

# Capital Structures Mediating Role in Profitability, Liquidity, and Firm Value

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**Abstract:** *This study investigates the role of capital structure in mediating the impact of profitability and liquidity on firm value. Using a sample of 25 property and real estate companies from 2020-2022, the study finds that Return On Equity (ROE) and Current Ratio (CR) have no significant effect on Debt to Equity Ratio (DER). Furthermore, ROE and DER do not significantly affect Price to Book Value (PBV), while CR has a significant negative effect on PBV. The study concludes that DER cannot mediate the effect of ROE and CR on PBV.*

**Keywords:** Debt to Equity Ratio, Return On Equity, Current Ratio, Price to Book Value.

## 1. Introduction

The Covid-19 pandemic that has hit Indonesia since March 2020 has dealt a heavy blow to various industrial sectors in Indonesia, one of which is property. During 2020 to 2021, it was a very tough period for the property business with a significant decline in performance. A number of property projects had to experience delays during the pandemic due to weakening consumer purchasing power. Consumers choose to postpone purchases in the property sector because they are waiting for the crisis due to the pandemic to subside.

This condition did not last long. This is evident from the fact that several companies in the property and real estate sector were able to close 2022 with sizeable revenues and net profits. Even though it has earned a sizable net profit income, the purpose of the company was founded not only to generate profits, but also to maximize the prosperity of shareholder value. Shareholder value will increase if the company's value also increases. Companies that are considered good must be able to control all financial potential and non-financial potential as a form of increasing company value in the long term [1].

Firm value has several ratio analysis approaches, one of which is Price Book Value (PBV). According to [2] almost all investment decisions in the capital market are based on PBV developments. A high PBV can make investors more confident about the company's future opportunities. The PBV size is related to the policies used by the company. Managers will maximize the value of the company by choosing the optimal capital structure, debt ratio as high as possible. High quality companies need to signal their quality to the market, while managers of low quality companies will try to imitate [3]. According to [4] the theory of capital structure proxied by the Debt to equity ratio (DER) states that the value of a company is inseparable from debt policy. Companies must optimize the selection of sources of funds to be used in order to maximize the company's stock price. There are other factors that can affect the value of the company, namely; liquidity is proxied by the current ratio

(CR) and profitability is proxied by return on equity (ROE). The impression of investors on the company's success is also related to liquidity and profitability. Smart investors will see the company's potential from various perspectives that can affect the company. Firm value can be influenced by the size of the profitability generated by the company. According to [5], profitability can be seen from the extent to which a company generates profits from sales and investment of a company. Companies that have high liquidity mean they have the ability to pay off debt. This can also increase the confidence of creditors in lending funds, so as to ensure the trust of potential investors and creditors [4].

At least there are several previous studies that have relevance to this research, including namely; Research conducted [6] and [7] says that profitability has a positive and significant effect on capital structure. On the other hand [8] conducted research on profitability and the results showed a significant positive effect on firm value. However, [9] said that profitability has no significant effect on company value.

Research on liquidity was conducted by [10] the result is that liquidity does not have a significant effect on company value. Meanwhile, in research conducted by [11] and [8] said that liquidity has a significant positive effect on firm value.

Research on firm value was conducted by [12] revealed that capital structure has a significant positive effect on firm value. However, different results were found in research [13] which stated that capital structure had a significant negative effect on firm value.

Based on several previous studies, various results were obtained so that there were still gaps in the research. Therefore, researchers want to conduct in-depth research to find out the overall results related to this study.

## 2. Literature Review

A research is certainly inseparable from the main theory and supporting theories to help uncover problems in research. The following will be presented regarding the theories used in this study.

### 2.1 Pecking Order Theory

Pecking Order Theory shows how companies maximize the use of funds. Companies prefer internal funding, because it saves more expenses and can minimize a lower risk. But if internal funding is insufficient, the company will use debt and issue equity [14].

### 2.2 Firm Value

Firm value is a very important factor, because if the company value is high it will be followed by high shareholder or investor prosperity. In this study, firm value is proxied by Price to Book Value (PBV). PBV is a ratio that describes how the market values the company's book value. The formula for Price to Book Value:

$$PBV = \frac{\text{Market Price per Share}}{\text{Book Value per Share}} \quad (1)$$

### 2.3 Capital Structure

The capital structure is the proportion of the company's long-term permanent financing shown by debt, equity preferred stock and common stock. In this study, the capital structure is proxied using the Debt To Equity Ratio (DER). The proxy chosen by DER is said to be able to represent the company's total debt which has an influence on company value. The formula for Debt To Equity Ratio:

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}} \quad (2)$$

### 2.4 Profitability

According to [15] profitability is a company's ability to earn profits. If the company can generate high profits it can be concluded that the company has good performance and vice versa. In this study, the ratio used to proxies profitability is Return On Equity (ROE). ROE is able to measure the level of return obtained for shareholders. ROE can also be used to measure a company's ability to generate profits from the utilization of the company's capital resources. The formula for Return On Equity:

$$ROE = \frac{\text{Earning After Taxes}}{\text{Total Equity}} \quad (3)$$

### 2.5 Liquidity

A company can be said to be liquid if a company can fulfill its obligations in a timely manner using current assets that are larger than short-term debt. This study uses the Current Ratio (CR) to calculate liquidity. Current Ratio is a ratio that reflects a company's ability to meet long-term obligations, if a company has a large Current Ratio, it is likely that the

company is able to fulfill its obligations and give a positive perception to external parties. The amount of financial performance can be calculated through CR with the formula:

$$CR = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad (4)$$

## 3. Methodology

The research design used in this research is a quantitative method with a descriptive and verification research approach. The objects of this research are property and real estate companies listed on the Indonesia Stock Exchange during the 2020-2022 period. The population in this study amounted to 83 companies. However, not all populations are sampled. After applying the criteria, the sample in this study amounted to 25 companies. So that the total is 75 data, the result is the multiplication of the number of samples (25 companies) with the study period (3 years). The type of data used in this research is using secondary data. The secondary data used in this research is the 2020-2022 annual report and financial reports from the Indonesian Stock Exchange website.

## 4. Result

After doing a series of data processing. Which starts from; descriptive statistics, panel data regression analysis, classical assumption test, hypothesis testing and sobel test. Then the results obtained will be translated in the form of recapitulation.

### 4.1 Partial Hypothesis Test (T Test)

Partial hypothesis test (t test) aims to determine whether the independent variable partially affects the dependent variable. To find out whether there is influence or not, it can be seen through the p-value of each independent variable. The t test can be measured at the  $\alpha$  level of 0.05.

**Table 1:** Recapitulation of Partial Hypothesis Test Result

Variable Effect	$\beta$	Prob.	$\alpha$	Result
ROE→DER	-281.3448	0.2766	> 0.05	No significant effect
CR→DER	-393.9819	0.3040	> 0.05	No significant effect
ROE→PBV	0.037673	0.1410	> 0.05	No significant effect
CR→PBV	-0.831519	0.0000	< 0.05	Negative significant
DER→PBV	2.900006	0.8274	> 0.05	No significant effect

### 4.2 Sobel Testing

To find out if the mediation effect that occurs is significant or not, it is necessary to do the Sobel test. To produce coefficients that show direct and indirect effects in path analysis.

**Table 2:** Recapitulation of Sobel Test Result

Variable Effect	$\beta$	Prob.	$\alpha$	Result
ROE→DER→PBV	-0.2149	0.8298	> 0.05	Unable to mediate
CR→DER→PBV	-0.1814	0.8559	> 0.05	Unable to mediate

## 5. Discussion

In this section, an in-depth discussion will be carried out on the results of data processing that have been described in the previous discussion.

### 5.1. Effect of Profitability (Return on Equity) on Capital Structure (Debt to Equity Ratio)

Based on table 1, the sig value is 0.2766 or  $> 0.05$  with a  $\beta$  gain of -281.3448. Thus explaining that profitability has no significant effect on capital structure. Return On Equity is a ratio that can be used to measure a company's ability to earn profits from business activities. The use of large debt is considered to be more profitable than using its own capital in financing company activities. However, the higher the ROE value does not determine that it can attract creditors' interest in lending capital.

### 5.2 Effect of Liquidity (Current Ratio) on Capital Structure (Debt to Equity Ratio)

Based on table 1, the sig value is 0.3040 or  $> 0.05$  with a  $\beta$  gain of -393.9819. Thus explaining that liquidity has no significant effect on capital structure. A company can be said to be liquid if a company can fulfill financial obligations in a timely manner or current assets are greater than current liabilities or short-term debt. However, the capital structure that is said to be optimal has no effect on the size of the company's liquidity and investors do not judge the size of the company's current assets in providing long-term obligations. Investors are more interested in the company's fixed assets because they can be used as collateral for debt if the company is unable to pay its obligations.

### 5.3 Effect of Profitability (Return on Equity) on Firm Value (Price Book Value)

Based on table 1, the sig value is 0.1410 or  $> 0.05$  with a  $\beta$  gain of 0.037673. Thus explaining that profitability has no significant effect on firm value. If a company has a low Return On Equity, it will have an impact on decreasing the value of the company (Price Book Value) because investors do not only look at how much dividends they will get but look at the investment environment situation. If the dividends obtained are high but the investment conditions are not good, it will be a consideration made by investors to invest.

### 5.4 Effect of Liquidity (Current Ratio) on Firm Value (Price Book Value)

Based on table 1, the sig value is 0.0000 or  $< 0.05$  with a  $\beta$  gain of -0.831519 which is negative. Thus explaining that liquidity has a significant negative effect on firm value. A company is said to be liquid if it can meet debts in a timely manner and the company has current assets greater than current liabilities. If a company has a large Current Ratio, it is more likely that the company can fulfill its obligations and provide a positive perception of the company's condition in the eyes of external parties.

### 5.5 Effect of Capital Structure (Debt to Equity Ratio) on Firm Value (Price Book Value)

Based on table 1, the sig value is 0.8274 or  $> 0.05$  with a  $\beta$  gain of 2.900006. Thus explaining that the capital structure has no significant effect on firm value. Companies that have high debt will result in higher interest expenses borne by the company. So that investors will judge that the company has a big risk. For companies that prioritize the use of debt for company activities, they must be wiser in using debt, whether it can provide benefits or losses for the company. Increased debt will affect stock prices, which consequently will decrease the value of the company.

### 5.6 Effect of Profitability (Return On Equity) on Firm Value (Price Book Value) with Capital Structure (Debt to Equity Ratio) as Mediation

Based on table 2, the sig value is 0.8298 or  $> 0.05$  with a  $\beta$  gain of -0.2149. So that explains that So that explains that the Capital Structure is not able to mediate the effect of profitability on firm value. Companies that have a high level of profitability this proves that the company has good performance and the company is said to be able to manage profits properly. A high level of profitability is able to finance the company's business activities with retained earnings, so that the use of debt is relatively small. The use of less debt will minimize the company's financial risk so that it can increase investor interest and will increase the value of the company.

### 5.7 Effect of Liquidity (Current Ratio) on Firm Value (Price Book Value) with Capital Structure (Debt to Equity Ratio) as Mediation

Based on table 2, the sig value is 0.8559 or  $> 0.05$  with a  $\beta$  gain of -0.1814. Thus explaining that the Capital Structure is not able to mediate the effect of liquidity on firm value. Optimal capital structure is a capital structure that can minimize risk and maximize stock prices. Current assets that are not used optimally by company management are considered to reduce the level of the company's ability to obtain company profits.

## 6. Conclusion

Based on the results of the research and discussion that has been done, the following conclusions can be drawn: ROE and CR have no significant effect on DER. ROE and DER have no significant effect on PBV, while CR has a significant negative effect on PBV. The existence of DER as a mediating variable is unable to mediate the effect of ROE and CR on PBV.

## 7. Future Scope

Further research can be conducted on companies in other industrial sectors to see the role of profitability, liquidity and capital structure as a mediating variable. It is recommended that further research discusses company performance as

another variable outside of this study and can add other dependent variables that are considered to affect company value and use other analytical tools such as path analysis with the latest AMOS software to obtain research results in current conditions.

## References

- [1] Syarah, F. (2019). PENGARUH KEPEMILIKAN MANAJERIAL, LEVERAGE, DAN KEBIJAKAN DIVIDEN TERHADAP NILAI PERUSAHAAN (Studi pada Perusahaan Properti dan Real Estate yang terdaftar di Bursa Efek Indonesia pada tahun 2013-2017). *Repository Unpas*. <http://repository.unpas.ac.id/id/eprint/43155%0A>
- [2] Jefriansyah. (2014). *Effect of debt policy and management at the company's earnings to the valye of companies listed on the Stock Exchange*.
- [3] Chowdhury, A., & Chowdhury, S. P. (2010). *Give to AgEcon Search Impact of capital structure on firm's value: Evidence from Bangladesh* (Vol. 3).
- [4] Ilham, T., & Dewantoro, A. (2017). Jurnal Riset Perbankan Manajemen dan Akuntansi Vol.1 No.1 2017. *Pengaruh Profitabilitas Dan Likuiditas Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Intervening (Studi Pada Perusahaan Transportasi Laut Di Bursa Efek Indonesia, 1(1), 20*. Jurnal Riset Perbankan Manajemen dan Akuntansi Vol.1 No.1
- [5] Prasetyorini, B. F. (2013). Bhukti Fitri Prasetyorini; Pengaruh Ukuran Perusahaan. In *Jurnal Imu Manajemen: Vol. 1 nomor 1* (Issue 183).
- [6] Khoiriyah, D., & Rasyid, R. (2020). Pengaruh Risiko Bisnis, Profitabilitas dan Pertumbuhan Aset terhadap Struktur Modal Perusahaan yang Terdaftar di Jakarta Islamic Index. *Jurnal Kajian Manajemen Dan Wirausaha, Volume 02*.
- [7] Supeno, A., Ali, H., & Priyati, R. Y. (2022). *Effect of Profitability and Liquidity on Capital Structure and Value of Plantation Companies in Indonesia*. 2(6). <https://doi.org/10.38035/dijefa.v2i6>
- [8] Chartady, R., Satria, H., Sahara, M. A., Utami, R., & Kurnia, S. (2021). *Profitability and Liquidity on Firm Value with Dividend Policy Evidence From Indonesian*.
- [9] Sudrajat, J., & Setiyawati, H. (2021). *Role of Firm Size and Profitability on Capital Structures and Its Impact Over Firm Value*. 2(1). <https://doi.org/10.38035/dijefa.v2i1>
- [10] Pangestuti, D. C., & Tindangen, A. M. L. (2020). The Influence of Internal and External Factors on Firm Value. *European Journal of Business and Management Research*, 5(5). <https://doi.org/10.24018/ejbmr.2020.5.5.492>
- [11] Hasanudin, Nurwulandari, A., Adnyana, I. M., & Loviana, N. (2020). The effect of ownership and financial performance on firvalue of oil and gas mining companies in Indonesia. *International Journal of Energy Economics and Policy*, 10(5), 103–109. <https://doi.org/10.32479/ijeep.9567>
- [12] Runis Makkulau, A., Amin, F., Hakim, A., Tinggi, S., Enam, I. E., Kendari, E., & Kendari, I. (2018). Pengaruh Struktur Modal Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Intervening Pada Perusahaan Properti dan Real Estate Yang Terdaftar Di Bursa Efek Indonesia. In *Journal of Economic and Business* (Vol. 1, Issue 2). <http://journal.stie-66.ac.id/index.php/sigmajeb>
- [13] Tri Rahayu, N., & Darim, A. (2020). ANALYSIS OF INFLUENCE OF CAPITAL STRUCTURE, COMPANY SIZE, COMPANY GROWTH AND PROFITABILITY ON CORPORATE VALUE. *International Journal of Global Accounting, Management, Education, and Entrepreneurship*, 1(1), 10–27. <https://doi.org/10.48024/ijgame2.v1i1.11>
- [14] Lessy, D. A. (2016). pengaruh ukuran perusahaan, likuiditas, profitabilitas dan struktur aktiva terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Pengaruh Ukuran Perusahaan, Likuiditas, Profitabilitas Dan Struktur Aktiva Terhadap Struktur Modal Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia*.
- [15] Mulyana, B., & Elisabeth, E. (2018). *IMPLIKASI EFISIENSI MODAL KERJA, LIKUIDITAS, DAN SOLVABILITAS TERHADAP PROFITABILITAS (Studi Kasus pada PT. Berdikari Insurance)*.