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Research Article

The Influence of Good Corporate Governance on the Financial Stability of Indonesian Stock Exchange Manufacturing Companies with Technological Innovation as a Mediating Variable

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Abstract: Financial stability in manufacturing companies is an important issue, especially when facing national and global economic uncertainty. Good corporate governance is considered a framework that can drive technological innovation to enhance corporate excellence and achieve sustainable financial stability. This study aims to analyze the influence of the size of independent board of commissioners, managerial ownership, and institutional ownership on financial stability, with technological innovation as a mediating variable. The research data for this study were obtained from the annual financial reports of manufacturing companies listed on the Indonesia Stock Exchange for the period 2020 to 2023. Data analysis was performed using panel data regression and mediation testing using the Sobel test approach. The research findings indicate that the size of the independent board of commissioners has a positive effect on technological innovation, while managerial ownership has a negative effect and institutional ownership has no significant effect on technological innovation. However, the size of the independent board of commissioners, managerial ownership, institutional ownership, and technological innovation all have a significant effect on financial stability. The technology innovation variable also proved to mediate the influence of the size of the independent board of commissioners on financial stability. This finding emphasizes the importance of good corporate governance and technological innovation in maintaining the financial stability of manufacturing companies.

Keywords: Financial Stability; Good Corporate Governance; Indonesia Stock Exchange; Manufacturing Companies; Technological Innovation

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1. Introduction

The manufacturing sector is the engine of the world economy. In Indonesia in 2023, the manufacturing sector contributed 18.67% to total GDP. Similarly, before the pandemic, this sector contributed over 19% to total GDP, making it one of the main pillars of national economic growth (Statista, 2024). The pandemic has impacted the manufacturing sector in Indonesia, as evidenced by the decline in the Indonesian Manufacturing PMI Index in 2020 and 2021. Although an increase began in 2022 until 2024, the Ministry of Industry and the research institute Institute for Development of Economics and Finance (Indef) also stated that in 2024, the performance of the Manufacturing PMI was still sluggish with a PMI index below 50, indicating contraction. This was also stated in an article published by the Center for Parliamentary Analysis of the DPR RI Secretariat General's Expert Body, which reported a decline in manufacturing sector activity during 2024.

Challenges to company stability in the manufacturing sector persist, with the trade war between the United States and China, triggered by the US's high tariff policy on Chinese

products and rising import tariffs, causing global tension (Indonesia, 2025). The Indonesian Ministry of Defense stated that this tension has led to a depreciation of the rupiah by 10-11%, resulting in increased costs for raw material and energy imports, which has put pressure on the manufacturing sector. This can trigger a decline in the financial stability of companies in the manufacturing sector.

Based on these phenomena, it can be seen that financial stability in the manufacturing sector is an important indicator because if this sector experiences a decline, it will affect the overall national economic stability. Financial stability refers to the ability to withstand economic shocks and maintain solvency, enabling continued operations, fulfillment of obligations, and survival amidst economic uncertainty (Asare et al., 2023). Amidst the ongoing global tensions, a framework is needed to help maintain the company's financial stability. Good corporate governance serves as a framework that ensures decision-making is transparent, accountable, and responsible (P3IEI, 2021).

Previous research by (Marie et al., 2021), where good corporate governance is represented by the board size variable, shows a positive relationship with financial stability. This means that the larger the board size in a company, the higher its financial stability. Similar results were also reported in studies by (Al-Absy, 2020) and (Maier & Yurtoglu, 2022). However, some studies have found different results, such as the research by (Karkowska, 2019) which found that board size has a negative influence on financial stability. Another part of the good corporate governance mechanism that contributes to company stability is managerial ownership. Research by (Vijayakumaran, 2021), (Pratiwi & Noegroho, 2022), and (Musa, 2024) found that managerial ownership has a positive influence on financial stability by encouraging management to adopt long-term policies that can provide benefits. However, there are previous studies that found different results; research by (Malahayati, 2021) and (Rahmawati et al., 2022) indicates that management ownership does not affect company performance in driving financial stability. Beside management ownership, institutional ownership, commonly referred to as institutional ownership, also plays a role in maintaining and improving the long-term financial stability of a company. Institutional shareholders can help companies reduce excessive risk and preserve company capital (Yang & Xiang, 2023). Based on research by (Annither et al., 2020) and (Handriani et al., 2021), institutional ownership has a positive influence on the company's financial stability. However, research by (Rizki & Saad, 2023) and (Natalia & Harahap, 2025) found contradictory results; their research indicated that institutional ownership did not affect company financial performance and stability.

In the manufacturing sector, technological innovation is also another key factor in achieving a company's financial stability. Technological innovation can enable companies to adapt to rapid market changes, increase productivity, and reduce operational costs. Research by (Ma et al., 2024) and (Singhal et al., 2020) indicates that technological innovation strengthens the relationship between corporate governance and a company's performance.

Given the importance of a company's stability, this research is crucial because the post-pandemic situation has brought significant changes to the business world, particularly in the manufacturing sector. Therefore, to further examine the relationship between good corporate governance variables and financial stability, with technological innovation as a mediating variable.

2. Literature Review

2.1. Agency Theory

Agency theory, proposed by Michael C. Jensen and William H. Meckling in 1976, provides a comprehensive framework for understanding the relationship between principals (owners) and agents (managers) within a company. This theory supports the concept that ownership should be separated from control because both powers given to one person can create conflicts of interest (Jensen & Meckling, 1976). In this context, Agency Costs arise, which are costs incurred due to conflicts of interest between the principal and the agent. In agency theory, a higher proportion of independent board members can reduce agency problems, which in turn can lower agency costs. Additionally, higher managerial ownership can also improve the alignment of interests between principals and agents (Shan, 2019). This theory is very important in corporate governance because it emphasizes the importance of aligning interests between managers and shareholders to minimize conflict, improve performance, and maintain company stability.

2.2 Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory was first proposed by Birger Wernerfelt in 1984 and later developed by Jay Barney. Barney argued that sustainable competitive advantage comes from resources and capabilities controlled by the company that are valuable, rare, difficult to imitate, and non-substitutable (Barney et al., 2001). RBV theory, which emerged in the 1980s and 1990s, is an approach aimed at achieving competitive advantage. Proponents of this theory argue that companies should focus on internal factors within the company to identify sources of competitive advantage, rather than solely on external conditions.

According to Barney, these resources and capabilities can be a combination of tangible assets such as physical and financial assets, as well as intangible assets like managerial skills, organizational knowledge, corporate culture, and internal processes. It is this combination that forms the unique "bundles of resources" for each company. This theory is one that uses a company's internal resources as the key to competitive advantage.

2.3 Good Corporate Governance

Good corporate governance is a framework that governs the relationships between management, the board of commissioners, shareholders, and other stakeholders in a company. According to the International Finance Corporation (IFC), Corporate Governance is "the structure and processes for the direction and control of a company." Meanwhile, the Organization for Economic Cooperation and Development (OECD) defines corporate governance as "the internal means used to operate and control a company." From these two definitions, it can be concluded that good corporate governance plays an important role in ensuring that companies are managed effectively and accountably.

In Indonesia, the practice of good corporate governance began to be introduced in 2002 by the government thru the Ministry of State-Owned Enterprises. This was marked by the issuance of the Decree of the Minister of State-Owned Enterprises Number Kep-117/M-MBU/2002 dated August 1, 2002, regarding the implementation of good corporate governance in State-Owned Enterprises (Sudarmanto et al., 2021). Good corporate governance practices in Indonesia have the principles of transparency, accountability, responsibility, independence, and fairness.

This study uses several indicators to measure the effectiveness of corporate governance, namely thru the size of the independent board of commissioners, managerial ownership, and institutional ownership.

1). Size of the Independent Board of Commissioners

Based on Financial Services Authority Regulation Number 57/POJK.04/2017, an Independent Commissioner is a member of the board of commissioners from outside the securities company and meets the requirements to be an independent commissioner. An independent board of commissioners is a group of individuals who oversee the management of the company but do not have a material relationship with the company that could interfere with their independent judgment. This means they are not part of the company's management and have no significant financial ties to the company, ensuring their decisions are made in the best interests of shareholders and stakeholders. Based on Article 19 of OJK Regulation Number 57/POJK.04/2017, companies listed on the IDX are required to have a board of commissioners with more than 2 members and independent commissioners comprising at least 30% of the total number of board members. The presence of independent commissioners is crucial for effective corporate governance as they provide unbiased oversight and help mitigate conflicts of interest (Abdullah et al., 2022).

2). Managerial Ownership

Managerial ownership is ownership by company managers, including the board of directors and commissioners (Widhiadnyana & Dwi Ratnadi, 2019). This managerial ownership refers to the percentage of company shares owned by its management team, including executives and directors. This stock ownership is significant because it aligns management's interests with those of shareholders, potentially leading to better decision-making and performance. As agency theory states that incentives are needed to encourage managers to act in the interests of shareholders, the presence of managerial ownership causes managers to be more cautious in the decision-making process because they will share the consequences of those decisions. Therefore, managerial ownership is considered key in corporate governance mechanisms (Shan et al., 2024).

3). Institutional Ownership

Institutional ownership refers to the ownership of shares by corporations or other organizations, such as insurance companies, banks, investment firms, asset management businesses, and other institutional entities (Hosny, 2022). Institutional ownership is the proportion of a company's outstanding shares held by large organizations such as pension funds, investment funds, insurance companies, investment firms, private foundations, endowments, and other entities that manage funds on behalf of others. These institutions generally have significant financial resources and employ professional analysts to conduct in-depth research before making investment decisions. Based on (Kusumawati & Setiawan, 2019), this study assumes that institutional investors have a better ability to utilize current period earnings information to predict future earnings compared to non-institutional investors. Institutional ownership is believed to be able to increase company value by optimizing available information. Therefore, companies with high institutional ownership are required to implement transparency in every policy and action.

2.4 Financial Stability

According to the International Monetary Fund (IMF), financial stability is a condition where the financial system can simultaneously perform three core functions: efficient resource allocation, sound financial risk management, and the ability to withstand economic or financial shocks (IMF, 2004). Financial stability is crucial because it instills confidence in financial conditions and encourages investors to provide funds that will be channeled into productive activities in the economy (Ozili, 2024). Financial stability is one of the main factors for the long-term success of joint-stock companies, as it affects investor confidence and overall market performance.

2.5 Technological Innovation

Technological innovation refers to the introduction of new or improved products or processes within an organization. This is a complex and multidimensional construction that plays a crucial role in enhancing the company's operations and competitiveness. Technological innovation is recognized as essential for the company's ability to achieve sustainable competitive advantage. This allows companies to differentiate themselves in the market, increase efficiency, and respond to changing consumer demands (Singhal et al., 2022).

2.6 Hypothesis Development

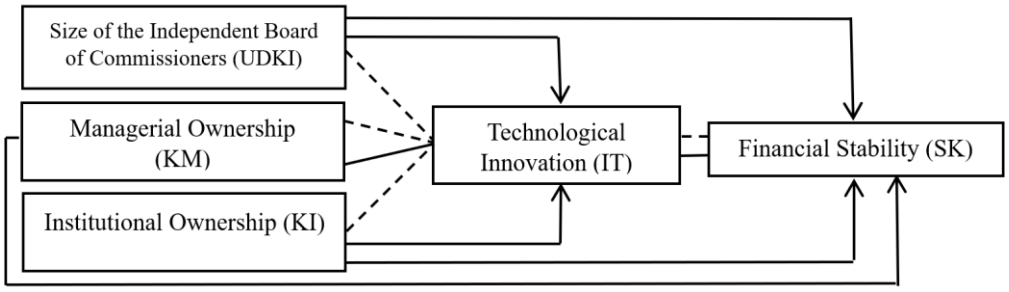

Figure 1. Conceptual Framework.

Description :

——— : direct influence

- - - - - - : influence with mediation

A larger board size is believed to enhance oversight and accountability, potentially improving financial stability. This is in line with the results of previous research by (Al-Absy, 2020) which found that the size of the independent board of commissioners has a positive effect on financial stability. Research by (Chaudhary & Arora, 2023) also found that the size of the independent board of commissioners affects financial performance, which ultimately increases financial stability. These research findings are consistent with other studies by (Abdullah et al., 2022), (Cuifeng et al, 2022), and (Maier & Yurtoglu, 2022). Based on the

findings of previous studies, the independent board size variable has a significant positive effect on company financial stability.

H1: The size of the Independent Board of Commissioners has a positive effect on the Financial Stability of the Company.

Managerial ownership can drive long-term policies and reduce risky actions that could lead to financial difficulties or, at worst, bankruptcy (Musa, 2024). Therefore, managerial ownership is hypothesized to have a significant positive influence on a company's financial stability. This is supported by research from (Altania & Tanno, 2023), (Liu, 2024), and (Handayani & Wuryani, 2025), which found that management ownership of shares can make management work harder by increasing motivation, allowing management to pay more attention to company performance.

H2: Managerial Ownership has a positive influence on the Financial Stability of the Company.

The role of institutional ownership in overseeing companies is crucial for maintaining their financial stability and sustainable performance. This aligns with research (Handriani et al., 2021) showing that institutional ownership has a positive influence on the financial condition of manufacturing companies in Indonesia. These findings are consistent with research by (Annither et al., 2020) and (Nababan & Nurani Hertikayanti, 2025), which also found that institutional ownership positively impacts a company's performance and financial stability.

H3: Institutional Ownership has a positive influence on Company Financial Stability.

In the study (Nathanael & Ria, 2022), a larger size of the independent board of commissioners can help with oversight in Innovation, as reflected in R&D costs. A larger number of independent board members can provide a wider range of perspectives, thus improving the effectiveness of R&D cost management, which in turn enhances the company's technological innovation. Previous studies, such as those by (Rahmadani & Widijaya, 2023) and (Chou & Johennesse, 2021), have shown that the size of the independent board of commissioners has a positive effect on technological innovation.

H4: The size of the Independent Board of Commissioners has a positive influence on Technological Innovation.

R&D will increase company value and maximize shareholder wealth; company managers will be eager to allocate company resources to activities that maximize value (Hassanein et al., 2023). Therefore, it can be said that companies with managerial ownership will be willing to allocate more resources to R&D to enhance technological innovation. Previous studies by (Widi & Barry, 2020), (Pu & Zulkafli, 2024), and (Hassanein et al., 2023) also found that managerial ownership has a positive and significant impact on technological innovation.

H5: Managerial Ownership has a positive influence on Technological Innovation.

Institutional shareholders generally have better monitoring capacity and access to information, and tend to support long-term policies including innovation investments. Previous studies, such as those by (Ulum et al., 2024), (Simeth & Wehrheim, 2024), and (Zhao & Wu, 2023), have found that institutional ownership has a positive impact on technological innovation. Institutional investors have natural advantages, such as professional teams and capital scale, and it is easier for them to obtain internal and external information about companies to assess the long-term value of the company, thus supporting technological innovation to achieve long-term profits (Yang & Xiang, 2023).

H6: Institutional ownership has a positive influence on technological innovation.

In manufacturing companies, technological innovation reflected in R&D can lead to significant changes in the company's financial condition. When R&D cost allocation is done well and results in future assets. Thru innovation, companies can be more adaptable to market challenges and regulatory changes, thereby enhancing long-term resilience and financial stability (Pham et al., 2024). As shown in the research by (Zhang, 2015) and (Dewiruna et al., 2020), companies with greater R&D intensity have a better ability to survive financial distress risks.

H7: Technological innovation has a positive impact on the company's financial stability.

Technological innovation can strengthen the role of a larger independent board of commissioners in technological innovation, measured by the percentage of R&D to revenue, which strategically supports innovation sustainability. In addition to the size of the independent board of commissioners, the ownership structure, whether management ownership or institutional ownership, is believed to be able to enhance financial stability thru corporate innovation policies. Previous studies have also found results supporting this statement. Research by (Ma et al., 2024) showed that technological innovation mediates the influence of corporate governance variables on company stability. This study found that board size and management ownership affect stability thru the mediation of technological innovation. Research by (Shan et al., 2024) also found that technological innovation mediates the influence of managerial ownership on a company's financial stability. Additionally, previous research by (Sakaki & Jory, 2019) also found that institutional ownership influences innovation in companies, with institutional ownership believed to be capable of increasing technological innovation within a company.

H8: Technological innovation mediates the influence of the size of the independent board of commissioners on the financial stability of the company.

H9: Technological innovation mediates the influence of managerial ownership on the financial stability of the company.

H10: Technological innovation mediates the influence of institutional ownership on the financial stability of the company.

3. Materials and Method

3.1. Data Types and Sources

This research is quantitative, with a study period from 2020 to 2023. Research data was obtained from annual reports and other relevant documents of manufacturing sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2020 to 2023. The selection of public companies as research subjects was based on their obligation to publicly disclose financial reports, which can be easily accessed thru the official IDX website at www.idx.co.id.

3.2. Research Variables

3.2.1. Dependent Variabel

In this study, the dependent variable is financial stability. This financial stability is measured thru indicators that reflect the company's overall financial condition, such as financial ratios, asset quality, and the company's ability to withstand economic fluctuations.

The financial stability variable can be calculated using the Altman Z-Score (Al-Absy, 2020). The formula is:

$$\text{Altman Z-Score} = 1.2\,\frac{\textit{Modal Kerja}}{\textit{Total Aset}} + 1.4\,\frac{\textit{Laba Ditahan}}{\textit{Total Aset}} + 3.3\,\frac{\textit{EBIT}}{\textit{Total Aset}} + 0.6\,\frac{\textit{Nilai Pasar Ekuitas}}{\textit{Total Kewajiban}} + 1.0\,\frac{\textit{Penjualan}}{\textit{Total Aset}}$$

3.2.2. Independent Variabel

The independent variable in this study is good corporate governance, which is described thru the variables below.

a) Size of the Independent Board of Commissioners
The size of the Independent Board of Commissioners (UDKI) is measured by counting the number of independent board members in a company. This measurement is expressed as a percentage of the number of independent board members divided by the total number of board members (Chaudhary & Arora, 2023).

$$\text{UDKI} = \frac{\textit{Number of Independent Board of Commissioners}}{\textit{Total Board of Commissioners Members}}$$

b) Managerial Ownership
Managerial ownership (KM) is measured by calculating the percentage of shares held by management, such as directors and senior executives, out of the total outstanding shares (Shan et al., 2024).

$$KM = \frac{\textbf{Number of Shares Owned by Management}}{\textbf{Number of Shares Outstanding}}$$

c) Institutional Ownership According to (Kusumawati & Setiawan, 2019), institutional ownership is measured by calculating the ratio of the number of shares held by institutions.

$$KI = \frac{\textbf{Number of Shares Held by Institutions}}{\textbf{Number of Outstanding Shares}}$$

3.2.2. Mediating Variable

The mediating variable in this study is technological innovation. Based on research (Singhal et al., 2022), R&D expenditure is the most frequently used measure of technological innovation in empirical studies. The greater a company's investment in R&D, the higher the company's focus on technological innovation (Ma et al., 2024), (Kijkasiwat et al., 2024).

$$IT = \frac{\textbf{R\&D Cost}}{\textbf{Total Revenue}}$$

4. Results and Discussion

4.1. Result

The following are the results of the hypothesis testing for this study, which was conducted using the coefficient of determination test, the simultaneous significance test, the partial significance test, and the Sobel test to assess the mediation effect. Testing was conducted using EViews 12.

Table 1. Determination Coefficient Test and Simultaneous Significance Test (F Test) for Substructure 1.

R-squared	0.388311
Adjusted R-squared	0.385057
S.E. of regression	0.162978
F-statistic	119.3456
Prob(F-statistic)	0.000000

Source: Data Processed with Eviews 12, 2025

The coefficient of determination (R^2) value of 0.388311 indicates that 38.83% of the technology innovation (IT) variable can be explained by the independent variables in sub-structural model 1, namely the size of the independent board of commissioners, managerial ownership, and institutional ownership. Meanwhile, the remaining 61.17% is explained by other factors outside this model. An adjusted R-squared value of 0.385057 indicates that after adjusting for the number of independent variables and the number of observations, the model still explains IT variability quite well, accounting for 38.5%.

The F-test results for sub-structural model 1 show an F-statistic value of 119.3456 with a significance level (Prob F-statistic) of 0.000000. Since this value is smaller than the significance level of 0.05 (α = 5%), it can be concluded that the independent variables simultaneously have a significant effect on the technology innovation variable. In other words, the size of the independent board of commissioners, the size of the board of directors, and managerial ownership are jointly able to explain the technology innovation variable.

Table 2. Determination Coefficient Test and Simultaneous Significance Test (F Test) for Substructure 2.

R-squared	0.419140
Adjusted R-squared	0.415013
S.E. of regression	0.360249
F-statistic	101.5631
Prob(F-statistic)	0.000000

Source: Data Processed with Eviews 12, 2025

Based on the results of the coefficient of determination values, an R-squared value of 0.419140 was obtained, indicating that 41.91% of the variation in financial stability (SK) in manufacturing companies can be explained by the variables of independent board size, managerial ownership, institutional ownership, and technological innovation. Meanwhile, the remaining 58.09% is explained by other variables outside of this research model. The Adjusted R-squared value is also 0.415013, indicating that after adjusting for the number of variables and samples, the model's ability to explain the dependent variable remains strong and not significantly different from the R-squared, which is 41.5%.

Substructural model 2 has an F-statistic value of 101.5631, with a significance value (Prob F-statistic) of 0.000000. This indicates that the variables in the model, namely the size of the independent board of commissioners, managerial ownership, institutional ownership, and technological innovation, simultaneously have a significant effect on financial stability. Because the significance value is < 0.05, this model can be considered valid for use in hypothesis testing.

Table 3. Partial Significance Test (T Test) for Substructure 1.

Dependent Variable: IT

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.042242	0.015880	-2.660005	0.0080
UDKI	0.173512	0.022016	7.881154	0.0000
KM	-0.041305	0.014857	-2.780107	0.0056
KI	0.018506	0.018098	1.022584	0.3069

Source: Data Processed with Eviews 12, 2025

Partial significance tests or t-tests are conducted to determine whether each independent variable individually has a significant impact on the dependent variable. Based on the test results for sub-structural 1, it is known that the UDKI variable has a probability value of 0.0000 (< 0.05 or 5%) with a t-value of 7.881154, indicating that UDKI has a positive and significant effect on the IT variable. Furthermore, the KM variable also has a probability value of 0.0056 (< 0.05 or 5%) with a t-value of -2.780107, indicating that KM has a negative and significant effect on the IT variable. For the KI variable, the obtained probability value is 0.3069 (> 0.05 or 5%), which means this variable is not significant for IT.

Table 4. Partial Significance Test (T Test) for Substructure 2.

Dependent Variable: SK

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.191508	0.039594	30.09300	0.0000
UDKI	0.727553	0.076339	9.530548	0.0000
KM	1.037996	0.052976	19.59383	0.0000
KI	0.732574	0.050080	14.62812	0.0000
IT	0.070202	0.026909	2.608821	0.0093

Source: Data Processed with Eviews 12, 2025

Based on the test results for sub-structural 2, it is known that all independent variables, namely UDKI, KM, KI, and IT, have probability values of 0.0000, 0.0000, 0.0000, and 0.0093, respectively. This means that the probability of all these variables is less than 0.05 (5%) with t-values indicating a positive direction. This means that each of the variables UDKI, KM, KI, and IT has a significant and positive effect on SK. This result indicates that UDKI, KM, and KI as elements of corporate governance, as well as the IT owned by the company, can directly improve the company's financial stability. In other words, the better the governance and the higher the innovation, the higher the company's financial stability.

Table 5. Sobel Test.

Variabel	a	SEa	b	SEb	z hitung
UDKI	0.17351	0.02202	0.07020	0.02691	2.47670
KM	- 0.04131	0.01486	0.07020	0.02691	- 1.90243
KI	0.01851	0.01810	0.07020	0.02691	0.95203

z-table value :

z tabel	1.964172

Based on the calculation results, it is known that only the independent board of commissioners size (UDKI) variable has a calculated Z value of 2.4767, which is greater than the table Z value of 1.9642. This result indicates that UDKI has a significant indirect influence on Financial Stability (SK) through Technological Innovation (IT). This means that the role of the independent board of commissioners not only directly affects financial stability but also indirectly by promoting innovation, which ultimately increases company stability. Conversely, the variables of Managerial Ownership (KM) and Institutional Ownership (KI) have calculated Z-values of -1.9024 and -0.9520, respectively, both of which are smaller than the table Z-value of 1.9642. Therefore, it can be concluded that there is no significant indirect effect of KM and KI on financial stability through technological innovation. Thus, in this study, technological innovation was only proven to significantly mediate the effect of UDKI on financial stability.

4.1. Discussion

4.1. The Influence of Independent Board of Commissioners Size on Financial Stability

Based on the test results above, it was found that the independent board of commissioners size variable (UDKI) has a positive and significant influence on financial stability (SK) in manufacturing companies listed on the Indonesia Stock Exchange. This result supports the first hypothesis, which states that UDKI has an effect and is aligned with the first research objective. These results indicate that the larger the size of the independent board of commissioners in manufacturing companies, the higher the level of financial stability. An independent board of commissioners that effectively oversees management can help companies reduce their financial risks. In line with Agency Theory, which states that conflicts of interest between management and owners can be minimized thru effective governance mechanisms, one of which is the presence of an independent board of commissioners.

This result is also consistent with several previous studies, namely those by (Al-Absy, 2020), (Chaudhary & Arora, 2023), (Abdullah et al., 2022), and (Maier & Yurtoglu, 2022), which found that UDKI has a positive and significant relationship with company financial stability. Findings from previous studies further demonstrate that good corporate governance practices thru independent boards of commissioners can have a positive impact on the financial stability of manufacturing companies.

4.2. The Influence of Managerial Ownership on Financial Stability

Based on the test results for sub-structural 2, it was found that the managerial ownership (KM) variable was proven to have a positive and significant effect on the financial stability (SK) of manufacturing companies listed on the Indonesia Stock Exchange. This finding supports the second hypothesis, which states that KM has a positive effect on financial stability. This means that the larger the proportion of shares held by management, the higher the financial stability of the company, indicating better financial stability for manufacturing companies. Management ownership of company shares is a way to address the conflict of interest between management and shareholders. This aligns with agency theory, which states that conflicts of interest between management and shareholders can be reduced thru managerial ownership mechanisms.

This result is also consistent with previous studies, such as those conducted by (Musa, 2024), (Altania & Tanno, 2023), and (Liu, 2024), which found that managerial ownership can promote long-term policies aimed at company sustainability. In this way, managerial ownership can reduce risky actions that could lead to financial difficulties, preventing the company from surviving in uncertain economic conditions. These studies increasingly support the idea that managerial ownership contributes positively to the financial stability of companies.

4.3. The Influence of Institutional Ownership on Financial Stability

Based on the test results for sub-structural 2, it was found that the institutional ownership (KI) variable has a positive and significant effect on the financial stability (SK) of manufacturing companies listed on the Indonesia Stock Exchange. This result supports the third hypothesis, which states that KI has a positive effect on the financial stability of companies. These results indicate that a larger proportion of institutional share ownership will increase the financial stability of manufacturing companies. The findings are consistent with Agency Theory, which states that the presence of institutional owners can serve as an effective external monitoring mechanism for management. Institutional bodies tend to have long-term interests and adequate resources to monitor management activities, which can promote sustainable financial decisions that will ultimately enhance the company's financial stability.

The findings of this study are also consistent with previous research. Studies by (Handriani et al., 2021), (Annither et al., 2020), and (Nababan & Nurani Hertikayanti, 2025) also found that institutional ownership has a positive and significant influence on company performance and stability. These studies further support the findings of this research.

4.4. The Influence of Independent Board of Commissioners Size on Technological Innovation

Based on the test results from sub-structural 1, it was found that the independent board of commissioners size (UDKI) variable had a positive and significant effect on technological innovation (IT) in manufacturing companies listed on the Indonesia Stock Exchange. This result supports the fourth hypothesis, which states that UDKI has a positive effect on a company's technological innovation. These results indicate that a larger independent board of directors can encourage management to be more adaptable to technological changes thru oversight and the promotion of innovation. In accordance with agency theory, which states that an independent board of commissioners can encourage investors to invest in technology innovation projects for long-term returns. The findings of this study are also consistent with several previous studies. Research by (Nathanael & Ria, 2022) found that the size of the independent board of commissioners positively influences corporate innovation, as measured by R&D. Research by (Rahmadani & Widijaya, 2023) and (Chou & Johennesse, 2021) also found that the size of the independent board of commissioners positively influences technological innovation. Independent boards of directors are considered to be more risk-averse than company management. Additionally, independent boards of commissioners are also considered more objective because they have no vested interest in the company, making them more likely to critically analyze and monitor managers (Chou & Johennesse, 2021).

4.5. The Influence of Managerial Ownership on Technological Innovation

Based on the test results for sub-structural 1, the variable of Managerial Ownership was found to have a significant negative effect on Technological Innovation. This finding

contradicts the initial hypothesis, which stated that managerial ownership should have a significant positive influence on technological innovation. Based on agency theory, managerial ownership is believed to align the interests of management and owners, thereby encouraging managers to make long-term investments, including in technological innovation. However, the results of this study show a different condition. One possible cause is that excessive managerial ownership can actually lead managers to be conservative and risk-averse, including risks inherent in research and development (R&D) activities. Technological innovation, which requires long-term investment and uncertain outcomes, is often avoided by managers who want to maintain short-term stability, especially if they already feel secure in their position as both owner and manager.

There are previous studies that have findings similar to this one. Research by (Chou & Johennesse, 2021) found that managerial ownership has a negative impact on corporate innovation. Research by (Usman et al., 2017) also found that managerial ownership has a negative impact on technological innovation. This can be attributed to the fact that top management is typically reluctant to invest resources in innovation in R&D because innovation projects are long-term and carry a high risk of failure, which impacts the company's short-term profitability. Consequently, there is a high risk of direct job losses due to risky R&D projects.

4.6. The Influence of Institutional Ownership on Technological Innovation

Based on the test results for sub-structural 1, the institutional ownership variable was found to have no significant effect on Technology Innovation. This finding contradicts the initial hypothesis, which stated that institutional ownership should have a significant positive influence on technological innovation. Institutions as shareholders are believed to have an advantage in better overseeing management and promoting long-term decision-making, including policies related to innovation. This is also in line with the agency theory's view that institutional ownership can serve as an effective control mechanism in reducing conflict and promoting corporate efficiency. However, in this study, institutional ownership did not have an impact on technological innovation. Some previous studies have also found similar results, where institutional ownership is not significant for corporate innovation. Research by (Rahmadani & Widijaya, 2023) suggests that the lack of influence of institutional ownership on innovation is due to institutional investors prioritizing short-term returns over the long-term returns from technological innovation.

Further analysis of the research data suggests that this result may be due to the fact that out of the 142 companies in the research sample, only 32, or about 22.6%, of the observed companies had data on technological innovation. Meanwhile, only 5 companies out of the total 142 in the sample did not have institutional ownership. Therefore, the limitations of this technological innovation data lead to research results that differ from the existing hypotheses.

4.7. The Influence of Technological Innovation on Financial Stability

Based on the test results for sub-structural 2, it was found that the technology innovation variable has a positive and significant effect on the financial stability of manufacturing companies listed on the Indonesia Stock Exchange. This result supports the seventh hypothesis, which states that technological innovation has a positive effect on a company's financial stability. This result aligns with the Resource-Based View (RBV), which states that a company's long-term competitive advantage can be achieved thru the utilization of valuable, rare, inimitable, and non-substitutable resources. Technological innovation is one form of such strategic resources. By developing and adopting new technologies, companies can improve production efficiency, reduce operational costs, create superior products, and ultimately enhance the company's financial stability. In the study (Pham et al., 2024), companies that actively innovate are considered capable of adapting and surviving in the long term. This finding aligns with research (Zhang, 2015) which found that companies with higher levels of innovation have a better ability to withstand the risk of financial distress. Additionally, research by (Mohajan, 2018) emphasizes the importance of innovation in enhancing company competitiveness and market position, while also highlighting the effectiveness of innovation policies in mitigating the negative impacts of economic cycles, particularly during economic downturns or crises.

4.8. Technological Innovation as a Mediation between Independent Board Size and Financial Stability

Based on the results of the Sobel test, it shows that technological innovation significantly mediates the influence of UDKI on SK, with a calculated Z value of 2.4767, which is greater than the table Z value of 1.9642. This result supports the eighth hypothesis, which states that technological innovation mediates the influence of independent board size on financial stability. This finding aligns with research (Ma et al., 2024) stating that the higher the technological innovation within a company, the more it also increases the company's financial stability. This result aligns with agency theory, which posits that independent boards of commissioners serve as management overseers to ensure they always act with long-term performance goals in mind, including decisions regarding technological innovation aimed at long-term profitability. UDKI can act as an internal supervisor and resource that can assess potential risks when deciding to innovate. Additionally, because independent board members have no vested interest in the company, this will promote objectivity in their assessment of the risks and opportunities the company may face. Previous studies have also found that UDKI has a positive influence on innovation.

4.9. Technological Innovation as a Mediation between Managerial Ownership and Financial Stability

Based on the results of the Sobel test, it shows that technological innovation does not significantly mediate the influence of KM on SK, where the calculated Z value obtained is -1.9024. This value is smaller than the Z table value, which is 1.9642. Therefore, technological innovation is not significant in mediating the relationship between KM and SK. Thus, this result rejects the ninth hypothesis, which states that technological innovation mediates the influence of KM on SK. This can occur because, based on previous test results, the KM variable has a negative and significant relationship with technological innovation, which contradicts the formulated hypothesis. These findings are consistent with several previous studies, including one by (Aini et al., 2023), which found that innovation does not mediate the relationship between innovation and firm financial performance. Financial performance itself is one of the main factors that can be used to assess a company's financial stability.

4.10. Technological Innovation as a Mediation between Institutional Ownership and Financial Stability

Based on the results of the Sobel test, it shows that technological innovation does not significantly mediate the influence of KI on SK, with a calculated Z value of 0.95203. This value is smaller than the table Z value, which is 1.9642. Therefore, technological innovation is not significant in mediating the relationship between KI and SK. Thus, this result rejects the tenth hypothesis, which states that technological innovation mediates the influence of KI on SK. This could be because in previous tests, the KI variable did not affect the company's technological innovation. Although KI directly affects SK, this could be the reason why the technological innovation variable is not significant in mediating the relationship between institutional ownership and the company's financial stability. Previous research by (Aini et al., 2023) also found that innovation did not mediate the relationship with financial performance.

5. Conclusion

Based on the results of the regression analysis, the following key conclusions were obtained:

First, the size of the independent board of commissioners (UDKI) has been proven to have a positive and significant influence on financial stability. This indicates that the presence of independent commissioners in the company's governance structure has a positive impact on management oversight and strategic decision-making, thereby increasing the company's financial stability. Additionally, UDKI also has a positive and significant impact on technological innovation, and a significant indirect influence on financial stability thru innovation. This confirms that independent commissioners not only strengthen internal control but also encourage companies to innovate in the face of modern business dynamics.

Second, managerial ownership (KM) shows a positive and significant influence on financial stability. However, KM has a negative and significant effect on technological innovation, which contradicts the hypothesis made. Innovation also did not prove to mediate the relationship between KM and financial stability.

Third, institutional ownership (KI) has a positive and significant effect on financial stability, indicating that institutional investors play an important role in exerting external pressure on management to maintain the company's financial health. However, KI does not have a significant effect on technological innovation, and there is no mediating effect of innovation in the relationship between KI and financial stability. This indicates that although institutions have a significant interest in company stability, they do not necessarily actively promote an innovation agenda.

Fourth, technological innovation (IT) directly and positively influences financial stability. This means that companies investing in innovation have a greater chance of surviving and thriving in the long run. Innovation allows companies to create a competitive advantage and adaptively respond to market changes. Thus, innovation serves as an important bridge between governance aspects and financial results, particularly in the context of the impact of UDKI. Overall, this research confirms the importance of strong corporate governance and innovation strategies in enhancing corporate financial stability. Independent boards of directors are the most consistent element of governance contributing to financial stability, both directly and thru innovation.

This research is limited to measuring technological innovation thru R&D, which is only disclosed by a small fraction of companies, focuses on the manufacturing sector, and does not yet include all the determinants of financial stability for GCG variables. The implication is that the research results are more representative of transparent companies and cannot yet be generalized across sectors. Therefore, it is recommended to improve the transparency of R&D reporting, the active role of independent board members, more standardized R&D disclosure regulations, and further research with more complex methods, primary data, and cross-sectoral coverage to ensure more accurate and generalizable findings.

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