# Analyzing the Impact of Return on Equity and Current Ratio on Price to Book Value: The Moderating Role of Debt to Equity Ratio in Indonesian Mining Companies

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**Abstract:** ***This study looked at how some numbers (like Return On Equity and Current Ratio) affect the value of certain companies in Indonesia that mine metals and minerals. They also looked at how another number (Debt to Equity Ratio) affects this relationship with moderated. They used a computer program like Eviews 12 to analyze the data and found that ROE had a significant positive effect on PBV. CR did not have a significant effect on PBV, DER was not able to moderate the effect of ROE on PBV while DER was able to moderate the effect of CR on PBV.***

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

## 1. Introduction

In the world today, many big businesses have started in different countries. These businesses were made to earn money so that they can keep going and make their products better. They also want to make their owners happy by making them richer. Companies try to be better than each other so that they can survive. To be the best, they try to sell more of their ownership to people who want to invest in them. This works best if the company is doing well and growing. How well a company is doing is very important because people who might want to invest in them need to know if it's a good idea or not. [1] Investor opinion regarding the company's success is often associated with stock prices. This is reflected in the Present Value regarding the expected benefits in the future. [2] The higher this value, the more investors are interested in investing in the company and believe that the return will be greater.

Investors need tools that can be used to get an overview of the company for consideration. [3] The analysis tool in question is financial ratios. At least to compare and analyze the movement of company stock prices from one period to another, it can be measured using the Price to Book Value (PBV).

The company must be in a profitable condition so that business activities run well and one of the company's goals for the welfare of shareholders can be achieved. One of the financial ratios that investors often use to measure how much profit a company generates is Return On Equity (ROE).

When people invest money in a company, they want to make sure the company can make money and pay back any money they owe to other people. This makes investors more likely to trust the company and want to buy more shares. They can check if the company can pay back its debts by looking at something called the Current Ratio (CR).

When a company wants to do business, it needs money. This money can come from outside people or from their own savings. To see how much money they borrowed compared to how much they saved, people can use a special calculation called the Debt to Equity Ratio (DER).

In previous research [4] showed that PBV can be positively and significantly affected by ROE. However, this study is contrary to the results of the study by [5] which reveals the opposite fact. Likewise with previous research [6] regarding CR which revealed that this ratio can have a positive and significant effect on PBV. The existence of DER as moderation has also been carried out by previous researchers, such as in the research by [7] who found a fact that DER is able to play a moderating role in the effect of ROE on PBV. However, this fact was challenged in a study by [8] which states otherwise. Still about the role of DER. This time, in a study by [9] found that there was an influence that CR had on PBV when moderated by DER.

When researchers look at what other researchers have found in their studies, they sometimes find different answers. This makes them want to do more research to figure out what the right answer is.

## 2. Literature Review

In conducting research it is necessary to have strong principles related to the problem to be discussed. Therefore, in the literature review, the researcher will describe the grand theory and other theories related to the variables in this study.

### 2.1 Signaling Theory

Signaling theory helps companies talk to people outside the company. They share information like how well they are doing financially, hoping that others will think better of them. [10]

### 2.2 Price to Book Value

PBV is like a special tool that helps people know how much a company's shares are worth. It helps people understand how good the company is at making money with the money it has. [11] The formula for the Price to Book Value:

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

### 2.3 Return On Equity

According to [12] ROE is like a report card for how much money a company makes for the people who own it. If the company is big and makes a lot of money, the owners might get more money back as a return. This is important for people who want to invest in the company. The formula for the Return On Equity:

$$ROE = \frac{Net\ Income}{Equity} \quad (2)$$

### 2.4 Current Ratio

According to [13] Current Ratio is like a way to measure if a company can pay its bills now. It looks at how much money the company has that can be easily turned into cash, and compares it to how much it owes to people. This helps people who want to invest in the company know if it is doing well in the short term. The formula for the Current Ratio:

$$CR = \frac{Cuurent\ Assets}{Current\ Liabilities} \quad (3)$$

### 2.5 Debt to Equity Ratio

According to [14] Debt to Equity Ratio tells us how much of a company's money is borrowed (debt) and how much they actually own (equity). If this ratio is too high, it means the company might have trouble paying back what they owe and could go out of business. The formula for the Debt to Equity Ratio:

$$DER = \frac{Total\ Liabilities}{Total\ Equity} \quad (4)$$

## 3. Methodology

Multiple linear regression is an analytical technique and using Moderated Regression Analysis (MRA) to test the effect of moderation in this study. Type of research data uses secondary data, was obtained from company financial reports that have been audited and published from 2015 to 2021 on the official website of the Indonesia Stock Exchange and other information needed during the research period. A population of 12 was obtained. The sample selection technique was purposive sampling in order to obtain 6 companies that met the criteria with a total sample of 42 the result of multiplying 6 companies with 7 years of observation. Metal and mineral mining sub-sector companies listed on the Indonesia Stock Exchange are the scope of this study with financial ratios as a research tool.

## 4. Result

In the following, the results of data processing are presented using the reviews 12 program to help answer the questions in this study.

### 4.1 Partial Hypothesis Testing (t test)

t test was conducted to determine whether ROE and CR partially affect PBV which can be measured by comparing the probability value with an α level of 0.05.

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

| Variable Effect | Coefficient | Prob. | α (0,05) | Result |
|---|---|---|---|---|
| Effect of ROE on PBV | 5,036211 | 0,0086 | < 0,05 | Positive significant |
| Effect of CR on PBV | – 0,015263 | 0,7097 | > 0,05 | No significant effect |

### 4.2 Moderated Regression Analysis (MRA)

The interaction test was carried out to find out whether the moderating variable in this study was able to strengthen or weaken the influence between the independent variable and the dependent variable.

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

| Variable Effect | Coefficient | Prob. | α (0,05) | Result |
|---|---|---|---|---|
| DER in moderating the effect of ROE on PBV (ROE*DER) | – 0,455942 | 0,2266 | > 0,05 | Not able to moderate |
| DER in moderating the effect of CR on PBV (CR*DER) | – 1,017657 | 0,0006 | < 0,05 | Able to moderate |

## 5. Discussion

Based on the results of data processing that has been carried out in the previous discussion, several findings were found which will be discussed further to reveal the purpose of this study.

### 5.1 Effect of Return On Equity on Price to Book Value

Based on table 1, information can be obtained that the coefficient value of ROE is 5.036211 which is positive and has a probability value of less than 0.05 or (0.0086 < 0.05) which means that ROE as an independent variable has a significant positive effect on PBV. The amount of return can show the company's ability to generate profits intended for shareholders. This is a good signal captured by external parties to invest in the company in the form of shares. If there is an increase in demand for shares, it will indirectly increase the price of these shares in the capital market.

### 5.2 Effect of Current Ratio on Price to Book Value

Based on table 1, information can be obtained that the coefficient value of CR is - 0.015263 which is negative and has a probability value of more than 0.05 or (0.7097 > 0.05) which means that CR as an independent variable has no effect on PBV. The Current Ratio is not the only indicator to describe the condition of the company nor is it the only indicator that is of concern to market appraisal in making investment decisions, because CR is more focused on the company's internal state in fulfilling short-term debt and does not explain the amount of returns earned and dividend distribution which is the main focus of investors, so that it can be indicated that there are other indicators other than the Current Ratio that are better at explaining the state of the company.

### 5.3 Debt to Equity Ratio Moderates the Effect of Return on Equity on Price to Book Value

Based on table 2, information can be obtained that the coefficient value of the ROE*DER interaction ($X_1Z$) is - more than 0.05 or (0.2266 > 0.05) so it can be said that DER is not able to moderate the effect of ROE on PBV. Companies with high ROE levels will first use profits in the form of profits before using external funds. Thus, it can be explained that in order to finance operations and increase investor prosperity, companies use internal funding rather than using external funds.

### 5.4 Debt to Equity Ratio Moderates the Effect of Current Ratio on Price to Book Value

Based on table 2, information can be obtained that the coefficient value of the CR*DER interaction (X2Z) is - 1.017657 which is negative and has a probability value of less than 0.05 or (0.0006 < 0.05) so it can be said that DER is capable moderate the effect of CR on PBV. The company's ability to pay short-term obligations can illustrate the flow of unstable capital structure, because the funding obtained is intended to pay off debt, so that the dividends paid to investors are lower and this is a bad signal for investors, thereby reducing investor interest in investing.

## 6. Conclusion

Based on the results of data processing in this study, it can be concluded that the existence of ROE as an independent variable ($X_1$) can have a significant positive effect on PBV. Meanwhile, CR as an independent variable ($X_2$) has no significant effect on PBV. The existence of DER is not able to moderate the effect of ROE on PBV. But on the contrary, the presence of DER is able to moderate the effect of CR on PBV by weakening it.

## 7. Future Scope

Based on the results of this study, the researcher provides suggestions that can be used as input so that further research will be better and develop, including namely; It is hoped that future researchers can use other financial ratios in order to obtain a picture from a different perspective on company performance and are expected to be able to increase the period of observation, because adding years of observation will better describe the accuracy of the desired research results.

## References

[1] Husna, R., & Rahayu, Y. (2020). Pengaruh pertumbuhan perusahaan, kebijakan dividen, dan profitabilitas terhadap nilai perusahaan. *Jurnal Ilmu dan Riset Akuntansi (JIRA)*, *9*(1).

[2] Sari, C. M., Al Idrus, S., & Yuliana, I. (2018). Pengaruh Struktur Modal Dan Profitabilitas Terhadap Nilai Perusahaan Dengan Pengungkapan Corporate Social Responsibility. *Islamic Economics Quotient: Journal of Economics & Business Sharia*, *1*(1).

[3] Handayani, F., & Martha, L. (2019). Pengaruh Profitabilitas terhadap Nilai Perusahaan dengan Corporate Social Responsibility sebagai Variabel Moderating. In *Academic Conference For Management I*, *1*, 203-221.

[4] Ryando, R. (2022). Pengaruh Profitabilitas Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Intervening (Pada Perusahaan Tambang PT. Adaro Energy Periode 2015 – 2019). *JURNAL ILMIAH M-PROGRESS*, *12*(2).

[5] Kolamban, D. V., Murni, S., & Baramuli, D. N. (2020). Analisis Pengaruh Leverage, Profitabilitas Dan Ukuran Perusahaan Terhadap Nilai Perusahaan Pada Industri Perbankan Yang Terdaftar Di Bei. *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *8*(3).

[6] Colline, F. (2022). The Mediating Effect of Debt Equity Ratio on The Effect of current ratio, return on equity and total asset turnover on price to book value. *Jurnal Keuangan dan Perbankan*, *26*(1), 75-90.

[7] Bangkit Arsyada, A., Fajarini Sri Wahyuningrum, I., & Korespondensi Diajukan, P. (2022). Pengaruh Ukuran Perusahaan,Profitabilitas, Dan Keputusan Investasi Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Moderating. *Owner : Riset Dan Jurnal Akuntansi*, *6*(2), 1648–1663.

[8] Simanullang, C. D., Rasinta, R. E., Ginting, R., & Simorangkir, E. N. (n.d.). (2023). The Effect of Return On Assets (ROA) and Return On Equity (ROE) on Company Value with Capital Structure as Moderating Variables in Banking Companies Listed on The Indonesia Stock Exchange. *International Journal of Business, Economics and Law*, *24*(6).

[9] Zulfa, A., Novietta, L., & Karya Satya Azhar, M. (2022). Pengaruh Profitabiltias, Likuiditas, Ukuran Perusahaan Terhadap Nilai Perusahaan Dengan Struktur Modal Sebagai Variabel Moderasi. *Inovatif:*

*Jurnal Ekonomi, Manajemen, Akuntansi, Bisnis Digital Dan Kewirausahaan*, *1*(4), 335–352.

[10] Utomo, M. N. (2019). *Ramah Lingkungan dan Nilai Perusahaan* (F. A. Rahmawati, Ed.). CV. Jakad Publishing.

[11] Franita, R. (2018). *Mekanisme Good Corporate Governance dan Nilai Perusahaan* (1 ed.). (H. Wahyuni, Ed.) Medan: Lembaga Penelitian dan Penulisan Ilmiah Aqli.

[12] Murhadi, W.R. (2013). *Analisis Laporan Keuangan Proyeksi Dan Valuasi Saham*. Jakarta: Salemba Empat.

[13] Sumardi, R., & Suharyono. (2020). *Dasar-Dasar Manajemen Keuangan* (1 ed.). (Suharyono, Ed.) Jakarta Selatan: LPU-UNAS.

[14] Siswanto, E. (2021). *Buku Ajar Manajemen Keuangan Dasar* (1 ed.). Malang: Universitas Negeri Malang.