THE EFFECT OF CORPORATE GOVERNANCE AND PROFITABILITY ON THE FIRM VALUE OF LQ45 COMPANIES

THESIS

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YOGYAKARTA

2025

THE EFFECT OF CORPORATE GOVERNANCE AND PROFITABILITY ON THE FIRM VALUE OF LQ45 COMPANIES

UNDERGRADUATE THESIS

Presented as a Partial Fulfilment of The Requirements to Obtain The Bachelor Degree

in Accounting Department

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FACULTY OF BUSINESS AND ECONOMICS

UNIVERSITAS ISLAM INDONESIA YOGYAKARTA

2025

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APPROVAL PAGE

THE EFFECT OF CORPORATE GOVERNANCE AND PROFITABILITY ON THE FIRM VALUE OF LQ45 COMPANIES

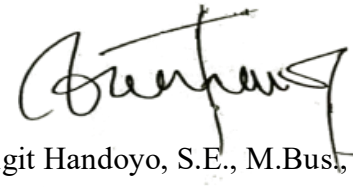
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ACKNOWLEDGEMENT

Assalamu'alaikum Wr. Wb.

Alhamdulillahirabbil'alamin, all praise and gratitude are extended to Allah S.W.T. for bestowing His grace and guidance, enabling the author to complete this thesis entitled "THE EFFECT OF CORPORATE GOVERNANCE AND PROFITABILITY ON THE FIRM VALUE OF LQ45 COMPANIES," as a partial fulfillment of the requirements for the Bachelor's degree in the Accounting Program, Faculty of Business and Economics, Universitas Islam Indonesia.

This thesis would not have been realized without the guidance, support, prayers, and affection from numerous individuals. Therefore, with utmost respect and affection, the author wishes to express sincere gratitude to:

1. Allah S.W.T., who has granted all ease, blessings, and favors.
2. My beloved parents, Agung Triwibowo, S.E., and Rina Dwiarti, S.E., M.Si., who have tirelessly prayed for, encouraged, and been a constant source of support in all circumstances. Thank you for every invaluable sacrifice, patience, and affection.
3. My beloved sibling, Anindya Athailah, who has always provided entertainment and encouragement to the author.
4. My beloved sibling, Anindya Athailah, who has always provided entertainment and encouragement to the author.
5. Johan Arifin, S.E., M.Si., Ph.D., the Dean of the Faculty of Business and Economics, Universitas Islam Indonesia for the 2022-2026 period, and all faculty leadership.

6. Maulidyati Aisyah, S.E., M. Com (Adv)., the academic advisor and Secretary of the Accounting (IUP) Program, Faculty of Business and Economics, Universitas Islam Indonesia.
7. Sigit Handoyo, S.E., M.Bus., CFrA., the thesis supervisor, thank you for your time, advice, suggestions, and guidance provided to the author throughout the thesis writing process. Without your direction and guidance, the author would not have been able to complete this final assignment well.
8. Ruli Hapsari S.Pd., MA., the thesis language advisor, who has taken the time, energy and thoughts to check the thesis and help check the writing of this thesis
9. All Lecturers, Staff, and Administration of the Accounting Department, who have dedicated their time and imparted knowledge to the researcher during the completion of studies at the university.
10. My friends, Dara, Azhar, and Erlinda, thank you for colouring every step of this journey with joy, providing assistance, and offering support to the author.
11. My fellow classmates, Anggun, Amri, Astria, Irfan, Riri, and Aulia, thank you for helping to overcome obstacles from the initial semester until the completion of coursework.
12. My seniors, Ammar, Dina, Putri, Avissa, and Iza, who have guided me throughout my university years.
13. The family of KSPM FBE UII, which has been a place for the author to grow and share experiences. Thank you for accepting me for three years as

part of the family and teaching me many extraordinary things that have shaped the author into a better individual.

14. My friends from IPF FBE UII 2022-2023, thank you for the very valuable experiences.

In conclusion, the author realizes that this thesis is far from perfect. However, with all the existing limitations, the author hopes that this work can provide benefits and be a meaningful small step in the world of science. Any constructive criticism and suggestions are highly appreciated for future improvements.

Wassalamu'alaikum Warahmatullahi Wabarakatuh

Yogyakarta, 17 Mei 2025



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YUDICIUM THESIS EXAMINATION
INTERNATIONAL UNDERGRADUATE PROGRAM IN ACCOUNTING
FACULTY OF BUSINESS AND ECONOMIC UII
No.: 189/Ka.ProdiAkt/10/Prodi.Ak/US/V/2025

Bismillahirrahmaanirrahim

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1. **Passes** the examination **with revision**
2. ~~**Does not pass** the Thesis examination~~

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Reference : Appropriate for present in the Library

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ABSTRACT

This study investigates the effect of corporate governance and profitability on firm value, focusing on companies listed in the LQ45 index on the Indonesia Stock Exchange during the period 2021–2023. Corporate governance variables include the board of commissioners, board of directors, and audit committee, while profitability is proxied using return on assets (ROA). Firm value is measured by the Price Earnings Ratio (PER). Using purposive sampling, 26 companies were selected, and secondary data from their annual reports were analysed using multiple linear regression. The results reveal that profitability and the board of directors have a significant negative effect on firm value. In contrast, the board of commissioners and audit committee do not significantly affect firm value. These findings suggest that increased profitability and board size do not automatically translate into higher firm valuation, possibly due to investor scepticism or inefficiencies in corporate structures. This study provides insights for regulators, investors, and corporate leaders in enhancing governance strategies to sustain firm value in Indonesia's capital market.

Keywords: Corporate Governance, Profitability, Firm Value, LQ45, Board of Directors, Audit Committee, Return on Assets (ROA), Price Earnings Ratio (PER)

CHAPTER I

INTRODUCTION

1.1 Study Background

Firm value reflects investors' perceptions of a firm's success and prospects. Enhancing firm value is a key indicator of a firm's success, as it directly correlates with increasing shareholder wealth and attracting investments. Firm value can be measured through stock prices, representing public expectations of the firm's performance and governance (Damaianti, 2020).

Corporate governance is the internal control system of a firm that aims to manage risk; it can achieve business goals and increase firm value in the long term (Dwiarti et al. l, 2022). The efforts to increase firm value and foster cooperation between firm management and all its components, including shareholders, are needed in making both short-term and long-term corporate decisions.

In the past two decades, corporate governance has been a prominent issue in company management worldwide, including in developing countries such as Indonesia. GCG represents an effort to reinforce the need for companies and stakeholders to conduct their activities with transparency, accountability, responsibility, and compliance with regulations. Corporate governance has emerged as an important global concept, particularly considering scandals involving corporation such as Enron and WorldCom, which highlighted the importance of more effective oversight mechanisms to safeguard shareholders' interests and improve corporate performance (Putra, 2024).

The Asian financial crisis of 1997–1998 marked a historical turning point

that broadly highlighted the need for the implementation of GCG principles in Indonesia. Since then, companies in Indonesia have strived to align with global standards to regain investors' trust and achieve sustainable growth (Virliandita & Sulistyowati, 2024). These practices are essential to reducing agency conflicts, where information asymmetry and divergent objectives between management and shareholders will lead to agency rivalry (Dwiarti et al, 2022).

The claim that corporate governance enhances performance and stock market stability has been supported by empirical evidence, with high-performing corporations consistently maintaining such practices while contributing to the economic recovery during crises such as COVID-19 pandemic (Tjahjadi et al., 2021).

The size and autonomy of the board of commissioners are key factors in overseeing corporate activities. The Diverse expertise that often accompanies larger boards can enhance strategic decision-making (Lozano et al., 2016; Cahyani et al., 2024). On the other hand, excessively large boards may become inefficient and slow in reaching decisions. As they are not directly involved in the company's day-to-day operations, they maintain an independent perspective, free from conflicts of interest. Their presence ensures that stockholders' interests are prioritized above the personal interests of managers (Dwiarti et al. l,2022).

Strategies are formulated, and the board of directors is responsible for overseeing operations. The size of the board can play an important role in the efficiency of decision-making. The literature suggests that larger boards contribute positively to resource allocation and strategic planning; however, they may also

lead to coordination challenges, and less accountability (Tjahjadi et al., 2021). The background of board members in terms of educational and professional experiences - also influences their effectiveness in addressing business issues (Putra, 2024).

The Audit Committee is an important part of the financial oversight process; it ensures that the company provides accurate and transparent financial statements. It plays a key role in maintaining investor trust and preventing fraud. Research indicates that a well-functioning audit committee can enhance performance by strengthening internal control systems, thereby facilitating compliance with regulatory standards (Dwiarti et al., 2022). The effectiveness of the audit committee is also dependent on other factors, such as the number (but not excessive) of meetings held and the presence of qualified members (Putra, 2024).

However, the relationship between these elements of governance and corporate performance varies depending on the industry and region, highlighting the need for context-specific examination. For example, while some studies suggest that independent boards contribute to improved financial performance, others report minimal or no effects, indicating that effective governance structures are closely tied to implementation and organizational culture (Virliandita & Sulistyowati, 2024).

Several studies have measured the effect of GCG and profitability on firm value and found different research results. Pratiwi and Ibrahim (2017) found that that GCG with indicators of the independent Board of Commissioners and audit committee has a significant effect on firm value (Putri & Putri, 2022). However, Thendean & Meita (2018) revealed that the size of the Board of Commissioners and

the size of the Board of Directors have no significant effect on firm value. This is because the size of the Board of Commissioners has an opposite relationship with firm value, meaning that the larger the size of the Board of Commissioners, the lower the firm value tends to be (Khoirunnisa & Aminah, 2022).

Another key driver of firm value is the level of profitability, which is assessed through metrics such as return on assets (ROA) and net profit margins (NPM). Companies listed in the LQ45 index - often regarded as top performers on the IDX are generally able to maintain high levels of profitability. Studies show that profitability reflects operational efficiency and is an important factor in sustaining investor confidence, leading to higher firm valuation (Virliandita & Sulistyowati, 2024).

As a measure of how effectively a company generates profit and revenue, profitability is one of the most important financial performance indicators related to corporate governance. Metrics such as Return on Assets (ROA) and Net Profit Margins (NPM) provides insights into a company's operational efficiency and financial health. Prior studies have shown that well-governed companies tend achieve higher profits, as resources are allocated more wisely and decisions are made strategically (Virliandita & Sulistyowati, 2024).

Several previous studies have shown that ROA can affect firm value. According to Amin (2017), a high ROA indicates good operational performance, which can increase investor confidence in the company's prospects. Munsaidah (2016) also stated that companies with higher ROA tend to have higher market value as they show efficiency and optimal asset management. However, despite the

potential relationship between ROA and firm value, the influence has not been consistently observed across all industries or in developing countries. Hidayati and Siti (2019) found that the influence of ROA on firm value in the Indonesia's manufacturing sector was not very significant, indicating that other factors, such as leverage, firm size, and market structure, also influence firm value.

LQ45 companies are Indonesian companies with the largest market capitalizations on IDX or the top-performing firms listed on the (IDX). These firms draw significant interest from investors and often set the trend for corporate governance practices in Indonesia. Thus, governance mechanisms are paramount for maintaining competitive advantage and ensuring long-term sustainability (Cahyani et al. l, 2024).

This implies that for companies listed in the LQ45 index, profitability is not only a driver but also an outcome of good corporate governance. On one hand, profitable companies are more inclined to invest in robust governance systems. On the other hand, strong governance helps sustain profitability by promoting accountability and ethical behavior (Tjahjadi et al., 2021).

A key challenge faced by LQ45 companies lies in balancing the aspiration for growth with the requirements of good corporate governance. Excessive growth often leads to increased complexity and can hinder effective decision-making processes. Independent boards and audit committees are examples of governance mechanisms that can help address these challenges by safeguarding stakeholders' interests (Adegbite,2015).

LQ45 companies, especially top IDX-listed issuers, must apply corporate

governance properly. These companies are constantly under scrutiny from both investors and regulators. As such, stakeholder trust is dependent on transparency and accountability. Further, the high level of competitive dynamics within the LQ45 group demands productivity and responsiveness, both of which can be achieved through leadership in governance structure (Virliandita & Sulistyowati, 2024). This highlights the need to customize governance practices to different organizations based on their specific requirements and challenges. Such customization is imperative for LQ45 companies, given their broad and diverse operational landscapes and varying strategic priorities.

Although corporate governance is generally beneficial, its effects on firm performance varies across different contexts. Variations in industry characteristics, regulatory environments, and cultural factors affect the effectiveness of governance mechanisms. For example, independent commissioners may improve performance; however, their role tends to diminish in a family-owned firms, where management and decision-making power are often centralized (Cahyani et al., 2024).

This research study offers important recommendations for firms in Indonesia to determine their optimal governance structures by examining the joint effects of board size, independence, and audit committees on performance. The results are expected to serve as a reference for policymakers and corporate leaders in managing LQ45 companies more effectively, thereby contributing to sustainable economic growth.

Extensive research has examined the interdependence of GCG, profitability, and firm value. For example, independent directors, audit committees, and

ownership structures have been found to contribute to improved corporate performance. However, the results have been mixed. Some studies report a significant positive correlation, while others suggest the influence is not statistically significant and thus warrants further exploration (Reyna & Encalada, 2012). In addition, the unique characteristics of Indonesian firms operating in a dynamic economic environment call for a focused analysis of LQ45 companies.

This research study seeks to fill the gap by focusing on the interaction of GCG and profitability as moderating variables linking the performance and valuation of LQ45 firms. This study contributes to understanding the relationship between governance mechanisms and financial powers in affecting corporate outcomes by focusing on top-tier firms listed on IDX. It also offers real-world lessons for regulators and practitioners on developing governance frameworks and improving corporate strategies in Indonesia.

1.2 Problem Formulation

Based on the study background explain, a few research problems are formulated here:

1. Does profitability have an effect on the value of firms listed in LQ45?
2. Does the Board of Commissioners affect the value of firms listed in LQ45?
3. Does the Board of Directors have an effect on the value of firms listed in LQ45?
4. Does the Audit Committee have an effect on the value of firms listed in LQ45?

1.3 Research Objectives

Having formulated the research problem, there are four research objectives to be achieved:

1. To analyze the effect of profitability on the firm value of LQ45 companies.
2. To analyze the effect of the Board of Commissioners on the firm value of LQ45 companies.
3. To analyze the effect of the Board of Directors on the firm value of LQ45 companies.
4. To analyze the effect of the Audit Committee on the firm value of LQ45 companies.

1.4 Benefits of Research

This research provides benefits theoretically and practically. Theoretically, it would make a significant contribution to the field of accounting, especially on the effect of good corporate governance and profitability on LQ45 companies.

Practically, the public can benefit from the research findings as they can serve as a reference for making informed investment decisions in companies listed on the IDX.

1.5 Writing Systematics

The structure of in this writing consists of five interrelated chapters designed to facilitate understanding throughout the paper. The structure includes:

CHAPTER I: INTRODUCTION

The introduction explains the study background on the effect of Good Corporate Governance and Profitability on LQ45 companies, problem identification, writing objectives, research benefits, and writing systematics.

CHAPTER II: LITERATURE REVIEW

This literature review presents the theoretical basis of this research, previous studies, research frameworks, and research hypotheses.

CHAPTER III: RESEARCH METHODOLOGY

The research methodology section contains an explanation of the research process along with an explanation of the components of research, which include the population and sample, research variables, data collection methods, and data analysis methods.

CHAPTER IV: DATA ANALYSIS AND DISCUSSION

This section presents the results obtained from the analysis process carried out using analytical tools and data instruments, including the outcomes of the data collection process, accompanied by a detailed explanation of the findings.

CHAPTER V: CONCLUSIONS AND SUGGESTIONS

This section presents the conclusions of the research,, identifies the shortcomings contained in the research, provides suggestions for further studies, and details the implications of the research that has been done.

CHAPTER 2

LITERATURE REVIEW

2.1 Agency Theory

Agency theory was chosen as the conceptual foundation for this study. This theory outlines the relationship between a party that delegates authority (the principal) and a party that receives and acts on that authority (the agent). According to Jensen and Meckling (1976), agency theory explains the contractual relationship between a principal (the owner) and an agent (the party employed to perform a service on behalf of the principal), whereby the agent is granted authority to make decisions. When both parties aim to maximize firm value, the agent is expected to act in accordance with the principal's interests. In the context of corporations, shareholders (as principals) delegate decision-making authority to managers, who serve their agents. Shareholders provide the resources necessary for the firm's operations; while management is required to provide services that align with the shareholders' interests. However, managers do not always act in ways that best serve shareholders, often leading to conflicts arising from differences in interests. Managers may pursue personal goals, prioritizing short-term gains through high-return projects or investments rather than focusing long-term strategies that enhance shareholder wealth.

2.2 Signaling Theory

According to Sari (2022), signaling theory assumes that information is distributed unequally among all parties. This theory is closely related to the issue

of information asymmetry, wherein company management possesses more comprehensive information than other stakeholders who need such information. Therefore, managers are expected to inform stakeholders by publishing financial statements. Signaling theory was first introduced by Ross in 1977. In its development, the theory is founded on information asymmetry between management (who are well-informed) and shareholders (who are poorly informed). The theory posits that management tends to disclose favorable information to investors or shareholders, such as when there is an increase in firm value. However, investors may distrust this information, as managers are often perceived to have their interests at heart. As a result, only companies with genuinely high value are willing and able to send credible signals through their financial policies, thereby distinguishing themselves from lower-value firms.

2.3 Firm Value

According to Dewi and Sujana (2019), firm value essentially reflects investors' perception of a company, which is indicated by the firm's stock price. A company is considered to have good value when its performance is also strong. The rationale is straightforward: the higher a company's stock price, the higher its firm value. Company owners aspire to achieve a high firm value because it directly indicates increased shareholder wealth. In other words, an appreciated stock price reflects market confidence in the company's prospects and performance, which benefits its shareholders.

Furthermore, a positive firm value serves as a significant attraction for investors. They tend to be more interested in investing their capital in companies

that demonstrate strong performance in increasing their firm value. This is because a steadily increasing firm value often signals strong signal financial health, operational efficiency, and promising growth potential. As mentioned earlier, the stock price in the capital market reflects the public's assessment of the company's actual performance. Therefore, companies that consistently maintain and improve their performance will potentially attract more investment, thereby further strengthening their firm value.

2.4 Profitability

Kasmir (2013) states that profitability is a ratio that measures a company's ability to generate profit through its operations and reflects the effectiveness of the company management. High profitability is related to good firm prospects; the higher the company's efficiency in generating profit, the higher the firm value it can achieve. This, in turn enhances the company's ability to distribute larger dividends to shareholders, thereby positively influencing investor confidence in allocating their capital to the company (Widyantari and Yadnya, 2017).

Profitability, which measures a company's ability to generate revenue from its operations and asset management for the future, serves as a crucial benchmark for investors and creditors in assessing the company's performance. A higher level of profitability indicates better company performance. Capital market investors closely monitor a company's ability to generate and increase profits, which is an attractive factor in stock transactions. Therefore, management must meet the established profitability targets, as this level reflects the company's profit position.

Several experts define profitability as a ratio that measures the overall

effectiveness of management, which is indicated by the magnitude of profit obtained from sales and investments (Fahmi, 2015). A good profitability ratio reflects a company's ability to generate high profits. Meanwhile, Hery (2016) defines the profitability ratio as a tool to measure a company's ability to generate profit from its normal business activities.

Based on these various definitions, the profitability ratio is a tool to measure how effectively a company generates profit by utilizing all its available resources. This ratio often becomes a primary consideration for investors when making stock investments. A company with a high rate of return on equity will be an attractive choice for investors.

2.5 Good Corporate Governance

According to Pertiwi and Pratama (2012), corporate governance is a series of processes, habits, policies, rules, and institutions that influence a firm's direction, management, and control. Corporate governance includes the relationship between the stakeholders involved and the objectives of the firm's management. According to Jensen and Meckling (1976), good corporate governance is one solution to increase firm value. The agent's interests should with the principal's to reduce agency conflicts. Better corporate governance will make the company more attractive to investors, leading to a higher firm value. The implementation of the good corporate governance proxies used in this study are explained as follows:

a. The Board of Commissioners is a governance body responsible for overseeing the firm's operations to ensure they align with the firm's goals.

The number of board members can affect the quality of supervision over firm management, which can reduce agency problems and potentially prevent harm to the firm (Lestari & Mardiana., 2020). The research by Badruddien et al. (2017) states that, as the organizer of the firm's internal control, according to Devi (2013), an effective board of commissioners can improve management performance standards in the firm ultimately increasing firm value.

b. According to KNKG (2006), as an organ of the firm, the Board of Directors is responsible for managing the firm collegially. Each member of the Board of Directors performs duties and makes decisions based on the division of responsibilities and authority. However, the implementation of duties by each member of the BOD remains a collective responsibility. The position of each member of the BOD, including the President and Director, is considered equal. The management of the firm by the BOD includes 5 (five) main tasks: management, risk management, internal control, communication, and social responsibility.

c. The Audit Committee is a body established by the Board of Commissioners to carry out the supervisory function of firm management. The audit committee has the task of providing independent professional advice to the Board of Commissioners on reports submitted by the Board of Directors. In addition, the audit committee is responsible for reviewing matters that require the attention of the Board of Commissioners and overseeing the firm's financial statements, supervising external audits, and monitoring the firm's

internal control system (Amaliyah & Herwiyanti, 2019).

2.6 Previous Research

No	Researcher	Research Title	Variable	Research Results
1.	Rina Dwiarti, Shadrina Hazmi, Awan Santosa, Norlailebintis allehHudin, 2022	Corporate Governance, Ownership Structure, Agency Costs, and Corporate Value (In the Banking Sector Listed on The IDX for the 2016-2019 Period).	Independent commissioner, Institutional Ownership, Price Earning ratio, price	1. It was found that corporate governance, as measured by the independent Board of Commissioners, has a significant positive effect on firm value. 2. Indicate that the ownership structure, as measured by institutional ownership, has a significant positive effect on firm value. 3. Indicate that agency costs, as measured by asset utilization, strengthen the effect of corporate governance on firm value. This means that the more efficient the firm is in managing assets, the more agency costs will be reduced, strengthening corporate governance's influence on firm value. 4. As measured by an independent board of commissioners, corporate governance has a significant positive effect on firm value as measured by the price-earnings ratio. 5. As measured by institutional ownership, ownership structure

No	Researcher	Research Title	Variable	Research Results
				significantly positively affects firm value. 6. Agency costs, as measured by asset utilization, strengthen the effect of corporate governance on corporate performance.
2.	Bella Danita Putri, Eskasari Putri, 2022	Good Corporate Governance (GCG) and Profitability influence firm value.	Firm value, Managerial Ownership, Independent Board of Commissioners, Audit Committee, Profitability	1. Simultaneously, managerial variables, independent Board of commissioners, audit committee, and Profitability affect the firm's value. 2. Partially, the variable of managerial ownership does not affect the firm's value. 3. Partially, the independent Board of Commissioners variable affects the firm's value. 4. Partially, the variables of the audit committee do not affect the firm's value. 5. Partially, the profitability variable affects the firm's value.
3.	Yusmaniarti, Hesti Setiorini &, Lola Pitaloka 2019	Influence of good corporate governance, Profitability, and leverage toward companies' value at Indonesian property and real estate companies.	Audit Committee, Independent Commissioners, Profitability, Leverage, firm value.	1. The Audit Committee has a significant adverse effect on the firm's value. 2. Independent Commissioners have a significant adverse effect on the firm's value. 3. Profitability does not affect the value of the firm. 4. Leverage has a significant negative

No	Researcher	Research Title	Variable	Research Results
				effect on the value of the firm.
4.	Indriana Damaianti ,2019	The Influence of Good Corporate Governance (GCG), Profitability, and Leverage on Firm Value.	Good Corporate Governance (GCG), Profitability, Leverage, and firm value.	1. The Good Corporate Governance (GCG) variable with the proxy of the independent Board of Commissioners did not significantly affect the firm's value. 2. The Good Corporate Governance (GCG) variable with the proxy of the Board of Directors significantly affects the firm's value. 3. The profitability variable with a Return on Asset (ROA) proxy does not significantly affect the firm's value. 4. The leverage variable with the Debt-to-Equity Ratio (DER) proxy does not significantly affect the firm's value. 5. Simultaneously, independent variables, namely Good Corporate Governance (GCG), Profitability, and leverage, significantly affect the firm's value.
5.	Taufik Hidayat, Edi Triwibowo, Vebrina Marpaung Novel, 2021	THE INFLUENCE OF GOOD CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE ON FIRM VALUE	Independent Board of Commissioners, Institutional Ownership, Audit Committee, ROE, Corporate Value	1. The independent Board of Commissioners has a positive and significant influence on the value of state-owned companies listed on the Indonesia Stock Exchange for the 2016-2019 period. 2. Institutional ownership negatively and significantly influences

No	Researcher	Research Title	Variable	Research Results
				the value of state-owned companies listed on the Indonesia Stock Exchange (IDX) for 2016-2019. 3. The audit committee does not significantly influence the value of state-owned companies listed on the Indonesia Stock Exchange (IDX) for 2016-2019. 4. ROE positively influences the value of state-owned companies listed on the Indonesia Stock Exchange (IDX) for 2016-2019.
6.	Muhammad Saddam, Osmanali, & Jamaluddinal i (2021).	The Effect of Profitability on Firm Value		Profitability (ROE) and Profitability (NPM) have a positive and significant effect on the firm value (PBV) of companies in the consumer goods industry listed on the Indonesia Stock Exchange for the 2017-2019 period.
7.	Yusmaniarti, Hesti Setiorini &, Lola Pitaloka, 2019	Intellectual Capital, Profitability, and Good Corporate Governance Effects on Firm Value		IC, ROA, institutional ownership, and managerial ownership have no significant effect on firm value. The results also show that only ROE significantly impacts firm value.
8.	Rama Andi Wiguna & Muhammad Yusuf, 2019	THE EFFECT OF PROFITABILIT Y AND GOOD CORPORATE GOVERNANCE ON FIRM VALUE (Empirical Study on Companies Listed on the		Profitability proportion of the independent Board of Commissioners, the proportion of the audit committee, managerial ownership, and institutional ownership have a significant positive effect on firm value. In contrast, Board of Commissioners and audit

No	Researcher	Research Title	Variable	Research Results
		Indonesia Stock Exchange)		committee meetings do not affect firm value.
9.	Nyoman Astriani Febrianty, & I Made Martha, 2021	Effect of Profitability, Investment Opportunity Set, and Good Corporate Governance on Firm Value		Profitability and investment opportunity set have a positive effect on firm value. Meanwhile, as proxied by the independent Board of Commissioners and the audit committee, good corporate governance has no effect on firm value.
10.	Ati Kushariani, Rifki Ananda, & M. Rizky Riandi, 2019	EFFECT OF CORPORATE SOCIAL RESPONSIBILITY, PROFITABILITY, AND CORPORATE GOVERNANCE ON FIRM VALUE		1. Profitability has a significant positive effect on a firm. 2. Institutional ownership has a significant positive effect on firm value. 3. Managerial ownership does not affect firm value. 4. Independent commissioners have a significant positive effect on firm value.
11.	Sukmono and Winwin Yadiati, 2016	Effect of Board of Commissioners and Audit Committee on the Firm Value with Mediating Effect of Financial Reporting Quality		1. The Board of Commissioners and the audit committee significantly positively affect the quality of financial reporting. 2. The Board of Commissioners and the audit committee significantly positively affect the firm's value. 3. Financial reporting quality has a significant positive effect on the firm value. 4. The quality of financial reporting mediates the positive effect of the Board of Commissioners and the

No	Researcher	Research Title	Variable	Research Results
				audit committee on the firm's value.
12.	Rosa Virginia Dara Aprill & Dikdik Saleh Sadikin, 2024	The Effect of Profitability and GCG on the Value of LQ45 Index Companies on the IDX in 2018-2022		The sample in this study uses the purposive sampling method, with the number of samples being 24 companies listed on the Indonesia Stock Exchange (IDX). The dependent variables used are Firm Value (PBV), the independent variables Profitability (ROA), and Good Corporate Governance (GCG), which are proxied with Managerial Ownership, Institutional Ownership, and an Independent Board of Commissioners. The study results show that Profitability (ROA) and Institutional Ownership have a significant positive effect, while Managerial Ownership and the Independent Board of Commissioners do not significantly affect Firm Value.
13.	Miracllyne F.G. Mawei & Joy E. Tulung, 2019	THE EFFECT OF THE BOARD OF DIRECTORS, FIRM SIZE, AND DEBT TO EQUITY RATIO ON THE VALUE OF COMPANIES IN THE FOOD AND BEVERAGE SUBSECTOR LISTED ON THE INDONESIAN STOCK EXCHANGE		It shows that the Board of Directors does not have a significant effect on Price Book Value, Firm Size does not have a significant effect on Price Book Value, and Debt to Equity Ratio does not have a significant effect on Price Book Value. The Simultaneous Test showed that the Board of Directors, Firm Size, and debt-to-equity ratio together did not significantly affect Price Book Value. The firm must improve its performance in the firm, starting with

No	Researcher	Research Title	Variable	Research Results
				decision-making, supervision, management of existing assets, and maximizing existing sources of funding so that the firm can increase its value.

Table 2. 1 Previous Research

2.7 Hypothesis Development

2.7.1 The Effect of Profitability on Firm Value

Profitability refers to the profit earned by a firm within a given period. If a firm records high profits, it becomes a viable investment option, as it is likely to yield favorable returns for investors in the future. Therefore, it is essential for firm managers to maximize profits, ensuring that the profits obtained align with the firm's targets. In addition, profitability serves as an indicator of a firm's operational success. A consistent annual increase in profit suggests that the firm is effectively managing its operations (Kasmir, 2008).

The signaling theory explains that the information reported by the company to the capital market is a signal that can be used by investors in deciding whether to invest in the company or not. Information from good and credible financial reports is a positive signal for investors and will make investors interested in investing (Khairudin & Wandita, 2017) and (Cecilia and Sjarief). Based on signaling theory, profitability is information or a signal for investors. Companies that demonstrate high and stable profitability over time are more likely to attract investor interest, which in turn drives up their stock prices. An increase in stock price leads to a rise in firm value. Conversely, firms with low or declining profitability tend to

experience reduced investor interest, which can result in lower stock prices and a subsequent decrease in firm value (Rinnaya, Andini, & Oemar, 2016).

Research by Chasanah & Adhi (2018), Rudangga & Sudiarta (2016), Lumoly et al. (2018), and Putri & Putri (2022) consistently shows that profitability has a positive and significant effect on firm value, indicating that higher rofitability increases investor interest and enhances firm value. From the description above, the following hypothesis is proposed:

Research by Chasanah & Adhi (2018), Rudangga & Sudiarta (2016), Lumoly et al. (2018), and Putri & Putri (2022) consistently shows that Profitability has a positive and significant effect on firm value, indicating that higher Profitability increases investor interest and enhances the value of the firm. From the description above, the following hypothesis can be made:

H1: Profitability has a positive effect on firm value.

2.7.2 The Effect of the Board of Commissioners on Firm Value

Referring to the Financial Services Authority Regulation Number 33 / POJK.04 / 2014, which regulates the Directors and Board of Commissioners of Issuers or Public Companies, independent board members are part of the Board of Commissioners, and the provisions of the number of commissioners are at least 30% (thirty percent) of the total number of members of the Board of commissioners. In addition, the Board of Commissioners has no affiliation with the firm. Their primary role is to oversee management policies in general, both regarding the issuer and its business activities, and to provide strategic guidance to the Board of Directors. A higher proportion of commissioners enhances the supervisory and

coordination functions of the Board of Commissioners. Consequently, an increased presence of independent commissioners strengthens oversight of the Board of Directors, ensuring that the interests of stakeholders – beyond those of majority shareholders – are well represented, which positively influences firm value. In addition, an independent board of commissioners can reduce agency conflicts within the firm and remain focused on initiatives aimed at increasing firm value (Wedayanthi & Darmayanthi, 2016). In agency theory, the position of the independent board of commissioners can control managers in carrying out their work and overcome fraud so that managers work to increase the company's enterprising. Management performance is always monitored or supervised by independent commissioners so that it can affect company value (Fitriyah et. al 2023).

Studies by Susanto & Subekti (2013), Muryati & Suardikha (2014), and Onasis & Robin (2016) consistently revealed that the independent Board of Commissioners has a positive effect on firm value, as stronger supervision helps minimize fraud and enhance firm performance. From these explanations, the following hypothesis is proposed:

H_2: The Board of Commissioners positively affects firm value.

2.7.3 The Effect of the Board of Directors on Firm Value.

Agency theory explains the relationship between principals (shareholders) and agents (management or board of directors) who are contracted to work in the principal's interest (Jensen and Meckling 1976). The Board of Directors holds a pivotal role, possessing the authority to represent the company in both internal

operations and external engagements. A larger board may allow for a more structured division of responsibilities among its members, enhancing oversight and enabling specialized expertise to be applied to specific areas of the firm's operations. This division of labor can lead to more effective governance and a stronger alignment with stakeholder interests. Furthermore, more directors can broaden the company's external network, potentially fostering stronger relationships with external parties, opening doors to new opportunities, and ultimately contributing to improved financial performance. The diverse perspectives and broader connections that accompany a larger board brings can be particularly valuable in navigating complex business environments and making strategic decisions.

Empirical evidence from research conducted by Nugroho & Raharjo (2014) and Damaianti (2019) consistently supports the notion that the size of the Board of directors has a positive and significant impact on firm value. These findings suggest that a larger board is not merely a matter of numbers but rather a structural characteristic that can genuinely enhance a company's financial performance and its overall value in the eyes of investors and the market. This positive correlation suggests that the benefits of a larger and potentially more diverse board, such as improved governance, broader access to resources through expanded networks, and more comprehensive expertise, outweigh any potential drawbacks associated with increased board size. Based on this rationale and supported by prior research, hypothesis 3 is proposed as follows:

H_3: The Board of Directors has a positive effect on firm value.

2.7.4 The Effect of the Audit Committee on Firm Value.

According to the Financial Services Authority Regulation Number 55 / POJK.04 / 2015 concerning the Establishment and Implementation Guidelines for the Audit Committee of each Issuer or Public Firm, the primary role of the audit committee is to review the financial information issued by the firm to the public, including financial statements, projections and other reports related to the firm's financial data. Base on Agency Theory, the audit committee is responsible for ensuring the firm's compliance with applicable laws and for promoting the disclosure of accurate and transparent financial reports, thereby preventing fraud and manipulation. The presence of an audit committee is expected to prevent agency problems within the firm. Thus, the financial reports published to investors are of higher quality and credibility, thereby increasing firm value (Syafitri et al., 2018). Research by Ulfa (2017), Syafitri et al. (2018), and Isnawati (2018) consistently shows that the audit committee has a positive effect on firm value, indicating its role in enhancing oversight and improving overall firm performance. From these explanations, the following hypothesis is proposed:

H4: The Audit Committee has a positive effect on firm value.

2.7.5 The Conceptual Framework

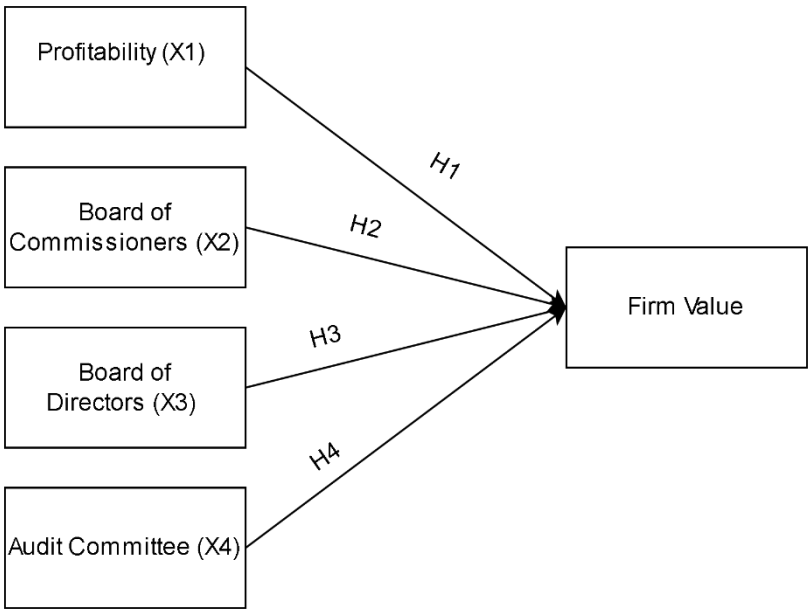


Chart 2. 1 The Conceptual Framework

Description:

Variable (X1) = Profitability

Variable (X2) = Board of Commissioners

Variable (X3) = Board of Directors

Variable (X4) = Audit Committee

Variable (Y) = Firm Value

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Population and Sample

The population in this study is all companies included in the LQ 45 index on the Indonesia Stock Exchange (IDX) during the 2021-2023 period. However, not all companies included in the index were used in this study. The sample determination technique used in this study to obtain the research sample is non-probability sampling. Non-probability sampling is a sampling technique that does not give an equal chance for each element or member of the population to be selected as a sample. In this study, the non-probability sampling technique used is purposive sampling. Purposive sampling is sampling based on specified criteria (Sugiyono, 2014). Some of the criteria that must be met in the selection of the research sample are as follows:

1) The firm must have consecutively been included in the LQ 45 index of the Indonesia Stock Exchange (IDX) from 2021 to 2023.
2) The firm must be listed in the LQ 45 index of the Indonesia Stock Exchange (IDX) and must have published its annual financial statements for the years 2021-2023.
3) The firm must be listed in the LQ 45 index of the Indonesia Stock Exchange (IDX) and must have available required for analysis in this study for the years 2021-2023.

Based on the above criteria, this study has obtained data from a total of 26 companies.

3.2 Data Sources and Collection Technique

The data used in this study is secondary data. The data sources used in this study come from existing document collections in the form of the annual reports of companies listed in the LQ 45 index on the Indonesia Stock Exchange (IDX) for the 2021-2023 period, accessed through the official IDX official website at www.idx.co.id and the respective official websites of the companies.

3.3 Variables and Operational Definition

This study's dependent variable is firm value with the proxy Price Earnings Ratio (PER), while the independent variables consist of Profitability with the proxy Return on Assets (ROA), Board of Commissioners, Board of Directors, and Audit Committee. Below are the definitions of operations and proxies of all research variables:

Table 3. 1 Operational Definition

Variable	Operational Definition	Formula
Firm Values Price Earnings Ratio (PER)	PER is a comparison between the market share price and earnings per share. A high PER is an investor's expectation that the firm's future performance looks good. Indri (2019)	$\text{PER} = \frac{\text{Market share Price}}{\text{earning per share}}$

Profitability (X1)	Profitability ratio measures a firm's ability to generate profits in each period. The Return on Assets (ROA) indicator can calculate profitability. Return on assets (ROA) is a profitability ratio that measures of how much profit a firm can generate from its assets (Kasmir 2013).	ROA = Net Profit After Tax Total Assets
Board of Commissioners (X2)	The Board of Commissioners is the core of Corporate Governance, responsible for ensuring the implementation of the firm's strategy, supervising management in running the firm, and demanding accountability for its execution. Essentially, the Board of Commissioners serves as a supervisory mechanism that provides guidance and direction to the firm's managers. (Rahmawati et al. 2017)	Board of Commissioners = ∑ Board of Commissioners
Board of Directors (X3)	The Board of Directors is the person who has the authority and responsibility for various activities related to the firm.	Board of Directors = ∑ Board of Directors

	The Board of Directors is responsible for improving firm performance, allocating resources, and increasing shareholder wealth. (Khaoula & Moez, 2019)	
Audit Committee (X4)	The audit committee comprises several people appointed by the Board of Commissioners who are responsible for overseeing the process of preparing financial statements and their disclosure (Rahmawati et al. 2017).	Audit Committee = ∑ Audit Committee

3.4 Data Analysis Model

The data analysis method is a series of research processes in which the data obtained is processed to answer research problems. In this research study, the method is used to determine the effect of Profitability, Board of Commissioners, Board of Directors, and Audit Committee on firm value in LQ 45 index companies listed on the IDX for the period 2021-2023.

3.4.1 The effect of the Audit Committee on firm value.

The classical assumption test is an analysis carried out to assess as the validity of predictors in a linear regression model. In this analysis, the researcher applies four assumptions that underlie the linear regression model.

1. Normality Test

According to Ghozali (2016), the normality test is conducted to determine whether the independent and dependent variables in a regression model have a standard or abnormal distribution. If a variable is not distributed normally, the statistical test results will decrease. This test is typically performed using the Kolmogorov Smirnov test. The results indicate normal distribution if the significance value is greater than the 5% threshold.

2. Multicollinearity Test

The multicollinearity test is used to determine whether there is a high correlation among independent variables in the regression model. This test evaluates the Variance Inflating Factor (VIF) and the Tolerance Value. A VIF value below 10, and a Tolerance Value above 0.1 indicate the absence of multicollinearity. Conversely, if the VIF exceeds 10 and the Tolerance Value falls below 0.1, multicollinearity is considered to be present.

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4. Heteroscedasticity Test

This test is conducted to determine whether a regression model has variant discomfort from residual in one observation to another. If the variant is different, it is called heteroscedasticity. The heteroscedasticity test using the chart method (scatterplot diagram) indicates the following:

1) If the points that form a specific pattern are regularly bubbling and widening, then heteroskedasticity occurs.
2) If the plot spreads above and below the number 0 (zero) on the Y axis, it proves that the independent variable is free from heteroskedasticity, thus fulfilling the heteroskedasticity test.

5. Autocorrelation Test

Autocorrelation tests indicate disturbances that fall into regression using the Durbin-Watson coefficient. The Durbin-Watson statistical test compares the Durbin-Watson number with its critical value. There is no autocorrelation if the Durbin-Watson is greater than its critical value. On the other hand, if the Durbin-Watson is less than its critical value, then an autocorrelation occurs.

3.4.2 Multiple Linear Regression Analysis

Multiple linear regression analysis is a linear relationship between two or more independent variables (X1, X2,... Xn) and the dependent variable (Y). The following is the formula for multiple lines:

$$\mathbf{Y = a + b1X1 + b2X2 + b3X3 + b4X4}$$

Information:

Y = Firm Value

X1 = profitability

X2 = Board of Commissioners

X3 = Board of Directors

X4 = Audit Committee

a = Constanta

b = Regression coefficient for X1, X2, X3, and X4

3.4.3 Partial Test (T-Test)

The t-test is a statistical hypothesis test used to test the validity of a hypothesis regarding the partial influence of independent variables on the dependent variables. According to Magdalena (2020), the significance of the t-test used is 5%

Criterion:

1) If t counts > t table, then Ho is rejected and Ha is accepted.
2) If t counts < t table, then Ho is accepted and Ha is rejected.

3.4.4 Simultaneous Test (Test F)

The F-test is one of the statistical test methods carried out simultaneously to determine the influence of all independent variables on the dependent variables. The significance level of the t-test used is 5%. The rules for conducting the F-test are as follows:

If F counts > F table, then Ho is rejected and Ha is accepted.

If F counts < F table, then Ho is accepted and Ha is rejected.

CHAPTER IV

RESEARCH RESULTS AND DISCUSSION

4.1 Profile of Research Object

LQ45 companies refer to 45 selected companies listed on the Indonesia Stock Exchange (IDX) that are included in the LQ45 index. The selection of stocks to be included in the LQ45 index is based on several crucial parameters. The main criteria include a superior level of liquidity, indicated by a significant trading intensity in the regular market. Companies listed in the LQ45 index are often considered attractive investment options due to their high liquidity and strong fundamentals. The companies examined in this study are those included the LQ45 index and listed on the Indonesia Stock Exchange during the period the 2021-2023. The research uses financial statements; the sample was selected using a purposive sampling technique. Based on the established criteria, a sample of 35 companies over a three-year period was obtained. Below is the list of LQ45 companies from the 2021-2023 period that were selected as the research sample.

Table 4. 1 LQ45 Firm Sample 2021-2023

No	Stock Code	Firm Name
1	ACES	PT Aspirasi Hidup Indonesia Tbk
2	EXCL	PT XL Axiata Tbk
3	BBTN	PT Bank Tabungan Negara (Persero) Tbk
4	GGRM	PT Gudang Garam Tbk
5	KLBF	PT Kalbe Farma Tbk
6	ACCRA	PT AKR Corporindo Tbk
7	BMRI	PT Bank Mandiri (Persero) Tbk
8	MAPI	PT Mitra Adiperkasa Tbk
9	TDMA	PT Sumber Alfaria Trijaya Tbk
10	SMGR	PT Semen Indonesia (Persero) Tbk
11	ANTM	No information in search results

12	BRPT	PT Barito Pacific Tbk
13	ICBP	PT Indofood CBP Sukses Makmur Tbk
14	INCO	PT Vale Indonesia Tbk
15	MEDC	PT Medco Energi Internasional Tbk
16	ASIA	PT Astra International Tbk
17	CPIN	PT Charoen Pokphand Indonesia Tbk
18	INDF	PT Indofood Sukses Makmur Tbk
19	TOWR	PT Sarana Menara Nusantara Tbk
20	BBCA	PT Bank Central Asia Tbk
21	INKP	PT Indah Kiat Pulp & Paper Tbk
22	PGAS	PT Perusahaan Gas Negara Tbk
23	UNTR	PT United Tractors Tbk
24	BBNI	PT Bank Negara Indonesia (Persero) Tbk
25	ESSA	PT ESSA Industries Indonesia Tbk
26	INTP	PT Indocement Tunggal Prakarsa Tbk
27	ITMG	PT Indo Tambangraya Megah Tbk
28	PTBA	PT Bukit Asam Tbk
29	ADRO	PT Alamtri Resources Indonesia Tbk
30	PTMP	PT Mitra Pack Tbk
31	AKRA	PT AKR Corporindo Tbk
32	SIDO	PT Industri Jamu dan Farmasi Sido Muncul
33	SRTG	PT Saratoga Investama Sedaya Tbk
34	PGEO	PT Pertamina Geothermal Energy Tbk
35	UNVR	PT Unilever Indonesia Tbk

Source: Obtained from Google and IDX stock exchanges

4.2 Data Testing

4.2.1 Results of the Classic Assumption Test

4.2.1.1 Normality Test Results

The data test used the Kolmogorov-Smirnov Test. This test aims to determine whether the data is distributed normally or abnormally. The test criterion is that the residual is normally distributed if the significance value is > 0.05. The results of the normality test are presented in Table 4.3 as follows:

Table 4. 2 Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test

			Unstandardized
N			105
Normal	Mean		.0000000
	Std. Deviation		10.38901465
Most Extreme	Absolute		**.104**
	Positive		**.104**
	Negative		**-.053**
Test Statistic			**104**
Asymp. Sig. (2-			**.007**
Monte Carlo	Sig.		**.007**
		Lower	
		Upper	**.009**

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. Lilliefors' method is based on 10000 Monte Carlo samples with starling seed 2000000.

Source: Output SPSS 22 (data processed), 2024

Table 4.3 displays that the distributed residual value is close to abnormal because the Sig value (2-tailed) is 0.007. This means the significance value is less than 5%, so the data is unsuitable. Since it is not normal, treatment is carried out with outliers. This is done by discarding extreme data. After the extreme data is issued, the results of the normality test are as follows:

Table 4. 3 Test normality after outlier

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		78
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	9.53601009
Most Extreme	Absolute	.087

Differences	Positive		.087
	Negative		-.057
Test Statistic			.087
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.151
	99% Confidence Interval	Lower Bound	.142
		Upper Bound	.161

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 299883525.

Source: SPSS 22 output (processed data), 2024

Table 4.4 shows that the residual value is normally distributed because the Sig value (2-tailed) is 0.200. The value is greater than 5%, so the data is suitable for use.

4.2.1.2 Multicollinearity Test

The Multicollinearity test is useful for identifying comparisons in the model used on the independent variables. The Inflation Factor (VIF) and tolerance variables can be used to detect correlations between independent variables. The tolerance number shows above 0.1 and VIF < 10, so there are no symptoms of multicollinearity. The results of the Multicollinearity test are displayed in Table 4.5 as follows:

Table 4. 4 Multicollinearity Test

Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	FV	25.933	5.598		4.633	.000		
	PR	-16.066	33.823	-.059	-.475	.636	.825	1.212
	BOC	.010	.612	.002	.017	.986	.617	1.621
	BOD	-.697	.521	-.184	-1.338	.185	.676	1.480
	AU	-1.386	1.337	-.149	-1.037	.303	.617	1.621

a. Dependent Variable: FV

Source: SPSS 22 output (processed data), 2024

Table 4.5 above shows that the VIF value of the profitability variable (PR) is 1.212 < 10 and the tolerance value is 0.825 > 0.1, the Board of Commissioners (BOC) has a VIF value of 1.621 < 10, and the tolerance value is 0.617 > 0.1, the VIF value and the tolerance value of the Board of Directors Variable (BOD) is 1.480< 10 and 0.676 > 0.1 in the tolerance value. Meanwhile, the VIF value of the Audit Committee variable (AU) is 1.621 < 10, and the tolerance value is 0.617 > 0.1. Thus, there is no multicollinearity.

4.2.1.3 Heteroskedasticity Test

This test aims to examine the existence of differences between one perception and another within the regression model. A good regression model is characterized by the absence of heterokedasticity, which can be detected by observing patterns in the scatterplot diagram, as shown in Figure 4.1 below:

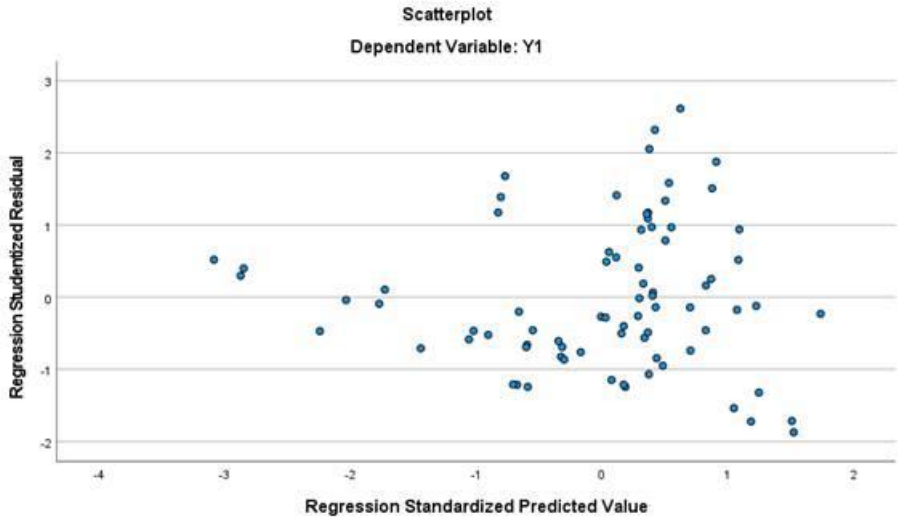


Chart 4. 1 Heteroskedasticity Test Results

Scatterplot Chart 4.1 shows a distribution of points both above and below the value of 0 on the Y axis, without forming any clear or systematic pattern. This indicates that the regression is appropriate to proceed with, as the results suggest that heteroscedasticity is not present.

4.2.1.4 Autocorrelation Test

This test aims to determine whether there is a correlation between the current period and the previous period in the linear regression model. The approach used to detect autocorrelation is the Durbin-Watson test (DW test).

Table 4. 5 Autocorrelation Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	

1	.263[a]	.069	.018	9.793787	.069	1.361	4	73	.256	.984

a. Predictors: (Constant), PR, BOC, BOD, AU

b. b. Dependent Variable: FV

Source: SPSS 22 output (processed data), 2024

Table 4.6 demonstrates that the DW value is 0.984. Using the number of independent variables, namely k = 3 and n = 60 (n=60), the Durbin-Watson test yields a dU value of 1.6889 and a dL value of 1.4797 at a 5% significance level. Based on this, it can be concluded that autocorrelation is present due to the value of DW<DU. To address this issue, the Orcutt-Conrad test is performed:

Table 4. 6 Autocorrelation Test Results

(contract Orcutt test)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.420[a]	.176	.131	8.07624	.176	3.854	4	72	.007	1.677

Based on the results of the data processing, the DW value obtained is 1.677. Based on the dU and dL values, it can be concluded that the DW value is included in the dU category < DW < 4-dU, which is 1.6889 < 1.724 < 2.3111, indicating no autocorrelation.

4.2.2 Descriptive Statistical Test Results

Descriptive statistics, through describing data from mean values, minimum values, ranges, and standard deviations from dependent and independent variables, help obtain the data described, namely analyzing and interpreting data. The variables in this study are Firm Value (FV), Profitability (PR), Board of Commissioners (BOC), Board of Directors (BOD), and Audit Committee (AU). The descriptive statistical figure of the variable used can be shown in Table 4.2 as follows:

Table 4. 7 Descriptive Statistics Test Results

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std.
FV	78	1.530	41.600	15.05962	9.885239
PR	78	.0002	.1670	.054168	.0363322
BOC	78	3	11	6.18	2.323
BOD	78	3	13	7.33	2.607
AU	78	3	7	3.58	1.063
Valid N	78				

Source: SPSS output (processed data), 2024

From Table 4.2 above, it can be seen the distribution of the data.:

1. The Profitability variable with the ROA proxy (PR) has a minimum value of 0.0002 with the maximum value of 0.1670, and the average value of 0.054168. According to Sekaran & Bougie, R.J et al., (2016), mean value means the indicator used in measuring the average in a data as one number that represents the entire dataset. So, such mean value indicates that the average level of profit relative to total assets generated by LQ45 companies listed on the IDX is 0.054168. The

standard deviation of profitability, which is 0.0363322, is lower than the mean indicating a low level of deviation or variance. The standard deviation represents the distribution of data in a sample and reflects how close the data are to the mean. The larger the standard deviation, the greater the variance, and conversely, the smaller the standard deviation, the lower variance (Ghozali, 2016).

2. The Board of Commissioners variable (BOC) has a minimum value of 3 and a maximum value of 11. Its average value is 6.18 with a standard deviation of 2.323. The value is smaller than the average value (mean). This means that the average variable of the Board of Commissioners has a low level of variance.
3. The Board of Directors variable (BOD) has a minimum value of 3 and a maximum value of 13. Its average valuevalue is 7.33. The standard value of the liquidity deviation is 2.607, which shows that the standard deviation is smaller than the average value. This indicates that the Board of Directors has a reasonably low variance.
4. The Audit Committee variable (AU) has a minimum value of 3 and a maximum value of 7, with Its average value of 3.58. Its standard deviation is 1.063, which shows that it is smaller than the average. This indicates that the Audit Committee has a reasonably low variance.
5. The Firm Value (FV) variable has a minimum value of 1.530 and a maximum of 41.600, with the average value of of 15.05962. Its

standard deviation is 9.885239. This standard deviation is smaller than the average value, so it can be concluded that the firm value has a low level of variance.

4.2.3 Multiple Linear Regression Analysis

The multiple linear regression test examines the relationship between the dependent and independent variables based on the regression coefficient values to determine the research findings. A positive β value indicates a direct relationship, meaning that an increase in the independent variable leads to an increase in the dependent variable. Conversely, a negative β value signifies an inverse relationship, meaning that an increase in the independent variable leads to an increase in the dependent variable. Thus, multiple linear regression is used in this research study to incorporate several variables simultaneously. The results of the multiple linear regression analysis are presented in Table 4.8 below.

Table 4. 8 Multiple Linear Regression Results

Coefficient

Model		Unstandardized Coefficients B	t	Sig.
1	CO	12.515	4.688	.000
	PR	-59.199	-2.083	.041
	BOC	-.202	-.387	.700
	BOD	-2.609	-2.696	.009
	AU	1.246	1.559	.123

Source: SPSS 22 output (processed data), 2024

Based on the table above, the regression equation can be formulated as follows:

Firm Value = 12.515 – 59.199x1 – 0.02x2 – 2.6099x4 + 1.246

Interpretation:

1. The ∝ value or constant of 12.515 indicates that the firm value level is 12.515 if the profitability variable (PR), Board of Commissioners (BOC), Board of Directors (BOD), and Audit Committee (AU) are in a constant state (fixed) or in a state of zero.
2. Profitability value, as proxied by Return on Asset is -59.199. This means that profitability with ROA proxy negatively affects firm value. The results show that an increase of one unit in ROA will decrease firm value by 59.199 units.
3. The Board of Commissioners has a regression coefficient of -0.202. This indicates a negative influence of the Board of Commissioners on firm value, meaning that for every one-unit increase in the Board of Commissioners, firm value will decrease by 0.202 units.
4. The regression coefficient of the Board of Directors is -2.609. This means that the variable negatively influences firm value, which states that a one-unit increase in the Board of Directors will decrease firm value by 2.609 units.
5. Audit Committee has a regression coefficient of 12.46, meaning that it has a positive influence on firm value. This result shows that every one-unit increase in Audit Committee will increase firm value by 12.46 units.

4.2.4 Hypothesis Test Results

4.2.4.1 Test T (Partial Test)

T-test is carried out to test whether independent variables affect dependent variables in partial multiple regression equations. T-test can be conducted to test the validity of the regression and to determine whether the obtained coefficients are significant at a 5% significance level (α=0.05). If t-count > t-table or if α < 0.05 and β corresponds to the direction of the hypothesis, then the hypothesis is accepted. The hypothesis is rejected if the opposite happens. Namely, t-count < t table, α > 0.05, and β are not by the direction of the hypothesis. Table 4.7 presents the results of the T-test.

Table 4.7 T-test results

Coefficients

Model		Unstandardized Coefficients B	t	Sig.
1	CO	12.515	4.688	.000
	PR	-59.199	-2.083	.041
	BOC	-.202	-.387	.700
	BOD	-2.609	-2.696	.009
	AU	1.246	1.559	.123

Source: SPSS 22 output (processed data), 2024

Based on the data of table 4.7 above, the following results were obtained:

1. The Effect of Profitability (PR) on Firm Value

   The significance value of Profitability is 0.041 or less than 5% (< 0.05), meaning that profitability has a significant negative influence on firm value.

2. The influence of the Board of Commissioner (BOC) on Firm Value

The significance value of the Board of Commissioners is 0.700 or greater than 5% (> 0.05). This shows that the Board of Commissioners does not significantly affect Firm Value.

3. The Influence of the Board of Directors (BOD) on Firm Value

   The significance value of the Board of Directors is 0.009 or less than 5% (<0.05). This shows that the Board of Commissioners significantly negatively affects Firm Value.

4. The Influence of the Audit Committee (AU) on Firm Value

   The significance value of the Audit Committee is 0.123 or greater than 5% (> 0.05), meaning that audit committee does not significantly affect firm value.

4.2.4.2 Test F

The F test aims to examine the significance of the simultaneous influence of the independent variables on the dependent variable. If the F table < F counts, it can be concluded that there is an influence, or Ha is accepted and Ho is rejected. If the F table > F calculates, then there is no influence, Ho is accepted, and Ha is rejected. Alternatively, if the significance value < 0.05 or F is calculated > F table, then the independent variables have a simultaneous influence on the dependent variable. If F calculated < the table or the significance value > 0.05, then it is stated that there is no simultaneous influence of the independent variables on the dependent variable. The results of the F test are presented in Table 4.10:

Table 4. 9 Test Results F

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1005.633	4	251.408	3.854	.007[b]
	Residual	4696.243	72	65.226		
	Total	5701.876	76			

Source: SPSS 22 output (processed data), 2024

Based on table 4.10, displays that the value of f calculated at 3.854 > from the value of f of table 2.77 and the significance value for Profitability (PR), Board of Directors (BOD), Board of Commissioner (BOC), and Audit Committee (AU) to Firm Value (FV) is 0.007 < 0.05. This proves a significant influence of Profitability Board of Commissioners, Board of Directors, and Audit Committee simultaneously on firm value.

4.2.5 Coefficient of Determination Test

The coefficient of determination test helps determine and assess the accuracy of multiple linear regression on the independent variables, with the results of the coefficient of determination ranging from 0 to 1. If the Adjusted R2 value is close to the direction of the number 1, it means the independent variables have a stronger ability to explain the dependent variable. The smaller the Adjusted R square value indicates, the more limited the ability of the independent variables to explain the dependent variable, as it is getting closer to zero. The following are the results of the coefficient of determination.

Table 4. 10 Results of Coefficient of

Determination Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.420[a]	.176	.131	8.07624	.176	3.854	4	72	.007	1.677

Source: SPSS 22 output (processed data), 2024

Based on the Model Summary table, the Adjusted R Square (R^2) value of 0.131 means that it is close to 0 indicating that the ability of the Profitability, Board of Directors, Board of Commissioner, and Audit Committee to be able to explain the fluctuations of the firm value variable is getting weaker. This means that the variance of the Firm Value variable of 13.1% is influenced by the variance of the Profitability, Board of Director, Board of Commissioner, and Audit Committee variables in this model, with the rest influenced by other models outside of this model by 86.9%.

4.3 Discussion

The research findings show that H1 is rejected, meaning that profitability has a negative and significant influence on firm value of LQ45 companies for the 2021-2023 period. This result shows that an increase in profitability does not necessarily lead to an increase in firm value, but may instead reduce public appreciation for the stock's value. The counterintuitive finding that profitability has a negative and significant influence on the firm value of LQ45 companies during 2021-2023, leading to the rejection of H1, could be attributed to several potential market interpretations and company-specific dynamics. Investors

might perceive a surge in profitability as unsustainable or achieved through short-term strategies that could compromise long-term growth prospects. Alternatively, high profits without corresponding reinvestment in innovation, research and development, or expansion could signal a lack of future-oriented vision, potentially diminishing public appreciation for the company's long-term value.

Furthermore, in the context of the LQ45 companies, which are mature firms and often pay dividends, very high profits can lead investors to expect larger dividend payouts rather than reinvestment in the business. If these expectations are not met, it can negatively impact stock valuation. During the 2021-2023 period, high profitability in some sectors within the LQ45 might have been viewed with skepticism due to external factors or regulatory concerns, leading to adverse market reactions despite strong earnings. High corporate profits do not automatically translate into increased firm value. These research findings differ from those of Chasanah & Adhi (2018), Rudangga & Sudiarta (2016), February and Mertha (2021), Saddam et al. (2021), who found that profitability has a positive impact on firm value. The higher the profitability, the higher the interest of investors in investing. The results also contrast with those of Yusmaniarti et.el's (2021) , who stated that profitability has no effect on firm value, meaning fluctuations in profitability are not a consideration for investors when selecting stocks, and thus do not affect firm value.

According to this study's data analysis and hypothesis tests, the results of individual variable test (t-test) show that the Board of Commissioners does not

significantly affect firm value of LQ45 companies for the 2021-2023 period. H2 was rejected. The number of Board of Commissioners does not influence the public appreciation of a company's stocks as reflected in firm value. The lack of a significant effect of the Board of Commissioners on the firm value of LQ45 companies from 2021 and 2023, leading to the rejection of H2, can be attributed to several interrelated reasons: the relatively homogenous and well-established governance structures in these large-cap companies might lead to minimal variance in board effectiveness influencing firm value; the highly efficient LQ45 stock market may prioritize immediate financial metrics and broader economic conditions over the composition of the board of directors; and external factors or more complex indirect relationships between the Board and firm value, potentially mediated by other variables, might have obscured any direct impact during this specific period. This finding aligns with the study by Dwiarti et al. (2022), which shows that the Board of Commissioners does not significantly affect firm value. However, it contradicts the research by Sukmono and Yadiati (2016) and Anggraini and Gunawan (2024), which found that the Board of commissioners has a significant positive effect on firm value or the higher the number of Boards of Commissioners, the greater the public trust in the firm, thereby increasing its firm.

The research finding reveals that the Board of Directors has a significant negative effect on firm value of LQ45 companies for the 2021-2023 period, or H3 is rejected. This means that a larger board of directors does not guarantee increased public trust, and therefore does not necessarily enhance stock value or

firm value. The unexpected result that a larger board of directors negatively and significantly affects the firm value of LQ45 companies during 2021-2023, resulting in the rejection of H3, suggests that beyond a specific optimal size, an increased number of directors might be perceived by the market as detrimental to effective decision-making and overall firm efficiency. A larger board can sometimes lead to slower and more bureaucratic processes, increased agency costs due to difficulties in coordinating and monitoring a greater number of individuals, and potentially divergent opinions that hinder strategic direction. Investors might interpret a bloated board as a sign of inefficiency, over-monitoring, or even management entrenchment, none of which are conducive to maximizing shareholder value. In the context of the well-established LQ45 companies, investors may prioritize agility and efficient governance over board size, viewing smaller, more focused boards as better suited to navigating market dynamics and enhancing firm value. This result contrasts with the findings of Sondokan (2019) and Mawai and Tulung (2019), who found that the Board of Directors did not significantly affect firm value.

The finding in this study shows that H4 is rejected, meaning that the audit committee variable has an insignificant influence on the firm value of LQ45 companies for the 2021-2023 period. The number of audit committees does not influence public appreciation of shares, as reflected in firm value. This finding indicates that the market perceives a baseline level of audit quality to be established and consistently maintained within these large, publicly listed firms. Investors in LQ45 companies might assume that these entities already have

adequately functioning audit committees due to regulatory requirements and market scrutiny, thus rendering variations in size or perceived activity less influential in their assessment. Furthermore, the effectiveness of an audit committee might be more qualitative, depending on the expertise and independence of its members rather than simply the number of members. Therefore, if the audit function is perceived to be sufficiently robust in ensuring the integrity of financial reporting, the specific size of the committee might not significantly impact public appreciation of the company's stock or its overall firm value in this market segment and time frame. This contrasts with the findings of Sondokan et al. (2019) and Wiguna & Yusuf (2019), which showed that the audit committee significantly affect firm value.

CHAPTER V

CLOSING

5.1 Conclusion

This research study examines the influence of profitability, BOD, BOC, and AC on firm value. Based on the results of data processing and data analysis in the previous chapter, it can be concluded that:

1. Profitability has a significant negative influence on the firm value of LQ45 companies.
2. Board of Commissioners does not influence the firm value of LQ45 companies listed on the Indonesia Stock Exchange in the 2021-2023 period.
3. Board of Directors has a significant negative effect on the firm value of LQ45 companies listed on the Indonesia Stock Exchange in the 2021-2023 period.
4. Audit Committee does not influence the firm value in LQ45 companies listed on the Indonesia Stock Exchange in the 2021-2023.
5. From 2021 to 2023, the firm value of LQ45 companies was significantly affected by Profitability, Board of Commissioners, Board of Directors, and Audit Committee.

5.2 Research Limitations

This research study is far from being perfect. Given the limitations outlined herein, such constraints are expected to be addressed and not recur in future research. The limitations in this study are:

1. The research sample comprises only 26 LQ45 companies listed on the Indonesia Stock Exchange in the 2021-2023.
2. The Adjusted R Square value remains low,13.1%, which means that in this model, the variables Firm Value, Profitability, Board of Commissioners, Board of Directors, and Audit Committee collectively explain only 13.1% of the variable Firm Value while the remaining 86.9% is influenced by other.
3. The number of variables tested is limited to only 4 variables, namely Profitability, Board of Commissioners, Board of Directors, and Audit Committee in influencing Firm Value.
4. The research covers only used 3 periods, specifically from 2021 to 2023.

5.3 Suggestions

For future possible studies, there are few suggestions that researchers can consider:

1. It is suggested that future research, expand or increase the number of company samples to be studied to produced representative results.
2. It is suggested that future research extend the study period to provide a better understanding of the evolution of firm value.
3. It is suggested that future studies include additional research variables to enhance understanding of the factors influencing firm value.

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APPENDIX

Appendix 1 Daftar Saham LQ45 Periode Februari-Juli 2024

Daftar Saham LQ45 Periode Februari-Juli 2024						
Perusahaan	**Tahun**	**PER (Y)**	**Profitabilitas (X1)**	**Dewan Komisaris (x2)**	**Dewan Direksi (x3)**	**Komisi Audit (x4)**
ACES	2021	31.78	0.0185	4	6	3
	2022	12.8	0.0274	5	6	3
	2023	16.17	0.0306	5	5	3
EXCL	2021	26.4	0.0177	8	6	4
	2022	25.32	0.0127	8	6	4
	2023	20.66	0.0145	7	7	4
BBTN	2021	7.71	0.0064	7	9	5
	2022	4.69	0.0076	8	9	6
	2023	5.01	0.0080	8	10	7
GGRM	2021	10.5	0.0623	4	7	3
	2022	12.46	0.0314	4	9	3
	2023	7.34	0.0576	4	9	3
KLBF	2021	23.78	0.1240	7	5	3
	2022	28.97	0.1242	7	5	3
	2023	27.28	0.1023	6	6	3
AKRA	2021	14.84	0.0473	3	7	3

Daftar Saham LQ45 Periode Februari-Juli 2024						
Perusahaan	**Tahun**	**PER (Y)**	**Profitabilitas (X1)**	**Dewan Komisaris (x2)**	**Dewan Direksi (x3)**	**Komisi Audit (x4)**
	2022	11.69	0.0884	3	7	3
	2023	10.65	0.0919	4	7	3
BMRI	2021	11.7	0.0162	11	13	7
	2022	11.25	0.0207	10	12	7
	2023	10.26	0.0253	11	12	7
MAPI	2021	26.85	0.0262	3	5	3
	2022	11.37	0.1006	3	6	3
	2023	15.69	0.0688	4	7	3
AMRT	2021	25.86	0.0710	4	6	3
	2022	38.54	0.0929	5	6	3
	2023	35.74	0.0994	4	6	3
SMGR	2021	21.01	0.0250	10	9	3
	2022	18.77	0.0285	7	6	3
	2023	19.91	0.0265	6	7	4
ANTM	2021	29.04	0.0566	6	6	4
	2022	12.48	0.1136	5	5	4
	2023	13.31	0.0718	5	5	4
BRPT	2021	1.78	0.0118	4	5	3
	2022	1.53	0.0002	4	4	3
	2023	2.93	0.0026	4	4	3
ICBP	2021	1.79	0.0541	6	11	3
	2022	1.8	0.0398	5	11	3
	2023	1.82	0.0586	5	11	3
INCO	2021	19.64	0.0670	10	5	3
	2022	22.58	0.0754	10	4	3
	2023	10.11	0.0938	10	5	3
MEDC	2021	17.45	0.0083	3	3	3
	2022	3.08	0.0766	3	4	3
	2023	5.69	0.0443	3	4	3
ASII	2021	11.43	0.0550	10	9	4
	2022	7.97	0.0700	10	10	4
	2023	6.76	0.0759	10	10	4
CPIN	2021	26.95	0.1022	3	6	3
	2022	31.64	0.0735	3	6	3
	2023	35.54	0.0566	4	5	3
INDF	2021	7.27	0.0426	8	11	3
	2022	9.29	0.0352	8	11	3
	2023	6.95	0.0437	8	11	3
TOWR	2021	16.75	0.0521	5	7	3
	2022	16.3	0.0524	5	7	3
	2023	15.52	0.0475	5	6	3
BBCA	2021	28.64	0.0256	5	12	3
	2022	25.87	0.0310	5	12	3
	2023	23.82	0.0345	5	12	3
INKP	2021	5.7	0.0586	7	7	3

Daftar Saham LQ45 Periode Februari-Juli 2024						
Perusahaan	**Tahun**	**PER (Y)**	**Profitabilitas (X1)**	**Dewan Komisaris (x2)**	**Dewan Direksi (x3)**	**Komisi Audit (x4)**
	2022	3.57	0.0889	7	7	3
	2023	7.17	0.0406	7	7	3
PGAS	2021	7.68	0.0405	6	6	5
	2022	8.39	0.0453	6	6	5
	2023	6.38	0.0421	6	6	5
UNTR	2021	8.04	0.0913	6	6	3
	2022	4.63	0.1495	6	6	3
	2023	4.09	0.1338	6	6	3
BBNI	2021	11.55	0.0113	10	12	5
	2022	9.39	0.0178	10	13	5
	2023	9.59	0.0192	11	12	5
ESSA	2021	41.6	0.0173	5	5	4
	2022	6.62	0.1670	5	5	4
	2023	17.09	0.0498	6	4	3
INTP	2021	24.91	0.0684	7	7	3
	2022	19.78	0.0717	7	7	3
	2023	17.74	0.0658	7	7	3

Appendix 2 Output SPSS

NPar Tests

Notes

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	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.

Syntax		NPAR TESTS /K-S(NORMAL)=RES_1 /MISSING ANALYSIS /KS_SIM CIN(99) SAMPLES(10000).
Resources	Processor Time	00:00:00,06
	Elapsed Time	00:00:00,11
	Number of Cases Allowed[a]	786432

a. Based on availability of workspace memory.

Explore

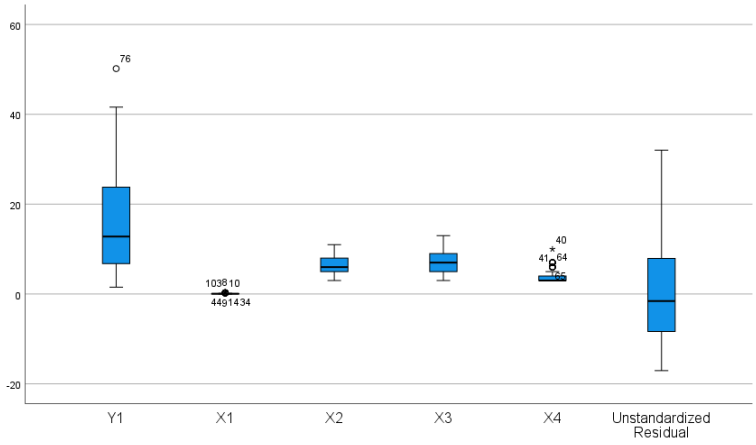
Notes

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	N of Rows in Working Data File	105
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=Y1 X1 X2 X3 X4 RES_1 /COMPARE VARIABLE /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL /MISSING=LISTWISE.
Resources	Processor Time	00:00:02,06
	Elapsed Time	00:00:16,65

Case Processing Summary

Cases			
Valid		Missing	Total

	N	Percent	N	Percent	N	Percent
Y1	105	100.0%	0	0.0%	105	100.0%
X1	105	100.0%	0	0.0%	105	100.0%
X2	105	100.0%	0	0.0%	105	100.0%
X3	105	100.0%	0	0.0%	105	100.0%
X4	105	100.0%	0	0.0%	105	100.0%
Unstandardized Residual	105	100.0%	0	0.0%	105	100.0%



Explore

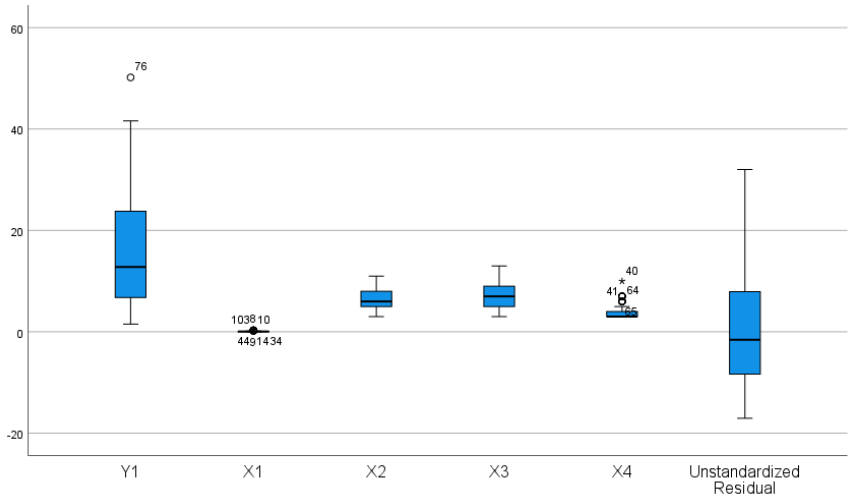
Notes

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Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.

Syntax		EXAMINE VARIABLES=Y1 X1 X2 X3 X4 RES_1 /COMPARE VARIABLE /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL /MISSING=LISTWISE.
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Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Y1	105	100.0%	0	0.0%	105	100.0%
X1	105	100.0%	0	0.0%	105	100.0%
X2	105	100.0%	0	0.0%	105	100.0%
X3	105	100.0%	0	0.0%	105	100.0%
X4	105	100.0%	0	0.0%	105	100.0%
Unstandardized Residual	105	100.0%	0	0.0%	105	100.0%



NPar Tests

Notes

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	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /K-S(NORMAL)=RES_1 /MISSING ANALYSIS /KS_SIM CIN(99) SAMPLES(10000).
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a. Based on availability of workspace memory.

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			78
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		9.53601009
Most Extreme Differences	Absolute		.087
	Positive		.087
	Negative		-.057
Test Statistic			.087
Asymp. Sig. (2-tailed)[c]			.200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		.151
	99% Confidence Interval	Lower Bound	.142
		Upper Bound	.161

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 299883525.

Regression

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA COLLIN TOL CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT Y1 /METHOD=ENTER X1 X2 X3 X4 /SCATTERPLOT=(*SRESID ,*ZPRED) /RESIDUALS DURBIN.
Resources	Processor Time	00:00:00,17
	Elapsed Time	00:00:00,16
	Memory Required	4144 bytes
	Additional Memory Required for Residual Plots	176 bytes

Descriptive Statistics

	Mean	Std. Deviation	N
Y1	15.05962	9.885239	78
X1	.054168	.0363322	78
X2	6.18	2.323	78
X3	7.33	2.607	78
X4	3.58	1.063	78

Correlations

		Y1	X1	X2	X3	X4
Pearson Correlation	Y1	1.000	.054	-.160	-.229	-.207
	X1	.054	1.000	-.168	-.327	-.360
	X2	-.160	-.168	1.000	.496	.541
	X3	-.229	-.327	.496	1.000	.440
	X4	-.207	-.360	.541	.440	1.000
Sig. (1-tailed)	Y1	.	.319	.082	.022	.034
	X1	.319	.	.071	.002	.001
	X2	.082	.071	.	.000	.000
	X3	.022	.002	.000	.	.000
	X4	.034	.001	.000	.000	.
N	Y1	78	78	78	78	78
	X1	78	78	78	78	78
	X2	78	78	78	78	78
	X3	78	78	78	78	78
	X4	78	78	78	78	78

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	X4, X1, X3, X2[b]	.	Enter

a. Dependent Variable: Y1

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.263[a]	.069	.018	9.793787	.069	1.361	4	73	.256	.984

a. Predictors: (Constant), X4, X1, X3, X2

b. Dependent Variable: Y1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	522.249	4	130.562	1.361	.256[b]
	Residual	7002.033	73	95.918		
	Total	7524.282	77			

a. Dependent Variable: Y1

b. Predictors: (Constant), X4, X1, X3, X2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	25.933	5.598		4.633	.000		
	X1	-16.066	33.823	-.059	-.475	.636	.825	1.212
	X2	.010	.612	.002	.017	.986	.617	1.621
	X3	-.697	.521	-.184	-1.338	.185	.676	1.480
	X4	-1.386	1.337	-.149	-1.037	.303	.617	1.621

a. Dependent Variable: Y1

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	X1	X2	X3	X4

1	1	4.501	1.000	.00	.01	.00	.00	.00
	2	.357	3.550	.00	.56	.01	.02	.01
	3	.061	8.588	.05	.00	.72	.40	.00
	4	.055	9.080	.11	.06	.16	.46	.35
	5	.026	13.164	.84	.37	.10	.11	.63

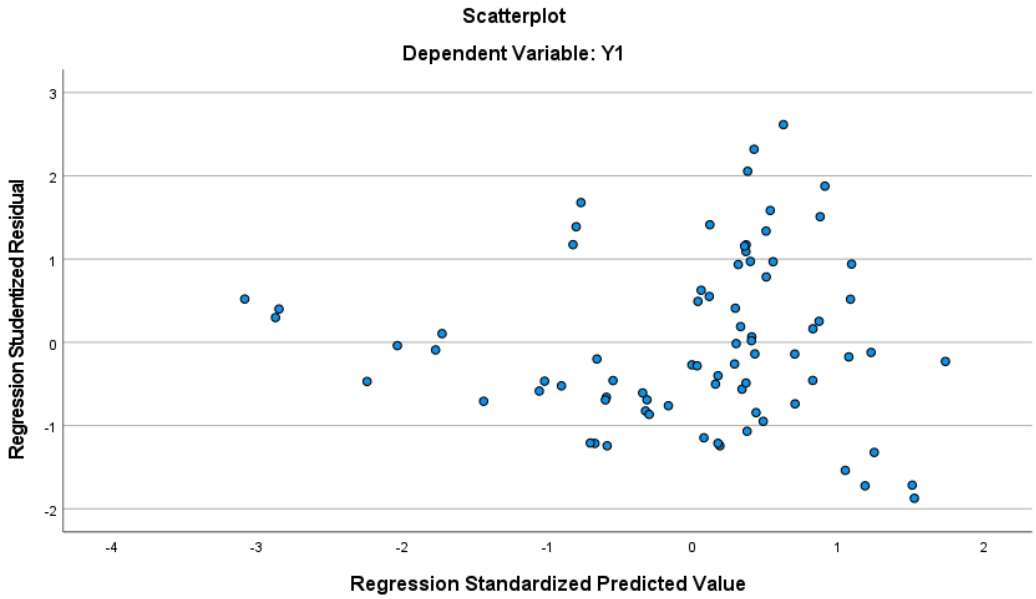
a. Dependent Variable: Y1

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	7.02696	19.58346	15.05962	2.604315	78
Std. Predicted Value	-3.084	1.737	.000	1.000	78
Standard Error of Predicted Value	1.339	4.214	2.386	.679	78
Adjusted Predicted Value	6.15089	20.76577	15.09819	2.762614	78
Residual	-17.496925	24.919970	.000000	9.536010	78
Std. Residual	-1.787	2.544	.000	.974	78
Stud. Residual	-1.873	2.615	-.002	1.004	78
Deleted Residual	-19.235771	26.330454	-.038574	10.145165	78
Stud. Deleted Residual	-1.907	2.728	.001	1.016	78
Mahal. Distance	.453	13.271	3.949	2.880	78
Cook's Distance	.000	.077	.013	.017	78
Centered Leverage Value	.006	.172	.051	.037	78

a. Dependent Variable: Y1

Charts



Regression

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT RES_1 /METHOD=ENTER LAGRES_1.
Resources	Processor Time	00:00:00,02
	Elapsed Time	00:00:00,03
	Memory Required	2608 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LAGRES_1[b]	.	Enter

a. Dependent Variable: Unstandardized Residual

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.500[a]	.250	.240	8.23867665

a. Predictors: (Constant), LAGRES_1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1700.088	1	1700.088	25.047	.000[b]
	Residual	5090.684	75	67.876		
	Total	6790.772	76			

a. Dependent Variable: Unstandardized Residual

b. Predictors: (Constant), LAGRES_1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.176	.939		-.187	.852
	LAGRES_1	.493	.098	.500	5.005	.000

a. Dependent Variable: Unstandardized Residual

Regression

Notes

Output Created		18-JAN-2025 11:44:40
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	78
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.

Syntax		REGRESSION /DESCRIPTIVES MEAN STDDEV CORR SIG N /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA COLLIN TOL CHANGE /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT LAG_Y1 /METHOD=ENTER LAG_X1 LAG_X2 LAG_X3 LAG_X4 /SCATTERPLOT=(*SRESID ,*ZPRED) /RESIDUALS DURBIN.
Resources	Processor Time	00:00:00,13
	Elapsed Time	00:00:00,16
	Memory Required	4384 bytes
	Additional Memory Required for Residual Plots	176 bytes

Descriptive Statistics

	Mean	Std. Deviation	N
LAG_Y1	7.4352	8.66168	77
LAG_X1	.0280	.03375	77
LAG_X2	3.1666	2.11397	77
LAG_X3	3.7332	2.23210	77
LAG_X4	5.5835	2.58507	77

Correlations

		LAG_Y1	LAG_X1	LAG_X2	LAG_X3	LAG_X4
Pearson Correlation	LAG_Y1	1.000	-.142	-.203	-.307	-.196
	LAG_X1	-.142	1.000	-.135	-.258	-.246
	LAG_X2	-.203	-.135	1.000	.545	.487
	LAG_X3	-.307	-.258	.545	1.000	.894

	LAG_X4	-.196	-.246	.487	.894	1.000
Sig. (1-tailed)	LAG_Y1	.	.109	.038	.003	.044
	LAG_X1	.109	.	.121	.012	.016
	LAG_X2	.038	.121	.	.000	.000
	LAG_X3	.003	.012	.000	.	.000
	LAG_X4	.044	.016	.000	.000	.
N	LAG_Y1	77	77	77	77	77
	LAG_X1	77	77	77	77	77
	LAG_X2	77	77	77	77	77
	LAG_X3	77	77	77	77	77
	LAG_X4	77	77	77	77	77

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LAG_X4, LAG_X1, LAG_X2, LAG_X3[b]	.	Enter

a. Dependent Variable: LAG_Y1

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.420[a]	.176	.131	8.07624	.176	3.854	4	72	.007	1.677

a. Predictors: (Constant), LAG_X4, LAG_X1, LAG_X2, LAG_X3

b. Dependent Variable: LAG_Y1

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1005.633	4	251.408	3.854	.007[b]
	Residual	4696.243	72	65.226		
	Total	5701.876	76			

a. Dependent Variable: LAG_Y1

b. Predictors: (Constant), LAG_X4, LAG_X1, LAG_X2, LAG_X3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	12.515	2.670		4.688	.000		
	LAG_X1	-59.199	28.425	-.231	-2.083	.041	.932	1.073
	LAG_X2	-.202	.523	-.049	-.387	.700	.703	1.423
	LAG_X3	-2.609	.968	-.672	-2.696	.009	.184	5.435
	LAG_X4	1.246	.799	.372	1.559	.123	.201	4.977

a. Dependent Variable: LAG_Y1

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions (Constant)	LAG_X1	LAG_X2	LAG_X3	LAG_X4
1	1	4.014	1.000	.01	.01	.01	.00	.00
	2	.686	2.419	.00	.66	.01	.01	.00
	3	.168	4.890	.05	.01	.95	.02	.02
	4	.111	6.006	.70	.31	.00	.11	.01
	5	.021	13.819	.24	.00	.02	.87	.96

a. Dependent Variable: LAG_Y1

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-3.1151	17.6848	7.4352	3.63758	77
Std. Predicted Value	-2.900	2.818	.000	1.000	77
Standard Error of Predicted Value	.964	4.317	1.926	.731	77
Adjusted Predicted Value	-3.7221	16.3122	7.4101	3.66797	77
Residual	-19.23091	19.61839	.00000	7.86083	77
Std. Residual	-2.381	2.429	.000	.973	77
Stud. Residual	-2.558	2.614	.001	1.018	77
Deleted Residual	-22.19573	22.74318	.02512	8.61220	77
Stud. Deleted Residual	-2.664	2.728	.004	1.036	77
Mahal. Distance	.095	20.731	3.948	3.911	77
Cook's Distance	.000	.220	.020	.046	77
Centered Leverage Value	.001	.273	.052	.051	77

a. Dependent Variable: LAG_Y1

Charts

