



The Moderation Role of Capital Structure in Increasing Company Value

Riana Sitawati ^{a*}, Bagus Kusuma Ardi ^a and Agus Pitoyo ^b

^a STIE Dharmaputra Semarang, Central Java, Indonesia.

^b AMIK Jakarta Teknologi Cipta, Semarang, Central Java, Indonesia.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJEBA/2023/v23i241185

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/110428>

Original Research Article

Received: 08/10/2023

Accepted: 12/12/2023

Published: 15/12/2023

ABSTRACT

Aims: To test capital structure moderates influence size company and profitability to value companies in the property and real estate business listed on the Indonesia Stock Exchange (IDX).

Study Design: Moderating.

Place and Duration of Study: The property and real estate business listed on the Indonesia Stock Exchange (IDX) in the year 2021-2022.

Methodology: Population study This property and real estate business is listed on the Indonesia Stock Exchange; in 2021, there will be 76 companies, and in 2022, there will be 85 companies, totalling 161. As for the sample determined based on the method census, however, there were 45 outlier data after the Normality test, so the sample end is 116. Data was collected with method documentation and analysis using a pure moderation model with processed SPSS 24.

Results: The size of a company and its profitability have a positive significance on the company's value, and the capital structure can moderately influence the size and profitability of a company.

Conclusion: The contribution of this research supports signalling theory and business policy in increasing company value through increasing company size and profitability, which is leveraged with an optimal capital structure.

Keywords: Size; profitability; capital structure; value company.

*Corresponding author: E-mail: rianasitawati.stiedp@gmail.com;

1. INTRODUCTION

The company's value is draft important for investors because the value of the company is an indicator of how the value rates the company in a way whole. High company value becomes investors' desire because high value shows prosperity holder shares are also high [1]. High company value shows the performance of a good company. The more the company, the more the prosperity of the holder's shares will be guaranteed.

The main goal of a public company is to increase prospects for owners by increasing the company's value [2]. Therefore, increasing the company's value is a real positive for investors regarding capital value. The company's value can be measured by comparing price book value (PBV) ratios between price share and value book per sheet share [1].

The company's value can be influenced by several factors, including its size, profitability and capital structure. Research results show that Company size significantly positively influences company value [3,4,5]. Company size is big and small companies that can be measured through big and small sales, total assets and equity [1]. The larger the company, the greater the power source [6], so there is a potential to obtain a high income. Companies that enhance their size will respond positively to the market, increasing the company's value [7]. However, this is different from the research results of Nuralitasari & Durya [8], Margono & Gantino [9] and Ibrahim & Isiaka [10] which reveal that company size does not affect company value. This could be due to an increase in company size not being attractive to investors when it comes from company profits that are not shared with investors and debt, so share prices do not rise.

Profit is a positive signal for the market, as proposed by Komara et al. [11]. Previous research results also show that profitability has a significant positive effect on company value, as stated by Bon & Hartoko [12], Handayani et al. [13], Jihadi et al. [14] and Fajaria & Isnalita [15]. This positive influence indicates that the company value will increase if profit can increase. Profitability enhancement gives potency dividends to investors or holder shares, so they respond positively to the market. However, this is different from the research results of Kusumawati & Harijono [16], Sondakh [17], and Sukmawardani & Ardiansari [18] which reveal that profitability has no effect on company

value. This could be because the increase in profits is not attractive to investors because the company does not distribute profits to investors in the form of dividends, so share prices do not increase.

The existence of these two research gaps is interesting to carry out research again and it is important to find solutions to reduce these research gaps. This research proposes using capital structure moderation. Capital structure is a comparison of sourced capital from debt and equity, and an optimal capital structure company is a structure that will maximise the price of the shares [1]. In practice, no easy management reaches optimal capital structure, especially those who can afford it to increase the company's value. Research results show that capital structure as moderation influences the size of companies to value companies [19, 20]. That means that enhancement size-supported companies with the optimal capital structure will increase the company's value.

Research results stated by Sunny & Suryadi [21], Cahyono et al. [22], and Santoso [23] disclose that capital structure, as moderation, influences profitability to value company, meaning that enhancement profitability which is leveraged with the optimal capital structure will increase value company.

Research: This will retest the role of capital structure to increase the company's value. The selected object is property and real estate businesses listed on the Indonesian Stock Exchange when 2019-2022 experienced a drastic decline in value for the company being measured with PBV. In 2019, the average PBV was 2.42 to 1.4 in 2020 or a decrease of 42%; to 0.65 in 2021 or down 54%; and to 0.52 in 2022 or down 20% [24, 25, 26, 27]. Contribution study This contributes to theory signalling and provides empirical proof of How to increase the value of a company through enhancement, strengthening capital structure influences the size of the company and profitability to the company's value.

2. REVIEW OF RELATED STUDIES AND DEVELOPMENT HYPOTHESIS

2.1 Signal Theory

Signalling theory is closely related to company financial information; company executives will be encouraged to convey good information to investors [28]. Aligned with the matter, Brigham & Houston [1] revealed that an action taken by

company management provides a signal to investors about how to manage and see the company's prospects.

Relationships profitability with value companies can signal the market positively whenever price share increases [8]. Statement the forbid with Cuong & Canh [29] that capital structure gives a positive signal to influencing investors the value of the company. The company will use debt. If the company's prospects are good, then this signal is captured by investors so that the company's value will increase. Another aspect that is related to signal theory is company size. A large company size will, of course, be well-received by the market. Simply put, the larger the company size, the more positive the signal from investors [7].

2.2 The Effect of Company Size on Company Value

The market will respond to an increase in company size so that company value will increase. The company's large size results in investors paying more attention so that the share price rises, which will cause the company's value to rise.

Lambey et al. [3] stated that company size has a significant positive effect on company value, meaning if the company's size increases, then the company's value will also increase. The results aligned with research by Hapsoro & Falih [4] and Husna & Satria [5]. Based on the information, hypothesis 1 is that company size positively affects company value.

2.3 The Effect of Profitability on Company Value

Profitability is a company's ability to generate profits from its assets and capital at a certain level of sales [1]. Profit is news. It is good for investors, impacting the company's value [11].

Previous research shows that profitability has a significant positive effect on company value [12]; if profitability increases, the company's value will increase. Research results aligned with research by Handayani et al. [13], Jihadi et al. [14] and Fajaria & Isnalita [15]. Based on the information, Hypothesis 2 is that profitability positively affects company value.

2.4 Capital Structure Moderates the Effect of Company Size on Company Value

Size companies that can increase profit will respond positively to the market so that value companies will increase. Predictions by the research results of Mardevi et al. [19] and Arsyada et al. [20] reveal that capital structure moderates the influence of company size on company value. This research means that if the company's size is supported by optimal capital structure, then the company's value will increase. Based on that, hypothesis 3 is that capital structure moderates the effect of company size on company value.

2.5 Capital Structure Moderates the Effect of Profitability on Company Value

Supported for-profit companies with good capital structures are more positively responded to by the market, so the company's value will increase [11]. Prediction This is to the research results of Sunny & Suryadi [21], Cahyono et al. [22], and Santoso [23], which reveal that the capital structure moderating influences company profitability on company value. Based on the information, hypothesis 4 is that capital structure moderates the effect of profitability on company value.

On base review of the literature and hypotheses prepared, the study framework is as follows:

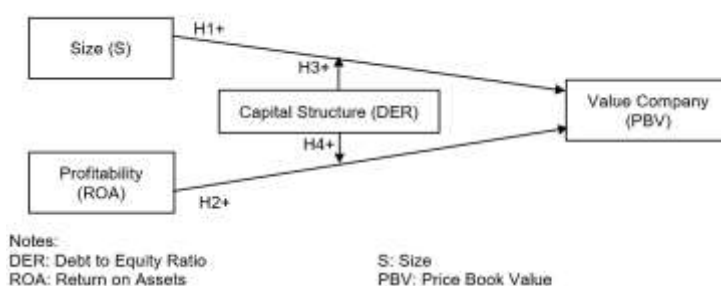


Fig. 1. Study Framework

Source: Mardevi et al. [19], Arsyada et al. [20], Sunny & Suryadi [21], Cahyono et al. [22], and Santoso [23].

3. METHODS

This research includes quantitative data from annual report statistics on the Indonesian Stock Exchange (IDX) in 2021 and 2022. The population is 76 real estate companies listed in 2021 and 85 companies in 2022, totalling 161 companies [26, 27]. The sample is determined based on the census method; however, there were 35 outlier data after the Normality test, so the sample end is 126. Data in the study got this with method studies documentation. Data was analysed using a pure moderation model with equality multiple linear regression as follows:

$$PBV = \alpha_1 + \beta_1 S + \beta_2 ROA + \beta_3 DER_S + \beta_4 DER_ROA + \varepsilon$$

Variable description and measurement:

PBV: Price Book Value, price share divided by book value per share [1].

DER: Debt Equity Ratio, total debt divided by equity in percentage [1].

S: Size: company size measured by Ln - assets [4].

ROA: Return on Assets, net profit divided by total assets in percentage [1].

DER_S: DER*Size interaction

DER_ROA: DER*ROA interaction

α : Constant

$\beta_1, \beta_2, \beta_3, \beta_4$: regression coefficients

ε : standard error

Pure moderated analysis includes: classical assumption tests, model feasibility tests and hypothesis tests with criteria and results as explained in the following chapter

4. RESULTS AND DISCUSSION

4.1 Classical Assumption Test Results of Multiple Linear Regression

4.1.1 Normality test results

The Normality Test aims to test whether, in the regression model, the dependent variable and the independent variable have a normal distribution. A good regression model is a normal data distribution. This test is carried out by looking at the results of the histogram graph, which shows that all data is located inside the curve; the data distribution is called normal [30]. Fig. 2 shows the data in an arch curve, so the data is normally distributed.

4.1.2 Heteroscedasticity test results

A regression criterion is free from heteroscedasticity if *the scatterplot* of points resulting from data processing between ZPRED and SRESID spreads below or above the origin point (number 0) on the Y axis and does not have a regular pattern [30]. Fig. 3 shows the criteria for the research data. This is free from the heteroscedasticity problem.

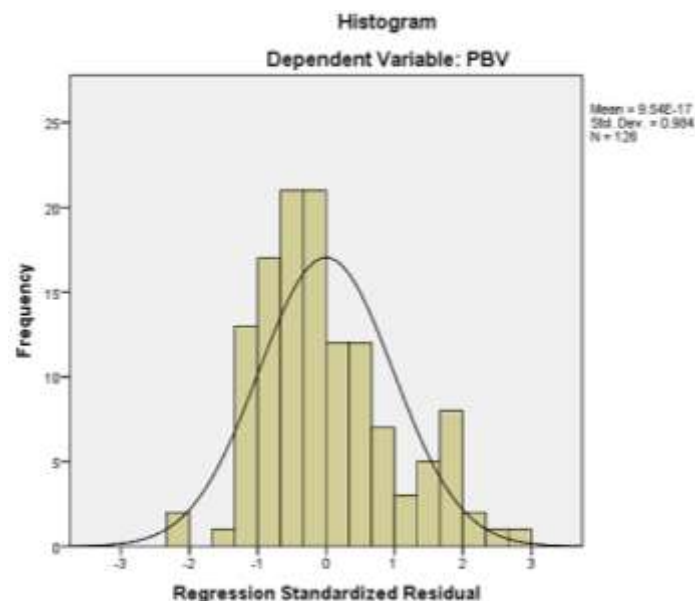


Fig. 2. Normality Test Results

Source: Secondary data processed (2023)

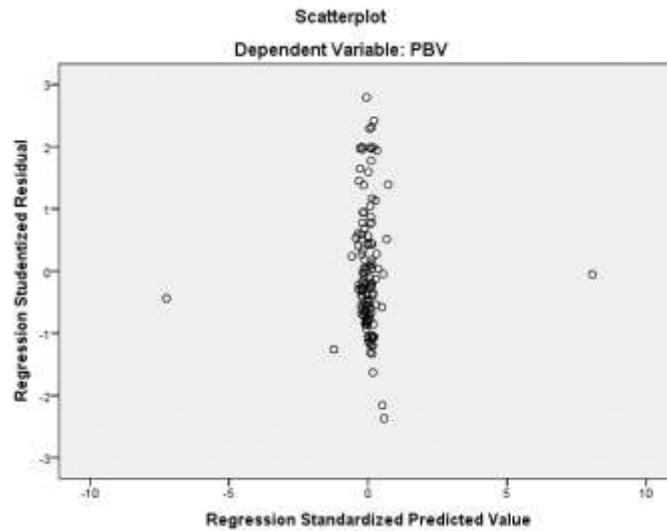


Fig. 3. Heteroscedasticity test results

Source: Secondary data processed (2023)

4.1.3 Autocorrelation test results

Based on Table 1, Durbin Watson's value is 1.877. Meanwhile, Durbin Watson's table value is $n=126$; the number of independent variables=4, with degrees of 5% significance, is known to be $DL=1.6608$ and $DU=1.7581$. There is no problem with autocorrelation if $DU < D < 4-DU$ [30], then $4-DU=4-1.7581=2.2419$. The results of the autocorrelation test are $1.6608 < 1.877 < 2.2419$, so No autocorrelation problem occurs.

4.1.4 Multicollinearity test results

The multicollinearity test determines that the regression model does not correlate with independent variables. One method to diagnose the emergence of multicollinearity is to analyse the *tolerance value* and *variance inflation factor* (VIF), an indication that there is no multicollinearity problem if the number $VIF < 10$ and $Tolerance > 0.1$ [30]. Table 2 shows the criteria for the research data. This is free from the multicollinearity problem.

Table 1. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,905 ^a	,819	,813	,40205	1,877

a. Predictors: (Constant), DER_ROA, S, ROA, DER_S
 b. Dependent Variable: PBV

Source: Secondary data processed (2023)

Table 2. Coefficients

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,305	,169		7,719	,000		
	S	,092	,022	,170	4,262	,000	,939	1,065
	ROA	1,543	,502	,121	3,072	,003	,965	1,036
	DER_S	,000	,000	,221	4,058	,000	,504	1,984
	DER_ROA	,026	,002	,738	13,596	,000	,508	1,970

a. Dependent Variable: PBV

Source: Secondary data processed (2023)

Table 3. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	88,367	4	22,092	136,671	,000 ^b
	Residual	19,559	121	,162		
	Total	107.925	125			

a. Dependent Variable: PBV

b. Predictors: (Constant), DER_ROA, S, ROA, DER_S

Source: Secondary data processed (2023)

4.2 Model Feasibility Test Results

Test the feasibility of the model aims to know the results of equality regression worthy of use for analysing the data that has been processed. To test the feasibility of the model, we can use statistics F; if the significance of the F value is small instead of 0.05, then the model is worthy or fit [30]. Table 3 shows a sig value of 0.000, less than 0.05, so the regression model study is feasible.

4.3 Hypothesis Test Results and Discussion

Hypothesis testing uses the criteria for accepting a sig value of less than 0.05 [30], while the results of this research hypothesis are as follows:

- a. The variable S or company size (Table 2) has a sig value of 0.000, less than 0.05, and has a positive coefficient of 0.092, meaning that company size significantly positively affects PBV; thus, hypothesis 1 is accepted. A positive and significant influence indicates that the larger the company size, the greater the company value (PBV).

The results of this research prove that company size provides a positive signal for the market research by Lambey et al. [3], Hapsoro & Falih [4], and Husna & Satria [5], who revealed that company size has a significant positive effect on company value.

- b. The ROA variable (Table 2) has a sig value of 0.003, less than 0.05 and has a positive coefficient of 1.543, meaning that ROA has a significant positive effect on PBV; thus, hypothesis 2 is accepted. The greater the ROA value, the greater the PBV.

The results of this research prove that profitability provides a positive signal for the market, and is by the research of Bon &

Hartoko [12], Handayani et al. [13], Jihadi et al. [14] and Fajaria & Isnalita [15], profitability has a significant positive effect on firm value.

- c. The variable DER_S (Interaction of DER with Size) (Table 2) has a sig value of 0.000, less than 0.05 and has a positive coefficient, meaning that DER moderates the influence of company size on company value (PBV); thus hypothesis 3 is accepted. This means that company size supported by an optimal capital structure increases company value. This research proves that capital structure provides a positive signal for the market and is in line with the research of Mardevi et al. [19] and Arsyada et al. [20].
- d. The variable DER_ROA (Interaction of DER with ROA) (Table 2) has a sig value of 0.000, less than 0.05 and has a positive coefficient, meaning that DER moderates the influence of ROA on firm value (PBV); thus, hypothesis 4 is accepted. This means that profitability supported by an optimal capital structure increases company value. The results of this research prove that the capital structure provides a positive signal for the market and is in line with the research of Sunny & Suryadi [21], Cahyono et al. [22], and Santoso [23].

5. CONCLUSION

The research results show that company value, as proxied by price to book value (PBV), is influenced by company size and profitability, and capital structure moderates the influence of company size and profitability on company value.

This research is limited because the sample of companies studied is only property and real estate companies on the Indonesia Stock Exchange. Hence, the results need to be sufficiently representative of all companies in Indonesia. Therefore, future research can expand the company's objectives.

The results of this research contribute to the application of signalling theory by providing empirical evidence of the influence of company size and profitability on company value with moderation of capital structure, as well as as an additional reference for similar research in the future. For business practitioners, the results of this research contribute to policies to increase company value through increasing company size, profitability and moderation of capital structure.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Brigham EF, Houston JF. Fundamentals of financial management. USA: Cengage Learning. 2015.
2. Salvatore D. Managerial economics in the global economy. New York: Oxford University Press; 2007.
3. Lambey et al. The effect of profitability, firm size, equity ownership and firm age on firm value (Leverage Basis): Evidence from The Indonesian Manufacturer Companies. Archives of Business Review. 2021;9(1): 128–139.
4. Hapsoro D, Falih ZN. The Effect of Firm Size, Profitability, and Liquidity on the Firm Value Moderated by Carbon Emission Disclosure. Journal of Accounting and Investment. 2020;21(2):240-257.
5. Husna A, Satria I. Effects of Return on Assets, Debt to Asset Ratio, Current Ratio, Firm Size, and Dividend Payout Ratio on Firm Value. International Journal of Economics and Financial Issues. 2019; 9(5):50-54.
6. Choi BB, Lee D, Psaros, J. An analysis of Australian firm carbon emission disclosures. Pacific Accounting Review. 2013;25(1):58-79.
7. Brau JC, Carpenter JT. Small-firm uniqueness and signaling theory. Journal of Business, Economics & Finance. 2012; 1(1):50–63.
8. Nurmalitasari N, Durya NPMA. The effect of firm size, return on equity, and leverage on firm value. International Journal of Economics, Social Science, Entrepreneurship and Technology (IJESET). 2022;1(4):271-278.
9. Margono FP, Gantino R. the influence of firm size, leverage, profitability, and dividend policy on firm value of companies in Indonesia stock exchange. Copernican Journal of Finance & Accounting. 2021; 10(2):45-61.
10. Ibrahim UA, Isiaka AQ. Effect of Financial Leverage on Firm Value: Evidence From Selected Firms Quoted on the Nigerian Stock Exchange. European Journal of Business and Management. 2020;12(3): 124-135.
11. Komara A, Ghazali I, Januarti I. Examining the firm value based on signaling theory. Advances in Economics, Business and Management Research. 2019;123: 1-4.
12. Bon SF, Hartoko S. The effect of dividend policy, investment decision, leverage, profitability, and firm size on firm value. European Journal of Business and Management Research. 2022;7(3):7-13.
13. Handayani RH, Indarto Santoso A. Determinants of firm value with profitability as intervening variables. Asian Management and Business Review. 2022; 2(1):74-89.
14. Jihadi et al. The effect of liquidity, leverage, and profitability on firm value: Empirical Evidence from Indonesia. Journal of Asian Finance, Economics and Business. 2021;8(3):423-431.
15. Fajaria AZ, Isnalita. The Effect of Profitability, Liquidity, Leverage and Firm Growth of Firm Value with its Dividend Policy as a Moderating Variable. International Journal of Managerial Studies and Research. 2018;6(10):55-69.
16. Kusumawati VC, Harijono H. Profitability and dividend policy affects firm value in the infrastructure, utility and transportation sector. International Journal of Social Science and Business. 2021;5(1):8-15.
17. Sondakh R. The Effect of Dividend Policy, Liquidity, Profitability And Firm Size On Firm Value In Financial Service Sector Industries Listed In Indonesia Stock Exchange 2015-2018 Period. Accountability. 2019;8(2):91-101.
18. Sukmawardani D, Ardiansari A. The Influence of Institutional Ownership, Profitability, Liquidity, Dividend Policy, Debt Policy on Firm Value. Management Analysis Journal. 2018;7(2):211-222.
19. Mardevi KS, Suhendro, Dewi RR. Factors That Influence Company Value with Capital Structure as Variable Moderation. Journal Accounting & Economics. 2020; 5(2):36-47.

20. Arsyada AB, Sukirman, Wahyuningrum IFS. Influence company size, profitability, and investment decisions towards company value with capital structure as a moderating variable. *Owner: Research & Journal Accounting*. 2022;6(2):1648-1663.
21. Sunny GE, Suryadi L. Factors that influence company value with capital structure as variable moderation. *Journal Multiparadigm Accounting*. 2021;3(4):1670-1680.
22. Cahyono, Sigit, Surasni, Ni Ketut, & Hermanto, Hermanto. Influence profitability to value company with capital structure as variable moderating the company sector agriculture listed on the Indonesian Stock Exchange. *JMM Unram-Master of Management Journal*. 2019;8(4):323–337.
23. Santoso A. Influence Profitability, Size Company and Level Growth to Value Company Manufacturing in Indonesia with Capital Structure as Moderating Variable. *Petra Business and Management Review*. 2018;4(1):131–141.
24. Indonesia Stock Exchange (IDX) -Data Services Division (2019). *IDX Statistics*; 2019.
25. Indonesia Stock Exchange (IDX) - Data Services Division (2020). *IDX Statistics*; 2020.
26. Indonesia Stock Exchange (IDX) - Data Services Division (2021). *IDX Statistics*; 2021.
27. Indonesia Stock Exchange (IDX) - Data Services Division (2022). *IDX Statistics*; 2022.
28. Ross SA. The Determination of financial structure: The Incentive Signaling Approach. *Bell Journal of Economics and Management Science*. 1977;8(1):23–40.
29. Cuong NT, Canh NT. The Effect of Capital Structure on Firm Value for Seafood Enterprises. *International Research Journal of Finance*. 2012;89:221-223.
30. Ghozali I. *Application Multivariate analysis with the SPSS program IBM*. Edition 8. Semarang: Publishing Agency University Diponegoro; 2016.

© 2023 Sitawati et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/110428>