fahmi, I. (2016). *Pengantar Manajemen Keuangan Teori dan Soal Jawaban* (Cetakan Ke). Bandung: Alfabeta.
- Gunawan, A. (2011). Pengaruh Profitabilitas dan Perputaran Aktiva terhadap Struktur Modal. *Jurnal Ilmiah Manajemen dan Bisnis*, 11(1), 12–14. Retrieved from <https://onesearch.id/Record/IOS445.article-111>
- Hakim, A. R. (2013). *Pengaruh Struktur Aktiva, Profitabilitas, Ukuran perusahaan, dan Likuiditas terhadap Struktur Modal (Studi Kasus pada Perusahaan Makanan dan Minuman yang Terdaftar di Bursa Efek Indonesia Tahun 2007-2012)*. (Skripsi, Universitas Islam Negeri Syarif Hidayatullah, Jakarta, Indonesia). Retrieved from <https://repository.uinjkt.ac.id/dspace/bitstream/123456789/23953/1/Arief%20Rahman%20Hakim%20%28108081000129%29.pdf>
- Haron, R. (2016). Do Indonesian firms practice target capital structure? A dynamic approach. *Journal of Asia Business Studies*, 10(3), 318–334. doi: <https://doi.org/10.1108/JABS-07-2015-0100>
- Hery. (2015). *Analisis Laporan Keuangan Pendekatan Rasio Keuangan*. Yogyakarta: CAPS (Center of Academic Publishing Service).
- Ismaida, P., & Saputra, M. (2016). Pengaruh Pertumbuhan Penjualan, Profitabilitas, Ukuran, dan Aktivitas Perusahaan terhadap Struktur Modal pada Perusahaan Property dan Real Estate yang Terdaftar Di BEI Periode 2012-2014. *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA)*, 1(1), 221–229. Retrieved from <http://jim.unsyiah.ac.id/EKA/article/view/769>
- Kasmir. (2014). *Analisis Laporan Keuangan* (Edisi Pert). Depok: PT Raja Grafindo Persada.
- Khan, I., Jan, S. U., & Khan, M. (2015). Determinant of Capital Structure : An Empirical Study of Cement Sector of Pakistan. *Asian Journal of Management Sciences & Education*, 4(3), 50–60. Retrieved

- p>from
- [http://www.ajmse.leena-luna.co.jp/AJMSEPDFs/Vol.4\(3\)/AJMSE2015\(4.3-05\).pdf](http://www.ajmse.leena-luna.co.jp/AJMSEPDFs/Vol.4(3)/AJMSE2015(4.3-05).pdf)
- Khan, S., Bashir, U., & Islam, M. S. (2021). Determinants of capital structure of banks: evidence from the Kingdom of Saudi Arabia. *International Journal of Islamic and Middle Eastern Finance and Management*, 14(2), 268–285. doi: <https://doi.org/10.1108/IMEFM-04-2019-0135>
- Leland, H. E., & Pyle, D. H. (1977). Informational Asymmetries, Financial Structure, And Financial Intermediation. *The Journal Of Finance*, 3(2), 371–387. doi: <https://doi.org/10.2307/2326770>
- Lumbantobing, R. (2014). Rasio Utang Dan Dividen Memediasi Pengaruh Investment Opportunity Set terhadap Nilai Perusahaan. *Paper Knowledge. Toward a Media History of Documents*, 5(2), 40–51.
- Manurung, A. H. (2011). Capital Structure Determinant di Indonesia. *Akuntansi*, XV(3), 250–261.
- Marinda, F., AR Dzulkirom, M., & Saifi, M. (2014). Pengaruh Investment Opportunity Set (IOS) dan Struktur Modal terhadap Kinerja Keuangan (Studi pada Perusahaan Sektor Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia Periode 2011–2013). *Jurnal Administrasi Bisnis (JAB)*, 14(1). Retrieved from <http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/566>
- Masruroh., Nursanti, T. D., & Lisa. (2011). Analisis Pengaruh Moderating Investment Opportunity Set dengan Kebijakan Dividend Serta Moderating Investment Opportunity Set dengan Arus Kas Bebas terhadap Tingkat Leverage Perusahaan Makanan dan Minuman yang Terdaftar di BEI Periode 2003-2007. *The Winners*, 12(2), 121–141. doi: <https://doi.org/https://doi.org/10.21512/tw.v12i2.672>
- Morri, G., & Beretta, C. (2008). The Capital Structure Determinants of REITs. Is It A Peculiar Iindustry? *Journal of European Real Estate Research*, 1(1), 6–57. doi: <https://doi.org/10.1108/17539260810891488>
- Nasar, P., & Krisnando. (2020). *Pengaruh Likuiditas, Profitabilitas, dan Struktur Aset terhadap Struktur Modal dengan Ukuran Perusahaan Sebagai Variabel Moderasi pada Perusahaan Textile dan Garmen yang Terdaftar di Bursa Efek Indonesia Tahun 2014- 2019*. (Skripsi, Sekolah Tinggi Ilmu Ekonomi Indonesia, Jakarta, Indonesia). Retrieved from <http://repository.stei.ac.id/1215/>
- Nastiti, R. D. (2016). Pengaruh Struktur Aset, Likuiditas, Profitabilitas, Ukuran Perusahaan, Pertumbuhan Penjualan terhadap Struktur Modal. *Jurnal Ilmu dan Riset Akuntansi*, 5(1), 1-17. Retrieved from <http://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/1518>
- Nasution, R. A. (2021). *Analisis Persepsi Pedagang Pada Pengguna QRIS Sebagai Alat Transaksi UMKM Di Kota Medan*. (Skripsi, Universitas Islam Negeri Sumatera Utara, Medan, Indonesia). Retrieved from http://repository.uinsu.ac.id/11006/1/Skripsi_Final_Rina_Anasti_Nasution.pdf
- Nguyen, N. M., & Tran, K. T. (2020). Factors Affecting Capital Structure of Listed Construction Companies on Hanoi Stock Exchange. *Journal of Asian Finance, Economics and Business*, 7(11), 689–698. doi:

<https://doi.org/10.13106/jafeb.2020.vol7.no11.689>

- Noviandini., & Welas. (2017). Pengaruh Current Ratio, Return On Asset dan Total Asset Turnover terhadap Struktur Modal pada Perusahaan Publik Sub Sektor Makanan dan Minuman Periode 2011-2015. *Jurnal Akuntansi dan Keuangan*, 6(1), 1–19. Retrieved from <https://journal.budiluhur.ac.id/index.php/akeu/article/view/348>
- Prabansari, Y., & Kusuma, H. (2005). Faktor-Faktor yang Mempengaruhi Struktur Modal Perusahaan Manufaktur Go Public di Bursa Efek Jakarta. *Sinergi: Kajian Bisnis dan Manajemen*, 1–15. Retrieved from <https://journal.uui.ac.id/Sinergi/article/view/935>
- Purba, M. N., Sinurat, E. K. B., Djailani, A., & Farera, W. (2020). The Effect of Current Ratio, Return on Assets, Total Asset Turnover and Sales Growth on Capital Structure in Manufacturing Company. *International Journal of Social Science and Business*, 4(3), 489–500. doi: <https://doi.org/10.23887/ijssb.v4i3.27958>
- Rustam, M. (2015). Penentuan Struktur Modal Optimal pada Perusahaan Sektor Properti, Real Estate, dan Kontruksi yang Terdaftar di Bursa Efek Indonesia. *Jurnal Ekonomi Bisnis dan Kewirausahaan (JEBIK)*, 4(1), 94–124. doi: <http://dx.doi.org/10.26418/jebik.v4i1.11463>
- Said & Jusmansyah, M. (2019). Analisis Pengaruh Current Ratio, Return On Equity, Total Asset Turn Over dan Ukuran Perusahaan terhadap Struktur Modal pada Perusahaan Otomotif dan komponen yang terdaftar di Bursa Efek Indonesia (Periode 2013–2017). *Jurnal Ekonomika Dan Manajemen*, 8(1), 1–20. Retrieved from <https://journal.budiluhur.ac.id/index.php/ema/article/view/857>
- Santoso, Y. (2016). *Pengaruh Profitabilitas Ukuran Perusahaan, Struktur Aktiva, Likuiditas dan Growth Opportunity terhadap Struktur Modal Perusahaan Manufaktur di Bursa Efek Indonesia Tahun 2010–2015*. (Skripsi, Universitas Negeri Yogyakarta, Yohyakarta, Indonesia). Retrieved from <https://eprints.uny.ac.id/43354/>
- Sari, D. V., & Haryanto, A. M. (2013). Pengaruh Profitabilitas, Pertumbuhan Aset, Ukuran Perusahaan, Struktur Aktiva dan Likuiditas terhadap Struktur Modal pada Perusahaan Manufaktur di Bursa Efek Indonesia Tahun 2008-2010. *Diponegoro Journal of Management*, 2(3), 1–11. Retrieved from <https://ejournal3.undip.ac.id/index.php/djom/article/view/3204/3138>
- Seftianne., & Handayani, R. (2011). Faktor-Faktor yang Mempengaruhi Struktur Modal pada Perusahaan Publik Sektor Manufaktur. *Jurnal Bisnis dan Akuntansi*, 13(1), 39–56. Retrieved from <https://jurnaltsm.id/index.php/JBA/article/view/214>
- Sigalingging, Y. N., & Dewi, A. S. (2019, August 2). *Pengaruh Kebijakan Dividen dan Ukuran Perusahaan terhadap Leverage Perusahaan dengan Investment Opportunity Set (IOS) Sebagai Variabel Moderasi pada Sektor Trades, Services & Investment yang Terdaftar di BEI*. doi: <https://doi.org/10.31227/osf.io/6sa8n>

- Situmeang, A. L., Siagian, M. D. S., Sigalingging, N., & Samosir, Y. G. (2019). Pengaruh Rasio Profitabilitas (ROA), Rasio Likuiditas (CR) dan Rasio Aktivitas (TATO), terhadap Struktur Modal (DER) pada Perusahaan Basic Industry and Chemicals di Bursa Efek Indonesia Periode 2014-2018. *Jurnal Ilmiah Socio Secretum*, 9(1), 1–13. Retrieved from <https://jurnal.darmaagung.ac.id/index.php/socio/article/view/204>
- Sudana, M. I. (2015). *Manajemen Keuangan Perusahaan: Teori & Praktik* (2nd ed.). Jakarta: Penerbit Erlangga.
- Sugiyono. (2017). *Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif, Kombinasi dan R&D)*. Bandung: Alfabeta.
- Sulistio, A., & Saifi, M. (2017). Analisis Penentuan Struktur Modal yang Optimal untuk Meningkatkan Nilai Perusahaan (Studi pada PT. Astra Graphia Tbk Periode 2013-2015). *Jurnal Administrasi Bisnis*, 48(1), 37–45. Retrieved from <http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/1867>
- Susanti, E., Azwar, K., & Nainggolan, C. D. (2021). Peranan Nilai Perusahaan dalam Memoderator Pengaruh Fundamental terhadap Kinerja Keuangan pada Perusahaan Sektor Aneka Industri. *Owner Riset & Jurnal Akuntansi*, 5(1), 186–195. doi: <https://doi.org/10.33395/owner.v5i1.351>
- Susanto, D. (2019). Analisis Pengaruh Current Ratio, Net Profit Margin, Total Assets Turnover dan Ukuran Perusahaan terhadap Struktur Modal (Studi Empiris pada Perusahaan Sub Sektor Perdagangan Besar Barang Produksi dan Konsumsi di Bursa Efek Indonesia Periode 2013-2017). *Jurnal Ekonomika dan Manajemen*, 8(1), 59–70. Retrieved from <https://journal.budiluhur.ac.id/index.php/ema/article/view/861>
- Syamsuddin, L. (2016). *Manajemen Keuangan Perusahaan, Konsep Aplikasi Dalam Perencanaan Pengawasan Dan Pengambilan Keputusan* (Baru). Depok: PT Raja Grafindo Persada.
- Thippayana, P. (2014). Determinants of Capital Structure in Thailand. *Procedia-Social and Behavioral Sciences*, 143, 1074–1077. doi: <https://doi.org/10.1016/j.sbspro.2014.07.558>
- Udayani, D., & Suaryana, I. G. N. A. (2013). Pengaruh Profitabilitas dan Investment Opportunity Set pada Struktur Modal. *E-Jurnal Akuntansi*, 4(2), 299–314. Retrieved from <https://ojs.unud.ac.id/index.php/Akuntansi/article/view/6145>
- Wangsawinangun, R. Z., Darminto, & Nuzula, N. F. (2014). Penetapan Struktur Modal yang Optimal dalam Upaya Meningkatkan Nilai Perusahaan. *Jurnal Administrasi Bisnis (JAB)*, 9(2), 1-8. Retrieved from <https://media.neliti.com/media/publications/81713-ID-penetapan-struktur-modal-yang-optimal-da.pdf>
- Wassie, F. A. (2020). Impacts of capital structure: profitability of construction companies in Ethiopia. *Journal of Financial Management of Property and Construction*, 25(3), 371–386. doi: <https://doi.org/10.1108/JFMPC-08-2019-0072>
- Watung, A. K. S., Saerang, I. S., & Tasik, H. H. D. (2016). Pengaruh Rasio

- Likuiditas, Aktivitas, Provitabilitas, dan Struktur Aktiva terhadap struktur Modal Industri Barang Konsumsi di Bursa Efek Indonesia. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 4(2), 726–737. Retrieved from <https://ejournal.unsrat.ac.id/index.php/emba/article/view/13152>
- Wimelda, L., & Marlinah, A. (2013). Variabel-Variabel yang Mempengaruhi Struktur Modal pada Perusahaan Publik Sektor Non-K keuangan. *Media Bisnis*, 5(3), 200–213.
- Yulia, A., & Ifaksara, M. (2016). Pengaruh Investment Opportunity Set, Profitabilitas, dan Likuiditas terhadap Struktur Modal (Studi pada Perusahaan Properti dan Real Estate yang Terdaftar di Bursa Efek Indonesia Tahun 2010-2014). *Jurnal Akuntansi*, 5(1), 29–41. Retrieved from <https://ja.ejournal.unri.ac.id/index.php/JA/article/view/3612>
- Zuhro, F., & Suwitho. (2016). Pengaruh Ukuran Perusahaan, Pertumbuhan Aset, dan Profitabilitas terhadap Struktur Modal. *Jurnal Ilmu dan Riset Manajemen*, 5(4), 1–18. Retrieved from <https://ejournal.stiesia.ac.id/jirm/article/view/1541>