FINANCIAL PERFORMANCE AND OWNERSHIP STRUCTURE: INFLUENCE ON FIRM VALUE THROUGH LEVERAGE

Harmono Harmono, Sugeng Haryanto,
Grahita Chandrarin and Prihat Assih

CHAPTER 5

FINANCIAL PERFORMANCE AND OWNERSHIP STRUCTURE: INFLUENCE ON FIRM VALUE THROUGH LEVERAGE

Harmono Harmono, Sugeng Haryanto, Grahita Chandrarin and Prihat Assih

ABSTRACT

This chapter focuses on testing optimal capital structure theory: The role of intervening variable debt to equity ratio (DER) on the influence of the financial performance, Ownership Structure of Independent Board of Commissioners (IBCO), Audit Committee (ACO), and Institutional Ownership on Firm Value. The research design was explanatory research using path analysis. Using purposive sampling, 61 manufacturing companies, observation period from 2014 to 2018 with 286 N samples. The research novelty empirically can prove the role of intervening variable DER on the effect of return on assets (ROA) on firm value and shows the market response to the ROA is fully reflected by DER, indicating the existence of an optimal capital structure. The role of DER on the effect of ROE and IBCO on firm value is a partial mediation with the inverse direction. This phenomenon shows that the mechanism of forming a balance between the responses of investors and creditors relates to debt financing.

Keywords: Firm performance; ownership structure; leverage; growth; firm value; optimum capital structure signals

JEL classifications: G3; G32; G31

Macroeconomic Risk and Growth in the Southeast Asian Countries: Insight from SEA
International Symposia in Economic Theory and Econometrics, Volume 33B, 63–85

ISSN: 1571-0386/doi:10.1108/S1571-03862023000033B005

1. INTRODUCTION

Based on IAS No. 1 of 2007 stated that the presentation of a set of financial statements consisting of statements of financial position, profit and loss, and other comprehensive income, statements of changes of equity, and statements of cash flows. The standard information is a tool for evaluating company performance that can interconnect the interests of management representing the companies internally with external parties the company includes: investors, creditors, governments, suppliers, consumers, and others. The relationship between firm performance and firm value can describe the condition of market response to company performance. The firm's performance is measured based on profitability as a final result of the company's financial performance using the measurement of return on equity (ROE) and ROA. On the other hand, non-financial performance is analyzed based on good corporate governance (GCG) values to determine the transparency, managerial participation, and corporate accountability measured through the ownership structure (Alipour, 2013; Banamtuan, Zuhroh, & Sihwahjoeni, 2020; Mian Du, 2014; Naeem, Karim, Nor, & Ismail, 2022). The composition of the capital ownership structure influences the determination of management policy direction at the general meeting of shareholders. The capital ownership structure is measured using the ownership structure of an IBCO, an ACO, and an institutional ownership (IO) structure (Al Farooque, Buachoom, & Sun, 2020; Al-Najjar & Taylor, 2008; Farooq, 2015; Shyu, 2013; Suhadak, Mangesti Rahayu, & Handayani, 2020).

The firm growth variable is measured based on asset growth and is played as a control variable to determine the resilience of a fit and eligible model without being influenced by variables outside the model through model sensitivity analysis. The market response to the firm performance will reflect in the share price formed through the market mechanism in the capital market. This phenomenon has been widely studied in various sectors and dimensions of financial performance (Cao, Sun, & Yuan, 2019; Clement, Lee, & Yong, 2019; Fiador, 2013; Isshaq, Bokpin, & Mensah Onumah, 2009; Peng, 2015).

Fundamentally, the research model is developed based on agency theory and has many subsequent researchers related to agency relationships. In addition to observing the agency relationship between the management or the company's internal parties with investors, it also examines the agency relationship between management and creditors in determining whether the contractual debt agreement transactions will be reflected in the form of optimal capital structure (Beaver, 1968; Jensen & Meckling, 1976).

On the other hand, investors' assessments of company performance, in addition to looking at the level of profitability, generally also pay attention to the conditions of optimal capital structure (Ahmad & Abdullah, 2013; Govindaraj, Li & Zhao, 2020; Groth & Anderson, 1997). When the company is too much to bear the burden of interest and instalments on the principal debt that causes the company's decreasing net profit, investors will consider investing in the company. In these conditions, of course, both management and creditors will reduce debt to achieve the optimal capital structure. Therefore,

many researchers examine the effect of optimal capital structure variables on firm value (Adeoye & Islam, 2020; Aggarwal & Padhan, 2017; Aras & Yildirim, 2018; Faturohman & Noviandy, 2022; Miller, 1958). The novelty of developing this research model is: Disclosure of the signal of the existence of an optimal capital structure through the role of DER as an intervening variable between the influence of financial performance and GCG on firm value, which is the result of the interaction of agency relationships between management, investors, and creditors until the optimal point in the market mechanism process is compromised. Capital market investment and debt funding', derived from signalling theory, agency theory, and optimum capital structure (Beaver, 1968; Jensen & Meckling, 1976; Miller, 1958).

Based on the interrelation argument between the theory and the results of the study above, can be determined the objectives of this research: testing the effect of financial performance using measurements of ROE, ROA, and GCG reflected by the ownership structure The IBCO, the ACO, and IO, and the firm value using price earnings ratio (PER), price to book value (PBV), and Tobin's *Q* indicators with the role of variable intervening optimal capital structure (leverage). To obtain the eligible models, conduct a model sensitivity analysis is carried out by including the company growth variable as a control variable.

2. LITERATURE REVIEW AND HYPOTHESIS

2.1 Literature Review of Firm Value

Capital market research has produced many theories in the field of finance. The concept of company value is reflected by the interaction of market participants between issuers of companies that sell shares with investors who invest their capital into stock investments, then form the market price of securities that reflect the firm value. Since the theory of determining the price of a stock (Capital Asset Pricing Model, CAPM) and the efficient market hypothesis (Fama & French, 2015; Sharpe, 1964) many have inspired capital market research.

The assumptions underlying the application of the CAPM model have been discussed in the book Financial Management Based on the Balanced Scorecard Case Theory and Business Research Approach (Harmono, 2009) when the condition of a country's stable macroeconomic situation, economic growth rates, inflation rates, exchange rates and stable gross domestic revenue, and other macroeconomic indicators are stable. Then fundamentally, company performance can use as analysis security of price predictions. There are the CAPM model, Market Model, and Mean Adjusted Model. Conversely, if macroeconomic conditions are unstable, the macroeconomy information itself has significant information content for the basis of investment analysis decisions (Cox & Ross, 1976). Practices that have developed so far, empirical indicators to measure the firm value can use stock prices, returns, and the intrinsic value of shares, abnormal returns, PER, PBV, Tobin's *Q*, and others that reflect the occurrence of market prices arising from securities trading transactions in the capital market.

The conceptual framework of the development of this research model has been based on the sophisticated evolution of financial theories. Initially, the discovery of the CAPM securities prediction (Sharpe, 1964); can inspire the next researcher, namely research on the content of accounting information, its effect on firm value (Beaver, 1968); and in the future, it becomes the basis for the discovery of efficient capital market theory, which discusses the absorption of capital market information content, both related to macroeconomy information and corporate fundamentals including corporate financial statements (Fama, 1970). Based on the efficient capital market theory, the subsequent fundamental research findings related to market responses to macroeconomy information as the basis for capital market investment decisions. The relationship with the macroeconomy variables affects the stock price (Cox & Ross, 1976) and has found the arbitrage pricing theory; future development is the testing of the absorption of capital market information through a market mechanism by investors and reflected on the price of securities formed in the market as a concept of corporate value.

Based on the market mechanism process, agency theory has emerged that the agency relationship between management and investors and creditors can fundamentally produce research models and become a grand theory in finance. It can be developed related to non-financial company performance information (Jensen & Meckling, 1976). Based on a series of historical values of the development of financial theory, the development of this research model, in theory, has a robust conceptual framework and can be used as a basis for developing a model that is 'Financial and Non-Financial Performance Its Effect on Company Value through Capital Structure'.

2.2 Fundamental Performance of the Company

The classification of a company's performance is divided into two parts are financial performance and non-financial performance. What is meant by financial performance can be analyzed based on the company's financial statement information? Principally, the set of financial statement standards is under construction of the International Accounting Standard Board (IASB), that the financial accounting standards must describe the truth (objectivity) and fairness of the business of an organization. Therefore, the financial statements produced must follow generally accepted accounting principles and comply with international financial reporting standards (IFRS) that are beneficial to various parties, both internal and external to the organization. The measurement of firm performance is widely carried out by researchers about the firm's value (Fatemi, Glaum, & Kaiser, 2018; Krüger, 2015; Marsha & Murtaqi, 2017). In this research model, financial performance is information generated from various business transaction processes that ultimately as an earnings perspective. The management efforts ranging from supplier efficiency and internal business processes to sales strategies, including research and product innovation development and marketing strategies, will ultimately lead to earnings. Some financial performance indicators related to profitability can be measured using a ROA related to the extent to which all invested assets can produce earnings after tax. Besides that, we can also

use the ROE indicator, which wants to see the extent to which your capital can contribute to earnings that focus attention on the owner. In this case, depending on the phenomenon, it can select the appropriate financial performance indicators. The measurement of firm performance can use the firm's size, liquidity, and the efficiency of the company's operations depending on the context to be studied. Some of the previous studies related to the research of financial performance with firm values are Ham, Kaplan, and Leary (2020), Karaca and Eksi (2011), Krüger (2015), and a series of other researchers.

Based on the framework of the relationship between financial performance variables with various indicators of firm value, the following research hypotheses can be derived:

H_a1. Return on assets positively influences a firm's value.

H_a2. Return on equity positively influences a firm's value.

2.3 Leverage (Optimum Capital Structure)

Fundamentally, the main initiator of the concept of optimal capital structure (Miller, 1958). In this case, the optimal capital structure combines debt funding and capital funding. When there is a tax will increase the company's ability to earn profits after tax. Leverage illustrates the extent of debt funding, especially long-term debt, which can encourage the optimization of sales achievements and increase profitability. Leverage conditions will occur not only in tax savings by reducing interest expense on taxable profits.

On the other hand, the description of leverage is the condition of the leverage moment. What is meant by the leverage moment is when the company's financial performance based on the BSG matrix discovered by Bruce Henderson in the 1970s provides benefits for the determination of the company's business strategy.

> The leverage will occur when the condition of the firm's sales, earnings, and demand is growing. Production capacity is less than the maximum, as well as stable economic conditions. The alternative debt funding provides opportunities for operational leverage in achieving sales targets and ultimately increases the ability to earn earnings assuming cost efficiency also can be achieved, and product quality is maintained.

Therefore, the financial performance can also be traceried from the company's capital structure. Several studies linking the leverage effect on firm value include Aggarwal and Padhan (2017), Matias and Serrasqueiro (2017), Miller (1958), and Widya and Nugrahani (2018).

The concept of leverage that describes the condition of the company's capital structure, of course, will also be responded to by investors. When the leverage position is in optimal capital structure, the company's debt composition theoretically is between 40 per cent to a maximum of 50 per cent for the type of manufacturing industry. Based on the argument that optimal leverage conditions can increase the firm value with the assumption when the other information is constant, based on this proposition, we can formulate the research hypothesis:

H_a3. Debt to equity effects on the firm value.

The leverage variable, on one condition, has the role of an independent variable seen by investors when investing in shares. On the other hand, the leverage variable can also be positioned as the dependent variable that has influenced the firm performance. In this context, the better the company's financial or profit performance will be responded to by creditors and investors, which will form an optimal capital structure. The relationship between company performance and its influence on capital structure refers to agency theory that looks at the interaction between management and creditors in debt contract transactions. Some previous studies that examined the interactions of management, investors, and creditors include Beaver (1968), Jensen and Meckling (1976), and Matias and Serrasqueiro (2017). Based on the framework of the research concept, a research hypothesis can be derived that plays the variable leverage as an intervening variable as a signal of the existence of an optimal capital structure theory:

H_a4. Return on assets affects the capital structure.

H_a5. Return on equity affects the capital structure.

H_a6. Return on assets affects the firm value through the role of capital structure as an intervening variable that signals the existence of an optimal capital structure.

H_a7. Return on equity affects a firm's value through the capital structure as an intervening variable that signals the optimal capital structure.

2.4 Good Corporate Governance and Firm Value

In addition to analyzing the company's performance through the company's financial condition can also be examined through non-financial performance, one of which can assess in terms of GCG. in this case, corporate governance is a corporate organizational control mechanism that involves ownership structures including managerial ownership, institutional, independent commissioner board, audit committee, government board ownership and other parties that can affect the level of transparency in enforcing organizational management policies, accountability company performance and accommodate the level of participation among members of the organization in an effort to improve company performance and company value (Kurniati, 2019; Steens et al., 2020; Suto & Toshino, 2005). Achieving these GCG values is widely influenced by the structure of share ownership. The ownership structure is very dependent on the political system in force in the country where the company operates. As an example of the condition of the share ownership structure examined by Mao (2015), empirical evidence from China as a socialist country proves the dominance of the ownership structure of the government council and IO structure over the capital ownership structure, while the ownership structure of IBCO and ACO is a minority compared to the ownership structure of government councils and IO structure.

When the country is a socialist economic system, the direction of management policy is dominated by government councils and IO structures, including non-bank financial institutions that manage funds on behalf of others or manage public

funds to invest in securities, including mutual fund companies, Pension Fund Companies, Insurance Companies, Investment Companies, Private Foundations, Endowments, or other non-bank financial entities. Thus through institutional institutions and ownership structure of government councils, a country that adopts a socialist economic system will able to control the country's economic order.

The condition of the ownership structure in Indonesia, which is the target area, is different from the condition in a country that adopts a socialist economic system. Empirically the share ownership structure of the companies in Indonesia, including countries that implement economic systems, tends to follow the mechanism of free markets and a capitalist economy. In such an economic system, of course, it will be controlled by large investors, both individual share ownership and the ownership structure of an IBCO, who have a strategic position to oversee the course of management policies (Chattopadhyay, Shaffer, & Wang, 2020; Nadarajah, Ali, Liu, & Huang, 2018). The ownership structure of the IBCO is dominant on the ACO, which has the task of working with internal auditors to oversee the company's management practices.

It's the position of an ownership structure of an IBCO that will dominate the capital ownership structure of companies operating in government systems that tend to follow the free market mechanism leading to a capitalist economic system. In this context, managerial and individual share ownership structure tends to be supervised or controlled by an IBCO as the basis for controlling voting rights in determining management policies in the general meeting of shareholders.

The Organization for Economic Co-Operation and Development (OECD) also provides opinions on the notion of corporate governance. There is a set of relationships between the company management, shareholders, and other parties who have an interest in the company that helps determine management policies so that the company's operations run by the expectations of the stakeholders (stakeholders).

GCG values, according to the United Nations Development Program (UNDP), the basic principles include:

> a) the value of organizational participation in the determination of operational management policies built based on democracy and participation; b) follow the rules of the game that are mutually agreed; c) uphold the value of transparency based on the delivery of information that is transparent and impartially biased; d) responsive to institutional processes that pay attention to various interested parties; e) promote joint consensus among stakeholders; f) accommodating each process and institution following the program outlined by the principles of efficiency and effectiveness in resource management; g) fulfill the principle of accountability in every policy making that prioritizes the interests of the organization; and h) oriented to a strategic vision based on a corporate governance perspective.

The indicators of GCG are operationalized in every company management policy. It will reflect the company's performance, which will eventually be responded to by the market and other external parties. One of which is creditors who will lend their capital to the company. Market responses to the conditions of share ownership structure have been conducted by Beretta, Demartini, and Trucco (2019), Mohammed and Rashid (2018), and Tobin (1969).

Based on a critical review of some fundamental theories and relevant research results, the research model can be seen in Fig. 1.

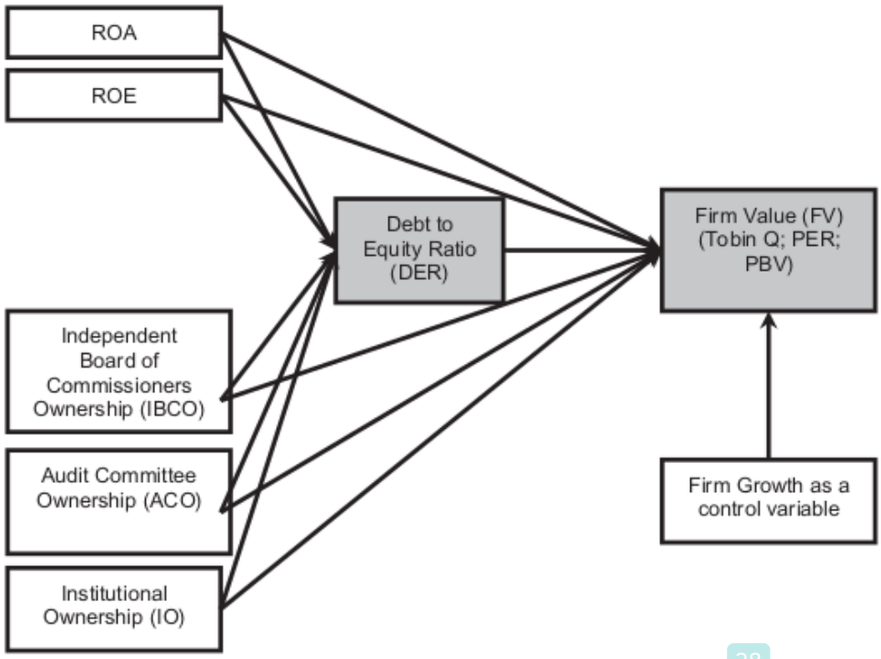

Fig. 1. The Research Model, Financial Performance, and GCG on Firm Value Through Leverage and Firm Growth as a Control Variable.

A research hypothesis can be formulated by including firm growth as a control variable to obtain an eligible research model, namely:

H_a8. Ownership of an independent board of commissioners affects the capital structure.

H_a9. The ownership structure of the audit committee influences the capital structure.

H_a10. Institutional ownership structure influences the capital structure.

H_a11. Ownership of an independent board of commissioners affects the value of the company.

H_a12. Audit committee ownership structure influences the company value.

H_a13. Institutional ownership influences company value.

H_a14. Ownership of an independent board of commissioners affects the value of the company through the role of capital structure as an intervening variable that signals the existence of an optimal capital structure.

H_a15. Audit committee ownership affects the value of the company through the role of the capital structure as an intervening variable that signals the existence of an optimal capital structure.

$H_a 16$. Institutional ownership influences company value through the capital structure as an intervening variable that signals the optimal capital structure.

3. METHODOLOGY

The research design was explanatory research. That examines causality relationships using the formulation of hypotheses to see the relationship between the financial performance consistency of ROA, ROE, and non-financial performance by using GCG, IBCO, ACO, and IO on firm value through a capital structure, with firm growth as a control variable.

The analysis techniques by using path analysis to test the relationship between dependent and independent variables. Supporting techniques are descriptive analysis, and multiple regression, using SPSS software. The sampling frame of research is a manufacturing company that went public in Indonesia from 2014 to 2018. In this industry, 61 companies were observed for five years, with 286 N samples, by using pooling data.

Subsequent analysis carries out path analysis to test the effects of financial performance and GCG on firm value through capital structure, and control variables are firm growth as follows:

$$Y_{1.1}\,(\mathrm{DER}) = \alpha + \beta_1\,(\mathrm{ROA}) + \beta_2\,(\mathrm{ROE}) + \beta_3\,(\mathrm{OIBC}) + \beta_4\,(\mathrm{ACO}) + \beta_5\,(\mathrm{IO}) + \sum i \qquad \text{(equation 1)}$$

$$Y_{2.1}\ \text{price to book value (PBV)} = \alpha + \beta_1\,(\mathrm{ROE}) + \beta_2\,(\mathrm{ROA}) + \beta_3\,(\mathrm{IBCO}) + \beta_4\,(\mathrm{ACO}) + \beta_5\,(\mathrm{IO}) + \beta_6\,(\mathrm{DER}) + \Sigma_i \qquad \text{(equation 2)}$$

$$Y_{2.1}\ \text{Price to book value (PBV)} = \alpha + \beta_1\,(\mathrm{ROE}) + \beta_2\,(\mathrm{ROA}) + \beta_4\,(\mathrm{IBCO}) + \beta_5\,(\mathrm{ACO}) + \beta_6\,(\mathrm{IO}) + \beta_7\,(\mathrm{DER}) + \beta_8\,(\mathrm{FG})\ \text{as a control variable} + \sum i \qquad \text{(equation 3)}$$

$$Y_{2.2}\ \text{Price earnings ratio (PER)} = \alpha + \beta_1\,(\mathrm{ROE}) + \beta_2\,(\mathrm{ROA}) + \beta_3\,(\mathrm{Size}) + \beta_4\,(\mathrm{IBCO}) + \beta_5\,(\mathrm{ACO}) + \beta_5\,(\mathrm{IO}) + \beta_6\,(\mathrm{DER}) + \sum i \qquad \text{(equation 4)}$$

$$Y_{2.2}\ \text{price earnings ratio (PER)} = \alpha + \beta_1\,(\mathrm{ROE}) + \beta_2\,(\mathrm{ROA}) + \beta_3\,(\mathrm{IBCO}) + \beta_4\,(\mathrm{ACO}) + \beta_5\,(\mathrm{IO}) + \beta_6\,(\mathrm{DER}) + \beta_7\,(\mathrm{FG})\ \text{as a control variable} + \sum i \qquad \text{(equation 5)}$$

$$Y_{2.3}\ \text{Tobin's}\ Q = \alpha + \beta_1\,(\mathrm{ROE}) + \beta_2\,(\mathrm{ROA}) + \beta_3\,(\mathrm{IBCO}) + \beta_4\,(\mathrm{ACO}) + \beta_5\,(\mathrm{IO}) + \beta_6\,(\mathrm{DER}) + \sum i \qquad \text{(equation 6)}$$

$$Y_{2.3}\ \text{Tobin's } Q = \alpha + \beta_1\,(\text{ROE}) + \beta_2\,(\text{ROA}) + \beta_3\,(\text{IBCO}) + \beta_4\,(\text{ACO}) + \beta_5\,(\text{IO}) + \beta_6\,(\text{DER}) + \beta_7\,(\text{FG})\ \text{as a control variable} + \sum i. \quad \text{(equation 7)}$$

Notes:

$Y_{1.1}$ = Debt to equity ratio (DER)
$Y_{2.1}$ = Firm value (Tobin's Q)
$Y_{2.2}$ = Price to book value (PBV)
$Y_{2.3}$ = Price earning per share (PER)
X_1 = Return on assets (ROA)
X_2 = Return on equity (ROE)
X_3 = Independent Board of Commissioners Ownership (IBCO)
X_4 = Audit Committee Ownership (ACO)
X_5 = Institutional ownership (IO)
X_6 = Firm growth (FG) as control variable

4. RESULT AND DISCUSSION

4.1 Descriptive statistics

The descriptive statistical analysis shows that the number of valid N samples is 271 of 61 manufacturing companies that went public in the Indonesian Capital Market, analyzed for the five years 2014–2018 of 286 N samples. The minimum value of the variable ROA of −30,360. The average of 8.865 with a standard deviation of 10.646 indicates a level of data variance that is higher than the ROE value, which both describes the level of profitability of the company that is an average ROE of 5.282 with a standard more stable deviation of 6.518.

Based on the relationship between the variables studied. Of course, the ROE variable is also more relevant if it is related to the ownership structure, which incidentally will represent the interests of each party to maintain control rights in determining managerial policies. Descriptively representing the variable of financial performance is ROE, the average value of ROE of 5.282 with a standard deviation of 6.518 is relatively more stable than the value of ROA with an average of 8.865 and a standard deviation of 10.646. Based on the condition of the variance value of financial data, that is, more representatives are ROE. Conceptually the relationship between firm performance variables and company value is more relevant considering ROE because investors will look more at the company's ability to make profits than the value of its capital when compared to profit information compared to all assets owned by the company and corporate debt.

The variability of capital ownership structure that has the smallest standard deviation is the ownership structure of an IBCO, with an average value of 0.415 and a standard deviation of 0.127. For a while, the ACO structure with an average value of 4.775 and a standard deviation of 1.915, and the one that has the highest

level of data variability is the IO structure, with an average of 73.425 with the highest standard deviation of 14,708. Thus descriptively representing, the ownership structure, in general, is represented by the ownership structure of an IBCO.

The condition of the dependent variable, which is influenced by the financial performance and ownership structure in general, which has the lowest standard deviation is Tobin's *Q*, with an average of 1.580 and a standard deviation of 2.482. For a while, the PER and PBV variables have a standard deviation value that is a high variability with standard deviation values of 416,946 and 24,055, respectively. Thus the dimensions of company value, in general, will be represented by Tobin's *Q* value.

The last description is the corporate leverage that acts as an intervening variable and has an average value of 0.947 with a standard deviation of 2.337. The hypothesis of the role of the capital structure represented by DER will mediate between the influence of firm performance variables and ownership structure on the firm's value and have a mediating role as a signal of optimal capital structure.

It means that investor responses to company performance information and capital ownership structure reflect the mediating role of the DER variable. Investors will also consider when the company's debt condition is too large as a manufacturing company; of course, investors will not invest their money in the firm. And *vice versa*, if the corporate is high profits and still low debt, investors will invest their money in these companies. Thus the expected alternative hypothesis formulation is the mediating role of the DER variable on the influence of financial performance variables and ownership structure on firm value. Descriptively, the data for each research variable can be shown in Table 1.

Table 1. Descriptive Statistics Each Variable.

Variables	*N*	Minimum	Maximum	Mean	SD	Variance
$X_{1.1}$: ROA	272	−30.360	39.870	8.865	10.646	113.345
$X_{1.2}$: ROE	276	−9.710	25.320	5.282	6.518	42.490
$X_{2.1}$: Institutional Ownership (IO)	285	32.930	95.650	73.425	14.708	216.335
$X_{2.2}$: Audit Committee Ownership (ACO)	285	2.000	12.000	4.775	1.915	3.668
$X_{2.3}$: Independent Board of Commissioner Ownership (IBCO)	285	0.200	1.000	0.415	0.127	0.016
$X_{3.1}$: Growth Opportunity	285	−0.420	8.607	0.144	0.532	0.283
$Y_{1.1}$: DER	285	−31.700	7.400	0.947	2.371	5.622
$Y_{2.1}$: Tobin	285	0.002	18.360	1.580	2.483	6.164
$Y_{2.2}$: PER	285	−3.233000	4.354000	55.342	416.946	1.738E5
$Y_{2.3}$: PBV	285	−5.750	264.000	5.439	24.055	578.639
Valid *N* (listwise)	271					

Source: Results of descriptive statistical analysis of research variables.

4.2 Result

Based on the results of the model sensitivity analysis by testing *panel 1* data with Tobin's dependent variable, *panel 2* PER and *panel 3* with PBV as the dependent variable, which shows a stable and eligible model to be used as hypothesis testing is a model when the dependent variable using Tobin's *Q*. The simulation results of *panel 1, panel 2*, and *panel 3* data were consistent with significance between the variables studied before and after entering the firm growth control variable, which produced a consistent regression coefficient, and the calculated *F* value was significant when the dependent variable used Tobin's *Q*.

Tobin's *Q* variable dependent variable is statically accepted as an eligible model that can be continued to test the research hypothesis, namely: Tobin's *Q* concept with the formula:

$$\text{Tobin's } Q = \frac{\text{EMV} + D}{\text{EBV} + D}$$

where EMH is the equity market value; EBV, equity of book value; and *D*, debt (book value of liabilities).

Tobin's *Q* illustrates the extent of the market capitalization value of equity plus the debt market value in a given period compared to the book value of the equity plus the book value of debt in a certain period. This explains the extent of capitalization of the market value of equities resulting from the multiplication of market values with the amount of equity outstanding at the year-end closing price. Thus Tobin's *Q* value has a precision value that can more accurately reflect the true value of the company that illustrates the market's performance in one year. On the other hand, PER obtained from market prices divided by earnings per share (EPS) and PBV obtained from market prices divided by book value cannot yet represent the stability of the firm's value that illustrates the market's performance in one year. In this case, there is still a bias value that can describe market performance in one year if the market value of securities is EPS and book value when closing prices, not market capitalization in one-year period. Therefore, both in concept and empirical analysis results, the eligible variable as the dependent variable in this study is Tobin's *Q*.

Judging from the independent variables that affect market value, including ROA, ROE, and GCG, and DER is also a company's performance that reflects the company's fundamental performance each year. Thus it is natural when the dependent variable is chosen to become the model, the indicator of measurement of company value using Tobin's *Q*. The detailed conditions of testing the model to get an eligible model can be examined through testing *stage 1* and *stage 2* before and after entering the firm growth control variable by comparing the dependent variable Tobin's *Q* on *panel 1*; PER dependent variable in *panel 2*; and PBV dependent variable in *panel 3*. Consistently the Fit model has significant *F*-test results when the dependent variable uses Tobin's *Q*. Based on the results of multiple regression model analysis. It can be shown that the relationship between the variables studied in this case, ROE, IBCO, and DER, consistently affect the firm value represented by Tobin's *Q* value, both before and after entering the firm

control variable growth yields (*F*-test) significant at alpha 0.000. While the two models in *panel 2* with the dependent variable using PER and *panel 3* using PBV, the model is rejected both before and after entering the firm growth control variable. In this case, the *F*-test value is not significant. Based on the results of the analysis of the sensitivity of the model testing, it can be determined which becomes a model that is eligible and can be continued in testing the research hypothesis to use the dependent variable Tobin's *Q* in detail, and the test can be seen in Table 2.

4.3 Path Analysis

Testing the path coefficient on H_a1: Return on equity has a linear effect on firm value resulting in a linear relationship coefficient of 0.587 (sig: 0.000); thus H_a1 is accepted. This means that improved ROE profitability will be responded to positively by investors and market capitalization value plus debt divided by book value of assets plus debt. (Tobin's $Q = \frac{\text{EMV} + D}{\text{EBV} + D}$) will improve too, or in other words, the value of the company will also increase.

H_a2 test results: Return on assets has a positive effect on firm value showing insignificant results. This means that investors do not directly respond to profits compared to total assets. Investors are more focused on how much the company can generate profits compared to its capital as a reflection of how much capital investment can produce a level of profitability.

H_a3 test results: Debt to equity affects the firm's value and shows the negative effect coefficient of −0.124 (0.015)** means that H_a3 is accepted. In this case, investors respond negatively to the condition of the capital structure (DER). Investor attention to the increase in the composition of debt compared to capital which indicates the value of debt tends to be high, will reduce the response of investors to invest in the company. Therefore, information on the increase in debt divided by capital has a negative influence on firm value. Such phenomena can signal the existence of market transaction processes that see leverage as an important variable in investing and can illustrate the existence of an optimal capital structure signal. The market mechanism process related to debt financing or equity capital funding will continue until the optimum point between the cost of capital and the cost of debt.

H_a4 test results: Return on equity affects the capital structure and shows a negative effect of −0,474 (0,000)***. This condition can be interpreted as a high level of profitability measured by ROE will be responded to by creditors tend to approve debt contracts, as well as investor responses that want to invest in the company. Based on the results of hypothesis testing, H_a4 shows that the magnitude of the increase in ROE will be responded to more quickly by investors than the response by creditors, which causes the ratio of debt to equity to be greater in the proportion of equity so that DER decreases. Thus ROE is inversely proportional to or has a negative effect on DER.

Testing H_a5: Return on assets affect the capital structure shows a positive effect of 0.241 (0.074)* at an α level of 10 per cent. This means that the level of the company's ability to obtain profitability value divided by the total assets

Table 2. Analisis Sensitifitas Model Result.

Variable	*Panel 1* Dependent Variable ($y_{2.1}$: Tobin's *Q*)	*Panel 2* Dependent Variable ($y_{2.2}$: PER)	*Panel 3* Dependent Variable ($y_{2.3}$: PBV)	*Panel 4* Dependent Variable ($y_{1.1}$: DER)	*Panel 5* Indirect Effect (DER as Intervening Variable)
First Stage					
$X_{1.1}$: ROA	−0.052 (0.644)	−0.007 (0.962)	−0.017 (0.906)		
$X_{1.2}$: ROE	0.587 (0.000)***	−0.016 (0.911)	0.064 (0.651)		
$X_{2.1}$: IO	−0.003 (0.958)	0.002 (0.973)	0.089 (0.155)		
$X_{2.2}$: ACO	0.049 (0.323)	0.060 (0.348)	0.171 (0.007)***		
$X_{2.3}$: IBCO	0.197 (0.000)***	0.027 (0.677)	0.070 (0.274)		
$Y_{1.1}$: DER	−0.124 (0.015)**	0.002 (0.981)	−0.026 (0.690)		
Constant	−0.334 (0.529)	−41.215 (0.837)	−21.964 (0.048)**		
Adj. R^2 (*F*-test)	0.392 (0.000)***	0.004 (0.985)	0.037 (0.114)		
Second Stage After Entering Firm Growth as Control Variable					
$X_{1.1}$: ROA	−0.050 (0.656)	−0.009 (0.950)	−0.017 (0.906)		
$X_{1.2}$: ROE	0.586 (0.000)***	−0.015 (0.920)	0.065 (0.651)		
$X_{2.1}$: IO	−0.002 (0.971)	0.001 (0.984)	0.089 (0.157)		
$X_{2.2}$: ACO	0.049 (0.332)	0.061 (0.341)	0.171 (0.007)***		
$X_{2.3}$: IBCO	0.198 (000)***	0.026 (0.688)	0.070 (0.275)		
$Y_{1.1}$: DER	−0.126 (0.014)**	0.002 (0.981)	−0.025 (0.694)		
$X_{3.1}$: Growth (control variable)	0.022 (0.654)	−0.026 (0.680)	−0.002 (0.975)		
Constant	−0.348 (0.531)	−36.306 (0.857)	−21.943 (0.049)**		
Adj. R^2 (*F*-test)	0.392 (0.000) ***	0.004 (0.167)	0.037 (0.182)		
Third Stage With Intervening Variable				*DER as Intervening Variable*	
$X_{1.1}$: ROA				0.241 (0.074)*	
$X_{1.2}$: ROE				−0.474 (0.000)***	
$X_{2.1}$: IO				0.042 (0.478)	
$X_{2.2}$: ACO				0.027 (0.649)	

$X_{2.3}$: IBCO		0.197 (0.001)***	
Constant		0.019 (0.974)	
Adj. R^2 (F-test)		0.113 (0.000)***	Fit Model
Fourth Stage (Path Analysis)	*Direct Effect on the Fit Model*	*Intervening Variable*	*Indirect Effect*
$X_{1.1}$: ROA	−**0.052** (0.644)	0.241 (0.074)*	0.241* × −0.124** = −0.029* > −**0.052** *pure mediation*
$X_{1.2}$: ROE	0.587 (0.000)***	−0.474 (0.000)***	−0.474*** × −0.124** = 0.059** < 0.587*** *partially mediation*
$X_{2.1}$: IO	−0.003 (0.958)	0.042 (0.478)	
$X_{2.2}$: ACO	0.049 (0.323)	0.027 (0.649)	
$X_{2.3}$: IBCO	0.197 (0.000)***	0.197 (0.001)***	0.197*** × −0.124** = −0.024 < 0.197 *partially mediation*
$Y_{1.1}$: DER	−0.124 (0.015)**	-	
Constant	−0.334 (0.529)	0.019 (0.974)	
Adj. R^2 (F-test)	0.392 (0.000)***	0.113 (0.000)***	Fit Model

*, **, and *** Indicate the level of significance of bold value at 0.10, 0.05, and 0.01, respectively.

invested in the company is responded to positively by the creditor, which causes an increase in debt higher than the change in equity at an α level of 10 per cent. The use of the ROA independent variable illustrates the extent to which all company investments, whether funded by debt or equity, can produce the ability to make a profit. Therefore, ROA has a positive influence on DER, with the explanation that creditors tend to look more at ROA than ROE which only looks at equity and can generate profits that provide more information to investors. The interaction of the relationship between ROA and DER, which produces a positive influence, also signals the existence of an optimal capital structure theory, thereby supporting the testing of the H_a5.

Testing H_a6: Return on equity affects the firm's value through the role of capital structure as an intervening variable that indicates the optimal capital structure signal. The results show that the DER variable has a role as an intervening variable, partially its effect on the relationship between profitability variables and firm value. In this case, it can be seen the direct effect of ROE on DER has a negative effect of -0.474 (0.000)*** while the effect of DER on Tobin's Q value of -0.124 (0.015)** based on the coefficient of the relationship can be calculated, the indirect effect ROE on firm value (Tobin's Q) through intervening variable DER can be partially calculated $-0.474 \times -0.124 = 0.059$ still smaller than the direct effect of variable ROE on firm value of 0.587 (0.000); thus the H_a6 states that the return on equity affects the value of the company through the role of capital structure as an intervening variable that indicates the optimal capital structure signal is proven. This means that the role of the DER variable as a partially intervening variable on the ROE variable to firm value (Tobin's Q). The results of the H_a6 testing can provide information signals about the existence of optimal capital structure. Following the theory of optimal capital structure (Harmono, 2011; Matias & Serrasqueiro, 2017; Miller, 1958), there will be a weighted average cost between the cost of debt capital and the cost of capital itself. Creditors and their capital costs associated with capital fertilization through investors or holding profits will ultimately produce the optimal capital structure.

H_a7 test results: Return on assets affects the firm value through the role of capital structure as an intervening variable that indicates the optimal signal capital structure, indicating that the variable ROA does not affect firm value. While ROA on DER shows a positive influence on DER of 0.241 (0.074)* at an α level of 10 per cent, the DER variable has a negative influence on the firm value of -0.124 (0.015)**. Thus the path analysis that can be developed is the effect of ROA on firm value through DER can be calculated as $0.241 \times -0.124 = -0.029$, and ROA does not affect firm value. Thus the role of the DER variable is pure intervening. This indicates the existence of optimal capital structure signals in the opposite direction. This means that the mediating role of the DER variable between the profitability (ROA) against the firm value can be described that the increase in ROA will be responded to by creditors faster than investors, so it will produce a positive response. On the other hand, investors will respond negatively when the tendency of rising corporate debt is indicated by the composition of DER. Thus the mediating role of the DER variable will reduce investor interest in investing, and in the process of the ongoing market

mechanism, an optimal capital structure will occur. This condition can describe the optimal capital structure signal.

Under certain conditions, the company will be given a loan by the creditor. On the other hand, when debt is at its optimal position, it will tend to go down through principal loan instalments plus interest which will be followed by investor responses that can add to their capital. When the DER condition goes down, it will attract investors to invest, and with the ongoing process of the market balance mechanism, an optimal capital structure will be formed. This condition can prove the existence of signals in optimal capital structure theory (Harmono, 2011; Meckling & Jensen, 1976; Miller, 1958).

H_a8 test results: Ownership of an IBCO affects the capital structure, showing that the IBCO has a positive effect on the capital structure of 0.197 (0.000)*** means that management policies in determining debt or own capital funding through selling shares or holding profits strongly influenced by the condition of the IBCO structure.

Testing H_a9: The ownership of the audit committee affects the capital structure and shows insignificant results, so this hypothesis is rejected. This condition illustrates that, for conditions in Indonesia, the role of controlling the structure of capital ownership with an economic system that tends to be through a free market mechanism will certainly be more dominated by the shareholders of the IBCO. This is consistent with the role and main tasks of the audit committee more to assist the task of the IBCO to oversee the course of company policy in collaboration with internal auditors. Thus the majority decision remains on the board of independent commissioners, including when deciding on company funding through debt contracts with creditors.

Testing H_a10: Institutional ownership affects the capital structure and shows insignificant results. Based on the results of previous hypothesis testing related to the influence of GCG on capital structure, which has the majority control over the direction of policies determining debt funding or selling shares is an IBCO. The IO structure for conditions in Indonesia, such as pension funds, insurance institutions, foundations, and non-bank financial institutions, seems to be less interested in investing in companies. The phenomenon that occurs in Indonesia, in addition to being limited by regulations that limit institutions to invest in shares, seems to be predominantly still dominated by the ownership of an IBCO. Surely this will have implications for the structure of the economic structure in Indonesia.

Testing H_a11: The Ownership of the Independent Board of Commissioners influences the value of the company showing a significant result of 0.197 (0.000)***. This means that the ownership of an IBCO influences the determination of the company's funding strategy, both funding through debt and selling strategies. Based on the results of testing the hypothesis of the influence of the IBCO on the value of the company, it can describe the condition of ownership structure in Indonesia that has implications for investors when the motivation of investors wants to control the voting rights in determining the direction of management policies and wants to control the company not just get dividends. It is necessary to enter the board of independent commissioners.

Testing H_a12: Audit committee ownership affects the firm's value. The results show the ACO does not affect the value of the company. The results of this test imply that dominates the ownership structure of the IBCO. This condition is also supported by the results of H_a13 testing.

Testing H_a13. Institutional ownership affects the value of the company also does not influence the value of the company; thus upholding the values of GCG related to the value of transparency, participation, and accountability of the company's performance is largely controlled by the board shareholders independent commissioner.

The last stage is the discussion of research results related to path analysis to illustrate the existence of a signal theory of optimal capital structure based on the test results of H_a14: Ownership of an independent board of commissioners affects the firm's value through the role of capital structure as an intervening variable indicating signal capital structure optimal results show that the effect of ownership of independent commissaries on the company value of 0.197 (0.000)*** while the indirect effect of ownership of independent commissaries of the capital structure of 0.197 (0.001) and capital structure affects the value of the company of −0.124, with thus the indirect effect of 0.197*** × −0.124** = −0.024**< 0.197*** shows the results of partial mediation. The results of testing the hypothesis of the influence of the IBCO on the value of the company through the role of capital structure as an intervening variable that indicates the signal of optimal capital structure is proven, and the role of capital structure as an intervening variable is partially proven. This means that not all investors and creditors invest in companies based on capital structure condition information (DER). Some others immediately saw the condition of the ownership structure of the IBCO. This condition signals the existence of a market mechanism process in both the capital market and the debt funding market, thereby showing a trade-off theory, namely the occurrence of an optimal capital structure condition which is a balanced price determined by the investor and a price determined by the creditor; this is in line with the theory optimal capital structure (Matias & Serrasqueiro, 2017; Miller, 1958).

Testing H_a15: The ownership of the audit committee influences the value of the company through the role of the capital structure as an intervening variable that indicates the optimal signal capital structure. Either directly or indirectly shows that there is no effect of the ACO on capital structure, nor the effect of ACO on the company's value. This condition indicates that the enforcement of GCG values is more dominated by the ownership of an IBCO.

Testing H_a16: Institutional ownership influences firm value through the role of capital structure does not act as an intervening variable. In this case it shows, for the conditions of manufacturing companies in Indonesia, IO does not affect funding decisions (DER) and company value. However, DER is more determined by IBCO. Thus the implications for the practice of implementing GCG values are represented by IBCO. Details can be seen in Table 2 of the fourth analysis stage in Panel 5.

5. CONCLUSION

The results of the regression analysis of the effect of financial performance and GCG on firm value through the capital structure [$\text{DER} = \frac{\text{Debt}}{\text{Equity}}$] with company growth as a control variable indicates that: Financial performance [$\text{ROA} = \frac{\text{Earning after tax}}{\text{Assets}}$] has no direct effect on the value of the company (Tobin's *Q*), while ROE has a positive effect firm value. The next regression coefficient analysis shows ROA financial performance positively influences DER and ROE negatively affects company DER or leverage, and capital structure variable (DER) negatively affects company value.

Based on the results of the analysis of the regression coefficients between these variables can be concluded using the first path analysis that: Investors, in responding to the financial performance of ROA, have reflected through the intervening variable capital structure (DER) in the inverse direction. It means that ROA's financial performance indicates how much the company is able to generate profits based on total assets invested in the company. ROA financial performance contains expectations for creditors and investors as reflected in how much the total assets generate net income after tax. In this case, the firm performance was responded positively by the creditors was faster in the form of increased debt funding compared to the accumulation of equity from the increased investor DER. On the other hand, DER negatively affects firm value.

Based on the results of the first path analysis. We can draw conclusions that the effect of ROA on firm value is reflected by the capital structure in a direction that is inversely proportional. It means that when firm performance increases, it will be responded to more by creditors than by investors, thus showing a positive response. However, when the condition of the capital structure shows that debt conditions are too high, it will be responded negatively by investors, and then the DER position like this will pressure the management to try to pay a debt to the point of weighted average debt costs with the cost of capital itself optimally. It means that it gives the signal of the existence of a funding mechanism process towards an optimal capital structure.

The results of the second path analysis, namely the influence of financial performance ROE [ROE (Earnings after tax)/Equity] on the value of the company through DER, show that ROE is responded to directly by investors positively because ROE financial performance information emphasizes how far the ability of own capital can generate net profit after tax. On the other hand, ROE financial performance information negatively affects DER. It means that the increase in earnings after tax is faster than changes in equity. In such conditions, the investors will continue to invest their capital through the stock transaction mechanism in the capital market, which causes the composition of the DER to decrease due to the addition of equity, which is greater than the addition of debt funding. This process of adding equity will continue until the composition of the small DER, assuming profits after taxes continue to rise, is attractive to creditors to invest

their funds in the form of long-term loans to companies. When the management style tends to utilize optimal leverage, then, at a certain point, it will form the optimal capital structure. Based on the result of the second path analysis. We can conclude that the role of the DER as an intervening variable is part of the effect of ROE on firm value as a signal of the process of forming an optimal capital structure.

The third path analysis begins with an analysis of the influence of ownership structures: the ownership structure of an IBCO, an ACO, and the IO structure on DER. The capital ownership structure variable that has a positive influence on DER is the IBCO. For a while, the ACO and IO structures do not affect the DER. The effect of ownership structure on DER can illustrate that the domination capital ownership structure is an IBCO. It will also dominate in the determination of the direction of management policies, including the determination of corporate funding policies that lead to GCG.

On the other hand, the ownership structure of the IBCO positively influences the firm value, while DER negatively affects the firm's value. It can illustrate that the role of the DER as an intervening variable on the influence of the ownership structure of the IBCO on the company value is partial. It means that some investors directly respond to GCG, represented by the dominance of the ownership structure of the IBCO, and some others through DER conditions. This partial investor response illustrates the signal of the formation of an optimal capital structure following the theory (Beaver, 1968; Miller, 1958).

REFERENCES

Adeoye, O. A., & Islam, S. M. (2020). Optimal capital structure and the debtholder–manager conflicts of interests: A management decision model. *Journal of Modelling in Management*, *16*(4), 1070–1095. https://doi.org/10.1108/JM2-03-2020-0095

Aggarwal, D., & Padhan, P. C. (2017). Impact of capital structure on firm value: Evidence from Indian Hospitality Industry. *Theoretical Economics Letters*, *07*(04). https://doi.org/10.4236/tel.2017.74067

Ahmad, A. H., & Abdullah, N. A. H. (2013). Investigation of optimal capital structure in Malaysia: A panel threshold estimation. *Studies in Economics and Finance*, *30*(2), 108–117. https://doi.org/10.1108/10867371311325426

Al-Najjar, B., & Taylor, P. (2008). The relationship between capital structure and ownership structure: New evidence from Jordanian panel data. *Managerial Finance*, *34*(12), 919–933. https://doi.org/10.1108/03074350810915851

Al Farooque, O., Buachoom, W., & Sun, L. (2020). Board, audit committee, ownership and financial performance – Emerging trends from Thailand. *Pacific Accounting Review*, *32*(1), 54–81. https://doi.org/10.1108/PAR-10-2018-0079

Alipour, M. (2013). An investigation of the association between ownership structure and corporate performance: Empirical evidence from Tehran Stock Exchange (TSE). *Management Research Review*, *36*(11), 1137–1166. https://doi.org/10.1108/MRR-08-2012-0188

Aras, G., & Yildirim, F. M. (2018). The impact of corporate finance decisions on market value in emerging markets. *International Journal of Productivity and Performance Management*, *67*(9), 1959–1976.

Banamtuan, O., Zuhroh, D., & Sihwahjoeni, S. (2020). Asset management and capital ownership on firm value: Through profitability. *Accounting and Financial Review*, *3*(1), 83–92. https://doi.org/10.26905/afr.v3i1.4296

Beaver, W. H. (1968). Discussion of the information content of annual earnings announcements. *Journal of Accounting Research*, *6*. https://doi.org/10.2307/2490071

Beretta, V., Demartini, C., & Trucco, S. (2019). Does environmental, social and governance performance influence intellectual capital disclosure tone in integrated reporting? *Journal of Intellectual Capital*, *20*(1). https://doi.org/10.1108/JIC-02-2018-0049

Cao, F., Sun, J., & Yuan, R. (2019). Board directors with foreign experience and stock price crash risk: Evidence from China. *Journal of Business Finance and Accounting*, *46*(9–10), 1144–1170. https://doi.org/10.1111/jbfa.12400

Chattopadhyay, A., Shaffer, M. D., & Wang, C. C. Y. (2020). Governance through shame and aspiration: Index creation and corporate behavior. *Journal of Financial Economics*, *135*(3). https://doi.org/10.1016/j.jfineco.2019.07.005

Clement, M., Lee, J., & Yong, K. O. (2019). A new perspective on post-earnings-announcement-drift: Using a relative drift measure. *Journal of Business Finance and Accounting*, *46*(9–10), 1123–1143. https://doi.org/10.1111/jbfa.12401

Cox, J. C., & Ross, S. A. (1976). The valuation of options for alternative stochastic processes. *Journal of Financial Economics*, *3*(1–2). https://doi.org/10.1016/0304-405X(76)90023-4

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *The Journal of Finance*, *25*(2). https://doi.org/10.2307/2325486

Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. *Journal of Financial Economics*, *116*(1). https://doi.org/10.1016/j.jfineco.2014.10.010

Farooq, O. (2015). Effect of ownership concentration on capital structure: Evidence from the MENA region. *International Journal of Islamic and Middle Eastern Finance and Management*, *8*(1), 99–113. https://doi.org/10.1108/mf.2008.00934jaa.001

Fatemi, A., Glaum, M., & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal*, *38*. https://doi.org/10.1016/j.gfj.2017.03.001

Faturohman, T., & Noviandy, R. Q. (2022). An empirical analysis of firm-specific determinants of capital structure before and during COVID-19 pandemic: Evidence from listed hotels, restaurants, and tourism entities on the Indonesia Stock Exchange. In W. A. Barnett & B. S. Sergi (Eds.), *Quantitative analysis of social and financial market development* (Vol. 30, pp. 119–133). Emerald Publishing Limited. https://doi.org/10.1108/S1571-038620220000030008

Fiador, V. O. (2013). Corporate governance and value relevance of financial information: Evidence from the Ghana Stock Exchange. *Corporate Governance (Bingley)*, *13*(2), 208–217. https://doi.org/10.1108/14720701311316689

Govindaraj, S., Li, Y., & Zhao, C. (2020). The effect of option transaction costs on informed trading in the options market around earnings announcements. *Journal of Business Finance and Accounting*, *47*(5–6), 615–644. https://doi.org/10.1111/jbfa.12443

Groth, J. C., & Anderson, R. C. (1997). Capital structure: perspectives for managers. *Management Decision*, *35*(7), 552–561. https://doi.org/10.1108/00251749710170529

Ham, C. G., Kaplan, Z. R., & Leary, M. T. (2020). Do dividends convey information about future earnings? *Journal of Financial Economics*, *136*(2). https://doi.org/10.1016/j.jfineco.2019.10.006

Harmono. (2009). *Manajemen Keuangan Berbasis Balanced Scorecard (Pendekatan Teori, Kasus, dan Riset Bisnis)*. Jakarta: Bumi Aksara.

Harmono. (2011). Manajamen Keuangan Berbasis Balanced Scorecard Pendekatan Teori, Kasus, dan Riset Bisnis. Manajemen Keuangan.

Hirschey, M., John, K., & Makhija, A. K. (2009). *Corporate Governance and Firm Performance* (Advances in Financial Economics, Vol. 13). Bingley: Emerald Publishing Limited.

Isshaq, Z., Bokpin, G. A., & Mensah Onumah, J. (2009). Corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange. *Journal of Risk Finance*, *10*(5), 488–499. https://doi.org/10.1108/15265940911001394

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4). https://doi.org/10.1016/0304-405X(76)90026-X

Karaca, S. S., & Eksi, I. H. (2011). The relationship between ownership structure and firm performance: An empirical analysis over Istanbul Stock Exchange (ISE) listed companies. *International Business Research*, *5*(1). https://doi.org/10.5539/ibr.v5n1p172

Krüger, P. (2015). Corporate goodness and shareholder wealth. *Journal of Financial Economics*, *115*(2). https://doi.org/10.1016/j.jfineco.2014.09.008

Kurniati, S. (2019). Stock returns and financial performance as mediation variables in the influence of good corporate governance on corporate value. Corporate Governance (Bingley), 19(6), 1289–1309. https://doi.org/10.1108/CG-10-2018-0308

Mao, L. (2015). *State ownership, institutional ownership and relationship with firm performance: Evidence from Chinese listed firms. Bachelor's thesis, University of Twente, Twente*.

Marsha, N., & Murtaqi, I. (2017). The effect of financial ratios on firm value in the food and beverage sector of the IDX. *Journal of Business and Management*, *6*(2), 214–246.

Matias, F., & Serrasqueiro, Z. (2017). Are there reliable determinant factors of capital structure decisions? Empirical study of SMEs in different regions of Portugal. *Research in International Business and Finance*, *40*. https://doi.org/10.1016/j.ribaf.2016.09.014

Meckling, W. H., & Jensen, M. C. (1976). Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*. https://doi.org/10.1016/0304-405X(76)90026-X

Mian Du, S. C., & H. S. (2014). Corporate governance: Institutional arrangement or market choice? *Chinese Management Studies*, *8*(4), 717–744.

Miller, W. B. (1958). Lower class culture as a generating milieu of gang delinquency. *Journal of Social Issues*, *14*(3). https://doi.org/10.1111/j.1540-4560.1958.tb01413.x

Mohammed, A., & Rashid, B. (2018). A conceptual model of corporate social responsibility dimensions, brand image, and customer satisfaction in Malaysian hotel industry. *Kasetsart Journal of Social Sciences*, *39*(2). https://doi.org/10.1016/j.kjss.2018.04.001

Nadarajah, S., Ali, S., Liu, B., & Huang, A. (2018). Stock liquidity, corporate governance and leverage: New panel evidence. *Pacific Basin Finance Journal*, *50*. https://doi.org/10.1016/j.pacfin.2016.11.004

Naeem, M. A., Karim, S., Nor, S. M., & Ismail, R. (2022). Sustainable corporate governance and gender diversity on corporate boards: evidence from COVID-19. *Economic Research-Ekonomska Istrazivanja*, *35*(1). https://doi.org/10.1080/1331677X.2022.2038649

Peng, W. W. X. H. Y. L. P. (2015). Integrating nonmarket and market action, response, and initiating firm performance in competitive dynamics. *Management Decision*, *53*(3), 512–532.

Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, *19*(3). https://doi.org/10.1111/j.1540-6261.1964.tb02865.x

Shyu, J. (2013). Ownership structure, capital structure, and performance of group affiliation: Evidence from Taiwanese group-affiliated firms. *Managerial Finance*, *39*(4), 1–5.

Steens, B., de Bont, A., & Roozen, F. (2020). Influence of governance regime on controller roles supervisory board members' perspectives on business unit controller roles and role conflict. *Corporate Governance (Bingley)*, *20*(6), 1029–1051. https://doi.org/10.1108/CG-10-2019-0309

Suhadak, S., Mangesti Rahayu, S., & Handayani, S. R. (2020). GCG, financial architecture on stock return, financial performance and corporate value. *International Journal of Productivity and Performance Management*, *69*(9), 1813–1831. https://doi.org/10.1108/IJPPM-09-2017-0224

Suto, M., & Toshino, M. (2005). Behavioural biases of Japanese institutional investors: Fund management and corporate governance. *Corporate Governance: An International Review*, *13*(4), 466– 477. https://doi.org/10.1111/j.1467-8683.2005.00442.x

Tobin, J. (1969). A general equilibrium approach to monetary theory. *Journal of Money, Credit and Banking*, *1*(1). https://doi.org/10.2307/1991374

Widya, R. W., & Nugrahani, C. (2018). Asset scale and capital structure on the performance of Sharia Banks. *Accounting and Financial Review*, *1*(2), 93–100. https://doi.org/10.26905/afr.v1i2.2789

APPENDIX

Definitions of Variables

DER	*Debt to Equity Ratio* describes the composition of the capital structure as a measurement variable to detect optimal capital structure signals (leverage)
PBV	*Price to Book Value* describes the value
PER	*Price Earning Per Share* explains the market value per share
ROA	*Return on Assets* is the company's ability to get a net profit after tax compared to investment (Debt + Capital), as a measure of profitability that is likely to be responded to by creditors and investors
ROE	*Return on Equity* is the ability of a company to make a profit compared to equity, thus focusing its attention on the owners of capital
IBCO	*Independent Board of Commissioners Ownership* describes the extent to which the ownership structure of shares is controlled in the context of controlling voting rights in the direction of determining company management policies
ACO	*Audit Committee Ownership* is a capital ownership structure by the audit committee, whose job is to assist the Designers of Independent Commissioners and work closely with internal auditors
IO	*Institutional Ownership* representing many investors to invest in shares, including non-bank financial institutions, pension fund insurance, foundations, WAQF bodies, and other non-financial institutions
Firm Growth as Control Variable	*Firm Growth* is a control variable as a testing tool for research models based on the analysis of model sensitivity
Firm Value	*Firm Value* is a concept of company value that is reflected by stock prices as a result of the demand and supply in stock trading transactions in the capital market
Tobin's *Q*	Tobin's *Q* is one indicator of firm value that can reflect and represent the firm in one year or a specified period. Tobin's *Q* is calculated based on Stock Market Value plus Debt Market Value divided by Market capitalization Value in Period *t*. Thus, it can describe the value of the company that is reflected by the market in period *t*
Leverage	*Leverage* is often measured through debt to equity ratio or debt to assets to illustrate the leverage of achieving profits based on debt capital invested. In this case, there is operational leverage and financial leverage
GCG	*Good Corporate Governance* is the company's organizational values related to the value of transparency, organizational participation, agreement on the rules of the game, and accountability, which are generally measured through a share ownership structure. It is greatly influenced by a country's economic system, including the capitalist economic system, socialist, and popular economy
Ownership Structure	*Capital Ownership Structure* consists of Independent Board of Commissioners Ownership, Managerial Ownership, Government Board Ownership, Institutional Ownership, Individual Ownership, Audit Committee Ownership, and Ultimat Ownership
Optimum Capital Structure	*Optimum Capital Structure* can occur when the condition of the economy is stable, the weighted average between the cost of debt capital and the cost of capital itself is at an optimal point due to the process of balancing through the market mechanism between the capital market and the debt funding market
Agency Theory	*Agency Theory* is a theory that explains the relationship between the principal and agent in this case, as the principal is the owner of the capital or investor and creditor, while the agent is the management of the company, the principal's relationship with the agent can empirically achieve optimal capital structure conditions

FINANCIAL PERFORMANCE AND OWNERSHIP STRUCTURE: INFLUENCE ON FIRM VALUE THROUGH LEVERAGE

ORIGINALITY REPORT

16%	14%	11%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	"From the Internet of Things to the Internet of Ideas: The Role of Artificial Intelligence", Springer Science and Business Media LLC, 2023 Publication	1%
2	repository.up.ac.za Internet Source	1%
3	media.neliti.com Internet Source	1%
4	dspace.mnau.edu.ua Internet Source	<1%
5	files.osf.io Internet Source	<1%
6	epe.lac-bac.gc.ca Internet Source	<1%
7	ojs.uajy.ac.id Internet Source	<1%
8	uab.marka.pt Internet Source	<1%
9	journal.unpas.ac.id Internet Source	<1%
10	www.emerald.com Internet Source	<1%
11	Suhadak Suhadak, Sri Mangesti Rahayu, Siti Ragil Handayani. "GCG, financial architecture on stock return, financial performance and	<1%

corporate value", International Journal of Productivity and Performance Management, 2019
Publication

12	Submitted to Universitas Jenderal Soedirman Student Paper	<1%
13	hvtc.edu.vn Internet Source	<1%
14	journal.ubaya.ac.id Internet Source	<1%
15	Erna Setiany, Wiwik Utami, Annisa Hakim Zamzami. "Firm value: Competitive position and corporate governance during the COVID-19 pandemic", Journal of Governance and Regulation, 2023 Publication	<1%
16	journal.walisongo.ac.id Internet Source	<1%
17	1library.net Internet Source	<1%
18	libweb.kpfu.ru Internet Source	<1%
19	www.ilomata.org Internet Source	<1%
20	Azwani Aulia, Fiona Febriyanti, Lita Permata Umi. "Trend Analysis Of ESG Disclosure On Green Finance Performance In Indonesia, Malaysia & Singapore Exchanges", JAK (Jurnal Akuntansi) Kajian Ilmiah Akuntansi, 2023 Publication	<1%
21	journal.formosapublisher.org Internet Source	<1%
22	www.karyailmiah.trisakti.ac.id Internet Source	<1%

23	Nur Imamah, Saparila Worokinasih, Zeni Firdayani, Jung-Hua Hung. "Financial Performance and Corporate Governance: Its Effect on Market Performance", Emerald, 2023 Publication	<1 %
24	Riskin Hidayat, Sugeng Wahyudi, Harjum Muharam, Fatlina Zainudin. "Institutional Ownership, Productivity Sustainable Investment Based on Financial Constrains and Firm Value: Implications of Agency Theory, Signaling Theory, and Asymmetry Information on Sharia Companies in Indonesia", International Journal of Financial Research, 2019 Publication	<1 %
25	cdn1.i3investor.com Internet Source	<1 %
26	www.thefreelibrary.com Internet Source	<1 %
27	Eva R. Porras. "The Cost of Capital", Springer Science and Business Media LLC, 2011 Publication	<1 %
28	journal.feb.unmul.ac.id Internet Source	<1 %
29	www.psychosocial.com Internet Source	<1 %
30	repository.ubharajaya.ac.id Internet Source	<1 %
31	eprints.utar.edu.my Internet Source	<1 %
32	www.econstor.eu Internet Source	<1 %

33	Yuli Agustina, Febiyana Dwi Safitri. "How Important Are the Roles of GCG, Capital Structure and Profitability in the Company Values?", KnE Social Sciences, 2020 Publication	<1 %
34	Hamed Ahmad Almahadin, Yazan Salameh Oroud. "Capital Structure-Firm Value Nexus: Moderating Role of Profitability", Revista Finanzas y Política Económica, 2020 Publication	<1 %
35	Submitted to Universitas Diponegoro Student Paper	<1 %
36	e-journal.uajy.ac.id Internet Source	<1 %
37	Submitted to Curtin University of Technology Student Paper	<1 %
38	Submitted to Pennsylvania State System of Higher Education Student Paper	<1 %
39	Submitted to Sriwijaya University Student Paper	<1 %
40	Yossi Diantimala, Sofyan Syahnur, Ratna Mulyany, Faisal Faisal. "Firm size sensitivity on the correlation between financing choice and firm value", Cogent Business & Management, 2021 Publication	<1 %
41	Epstein, Lita; Schneider, Arnold. "Accounting for Healthcare Professionals, 2e", Zovio Inc, 2022 Publication	<1 %
42	Nadeem Fatima, Abdul Rahman Shaik, Sasikanta Tripathy. "Firm Value and Profitability of Saudi Arabian Companies	<1 %

	Listed on Tadawul: Moderating Role of Capital Structure", International Journal of Sustainable Development and Planning, 2023 Publication	
43	dokumen.pub Internet Source	<1 %
44	infor.seaninstitute.org Internet Source	<1 %
45	journal31.unesa.ac.id Internet Source	<1 %
46	reviews.financesonline.com Internet Source	<1 %
47	www.conscientiabeam.com Internet Source	<1 %
48	www.doria.fi Internet Source	<1 %
49	www.ecgi.global Internet Source	<1 %
50	www.growingscience.com Internet Source	<1 %
51	www.ukessays.com Internet Source	<1 %
52	www.um.edu.mt Internet Source	<1 %
53	Submitted to Kenyatta University Student Paper	<1 %
54	Rita Wijayanti, Doddy Setiawan. "The role of the board of directors and the sharia supervisory board on sustainability reports", Journal of Open Innovation: Technology, Market, and Complexity, 2023 Publication	<1 %

55	economice.ulbsibiu.ro Internet Source	<1 %
56	m.moam.info Internet Source	<1 %
57	www.coursehero.com Internet Source	<1 %
58	www.e3s-conferences.org Internet Source	<1 %
59	www.easpublisher.com Internet Source	<1 %
60	www.virtusinterpress.org Internet Source	<1 %
61	Ayman Issa. "Do emissions reduction initiatives improve financial performance? Empirical analysis of moderating factors", International Journal of Accounting & Information Management, 2023 Publication	<1 %
62	Sarah Anobil Okyere, Vera Fiador, Emmanuel Sarpong-Kumankoma. "Earnings management, capital structure, and the role of corporate governance: Evidence from sub-Saharan Africa", Managerial and Decision Economics, 2021 Publication	<1 %
63	Yavida Nurim, Nung Harjanto, Paulina I. Prabawati, Nur R. Wijaya. "Stable Financial Performance as the Antecedent of ESG Activity and Firm Value Relationship: An Evidence from Indonesia", Emerald, 2022 Publication	<1 %
64	acfr.aut.ac.nz Internet Source	<1 %
	de.scribd.com	

65	Internet Source	<1%
66	dlib.hust.edu.vn:8080 Internet Source	<1%
67	ejournals.umn.ac.id Internet Source	<1%
68	etheses.uin-malang.ac.id Internet Source	<1%
69	expeditiorepositorio.utadeo.edu.co Internet Source	<1%
70	journalofbusiness.org Internet Source	<1%
71	jurnal.unived.ac.id Internet Source	<1%
72	kupdf.net Internet Source	<1%
73	www.irejournals.com Internet Source	<1%
74	Firda Nosita, Rifqi Amrulloh. "Investor Behaviour During COVID-19 Pandemic: Do They Herding?", Emerald, 2023 Publication	<1%
75	Pradip Kumar Mitra, Omkar Naik. "Debt Financing and Agency Cost on Profitability: Are Real Estate Firms' Performance in India Getting Affected?", Asia-Pacific Journal of Management Research and Innovation, 2021 Publication	<1%
76	Raja Rehan, Abdul Razak Abdul Hadi, Hafezali Iqbal Hussain, Qazi Muhammad Adnan Hye. "Capital structure determinants across sectors: Comparison of observed evidences	<1%

from the use of time series and panel data estimators", Heliyon, 2023
Publication

77	ajba.um.edu.my Internet Source	<1 %
78	core.ac.uk Internet Source	<1 %
79	dora.dmu.ac.uk Internet Source	<1 %
80	etd.uum.edu.my Internet Source	<1 %
81	hrcak.srce.hr Internet Source	<1 %
82	hrmars.com Internet Source	<1 %
83	ideas.repec.org Internet Source	<1 %
84	jurnal.feb-umi.id Internet Source	<1 %
85	koreascience.or.kr Internet Source	<1 %
86	link.springer.com Internet Source	<1 %
87	mobt3ath.com Internet Source	<1 %
88	oer.biu.edu.ng Internet Source	<1 %
89	prr.hec.gov.pk Internet Source	<1 %
90	repo.bunghatta.ac.id Internet Source	<1 %

91	scipg.com Internet Source	<1 %
92	sekarl.euba.sk Internet Source	<1 %
93	sloap.org Internet Source	<1 %
94	www.efmaefm.org Internet Source	<1 %
95	www.hindawi.com Internet Source	<1 %
96	www.mawer.com Internet Source	<1 %
97	www.mdpi.com Internet Source	<1 %
98	www.scielo.br Internet Source	<1 %
99	zambrut.com Internet Source	<1 %
100	Anthony Diefendorf, Bert Zarb. "A QUESTION OF VALUE ﷺ CASH FLOW AND CAPITAL STRUCTURE DETERMINANTS IN THE U.S. DEFENSE AND AEROSPACE INDUSTRIES", Journal of International Finance and Economics, 2023 Publication	<1 %
101	Messaoude Nebie, Ming-Chang Cheng. "Corporate tax avoidance and firm value: Evidence from Taiwan", Cogent Business & Management, 2023 Publication	<1 %
102	Suhadak Kurniati. "Stock returns and financial performance as mediation variables in the influence of good corporate governance on	<1 %

corporate value", Corporate Governance: The International Journal of Business in Society, 2019
Publication

103 "Index", Emerald, 2023 <1%
Publication

104 Eleonora Kontuš, Kristina Šorić, Nataša Šarlija. "Capital structure optimization: a model of optimal capital structure from the aspect of capital cost and corporate value", Economic Research-Ekonomska Istraživanja, 2022 <1%
Publication

105 K.M.K.N.S. Kulathunga, L.A.S. Perera, G.N. Anagipura. "The Relationship between Capital Structure and Ownership Structure: Evidence from Listed Companies in Hotel and Manufacturing Sectors in Sri Lanka", Kelaniya Journal of Management, 2017 <1%
Publication

106 Taufik Faturohman, Rashifa Qanita Noviandy. "An Empirical Analysis of Firm-specific Determinants of Capital Structure Before and During COVID-19 Pandemic: Evidence from Listed Hotels, Restaurants, and Tourism Entities on the Indonesia Stock Exchange", Emerald, 2022 <1%
Publication

Exclude quotes	Off	Exclude matches	Off
Exclude bibliography	On		

FINANCIAL PERFORMANCE AND OWNERSHIP STRUCTURE: INFLUENCE ON FIRM VALUE THROUGH LEVERAGE

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9

PAGE 10

PAGE 11

PAGE 12

PAGE 13

PAGE 14

PAGE 15

PAGE 16

PAGE 17

PAGE 18

PAGE 19

PAGE 20

PAGE 21

PAGE 22

PAGE 23