

Conference Paper

Leverage as Intervening Variable of Profitability Post-pandemic (Covid-19)

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Abstract.

Cement companies in Indonesia support the government's role in the development of the property sector. However, the Covid-19 pandemic has caused problems in making a profit. Therefore, the main problem of this study is to find out and analyze how profitability affects leverage and market value with the variables price earnings ratio (PER) and price to book value (PBV) as proxies. Second, knowing and analyzing leverage as an intervening variable that relates the effect of profitability to market value. This study uses the documentation analysis method of social research for exploring the theoretical model and empirical results of how profitability affects market value through leverage. The results from various empirical results showed that there is still little research on the ability of leverage as a variable to analyze cement companies listed on the Indonesia Stock Exchange. The results of the study can be expected to contribute to further research and facilitate the government to approach the development of cement companies to encourage the economy. Meanwhile, investors can be informed about the company's financial performance. This study will provide advanced research guidance and convenience to the companies in providing solutions on how to increase market value by increasing profitability through leverage factors.

Keywords: leverage, market value, profitability, Price Earnings Ratio (PER), Price to Book Value (PBV)

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1. Introduction

Stock trading on the Capital Market is certainly inseparable from the role of the investor making the transaction. However, before investors made a decision to purchase stock, they should start assessing the financial performance of each company to be purchased. The manner of which is usually done by investors is to measure the company's ability to generate profitability, so that almost all investors who want to buy company shares can figure out the condition of the company's financial performance.

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In the beginning, the SARS-Cov-2 Coronavirus was identified in Wuhan, China in December 2019. Then, the pandemic issue in Indonesia, in which the first case of transmission, was revealed in March 2020. This issue has an impact on several companies, especially cement companies in managing kraft (cement sack paper) and gypsum raw materials. The two materials are obtained by way of imports, so they have difficulties in running their business. Indonesia does not yet have a kraft paper manufacturing plant for cement packaging. Of course, this has a direct impact on the company's profitability. In addition, many investors also avoid investing in cement companies, so the importance of this study is by analyzing the market value of shares because one of the ways investors determined whether shares are worth buying, is by measuring the market value of shares using a market ratio, namely PBV which is a ratio to measure the performance of the stock market price to its book value [1].

PBV also shows how far the company is able to create company value relative to the amount of capital invested. If the book value of a company increases, then the value of the company indicated by the share price will increase as well. The company's value is reflected in its share price. The higher the share price, the higher the value of the company because the high value indicates the prosperity of shareholders [2]. Meanwhile, [3] argues that PBV is a value that can be used to compare whether a stock is more expensive or cheaper compared to other stocks. In addition to PBV, investors can use the PER. PER is a comparison the price of a share to net income for each share or Earnings Per Share (EPS) of the company. PER can be used to measure how cheap or expensive stock is, when compared to other stock prices for a similar industry. Here are some reasons as to why investors use PBV ratios in investment analysis: First, book value is relatively stable. Investors who are not convinced by cash flow estimates, book value is the simplest way to compare them. Second, there are relatively standard accounting practices companies, causing PBV to compared between various companies which can eventually signal whether company's value is under-valuated or over-valuated. For companies that have negative earnings, it is not possible to use PER, so the use of PBV can cover the weaknesses that exist in PER [4].

Figure 1 shows the value of PBV in 2009 by 4.24 times, each year tends to fall until 2016 by 1.61 times. Furthermore, the next 5 (five) years until 2021, it continues to experience a decrease in PBV until 1.47 times which was caused by the pandemic in Indonesia.

In 2009, it experienced an increase due to the increase in the average book value per share of the cement company along with the increase in the number of investors buying shares which affected the increase in stock price. Meanwhile, in 2016, there was

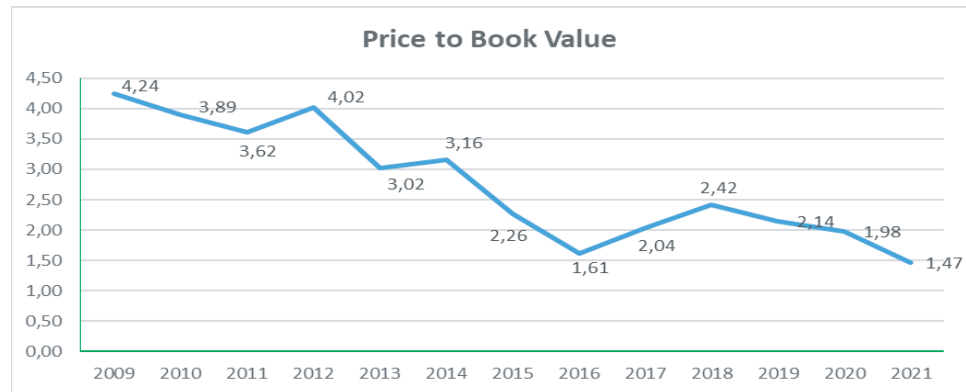


Figure 1: Price to Book Value (PBV).

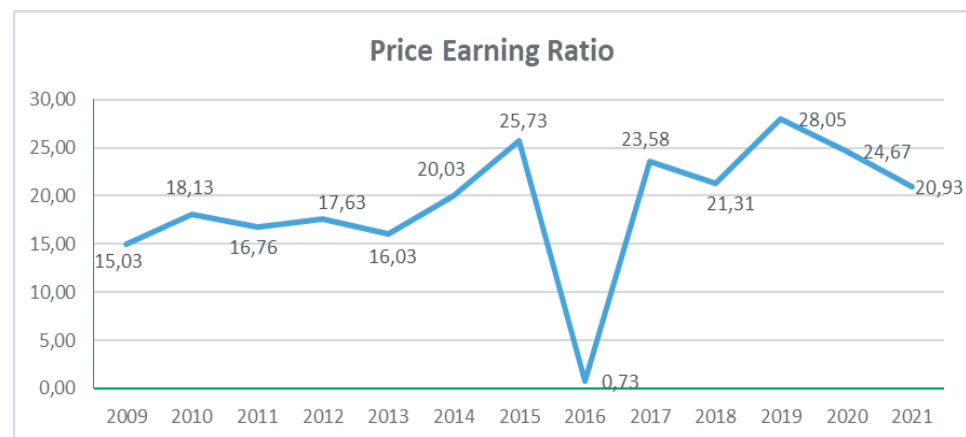


Figure 2: Price Earnings Ratio (PER).

a decrease in book value per share because one of the cement companies had a low equity book value. Low equity is caused by, first; the company suffers a loss, second; there is an element of equity change that increases the retained earnings that have not been determined (retained earnings unappropriated). Retained earnings reflects that the company has fund which is ready to be used for business activities, or commonly known as reserve fund. However, if the balance of undetermined profit is higher than the profit that has been determined, the company cannot use undetermined equity to generate optimal profits. This condition provides information (as bad news) for investors which will impact on their investment decisions. In the event of a lack of purchase of the shares, it will not increase the value the price of shares in market. Until 2021, PBV experienced a decrease due to the high allocation of retained earnings unappropriated. Retained earnings, in which the use are not determined yet, is usually distributed to shareholders as dividends. The retained earning that has been determined to be used will be low so

that the company has difficulties for financing, such as: operational activities, expansion, or development and debt.

Figure 2, shows the value of PER. In 2009 it was 15.03 times, every year it tends to increase until 2015 which was 25.73 times. In 2016, there was a decrease of 0.73 times, then the next 5 (five) years until 2021, it experienced an increase, but not significant, which was 20.93 times, caused by the pandemic in Indonesia.

In 2015, it experienced an increase due to the increase in the average value of earnings per share of cement companies along with the increase in the number of investors buying shares which had an impact on the increase in stock prices. Meanwhile, in 2016, there was a decrease in value (*earnings per share*) caused by one cement company which suffered losses. For such loss, the company will provide information (*bad news*) for investors which will impact on their investment decisions. In the event of a lack of purchase of the shares, it will not increase the value of the price of shares in market. Until 2021, the PER experienced an increase in value, but it did not increase significantly because it could not generate an optimal increase in income. In fact, there has been an increase in expenses for operating expenses and other expenses.

Result in research [5] from all insurance companies listed on the Amman Securities Exchange from 2002 to 2007 stated "ROA, ROE, and ROI together showed a strong and positive relationship." However, it is partially ROE that has no relation to the share price. As research of the effect of profitability on firm value with capital structure as the mediator and firm size and industry as moderator, financial data listed companies in Taiwan from 2005 to 2009, with proxy ROA, PBV, DER as the mediator and total assets, resulting in the finding that ROA has a negative and significant influence on DER, DER has a negative and significant influence on PBV, ROA has a positive and significant influence on PBV [6].

Then, it can be stated that ROA has a negative influence on PBV with the mediator of DER. While, [7] found that their research on ROA have a negative and significant effect on the company's leverage. Meanwhile, [8] examines study of the impact of ROA and ROE and SIZE on the value of companies with DER as intervening variables in companies listed on the Indonesia Stock Exchange during period of 2006-2010. Analysis of this research used a panel of data and structural equation model (SEM), resulting in ROA and ROE research (profitability) partially negatively and significantly affect DER, SIZE positive and significant affect DER, DER negative and significant affect the company value, it can be stated that DER can mediate a negative and significant effect between profitability and company value. While the size of the company can mediate a positive and significant effect between profitability and company value.

Other research obtained results, namely profitability has a negative effect on leverage [9–11]. Meanwhile, [12] stated that profitability has a positive and significant effect on the value of mining companies, in her research findings, stated that ROA has a positive and significant effect on the value of companies in the non-service sector. Different research findings show that profitability (ROA) does not have a significant effect on the PBV of Porcelain and Glass Ceramics [13]. Meanwhile, [14,15] in their different research findings, stated that profitability with ROE measurement has a positive and significant influence on PBV. Meanwhile, the measurement of ROE in the results of a different study conducted by [16] stated that ROE has a negative and significant effect on the value of manufacturing companies. Furthermore, [17] found DER has a negative and significant effect on LQ45 company PER. However, the research results of [16] stated that DER has no effect on the value of manufacturing companies. Results of this study are in accordance with [18], that DER has no significant effect on the PBV of mining companies. Other findings on ROE have no significant effect on PBV after being mediated by DER. This means that companies that have high profitability will also affect the value of their companies, both by using debt or without using debt [19]. Meanwhile, [20] measured market value using market per book (M/B). The ratio can determine how expensive the price is in the market compared to book value of the stock and thus reflect the investment ability owned by the company.

Cement companies in Pakistan, in the findings of research by [21], stated is high debt levels tend to incur considerable debt costs that can reduce profitability. Meanwhile, [22] examined the infrastructure sector in Saudi Arabia about the growth and development of the cement industry that the industry has the most expensive value that can compete in the world due to the availability of raw materials. The availability of raw materials has a direct influence on how companies can manage the availability of adequate amounts of funds. These funds are not only needed to finance the company's operational activities, but also to finance the company's investment activities that affect the level of profitability. Based on the description of the phenomenon and several different previous research above, it is still found that each independent variable that predicts PER and PBV produces research that is not yet consistent, so the objective of this study is to analyze the effect of profitability on leverage, profitability has a direct effect on market value and leverage as a determinant of the mediating variable between profitability and market value of cement companies listed on the Indonesia Stock Exchange.

2. Cement Company in Indonesia

Company in its scope is engaged in the cement industry, including production activities, mining and excavating materials required in the industry. The company in trading, marketing, distribution as well as providing its services are also related to the cement industry.

2.1. Profitability and leverage

Profitability is the company ability to earn profits related to sales, total assets, and its own capital [23]. While [24] stated that profitability is the end result of a number of policies and decisions made by the company. Profitability too is one of the indicators of a company success to be able to generate profit so that the higher the profitability, the higher the company's ability to generate profit for the company. This study uses market value predictor profitability, namely with ROA and ROE. ROA as a ratio that measures the ability of a company to generate profit based on a certain level of assets, while return on equity is based on a certain level of equity in a company [25]. Trade-off theory as stated by [26], in the relationship between capital structure and company value, there is one optimal level of leverage (debt ratio). The use of debt will increase the value of the company to a certain *leverage* limit (optimal), but after crossing the optimum point, the use of *leverage* will incur greater bankruptcy costs, resulting in the decrease of the company value.

2.2. Profitability and market value

Pecking order theory as stated by [27] explained that by against the funding behavior of companies that tend to use internal funds first. If the company needs external funds, the company will prioritize debt over other external funds. Companies that depend on internal funds aim to maximize the wealth of shareholders. It is appropriate as described by [28] stated that market ratio or stock ratio is the ratio used to measure the value of shares. Market ratios include earnings per share, dividends per share, and book value per share". This study uses market value as measured by market to book value [29]. Market to book value or PBV is a benchmark to determine how far the company chooses investment opportunities. PBV reflects how much the market assesses the company can leverage its capital in carrying out business to meet the company's objectives. The

greater the company can manage its capital properly, the higher the opportunity for the company to grow so that it can attract investors to invest its funds into the company.

3. Method

This study uses the documentation analysis method of social research. Analysis is used because it combines coding content into a theme, similar to focus groups or interview transcripts from various documents [30]. Purpose of this model study provides a proposal to determine the effect of profitability on leverage and market value as well as leverage as an intervening variable between profitability and market value which will be used to determine important aspects of financial performance. Model became the starting point for further discussion to develop a convincing model that could be further tested at the empirical research stage in Figure 3, followed by a discussion of the theoretical review that built it.

4. Discussion

4.1. The effect of profitability on leverage

The result of research by [8] about ROA and ROE found that in which they partially affect the DER negatively and significantly. Similar research results were conducted by [27-28], it was proven that there is a negative relationship between profitability and leverage. Other relevant research concluded that profitability has a negative effect on leverage [9–11]. In this case, proposition 1 is formulated: There is a negative profitability influence on *leverage*.

4.2. The effect of profitability on market value

ROA according to [6] has a positive and significant effect on PBV. Meanwhile, according to [31] ROA has a positive and significant effect on PBV. The results of appropriate research by [14], the research findings that ROE has a positive and significant influence on the value of the manufacturing company (PBV). Companies that have high profitability will also affect the value of their companies, both by using debt or without using debt [19]. In this case, proposition 2 is formulated: There is a direct positive effect about profitability to market value.

4.3. The effect of leverage as a mediating variable between profitability and market value

Meanwhile, [6] found that DER has a negative and significant effect on PBV, so it can be stated that DER can mediate a negative and significant effect between ROA on PBV. Based on that research [8] proves that DER can be a mediating variable between profitability which reflects market value has a negative and significant effect on company value. In this case, proposition 3 is formulated: There is an effect of leverage as a mediating variable between profitability and market value.

4.4. The theoretical concept

This theoretical concept examines this study to estimate and analyze the effect of profitability on market value by using leverage as an intervening variable as presented in Figure 3, as follows:

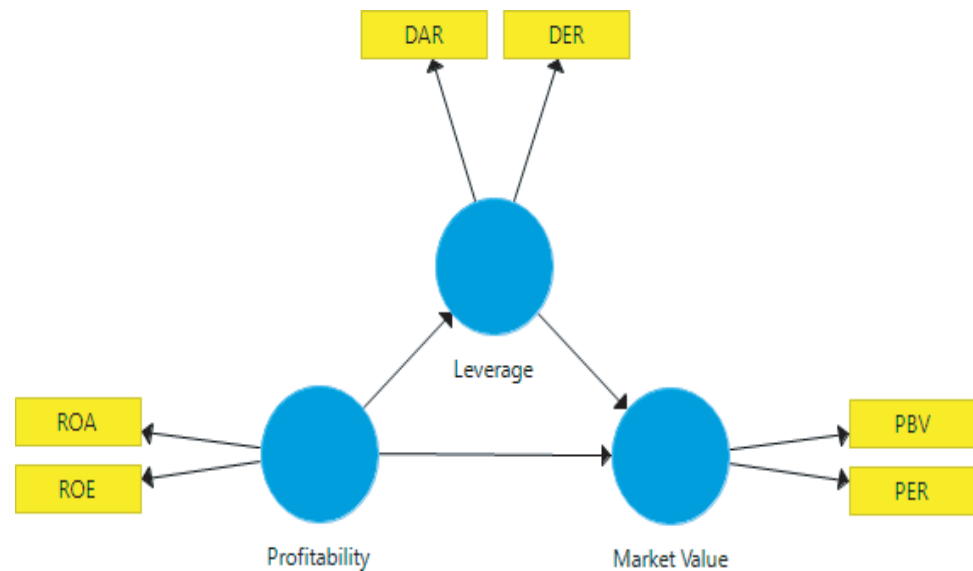


Figure 3: Thinking Framework.

5. Conclusion

The concept of this theoretical model will be empirically tested using *partial least square* (PLS) analysis which uses secondary types of data obtained from each audited financial statement recorded on the Indonesia Stock Exchange during the observation year. Research will be able to facilitate the government to approach the development of cement companies to drive the economy. In the meantime, investors can provide

information regarding the company's financial performance. As for the company's, it can provide solutions on how to increase market value by increasing profitability through leverage factors. Academically, this research can be further analyzed in many ways for developing countries that need attention to improve financial performance in supporting the success of company business activities. Therefore, the main objective of this empirical study and practical activities is a national framework to encourage cement companies in Indonesia as well as the economic growth and development of the country.

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