“Moderating effect of firm performance on firm value: Evidence from Indonesia”

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Abstract

The practice of accounting conservatism, determination of capital structure, and firm performance are important elements in influencing firm value, either directly or through moderation. Firm performance as a reflection of company’s policy plays an important role as a variable that can moderate this influence. Thus, this study aims to examine the role of firm performance in influencing firm value, particularly in moderating the effect of accounting conservatism and capital structure. To test this role, managerial ownership and institutional ownership are viewed as control variables. A total of 43 manufacturing companies from the Indonesia Stock Exchange (IDX) were sampled from 153 manufacturing companies listed from 2017 to 2019 to achieve this target. The data collection approach in this study was purposive sampling, and the data analysis method was multiple regression. The results showed a statistically significant positive effect between accounting conservatism and firm value, while the capital structure had no statistically significant effect. Firm performance acts as a moderating variable of accounting conservatism and capital structure in influencing firm value. The results of this study also confirm that managerial ownership and institutional ownership do not function as control variables in controlling the effect of accounting conservatism and capital structure on firm value. Whereas managerial and institutional ownership is expected to encourage managers to carry out policies that are oriented towards increasing the firm value.

Keywords

accounting conservatism, capital structure, control variable, firm performance, firm value, multiple regression, manufacturing company

JEL Classification

G32, G34, M41

INTRODUCTION

The firm value is the main key to the welfare of shareholders or company owners. By increasing the firm value, the welfare of the shareholders will increase. This task is assigned to the manager as an agent entrusted with the trust of the shareholders to carry out the company operations. Therefore, in carrying out the mandate, a manager seeks to take policies that can have an impact on increasing the firm value. These policies include policies on the application of accounting conservatism practices in financial reporting and capital structure policies. While the key factor to increase the firm value is the firm performance. The firm performance is the result of the representation of the implementation of management policies related to funding policies, investment policies, and operational policies (Sudiyatno, 2010). Thus, the firm performance plays an important role in increasing the firm value, because the firm performance will be seen by investors as an indication of an information signal that the company is in a healthy condition and prospective for the future of its investment. The higher the firm performance, the better the investment prospects in the company in the future, and this condition will have an impact on increasing...
the firm value. With the increase in the firm value, it means that the welfare of the shareholders as owners of the company will also increase.

The firm value is the total wealth of investors and shareholders, which is indicated by the total value of the company assets. The goal of a capitalist company is to maximize shareholder wealth by increasing profits and share value (Awan et al., 2018). The firm value can be determined by many factors, including the firm future performance, corporate governance, capital structure, ownership structure, asset structure, rate of return, inflation, interest rates, economic growth, etc. Different factors are used to determine the firm value, both fundamental and technical factors. Corporate governance, capital structure, ownership structure, and firm performance are the factors that attract the attention of researchers to determine the extent to which the role of these factors affects the firm value.

In the era of economic globalization marked by the trade war between China and the United States, the world’s economic conditions have become increasingly uncertain. In dealing with this era, management creativity and innovation are needed in making policies, including policies to apply accounting conservatism practices in financial reporting and capital structure policies. In this context, corporate governance plays an important role in the application of accounting conservatism in corporate financial reporting. Following the concept of positive accounting theory, accounting conservatism is an effective contractual and governance mechanism to reduce information asymmetry and resolve agency conflicts (Watts, 2003). Thus, an effort to limit the opportunistic behavior of managers to ensure the interests of shareholders and increase the value of the company is to apply the practice of accounting conservatism. Accounting conservatism as a rule in the practice of financial reporting that has been established and tested to deal with economic uncertainty and risky conditions is required by the company as the application of the precautionary principal concept in the preparation of financial statements. In contemporary accounting, the practice of conservatism in financial reporting is a debatable issue and has become a major focus in the accounting literature (El-Habashy, 2019). Various discussions of the existing literature show that accounting conservatism has a positive impact on the economic profit of a company (Sana’a, 2016). The same applies to capital structure policies. Capital structure is an important company decision related to the source of funding used to finance the company. The decision to determine the source of the company funding will determine the capital structure of a company and the risk for the company owner. Determining capital structure decisions can also improve the supervisory mechanism for managers’ opportunistic behavior and reduce the possibility of agency costs. One of the important elements in determining the capital structure is controlling the use of debt by managers, which can harm the interests of shareholders or company owners. To anticipate the uncertainty of economic globalization, the policy of applying accounting conservatism in financial reporting and capital structure policy is an important decision for management to increase firm value in Indonesia, so that this topic becomes relevant and up to date.

1. LITERATURE REVIEW

It has been a topic of discussion in the financial literature that the main goal of the company is to increase the firm value. Therefore, management as an agent must carry out various policies to realize these goals. The firm value is indicated by the total value of assets that determine the market value of a company, and this shows the total wealth of investors and shareholders. Firm value is a very important factor for more companies to improve shareholder welfare. Several management policies that can be implemented to increase the firm value are the policy of applying accounting conservatism in financial reporting and capital structure policies.

When the company is faced with uncertainty, accounting conservatism that refers to financial reporting requirements requires accountants to use a high degree of verification and use solutions that display the least aggressive amounts. It is a long-standing financial reporting approach designed to safeguard users of financial data from overstated revenues and ensure that all potential liabilities are dis-
closed. Therefore, in the context of uncertainty and economic difficulties, conservative accounting is required for the financial reporting process. While the capital structure is the composition of debt with own capital, as stated by Brigham and Daves (2016) that the so-called capital structure is “the firm’s mixture of debt and equity.” Therefore, the capital structure is a balance between debt and own capital used for the company operations.

The amount of debt and equity varies from time to time, so if not managed properly the capital structure can become a serious problem for the company, because the composition will directly affect the financial position of a company. Most companies try to keep their financing mix close to their targeted capital structure, i.e optimal capital structure. The company capital structure decisions related to the financing to be used must be designed to maximize the company’s intrinsic value (Brigham & Daves, 2016).

Accounting conservatism and capital structure are important elements in increasing firm value. As stated by LaFond and Roychowdhury (2008), and Lara et al. (2009), accounting conservatism can help reduce information asymmetry between managers and shareholders, which in turn reduces agency costs and secures the interests of shareholders better. Likewise, Cullinan et al. (2012) stated that accounting conservatism serves as a governance mechanism that serves management when information asymmetry behavior arises and as a mechanism to prevent such behavior. Thus, the policy of applying accounting conservatism policies in financial reporting can control managers to act in accordance with the interests of shareholders, namely increasing firm value.

Capital structure is an important element in increasing the firm value, as in the trade-off theory that the capital structure balances the benefits of funding on debt with the bankruptcy costs incurred because of using the debt. Kraus and Litzenberger (1973), and Jensen and Meckling (1976) discussed the tradeoff theory by concluding that the market value of companies that use debt is equal to the firm value that does not use debt plus tax savings and is reduced by the present value of bankruptcy costs. Thus, the tax savings benefits derived from the use of debt will be offset against losses in the event of bankruptcy (H. Nguyen & A. Nguyen, 2020a). Therefore, the trade-off theory shows that the optimal capital structure for a business occurs if the tax savings benefits from the use of debt are equal to financial distress and agency costs (bankruptcy costs).

Return on assets (ROA) as a representation of the firm performance or also called profitability, is the rate of return generated from assets used for company operations. As stated by Kontesa (2015), the management effectiveness ratio is based on returns generated from sales and investments. According to Manu et al. (2019), high profitability affects the company’s financial flexibility, so that the company can pay dividends and obtain a positive rating in the capital market. Profitability allows investors to see how efficiently the company spends funds for the operational activities of a company to get higher profits (Al-Nsour & Al-Muhtadi, 2019). Therefore, the firm performance can be used as information that gives a positive signal to investors, so it plays an important role in increasing the firm value.

### 2. OBJECTIVES AND HYPOTHESES

Various factors affect the firm value, although these findings still cause many differences. The firm performance is a factor that gets a lot of attention, so its role is quite significant in influencing the firm value. The problem is the extent of this role in influencing the firm value in times of economic uncertainty. Where and when does management implement accounting conservatism practice policies and capital structure policies, is the firm performance able to play a role in strengthening these policies? Therefore, the purpose of this study is to analyze the role of company performance in influencing the implementation of accounting conservatism practices and capital structure policies on firm value. These objectives can be described as follows:

- Analyzing the effect of accounting conservatism on firm value.
- Analyzing the effect of capital structure on firm value.
• Analyzing the role of company performance in influencing company value.

By basing on the basic concepts of theory and realizing the research objectives, the hypotheses can be formulated as follows:

H1: Accounting conservatism has a positive effect on firm value.

H2: Capital structure has a positive effect on firm value.

3. METHODOLOGY AND DATA

3.1. Data and sample

The data and samples were chosen from manufacturing industry companies listed on the Jakarta Stock Exchange for the aim of the study and further analysis (IDX). The sample consists of 43 companies that meet the criteria according to the needs of the variables needed during the period 2017–2019. The requirement for the sample is that industrial companies must be registered and have published a complete annual report for the period 2017–2019 on the Indonesia Stock Exchange (IDX). The company implements good corporate governance and displays its financial condition in the form of assets, debt, equity, and sales.

3.2. Research variables

This study uses Tobin's q as a proxy for firm value, capital debt to total assets ratio (DTA) as a proxy for capital structure and return on assets (ROA) as a proxy for firm performance. Firm value is placed as the dependent variable, accounting conservatism and capital structure as independent variables, firm performance as moderating variable, and managerial ownership and institutional ownership as control variables.

3.3. Control variables

In the financial literature, it is explained that there is a correlation between accounting conservatism, capital structure, firm performance, and firm value. Large companies tend to apply accounting conservatism practices to maintain stability and increase company value in times of economic uncertainty. Likewise, with the use of debt as a source of financing option, large companies tend to use debt as a source of financing to increase firm value. Meanwhile, the company performance is an information signal that is captured by investors as a good prospect to invest in the company, so that it has an impact on increasing stock prices or company value.

Several other variables that can also affect firm value are considered as control variables, namely managerial ownership, and institutional ownership. According to Hertina et al. (2021), managerial ownership has a beneficial impact on business value. Similarly, Gosal et al. (2018) showed that institutional ownership had a favorable effect on business value. Thus, the use of managerial ownership and institutional ownership as control variables is to determine whether these variables function as control variables of the practice of accounting conservatism and the policy of using debt as a source of corporate financing in influencing firm value.

3.4. Measurement of the variables

Measurement of research variables adopts research results of Rely and Arsjah (2018), Asiriuwa et al. (2019), Doğan (2020), and T. Nguyen and H. Nguyen (2020b). Table 1 shows the definitions and measurements of the research variables.

3.5. Data analysis

As an analytical tool, multiple regression analysis is used to make it easier to determine the relationship between the dependent variable, independent variable, moderating variable, and control variable. The firm value as the dependent variable is proxies by Tobin's q, the independent variable consists of accounting conservatism and capital structure, as previously explained that the debt to total assets ratio (DTA) is used as a proxy for capital structure. This study places firm performance as an intervening variable with return on assets (ROA) as a proxy for that variable. This study also uses two control variables, namely managerial ownership and institutional ownership.
The regression model used for hypothesis testing is an interaction regression model that is formulated as (1).

Regression equation:

\[ \text{Tobin's } q = a + b_1 AC + b_2 DTA + b_3 ROA + b_4 AC \cdot ROA + b_5 DTA \cdot ROA + b_6 MO + b_7 IO + e, \]  

(1)

where Tobin’ q = firm value; AC = accounting conservatism; DTA = capital structure; ROA = firm performance; MO = managerial ownership; IO = institutional ownership.

4. RESULTS

4.1. Descriptive analysis

As shown in Table 2, the minimum firm value (Tobin’s q) is 0.3597 and the maximum is 17.6782 with a mean of 1.4657 and a standard deviation of 1.9428. The minimum accounting conservatism value is –113.3000 and the maximum is 0.1620 with a mean of –1.0323 and a standard deviation of 10.8031. The minimum managerial ownership value is 0.0000 and the maximum is 0.7119 with a mean of 0.0850 and a standard deviation of 0.1530. The minimum institutional ownership value is 0.0002 and the maximum is 0.9704 with a mean of 0.4244 and a standard deviation of 0.2994. The mean institutional ownership value of 0.4244 indicates that the average institutional ownership in manufacturing companies is 42.44 percent.

4.2. Model testing analysis

The results of the model test show that the coefficient of determination (adjusted R Square) is 75.00%, and the statistical value is F = 47.724 with a significance of F = 0.000. Thus, it shows that...
75.00% of the variance in firm value (Tobin’s q) can be explained by conservative accounting, capital structure (Debt to Total Assets Ratio – DTA) as well as moderating factors and control factors. In addition, the regression model also meets the goodness of fit requirements, so it is feasible to use it to make predictions.

4.3. Regression analysis

The results of the panel regression analysis are presented in Table 3. Accounting conservatism (AC) has a considerable beneficial effect on company value (Tobin’s q) at a significance level of less than 1%, according to the findings of this study. Thus, $H1$ is accepted. It is concluded that the practice of accounting conservatism increases firm value.

As shown in Table 3, the capital structure (Debt to Total Assets Ratio – DTA) has a positive effect on the firm value (Tobin’s q) at a significance level of 10%. Thus, $H2$ is rejected: the policy of using debt to finance the company has no significant effect on firm value (Tobin’s q). The interaction moderating variable accounting conservatism and firm performance (return on assets – ROA) has a positive effect on firm value (Tobin’s q) at a significance level of less than 1%, according to the regression analysis results. At a significance level of less than 1%, the moderating interaction variable of capital structure (Debt to Total Assets Ratio – DTA) and firm performance (return on assets – ROA) has a favorable effect on firm value.

### Table 3. Results of the regression analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>t</th>
<th>Sig.</th>
<th>Hypothesis results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm value – Tobin’s q</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Independent, moderating,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and control variables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting conservatism – AC</td>
<td>5.184</td>
<td>.000***</td>
<td>Accepted</td>
</tr>
<tr>
<td>Capital structure – DTA</td>
<td>1.654</td>
<td>.101*</td>
<td>Rejected</td>
</tr>
<tr>
<td>Firm performance – ROA</td>
<td>–932</td>
<td>.353</td>
<td>–</td>
</tr>
<tr>
<td>Managerial ownership – MO</td>
<td>1.417</td>
<td>.160</td>
<td>Rejected</td>
</tr>
<tr>
<td>Institutional ownership – IO</td>
<td>–1.504</td>
<td>.136</td>
<td>Rejected</td>
</tr>
<tr>
<td>AC·ROA</td>
<td>5.745</td>
<td>.000***</td>
<td>Accepted</td>
</tr>
<tr>
<td>DTA·ROA</td>
<td>4.814</td>
<td>.000***</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Note: *** means significant at 1%; * means significant at 10%.

5. DISCUSSION

This study aims to examine the effect of accounting conservatism and capital structure (debt to total assets ratio – DTA) on firm value by placing firm performance (return on assets – ROA) as a moderating variable. This study also uses two control variables, namely managerial ownership and institutional ownership that are expected to be able to prevent the bias calculation of the influence of conservatism and capital structure on firm value.

The results of the descriptive analysis presented in Table 2 show that the standard deviation value is greater than the mean, which means that the difference in firm value (Tobin’s q) between one company and another is quite high. However, it can be concluded that the firm value (Tobin’s q) of most of the manufacturing companies is greater than 1.00, which means that the market performance is good. The mean value of accounting conservatism is negative, this condition shows the tendency of manufacturing companies to be more conservative in preparing financial statements, and this is consistent with Gray (1988). The mean managerial ownership value of 0.0850 indicates that the average managerial ownership in manufacturing companies is 8.50%, but with a standard deviation higher than the mean value, which is 15.30%, it means that the difference in managerial ownership between one company and another is quite high. The mean institutional ownership value of 0.4244 indicates that the institutional ownership of manufacturing companies is 42.44% or an...
average of 42.44% of the shares of manufacturing companies are owned by institutions.

As shown in Table 3, the results of the regression analysis point that accounting conservatism has a positive and significant effect on firm value (Tobin’s q). As a result, accounting conservatism policies have a positive impact on improving firm value. These results reflect a positive influence on stock prices. This influence is needed to attract new investors and improve the company’s ability to retain stakeholders and strengthen their confidence in the company’s financial position. The results of this study are in accordance with El-Habashy (2019), who found a positive effect of accounting conservatism on firm value. The results of this study also support Hamdan (2017), who found the role of accounting conservatism in increasing firm value even though this effect was through interaction with institutional ownership. The findings are also consistent with and support the agency theory, according to which accounting conservatism helps regulate managers’ opportunistic conduct, lowering agency costs and improving firm value. However, the findings of this study differ from those of Gosal et al. (2018), who discovered a negative effect even though it was not statistically significant. Despite the contradictions with the findings of previous studies, the results of this study can provide recommendations to assist managers in efforts to increase the firm value.

At a significance threshold of 10.01%, capital structure (Debt to Total Asset Ratio - DTA) has a positive effect on business value. These results indicate that the funding policy using debt has an impact on increasing stock prices at a significance level of 10%. However, statistically, $H2$ is rejected, so the policy of using debt has no impact on firm value (Tobin’s q) because hypothesis testing uses a significance level of 5%. Although the findings refute the premise, they do show that companies that use debt as a source of finance tend to raise their stock values. The results of this study are in accordance with Chen and Steiner (2000), Lin and Chang (2011), Moghadam and Rahimi (2016), El-Habashy (2019), and Al-Nsour and Al-Muhtadi (2019), who did not find any influence of debt on Tobin’s q. This study contradicts with Doğan (2020), who found a positive effect of debt to total assets ratio (DTA) on Tobin’s q, and Zeitun and Tian (2007), Salim and Yadav (2012), and Sakawa and Watanabel (2020), who found a negative effect of debt to total assets ratio (DTA) on Tobin’s q.

As control variables, the test results of managerial and institutional ownership did not affect firm value (Tobin’s q). As a result, managerial and institutional ownership does not influence business value (Tobin’s q). Meanwhile, results from using the firm performance (return on assets – ROA) as a moderating variable show that the firm performance moderates the impact of accounting conservatism and capital structure on firm value. This signifies that applying accounting conservatism techniques in financial statement preparation influences boosting firm value (Tobin’s q) in enterprises with a strong return on assets (ROA). Similarly, in companies with a high return on assets (ROA), companies that use debt as a source of financing have a favorable influence on growing firm value (Tobin’s q).

CONCLUSION

The practice of accounting conservatism in financial reporting and capital structure policies is an important part of management policy in manufacturing companies in Indonesia, especially during times of economic uncertainty. This study aims to examine the role of firm performance in moderating the effect of accounting conservatism and capital structure on firm value.

The results of this study indicate that accounting conservatism practices in financial reporting and capital structure policies influence increasing firm value in companies that produce a high return on assets (ROA). Thus, the policy of applying accounting conservatism practices in financial reporting and capital structure policies can control the opportunistic behavior of management so that it has an impact on increasing firm value, especially in companies with high firm performance.
In times of uncertain economic conditions, manufacturing companies in Indonesia need to implement a policy of accounting conservatism practices in financial reporting of capital structure policies by using debt as an alternative to corporate financing, especially for companies with high corporate performance. This policy has proven to be able to reduce agency costs, thereby increasing the value of the company. What is even more important for managers is the effort to improve the company performance, because the company performance is used by investors as a reliable information signal as the basis for making investment decisions. With increased investor confidence in the company, it will encourage the stock market price to be better.

AUTHOR CONTRIBUTIONS

Conceptualization: Bambang Sudiyatno.
Data curation: Ida Nurhayati.
Formal Analysis: Bambang Sudiyatno, Elen Puspitasari.
Investigation: Bambang Sudiyatno, Elen Puspitasari.
Methodology: Ida Nurhayati, Robertus Basiya.
Resources: Ida Nurhayati, Elen Puspitasari.
Software: Robertus Basiya.
Supervision: Elen Puspitasari.
Validation: Bambang Sudiyatno, Ida Nurhayati.
Writing – original draft: Ida Nurhayati.
Writing – review & editing: Robertus Basiya.

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