# Capital structure, agency cost, size and firm value of small and medium listed companies

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**DOI: https://doi.org/10.37178/ca-c.23.1.356**

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***Abstract***

*Firm value has an important role because it can explain how the market appreciates the company. This paper aims to explore the influence of capital structure, agency cost, and firm size on the company value of small and medium-listed firms in the Indonesian stock exchange. In the way to achieve the study objective, data was gathered from 227 small and medium listed firms from 2019 to 2020 selected by using certain criteria. This study applied a panel data regression model with a random effect approach to detect the impact of capital structure, agency cost, and firm size on the firm value. Statistical test results denote that capital structure and agency costs have a positive effect on firm value, while firm size has no effect. These study findings provide an outlook that capital structure decisions and agency cost control can maximize firm value in small and* medium companies listed on the development index of the Indonesian capital market.

**Keywords**: capital structure, agency cost, firm size, firm value, small and medium listed firm

## Introduction

Firm value has an important role in the company due to it reflects the acceptance of investors towards the company which can be seen from the raise in the firm's stock price. A high firm value illustrates the high market appreciation of the company's achievement. The firm value can increase or decrease depending on the rise or down in the investor interest toward the company. Changes in firm value generally can be clout

by several variables such as capital structure, agency cost, and firm size [1-5]. Most of the research results show that these variables affect firm value, but the study conducted is generally on large companies. Research on the firm value of small and medium-sized companies is still rare. Small and medium companies are different from large companies in terms of the number of employees, income, assets, level of investment, ownership, capital structure, etc. [5, 6]. Firm value is also important for small and medium-sized companies as for large companies. Therefore, it is obligatory to analyze the variables that influence the value of small and medium companies, are they the same or not as the variables that clout the value of large companies?

The link between capital structure and firm value has been widely mooted by previous researchers. The capital structure is very important for the firm due to it is the main source to improve the productivity and performance of the company which is tightly relational to the level of profits and potential losses that will be faced by shareholders. The firm value is influenced by the market value of the company's stock, the capital structure decision affects the market value of the stock which will provide returns and risks to shareholders. In addition to the capital structure, agency costs also have a connection with firm value. [7] with agency theory states that firm value will increase when agency costs can be controlled, one of which is good control. Agency cost is the cost of reducing the welfare of company owners due to differences in interests and information asymmetry with agents. Agency costs can increase trust for investors because the company is considered to be able to handle agency conflicts well. Firm size is always believed to have a positive link with firm value. An increase in firm size indicates a growing company so that it can upgrade investor credence which can encourage an boot in firm value. Firm size indicates the number of assets held by the firm and influence the value of the company [8, 9]

The purpose of this paper is to explore the clout of capital structure, agency cost, and firm size on the firm value of small and medium listed firms in the Indonesian for the period of 2019–2020. This study is different from other research due to uses small and medium-size companies listed on the Indonesia Stock Exchange which are still rarely studied and also uses variables commonly used in explaining the firm value of large companies.

## Literature Review and Hypotheses Development

### Firm value

Firm value describes the market view of the company [10]. Firm value is really notable for investors since it will be used as a guide for the market in assessing the company as an entire [8]. By looking at the grade of a company, investors can find out the market value of the business. Market value is tightly connected to the firm stock prices and shareholder welfare. The higher the stock price, the higher the grade of the company [11]. Through this firm value, investors can choose which companies can provide a high rate of return for their investment. The company will tend to maximize their value since it is following its long-term target that is increasing shareholder income and wealth.

### Capital structure and firm value

[12] suggested that capital structure does not affect firm value unless the increase in debt has not attained the optimal point, then the capital structure can raise firm value. In this theory, they put forward the important role of debt that can lower the tax from

interest and suggest companies take into consideration the costs and benefits of using debt and equity to fulfill the firm's capital requirement and arrange a target debt ratio in the company's capital structure. [13]argue that capital structure is one of the prominent factors to increase company productivity and performance. [14] suggest that is there a best capital structure for individual companies or whether the composition of the use of debt in the firm capital structure is suitable or not with firm value. The company's capital structure decisions should pay attention to the impact [15]of the ruling taken on conversion in the firm value, if the capital structure decision can upgrade the grade of the company, and then the company should have it that can optimize its value. [16]mentions that utilize of debt in the company's capital structure will intensify firm value since it can upgrade market belief in the firm's management capabilities. Although many theories support the connection among capital structure decisions and firm value, some oppose it. Conflicting theories such as the pecking order theory prioritize choosing capital in stages to meet the company's capital needs[9, 17].

Several studies point that firm value is affected by capital structure. [1] found that the utilization of long-term debt in a firm's capital structure is a primary determinative of firm value in Ghana. The results of another paper conducted in the registered mining sector in Indonesia found that firm value was positively affected by the capital structure [3]. [13] also mention that capital structure has a positive relationship with the firm value of industrial companies listed on HOSE. Different research output were presented by Osasere & [18]who found that capital structure decisions using both long-term and short-term debt did not affect the value of non-financial sector companies in Nigeria.

$H_1$: Capital structure has a positive relation with firm value

**Agency cost and firm value**

Agency theory explains the link among the principal and the agent through a contract agreement that explains the work that must be done by the agent to fulfill the interests of the principal. However, in practice, agency problems often occur because agents also have interests that can conflict with the interests of the principal and they prioritize pursuing them. This condition certainly reduces the value of the company [7]. The higher conflict of interest among the principal and the agent can increase agency costs [19]. [20] have also mentioned that with an upgrade in management capability, companies are likely to operate for the benefit of managers rather than owners. Several experts attempted to test what Berle and Means proposed [7, 21, 22] by examining the effectiveness of alternative mechanisms such as takeover, performance, manager salary structure, and firm performance, but the results are still mixed. One of the ways that can be taken by the principal to reduce agency costs is to use debt in the company's capital structure which is considered effective in limiting managers acting for themselves, but more for the interests of the principal by regulating investment choices[23], the level of risk faced [7], and the company's terms for liquidation [20, 24, 25]. Enhancement the use of debt to the optimal limit can reduce agency costs and will have a positive impact on the company's profit level which will increase company value [2]. [26] suggest that firm value can increase if the institution can become an effective monitoring tool to reduce agency costs [27, 28].

Several papers have tried to prove the connection among agency costs and firm value. Research conducted by [29] shows that firm value is positively affected by agency costs. [25, 27], also found that agency cost has a positive link with firm value. Another study found that firm value was negatively affected by agency costs [30-32]

$H_2$: Firm value is negatively affected by agency cost

### Firm size and firm value

The firm size is reflects the number of assets held by the company and influences the firm value [20]Companies that have an increase in size are considered to be experiencing growth, thereby increasing investor credence which can drive an escalate in firm value. Companies with a larger size have easier access to funding sources so that they can encourage the development of the company, in contrast to small companies that have limited access to funding, especially external funding. Total assets held and the level of sales is positively correlated with the firm size. The larger firm size, the higher the company's ability to transfer wealth when compared to small companies. This condition is an attraction for investors so that it can encourage enhancement in the firm's share price and at the same time increase the value of the company [3].

Several types of research found the relation between firm size and firm value. [3, 10, 33] mentioned that firm value is negatively affected by firm size. Another study found that firm size has a positive relationship with firm value [15, 34, 35]. Others found that firm size has no connection with firm value [36, 37].

$H_3$: Firm value is positively affected by firm size

### Research Methodology

This paper was conducted through a quantitative approach where the data utilized in this paper is secondary data sourced from IDX statistics, financial statements, and company yearly reports. This study uses a composite of cross-sectional data with time-series data or known as panel data. To be able to get the study goal used small and medium listed firms on the Indonesia Stock Exchange during the period 2019 - 2020 with a population of 273 companies and 227 companies were selected as samples because they had met the criteria with the purposive sampling technique. All variables employ in this study and its measurements shown in table 1:

*Table 1*

Table 1.

**Research Variables and Measurements**

| Research Variables | Symbol | Measurements |
|---|---|---|
| Firm Value | FIV | (MVE+DEBT)/Total Asset |
| Capital Structure | CAS | Total Liabilities/Total Equity |
| Agency Cost | AGC | Total Sales/Total Asset |
| Firm Size | FIS | LN (Total Asset) |

To find out the relationship among the independent variables and the dependent variable, we establish the following regression model:

FIV = a + β1CAS + β2AGC + β3FIS

Where a is a constant, β1, β2, and β3 are parameters, and FIV, CAS, AGC, and FIS are the dependent and independent variables utilized in this study.

Random effect is a panel data regression model that fits this research. It uses since the variation in the value and direction of the relationship between subjects is assumed to be random, which is specified in the form of a residual. This model estimates panel data of residual variables that are thought to have a relationship between time and between subjects. According to [27] the random effect model is used to surmount the frailty of the fixed-effect model that uses dummy variables.

Testing the regression model begins with the classical assumption test consisting of multicollinearity and heteroscedasticity test. The aim is to confirm that the equation model formed has approximation exactness, is unbiased, and is consistent. The next

step is a model test consisting of an F test and coefficient of determination ($R^2$) test. The last test carried out is hypothesis testing to determine whether each independent variable used in this study has a link or not on the dependent variable with significant at 5%.

## Research Results and Discussion

### Results

The statistical test results to determine whether or not there is multicollinearity problems in the regression model indicate that there is no multicollinearity problem because the Variance Inflation Factor (VIF) value < 10, which means that all independent variables used in this study are not related to each other. The heteroscedasticity test result by using Breusch Pagan Godfrey (BPG), denote that P-value obs*R-square > 0.05, indicate there is no heteroscedasticity problem.

The results of the regression model test by using the Chow, Hausman, and Lagrange Multiplier tests denote that the Random Effect Model is the most suitable for this study because it uses more cross-sectional data than time-series data. Random Effect Model and Multicolonearity test result as below[38]:

*Table 2*

**Random Effect Model and Multicolonearity Test result**

| Variable | Coefficient | t-Statistic | Prob. | VIF |
|---|---|---|---|---|
| Capital Structure | 0.075751 | 3.189479 | 0.0015** | 1.000139 |
| Agency Cost | 1.717080 | 18.36750 | 0.0000** | 1.001013 |
| Firm Size | -0.007524 | -0.912511 | 0.3620 | 1.000880 |
| C | 0.961365 | 2.255552 | 0.0246 | |

** Significant at 1%, * significant at 5%

Source: financial report, data processed

The result of statistical tests on the regression model show that the regression formulates is steady with the Prob F-statistic value <0.05, meaning that there is a linear connection among the capital structure, agency cost, and company size and firm value. $R^2$ test output explains that the capability of CAS, AGC, and FIS in interpreting changes in the FIV variable is 40.38%, the remaining 59.62% is defined by other variables that are not utilized in this paper.

The hypothesis test result as shown in table 2 above illustrate that firm value is affected positively by CAS and AGC variables. While the FIS variable does no effect on the firm value of small and medium-sized companies listed on the Indonesian capital market.

### Discussion

CAS is one of the important variables to increase productivity and company performance. The statistical test results denote that CAS has a positive effect on the FIV of small and medium companies. This condition illustrates that the more long-term debt is used to finance assets; the value of small and medium-sized companies will go up. The increasing debt in the CAS of small and medium-sized companies is believed by investors to be able to repair the firm's achievement, so that the company continues to grow and develop, even though there are risks to the use of debt, but if managed

properly, it will provide positive value for the company and can enhance FIV. The results of this paper are also in line with agency theory which argues that CAS has a positive influence on FIV because debt acts as a form of control which will ultimately reduce agency conflict [7]. The findings in this paper are in line with several study results which found that CAS positively affects FIV [1, 3, 13]. Different research results found that capital structure decisions using both long-term and short-term debt did not affect the FIV.

Agency costs will increase when there is a difference of interest between the agent and the principal. According to agency theory, the firm value will increase when agency costs can be managed, one of which is a great control. Statistical test output point that AGC has a positive connection with FIV. The higher of AGC, the higher of company's management ability to manage the company, so that it can provide high income to principals that have a clout on escalating investor confidence which is reflected in its share price and causes a raise in FIV. This study result contradicts the hypothesis of[39], which says that with a go up in management capability, companies are likely to operate for the benefit of managers rather than owners. In fact, for small and medium-sized companies, the increase in agency costs motivates agents to improve their performance which leads to a raise in FIV. This study's findings are in line with several research results which detect that FIV is positively influenced by AGC [25, 29]. The outputs of this paper are not in line with the findings which state that AGC have a negative link with FIV.

The firm size describes how large the total assets are held by the firm. Companies that have an increase in an asset are considered to be experiencing growth, thereby increasing investor credence which can drive a raise in FIV. Statistical test result denotes that FIS does not affect the FIV of small and medium companies listed in the Indonesia Capital Market. This condition shows that the large or small number of assets owned by small and medium-sized companies is not the major consideration of the market in evaluate the company's shares. Investor confidence in the company is not based on the number of assets owned. Investors pay more attention to how the company is managed properly using existing assets, to be able to provide increased income for the company. The main key lies not in the number of company assets, but in how the company is managed to increase market confidence, thus affecting the FIV. This research outcome is contrary to the opinion of several previous researchers who said that the larger FIS, the higher the firm's ability to increase company income which can increase shareholder wealth. This finding is in line with the research result of [36] and different from several research outcomes that mention FIS has an effect on the FIV [3, 15, 33, 34, 40].

**Research Conclusion**

This paper aims to explore the effect of CAS, AGC, and FIS on the FIV of small and medium-listed firms in the Indonesian capital market. The research findings point that only CAS and AGC have a positive effect on the FIV of listed small and medium-sized companies. While FIS does not affect the FIV. This finding point that not all variables that affect the value of large companies also influence the value of small and medium companies. The main determinants variables of the FIV of small and medium-sized listed companies in the Indonesia are only CAS and AGC which can be the main concern of the company managers so that they can always raise the FIV. Overall, the results of this study are in line with the trade-off theory [12, 23] and agency theory [7]. Small and medium-sized companies are unstable companies that still need to regulate the use of debt in their CAS to keep the company's business running and growing, avoiding the potential for bankruptcy and increasing the FIV. Companies also need to

control conflicts of interest within the company to continuously increase market confidence.

This research still has many limitations, it is hoped that future researchers who will conduct the same study will use more samples and independent variables, to enrich scientific evidence that can help the development of small and medium enterprises in Indonesia.

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