

Determinants of Firm Value: Evidence in Indonesia Stock Exchange

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Abstract—This study seeks to examine the determinants of firm value of listed manufacturing companies in Indonesia Stock Exchange (IDX) during a five-year period. The factors namely institutional ownership, firm size, profitability, leverage, and investment opportunity set. The sample was determined based on panel data, with a total sample of 84 manufacturing companies, so as many as 420 observations were obtained during the study period. The data analysis method used regression panel data. The results show size, return on assets, and market to book value of equity have a positive significant on firm value. The results also show debt to total assets have a negative significant on firm value. However, institutional ownership has a negative insignificant on firm value. The main value of this study is the identification of the factors that influence the firm value of listed manufacturing companies in Indonesia.

Keywords: *institutional ownership, firm size, profitability, leverage, investment opportunity set, firm value*

I. INTRODUCTION

In the era of increasingly competitive industrialization today, every company must increase competitiveness continuously. Increased competition in both the domestic and international markets requires companies to maintain or gain competitive advantage by giving full attention to the company's operational and financial activities.

The company's goals were profit-oriented as much as possible. This goal resulted in the company having to sacrifice profits in the long run to obtain high profits in the short run. Short-term and long-term benefits have an important role in the life of the company. Therefore, at this time the company's main objective is not to obtain maximum profit but to get good company value [1].

Firm value can be increased through increasing shareholder prosperity. The welfare of shareholders can be used as an illustration of firm value. Firm value is very important for the company because the firm value shows how well the company's performance. Signal theory states that the firm value is shown through signals in the form of information that will be received by investors, this information can be received through the company's stock price, funding decisions, and investment activities of the company [1].

That the purpose of the company is stockholder wealth maximization which translates to maximizing the company's

stock price [1]. The use of Tobin's Q in measuring company value has been carried out by many researchers among [2,3], using Tobin's Q as a proxy in measuring firm value. Tobin's Q is explained that the company's value will be higher if Tobin's Q value is also higher, so for investors it will be a marker if Tobin's Q rises, the prospect of the company's value will also increase.

Fundamental aspects become the basic valuation. This is because the value of shares reflects the value of the company, not only intrinsic value at a time, but also reflects the expectation of the company's ability to increase the value of wealth in the future. Fundamental factors are very complex and broad in scope, including macro fundamental factors that are outside the company's control and micro fundamental factors that are within the company's control [1].

In this study emphasizes the company's internal factors which are often seen as important factors to determine the value of the company as seen from the stock price. The company's internal factors in capital market analysis are often referred to as the company's fundamental factors, these factors are controllable so they can be controlled by the company. In this financial function the maximization of company value can be achieved.

II. METHOD

A. Data and Sample

In this study, population are all companies listed on the Indonesia Stock Exchange (IDX) during 2012-2017. Furthermore, the sample selection using purposive sampling technique, so that obtained sample of 84 companies and this study using pooled data, then sample becomes 420 observation data during 2012-2017. The reason for selecting used the period is to get more accurate results in accordance with the current situation. Data obtained from Bloomberg database and annual report of manufacturing firm in website Indonesia Stock Exchange (IDX).

B. Methodology

This research uses quantitative method with multiple regression analysis tools. Furthermore, we formulated the equation of multiple regression lines as follows:

$$\text{Tobin's } Q_{it} = a + \beta_1 \text{INS}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{DTA}_{it} + \beta_5 \text{MVBE}_{it} + e_{it} \quad (1)$$

Where: institutional ownership (INS), firm size (SIZE), profitability (ROA), leverage (DTA), investment opportunity set (MVBE), and error term (ϵ).

The value of regression coefficient is crucial as the basis of analysis, considering this research is a fundamental method. This means, if the coefficient β is positive (+), then it can be said to have a direct influence between the independent variable with the dependent variable, increase in the value of the independent variable on increase of the dependent variable. Vice versa, if the coefficient value β is negative (-), this indicates a negative influence where increase in the value of the independent variable on decrease in the value of the dependent variable.

C. Research Variables

We present the description of these variables and their measurement in this section. Based on earlier empirical studies following are the details of variables that different theories of capital structure suggest may affect the capital structure. Dependent variable is value of firm (Tobin's Q). Independent variables are institutional ownership (INS), firm size (SIZE), profitability (ROA), leverage (DTA), and investment opportunity set (MVBE).

1) *Institutional ownership*: Institutional ownership as part of the company's ownership structure, institutional investors can play an important role in monitoring company managers, thereby reducing agency costs [4,5]. Institutional ownership is the proportion of company shares owned by institutional investors [6-10].

2) *Firm size*: In agency theory [11] revealed that managers are usually tempted by incentives to expand in company size and buy assets that have nothing to do with their main business, because this action will maintain its position [8]. The size of the company can be proxy by total assets, but because the total value of assets owned by the company has a nominal value that is large enough to adjust to other variables that use the comparison number, the size of the company is used the natural logarithm of the assets [12-15].

3) *Profitability*: Profitability is the company's ability to make a profit. Utilization of profits for various corporate interests is based on pecking order theory which states that a company is more profitable then more funding comes from internal sources, meaning that the level of leverage is low [16]. Profitability in this study was measured through a comparison between Earning After Tax (EAT) and total assets. Profitability is measured through ROA, ROA is the most widely used measure [17]. ROA is used because it can measure the ability of the assets invested by the company to generate net income [1].

4) *Leverage*: Debt as a source of external funding becomes something interesting for companies to recapitalize or restructure capital and develop their business operations in addition to their own capital. Financial leverage can increase

earnings per share. However, debt that is too large will increase financial risk and can cause cost of financial distress [18,19].

5) *Investment opportunity set (MVBE)*: The MVE / BVE ratio is the most valid proxy used [20], in addition to that the variable is the proxy most widely used by researchers in finance [21,22]. This proxy had a very high correlation with future growth [21]. This is consistent with previous research. This proxy is better and can reduce the level of errors that exist [23].

6) *Firm value*: Tobin's Q is measuring firm value has been carried out by many researchers. Imeokparia, Vintila and Gherghina use Tobin's Q as a proxy in measuring company value [3,24]. In Tobin's Q it is explained that the firm value will be higher if Tobin's Q value is also higher, so for investors it will be a marker if Tobin's Q rises, the prospect of the company's value will also increase.

III. RESULTS AND DISCUSSION

Based on table 1, the results of the study show that the relationships between variables are as follows:

A. Results Hypothesis 1

Calculation results (table 1) for variable institutional ownership (INS), coefficient is -0.012 and probability value is 0.248. So it can be concluded that institutional ownership (INS) has a negative and insignificant effect on firm value (Tobin's Q).

B. Results Hypothesis 2

Calculation results (table 1) for variable firm size (SIZE), coefficient is 0.378 and probability value is 0.005. So it can be concluded that the firm size (SIZE) has a positive and significant effect on firm value (Tobin's Q).

Firm size can illustrate the possibility of the company's ability to deal with company failures in the future, because large companies tend to be more diversified and have less volatile assets [1].

The theory underlying the firm size and firm value relationship is agency theory, which suggests that if the actions of managers are in line with the expectations of shareholders, there is no agency problem. Managers tend to reduce the cash in their hands and be more careful in allocating available funds and more aimed at increasing the welfare of shareholders. Thus, the firm size will have a positive effect on firm value. This is supported by research conducted [25,26].

C. Results Hypothesis 3

Calculation results (table 1) for variable return on assets (ROA), coefficient is 0.154 and probability value is 0.000. So it can be concluded that the return on assets (ROA) has a positive and significant effect on firm value (Tobin's Q).

The higher the ability to earn profits, the greater the return expected by investors, thus making the company's value better. Profitability ratios indicate the effectiveness or performance of a company in generating profit levels using its assets. This ratio

reflects how effectively the company is managed and reflects the net results of a set of company asset management policies. This is supported by research conducted [2,9].

D. Results Hypothesis 4

Calculation results (table 1) for variable leverage (DTA), coefficient is -0.026 and probability value is 0.008. So it can be concluded that the leverage (DTA) has a negative and significant effect on firm value (Tobin's Q).

Increasing the use of debt will increase debt agency costs because of increased financial risks and opportunities for bankruptcy (financial distress). As long as the benefits of using debt are still large, debt will be added, but if the agency costs of using debt are greater than the benefits of using debt, then debt is no longer good to add [27]. Thus a good capital structure [27] can be determined by balancing the benefits of using debt with bankruptcy costs and agency costs, which is called the balancing or trade-off model. When companies consider financial distress and agency costs due to the presence of asymmetric information, the optimal capital structure can be determined by balancing the benefits of using debt with bankruptcy costs and agency costs. The implication of the trade-off model is the greater the use of debt, the greater the benefits of debt (leverage gain) but only up to a certain point.

E. Results Hypothesis 5

Calculation results (table 1) for variable investment opportunity set (MVBE), coefficient is 0.710 and probability value is 0.000. So it can be concluded that the investment opportunity set (MVBE) has a negative and significant effect on firm value (Tobin's Q).

Assets owned (assets in place) and growth opportunity in the future is a source of firm value. The growth opportunity of a company depends on the potential investment opportunities that can be utilized by the company called the investment opportunity set. Supporting research on investment opportunity sets on firm value [28].

TABLE I. SUMMARY OF RESULTS

Variables	Coefficient	t Statistic	Significant
(Constant)	2.803	13.747	0.000*
INS	-0.012	-1.630	0.248
SIZE	0.378	4.780	0.005*
ROA	0.154	15.420	0.000*
DTA	-0.026	-9.430	0.008*
MVBE	0.710	19.732	0.000*
Observation	420	Number of firms	84
F-statistic	0.000*	Adjusted R ²	0.765

Note: indicates significance at the 1%*, 5%* and 10%* level respectively.

Source: author's own calculation

IV. CONCLUSION

Conclusions from this research are firm size (SIZE), profitability (ROA), and investment opportunity set (MVBE) have positive and significant effects on firm value (Tobin's Q). Leverage (DTA) has negative and significant effect on firm value (Tobin's Q). And then institutional ownership (INS) has negative and insignificant effect on firm value (Tobin's Q).

Practical implications in this study has laid some groundwork to explore the determinants of firm value in Indonesia firms upon which a more detailed evaluation could be based. Furthermore, the empirical findings will help corporate managers in making optimal firm value.

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