



The role of capital intensity in mediating CEO risk-taking, sustainability reporting, aggressive tax strategies, and financial reporting

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ABSTRACT

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This study explores the influence of CEO risk-taking, sustainability reporting, and aggressive tax practices on financial reporting quality, focusing on the mediating role of capital intensity. Data from 2,305 companies listed in Indonesia over five years were analyzed using path analysis, with the Baron and Kenny approach employed to identify significant mediation effects. The findings reveal that CEO risk-taking, sustainability reporting, and aggressive tax practices indirectly impact financial reporting quality through capital intensity. The study also underscores the role of materiality gaps in sustainability reporting and tax non-compliance in shaping financial reporting outcomes. Capital intensity emerges as a crucial mediator, linking these factors to financial reporting quality. The results suggest that these indirect effects are significant and should be considered in corporate governance and financial management. To improve financial reporting quality, companies must recognize the role of capital intensity, while regulators and policymakers should address sustainability reporting standards and the discrepancies between accounting and tax regulations.

Contribution/Originality: This study underscores the crucial role of capital intensity in enhancing financial report quality. Through PLS-SEM mediation analysis, it reveals how capital intensity mediates the indirect effects of CEO risk-taking, tax aggressiveness, and sustainability reporting. The findings provide key insights for policymakers and businesses focused on improving financial reporting standards.

1. INTRODUCTION

Indonesia has two standards in disclosure and reporting that refer to the International Accounting Standards Board (IASB), IFRS Financial Reporting and IFRS Sustainability Reporting. Good financial statements are characterized by fair accounting information and reporting (Hanlon, Hoopes, & Shroff, 2014). There are two standards applied to ensure reliability, fairness, objectivity, and usefulness in the financial statements and sustainability reports. The first is the financial reporting standard for managing income activities, including modifying or deliberately omitting transaction points, accounts, or other important information from financial statements or supporting documents, selecting accounting principles, and purposely applying the wrong policies and procedures in assessing, recognizing, reporting, and publishing economic events and business transactions of an entity is fraudulent financial reporting (Laksmi & Narsa, 2021). Contrary to Hanlon et al. (2014) an indicator of good financial reporting quality is earnings management. Therefore, there are two ways to test earnings management (Laksmi & Narsa, 2021). The quality of good financial statements can reduce the manipulation of earnings that are too high and be able to reduce

discretionary accruals. CEOs emphasize the importance of leadership and decision-making styles that are ethical and can influence corporate culture towards more responsible and sustainable business practices, thereby having a positive impact on employees and society at large.

CEOs can utilize these insights to find the right balance between risk-taking and sustainable practices and to improve corporate transparency and financial stability as reflected in the quality of financial statements. High earnings quality indicates good report quality. CEOs tend to take risks to reduce risk uncertainty (Christensen, Dhaliwal, Boivie, & Graffin, 2015). The tax planning strategy serves as an alternative to the CEO in providing short-term profits and long-term stability. The CEO's ability to achieve legality for a report in terms of tax regulations and general accounting standard regulations in Indonesia is limited by the existence of ash regulations. Increased transparency of information associated with comparable financial statements is likely to lower moral hazard issues and reduce opportunities and incentives for management to engage in riskier activities. In addition, financial statement comparisons can lead to effective compliance and governance practices, enabling rigorous oversight and many more meaningful evaluations by the board regarding managerial investment decisions (Hasan & Taylor, 2020). In the research results presented by Low (2009) the ratios used to calculate executive characteristics include risk-taking or risk-averse characters, risk comparison. Studies conducted by Vo, Nguyen, and Phan (2022) found a significant correlation between risk-taking behavior and earnings management. According to research conducted by Tarus and Korir (2023) financial reporting plays an important role in shaping the way stakeholders view CEOs. In contrast, Wu, Chen, and Lee (2016) found a poor correlation between earnings management and an independent board of directors. We must understand how CEO risk aversion affects the firm's approach to risk-taking (Cid-Aranda & López-Iturriaga, 2023). A CEO's characteristics can shape the risk exposure of their business. This risk is identified by the standard deviation of the firm's earnings, which may exceed or fall short of targets. Dealing with uncertainty and taking risks are important aspects of running a business. Proper oversight of these risks is an important responsibility of the CEO. The Board of Directors has the responsibility to safeguard revenue-generating activities, also known as "golden geese," from both routine risks and unforeseen disasters, referred to as "black swans." The term "company" comes from the Latin word "Impressum," which means "to take over oneself." Mayberry, Park, and Xu (2021) found a positive relationship between intensive risk-taking as measured by incentives and earnings management; the result was insignificant, revealing performance-related misspecification in discretionary accruals. Managerial characteristics that are conservative in taking risks are crucial in making successful strategy and investment decisions in the company (Christensen et al., 2015). CEO risk-taking refers to the extent to which the CEO is willing to make decisions that involve high risk to achieve company goals, including investment in new projects, technological innovation, and expansion into new markets. One of the influencing factors is managerial incentives and compensation. This is why managerial discretion is so important; it can help predict and explain organizational phenomena. The CEO balances capital management strategies with effective risk management. A strong risk management strategy is reflected in the financial statements. A risk-taking CEO who is ethical aligns good organizational governance and is transparent in making decisions on potential risks. This provides a more realistic picture of the financial statements.

Indonesia follows IFRS standards for financial reporting, but tax reporting is governed by Tax Law no. 36 of 2008. Managers can use this discretion to manipulate income without affecting taxable income (Frank, Lynch, & Rego, 2009). The increase in corporate capital intensity is aligned with increased tax strategies and has a significant impact on the company's ability to avoid taxes by Hamidian, Mohamadi, and Karimi Deldar (2023) and we must avoid promoting or incentivizing overly aggressive tax planning strategies. Accurate recording and reporting of numerous fixed assets is crucial for companies with high capital intensity. Errors in reporting fixed assets can reduce the quality of financial statements. Good management of capital intensity includes recording depreciation, revaluing assets, and disclosing liabilities related to fixed assets. Differences in the standards of accounting and tax reporting can lead to opportunistic behavior by managers. This must be watched out for by company management because it will have an

impact on tax aggressiveness. In our study conducted by Heltzer, Mindak, and Shelton (2012) it was found that companies with an aggressive financial reporting culture are also aggressive in their tax reporting. This contrasts with the behavior of companies that are willing to pay higher taxes in order to report larger financial statement profits. Frank et al. (2009) noted that the market tends to overestimate the aggressiveness of tax reporting for companies with higher profits. When it comes to the impact of tax avoidance on the quality of financial statements, there are differing conclusions in the literature. According to Wang, Xu, Sun, and Cullinan (2020) and Nguyen (2021) tax avoidance has a positive impact on financial statement quality. However, there are conflicting views, with Balakrishnan, Blouin, and Guay (2019), Bauer, Fang, Pittman, Zhang, and Zhao (2020), Chen, Li, Lu, and Li (2024), Delgado, Fernández-Rodríguez, García-Fernández, Landajo, and Martínez-Arias (2023), Deng and Wen (2024), Durnev, Li, and Magnan (2017) and Guenther, Matsunaga, and Williams (2017) suggesting that tax avoidance has a negative effect on the quality of financial statements. Aggressive tax avoidance has a negative impact on the accuracy of financial statements, as evidenced by high levels of earnings management. The Indonesian government has legalized tax planning strategies associated with aggressive tax practices. However, excessively aggressive tax behavior can lead to penalties from government authorities, fines from tax agencies, and boycotts from consumers. Regulators can develop more effective policies to promote transparent tax reporting, discourage aggressive tax practices, and acknowledge their positive impact. Additionally, our research has revealed a significant correlation between tax aggressiveness and Corporate Social Responsibility (CSR), consistent with findings by Lanis and Richardson (2012). It is noted that companies engaging in aggressive tax practices are considered to have lower tax rates and demonstrate less social responsibility. The term 'whitewashing' characterizes the tax exposure as a sign of socially irresponsible behavior, which could potentially undermine the extent of social responsibility coverage. Chen (2017) research underscores that corporate social responsibility activities may not always reflect genuine dedication to the community. Sometimes, companies use their contributions to society to hide aggressive tax practices uphold a positive reputation (Chen, 2017).

The 2022 survey introduces new topics, such as materiality assessments, reporting on social risks, and reporting on governance risks (KPMG, 2022). Information disclosed in these reports can help reduce investment risk and contribute to sustainable development (Akhter & Dey, 2017). However, achieving high-quality and consistent sustainability reporting remains a challenge. Key insights from the literature review highlight the importance of materiality, as recommended by the Global Reporting Initiative (GRI). Although assurance is not yet a GRI requirement, current developments are incorporating GRI principles into key assurance standards (Luque-Vílchez, Cordazzo, Rimmel, & Tilt, 2023). Companies investing more in producing high-quality sustainability reports are likely to demonstrate a strong commitment to quality, which can alleviate auditors' concerns about opportunistic reporting, reduce business risk, and facilitate the verification of financial statements (Al-Shaer, 2020). The study's findings reveal that coercive pressure, such as the "Green Finance" policy, did not significantly improve reporting quality in the financial sector. In contrast, normative pressure had a substantial impact on corporate social responsibility (CSR) practices within financial institutions. The research suggests that banks in China could play a leading role in advancing these practices (Dong, Xu, & McIver, 2023).

The 2022 survey, first published in 1993, deals with sustainability reporting trends worldwide. There is a growing expectation of mandatory and regulated sustainability reporting adoption, leading to potential significant changes in the reporting landscape. The report presents current reporting trends, identifies gaps to meet regulatory requirements, and outlines business strategies for companies to fulfill increasing regulatory expectations, create impact, and generate value. Klynveld Peat Marwick Goerdeler (KPMG) professionals conducted an analysis of financial statements, sustainability and Environmental, Social, and Governance (ESG) reports, and websites of 5,800 companies across 58 countries, regions, and jurisdictions. The survey offers valuable information for organizations preparing their sustainability reports, as well as for investors, asset managers, and rating agencies looking into sustainability and ESG information concerning corporate performance and risk (KPMG, 2022). Companies with a

focus on Corporate Social Responsibility (CSR) that invest resources into meeting social expectations tend to minimize earnings management, thereby providing more transparent and reliable financial information to investors (Bozzolan, Fabrizi, Mallin, & Michelon, 2015) reducing information risk, and contributing to sustainable development (Akhter & Dey, 2017). Managers face the challenge of enhancing the credibility and quality of their reports to tackle the mounting concerns of stakeholders (Cohen & Simnett, 2015). Credible disclosures can effectively control managerial incentives to manipulate earnings and rebuild trust among shareholders and stakeholders (Katmon & Farooque, 2017). Sustainability reporting serves as a valuable communication tool for managers to showcase their trustworthiness and share information about their company's sustainable development with stakeholders. Institutionalizing sustainable practices within a company lays a strong foundation for enhancing the quality of the company's reports and for effectively communicating its sustainability information to stakeholders. The high level of carbon emissions worldwide impacts potential investors considering investing in Indonesia. Sustainability reports that evaluate qualitative impacts beyond financial statements should be readily available. Therefore, IFRS Sustainability delves into sustainability-related information that is comparable, verifiable, timely, and understandable (ifrs.org). The Triple Bottom Line (Elkington, 2013) encourages companies to assess their performance not just based on financial factors, but also economic, social, and environmental aspects. There is a global shift towards accelerating sustainable energy use to reduce the intensity of carbon emissions through policy. Governments now mandate responsible behavior from businesses by requiring them to publicly report pollutants and waste generated by their facilities. Improving energy efficiency and increasing the adoption of renewable energy not only enhances the quantity, predictability, and ease of developing country financing flows, but also supports technological innovation, skilled labor financing, knowledge sharing, and facilities. This also entails adapting to changes in knowledge transfer, enhancing skills, and leveraging the expertise of available resources. However, preparing sustainability reports incurs social or reputational costs that can result in stakeholder dissatisfaction (Chen, 2017). According to PwC data, by 2022, 80% of companies in Indonesia will be using GRI standards for sustainability reporting, while 92% of companies in Asia Pacific will be applying ESG. The GRI standards are the most commonly used sustainability reporting standards and frameworks across various industries.

The disclosure of information related to the Sustainable Development Goals (SDGs) is crucial in providing investors with decision-making information. Management determines the cost of sustainability reporting for a company based on its perceived impact on the company's reputation. While sustainability reporting may not be very effective for tracking sustainability performance and comparing companies, various studies, including those by Wagenhofer (2024) and Trisnawati, Wiyadi, and Setiawati (2016) have shown that the benefits of applying accounting concepts are generally accepted. Inconsistent research results have also found support, as highlighted by Chen (2017); Dang and Pham (2022), and Ningsih, Prasetyo, Puspitasari, Cahyono, and Kamarudin (2023). Similarly, a study by Chulkov and Wang (2021) discovered a positive relationship between Corporate Social Responsibility (CSR) and the quality of financial reports. The sustainability report contains information about how a company's operations impact the natural environment, providing shareholders with details about labor practices, product sourcing, energy efficiency, environmental impact, and business ethics. Sustainability reporting makes abstract concepts tangible, aiding in the understanding and management of the impact of sustainability development on organizational activities and strategies (GRI, 2019).

2. LITERATUR REVIEW

2.1. Agency Theory

Agency theory examines the relationship between principals (owners or shareholders) and agents (management or CEO) in a company. The principal entrusts the agent with the managing the company and making shareholder value-maximizing decisions. However, there is a potential conflict of interest between the principal and the agent, as agents may act in their self-interest, which is not always in line with the interests of the principal. CEOs may take

higher risks to pursue projects that may enhance their reputation or compensation, even though this could be risky for shareholder value. Risk-taking by CEO should be properly managed and monitored to ensure that the risks taken are in line with shareholders' interests. Examining how capital intensity mediates the relationship between CEO risk-taking and financial statement quality, given that high-risk decisions by CEOs in the context of high capital-intensity firms may affect financial statement quality through disclosure and asset recording. Principals want businesses to operate sustainably in order to maintain reputation and long-term sustainability. CEO may conduct sustainability reporting to demonstrate their commitment to sustainability, but it could also be just to fulfill regulatory demands or appease stakeholders. This study illustrates the relationship between sustainability reporting and good financial reporting quality through the mediation of capital intensity. CEO may engage in aggressive tax strategies to reduce tax burden and increase short-term profits. However, these strategies may lead to long-term risks such as tax audits or fines, which may be undesirable for principals. In this study, we aim to examine whether the level of capital investment mediates the relationship between tax aggressiveness and the quality of financial reporting, as measured by earnings management. We seek to explore how the amount of capital investment impacts the connection between CEO risk-taking, tax aggressiveness, and the quality of financial reporting, with a focus on how substantial investments affect the transparency and accuracy of these statements. Additionally, we will investigate whether tax aggressiveness has a negative influence on the quality of financial reporting.

2.2. The Capital Asset Pricing (CAPM)

The Capital Asset Pricing Model (CAPM) is a financial theory that connects investment returns to systematic risk. Developed by researchers including [Markowitz \(1999\)](#); [Perold \(2004\)](#) and [Sharpe \(1964\)](#) CAPM posits that investors require higher returns for taking on additional risk. The theory examines effective asset management strategies to support a firm's financial goals and explores the pricing of capital assets under the assumption of risk aversion, as proposed by [Jensen \(1969\)](#). Managers can make capital asset pricing decisions using this theory, as proposed by [Fama and French \(1996\)](#).

2.3. Legitimacy Theory

Legitimacy theory focuses on the relationship between business actions and the advancement of societal goals ([Lanis & Richardson, 2012](#)). The aim is to establish a management system that fosters harmony between the company, society, and regulatory bodies. Companies widely use legitimacy theory to explain their choice to transparently disclose their activities ([Dai, Du, Young, & Tang, 2018](#)). The pressing need to fulfil social and environmental responsibilities mandates companies to include information in sustainability reports ([Dube & Maroun, 2017](#)). As stated by [Truant, Corazza, and Scagnelli \(2017\)](#) disclosing sustainability issues serves a strategic purpose and is not solely about complying with civic obligations. The primary objective is to uphold the company's positive reputation with the general public, emphasizing the importance of disclosing non-financial information to validate the company's legitimacy ([Dube & Maroun, 2017](#)). In line with the concept of legitimacy, companies actively addressing the tax payment system must provide additional information about their social responsibilities in various aspects of their sustainability reports.

2.4. Capital Intensity

Researchers have found a connection between the asset structure (capital intensity) and financial reporting. A clear asset structure is essential for illustrating the variables studied and demonstrating the financial statements' quality. Capital intensity is defined as the amount of capital required to generate revenue. CEOs who are risk-averse tend to choose projects with lower risk and more stable return potential, potentially missing out on larger growth opportunities in order to maintain the company's financial and strategic stability ([Christensen et al., 2015](#)). However,

their decisions may still bring benefits and increase shareholder value. According to the agency theory, the risk-averse CEO, acting as an agent, and the shareholders, acting as principals, both benefit in this scenario. The agency theory particularly supports the CEO's ability to evaluate risks and opportunities, and manage shareholder capital effectively and efficiently. Research by Hambrick and Finkelstein (1987) found that narcissistic CEOs in state-owned companies and projects with low capital intensity tend to have greater managerial discretion and are more likely to take greater risks in pursuit of external asset growth. Yang, Lin, Quan, Cunningham, and Huang (2024) also examined the impact of CEO narcissism on entrepreneurial orientation, taking factors such as capital intensity and others into account as moderating variables (Yang et al., 2024). Companies with high capital intensity have significant fixed assets such as plants, machinery, and equipment. These assets require complex accounting procedures, including valuation, depreciation, and amortization. Ethical CEOs and decision-making can influence corporate culture towards more responsible and sustainable business practices, thereby positively impacting employees and society at large. High capital intensity requires effective and transparent asset management, which can be a challenge for agents to maintain the quality of financial statements. Conflicts of interest can arise if the CEO does not accurately report the condition of risky assets or investments. This study seeks to understand how decisions made by CEOs, especially high-risk ones, are affected by capital intensity and how this, in turn, affects the quality of financial statements.

Transparency and accountability in financial statements are dependent on high capital intensity. However, due to the complexity and high estimation requirements, there are opportunities for management to manipulate financial statements through earnings management. Earnings management, measured by low discretionary accruals, is preferable, while high discretionary accruals indicate manipulative earnings management. Delgado et al. (2023) suggest that capital intensity is a crucial component in the asset structure. Capital intensity is a ratio that demonstrates the ownership intensity of a company's fixed assets compared to its total assets (Tang, 2019). A higher ratio of fixed asset turnover to total assets indicates smoother operational activities within the company. According to IAS 16, a company's tangible assets are defined as assets held for use in the production or delivery of goods or services, for rental to third parties, or in an administrative capacity. These assets are expected to be used over several accounting periods. Fixed assets, which are non-current assets acquired by a business for internal use and not intended for sale, typically receive tax relief. However, except for land, they are subject to depreciation as per PSAK 16 of 2017. Managerial investments in fixed assets can yield favourable returns.

2.5. CEO Risk-Taking

The authors have reviewed research findings on CEO characteristics by Gustafsson and Uysal (2018) and John, Litov, and Yeung (2008). As one of the most important resources of the company, the CEO holds the greatest responsibility in the organization. The results of this study will assist regulators in making policies to maintain high financial reporting quality standards, help boards of directors generate rewards for executive contracts, and aid researchers in determining the conditions under which earnings management incentives are most common. Furthermore, research by Wu et al. (2016) found a poor correlation between earnings management and independent boards of directors. Therefore, it is important to examine risk-taking characteristics, one aspect of CEO narcissism. A company's risk level can indicate whether its executives are risk-taking or risk-averse individuals. A company's commitment to preserving the environment can be measured by its environmental impact or its commitment to environmentally friendly practices. In particular, the impact of Property, Plant, and Equipment (PPE) use on environmental issues is important. Companies that invest in Property, Plant, and Equipment (PPE) and sustainable infrastructure will maintain a high fixed asset intensity ratio that supports environmental sustainability. The rapid growth of a company requires a substantial amount of capital. Therefore, researchers are interested in understanding how the risk-taking behavior of a CEO affects the company's investment in assets. They want to investigate whether CEO risk-taking leads to an increase or decrease in the capital intensity of the company. In order to reduce information asymmetry, it is important for the CEO, as the agent, and the shareholders, as principals, to improve

transparency in reporting. Investors will have more confidence in the company's investments if managerial decisions are sound and not excessively risky, as high risks can destabilize the company. Conservative CEOs are seen as effective in making strategic decisions and managing risks. In this study, the researchers measure managerial conservatism by evaluating CEO risk-taking (Christensen et al., 2015). The CEO plays a crucial role in making decisions related to strategic risk in managing the company's asset investments. Making erroneous policies and decisions can diminish investor confidence in investing in high capital, which is especially important for potential future investors looking to collaborate with the company, as highlighted by Wang et al. (2020). Recent meta-analysis studies by Cragun, Olsen, and Wright (2020) and Zhu and Chen (2015) have found a significant link between CEO narcissism and various measures of external research, development, and growth (R&D intensity). The discretionary actions available to top executives, also known as managerial policies, can either enhance or hinder the impact of CEO narcissism. Important managerial policies include capital intensity, corporate ownership, and CEO duality (Hambrick & Finkelstein, 1987). CEOs have greater influence on investment decisions in companies with lower capital intensity (Wangrow, Schepker, & Barker III, 2015). Yang et al. (2024) examined the effect of CEO narcissism on entrepreneurial orientation, taking into account factors like capital intensity as moderating variables (Yang et al., 2024). Assuming that risk-taking CEOs are the most significant decision-makers in investing in asset structures, and given the results of previous studies, it is assumed that:

H1a: CEO Risk-Taking Impacts Capital Intensity.

Investors who prioritize environmental and social responsibility always take sustainability reports into account. Companies can enhance their reputation and attract investors by practicing responsible investment and transparent reporting. ESG- and environment-focused investors heavily invest in green technologies, such as energy efficiency, emissions reduction, and waste management. High capital intensity, a measure of how much capital generates income returns, is necessary for these investments. High-capital-intensity investments pose greater risks related to changes in environmental regulations or market expectations regarding sustainability. Sustainability reporting helps companies manage risks and demonstrate to stakeholders their proactive approach to handling sustainability issues and impacts. By disclosing environmentally friendly assets and investments, sustainability reporting supports better quality financial reporting. The integration of sustainability and financial reports has become a significant global issue, aligning with our study's hypothesis. Saadaoui and Chtourou (2023) found that increased capital intensity can facilitate the use of renewable energy in Tunisia. Investors consider a company's sustainability reporting when assessing its long-term performance, and a higher fixed asset intensity ratio indicates a greater allocation of assets to long-term fixed assets (Nick & Dauber, 2012). This is especially beneficial if the company's assets are linked to specific industry activities, company operations, and the company's commitment to sustainability reporting. There is a global push to use sustainable energy to reduce carbon emissions, with governments now requiring businesses to publicly report their pollutants and waste. Focusing on improving energy efficiency and adopting renewable energy can make it easier to finance projects in developing countries. However, these efforts require a significant investment in assets to support technological innovation, skilled labor, knowledge sharing, and facilities. In Indonesia, sustainability reporting has become a mandatory disclosure obligation through the country's financial regulation (ojk.go.id) and sustainability guidelines set by GRI (2019).

Saadaoui and Chtourou (2023) shows that renewable energy policies and substitution depend on capital intensity with environmentally friendly resources. Investment companies that allocate more resources to produce high-quality sustainability reports tend to demonstrate an overall commitment to quality, reducing auditor concerns about the use of sustainability reporting (Al-Shaer, 2020). The study's results Saadaoui and Chtourou (2023) suggest that increasing capital intensity can facilitate the substitution of renewable energy in Tunisia. Considering the significance of sustainable investment in asset structure, research, and development, including resources, our hypothesis is as follows:

H2a: Sustainability reporting have significant impact on capital intensity.

Highly capital-intensive companies have more opportunities to benefit from tax incentives for investments in fixed assets. They can take advantage of depreciation and other tax incentives related to fixed assets. If a company focuses on a strategy of tax aggressiveness along with fixed assets, it is more likely to reduce its overall tax liability, regardless of the composition of its fixed assets. Tax aggressiveness can mean dependence on the existing tax policies and regulations in a region or country, which can also affect the extent to which a company will allocate its fixed assets. "Is this sustainability report a milestone in the history of tax radicalism (Chen, 2017)? Therefore, the company will maintain its reputation and social standing by implementing social responsibility strategies. Investors with high capital intensity typically make a large investment in fixed assets, resulting in making the best decisions in investing and a favorable return on investment. However, having a large amount of fixed assets can result in large depreciation costs on assets, leading to reduced profits. This can make the company more aggressive in terms of corporate taxation. The greater the operational risk of a company, the more likely the executive has a risk-taking personality. The greater the level of disclosure of sustainability reporting of a company, the lower the level of tax avoidance (Baccouche, Bouzgarrou, Jouirou, & Ben Saada, 2023). Low tax avoidance falls below the effective rate, resulting in tax aggressiveness. The higher the tax aggressiveness, the worse the quality of financial statements. Increased transparency in sustainability reporting and tax practices can improve corporate accountability and increase investor confidence, which is critical for financial market stability and growth. Encouraging investment in sustainable infrastructure can improve environmental impact, support ecological sustainability, and promote well-being." Research by Ulfa, Suprapti, and Latifah (2021) shows that capital intensity affects tax avoidance, where tax avoidance is measured by ETR. Additionally, research by Laksmi and Narsa (2021) proves that capital intensity plays a role in tax avoidance (TA). Studies by Delgado et al. (2023) and Lanis and Richardson (2012) introduced a new variable called capital intensity, which refers to the company's investment in fixed assets.

In a study by Delgado et al. (2023), it was found that higher capital intensity can reduce the tax burden by increasing depreciation costs, which leads to a decrease in taxable income and a lower effective tax rate (ETR). Marlina, Hasanudin, and Mulyasari (2022) also suggested that capital intensity influences tax aggressiveness. Additionally, Laksmi and Narsa (2021) indicated that using net fixed assets for social and environmental activities can increase capital intensity in manufacturing companies, thereby affecting tax aggressiveness. Our research, however, focuses on examining capital intensity as a mediating variable. Based on these findings, we hypothesize that tax aggressiveness impacts capital intensity as follows:

H3a: Tax aggressiveness has a significant impact on capital intensity.

2.6. Financial Reporting

Researchers use the concept of earnings quality, which is measured through earnings management (Dechow, Sloan, Sweeney, & Sloan, 2012). Earnings management involves manipulating financial statements to achieve specific goals, such as meeting revenue targets or influencing stakeholder perceptions. This practice can have both positive and negative effects. High-quality financial statements are characterized by minimal earnings management, reliability, relevance, and transparent, free from material errors, bias, and manipulation, and accurately reflecting the company's financial performance and position. To enhance financial statement quality, companies should implement excellent governance, undergo effective audits, and adhere to stringent accounting standards and regulations. This ensures that financial reports accurately represent economic conditions, boosting stakeholder confidence and supporting better business decisions. According to Dechow et al. (2012) high-quality earnings management is marked by minimal accrual discretion. Inaccuracies in earnings management can lead to misinterpretation by stakeholders.

The study investigates how CEO characteristics influence risk-taking and earnings management. Low levels of earnings management are associated with stronger financial statements, whereas high levels indicate the opposite. A risk-taking CEO can effectively manage earnings, benefiting investors by aligning with transparent and reliable financial reporting practices. Understanding how CEO risk aversion affects the company's approach to risk is crucial

(Cid-Aranda & López-Iturriaga, 2023). CEO characteristics can influence the types of risks a company faces, measurable by the standard deviation of earnings (Sharpe, 1964) whether it exceeds targets or not. Research using ratios to assess executive characteristics includes identifying risk-taking or risk-averse traits and comparing risks (Christensen et al., 2015; Low, 2009). Studies by Vo et al. (2022) found a significant correlation between risk-taking behavior and earnings management. Similarly, Tarus and Korir (2023) highlight the critical role of financial reporting in shaping stakeholders' perceptions of the CEO. The CEO's personality can significantly impact financial reporting, with risk-taking behavior potentially improving earnings management and investment decisions, indicates that financial reporting plays an important role in shaping the way stakeholders view the CEO. It is crucial for CEO to supervise and overcome risks, as well as strategize for good-quality financial statements (Cohen & Simnett, 2015; Mayberry et al., 2021). Managerial characteristics that are conservative in taking risks are important in making good strategy and investment decisions for the company (Christensen et al., 2015). Therefore, we propose the hypothesis that

H1b: CEO risk impacts of financial reporting.

The Triple Bottom Line Elkington (2013) encourages companies to assess their performance based not only on financial factors but also on economic, social, and environmental aspects. There is a global push use sustainable energy to reduce carbon emissions through policy. According to agency theory, sustainability reporting should support transparency and policies set by GRI (2019). Therefore, investors interested in the environment require high-quality sustainability reports, which in turn impact the quality of financial statements. As per Truant et al. (2017) disclosing sustainability issues serves a strategic purpose and is not just a way to meet civic obligations; this has become a global issue (KPMG, 2022). The Global Reporting Institute Indonesia in 2016 defined sustainability reporting as a comprehensive summary of the impact of an organization's daily operations on the SR index. According to GRI (2019) number 101, sustainability reporting is the practice of measuring, disclosing, and being accountable to internal and external stakeholders about a company's performance against sustainable development goals. GRI provides a globally accepted and widely used framework for sustainability reporting." Sustainability reports, based on United Nations Global Compact (UNGC) guidelines, track progress on human rights, labor, environment, anti-corruption, and sustainable development goals (SDGs).

According to the Sustainability Accounting Standards Board (SASB) in 2017, a sustainability report is a document that provides information about a company's sustainability performance that is important to stakeholders, particularly investors. SASB's focus is on disclosing information that is relevant to a company's financial and operational performance. The Indonesian Corporate Sustainability Report demonstrates the commitment of businesses in Indonesia to developing an environmentally friendly economy, setting goals, improving leadership, and measuring organizational performance in the social, environmental, and economic sectors. Legitimacy theory, as discussed by Laksmi and Narsa (2021) and Lanis and Richardson (2012) can offer assurance that the company has conducted its activities and operations in harmony with society. The Global Reporting Initiative (GRI) lists Sustainability Reporting (SR) indicators in a checklist table, which measures SR as an independent variable. By providing critical information about the organization's most severe issues, it aids businesses in creating sustainability reports. GRI G4 comprises six (GRI, 2019) indicators, totaling 91 elements. Sustainability reports play a crucial role in providing a transparent overview of how companies handle and report their environmental, social, and governance impacts. They enable companies to communicate their efforts and performance in promoting sustainable development to stakeholders.

Sustainability reporting, a type of non-financial report, helps businesses communicate their corporate responsibility to stakeholders (Dang & Pham, 2022). Widely recognized as the best means of disclosing information about financial statements and the goals of the Sustainable Development Goals (SDGs) (Dang & Pham, 2022) sustainability reporting is also the subject of ongoing research on its relationship with earnings quality. This has garnered attention from executives, managers, and researchers around the world (Dang & Pham, 2022; Xu, Mu, &

Wang, 2023). In contrast, research by Dang and Pham (2022) and Ningsih et al. (2023) suggests that sustainability reporting positively affects earnings. However, the inconsistent results of this study are supported by various sources (Chulkov & Wang, 2021; Dang & Pham, 2022; Ningsih et al., 2023). Research findings by Trisnawati et al. (2016) indicate that sustainability reporting has a negative impact on earnings management. Companies that focus on corporate social responsibility (CSR) and invest resources to meet social expectations tend to restrict earnings management, thereby providing more reliable financial information to investors (Bozzolan et al., 2015). People widely accept the application of financial reporting (Trisnawati et al., 2016; Wagenhofer, 2024). Building on the research gap mentioned above, we formulate the following hypothesis:

H2b: sustainability reporting have negative effect on financial reporting.

Companies use tax aggressiveness as a strategy to reduce their tax liability (Chen, Chen, Cheng, & Shevlin, 2010). It involves managing tax payments in compliance with tax laws and regulations (Chen, 2017). Applying industry-adjusted cash ETR as a measure of tax aggressiveness to companies experiencing losses presents a limitation, potentially leading to bias in sample selection. To address this issue, the study uses the tax aggressiveness measurement method outlined by Tang (2019). Ghaleb, Kamardin, and Tabash (2020) define tax aggressiveness as involving significant tax positions taken by companies. Analysts forecast dispersion, and information asymmetry can assess the less transparent information environments of companies engaging in more aggressive tax avoidance (Balakrishnan et al., 2019). Nguyen (2021) shows that tax avoidance can reduce the readability of financial statements. Durnev et al. (2017) found that companies in Offshore Financial Centers (OFCs) often practice more accrual-based earnings management, suggesting lower financial reporting quality. Excessive tax avoidance can negatively affect financial statement accuracy and lead to increased earnings manipulation. Higher levels of deferred tax liabilities may also indicate lower earnings quality. Research by Kothari, Leone, and Wasley (2005) suggests that companies employing aggressive tax strategies are more likely to present overly optimistic financial information, a finding supported by Frank et al. (2009). Hanlon and Slemrod (2009) indicate that discrepancies between financial and tax reporting could signal lower earnings quality and future earnings challenges. Additionally, Halioui, Neifar, and Ben Abdelaziz (2016) demonstrated that managers exploit differences between financial and tax reporting to distort earnings measures, suggesting a strong incentive for CEOs to manipulate earnings to minimize tax payments (Healy, 1985). Graham, Harvey, and Rajgopal (2005) and Tanko (2023) also observed that firms may manipulate earnings to conceal losses or income.

Financial decision-makers should be aware that manipulating accounting income figures is easy. Accounting standards are flexible and offer options for a wide range of events and estimates, which can be subjective and uncertain. This flexibility creates opportunities for earnings manipulation, as highlighted by Delgado et al. (2023). Aggressive tax avoidance can also have a negative effect on the quality of financial statements, as reported by Balakrishnan et al. (2019), Bauer et al. (2020), D. Chen et al. (2024), Delgado et al. (2023), Nguyen (2021), Deng and Wen (2024), Durnev et al. (2017), Guenther et al. (2017) and Blaylock, Shevlin, and Wilson (2012). Based on the aforementioned research gap, we formulate the following hypothesis:

H3b: tax aggressiveness have negative effect on financial reporting.

A company's level of investment in fixed assets is referred to as capital intensity. This investment plays a role in determining how effectively a business generates revenue using its fixed assets. The depreciation that fixed assets undergo can impact on the taxes that a business must pay. Both the revenue expense and the depreciation expense increase as the number of fixed assets it owns increases. Research conducted by Marchellina and Firmanti (2021) shows that there is a strong relationship between capital intensity (CAPINT) and earnings management. Managers can use depreciation as a means to reduce their corporate tax expenses. Managers can obtain expense benefits by investing idle funds in fixed assets. The depreciation from these fixed assets can be used as a tax deduction, leading to an improvement in the company's performance. As noted by Alexander and Hengky (2017) and Wenten, Doaly, and Barly (2023) managers can achieve the desired compensation from their performance, which in turn affects

earning managements. Additionally, Yang et al. (2024) investigated the impact of CEO narcissism on entrepreneurial orientation, while considering factors such as capital intensity and others as moderating variables. Capital intensity is a measure of how much capital is used by the company to generate income returns. Investments with high capital intensity pose greater risks related to changes in environmental regulations or market expectations regarding sustainability. Sustainability reporting helps companies to manage these risks and demonstrate to stakeholders that they are proactive in managing sustainability issues and impacts. According to the study results by Saadaoui and Chtourou (2023) found that increasing capital intensity can facilitate renewable energy substitution in Tunisia. A higher level of capital intensity helps reduce the tax burden, along with increased depreciation costs, which leads to a decrease in taxable income and a low ETR (Delgado et al., 2023). According to Marlina et al. (2022), research shows that tax aggressiveness is influenced by capital intensity. In a recent study conducted (Laksmi & Narsa, 2021) it was found that when manufacturing companies use net fixed assets to carry out social and environmental activities, it can increase capital intensity, which ultimately affects tax aggressiveness. Increased awareness of the company's capital intensity and its approach to earnings management can help guide investment decisions in line with sustainable and responsible investment principles.

H4: capital intensity mediates the relationship between CEO risk-taking, aggressive tax, and sustainability reporting to financial reporting.

3. METHODOLOGY

The regression model utilized unbalanced panel data, and multivariate analysis was employed for hypothesis testing. Multivariate analysis refers to statistical methods used to assess multiple measures of a subject at the same time. Descriptive statistics were applied to examine the data distribution, while correlation analysis measured the strength of relationships between variable pairs, with 1 indicating a strong correlation and 0 indicating no correlation. The goal of correlation analysis is to detect early signs of significant multicollinearity between variables (Dyreg, Hanlon, Maydew, & Thornock, 2017). The results include a causal model using path analysis, a technique developed by Wright (1934) that demonstrates a one-way relationship. The path analysis reveals that firms with high capital intensity typically invest significantly in tangible assets such as equipment, technology, and infrastructure development.

3.1. Model 1

$$CAPINT_{it} = \alpha + \beta_1 CEO\ RiskT_{it} + \beta_2 CR_{it} + \beta_3 ROE_{it} + \beta_4 FCF_{it} + \beta_5 SustainableGrowth_{it} + \beta_6 DPR_{it} + \beta_7 ROA_{it} + \beta_8 Governance_{it} + \varepsilon_{it} \quad (1)$$

$$EM_{it} = \alpha + \beta_2 CEO\ RiskT_{it} + \beta_3 CAPINT_{it} + \beta_4 CR_{it} + \beta_5 ROE_{it} + \beta_6 FCF_{it} + \beta_7 SustainableGrowth_{it} + \beta_8 DPR_{it} + \beta_9 ROA_{it} + \beta_{10} Governance_{it} + \varepsilon_{it} \quad (2)$$

3.2. Model 2

$$CAPINT_{it} = \alpha + \beta_1 SRIndex_{it} + \beta_2 CR_{it} + \beta_3 ROE_{it} + \beta_4 FCF_{it} + \beta_5 SustainableGrowth_{it} + \beta_6 DPR_{it} + \beta_7 ROA_{it} + \beta_8 Governance_{it} + \varepsilon_{it} \quad (3)$$

$$EM_{it} = \alpha + \beta_2 SRIndex_{it} + \beta_3 CAPINT_{it} + \beta_4 CR_{it} + \beta_5 ROE_{it} + \beta_6 FCF_{it} + \beta_7 SustainableGrowth_{it} + \beta_8 DPR_{it} + \beta_9 ROA_{it} + \beta_{10} Governance_{it} + \varepsilon_{it} \quad (4)$$

3.3. Model 3

$$CAPINT_{it} = \alpha + \beta_1 ETR_{it} + \beta_2 CR_{it} + \beta_3 ROE_{it} + \beta_4 FCF_{it} + \beta_5 Sustainable\ Growth_{it} + \beta_6 DPR_{it} + \beta_7 ROA_{it} + \beta_8 Governance_{it} + \varepsilon_{it} \quad (5)$$

$$EM_{it} = \alpha + \beta_2 ETR + \beta_3 CAPINT_{it} + \beta_4 CR_{it} + \beta_5 ROE_{it} + \beta_6 FCF_{it} + \beta_7 SustainableGrowth_{it} + \beta_8 DPR_{it} + \beta_9 ROA_{it} + \beta_{10} Governance_{it} + \epsilon_{it} \quad (6)$$

4. RESULT AND DISCUSSION

The regression model using panel data is unbalanced. Multivariate analysis is used to test hypotheses. Multivariate analysis refers to any statistical method in a study that assesses multiple measures of a particular subject or item simultaneously. This study employs descriptive statistics to scrutinize the data distribution. Correlation analysis is also used to measure the strength of the relationship between pairs of variables, with a correlation coefficient of 1 indicating a correlational relationship and 0 indicating no relationship. The purpose of correlation analysis is to test variables to reveal significant early signs of multicollinearity between variables (Dyreg et al., 2017). A causal model, a path analysis technique created by Wright (1934) is shown in our results, demonstrating a one-way relationship. The path indicates that companies with high capital intensity typically make large investments in tangible assets such as equipment, technology, and infrastructure development.

Table 1. Descriptive statistics.

Variable	Obs.	Mean	Std. dev.	Min.	Max.
ModJones	2328	1131.131	655.505	15	2253
CEO risk-taking	2329	0.11	0.103	-0.09	0.678
ETR	2329	0.207	0.37	0	3.157
SR disclosure	2326	0.188	0.283	0	1
CAPINT	2326	0.558	0.247	0.024	0.972
CR	2326	2.358	3.228	0.02	36.22
ROE	2326	34.321	49.402	-0.38	346.09
FCF	2326	70.132	334.71	-0.09	4883.302
ROA	2326	615.929	390.892	9	1299
DPR	2326	0.056	0.163	0	1.13
Gross sales	2326	5.36E+09	1.26E+10	3410782	8.49E+10
Sustainable growth	2326	20.631	58.545	-0.57	901.46
Governance	2326	14.863	6.506	1	20

Table 1 presents the detailed summary of the study's variables and their respective descriptive statistics. It includes measures such as means, standard deviations, and ranges for each variable under investigation. This table effectively outlines the central tendencies and variations within the data, providing a clear overview of the statistical properties relevant to the analysis. The study consists of 2305 company years across various industries in Indonesia from 2017 to 2021. The study collects data in the form of panels. The minimum number of observations is 1, indicating that some companies consistently reported profits throughout the years, while the maximum number of observations is 2269. The scale represents tax aggressiveness from 0 to 1.67, while the sustainability reporting index spans from 0 to 48. The average value for EM is 1130.3 with a standard deviation of 656.579, and the average CEO risk-taking value is 0.1 with a standard deviation of 0.124. The average CAPINT value is 0.558 with a standard deviation of 0.248, and the average tax aggressiveness value is 0.281 with a standard deviation of 1.10.

In Table 2, the pairwise correlation matrix coefficients for the main variables indicate significant relationships. The CEO risk-taking variable, sustainability reporting index (SR Index), tax aggressiveness (TA), and earnings management (EM) all show a strong connection to the capital intensity variable (CAPINT). This suggests that companies capable of managing assets with high capital intensity have a positive impact on CEO risk-taking, sustainability reporting Index (SR Index), and tax aggressiveness (ETR). Additionally, there is a notable relationship between capital intensity (CAPINT) and earnings management (EM).

Table 2. Pairwise correlation.

Variables	Mod Jones	CEO risk-taking	ETR	SR disclosure	CAPIN	CR	ROE	FCF	ROA	DPR	Gross sales	Sustainable growth	Governance
EM Mod Jones	1												
CEO risk-taking	-0.052	1											
ETR	-0.187*	-0.031	1										
SR index	0.100*	0.107*	-0.026	1									
CAPINT	-0.059*	-0.291*	0.028	-0.057*	1								
CR	0.034	0.130*	0.011	-0.039	0.053	1							
ROE	0.092*	-0.037	-0.042	0.089*	-0.025	-0.053*	1						
FCF	0.183*	-0.059*	-0.100*	0.184*	-0.004	-0.117*	0.194*	1					
ROA	0.183*	-0.016	-0.068*	0.349*	-0.069*	-0.079*	0.201*	0.214*	1				
DPR	0.145*	0.02	-0.004	-0.045	-0.095*	0.217*	-0.007	-0.075*	-0.025	1			
Gross sales	0.038	0.112*	-0.007	-0.027	0.007	0.149*	-0.051	-0.082*	-0.021	0.053*	1		
Sustainable growth	0.171*	-0.012	-0.159*	0.080*	-0.024	0.042	0.003	0.089*	0.099*	0.103*	-0.001	1	
Governance	-0.160*	-0.070*	0.015	-0.723*	0.076*	0.021	-0.076*	-0.115*	-0.308*	-0.014	0.018	-0.081*	1

Note: * p<0.1.

Table 3. Structural model.

Model	Path	t-value	p-value
Model 1a, 2a, 3a			
Constanta	0.607	26.08	0
CEO risk-taking→CAPINT	-0.17	-3.35	0.001
SR index→CAPINT	0.112	4.55	0
ETR→CAPINT	-0.035	-2.54	0.011
Model 1b, 2b,3b			
CEO risk taking →EMModJones	379.637	2.66	0.08
SR index→EMModJones	-37.008	-0.53	0.595
ETR→EMModJones	4.175	0.11	0.915
Control variables			
CR	12.957	2.5	0.012
ROE	1.618	5.53	0
FCF	-0.019	-1.59	0.112
ROA	-0.019	-0.55	0.581
DPR	-244.958	-2.85	0.005
Gross sales	0	0.58	0.559
Sustainable growth	0.183	1.35	0.177
Governance	1.028	1.35	0.726
Model 4 (Indirect effects)			
Constanta	841.52	11.29	0
CAPINT→EMModJones	304.158	5.21	0
Model	CEO risk taking	SRIndex	ETR
Mediation effect, %	16	11.4	16.4
Total mediation	Partial	Complete	Complete

Note: CAPINT capital intensity; SR index sustainability reporting index; ETR tax aggressiveness; EMModJones earnings management modified jones model; CR current ratio; ROE return on equity; FCF future cash flow; ROA return on assets; DPR dividend payout ratio; Gross sales gross operating earnings; Sustainable growth ratio of sustainable growth; Governance good governance; CI Confidence level.
 * Indicate significance tests (t statistics for linear models) of 1%.
 ** Indicate significance tests (t statistics for linear models) of 5%.
 *** Indicate significance tests (t statistics for linear models) of 10%.
 Significance test of statistics are shown between parentheses. Includes industry dummies, and year.

To support the seven major hypotheses put forth, we created three research models depending on the research objectives (Table 3). All four models use CAPINT as a mediating variable to explain the influence of CEO risk-taking, SR Index, and ETR on EMModJones. The first model shows the direct influence of CEO risk-taking on CAPINT. The second model aims to investigate the direct effect of the SR Index on CAPINT. The direct effect of ETR on CAPINT was shown in third model. The fourth model investigates the indirect influence of all three variables, i.e., CEO risk-taking, SRIndex, and ETR on EMModJones with CAPINT mediation.

We determine the significance of the mediation impact of decision tree by Baron and Kenny (1986) and Zhao, Lynch Jr, and Chen (2010). This type of mediation is known as excellent mediation or complete mediation. To confirm our hypothesis, we performed the STATA program installed on the unbalanced data panel. The testing models 1, 2, and 3. Models 1,2,3 summarizing the testing of the CAPINT mediation model in the influence of CEO risk taking, SR, ETR, and EM showed in (Table 3).

Model 1 presents the results of the research, indicating that CEO risk-taking had a significant and positive impact on CAPINT ($\beta=-0.17$, $\rho<0.01$) in (Table 4). This confirms the acceptance of the first hypothesis (H1a), and the hypothesis is accepted. The results Hamidian et al. (2023) and Yang et al. (2024) demonstrate that CEO risk-taking influences asset structure investment decisions. It is observed that low capital intensity provides CEOs with more investment opportunities (Wangrow et al., 2015). Additionally, Table 3 implies that earnings management and CEO risk-taking have a positive correlation (Tarus & Korir, 2023; Vo et al., 2022) with a value of ($\beta=379.637$, $\rho<0.1$ and hypothesis (H1b) is accepted.

Model 2 shows the test results for verifying H2a and H2b. According to the result of Equation 3, there is a significant impact of SR index on CAPINT ($\beta = 0.112$, $\rho<0.001$), thus supporting and accepting the hypothesis (H2a)

in (Table 3). These results are comparable to the results of the study (Saadaoui & Chtourou, 2023) which states that capital intensity in the industrial world is diverse with the suitability of renewable energy, they stated that SR index and EM are negatively related with a value of ($\beta = -37.008, \rho < 0.595$). Model 2 also shows a negative relationship between SR index and EM directly. This conclusion follows research by Trisnawati et al. (2016) and (H2b) is accepted.

Model 3 presents result test for verifying H3a. Aggressive tax (AT) affects capital intensity ratio in CAPINT and supports the hypothesis (H3a). The value of ($\beta = -0.035, \rho < 0.011$), which indicates that the more a company pays taxes, the greater the impact on its investment. Furthermore, the hypothesis for (H3a) is accepted, consisting of results by Laksmi and Narsa (2021) and Ulfa et al. (2021) that have demonstrated that capital intensity is a factor in aggressive tax (ETR). Model 3 on hypothesis 3b also shows that a company's aggressive tax has no direct impact between ETR and earnings management with values ($\beta = 4.175, \rho > 0.915$) has comparable results (Table 3). Our results indicated that (H3b) is accepted. This asymmetric impact of the tax on the earnings burden explains this trend. Even while businesses employ non-operating items to surpass the zero profit level, additional research suggests that their unequal effect is what causes the discontinuity caused by aggressive tax (Tang, 2019). This suggests that a corporation that aggressively pays taxes is likely implementing a sound aggressive tax rather than engaging in aggressive tax evasion. Consistent with results of Guenther et al. (2017) and Delgado et al. (2023). This corresponds to previous studies, such as Arias, Valencia, and Franco (2023) which suggest that management may manipulate earnings figures opportunistically to avoid reporting losses. According to Alexander and Hengky (2017) and Wenten et al. (2023) there is evidence that companies that comply with International Financial Reporting Standards (IFRS) and book tax compliance explain the effect of earnings management in a country related to tax aggressiveness, which supports hypothesis (H3b).

Analysis of three different models 4 revealed that CAPINT succeeded in simultaneously indirectly reducing the influence of risk-taking CEO, SR index, and ETRs on EM. Our results suggested (H4) are accepted. Furthermore, the results showed that EM was affected by CAPINT ($\beta = 304.158, \rho < 0.001$), which supports (H4). These findings are consistent with earlier research conducted by Hale and Ojeda (2018) and Yang et al. (2024). CAPINT mediation of CEO Risk is partial mediation, CAPINT mediation of SR Index is complete mediation, and CAPINT mediation of ETR is complete mediation. However, temporary variables control ROA variables. ROE, DPR, and GOVERNANCE have a real impact (Table 3). Models 1, 2, and 3 showed significant levels of 1%, 5%, and 10% for the control variables, indicating the acceptance of hypothesis 4 (H4).

The estimation findings of all three models, which show the impact of mediation, are consistent with the hypothesis. The model one estimation results show that the association between CEO risk-taking and EM is fully dedicated through CAPINT. This table provides important information in the path analysis of the three hypotheses (Table 3). The indirect effect of CAPINT (CEO risk taking, SR Index, ETR > CAPINT -> EM) had significant value (consistent with the research results (Blaylock et al., 2012; Dang & Pham, 2022; Delgado et al., 2023; Goh, Lee, Lim, & Shevlin, 2016; Hale & Ojeda, 2018; Hamidian et al., 2023; Laksmi & Narsa, 2021; Ningsih et al., 2023; Tanko, 2023; Ulfa et al., 2021; Yang et al., 2024).

5. CONCLUSION

5.1. Policy Implications

Based on their expertise, businesses use a variety of methods to determine and manage the useful lives of their assets. Regulations and financial accounting standards (IAS) have different useful life calculations than tax books. Using competent tax methods can help companies prepare taxes legally and effectively, ensuring compliance with tax rules, preventing reputational harm from aggressive tax avoidance methods, and resulting in significant cost savings. Tanko (2023) discovered a positive correlation between capital intensity and effective aggressive tax planning. When the government provides incentives and allowances for capital, it encourages companies to invest. Investors should carefully review the quality of financial statements, ensuring compliance with tax regulations and sustainable business

practices that prioritize environmental concerns. According to legitimacy theory, businesses follow financial reporting guidelines and non-financial operational procedures to gain legitimacy from the public and the government. They do this to gain credibility and acceptance while aiming to maximize revenue. Managers aim to avoid discrepancies between accounting reports and voluntary reports, with sustainability reports being a key part of a company's internal resource efficiency strategy. These reports substantially influence specific industries' environmental impact. To meet stakeholder expectations, especially investor expectations, corporations aim to assess non-financial performance.

Investing in asset management and renewable research, technology, and resources necessitates significant capital. The complexity of the asset structure significantly impacts the quality of financial statements. By monitoring and ensuring transparency in the asset structure, CEO can make strategic and sustainable decisions. It is also crucial to invest in managers who can take appropriate risks to maintain high-quality financial statements, address environmental concerns, and ensure tax compliance. High-quality sustainability reporting is essential for developing a logical and reasonable assessment of performance and taking appropriate actions. This includes principles such as balance, comparability, accuracy, timeliness, clarity, and reliability. Integrating financial and sustainability reports is vital for supporting system sustainability, innovation, and policy. Companies in Indonesia are required to report on their sustainability efforts, including socio-economic and environmental responsibilities. This study seeks to explain the complex dynamics between CEO risk-taking, sustainability reporting, aggressive tax strategies, and financial statement transparency and accuracy, facilitated by capital intensity. The results indicate a stronger connection between risk and the financial asset structure for companies with more financial constraints, poor corporate governance, and less favorable growth prospects. This explains why CEO risk-taking has a greater impact on business strategy and decision-making, reducing the negative impact of risk on actual investments made by enterprises.

Overall, these findings highlight the importance of financial assets (CAPINT) as essential tools for risk management. Management decisions, such as asset capitalization and estimated earnings recognition, significantly impact the quality of financial statements. According to CAPM theory (Markowitz, 1999; Perold, 2004; Sharpe, 1964), accounting for fixed assets plays a crucial role in classifying expenses as assets or expenses. When expenses are recognized as fixed assets, they are allocated to periods likely to benefit from those expenditures, which can increase reported operational results in the year the expenses occur and affect the acquisition price of the asset itself. Therefore, accounting for fixed assets is a crucial factor in changing accounting rules for earnings management. By aligning tax, sustainability, and accounting reporting with generally accepted accounting principles (GAAP), compliance is ensured.

5.2. Limitations

The study has some limitations. It focuses solely on Indonesian listed companies, so the findings may not be applicable to companies in other countries with different economic and regulatory environments. The results are highly dependent on the accuracy of the structural equation modeling (SEM) and the assumptions used, which may not fully capture the complexity of the relationships between variables. This limitation presents an opportunity for further investigation due to the short duration of the study. Additionally, there are issues with the readability and basic publication of sustainability reports in Indonesia. Furthermore, CEOs are concerned about the impact of overly aggressive methods and those that interfere with aggressive taxation. Companies with a good reputation are usually those that report openly, take calculated risks, and use moral tax planning techniques. This can lead to increased trust among stakeholders such as consumers, workers, and investors, resulting in numerous long-term benefits.

5.3. Future Research

Throughout the expected useful life of an asset, the depreciable amount, which is the cost of acquisition minus the predicted residual value, is spread out. This year's high capital intensity ensures that the business effectively

manages its tax obligations and achieves high-quality financial reporting through earning management. The costs of acquiring assets and associated costs (Kager, Schanz, & Niemann, 2011; Sharpe, 1964) should be totaled and compared to the project's cost or the assets so they can be capitalized as project assets (Fama & French, 1996; Jensen, 1969). As a result, a business that is proactive about paying taxes is likely to implement effective tax strategies. These findings are consistent with other studies, such as Guenther et al. (2017), Arias et al. (2023) and Delgado et al. (2023) which suggest that management might opportunistically manipulate earnings to avoid revealing weaknesses. In the future, businesses must maintain a constant commitment to sustainability reporting and integration. In order for businesses to adhere to the concepts of sustainability reporting in the future, they must maintain a constant state of commitment and integration.

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REFERENCES

- Akhter, S., & Dey, P. K. (2017). Sustainability reporting practices: Evidence from Bangladesh. *International Journal of Accounting and Financial Reporting*, 7(2). <https://doi.org/10.5296/ijaf.v7i2.11659>
- Al-Shaer, H. (2020). Sustainability reporting quality and post-audit financial reporting quality: Empirical evidence from the UK. *Business Strategy and the Environment*, 29(6), 2355–2373. <https://doi.org/https://doi.org/10.1002/bse.2507>
- Alexander, N., & Hengky, H. (2017). Factors affecting earnings management in the Indonesian stock exchange. *GATR Journal of Finance and Banking Review*, 2(2), 08–14. [https://doi.org/10.35609/jfbr.2017.2.2\(2\)](https://doi.org/10.35609/jfbr.2017.2.2(2))
- Alharbi, S., Al Mamun, M., & Atawnah, N. (2021). Uncovering real earnings management: Pay attention to risk-taking behavior. *International Journal of Financial Studies*, 9(4), 1–18. <https://doi.org/10.3390/ijfs9040053>
- Arias, J. E. T., Valencia, A. M., & Franco, J. B. (2023). Earnings management to avoid losses: Evidence in non-listed Colombian companies. *Journal of International Accounting, Auditing and Taxation*, 53, 100575. <https://doi.org/10.1016/j.intaccaudtax.2023.100575>
- Baccouche, A., Bouzgarrou, H., Jouirou, M., & Ben Saada, M. (2023). The relationship between corporate social responsibility and tax avoidance: The moderating role of directors with experience abroad in France (In A. Derb). *IGI Global*. <https://doi.org/https://doi.org/10.4018/979-8-3693-0532-4.ch005>
- Balakrishnan, K., Blouin, J. L., & Guay, W. R. (2019). Tax aggressiveness and corporate transparency. *The Accounting Review*, 94(1), 45–69. <https://doi.org/10.2308/accr-52130>
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *In Journal of Personality and Social Psychology*. American Psychological Association, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bauer, A. M., Fang, J., Pittman, J., Zhang, Y., & Zhao, Y. (2020). How aggressive tax planning facilitates the diversion of corporate resources: Evidence from path analysis. *Contemporary Accounting Research*, 37(3), 1882–1913. <https://doi.org/https://doi.org/10.1111/1911-3846.12563>
- Blaylock, B., Shevlin, T., & Wilson, R. J. (2012). Tax avoidance, large positive temporary book-tax differences, and earnings persistence. *The Accounting Review*, 87(1), 91–120. <https://doi.org/10.2308/accr-10158>
- Bozzolan, S., Fabrizi, M., Mallin, C. A., & Michelon, G. (2015). Corporate social responsibility and earnings quality: International evidence. *The International Journal of Accounting*, 50(4), 361–396. <https://doi.org/https://doi.org/10.1016/j.intacc.2015.10.003>

- Chen, D., Li, Y., Lu, J., & Li, C. (2024). Do international tax treaties govern financial report quality? *Research in International Business and Finance*, 69, 102246. <https://doi.org/10.1016/j.ribaf.2024.102246>
- Chen, S., Chen, X., Cheng, Q., & Shevlin, T. (2010). Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics*, 95(1), 41–61. <https://doi.org/10.1016/j.jfineco.2009.02.003>
- Chen, X. (2017). Corporate social responsibility disclosure, political connection and tax aggressiveness: Evidence from China's capital markets. *Open Journal of Business and Management*, 6(1), 151-164.
- Christensen, D. M., Dhaliwal, D. S., Boivie, S., & Graffin, S. D. (2015). Top management conservatism and corporate risk strategies: Evidence from managers' personal political orientation and corporate tax avoidance. *Strategic Management Journal*, 36(12), 1918-1938. <https://doi.org/10.1002/smj.2313>
- Chulkov, D., & Wang, X. (2021). Corporate social responsibility and financial reporting quality. *Available at SSRN 3970172*. <https://doi.org/10.2139/ssrn.3970172>
- Cid-Aranda, C., & López-Iturriaga, F. (2023). CEO characteristics and corporate risk-taking: Evidence from emerging markets. *Economic Research-Ekonomska Istraživanja*, 36(2), 2175008. <https://doi.org/10.1080/1331677X.2023.2175008>
- Cohen, J. R., & Simnett, R. (2015). CSR and assurance services: A research agenda. *Auditing: A Journal of Practice & Theory*, 34(1), 59-74. <https://doi.org/10.2308/ajpt-50876>
- Cragun, O. R., Olsen, K. J., & Wright, P. M. (2020). Making CEO narcissism research great: A review and meta-analysis of CEO narcissism. *Journal of Management*, 46(6), 908-936. <https://doi.org/10.1177/0149206319892678>
- Dai, N. T., Du, F., Young, S. M., & Tang, G. (2018). Seeking legitimacy through CSR reporting: Evidence from China. *Journal of Management Accounting Research*, 30(1), 1-29. <https://doi.org/10.2308/jmar-51627>
- Dang, H. N., & Pham, C. D. (2022). The effects of earning quality on sustainable reports: An empirical study from Vietnam. *Economic Research*, 35(1), 6705–6722. <https://doi.org/10.1080/1331677X.2022.2053360>
- Dechow, P. M., Sloan, R. G., Sweeney, A. P., & Sloan, R. G. (2012). Detecting earnings management. *Asian Financial Statement Analysis*, 70(2), 73–105. <https://doi.org/10.1002/9781119204763.ch4>
- Delgado, F. J., Fernández-Rodríguez, E., García-Fernández, R., Landajo, M., & Martínez-Arias, A. (2023). Tax avoidance and earnings management: A neural network approach for the largest European economies. *Financial Innovation*, 9(1), 19. <https://doi.org/10.1186/s40854-022-00424-8>
- Deng, M., & Wen, X. (2024). The role of internal control disclosure in financial reporting precision and the quality of audited financial reports. *Journal of Accounting, Auditing & Finance*, 0148558X241245171. <https://doi.org/10.1177/0148558X241245171>
- Dong, S., Xu, L., & McIver, R. P. (2023). Sustainability reporting quality and the financial sector: Evidence from China. *Meditari Accountancy Research*, 31(5), 1190-1214. <https://doi.org/10.1108/MEDAR-05-2020-0899>
- Dube, S., & Maroun, W. (2017). Corporate social responsibility reporting by South African mining companies: Evidence of legitimacy theory. *South African Journal of Business Management*, 48(1), 23–34. <https://doi.org/10.4102/sajbm.v48i1.17>
- Durnev, A., Li, T., & Magnan, M. (2017). Beyond tax avoidance: Offshore firms' institutional environment and financial reporting quality. *Journal of Business Finance & Accounting*, 44(5-6), 646-696. <https://doi.org/10.1111/jbfa.12240>
- Dyreng, S. D., Hanlon, M., Maydew, E. L., & Thornock, J. R. (2017). Changes in corporate effective tax rates over the past 25 years. *Journal of Financial Economics*, 124(3), 441-463. <https://doi.org/https://doi.org/10.1016/j.jfineco.2017.04.001>
- Elkington, J. (2013). Enter the triple bottom line. *The Triple Bottom Line: Does It All Add Up*, 1, 1–16. <https://doi.org/10.4324/9781849773348>
- Fama, E. F., & French, K. R. (1996). Multifactor explanations of asset pricing anomalies. *The Journal of Finance*, 51(1), 55-84. <https://doi.org/10.2307/2329302>
- Frank, M. M., Lynch, L. J., & Rego, S. O. (2009). Tax reporting aggressiveness and its relation to aggressive financial reporting. *Accounting Review*, 84(2), 467–496. <https://doi.org/10.2308/accr.2009.84.2.467>
- Garg, P. (2017). Development of sustainability reporting index (SRI) with special reference to companies in India. *Decision*, 44, 259-273. <https://doi.org/10.1007/s40622-017-0162-8>

- Ghaleb, B. A. A., Kamardin, H., & Tabash, M. I. (2020). Family ownership concentration and real earnings management: Empirical evidence from an emerging market. *Cogent Economics & Finance*, 8(1), 1751488. <https://doi.org/10.1080/23322039.2020.1751488>
- Goh, B. W., Lee, J., Lim, C. Y., & Shevlin, T. (2016). The effect of corporate tax avoidance on the cost of equity. *The Accounting Review*, 91(6), 1647-1670. <https://doi.org/10.2308/accr-51432>
- Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40(1-3), 3-73. <https://doi.org/https://doi.org/10.1016/j.jacceco.2005.01.002>
- GRI. (2019). *GRI standards GRI 207: Tax 2019*. Retrieved from <https://www.globalreporting.org>
- Guenther, D. A., Matsunaga, S. R., & Williams, B. M. (2017). Is tax avoidance related to firm risk? *Accounting Review*, 92(1), 115-136. <https://doi.org/10.2308/accr-51408>
- Gustafsson, P., & Uysal, E. (2018). *CEO? Or more like riskEO?: A cross-sectional study of CEO characteristics and firm risk-taking*. Retrieved from <https://www.Diva-Portal.Org>
- Hale, S. E., & Ojeda, T. (2018). Acceptable femininity? Gay male misogyny and the policing of queer femininities. *European Journal of Women's Studies*, 25(3), 310-324. <https://doi.org/10.1177/1350506818764762>
- Halioui, K., Neifar, S., & Ben Abdelaziz, F. (2016). Corporate governance, CEO compensation and tax aggressiveness: Evidence from American firms listed on the NASDAQ 100. *Review of Accounting and Finance*, 15(4), 445-462. <https://doi.org/10.1108/RAF-01-2015-0018>
- Hambrick, D. C., & Finkelstein, S. (1987). *Managerial discretion: A bridge between polar views of organizational outcomes research in organizational behavior*. Retrieved from <https://api.semanticscholar.org/CorpusID:149190342>
- Hamidian, M., Mohamadi, M., & Karimi Deldar, B. (2023). The effect of CEO's risk-taking characteristics, CEO's overconfidence and capital intensity on tax avoidance. *Journal of Accounting and Management Vision*, 5(75), 64-82.
- Hanlon, M., Hoopes, J. L., & Shroff, N. (2014). The effect of tax authority monitoring and enforcement on financial reporting quality. *The Journal of the American Taxation Association*, 36(2), 137-170. <https://doi.org/10.2308/atax-50820>
- Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public Economics*, 93(1-2), 126-141. <https://doi.org/10.1016/j.jpubeco.2008.09.004>
- Hasan, M. M., & Taylor, G. (2020). Financial statement comparability and bank risk-taking. *Journal of Contemporary Accounting & Economics*, 16(3), 100206. <https://doi.org/10.1016/j.jcae.2020.100206>
- Healy, P. M. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics*, 7(1-3), 85-107. [https://doi.org/10.1016/0165-4101\(85\)90029-1](https://doi.org/10.1016/0165-4101(85)90029-1)
- Heltzer, W., Mindak, M. P., & Shelton, S. W. (2012). The relation between aggressive financial reporting and aggressive tax reporting: Evidence from ex-Arthur Andersen clients. *Research in Accounting Regulation*, 24(2), 96-104. <https://doi.org/10.1016/j.racreg.2012.05.001>
- Jensen, M. C. (1969). Risk, the pricing of capital assets, and the evaluation of investment portfolios. *The Journal of Business*, 42(2), 167-247. <https://doi.org/10.1111/j.1540-6261.1969.tb01710.x>
- John, K., Litov, L., & Yeung, B. (2008). Corporate governance and risk-taking. *The Journal of Finance*, 63(4), 1679-1728.
- Kager, R., Schanz, D., & Niemann, R. (2011). Estimation of tax values based on IFRS information: an analysis of German DAX30 and Austrian ATX listed companies. *Accounting in Europe*, 8(1), 89-123. <https://doi.org/10.1080/17449480.2011.574362>
- Katmon, N., & Farooque, O. A. (2017). Exploring the impact of internal corporate governance on the relation between disclosure quality and earnings management in the uk listed companies. *Journal of Business Ethics*, 142(2), 345-367. <https://doi.org/10.1007/s10551-015-2752-8>
- Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163-197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
- KPMG. (2022). *Big shifts, small steps: Survey of corporate responsibility*. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/se/pdf/komm/2022/Global-Survey-of-Sustainability-Reporting-2022.pdf>

- Laksmi, D. A., & Narsa, N. P. D. R. H. (2021). Corporate social responsibility, capital intensity, and tax aggressiveness: Evidence from Indonesia. *AKRUAL: Jurnal Akuntansi*, 13(2), 132–143. <https://doi.org/10.26740/jaj.v13n2.p132-143>
- Lanis, R., & Richardson, G. (2012). Corporate social responsibility and tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy*, 31(1), 86–108. <https://doi.org/10.1016/j.jaccpubpol.2011.10.006>
- Low, A. (2009). Managerial risk-taking behavior and equity-based compensation. *Journal of Financial Economics*, 92(3), 470–490. <https://doi.org/10.1016/j.jfineco.2008.05.004>
- Luque-Vilchez, M., Cordazzo, M., Rimmel, G., & Tilt, C. A. (2023). Key aspects of sustainability reporting quality and the future of GRI. *Sustainability Accounting, Management and Policy Journal*, 14(4), 637–659. <https://doi.org/10.1108/SAMPJ-03-2023-0127>
- Marchellina, V., & Firnanti, F. (2021). *Financial ratio and company characteristics effect on earnings management*. Paper presented at the Proceedings of the Ninth International Conference on Entrepreneurship and Business Management (ICEBM 2020). <https://doi.org/10.2991/aebmr.k.210507.027>.
- Markowitz, H. M. (1999). The early history of portfolio theory: 1600-1960. *Financial Analysts Journal*, 55(4), 5–16. <https://doi.org/10.2469/faj.v55.n4.2281>
- Marlina, E., Hasanudin, A. I., & Mulyasari, W. (2022). Tax aggressiveness: The role of capital intensity and inventory intensity with leverage as intervening. *Journal of Applied Business, Taxation and Economics Research*, 1(6), 614–632. <https://doi.org/10.54408/jabter.v1i6.97>
- Mayberry, M., Park, H. J., & Xu, T. (2021). Risk-taking incentives and earnings management: New evidence. *Contemporary Accounting Research*, 38(4), 2723–2757. <https://doi.org/https://doi.org/10.1111/1911-3846.12704>
- Nguyen, J. H. (2021). Tax avoidance and financial statement readability. *European Accounting Review*, 30(5), 1043–1066. <https://doi.org/10.1080/09638180.2020.1811745>
- Nick, M. A., & Dauber, K. J. S. J. (2012). Financial statement reporting: The income statement in the complete cpa reference. In (pp. 1–31): John Wiley & Sons, Ltd. <https://doi.org/https://doi.org/10.1002/9781119204121.ch1>.
- Ningsih, S., Prasetyo, K., Puspitasari, N., Cahyono, S., & Kamarudin, K. A. (2023). Earnings management and sustainability reporting disclosure: Some insights from Indonesia. *Risks*, 11(7), 1–19. <https://doi.org/10.3390/risks11070137>
- Perold, A. F. (2004). The capital asset pricing model a fundamental question in finance is how the risk of an investment should. *Journal of Economic Perspectives*, 18(3), 3–24.
- Saadaoui, H., & Chtourou, N. (2023). Does increasing capital intensity facilitate the transition to renewable energy? *Bukti dari Tunisia*, 30(18), 54059–54072.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425–442.
- Tang, T. Y. (2019). The value implications of tax avoidance across countries. *Journal of Accounting, Auditing & Finance*, 34(4), 615–638. <https://doi.org/10.1177/0148558X17742821>
- Tanko, U. M. (2023). Financial attributes and corporate tax planning of listed manufacturing firms in Nigeria: Moderating role of real earnings management. *Journal of Financial Reporting and Accounting*. <https://doi.org/10.1108/JFRA-05-2022-0198>
- Tarus, D. K., & Korir, F. J. (2023). Does CEO narcissism matter? An examination of the relationship between board structure and earnings management in Kenya. *PSU Research Review*(ahead-of-print). <https://doi.org/10.1108/PRR-07-2022-0089>
- Trisnawati, R., Wiyadi, & Setiawati, E. (2016). Sustainability reporting and earning management. *Empirical Studies in the Companies that Participated in the Indonesian Sustainability Reporting Award*, 11(1), 978–967.
- Truant, E., Corazza, L., & Scagnelli, S. D. (2017). Sustainability and risk disclosure: An exploratory study on sustainability reports. *Sustainability*, 9(4), 636. <https://doi.org/10.3390/su9040636>
- Ulfa, E. K., Suprpti, E., & Latifah, S. W. (2021). The effect of ceo tenure, capital intensity, and firm size on tax avoidance. *Jurnal Reviu Akuntansi dan Keuangan*, 11(1), 77–86. <https://doi.org/10.22219/jrak.v11i1.16140>
- Vo, N. N. T., Nguyen, T. V. H., & Phan, D. H. T. (2022). Earnings management and bank risk-taking behavior in Asia-Pacific region. *Research in International Business and Finance*, 63, 101785. <https://doi.org/10.1016/j.ribaf.2022.101785>

Wagenhofer, A. (2024). Sustainability reporting: A financial reporting perspective. *Accounting in Europe*, 21(1), 1-13. <https://doi.org/10.1080/17449480.2023.2218398>

Wang, F., Xu, S., Sun, J., & Cullinan, C. P. (2020). Corporate tax avoidance: A literature review and research agenda. *Journal of Economic Surveys*, 34(4), 793-811. <https://doi.org/10.1111/joes.12347>

Wangrow, D. B., Schepker, D. J., & Barker III, V. L. (2015). Managerial discretion: An empirical review and focus on future research directions. *Journal of Management*, 41(1), 99-135. <https://doi.org/10.1177/0149206314554214>

Wenten, I. K., Doaly, T. D. L., & Barly, H. (2023). Earning management's, fixed asset intensity's effect on tax management with management compensation as intervening variable. *Jurnal Mebis*, 8(1), 36-44. <https://doi.org/10.33005/mebis.v8i1.421>

Wright, S. (1934). The method of path coefficients. *The annals of Mathematical Statistics*, 5(3), 161-215. <https://doi.org/10.1214/aoms/1177732676>

Wu, S., Chen, C.-M., & Lee, P.-C. (2016). Independent directors and earnings management: The moderating effects of controlling shareholders and the divergence of cash-flow and control rights. *The North American Journal of Economics and Finance*, 35, 153-165. <https://doi.org/https://doi.org/10.1016/j.najef.2015.10.007>

Xu, X., Mu, Y., & Wang, J. (2023). Corporate risk and financial asset holdings. *Pacific-Basin Finance Journal*, 81, 102121. <https://doi.org/10.1016/j.pacfin.2023.102121>

Yang, L., Lin, Z., Quan, R., Cunningham, J., & Huang, W. (2024). Internal R&D or external asset growth? A closer look at CEO narcissism and entrepreneurial orientation. *International Journal of Entrepreneurial Behavior & Research*, 30(1), 110-127. <https://doi.org/10.1108/IJEBR-09-2022-0797>

Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257>

Zhu, D. H., & Chen, G. (2015). Narcissism, director selection, and risk-taking spending. *Strategic Management Journal*, 36(13), 2075-2098. <https://doi.org/10.1002/smj.2322>

APPENDIX

Table 4. Appendix.

Variable	Definition	Measurement	Source
CEO risk taking	Characteristics of CEO who are able to take risks.	<p>Risk 1 =</p> $\sqrt{\frac{1}{T-1} \sum_t = 1 \left(Ei, s, t - \frac{1}{T} \sum_t = 1 Ei, s, t \right)}$ <p>Where</p> $Ei, e, t = \frac{EBITDAi, s, t}{Ai, s, t} - \frac{1}{Ns, t} \sum_{K=1}^{N, s, i} \frac{EBITDAi, s, t}{Ai, s, t}$ <p>In the given industry, each company is represented by the index Ns, t. The sum of depreciation and operating income after depreciation is referred to as $EBITDAi, s, t$. The assets at a particular time are indexed as Ai, s, t. To calculate the risk-taking proxy of our firm after adjusting for industry, we require the available earnings to total assets data for at least five years. Additionally, our second measure of risk-taking is the standard deviation of ROA (Risk2).</p>	John et al. (2008) and Alharbi, Al Mamun, and Atawnah (2021)
SR index	Sustainability reporting index.	<p>SR index =</p> $\sum_{j=1}^{17} Si, j$	Garg (2017)

Variable	Definition	Measurement	Source
ETR	Tax aggressiveness refers to the ability and action of paying taxes in accordance with tax planning as per the provisions of tax legislation.	$ETR = \frac{\text{Total Tax Expense}}{EBIT}$	Chen et al. (2010) and Chen (2017)
CAPINT	Capital intensity is a ratio that represents the book value of fixed assets to total assets.	$CAPINT = \frac{\text{Total Fixed Assets}}{\text{Total Assets}}$	Tang (2019)
EM Mod Jones	Earnings management often focuses on management's use of discretionary accruals modified Jones.	$DA = \Delta NCA - \Delta CA - (\Delta RE - \Delta CE)$ $\Delta NCA = \text{Change in net current assets (Net current assets)}$ $\Delta CA = \text{Change in current assets (Net current assets)}$ $\Delta RE = \text{Change in net receivables (Net receivables)}$ $\Delta CE = \text{Change in net current liabilities (Current liabilities)}$	Dechow et al. (2012) and Lanis and Richardson (2012)
ROA	Return on assets	Pretax income scaled by total assets.	OSIRIS
ROE	Return on equity	Pretax income scaled by total equity.	OSIRIS
CR	Current ratio.	Current assets scaled by current liabilities	Chen (2017)
SR growth	Sustainable growth.	Ratio that measures growth.	OSIRIS
Gross sales	Gross of operating earnings	Ratio that measures gross earnings.	Annual report
Governance	Good corporate governance.	Institutional ownership.	ESGI
DPR	Dividend of payout ratio	Representatives total dividend scaled by net income.	Chen (2017)

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