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The Effect of Risk Governance on Financial Performance with Moderation of Top Management Team Diversity

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ABSTRACT

This study analyzes the impact of risk governance on financial performance, specifically focusing on profitability, with the moderating role of top management team diversity in terms of age and gender. The research uses a purposive sampling method with a sample of 66 companies from the basic chemical manufacturing sector listed on the Indonesia Stock Exchange (IDX) for the period 2018-2022. Data were collected from annual reports, financial statements, and sustainability reports published by these companies, covering information on sustainability disclosure, risk management, corporate governance (CG), and elements of the risk governance framework (RGOV), which include governance at the board of directors (BOD) level, board of commissioners (BOC) level, and risk management processes. indicate that overall risk governance has a positive influence on profitability, although not statistically significant. Governance at the board of directors level has a significant positive effect on profitability, while governance at the management level and risk processes show no significant impact. Age diversity was found to have a significant positive influence on profitability, whereas gender diversity showed no significant effect. Furthermore, age and gender diversity did not moderate the relationship between risk governance and profitability. These findings are expected to provide insights into how management team diversity can improve the effectiveness of risk governance and the company's profitability.
***Keywords**: Risk Governance, Profitability, Age Diversity, Gender Diversity, Corporate Governance, Risk Management, Manufacturing Sector, Indonesia Stock Exchange, Sustainability Integration*

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INTRODUCTION

The basic chemical industry is currently under pressure due to a global crisis involving various dimensions, from environmental to social issues. The depletion of natural resources such as petroleum and natural gas has raised concerns about the sustainability of raw material supplies, while chemical pollution and waste continue to be major issues affecting the environment and public health. Additionally, societal demands for transparency and corporate social responsibility are increasing, forcing companies to consider social aspects in every business decision. Amid these conditions, the threat of climate change adds complexity to the risks that must be faced. Extreme weather, global temperature rises, and changes in ecosystem patterns cause infrastructure damage, supply chain disruptions, and spikes in energy costs.

Climate change also brings transition risks, such as the implementation of carbon tax policies that can increase operational costs, as well as reputation risks for companies that fail to meet sustainability standards. In facing these challenges, companies need to adopt an innovative Risk Governance framework to anticipate and manage risks effectively while seizing strategic opportunities for long-term sustainability. Climate change has become one of the biggest global challenges affecting various economic sectors, including the basic chemical industry.

As a sector that contributes significantly to carbon emissions, this industry is under pressure to adopt sustainability strategies that not only comply with environmental regulations but also protect operational sustainability and their financial performance. Regulations such as carbon emission trading mechanisms or cap-and-trade have been implemented in many countries as an effort to limit carbon emissions. This system forces companies to adjust their operations to be more environmentally friendly, creating an urgent need for integrated and adaptive risk management (Dou et al., 2023).

Risk Governance is one of the essential elements in Corporate Governance, focusing on the identification, assessment, and management of risks to ensure the sustainability and success of organizations. Weaknesses in risk supervision have been one of the main causes of various corporate governance system failures, as described by Anderson et al. (2010) that deficiencies in risk management can lead to systemic corporate collapse. Demirag et al. (2000) emphasized that Risk Governance aims to enhance transparency and accountability, with risk supervision as a key element of modern Corporate Governance. Governance reform, including the introduction of Risk Governance regulations, has been an important response to various corporate failures, as outlined by Gillan (2006), aiming to strengthen the Governance framework and reduce future failures. Almashhadani (2022) also highlights the need for stricter regulations to address failures in risk management that often trigger crises in the Governance system.

These efforts overall are expected to enhance stakeholder trust while creating stability in the global economic system. Despite various Risk Governance regulations being implemented, crises still continue to occur due to a gap between theory and practice in the field. One of the main reasons is inconsistent implementation, especially in companies facing short-term pressures to achieve financial profits. According to Steen et al. (2009), the neglect of sustainable Risk Governance principles often occurs due to a lack of commitment from management and weak external oversight.

Additionally, Almashhadani (2022) notes that the operational complexity in the modern business environment often exceeds the capabilities of existing Governance systems, thus creating room for repeated failures. Anderson et al. (2010) also highlight that reliance on outdated and less responsive risk management models to changes in the global economic environment exacerbates this condition. Basic chemical manufacturing companies face various significant challenges, such as increasingly complex environmental, social, and economic risks. These challenges include threats from climate change, depletion of natural resources, and increasing market and regulatory demands for transparency and sustainability. This requires companies to adopt innovative and comprehensive Risk Governance strategies. The Risk Governance framework plays a crucial role in helping companies not only to anticipate risks but also to turn them into strategic opportunities (Schaltegger et al., 2014).

Risks in the chemical sector can be classified into compliance risks, hazard risks, control risks, and opportunity risks. In this context, Risk Governance includes the process of identifying, mitigating, and evaluating risks to ensure the sustainability and profitability of companies. Effective Risk Governance in this sector must also comply with various stringent regulations (Hopkin, 2018). The basic chemical sector operates within a strict regulatory framework, especially regarding work safety, environmental, and financial and reputation compliance. In terms of work safety and operations, Law No. 1 of 1970 on Work Safety requires companies to ensure worker safety through safe operational procedures. Additionally, international standards such as ISO 45001 provide a systematic framework for managing occupational safety and health risks.

Further regulations are governed under Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Materials (B3), which sets specific procedures for handling hazardous chemicals to minimize accident risks in company operations. Regarding environmental protection, companies in the basic chemical sector are required to comply with Law No. 32 of 2009 on Environmental Protection and Management, which emphasizes waste and emission management to prevent environmental damage. Minister of Environment Regulation No. 5 of 2014 on Emission Quality Standards further regulates the emission limits that can be produced by chemical industry facilities, while the Basel Convention provides guidelines for managing hazardous waste across national borders. In terms of financial compliance and reputation, the Financial Services Authority Regulation (POJK) No. 21/POJK.04/2015 requires public companies to implement transparent Governance in risk reporting. ISO 31000:2018 provides global guidance on holistic risk management, while POJK No. 51/POJK.03/2017 encourages the implementation of sustainable finance by requiring companies to prepare sustainability reports to enhance stakeholder trust. These regulations collectively form an essential foundation for basic chemical sector companies to ensure safety, sustainability, and accountability in their operations. Risk Governance and sustainability regulations have been interpreted by top management as part of their social and environmental responsibility (CSR).

However, CSR practices tend to be philanthropic rather than substantive, with company reporting often being symbolic or "green washing," causing information asymmetry in the capital market (Anis et al., 2023). This internal lack of transparency has been identified as one of the causes of the global crisis that originated from the banking sector. To address this, Global and National Authorities have issued regulations such as the Risk Governance Framework (FSB, 2013) that require companies to formulate a Risk Appetite Statement (Karyani et al., 2019). In Indonesia, applicable regulations include the General Risk Governance Guide (KNKG, 2021), Sustainable Finance Roadmap (POJK, 2015), Sustainable Finance Action Plan (POJK, 2017), and Green Taxonomy (POJK, 2021), all of which support the integration of ESG principles into corporate Governance (Anis and Avrillia, 2024). Poor investment decisions are often influenced by personal motivations to expropriate company resources, causing many investment projects to fail to add value for stakeholders. Additionally, the capabilities of the Top Management Team (TMT) are also a concern, where a lack of certification and relevant educational backgrounds hinder effective decision-making. Research shows that Gender Diversity in TMT can provide advantages, such as enhancing innovation and strategic decision-making (Houanti et al., 2020; Milojević et al., 2023).

Gender Diversity has been found to have a positive correlation with company profitability, with some studies finding that increased gender diversity at the management level can boost profitability by up to 6% (Schipani et al., 2018). The edge of diverse TMT capabilities is increased profitability, creating a more adaptive and sustainable company. In practice, the effectiveness of Risk Governance is often influenced by the diversity within the top management team. This diversity, including age, gender, and experience, can enrich perspectives in strategic decision-making, enhance innovation, and strengthen the company's ability to manage risks holistically. Research shows that Age Diversity in management teams can bring broader perspectives, while the presence of women on the board often encourages better and more transparent Governance practices (Wegge et al., 2008).

Frameworks such as the PWC Four-Step Framework, ISO 31000:2018, and ISO 9001 provide practical guidelines for integrating Risk Governance principles into operational processes. For example, the PWC Four-Step Framework emphasizes identifying, analyzing, mitigating, and monitoring risks as critical steps to ensure organizational sustainability. Meanwhile, ISO 31000:2018 offers a flexible yet standardized approach to risk management, helping companies integrate ESG risks into their management strategies.

On the other hand, ISO 9001 promotes a risk-based approach to improve process efficiency, ensure compliance, and build stakeholder trust through good Governance. Thus, the implementation of these frameworks not only mitigates risks but also strengthens company resilience in the face of global market dynamics. In Indonesia, regulations such as the Financial Services Authority Regulation (POJK) No. 51/POJK.03/2017 and the General Corporate Governance Guidelines of Indonesia (PUGKI) emphasize the importance of integrating sustainability principles into company operations. This includes effective risk management, transparent sustainability reporting, and strategic decision-making that supports the company's long-term goals (Financial Services Authority, 2017). Therefore, integrating Risk Governance with diversity in the top management team is relevant to ensure sustainable financial performance.

Research on Corporate Governance and Risk Governance has significant limitations. Most studies still use outdated or irrelevant regulations, so their findings do not always reflect the evolving business environment dynamics (Houanti et al., 2020). Additionally, many studies are based on case studies with limited samples, making it difficult to generate strong generalizations (Schipani et al., 2018). The methods for measuring variables in this research are also often considered incomplete, such as a lack of indicators covering non-financial risk dimensions or sustainability (Milojević et al., 2023). Furthermore, varying regulatory contexts between countries pose an additional challenge, where research conducted in jurisdictions with strict

Governance may not be relevant for application in jurisdictions with more lenient rules. This indicates the need for a more universal and adaptive approach in evaluating Corporate Governance and Risk Governance. Risk Governance emerges as a comprehensive approach to managing these challenges. The Risk Governance framework helps companies identify, evaluate, and mitigate risks, while also leveraging strategic opportunities for innovation and growth. This practice not only ensures the company's survival amid market and regulatory pressures but also supports the creation of long-term value. For example, the effective implementation of Risk Governance at the director (BOD) and commissioner (BOC) levels has been shown to have a positive impact on company profitability, as revealed by previous research (Schaltegger et al., 2014).

This research aims This research aims to address the limitations of previous studies by analyzing the influence of Risk Governance on company financial performance while considering the moderating role of diversity in the top management team. Thus, this study not only provides new insights into how more inclusive and effective Risk Governance can enhance company performance but also strengthens the academic literature and business practices in the fields of Risk Governance, sustainability, and diversity. This approach is expected to address the weaknesses of previous research, such as incomplete variables and methodological relevance, by providing a more comprehensive analytical framework.

THEORETICAL FOUNDATIONS AND HYPOTHESIS DEVELOPMENT

Theoretical Framework

Risk Governance plays a vital role in enhancing financial performance through integrated risk management. Based on Adaptive Governance Theory, adaptive risk management requires a collaborative approach that considers social and ecological dimensions, as well as organizational resilience in facing uncertainty (Ansel & Torfing, 2022). This approach enables organizations to develop flexible governance structures in response to external environmental dynamics, such as regulatory and technological changes. For instance, the institutional branch within adaptive governance highlights the importance of institutional structures that support adaptive actions to overcome external challenges (Ansel & Torfing, 2022).

Diversity within the Top Management Team (TMT) plays a crucial role as a moderator in the relationship between Risk Governance and financial performance, as explained by Upper Echelon Theory. Hambrick and Mason (1984) proposed that individual attributes within the TMT, such as experience, values, and perspectives, influence how organizations perceive risks and opportunities and make strategic decisions. A diverse TMT provides a broader cognitive base, enabling organizations to be more responsive to external challenges and to generate innovative risk mitigation strategies. For example, managers with conservative experience might prefer stable approaches, while managers with innovative experience might be open to risks that potentially yield high returns (Hambrick & Mason, 1984).

Contingency Theory emphasizes that the success of Risk Governance in enhancing financial performance depends on the alignment between organizational structure, business strategy, and external conditions (Donaldson, 2001). In this context, TMT diversity can act as a contingency factor that strengthens an organization's ability to adapt to environmental dynamics. For example, organizations facing highly competitive market conditions require flexible strategies supported by adaptive Risk Governance structures (Donaldson, 2001; Miles & Snow, 2003). Thus, the integration of adaptive Risk Governance and TMT diversity can help organizations achieve superior financial performance through effective and responsive risk management.

Risk Governance Framework and Regulations

One essential element in Risk Governance is understanding the types of risks organizations face and the appropriate approaches to manage them. According to Hopkin (2018), risks can be categorized into four main types. Compliance risks are risks that arise from failing to act in accordance with laws, regulations, or internal policies, such as safety production procedures. This type of risk is usually managed through risk minimization approaches focused on preventing legal or policy violations. Hazard risks include negative outcomes such as cybercrimes, which require risk mitigation approaches to minimize their impact on the organization. Next, control risks are risks where the outcomes are uncertain, such as actual sales volumes or project durations that could be better or worse than budgeted. Risk management approaches are used to manage these types of risks. Lastly, opportunity risks reflect the potential financial loss from taking or not taking an opportunity, like strategic decisions to enter new markets or expand product offerings. Approaches to opportunity risks often involve careful risk assessment to ensure strategic decisions generate maximum value for the organization (Hopkin, 2018).

Moreover, the implementation of frameworks such as the PWC Four-Step Framework, ISO 31000:2018, and ISO 9001 provide practical guidelines for integrating these principles into operational processes. For example, the PWC Four-Step Framework emphasizes identifying, analyzing, mitigating, and monitoring ESG risks as critical steps to ensure organizational sustainability. Similarly, ISO 31000:2018 provides a flexible yet standardized approach to risk management, helping companies integrate ESG risks into their management strategies. Meanwhile, ISO 9001 emphasizes a risk-based approach to enhance process efficiency, ensure compliance, and build stakeholder trust through good governance (Dathe et al., 2024; Hopkin, 2018).

Climate change has become a major concern for governments, practitioners, and researchers in recent times. Concerns about carbon emissions continue to rise in various countries and regions worldwide. To reduce the impact of carbon emissions, various regulations and legislation have been proposed and implemented in many countries. One commonly used mechanism is carbon emission trading, known as "cap-and-trade," a market-based approach to limiting emissions from companies. In this context, environmental sustainability and eco-friendly business practices become crucial priorities for companies, thus integrating emission reductions into their operational planning (Dou et al., 2023).

In response to these regulations, many companies have begun adopting green technologies and investing in more environmentally friendly operations. This not only helps reduce the direct impact of climate change but also reduces transition risks, such as carbon taxes and new emission restrictions. On the other hand, physical risks like floods, droughts, or other natural disasters due to climate change pose serious challenges to the physical assets and supply chains of companies. Therefore, effective mitigation strategies are necessary to ensure operational sustainability in the face of these climate change threats (Dou et al., 2023).

In the chemical industry, various types of risks are regulated by relevant regulations to ensure effective management. Operational risks, such as work accidents or production disruptions, are regulated by UU No. 1 of 1970 on Work Safety, ISO 45001, and Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances (B3), which regulate the handling of hazardous chemicals. Environmental risks, related to waste and toxic emissions, are regulated by UU No. 32 of 2009 on Environmental Living, the Basel Convention, and the Minister of Environment Regulation No. 5 of 2014 on emission quality standards. For legal and compliance risks, regulations such as Government Regulation No. 74 of 2001, and UU No. 8 of 2010 on the Prevention and Eradication of Money Laundering Crimes help companies comply with rules and avoid legal sanctions. Reputational risks, which can arise from environmental or safety violations, are regulated by UU No. 32 of 2009 and guidelines like ISO 26000 as well as POJK No. 51/POJK.03/2017, which encourage sustainability reporting. Lastly, financial risks, such as penalties or losses due to legal violations, are regulated by ISO 31000 and POJK No. 21/POJK.04/2015, which emphasize transparency and financial risk management. By complying with these regulations, chemical companies can manage risks better, maintain operational sustainability, and improve financial performance.

Hypothesis Development

Risk Governance is a key element in risk management that includes the strategic and integrated processes of identifying, analyzing, mitigating, and monitoring risks. This approach emphasizes the importance of holistic risk management by considering its impact and opportunities on corporate sustainability. Processes like risk identification aim to recognize potential sources of risk, risk analysis focuses on understanding the nature of risks and their impacts, and risk evaluation helps prioritize risks requiring major attention. The overall process is designed to create transparency, enhance stakeholder trust, and integrate risks into strategic corporate decision-making (Dathe et al., 2024).

Risk Governance adopts a flexible and responsive approach to the dynamic business environment, including challenges like climate change and the development of ESG regulations. Adaptive governance theory emphasizes the importance of collaborative decision-making, the ability to learn from experiences, and adaptation to future uncertainties. This aligns with risk governance principles that not only focus on risk control but also on the organization's ability to adapt to new risks and emerging opportunities (Ansel and Torfing, 2022).

Risk Governance has been proven to have a significant impact on financial performance, especially through the implementation of good governance and sustainability disclosures. Research has shown that effective governance can strengthen risk management, enhance transparency, and build investor trust, which ultimately contributes to corporate financial performance. For example, research by Sutra Tanjung, P. R. (2021) shows that good corporate governance (GCG) significantly enhances sustainability disclosures, reflecting better risk management and increased stakeholder trust. This is reinforced by Cunha de Mascena et al. (2020), who found that board structure, such as independent directors, has a positive relationship with GRI reporting. This relationship confirms the importance of Risk Governance in ensuring transparency and accountability, which can drive long-term financial performance.

Diversity within the Top Management Team (TMT) also plays a crucial role in moderating the relationship between Risk Governance and financial performance. Diverse perspectives within the team can enhance strategic decision-making and innovation, especially in facing complex risks. Research by Cheuk S et al. (2018) shows that board diversity, particularly in age and gender, significantly affects financial sustainability. This indicates that diversity provides a broader perspective in risk management. Additionally, research by Jaturat Malee et al. (2021) reveals that the proportion of female directors and high educational levels on the board of directors can strengthen corporate governance and enhance sustainability disclosures. This perspective is supported by findings from Anazonwu et al. (2018), which highlight that board diversity, especially in developing countries, has a significant influence on sustainability reporting, indicating that diversity can be a key element in enhancing the effectiveness of Risk Governance.

Additionally, the effectiveness of Risk Governance also contributes to profitability and operational efficiency, especially through the mediation of sustainability. Arouri & Pijourlet (2015) show that CSR performance, as an essential element in strategic risk governance, enhances company value in countries with strong shareholder protection. This research underscores the importance of sustainability in creating long-term economic value. Furthermore, Felisha & Rossieta (2017) found that a company's environmental performance has a positive relationship with debt costs, indicating that investors and lenders value companies that demonstrate good risk management capabilities. These findings affirm that sustainability not only supports risk management but also enhances access to financial resources.

Thus, Risk Governance plays a critical role in enhancing company financial performance, with diversity in the top management team as a moderating element that strengthens this relationship. Diversity of perspectives allows the team to be more adaptive and responsive to complex risks, while the integration of sustainability into Risk Governance can strengthen operational efficiency and profitability.

The Influence of Overall Risk Governance on Profitability

Based on the General Governance Guidelines of Indonesia (PUGKI) 2021, the role of the Board of Commissioners (BOC) is to oversee and provide strategic direction to the Board of Directors (BOD) to ensure corporate governance operates with principles of transparency, accountability, responsibility, independence, and fairness. The BOC functions to supervise the implementation of strategic policies, the effectiveness of risk management, and internal controls, and to provide recommendations to shareholders regarding financial reports and company performance. Meanwhile, the BOD is responsible for managing the company operationally by devising business strategies, ensuring the implementation of risk management, presenting accurate financial reports, and carrying out duties according to the principles of prudence to protect stakeholder interests.

In the risk governance process, the roles of the BOC and BOD complement each other to ensure that company risks are managed effectively. Risk governance begins with the establishment of a structure, where the BOC is responsible for overseeing risk policies, the BOD implements risk management, and the Chief Risk Officer (CRO) coordinates the implementation of the risk framework. This process involves identifying, assessing, mitigating, and evaluating risks continuously. The BOD is tasked with reporting major risks and their mitigation efforts to the BOC, which then evaluates their effectiveness through related committees such as the Risk Committee or Audit Committee. With the integration of Risk Governance into company activities, risk governance not only increases stakeholder trust but also supports business sustainability.

The influence of Risk Governance on company financial performance cannot be separated from various moderating factors, one of which is diversity within the Top Management Team (TMT). TMT diversity, which includes variations in educational background, experience, gender, and culture, can enrich the risk-based decision-making process. In this context, diversity enables the team to identify risks more comprehensively, critically evaluate their impacts, and develop innovative and adaptive mitigation strategies. As emphasized in PUGKI 2021, diversity in management supports the implementation of inclusive and effective governance, which in turn strengthens the positive impact of Risk Governance on company financial performance. With a combination of integrated Risk Governance and TMT diversity, companies can enhance operational efficiency, strengthen competitiveness, and ensure the achievement of sustainable financial performance.

Risk Governance has proven to have a significant impact on financial performance, especially through the implementation of good corporate governance and sustainability disclosures. Research by Sutra Tanjung, P. R. (2021) shows that good corporate governance (GCG) significantly enhances sustainability disclosures, reflecting better risk management and increased stakeholder trust. With structured risk management, companies can enhance transparency and accountability through sustainability reporting, which ultimately contributes to improved financial performance. This finding is reinforced by Cunha de Mascena et al. (2020), who found that board structure, including the presence of independent directors, has a positive relationship with Global Reporting Initiative (GRI) reporting. This indicates that effective Risk Governance involves not only identifying and mitigating internal risks but also managing external risks through relevant and comprehensive information disclosure. This connection confirms the importance of implementing Risk Governance in ensuring long-term sustainable financial performance.

H1: Risk Governance positively influences profitability
H1a: BOC Level Governance positively influences profitability
H1b: BOD Level Governance positively influences profitability
H1c: Risk Process Management positively influences profitability

The Influence of Top Management Diversity on Profitability

Risk Management Process positively influences profitability Diversity within the Top Management Team (TMT), particularly regarding gender and age, not only impacts the effectiveness of strategic decision-making and organizational performance but also plays a crucial role as a moderator in the relationship between Risk Governance and financial performance. As described by Upper Echelon Theory (Hambrick & Mason, 1984), diverse attributes within the TMT expand the cognitive base, enabling the organization to be more adaptive in facing complex risks and strategic opportunities. Male leadership often focuses on more competitive and direct approaches, which can overlook collaboration and communication (Eagly & Johannesen-Schmidt, 2001). On the other hand, the presence of women in the TMT brings a more collaborative, inclusive, and empathetic perspective, thus enhancing balanced decision-making. Research by Cheuk et al. (2018) shows that Gender Diversity on the board of directors enhances financial sustainability through better Risk Governance.

This finding is supported by Jaturat Malee et al. (2021), who found that female directors and high educational levels on the TMT strengthen corporate governance and enhance sustainability disclosures. Age Diversity also provides a balance between experience and innovation in decision-making. Senior managers with deep experience can offer long-term strategic insights, while younger managers are more adaptive to new technologies and market changes (Williams & O'Reilly, 1998). Richard et al. (2004) affirm that Age Diversity enhances organizational performance due to the complementary work environment. In the context of Risk Governance, this age combination enables the organization to design more innovative and responsive risk mitigation strategies. TMT diversity expands perspectives in risk management and enhances organizational innovation capacity. This aligns with research by Anazonwu et al. (2018), which found that board diversity, especially in developing countries, significantly affects sustainability reporting, which in turn enhances the effectiveness of Risk Governance. With Gender and Age Diversity, the TMT has a greater ability to manage complex risks, thus strengthening the relationship between Risk Governance and financial performance. Diversity within the TMT not only strengthens Risk Governance but also contributes to improved financial performance through broader perspectives and more innovative strategies.

H2: Gender and Age Diversity positively influences profitability

The Moderating Role of Top Management Diversity

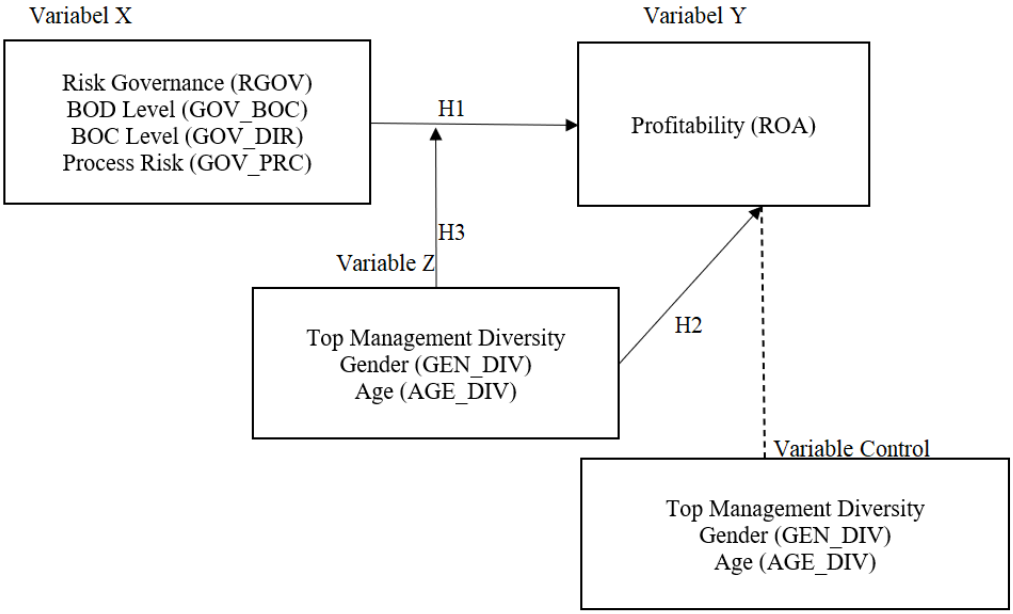
Diversity within the Top Management Team (TMT), particularly in terms of gender and age, not only moderates the relationship between Risk Governance and financial performance but can also be understood through the framework of Contingency Theory. This theory emphasizes that the success of Risk Governance in enhancing financial performance highly depends on the alignment between organizational structure, business strategy, and external conditions (Donaldson, 2001). In this context, TMT diversity acts as a contingency factor that strengthens the organization's ability to adapt to environmental dynamics. The presence of women in the TMT, for example, can provide a more inclusive and innovative perspective, strengthening the adaptability of the company's Risk Governance structure (Adams & Ferreira, 2009; Purwantini et al., 2021). Similarly, Age Diversity allows the organization to combine the experience of older members with the fresh approaches of the younger generation, resulting in more flexible and adaptive strategies (Carter et al., 2003; Milliken & Martins, 1996).

This diversity is highly relevant in competitive business environments, where organizations require strategies that are responsive to market changes. In such situations, an adaptive Risk Governance structure, supported by TMT diversity, can enhance the effectiveness of risk management and ultimately support the achievement of superior financial performance (Miles & Snow, 2003; Post et al., 2011). Additionally, the effectiveness of Risk Governance also contributes to profitability and operational efficiency, especially through the mediation of sustainability. Arouri and Pijourlet (2015) show that CSR performance, as an essential element in strategic risk governance, enhances company value in countries with strong shareholder protection. This affirms that adaptive Risk Governance, supported by TMT diversity, can create more innovative sustainability strategies, enhancing the organization's ability to respond strategically to risk challenges.

This sustainability also impacts stakeholder perceptions. Felisha and Rossieta (2017) found that a company's environmental performance has a positive relationship with debt costs, indicating that investors and lenders value companies that demonstrate good risk management capabilities. Thus, TMT diversity provides various perspectives that help the company integrate sustainability into Risk Governance more effectively. The integration between adaptive Risk Governance, sustainability, and TMT diversity creates a synergy that not only strengthens the company's value but also supports profitability and operational efficiency.

H3: Gender and Age Diversity plays a moderating role in Risk Governance's influence on profitability

Framework of Thought



RESEARCH METHOD

The population for this study consists of basic chemical manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2018–2022. The sampling technique employed is purposive sampling, based on specific criteria:

- The population includes basic chemical manufacturing companies listed on the IDX from 2018 to 2022.
- The sampling is performed using purposive sampling method, selecting companies that have published complete annual reports, sustainability reports, and financial statements during the study period.
- Companies that possess information on top management diversity, profitability, and Risk Governance elements, and have complete data for all research variables were selected. Based on these criteria, a sample of 66 companies was obtained, resulting in a total of 330 observations over the five-year research period.

Various analytical techniques are used in this study to test hypotheses and understand the relationships among variables. The primary test involves using moderation regression to identify the influence of top management diversity and company performance on Risk Governance. This analysis also includes interactions between independent and moderating variables to evaluate the extent to which top management diversity affects Risk Governance. Additionally, difference testing using the Independent Sample T-Test is conducted to compare profitability between companies with top management diversity and those without it (Ghozali, 2016).

To determine which variables have the most dominant influence on Risk Governance, multiple regression is used as the analysis method. This technique allows researchers to identify which independent variables contribute most significantly to explaining variations in Risk Governance. A significance level of 5% ($p < 0.05$) is used in the tests, ensuring that the results can be interpreted with a high level of confidence (Ghozali, 2016). With this approach, the study aims to provide robust and empirically relevant results. The following multivariate regression model was developed to test the influence of RGOV practices on profitability:

Hypothesis 1

$ROA = \alpha + \tau 1 * RGOV + LnSize+Leverage+Growth$ (1a)

$ROA = \pi 1 + \pi 2 * GOV\_BOARD + \pi 3 * GOV\_MGT + \pi 4 * GOV\_PRC+ LnSize+Leverage+Growth$ (1b)

Hypothesis 2

$ROA = \beta + \beta 1\ RGOV + \beta 2\ GEN\_DIV + \beta 3\ AGE\_DIV + LnSize+Leverage+Growth$ (2)

Hypothesis 3

$ROA = \gamma + \gamma_1 * RGOV + \gamma_2 * GEN\_DIV + \gamma_3 * AGE\_DIV + \gamma_4 * RGOV * GEN\_DIV + \gamma_5 * RGOV * AGE\_DIV + LnSize + Leverage + Growth$

Risk Governance Index (RGOV)

This research utilizes several variables measured based on clear operational definitions. The dependent variable in this study is Risk Governance, which is measured based on governance indicators at the level of the Board of Directors (BOD), the Board of Commissioners (BOC), and risk management processes as disclosed in the company's annual reports.

Table 3.1 Risk Governance (RGOV) Assessment Criteria

No	Item	RGOV Level	Item
A	**Risk Governance Structure: Board Level (Principles 1–3) – GOV_BOARD**		6
1	Responsibilities of board members (BOC)	Are the responsibilities of the BOC members disclosed considering risk aspects?	
2	Independence and competence of board members	Are BOC members independent, indicated by ≥50% being independent; and do they possess risk management competence, evidenced by at least one member having a risk management certification or experience in risk management?	
3	Selection process of board member candidates	Does the selection process for Board of Commissioners (BOC) candidates evaluate financial independence and competence; track record of integrity and good reputation; and whether the candidates have sufficient time to fulfill their responsibilities?	
4	Audit committee	Is the audit committee independent, indicated by having ≥50% independent audit committee members; and does it include at least one person with expertise in finance or accounting?	
5	Risk committee	Is the risk committee independent, indicated by having ≥50% independent risk committee members; and do they have expertise in corporate risk management, evidenced by at least one risk committee member having a risk management certification?	
6	Compensation committee	Is the compensation committee independent, indicated by having ≥50% independent compensation committee members; and does the committee evaluate compensation considering risk aspects?	
B	**Risk Governance Structure: Management Level (Principles 4, 6, 9, 10) – GOV_MGT**		4
1	Senior management	Does senior management's role in managing company activities consider aspects of risk (risk appetite)?	
2	Chief risk officer (CRO)	Is there a CRO (Chief Risk Officer) who is independent from other executive functions?	

3	Internal audit function	Is the compliance function independent from operational units; and does this function provide reports related to compliance risk?	
4	HRD	Is the internal audit function independent from operational units; are its members professionals or certified internal auditors; and does this function have expertise in risk-related activities, evidenced by risk management certification?	
C	**Risk Management Practices (Principles 5–8, 11) – GOV_PRC**		7
1	Integrated risk governance	Does the risk management framework cover all corporate entities (integrated)?	
2	CRO's reporting	Does the CRO (Risk Management Committee/Director of Risk) report the risk profile directly to the board (Board Risk Committee or BOC)?	
3	Risk evaluation by board and senior management	Do the board risk committee or senior management regularly evaluate the risks faced by the company and the entire risk profile?	
4	Risk meeting (board and senior management)	Is risk-related information communicated to the board risk committee and senior management?	
5	Risk information	Does the risk profile reporting system include important and routine information?	
6	Risk-based performance	Does the compensation structure consider risk-based compensation in evaluating the performance of managers (senior executives)?	
7	Publication	Are Governance disclosures delivered to stakeholders through the website and annual reports?	
	Total Assessment Items		17

Source. Karyani, (2019)

$$\textbf{GOV\_BOARD} = \frac{\sum \textbf{\textit{Board Governance}}\ (\textbf{\textit{GOV\_BOARD}})}{\textbf{\textit{Total Score}}\ (\mathbf{18})}$$

$$\textbf{GOV\_MGT} = \frac{\sum \textbf{\textit{Board Governance}}\ (\textbf{\textit{GOV\_MGT}})}{\textbf{\textit{Total Score}}\ (\mathbf{12})}$$

$$\textbf{GOV\_PRC} = \frac{\sum \textbf{\textit{Board Governance}}\ (\textbf{\textit{GOV\_PRC}})}{\textbf{\textit{Total Score}}\ (\mathbf{21})}$$

$$\textbf{RGOV} = \frac{\sum \textbf{\textit{Risk Governance}}\ (\textbf{\textit{RGOV}})}{\textbf{\textit{Total Score}}\ (\mathbf{51})}$$

The scoring technique in this study is conducted to measure Risk Governance based on three main components: Board-Level Risk Governance Structure (GOV_BOARD), Management Level (GOV_MGT), and Risk Management Practices (GOV_PRC). Each component consists of a number of assessment items that are evaluated based on specific criteria.

GOV_BOARD has 6 items, such as board member responsibilities, independence, and risk committee competence, with a total maximum score of 18 (6 x 3). GOV_MGT has 4 items, including the role of senior management and internal audit functions, with a total maximum score of 12 (4 x 3). GOV_PRC has 7 items, covering integrated risk framework and risk-based evaluation, with a total maximum score of 21 (7 x 3).

The interpretation of the Risk Governance Index (RGOV) score range provides an understanding of the quality of Risk Governance in an organization. Scores between 0.8–1.0 reflect excellent Risk Governance (Good Governance), with practices fully in accordance with international guidelines such as the Basel Committee (BCBS, 2015). Scores from 0.6–0.79 indicate Adequate Governance but still have room for improvement, while scores below 0.6 show significant weaknesses in Risk Governance (Poor Governance) that require substantial improvement. Previous research, as reported by Karyani (2019).

Risk Governance applied in the banking industry can serve as a reference for basic manufacturing companies because the fundamental principles are universal and relevant across various sectors. Manufacturing companies, like banks, face strategic, operational, financial, and reputational risks, albeit in different forms and intensities. For example, manufacturers often face volatility in raw material prices, supply chain disruptions, and compliance with environmental regulations, similar to the complexity of market and compliance risks faced by banks.

The Risk Governance Principles of the Basel Committee on Banking Supervision (BCBS, 2015) and the framework developed by the OECD (2014) emphasize the importance of transparency and risk oversight by the board of directors and management, which are also relevant to the manufacturing sector. Furthermore, research conducted by Aebi et al. (2012) suggests that the structure of Risk Governance, including independent risk functions (CRO) and risk-based compensation, can enhance organizational efficiency across various industries. Thus, the banking sector's Risk Governance framework can be adapted for manufacturing companies to help manage risks more structuredly, enhance transparency, and create additional value for the company.

Top Management Diversity

The moderating variable in this study is the diversity of top management, which consists of two dimensions: Gender Diversity and Age Diversity. Gender Diversity is measured based on the proportion of women on the Board of Directors compared to the total number of Board members, while Age Diversity is measured using the coefficient of variation of the ages of top management members (Anazonwu, 2018).

Previous research has shown that Gender Diversity can provide significant benefits to companies through various perspectives and expertise, as well as enhancing innovation and decision-making (Jaturat, 2021). In this study, top management diversity is measured through two dimensions: Gender Diversity and Age Diversity, focusing on a quantitative approach for both variables.

1. Measurement of Gender Diversity: Gender Diversity is calculated as the proportion of women on the Board of Directors compared to the total number of Board members. This approach provides a simple yet effective measure to reflect gender representation at the top management level.
2. Measurement of Age Diversity: Age Diversity is measured using the coefficient of variation of the ages of top management members, adopted from the method by Anazonwu (2018). The coefficient of variation is calculated as the ratio of the standard deviation of ages to the average age of top management members. This formula provides an overview of how much the ages of top management members vary around the average age. The higher the coefficient of variation, the greater the Age Diversity within the team. This approach allows for a deeper analysis of the impact of demographic diversity in top management on company performance, including the positive influence of Gender Diversity on innovation and decision-making, as outlined in the research by Jaturat (2021).

Profitability

Profitability as an independent variable in this study is measured using Return on Assets (ROA), which is the ratio of net profit to total assets, reflecting the company's ability to generate profit from its assets. ROA is used because it is considered a primary indicator for evaluating a company's efficiency in managing its assets (Iswandi, 2022). Moreover, ROA indicates a company's ability to use assets to increase revenue and profit, as explained by Darwis et al. (2022).

Control Variables

The use of company size, measured through the natural logarithm of total assets (Ln Size), as a control variable is based on various studies that show a significant influence of company size on profitability and financial performance. Rahmawati (2023) explains that larger companies have better access to capital markets, better reputation, and higher financial flexibility, thus they can enhance the efficiency of their capital structure. Therefore, the natural logarithm of total assets provides a more accurate indicator to measure the scale of a company, while also illustrating the company's ability to manage resources to support long-term profitability (Rahmawati, 2023). This research reinforces the argument that company size is an important variable that not only affects profitability but also the value of companies across various industry sectors.

Analysis Method

This study uses a panel data analysis approach to evaluate the relationships among variables. The analysis stages include three main steps. First, descriptive analysis is conducted to provide an overview of the data distribution and characteristics. Second, a correlation test among variables is performed to identify initial linear relationships among the variables studied. Third, a multivariate test with panel data models is conducted to analyze the causal relationships among variables in more depth. Before conducting multivariate tests, this study first performs a panel model suitability test, including the Hausman, Breusch-Pagan, and Chow tests to determine the best model between fixed effect, random effect, or common model. This methodology aligns with recommendations by Greene (2012), which emphasize the importance of choosing the appropriate panel model to ensure the validity of multivariate analysis results.

RESEARCH RESULT

Descriptive statistical analysis is used to provide an overview of the distribution and behavior of the sample data by examining the minimum, maximum, mean, and standard deviation values of each independent and dependent variable (Ghozali, 2018). This descriptive analysis is conducted in the study with the aim of forming a better understanding and strengthening the researcher's analysis in drawing conclusions. The descriptive analysis for this study is as follows:

	Mean	Median	Maximum	Minimum	Std. Dev.
ROA	0.02	0.03	0.36	-1.05	0.11
RGOV	0.70	0.73	1.00	0.47	0.15
GOV_BOC	0.72	0.78	1.00	0.39	0.14
GOV_DIR	0.73	0.75	1.00	0.5	0.15
GOV_PRC	0.67	0.66	1.00	0.38	0.18
GEN DIV	0.10	0	0.50	0	0.17
AGE_DIV	0.125	0.11	0.29	0.01	0.063
LNSIZE	14.89	14.72	18.84	11.79	1.59
LEVERAGE	3.68	0.87	786.97	-10.18	43.35
GROWTH	0.16	0.08	12.00	-1	0.95

Source: Processed by Researcher (2025)

The dependent variable, Return on Assets (ROA), representing profitability, has an average value of 0.02, indicating a 2% return on total assets on average across the sample. However, there is significant variation, with a maximum of 0.36 (36%) and a minimum of -1.05 (-105%), reflecting that some companies are experiencing substantial losses. The standard deviation of 0.11 further highlights this variability.

Risk Governance (RGOV) has a mean score of 0.7008, indicating an overall adequate level of Risk Governance. Based on the interpretation of the Risk Governance Index (RGOV) score ranges, values between 0.6 and 0.79 signify "Adequate Governance," suggesting that, while companies meet essential governance standards, there is still room for improvement (Karyani, 2019). The RGOV

ranges from a minimum of 0.47 to a maximum of 1.00, with a standard deviation of 0.15, indicating moderate variability in governance practices across the sample.

For the moderating variables, Gender Diversity (GEN_DIV) has a mean of 0.10, meaning women constitute 10% of the Board of Directors on average across the sample companies. The minimum value is 0, indicating no gender diversity in some firms, while the maximum of 0.50 (50%) reflects more balanced gender representation in a few cases. The standard deviation of 0.17 indicates significant variation in gender diversity among companies.

Age Diversity (AGE_DIV), calculated using the coefficient of variation of the ages of top management members, has an average value of 0.12, ranging from 0.01 to 0.29. This suggests a moderate level of variation in the ages of top management, with a standard deviation of 0.06 reflecting a relatively consistent distribution.

The control variable, Company Size (LNSIZE), measured as the natural logarithm of total assets, has a mean of 14.89, with a range from a minimum of 11.79 to a maximum of 18.84. The standard deviation of 1.59 indicates notable differences in company size across the sample.

Leverage, reflecting the use of debt financing, has a mean of 3.68, but with significant variability (standard deviation of 43.35). The maximum leverage of 786.97 and the minimum of -10.18 highlight extreme variations in financial structures across firms, including outliers.

Growth, measured as the percentage change in revenue, shows an average growth rate of 0.15 (15%). The maximum value of 12.00 reflects high revenue growth in some companies, while the minimum of -1.00 indicates negative growth. The standard deviation of 0.95 highlights considerable variability in growth rates across the sample.

These descriptive statistics provide an overview of the financial performance, governance quality, and diversity levels of the sampled companies, forming the foundation for further inferential analyses.

Correlation Test

Table 4.2 Correlation Analysis

Cor/Prob	Mean	St-Dev	ROA	RGOV	GEN_DIV	AGE_DIV	LNSIZE	LEVERAGE	GROWTH
ROA	0.02	0.11	1.00						
RGOV	0.70	0.15	0.11**	1.00					
GEN_DIV	0.10	0.17	0.05	0.21**	1.00				
AGE_DIV	0.12	0.06	0.14**	-0.03	-0.04	1.00			
LNSIZE	14.89	1.59	0.14**	0.30**	-0.11	0.00	1.00		
LEVERAGE	3.68	43.35	-0.10**	-0.03	-0.03	-0.02	-0.01	1.00	
GROWTH	0.15	0.95	-0.02	-0.15	-0.04	-0.07*	0.00	-0.05	1.00

Note(s):N=330***Significant at 1%, **5%;*10%

Sources: Data processed from content analysis of annual and sustainability reports

Source: Processed by Researcher (2025)

AGE_DIV has an average of 0.125 with a standard deviation of 0.063, indicating a low but consistent level of age diversity across most companies. AGE_DIV has a significant positive correlation with ROA (0.14**), suggesting that age diversity slightly supports company profitability. However, it has a significant negative correlation with GROWTH (-0.07*), indicating that age diversity can reduce the company's growth rate.

ROA has an average of 0.021 and a standard deviation of 0.110, indicating relatively low profitability with considerable variation among companies. ROA has a significant positive correlation with RGOV (0.11**) and AGE_DIV (0.14**), suggesting that risk governance, board governance, and age diversity can enhance company profitability. However, ROA has a significant negative correlation with LEVERAGE (-0.10**), indicating that companies with higher debt ratios tend to have lower profitability.

LEVERAGE has an average of 3.680 and a very large standard deviation of 43.351, indicating a highly varied distribution among companies. LEVERAGE has a significant negative correlation with ROA (-0.10**), suggesting that high debt ratios tend to reduce company profitability.

LNSIZE has an average of 14.887 with a standard deviation of 1.587, indicating relatively large company sizes with moderate variation. LNSIZE has a significant positive correlation with RGOV (0.31***), suggesting that larger companies tend to have better risk governance, board governance, and governance processes. However, LNSIZE has a significant negative relationship with GEN_DIV (-0.11*), indicating lower gender diversity in larger companies.

GROWTH has an average of 0.155 with a standard deviation of 0.952, indicating varying growth rates across companies. GROWTH has a significant negative correlation with RGOV (-0.15**), suggesting that companies more focused on governance tend to have lower growth rates. Additionally, GROWTH shows a significant negative correlation with AGE_DIV (-0.07*), indicating that age diversity can also reduce a company's growth rate.rowth, measured as the percentage change in revenue, shows an average growth rate of 0.15 (15%). The maximum value of 12.00 reflects high revenue growth in some companies, while the minimum of -1.00 indicates negative growth. The standard deviation of 0.95 highlights considerable variability in growth rates across the sample. These descriptive statistics provide an overview of the financial performance, governance quality, and diversity levels of the sampled companies, forming the foundation for further inferential analyses.

Multivariate Test

The regression analysis results show the influence of various variables on company profitability in each model. In Model 1 (H1), the direct effect of risk governance (RGOV) on profitability has a positive coefficient (0.049) but is not significant (p = 0.480), indicating that risk governance does not have a strong direct relationship with profitability.

Model 2 for H1a shows a positive effect of GOV_BOC (Board Diversity) on profitability with a coefficient of 0.198, significant at the 10% level (p = 0.099), suggesting that diversity on the board has a positive—albeit weak—effect. In H1b, the GOV_DIR (Management Diversity) variable shows a negative coefficient (-0.061) and is not significant (p = 0.590), implying that management diversity does not have a clear impact on profitability. H1c also reveals similar results, where GOV_PRC (Risk Management Process) has a negative coefficient (-0.070) and is not significant (p = 0.367), indicating that diversity in governance processes does not significantly affect profitability.

Furthermore, Model 3 for H2a, which incorporates the moderating variable of gender diversity (GEN_DIV), shows a positive coefficient (0.032) but is not significant (p = 0.389), indicating that gender diversity in the top management team does not moderate the relationship between risk governance and profitability. However, in H2b, age diversity (AGE_DIV) yields a significantly positive coefficient of 0.245 (p = 0.010), suggesting that age diversity significantly moderates the relationship between risk governance and profitability—pointing to the importance of age diversity in the top management team for enhancing the effect of risk governance on financial performance.

In Model 4 (H3a), the interaction variable between RGOV and GEN_DIV (RGOV_GEN) shows a positive coefficient (0.080) but is not significant (p = 0.801), indicating that gender diversity does not provide a significant moderating effect. Meanwhile, in H3b, which examines the interaction between RGOV and AGE_DIV (RGOV_AGE), the coefficient is negative (-0.017) and not significant (p = 0.965), signifying that age diversity does not offer a significant moderating effect when directly combined. with risk governance.

Table 4.3 Regression Result

	Pred	Model 1		Model 2		Model 3		Model 4	
Independent	**sign**	**H1**	**H1a**	**H1b**	**H1c**	**H2a**	**H2b**	**H3a**	**H3b**
RGOV	+	0.049 (0.480)				0.049 (0.270)	0.049 (0.270)		
GOV_BOC	+		**0.198502 (0.0993)***						
GOV_DIR	+			-0.061 (0.590)					
GOV_PRC	+				-0.070 (0.367)				
GEN_DIV	+					0.032 (0.389)		-0.024 (0.914)	
AGE_DIV	+/-						**0.244 (0.01)*****		-0.017 (0.965)
RGOV*GEN	+/-							0.080 (0.801)	
RGOV*AGE	+/-								0.278 (0.623)
Control Variable									
LNSIZE	+/-	**0.012 (0.064)***	**0.0130 (0.045)****	**0.0130 (0.045)****	**0.0130 (0.045)****	**0.009 (0.030)****	**0.009 (0.030)****	**0.012 (0.053)***	**0.012 (0.053)***
LEVERAGE	+/-	-0.000 (0.157)	-0.000 (0.158)	-0.000 (0.158)	-0.000 (0.158)	-0.000 (0.101)	-0.000 (0.101)	-0.000 (0.152)	-0.000 (0.152)
GROWTH	+/-	-0.000 (0.982)	-0.000 (0.945)	-0.000 (0.945)	-0.000 (0.945)	-0.001 (0.917)	-0.001 (0.917)	0.000 (0.992)	0.000 (0.992)
N		**330**	**330**	**330**	**330**	**330**	**330**	**330**	**330**
Adj R_Square		**0.436**	**0.436**	**0.436**	**0.436**	**0.434**	**0.434**	**0.434**	**0.434**
F-Statistic		**1.759**	**1.622**	**1.622**	**1.622**	**1.559**	**1.559**	**1.353**	**1.353**
Prob (F-Stat)		**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Source: Processed by Researcher (2025)

DISCUSSION

This study found that governance at the board level (GOV_BOC) has a significant positive impact on company profitability (ROA), emphasizing the strategic importance of the board of commissioners in oversight and decision-making. The findings highlight that an effective board can enhance corporate performance by ensuring flexibility, collaboration, and adaptability in responding to dynamic business environments. In contrast, governance at the management level (GOV_DIR) and risk management processes (GOV_PRC) do not show significant results, indicating the need for companies to strengthen managerial roles and integrate risk management processes more effectively into their business strategies to drive profitability.

Age diversity (AGE_DIV) has a significant positive effect on profitability, suggesting that companies with diverse age representation in their management teams can achieve better financial performance. This diversity allows organizations to leverage the experience of senior members for long-term strategic decisions and risk mitigation while incorporating the fresh perspectives and innovative approaches brought by younger members. However, gender diversity (GEN_DIV) and the interaction of diversity with risk governance do not yield significant results, indicating that the integration of gender diversity into governance strategies may require a more deliberate approach to realize its full potential. Lastly, company size (LnSIZE) consistently shows a positive and significant effect, indicating that larger companies benefit from competitive advantages such as greater market access, economies of scale, and financial flexibility, which support higher profitability.

Companies can enhance profitability and resilience by strengthening their boards' oversight and competence, promoting age diversity, and integrating risk management into strategic decision-making. Ensuring board independence, adopting proactive risk frameworks, and balancing experienced and innovative talent fosters adaptive governance. Additionally, organizations should leverage scale advantages, reevaluate gender diversity initiatives with a focus on inclusive cultures, and more explicitly integrate leadership diversity into risk governance. These measures not only drive responsive strategies but also create the conditions for sustainable growth.

On a broader level, regulators and policymakers can support these efforts by issuing guidelines that encourage stronger governance practices and transparent reporting on board diversity and risk management. Mandatory disclosures and incentives for significant progress can stimulate organizational change, while further research is necessary to uncover the nuanced relationships among gender diversity, risk governance, and firm performance. Longitudinal or sector-specific studies and exploration of other diversity dimensions could provide deeper insights, ultimately helping companies align with Adaptive Governance and Upper Echelon theories to navigate complex business environments more effectively.

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