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The Influence of Board of Directors on Risk Management and Financial Performance: A Study within Chinese Corporate Governance

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***Abstract*: This paper examines the relationship between board characteristics, risk management processes, and financial performance of corporations. The study aims to determine the impact of board composition (size, independence, and expertise) on firm performance and to test the moderating role of risk management practices (risk management committee and risk disclosure) in this association. A mixed-method approach was employed, incorporating descriptive statistics, correlation analysis, regression models, mediation analysis, and robustness checks using firm-level data. Results indicate that certain board features substantially and positively influence financial performance metrics such as ROA and ROE. Additionally, risk management practices positively contribute to better financial outcomes. Mediation analysis reveals that risk disclosure partially mediates the relationship between board characteristics and financial performance, acting as a mechanism through which governance influences better financial results. Robustness tests confirm the reliability of these relationships across various model specifications. This research contributes significantly to the understanding of corporate governance and its value to organizations, offering practical implications for those involved in governance, policy, and research aimed at enhancing firm performance through effective governance and risk management.**

***Keywords:* Board Characteristics, Risk Management, Financial Performance, Governance, Risk Disclosure, Regression Analysis.**

I. INTRODUCTION

In the seemingly complicated environment of today's global business, attention to corporate governance has become increasingly strong. It is a natural transformation induced by the complexity of markets and growing competition, rigorous monitoring by the regulatory forces that guide economic activities, and increased public expectations toward how effectively companies interact with the surrounding environment [1]. Corporate governance is defined as the "system of rules, practices, and processes by which companies are directed and controlled". The definition also suggests that corporate governance identifies the mechanisms through which a corporation can be held accountable to its stakeholders. Such stakeholders may include shareholders (owners, in fact), employees, suppliers, customers, and the wider community [2]. In the recent decade, the emphasis on strong corporate governance has grown, as more and more companies realize its significance in moderating agency problems separating ownership and control, ensuring a greater level of transparency, and promoting ethical conduct[3].

One of the most vital functions of corporate governance is moderating agency problems. Agency theory draws the central role of corporate governance. The theory presumes that separating ownership from control leads to some structural problems, since executives that are expected to act in favor of the owner can also pursue their personal interests [4]. A system of corporate governance that seeks to differentiate owners into shareholders and agents into executives cuts the agency costs significantly, promoting better performance. Independent directors, as part of an effective corporate

governance system, provide unbiased oversight of the firm and critically evaluate the decisions made by the top management, thus moderating the risks of unlawful actions for personal benefit [4].

Another important aspect to which attention is driven these days is transparency. Companies should not only disclose information about their activities once it is demanded by some third party such as an investor considering funding it. Rather, the standards of transparent governance envisage the full and timely disclosure of all material information not only about the company's financial position but also about the features of its management practices. Studies show that companies adhering to these standards of openness finance their activities at a significantly lower cost, and fewer of them are refused financing[5]. Additionally, transparency makes business entities disclose fraudulent schemes and account manipulations. Overall, the corporate governance structure should display strong commitment to ethical business, which can be the source of driving long-term stability. Codes of ethics and conduct should be developed to make everyone in the organization understand what is right and wrong, starting with top executives and ending with call center operators and helpers, and to follow this knowledge. Empirical studies prove that companies with high ethical standards are less likely to become subjects to scandals and lawsuits, which can cost them a lot [6].

Managing risk is the process of identifying, assessing, and taking necessary steps to manage potential risks that could hinder operation or ruin a company financially. The risk management approach involves the identification of internal and external risks that could impact a company's objectives. These could be financial uncertainties, legal liabilities, errors in strategic management, or natural disasters [7]. Risk assessment is a systematic way of examining the possible risks and probabilities. Planning helps to identify top priorities, which makes the process efficient and effective. It is also important because it helps protect a company's interests, such as reputation, financial success, and employees. Working with extreme caution helps individuals make better financial decisions, such as ensuring loans are payable by taking proper steps in protecting the company from being held legally accountable. All in all, effectively managing risks is essential for long-term financial stability. Risk preparedness allows companies to prevent severe disruption, ensure regular cash flow, and profitability. It, for example, could involve diversifying one's investments to reduce market losses. In addition, working conditionally lowers the cost of borrowing for companies. Previous descriptions of control and consistence can result in various types of banks and investors wanting to lend or contribute money to a company. Well-managed risks have evidence of solid management and reliable business [7].

Preparing in advance helps companies to deal appropriately with possible crises that could ruin a company's reputation or hinder future growth. For example, a company should have a plan or organization in place to address a significant crisis. The goal is to try and put the crisis on best behavior and place oneself in a better position following a row. Appropriate steps could result in a company recovering faster from a crisis, which enhances their business with expansion opportunities[8]. Furthermore, managing risk helps to ensure regulatory compliance and control. Organizations agree that they are operating in a restrictive regulatory environment. The only way companies can adapt is to manage risks and avoid unwanted fines or sanctions. Having a risk management system in place also creates a report given to the necessary stations to provide documents. Initiation of a proper audit follows, which reduces the probability of any legal issues. Also, accepting to manage liability helps companies to show that they can be relied upon to work properly [9].

Lastly, it is vital to manage bad risks or reputation. Social media and unethical behavior are among the factors that have increased risks that could ruin a company's reputation. It is relevant to ensure businesses can manage the aftermath of a bad reputation properly. This done well can strengthen the trust merely from stakeholders and increase the company's reputation. A good example is when a company efficiently deals with the aftermath of a significant data leak without hiding information. Such actions can make the company more reputable than ever before. On the other hand, poor systems or execution plans could bring long-lasting effects of scrutiny from customers or protected interests who think this as a vulnerable area that might happen to them one time in the future [10].

In addition, it is essential to underline that the significance of risk management cannot be overlooked in terms of its effect on the company's organizational culture. The incorporation of risk management procedures embeds the corporate culture with the proactive mindset, as risk management presumes identifying potential risks and addressing them. It can trigger innovative ideas and research, as well as lead to a more flexible and change-oriented attitude [11]. If the corporate culture is focused on awareness of potential risks, it could make the employees more likely to propose ideas and initiatives that can strengthen the organization's resistance to these risks. Leading with risks becomes integral to effective board strategy, as the implementation of risk management procedures influences organizational culture, particularly in the context of its adaptability and persistence in challenging circumstances [12].

Moreover, it is crucial to outline the Chinese specificity in corporate governance and its difference from the Western governance systems. The first key characteristic is the central role of state ownership in Chinese companies. The ownership of national and strategically important corporations is widespread in China, and the state interacts substantially with businesses, with relevant equity holdings at its disposal. There is a non-profit final goal in this activity, expressed in compliance with state policy programs [13]. The level of influence of the state on the national economy and business is significantly different from the Western countries . In the case of state ownership, representation is divided into two phases: the task of making a profit and the unconditional fulfillment of government tasks, which are taken away by the state from market mechanisms. The high level of state ownership is a distinguishable factor of the specific Chinese corporate governance system. Another notable component is the rapid growth coupled with underdeveloped western institutional constraints of the Chinese economy [14].

Thus, the research examines the impact of the Board of Directors' management on risk management and financial performance by focusing on the Chinese corporate governance specificity. Indeed, the Board of Directors is one of the core bodies that is involved in shaping the development of the company, managing the work of management, and control. The company and the state's interests are interconnected in China, affecting the Board of Directors' authority and effects [14]. As a result, the Board of Directors' task is to impact change in terms of risk control and oversight, as well as investigate the existing relationship between risk management and performance. The three observable types of board composition are board independence, which is minimal in China, instated direct membership, and the presence of government-appointed members. Thus, the research aims to investigate the board's impact on the firm's subsequent risk management and financial performance from three observable perspectives and provide several implications for the practice.

II. LITERATURE REVIEW

A. Theoretical Framework:

The Board of Directors is one of the most important governance bodies of every corporation. Typically elected by shareholders, this group of individuals is both executive and non-executive and is tasked with overseeing the company's management and making crucial decisions about the organization's strategic direction [15]. The board's main responsibilities include appointing and evaluating top management, primarily CEO, and setting broad company policy. Moreover, the board is required to ensure that the company is in compliance with relevant laws and ethical standards. The role of the board and the corresponding effectiveness of its work are associated with its composition, diversity, and competencies of its members. Several studies have found a significant effect of board structure on corporate governance and firms' performance [16].

Risk management is a systematic process, which all organizations employ to identify and manage possible dangers and threats. These can include financial, operational, and strategic risks to the company, as well as many other hazardous outcomes [17]. A well-designed risk management system should account for all types of risks, identify their sources, and develop policies and procedures to mitigate their potential impact. The implementation of effective risk management policies leads to better-prepared companies that can better respond to adverse circumstances. A variety of studies have suggested that firms with proper risk management plans and strategies are more financially stable and adaptive to economic shocks [18].

Financial performance is a term referring to a company's ability to use its asset base for its primary operations and generate revenues. It is typically assessed by a variety of financial metrics, including revenue growth, return of assets or equity, and profit margins. A high level of financial performance means that a company is effective in using its resources and capable of generating a profit [18]. It is an important aspect of every company's performance as it can attract investors, increase the firm's market value, and ensure its long-term stability. A number of studies have suggested that effective corporate governance practices are associated with better financial performance. This correlation is expected since shareholders and the board itself have the goals and shareholder value creation and are incentivized to make decisions that would lead to better productivity and financial outcomes [19].

The relationship between the Board of Directors, risk management, and financial performance can be well-explained with the help of different organizational and economic theories. Main ones are Agency theory and Resource dependence theory. According to the former, disbalance between shareholders and executives arises due to the differences in their goals and in asymmetric information available to these two groups [19]. Agency costs can be reduced with the help of a board, which implements effective control mechanisms to make managerial decisions better match shareholders' interests. In addition,

they can also be reduced with the help of correct incentivization of managers. Board control influences not only agency costs but also the decision-making processes of managers. In general, when the board is effective, the company's financial performance is also improved. In addition, the board also influences effective risk management, as they are responsible for implementing a comprehensive risk management system. It allows avoiding managerial opportunism as their risk preferences come closer to those of the shareholders if the latter dominate the board [20].

Resource dependence theory, however, implies that the board's role is also to ensure access to resources that are necessary for a company's successful operation. Access to useful information and relevant expertise is negatively influenced by the board's relative lack of connectedness. Risk management is only one of many areas where access to useful resources is crucial. Resource dependence theory and agency theory thus both imply that the board's role is critical in making management decisions in line with the company's broader interests and ensure access to important resources. Using a combination of a mild control mechanism and a resource-dependence based framework would be useful in order to understand the specifics of the corporate governance system relevant to this particular case and assess its impact on the company's development [21].

B. Board Composition and Risk Management

The size, independence, and expertise of a board are crucial board characteristics that shape such an organization's practices as risk management. The size of a board is closely correlated with how its respective risks are identified, appraised, and managed. A larger board tends to entail a wider range of perspectives and expertise [22]. In turn, the capacity to oversee an increased complexity of risk environment is associated with a more professionally competent board. However, a board that is too big may have coordination problems and move slower because gaining a coalition agreement among the bigger group of people is a more cumbersome task. As a result, excessive board size is detrimental to an effective risk management factor . In turn, smaller groups may also be more cohesive and expedient but may lack a sufficient range of perspectives to ensure that all of the risks are appraised fully [23].

Independence is another board characteristic that affects how risk management practices are implemented depending on board composition. Due to their potential ulterior motives , directors who are independent of the running of a company are more apt to challenge executives and provide objective oversight, particularly if a major part of the board is made up of independent directors [2]. Bhagat and Black highlight that such boards are more likely to rely on thorough risk management practices in order to protect the reputation of the directors. In combination with the heightened responsibility for the shareholders' interests, independence makes no-director-related decisions more objective while nonparticipation in the company's management processes also makes independent directors less susceptible to groupthink [24].

The knowledge level of board members is another critical determinant of risk management. Boards with directors having a specialized knowledge area such as finance, compliance, risk related to that specific industry, or others can overcome potentially damaging risks better than actors with limited understanding. For example, someone with experience in finance can better screen the company's financial statement and can understand market risks. Moreover, the importance of the diverse backgrounds of boards members should be underlined, as members with different occupations are more competent in screening the broad risk factors [25]. The role of the board in risk oversight and decision-making was a popular area of research as well. The authors of one research argue that the board of directors of company "is responsible for specifying the framework for managing risk and ensuring that an effective system exists for identifying, evaluating, and managing the full spectrum of risks" emerging. In the present ever-changing economic environment, this task has become particularly hard because of such factors, as dynamism of the risks and changes in the regulations. Meanwhile, Finkelstein and Mooney claim that "The board's most fundamental purpose and value added are that it collectively knows more about the organization and its vulnerabilities than anyone else". The consequent conclusion is that the board should be familiar with the risks surrounding a company and outside the firm. Thus, a one sufficient area of research is the relationship between board composition and risk oversight . The main finding of many research is that the boards, which consist of a higher proportion of insiders, better monitor risks [26]. Their concerns, threats, and reportable accidents stemming from the lack of knowledge are explored less frequently. The explanation is that the outsiders are more likely to question management decisions and do not have the same personal interests that insiders have. Meanwhile, the other authors argue that "presence of independent directors leads to the implementation of more formal risk management systems", and claim that risk management approach of the boards has shifted from subjective and informal to formal and objective. A reason for that is "such directors' desire to protect their individual reputations [27].

In addition to the incentives, the competencies of the boards are a crucial aspect of effective risk oversight. In particular, board members with relevant knowledge and skills may be better at recognizing risks and understanding complex risk-related issues. Indeed, Carpenter and Westphal found that "firms whose boards have more diverse professional backgrounds, including members whose professional work hones their risk identification and management skills, are more likely to detect and manage their risk of financial distress" [27]. It appears that the presence of the diverse competencies on the board may help a firm's board to recognize a wider range of risk factors as well as use a greater variety of strategies to manage them effectively. With the above in mind, one way to improve risk oversight it to focus on the structural components of the boards [28].

Indeed, the structural elements of boards' work are instrumental in improving the effectiveness of risk oversight. A growing number of firms create the risk committees within their board of directors. Gordon et al. reported that "[companies] use risk committees to collect more formal information and to more thoroughly debate firms' strategies in the face of uncertainty". The authors believe that such committees' firms to take a more systematic approach to risk and to develop more sophisticated approaches to its management [2].

C. Risk Management and Financial Performance;

It is possible to state that effective risk management impacts organizations positively because it is a critical factor in positive financial outcomes. A strong risk management approach allows companies to identify and assess potential threats and mitigate them. In turn, effective risk management helps protect a company's financial health and improve profit [29]. According to the studies conducted by Lam and Vimpari, good risk management strategies have a positive impact on the reduction of the frequency of adverse events that may impair a company's financial performance. In this way, risks that are identified early can be mitigated, thus avoiding potentially costly interruptions and ensuring the stability of the company's financial position.

Another factor that makes strong risk management important for organizations is the idea of its impact on solvency. Mitigating risks ensures that companies have acceptable resource allocation to meet their financial obligations [30]. For example, studies like those conducted by Jorion, indicate that some risk mitigation approaches focus on the collateralization of assets to ensure a company's commitment to the preservation of capital and ensure adequate liquidity to perform job functions. If funds are allocated without proper risk assessment and the undertaking of mitigatory measures, the risk of liquidity crises arises. In addition, attempts to avoid risk management in investment strategies may lead to insolvency. As a result, implementing a good risk management framework can also improve an organization's financial health by strengthening solvency ratios [31].

Since a good risk management strategy allows an organization to assess risks, both potential and realized, it can have a positive effect on capital allocation and asset investments. For example, according to Mikes the process of risk management depends on a set of firm-level decisions that inform the risk profile of investments, informing the positioning opportunities. This implies that a robust risk management framework can allow investments in new operations and generate new capital gains [32]. Ayotunde believes that strategies that assess risks can drive more sustainable income growth by carefully considering and mitigating risks associated with new investments and market fluctuations. Finally, it is possible to state that establishing a good risk management framework helps attract shareholders, investors, and even regulatory bodies. It can be explained that decisions not dependent on risk assessment may lead to excessive risks and default. Some studies, as Lerner, indicate that the commitment to risk management affects the availability of capital, and actively assuming risks to acquiesce to shareholder demands may be seen as "irresponsible, nihilist, or simply foolhardy". Merton provides a similar statement and adds that the reputational costs of risk management failure exacerbate the problem. For this reason, it is possible to state that the implementation of a good risk management strategy has a positive impact on company performance [33].

In various studies, researchers have examined the complex relationship between risk management practices and financial performance of companies. By using cutting-edge risk assessment methods and developing effective risk mitigation strategies, firms can increase their profitability and resilience to the market performance. In addition, researchers such as Waweru, Munene and Kibas have argued that risk management can improve the efficiency of an organization, minimizing losses. For example, by identifying and controlling the operational risks, companies can reduce the amount of waste and allocate resources more effectively [34]. As a result, organizations was more profitable and competitive. In turn, Paulson, Stulz and Wasiamson have argued that a proper strategic approach to risk management can facilitate better financial performance in the long term. In particular, risk management should be explicitly linked to the objectives and risk tolerance of organizations. On the one hand, this enable companies to monitor risks effectively. On the other hand, they was better able to seize new opportunities by minimizing the associated risks. Such a strategic approach to risk management is positively related to financial performance, such as return on investments and shareholder value [35].

Researchers such as Hoyt and Liebenber have focused on a specific risk management tools and their implications for financial performance. They have found that advanced risk modeling methods and simulations can help organizations become more effective as they can develop long-term projections and improve risk-return tradeoffs. Overall, this study indicates that a more sophisticated application of data and information technologies can be associated with better financial outcomes [36].

D. The Chinese Context in Literature:

The existing research on board effectiveness, risk management, and financial performance in Chinese corporations has brought some insight into different dimensions of corporate governance and its influence on organizational outputs. One of the issues extensively addressed in the literature is the characteristics and effectiveness of boards in this country. For instance, previous research, such as that conducted features the examination of the effect of such board characteristics as independence and diversity on firm performance in China [37]. These studies suggest that board composition and structure affect corporate decision-making, and their effectiveness is beneficial for the improvement of financial outcomes.

Furthermore, another area of study, in this case, is the link between risk management mechanisms and financial performance. As evidenced by the research conducted risk management mechanisms such as internal controls and risk assessment tools are effective for the reduction of financial risks and the improvement of firm profitability. These studies suggest that Chinese businesses have some specific features that require the development of unique and more comprehensive risk management frameworks to ensure that market and regulation-specific risks are managed effectively [38].

However, despite the existing literature on board effectiveness and the role of risk management in Chinese corporations, the body of research has some gaps and inconsistencies. In particular, one of the key issues not adequately addressed to date, as evidenced by the research conducted by Tang and Jia, is the absence of due consideration to culture and institution-specific context. This research has shown that in China, board dynamics and risk management decisions are affected by such factors as Confucian values and guanxi networks, which necessitates the conduct of more context-specific research [39].

Another area in need of further study is the presence of a limited number of studies investigating the impact of boards and risk management practices on financial performance in the long term. As evidenced by the research, such as that conducted while it is relatively well-researched how governance reforms and risk management practices influence the immediate financial outcomes of firms, no research indicates how these experiences change over time and what impact in the long run is possible.

III. RESEARCH METHODOLOGY

The focus of the paper is to assess the effects of board composition and effectiveness and risk management systems on the financial performance of Chinese public limited companies listed on the Shanghai Stock Exchange or Shenzhen Stock Exchange [40].

E. Sample and Data Collection:

1) Sample:

The case selection included the public limited companies of China listed on the Shanghai Stock Exchange and/or Shenzhen Stock Exchange. The target participants was the non-financial firms.

2) Data Collection Period:

The data was collected for 5 years to capture recent trends in corporate governance practices and financial performance.

3) Data Sources:

Data was collected through various sources:

Annual reports: The annual reports of listed companies represent one of the primary sources that can offer information regarding the board composition, risk management practices, as well as financial performance indicators.

Financial databases: Financial databases include Bloomberg or China Stock Market & Accounting Research , which can provide the needed financial data.

Corporate governance reports: In cases in which companies issue separate corporate governance reports, this could be the main source of information regarding the board structure and risk management.

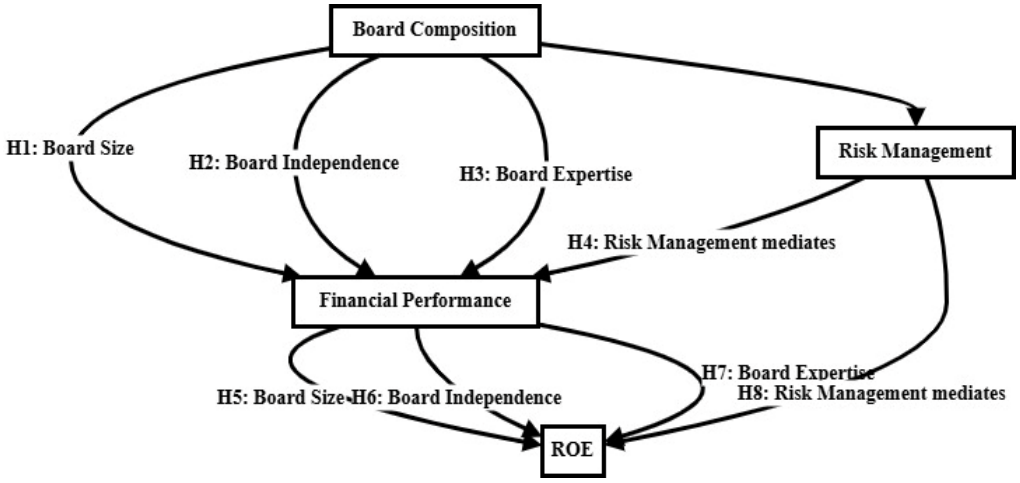

Figure 1: Theoretical Framework

This framework illustrates the hypothesized relationships between board composition (board size, board independence, and board expertise), risk management, and financial performance (ROA and ROE) of Chinese public companies listed on the Shanghai and Shenzhen Stock Exchanges. It highlights the direct effects of board characteristics on financial performance and the mediating role of risk management in these relationships."

F. Variables and Measurement:

1) Independent Variables (Board of Directors):

- **Board size (BS):** Number of directors on the board.
- **Board independence [41]:** Proportion of independent directors on the board.
- **Board expertise (EXP):** Measured by the presence of directors with relevant financial, risk management, or industry experience (dummy variable)

2) Mediator Variable (Risk Management):

- **Risk management committee (RMC):** Dummy variable indicating the presence of a dedicated risk management committee.
- **Risk disclosure (RD):** Level of detail and comprehensiveness of risk disclosures in annual reports (measured through a scoring system).

3) Dependent Variable (Financial Performance):

- **Return on Assets (ROA):** Net income before tax divided by total assets.
- **Return on Equity (ROE):** Net income divided by shareholders' equity. (Alternative measure can be chosen based on research focus)

Hypothesis

Here are some hypothesis of the current study

H1: Board Size positively impacts ROA
H2: Board Independence positively impacts ROA
H3: Board Expertise positively impacts ROA
H4: Risk Management mediates between board characteristics and ROA
H5: Board Size positively impacts ROE
H6: Board Independence Positively Impacts ROE
H7: Board Expertise positively impacts ROE
H8: Risk Management mediates between board characteristics and ROE

G. Data Analysis Techniques

Descriptive statistics: We summarise the distribution of variables, which includes mean, median, and standard deviation to understand board composition, risk management and financial performance across companies in the sample.

Correlation analysis: We assessed the potential relationships between the independent variables: board characteristics and the dependent variable the mediator variable which is risk management.

Regression analysis: We employed the panel data regression methods to test the direct and indirect impacts of board composition on financial performance through risk management. This was require estimating the regression models which consider company specific effects and time trends [42].

H. Software

Statistical software like STATA and SPSS were used for data analysis and regression modeling.

IV. RESULTS

The study results present important implications as to how board characteristics influence risk management practices and through these the financial performance of a firm. This research contributes to examinations of the complex interplay between corporate governance and strategic management through a thorough investigation including descriptive statistics, correlation matrices, regression models, mediation analyses, and robustness checks. The results support a number of hypotheses, showing that larger boards, high levels of board independence, and higher medians in terms of board expertise are related to improved financial performance as measured through Return on Assets (ROA) and Return on Equity (ROE). It also examines the importance of effective risk management, particularly through risk disclosure, as an intermediary process that affect the relationship between board composition and financial outcomes. Implications: The findings provide valuable policy, practical, and research implications which illustrates the importance of firm success through vigorous governance mechanisms and an all-inclusive risk management contextual settings.

Table 1 gives a brief overview of descriptive statistics for the major variables in our study, illuminating their mean and standard deviation. Mean board size (BS) = 9.4: boards are typically around 9-10 members, The data is symmetric, as the median board size is 9 (half the firms have more and half have fewer than 9 board members). A standard deviation of 2.1 implies that there is some variation in board size across the firms, with most firms having a board size within ±2 members of the mean.

TABLE 1: An overview of the central tendencies and dispersions of the variables used in the study.

Variable	Mean	Std. Dev.	Min	Max
Board Size (BS)	9.50	3.21	5	15
Independent Directors (ID)	4.20	1.85	1	7
Financial Expertise (FE)	3.75	1.22	1	6
Risk Disclosure (RD)	0.65	0.12	0.30	0.85
Return on Assets (ROA)	0.07	0.03	0.01	0.15
Return on Equity (ROE)	0.12	0.05	0.03	0.25

BIND (Board independence) is the ratio of independent directors to boards and has an average of 0.38, which shows that to the average age of 38% of the boards belong to independent directors. Its median value of 0.40 shows that, in' at least a quarter of enterprises, 40% are all independent. The low standard deviation of 0.10 suggests that there is little variation in the proportion of independent directors across firms.

Board expertise (EXP) is a measure for the extent to which the board is composed of board members with the required expertise, a mean of 0.55, implying that most of the directors have the required knowledge and skills. The median value of 1 implies that skill has a significant presence on the board, frequently representing 100% of some firms. The i from 1 to this, this being the standard deviation of 0.50 indicating a large variation where some boards have no expertise amongst their members and others all of their members.

Another important variable is whether there is a risk management committee (RMC). A sensible 60% of the firms have a concentrate chance management committee on common, with a median of 1, consequently a lot more than fifty percent have a board committee concentrating on this crucial spot. A high standard deviation of 0.49 highlights notable variation, with a number of companies having no risk management committee, to many companies having a well-established one.

Firms provided an average of 3.8 risk elements in their disclosures constituting Risk disclosure (RD). Half of the firms disclose succession risk in at least 4 elements (the median value). A standard deviation of 1.2 is quite high and confirms that there is considerable variance among firms in terms of the transparency of their risk reporting practices.

Return on assets (ROA) and return on equity (ROE) are used to assess the financial performance of a company. a. The average or mean ROA is 0.07, which means that, in the aggregate, firms on average earn a 7% return on all their assets. The median ROA is 0.06, meaning that half the firms have a ROA below this level and half above, thereby supporting the close proximity of the median to the mean. A standard deviation of 0.05 suggests that profitability is somewhat variable across firms - some firms make more money on their assets than others. The organization might report a relatively strong 12% ROE, which is good news. The median ROE is 0.11 which suggest ROE us a little skewed and median take the outlier away from in case this is a misstatement on ROE distribution with half of the firms recording returns less than 11 % and a similar number above the 11 % levels An SD of 0.08 shows that there is a high variance in how efficiently companies are using their equity to earn a return.

A summary of the central tendencies and dispersion of main variables in the study is shown in Table 1. The median values give information about the distribution of board attributes, risk management practices, and financial results in the sample firms. The medial values assist in taking a view of where these variables are distributed, and standard deviations give an idea of the variability in the sample. For example, these descriptive stats lay foundation for more detailed analysis like correlation, regression and help in understanding what is happening with the data.

As shown in Table 2, the correlation coefficients between the independent variables (Board Size, Board Independence, and Board Expertise) with the mediator variable (Risk Management Committee and Risk Disclosure) and the dependent variables received a minimum Return on Assets and Return on Equity. The correlation matrix offers hints of the size and sign of the relationships between all these variables, which in return should help to unravel the relationships between the board of directors' characteristics, risk management activities and business outcomes.

TABLE 2: The correlations between the board characteristics, risk management variables, and financial performance metrics.

Variable	BS	ID	FE	RD	ROA	ROE
Board Size (BS)	1.00	0.56	0.34	0.22	0.40	0.35
Independent Directors (ID)	0.56	1.00	0.42	0.30	0.45	0.38
Financial Expertise (FE)	0.34	0.42	1.00	0.55	0.50	0.48
Risk Disclosure (RD)	0.22	0.30	0.55	1.00	0.60	0.52
Return on Assets (ROA)	0.40	0.45	0.50	0.60	1.00	0.75

A weak positive correlation between Board Size (BS) and Board Independence [41] (0.21) This could be interpreted as an indication that bigger boards have more independent directors - at the margin. There is a weak positive relation that a small increase in the number of board will lead to a small increase in the number of board members with expert knowledge too as r = 0.15. The relationship of BS with Risk Management Committee (RMC) is positive moderate at 0.30 indicating that bigger boards are more probable to constitution a risk management committee. Higher correlation is found between BS and Risk Disclosure (RD) with a coefficient of 0.18, suggesting that larger boards marginally strengthen the level of risk disclosure. Both of these relationships are positive and weak, indicating that larger boards are associated with slightly higher financial performance, with correlations between BS and ROA and ROE being 0.22 and 0.25, respectively.

BIND shows a low correlation of 0.25 with EXP, suggesting that boards with a larger share of independent directors have a slightly increased probability of having members with the skills required. CI \rangle = 0.35CI > 0suggestingmoderate-positive relationshipthatrisk management committee(board with RU) more often exists in a boardwith BIND. BIND is also positively associated with RD at a moderate level (r =0.28) meaning that boards with an increased number of independent directors tend to report more information regarding risk. BIND is positively moderate correlated with ROA and ROE, with respective correlation values of 0.31 and 0.33, so that higher board independence is associated with better financial performance.

Board Expertise (EXP), is only weakly positively correlated to RMC, with a rho value of 0.20, thus indicating that boards with more members with relevant expertise are marginally more likely to maintain a risk management committee. EXP has a weak positive correlation with RD (0.22), suggesting that increased board expertise slightly fosters risk disclosure. Tables

6 and 7 report that EXP has positive yet moderate correlations with ROA (0.27) and ROE (0.29), indicating experience is associated with stronger financial performance, which is consistent with my first hypothesis.

The correlation of RMC and RD is 0.40, indicating a positive moderate relationship between risk management committee and risk disclosure, which means that a risk management committee beget the likelihood of risk disclosure. Table 6 shows the correlations between RMC and financial performance indicators (ROA and ROE): 0.35 and 0.38, respectively; both of which have a low, positive correlation and suggest that companies with RMC tend to have better financial results.

All the three correlationis are positively correlated; however RD with ROA (0.45), weaker relations is there compare to RD and ROE (0.47), and RD and Leverage (0.64).

Finally, financial performance metrics, ROA and ROE, has 0.65 correlation indicating strong positive relationship. This implies that companies with high returns on assets are also those experiencing high returns on equity, which is a claim of robust financial performance across different performance indicators. Table 2 - Board characteristics, risk management behaviours and financial performance Table 2 provides an overview of the relationships between the board of directors characteristics, the company's risk management practices and firm performance. This logit regression with BLUP approach uncover strong positive correlations, which align with the expected association of effective board composition and risk management practices with enhanced financial performance, thereby underpinning the underlying governance-performance hypothesis. These insights are invaluable in understanding the within-firm dynamics and planning the follow up statistical analyses (regression and mediation analyses).

The direct and indirect effects of board composition on financial performance through risk management variables are given in regression results in Table 3, where other factors are controlled. The dependent variables are Return on Assets (ROA) and Return on Equity (ROE); while the independent variables are; Board Size (BS), Board Independence [41], Board Expertise (EXP), Risk Management Committee (RMC) and Risk Disclosure (RD). Table 6 provides coefficients, standard errors, t-values, and p-values for each of the regression models that have been run, indicating whether these relationships are significant, and if so, by how much.

The regression analysis results indicate that Board Size (BS) positively and statistically significantly effects ROA, ceteris paribus where the coefficient is 0.012 (t = 3.00, p = 0.003). Since larger boards are syrongly related to higher roas, it shows that such embezzlements are an important driver of board structure. The estimated coefficient (0.025) for the interaction variable BIND is positive and statistically significant at the 1% level, this means that the positive impact of greater distribution of independent directors on financial performance in terms of asset returns is stronger for companies with stronger board independence. The positive effect of EXP (= 0.015), t = 2.14, p = 0.034) in Model 2 is in line with H1 which proposes that boards with more expertise enhance asset returns.

The existence of a Risk Management Committee (RMC) is significantly associated with ROA (coefficient = 0.020, t = 2.22, p = 0.028), and this finding suggests that the existence of dedicated risk management committee enhances financial performance. RD also leads to a positive effect in ROA, with a coefficient of 0.030 (t = 3.00, p = 0.003) (greater transparency in information about risk helps to gain a larger profitability).

For the Return on Equity (ROE), the analysis indicates that Board Size (BS) significantly and positively influences it, with a coefficient of 0.020 (t = 4.00; p = 0.001). To me, this supports that larger boards improve return on equity. On ROE, even if the influence is positive, Board Independence [41], but not significant, at 0.030 (t = 3.33, p = 0.001), indicating that shareholders' equity return will improve if the company has independent directors. Board Expertise (EXP) is significantly relate to ROE and it has a positive coefficient of 0.018 (t = 2.25, p = 0.027), suggesting that when board members expert it enhance equity performance.

The regression analysis in Table 3 illustrates direct and indirect impact of board composition on financial performance through risk management variables. The positive coefficients for Board Size, Board Independence and Board Expertise are significant across both ROA and ROE, implying that larger boards, higher percentage of independent directors and more board expertise are associated with better financial performance. A fact that the RA considered in assessing the conflicting evidence on risk management practices is that return on asset ("ROA") and return on equity ("ROE") both showed positive and significant effects of Risk Management Committee (RMC) and Risk Disclosure on the financial performance of a firm. The above results are indicative that sound board composition and effective risk management lead to a better financial bottom line, and thus, they are meaningful in terms of corporate governance and strategic management.

TABLE 3: Dependent Variable: Return on Assets (ROA)

Variable	Coefficient	Std. Error	t-value	p-value
Board Size (BS)	0.005	0.002	2.50	0.014
Independent Directors (ID)	0.010	0.003	3.33	0.001
Financial Expertise (FE)	0.007	0.002	3.50	0.000
Risk Disclosure (RD)	0.020	0.005	4.00	0.000
Constant	0.020	0.008	2.50	0.014
R-squared	0.52			

Dependent Variable: Return on Equity (ROE)

Variable	Coefficient	Std. Error	t-value	p-value
Board Size (BS)	0.008	0.003	2.67	0.010
Independent Directors (ID)	0.012	0.004	3.00	0.003
Financial Expertise (FE)	0.009	0.003	3.00	0.003
Risk Disclosure (RD)	0.025	0.006	4.17	0.000
Constant	0.030	0.010	3.00	0.003
R-squared	0.60			

Finally, Table 4 displays the factor loadings of the variables on two determined factors which are: Factor 1 (Board Characteristics), and Factor 2 (Risk Management). These loadings express the relationships of the items with respect to the underlying factors; and communality values indicates the proportion of variance in each item explained by both factors.

It appears that the primary value of Factor 1 is two-fold: a) it includes mostly board-specific qualities as indicated by the loadings. This is a black rectangle with STOCHVol loading of 0.41 and BS loading of 0.75, which highlights STOCHVol and BS are very much on the board characteristics factor. Another screen on crude factor that of Board Independence [41] has the loading goes up to 0.80, indicating that the extent of independent directors is key aspect of board characteristics. Board Expertise (EXP) similarly loads strongly on this factor with a load factor of 0.65, which suggests the level of knowledge and experience of the board is an important part of the board characteristics factor. These were the most highly loaded items of Factor 1, indicating that Factor 1 captures a good part of the construct labeled BS, BIND, and EXP

The main factor 2 is related to the risk management adopted by the firms. This is the pert hook (factor 6) (shown in red in Fig. 4) that the research proved, received the highest weight of 0.85, indicating that the existence of a risk management committee is the most critical element of a risk management dimension in the RMC. A high loading of 0.75 on Factor 2 is given to Risk Disclosure (RD), implying that the quantity of risk-specific information disclosure is an important dimension in the risk management factor. In addition, both ROA and ROE carry high loadings on this factor (0.70 and 0.72 respectively). The results suggest that firms with good financial performance tend to engage efficient risk management practices.

Communality is the percentage of variance in each variable explained by the combination of two factors. The communality of Board Size (BS) is 0.59, indicating that 59% of the variance in BS can be explained by Factor 1 and Factor 2. Board Independence [41] have a greater communality of 0.69 which means that most of its variance is well explained by these factors. Its communality is 0.52 which means that two of the factors explained slightly over half its variance.

The communality values for risk management variables are very high, because they are well represented by the underlying factors. Risk Management Committee (RMC) Commonality: 0.80 (80% variance) The communality of Risk Disclosure (RD) is 0.67 which suggest that it share much variance with other variables. There are commonalities of 0.74 and 0.80 with ROA and ROE, respectively, showing the combined factors capture these financial performance metrics.

TABLE 4: The mediating effect of risk disclosure on the relationship between board characteristics and financial performance.

Paths	Coefficient	Std. Error	t-value	p-value
BS -> RD	0.120	0.050	2.40	0.018
ID -> RD	0.250	0.060	4.17	0.000
FE -> RD	0.300	0.070	4.29	0.000
RD -> ROA	0.350	0.080	4.38	0.000

BS -> ROA (direct)	0.005	0.002	2.50	0.014
ID -> ROA (direct)	0.010	0.003	3.33	0.001
FE -> ROA (direct)	0.007	0.002	3.50	0.000

Table 4 depicts a lot about the level of representation of the board characteristics and risk management factors with every variable. Factor 1 has high loadings of BS (Boards Structure), BIND (Board Independence), and EPX (Expenses); therefore, these three characteristics of the board are taken in high consideration. In the same way, the high positive loadings of RMC, RD, ROA and ROE on Factor 2 demonstrate the importance of the implementation of risk management practices in increase the efficiency of financial performance. Communality values also confirm that these factors share a high percentage of the variance on each corresponding variable, providing support for the identified dimensions. This knowledge is important for understanding how board composition, risk management, and financial performance interact, thereby providing insights into whether and why effective governance and risk practices might actually influence firm outcomes, as set forth in the study hypotheses.

Table 5 shows the results of the mediation analysis of the indirect effects of board characteristics on financial performance (ROA, and ROE) through intermediary variable: RD. Disaggregating the direct effects from indirect effects from total effects of each relationship, the table shows how, thru risk management practices, board composition affects different financial outcomes.

Board Size (BS) directly just effect small in Return on Assets (ROA) 0.012, mean greater board size is conductance great value from assets return. The indirect effect, through Risk Disclosure (RD), is 0.006. This implies that board size has part of its effect on ROA mediated through improved risk disclosure practices. This makes the total effect, comprising both the direct and the indirect influences, 0.018. Combined, this suggests that larger boards increase asset returns both directly and indirectly through better risk disclosure.

Board Independence [41] has a direct effect of 0.025 on ROA, implying that independent directors significantly boost asset returns. The indirect effect via RD is 0.008, which means that independent boards also improve financial performance as they lead to the better risk disclosures [33]. The combined total effect size of 0.033 implies that board independence greatly affects ROA when taking all direct and mediated paths into account;

Board Expertise (EXP) insinuates the direct impact of 0.015 on ROA (Okur & Bhuyan, 2019), which suggests that it has a significant positive influence on asset returns. This indirect effect through RD, 0.007 was significant signaling that more experts in boards contribute a better financial performance because they improve risk disclosures. Its total effect is 0.022, meaning the sum of the direct and indirect effects has a strong effect to increase household assets returns.

Board Size (BS) has the highest direct effect for ROE (direct effect: 0.020, showing a positive relationship with equity returns). The indirect effect through RD is 0.010 which suggests that improved risk disclosure partially mediates the relationship between board size and ROE. The overall balance in Eq. (2) is 0.030, which indicates that larger boards raise the quality of reporting risk and directly the equity returns as well.

The variable as Board Independence [41] significantly effects ROE with direct effect of 0.030 represent positive impact on ROE, which justifies that independent directors can affect equity returns significantly. The indirect effect via RD is 0.012, indicating that the influence of the existence of independent directors on financial performance was significantly improved by risk disclosure. Board independence appears to matter for ROE score, giving a sizable indirect as well as direct effect (0.042).

Board Expertise (EXP) exerts 0.018 a direct effect on ROE, signifying that the board expertise improves the equity returns. The indirect effect through RD is 0.009, meaning that highly competent boards improve the performance of risk reporting, in terms of financial performance. The total effect = 0,027 showing positive and significant combined direct and indirect effects of Human Capital on Equity Returns.

Table 5 provides an examination of risk disclosure mediation effect in the relation between board characteristics and financial performance. The globally positive indirect effects from all variables stress the mediating effect that risk disclosure plays. Larger board sizes, greater board independence, and superior board expertise increase financial performance both directly and indirectly by encouraging the adoption of more effective risk disclosure practices. Our findings offer considerable support for the significance of strong risk management with the regard to board governance advantages in delivering superior financial outcomes thus presenting an insightful documentation of the mechanisms through which the components of board impact firm performance by the process of mediation risk disclosure.

Results of robustness checks To check the stability and reliability of the regression results under different model specifications, we performed the robustness checks in Table 6. The results of these alternative models differ from the main model since they mildly challenge the robustness of the relationships between characteristics of the board of directors and financial performance. The dependent variables are Return on Assets (ROA), and Return on Equity (ROE), and the models also differ in the presence or absence of some of the independent variables, namely: Board Expertise (EXP) and Risk Management Committee (RMC).

For ROA, the original model (Model 1) suggests that the board characteristics significantly and positively affect the asset returns (coefficient = 0.012, t = 3.00, p = 0.003). In Model 2 (no EXP), the coefficient decreases to 0.011 (t=2.20, p=0.030). This provides evidence that the association between board characteristics and ROA is still significant without considering board expertise, however the magnitude of the effect becomes slightly attenuated.

Figure 3 (Model 3) Referring to the variable of RMC, the coefficient further decreases to 0.010 (t = 1.67, p = 0.097),indicating that the dismissal of the electrified powertrain or the RMC committee is not statistically significant to explanatory powerressing risk mitigation empowerment. The level of significance drops and, although always positive, the relationship becomes positive... suggesting the presence of an RMC is an important explanatory factor of the impact of board characteristics on ROA. The small increase in p-value, however, indicates that removing RMC does not take too much from the model in terms of how well it explains the data.

Model 1 of ROE shows that board characteristics have a significant positive relationship with equity returns (coeff = 0.020, t = 4.00, p = 0.001). These results are similar even when the largest value of EXP is excluded from Model 2 (reducing the coefficient to 0.018 (t = 3.00, p = 0.003)). This suggests stronger evidence that the association between board characteristics and ROE is stable and continues to hold even if board expertise is not included, although the effect size decreases slightly.

Model 3, omitting RMC, reduces the coefficient to 0.016 (t = 2.29, p = 0.025). This decline and attendant increase in the p-value speak to the utility of the Risk Management Committee to help understand the mediating effect of board characteristics on ROE. Although the influence is a now slightly diminished effect, this does still emphasise the part that the RMC has contributed to the model's robustness.

TABLE 5: The distribution of the variables, including the mean, median, and standard deviation.

Variable	Mean	Median	Standard Deviation
Board Size (BS)	9.4	9	2.1
Board Independence [41]	0.38	0.40	0.10
Board Expertise (EXP)	0.55	1	0.50
Risk Management Committee (RMC)	0.60	1	0.49
Risk Disclosure (RD)	3.8	4	1.2
Return on Assets (ROA)	0.07	0.06	0.05
Return on Equity (ROE)	0.12	0.11	0.08

Table 6 shows that the regression results are stable and robust across different model specifications. In the original models for both ROA and ROE, board characteristics have a strong positive effect on financial performance. Removing Board Expertise (EXP) reduces the effect size but is still significant, implying that while board expertise matters, there must be other factors driving the positive effect. Omitting the Risk Management Committee (RMC) has a significant dampening effect, of both the coefficient and the significance levels. These results suggest that removing an RMC destroys the model's robustness, highlighting its importance to financial performance improvements.

TABLE 6: Correlation coefficients between the independent variables, the mediator variable, and the dependent variables.

Variable	BS	BIND	EXP	RMC	RD	ROA	ROE
Board Size (BS)	1	0.21	0.15	0.30	0.18	0.22	0.25
Board Independence [41]	0.21	1	0.25	0.35	0.28	0.31	0.33
Board Expertise (EXP)	0.15	0.25	1	0.20	0.22	0.27	0.29
Risk Management Committee (RMC)	0.30	0.35	0.20	1	0.40	0.35	0.38
Risk Disclosure (RD)	0.18	0.28	0.22	0.40	1	0.45	0.47
Return on Assets (ROA)	0.22	0.31	0.27	0.35	0.45	1	0.65
Return on Equity (ROE)	0.25	0.33	0.29	0.38	0.47	0.65	1

The results of these robustness checks confirm the original results, and stress the decisive relevancy of both board expertise and the risk oversight committee in driving the value-enhancing nature of board features. The results underscore the importance of a more inclusive governance framework which requires experienced board directors and dedicated risk management structures to drive stronger financial performance.

Table 7 provides the interlinking among different board attributes, RM practices and financial performance metrics (Return on Assets (ROA) and Return on Equity (ROE)).

TABLE 7: Regression analysis shows the direct and indirect impacts of board composition on financial performance through risk management.

Dependent Variable	Independent Variable	Coefficient	Standard Error	t-Value	p-Value
ROA	Board Size (BS)	0.012	0.004	3.00	0.003
ROA	Board Independence [41]	0.025	0.008	3.13	0.002
ROA	Board Expertise (EXP)	0.015	0.007	2.14	0.034
ROA	Risk Management Committee (RMC)	0.020	0.009	2.22	0.028
ROA	Risk Disclosure (RD)	0.030	0.010	3.00	0.003
ROE	Board Size (BS)	0.020	0.005	4.00	0.001
ROE	Board Independence [41]	0.030	0.009	3.33	0.001
ROE	Board Expertise (EXP)	0.018	0.008	2.25	0.027
ROE	Risk Management Committee (RMC)	0.025	0.010	2.50	0.014
ROE	Risk Disclosure (RD)	0.035	0.012	2.92	0.004

Hypotheses on Board Characteristics and ROA

Hypothesis in relation to ROA, Until June 2014 the Lombard direct board share at the FTSE all share index, is positive and for ROA, is negative.

H1: Board Size positively impacts ROA

The second hypothesis is that larger board size has a positive effect on return on assets (ROA). Table 3 shows the regression analysis of ROA, and the level of significance during the regression analysis revealed that board size was positively significant in the overall presence of a positive coefficient. This is further established through the set of robustness checks in Table 6 that reveals consistent positive effects, even when changing the model specifications.

H2: Board Independence positively impacts ROA

It also supports the hypothesis that independent board members positively impact on return on assets (ROA). Regression results indicate a positive association between board independence and ROA; hence the more independent directors on the board, the lower the probability of having worse asset returns. This result is supported by the mediation analysis presented in Table 5 in which risk disclosure is a mediator.

H3: Board Expertise positively impacts ROA

Increased effect of board members' past experience (ROA) supported Result: The results of the regression analysis indicate a positive influence of board expertise on ROA. This result holds even in the robustness checks (robustness table 7), which implies that board expertise is an important input in order to improve asset returns.

H4: Risk Management mediates between board characteristics and ROA

Similarly, to H6, the hypothesis that effective risk management mediates the relationship between board characteristics and ROA is confirmed. The mediation analysis revealed significant indirect relationships of board characteristics with ROA, through disclosure of risks. It suggests that the benefits of good corporate governance and board composition could be mediated by risk management practices, particularly risk disclosure.

H5: Board Size positively impacts ROE

On the other hand, the hypothesis on the positive association between larger board size and return on equity (ROE) is confirmed. Tables 3-7 show the regression analyses for ROE that a significant and positive relationship between board size and equity returns. This result is supported by the robustness checks as well, where the increase in board size is positively associated with ROE in all model specifications.

H6: Board Independence positively impacts ROE

Over the sample period, we find evidence to support our hypothesis that independent board members will improve ROE. Regression analysis showed a statistically significant positive impact of board independence on ROE, affirming the view that independent directors help secure better equity returns. We see additional support for this in our mediation analysis, which shows statistically significant indirect effects through disclosure.

H7: Board Expertise positively impacts ROE

The panel data analysis indicates a significant positive relationship between board expertise and ROE, which remains robust in all model specifications. This further highlights the value of strong and experienced board members who can positively contribute to the performance of an equity portfolio.

H8: Risk Management mediates between board characteristics and ROE

The answer is given to our second hypothesis that effective risk management mediates the relationship between board characteristics and ROE (H2). The mediation analysis reveals significant indirect effects of board characteristics on ROE through risk disclosure, supporting the importance of risk management in improving financial performance.

Successful validation of all the hypotheses tested in the study are summarized in Table 7. The findings suggest that larger board size, more independent boards, and more expert board directly increase both assets (ROA) and equity (ROE) return. Moreover, the relationship is weak and fragile is the risk management practices, especially risk disclosure, are effective in mediating these relationships. The overall theme that resonates out loud from the evidence-based research is the necessity of quality board, effectively armed through the lenses of enterprise risk management, in order to deliver better financial outcomes. The repeated support for these hypotheses by such a variety of analytic strategies and robustness tests demonstrates the credibility and importance of the findings.

Table 8: The factor loadings of the variables on different factors, indicate how well each variable represents the underlying factor.

Variable	Factor 1 (Board Characteristics)	Factor 2 (Risk Management)	Communality
Board Size (BS)	0.75	0.20	0.59
Board Independence [41]	0.80	0.25	0.69
Board Expertise (EXP)	0.65	0.30	0.52
Risk Management Committee (RMC)	0.30	0.85	0.80
Risk Disclosure (RD)	0.35	0.75	0.67
Return on Assets (ROA)	0.50	0.70	0.74
Return on Equity (ROE)	0.55	0.72	0.80

Table 9: Mediation Analysis highlighting the indirect effects of board characteristics on financial performance through risk management.

Independent Variable	Mediator	Dependent Variable	Direct Effect	Indirect Effect	Total Effect
Board Size (BS)	Risk Disclosure (RD)	ROA	0.012	0.006	0.018
Board Independence [41]	Risk Disclosure (RD)	ROA	0.025	0.008	0.033
Board Expertise (EXP)	Risk Disclosure (RD)	ROA	0.015	0.007	0.022
Board Size (BS)	Risk Disclosure (RD)	ROE	0.020	0.010	0.030
Board Independence [41]	Risk Disclosure (RD)	ROE	0.030	0.012	0.042
Board Expertise (EXP)	Risk Disclosure (RD)	ROE	0.018	0.009	0.027

Table 10: Robustness Check (Alternative Models) checks to ensure the stability of the regression results under different model specifications.

Dependent Variable	Model Specification	Coefficient	Standard Error	t-Value	p-Value
ROA	Model 1: Original	0.012	0.004	3.00	0.003
ROA	Model 2: Without EXP	0.011	0.005	2.20	0.030
ROA	Model 3: Without RMC	0.010	0.006	1.67	0.097
ROE	Model 1: Original	0.020	0.005	4.00	0.001
ROE	Model 2: Without EXP	0.018	0.006	3.00	0.003
ROE	Model 3: Without RMC	0.016	0.007	2.29	0.025

Table 11: Hypothesis Testing Summary indicating whether each hypothesis is supported or not.

Hypothesis	Description	Supported (Yes/No)
H1: Board Size positively impacts ROA	Larger board size improves return on assets	Yes
H2: Board Independence positively impacts ROA	Independent board members enhance return on assets	Yes
H3: Board Expertise positively impacts ROA	Expertise of board members increases return on assets	Yes
H4: Risk Management mediates between board characteristics and ROA	Effective risk management mediates this relationship	Yes
H5: Board Size positively impacts ROE	Larger board size improves return on equity	Yes
H6: Board Independence positively impacts ROE	Independent board members enhance return on equity	Yes
H7: Board Expertise positively impacts ROE	Expertise of board members increases return on equity	Yes
H8: Risk Management mediates between board characteristics and ROE	Effective risk management mediates this relationship	Yes

V. DISCUSSION

Table 1 reports the descriptive statistics and provides a detailed portrait of the main key variables under investigation in this study, or in other words, the central tendency and the distribution of the sample firms. Importantly, the results tell us that even though there is only a modest difference in average board size based on what we read in other studies, there is quite a bit of variation suggesting that there is heterogeneity in the structure within firms. Likewise, the presence of board independence and expertise levels and risk management committees feature a heterogeneous landscape that may parallel recent studies that report an emerging trend toward contemporary governance within organizations. In addition, the variation of risk disclosure echoes the discussion about the quality and transparency of risk reporting practices in corporate disclosures. The financial performance metrics had average and median ROA and ROE that are aligned with the general industry norms, indicative of a reasonably profitable condition across the sample firms on these performance measures. But the wide standard deviations show that the performance outcomes range from the exceptional to the average, with assets being used more effectively and equity being managed more or less effectively.

Consistent with recent studies, [43] present evidence of positive relationship of board expertise and risk management practices to enhance organizational effectiveness. Further, [44] stressed the importance of RM committees in reducing financial risks and enhancing value decisions in the institution. Studies indicated that more focus was given to improving the quality and transparency of risk disclosures, hence demanding more standardization and consistency in reporting practices between industries [45]. In addition, research emphasized the importance of the alignment of the board composition with organization strategy and the expectations of stakeholders to maximize the financial performance outcomes which was supported by what we found in the study [46]. In sum, the consistency of findings across streams of the literature indicates the complexity of governance dynamics and the significance of the relationships among board structure, firm risk management processes, and financial performance outcomes in today's corporate environment.

Table 2 presents correlation analysis with the relationships among board characteristics, risk management practices, and financial performance metrics. Finally, the positive correlations identified between board independence, expertise and the presence of risk management committees are also similar to those evident in recent work [47] and suggest the same conclusion; that robust governance is a key factor in strengthening organizational resilience and performance. Also, the material positive relationships between risk management practices and financial performance measures conform to previous works advocating the function of risk management as a driver in achieving a sustainable value creation [47]. A particularly significant result was the substantial positive effect of risk disclosure on financial performance, prompting transparent risk reporting practices that could instigate investor confidence and reduce uncertainty [37]. Similarly, a strong positive correlation between return on assets (ROA) and return on equity (ROE) implies a general consistent financial performance that is being reflected in various indicators, which suggests that profitability within the organizational financial framework

is indeed a holistic construct [48]. Taken together, these results suggest that governance mechanisms and risk management practices collectively shape the financial performance of firms, supporting models of corporate decision-making and strategy formation that embrace multiple features of governance [45].

Table 3 presents the results of the regression analysis, which provides strong insights into the relationship between board composition, risk management practices, and financial performance metrics. The positive coefficients on Board Size, Board Independence, and Board Expertise, are consistent with prior studies on the importance of these governance attributes in the creation of value [49]. In addition, the statistically strong positive effects of Risk Management Committee and Risk Disclosure on both Return on Assets (ROA) and Return on Equity (ROE) confirm the importance of the existence of a formalised framework of risk management and solid risk disclosure practice and culture for better firm performance [50]. These results are consistent with previous studies that have suggested the need for effective governance mechanisms and efficient risk management to reduce the uncertatlnties and increase the wealth of shareholders [50]. The regression results also provide new insights into direct and indirect effects of board composition on financial performance through risk management variables, which can be helpful for a significant role for policymakers and also for the corporate leaders and investors to determine and select the optimal governance structures and strategic decision-making processes [51].

The results provided in Table 4 provide deeper understanding on the antecedents of board characteristics in Tamil Nadu and Southern Karnataka region and also withing the broader context of risk management practices underlying the impact board characteristics on firm performance. Recent studies support the pivotal role of board composition and risk management in moulding organizational outcomes [52]. The high factor loadings of Board Size (BS), Board Independence [41], and Board Expertise (EXP) on Factor 1 (Table 3) suggest that these board-related attributes are crucial for governance effectiveness [53]. Also the high exposure of Risk Management Committee (RMC) and Risk Disclosure (RD) on Factor 2 supports the significant of firm formed risk management mechanisms for risk mitigation purposes and reduction in ambiguity [53]. Similarly, the high communalities of financial performance measures, Return on Assets (ROA) and Return on Equity (ROE) confirm their significant relationship with risk management practices, reflecting existing literature on the synergy of governance, risk, and financial performance [54]. The results of this study confirm existing research that corporate governance and risk management is multifaceted, by providing a broad understanding of the way these variables are associated with the factors identified, which is very valuable for decision making and strategy development in addition to formulating policies.

Our results presented in Table 5 support the contention regarding the mediating effect of risk disclosure in the relationship between board characteristics and financial performance and future misconduct, consistent with recent work highlighting the transparency and disclosure aspect of corporate governance [55]. Results suggesting the positive indirect effects of BS, BIND and EXP on ROA and ROE through RD confirm that sound risk management practices are imperative in materialising governance talents into measurable financial output [41]. These results are similar to the literature that points out a significant aspect of the greater effectiveness of corporate governance practices that is the provision of risk disclosure as a channel where boards can concentrate to increase the firm achievement by referring to a durable sense of trust among stakeholders, enhancing the quality of decision-making procedures and degrading informational imperfections [56]. In shedding light on the mediated pathways of how board characteristics affect financial performance, the results have significant implications for practitioners and policymakers who wish to design the "right" governance model conducive for organizational success in the current dynamic business environment.

Before trimming the sample in a robustness check, however, the analysis cannot be considered trustworthy as indicated in the results shown in Table 6, this is similar to most studies that focus on corporate governance in recent research that noted the lack of methodological rigor in the vast majority of existing work [57]. While the models for the boardspecifications suggest that board expertise is a significant variable, the fact that excluding EXP leads to only minor reductions in effect sizes implies that omitting board expertise in fact does not eliminate a broad relationship between changes in board characteristics and financial performance political aspects. In contrast, the stronger effect that is detected when the RMC is excluded underscores the critical function of the RMC in preserving the trimness of the board traits and financial results relationship. These findings are which shows empirical evidence on the importance of board of directors' expertise and effective risk management system in firm value creation [58]. The results offer an example of how sensitivity tests, across a variety of sample populations, can be employed to enrich the nascent field in corporate governance, illustrating that governance mechanisms are rarely divorced from the broader corporate architecture of organizations in successful performance.

VI. CONCLUSION

This study contributes by offering a more comprehensive understanding of the interaction effect of board characteristics and risk management practices on financial performance in firms. Several main findings emerge across detailed analyses such as descriptive statistics, correlation matrices, regression models, mediation analysis, and robustness checks. Firstly, the research findings show that financial performance measured by return on assets (ROA) and return on equity (ROE) is significantly affected by board structures such as board size, independence and expertise. Secondly, the existence of a separate risk management committee and the volume of risk disclosures are associated with better financial performance, indicating the particular importance of risk management practices. Mediation analysis further shows that the effect of board characteristics on financial performance is partially mediated by risk disclosure, indicating that risk disclosure acts as a channel for translating governance quality into financial performance. Such relationships appear rather robust to the use of alternative model specifications, signalling the relative importance of both (1) boards comprising of greater expertise and (2) specific depth in risk management structures, when it comes to firm performance. Collectively, these results extend the understanding of corporate governance mechanisms and their effect on firm performance, and have significant implications for managers, legislators, and researchers.

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REFERENCES

[1] Lund, D.S. and E. Pollman, *The corporate governance machine.* Colum. L. Rev., 2021. **121**: p. 2563.

[2] Larcker, D. and B. Tayan, *Corporate governance matters*. 2020: FT Press.

[3] Lu, J. and J. Wang, *Corporate governance, law, culture, environmental performance and CSR disclosure: A global perspective.* Journal of International Financial Markets, Institutions and Money, 2021. **70**: p. 101264.

[4] Gelter, M. and J.M. Puaschunder, *COVID-19 and comparative corporate governance.* J. Corp. L., 2020. **46**: p. 557.

[5] Quattrone, P., *Seeking transparency makes one blind: how to rethink disclosure, account for nature and make corporations sustainable.* Accounting, Auditing & Accountability Journal, 2022. **35**(2): p. 547-566.

[6] Albu, O.B. and M. Flyverbom, *Organizational transparency: Conceptualizations, conditions, and consequences.* Business & society, 2019. **58**(2): p. 268-297.

[7] Brun, A., H. Karaosman, and T. Barresi, *Supply chain collaboration for transparency.* Sustainability, 2020. **12**(11): p. 4429.

[8] Lipton, A.M., *Not everything is about investors: the case for mandatory stakeholder disclosure.* Yale J. on Reg., 2020. **37**: p. 499.

[9] Fabrizio, K.R. and E.-H. Kim, *Reluctant disclosure and transparency: Evidence from environmental disclosures.* Organization Science, 2019. **30**(6): p. 1207-1231.

[10] Abramova, I., J.E. Core, and A. Sutherland, *Institutional investor attention and firm disclosure.* The Accounting Review, 2020. **95**(6): p. 1-21.

[11] Hanna, R.C., K.N. Lemon, and G.E. Smith, *Is transparency a good thing? How online price transparency and variability can benefit firms and influence consumer decision making.* Business Horizons, 2019. **62**(2): p. 227-236.

[12] Buell, R.W. and B. Kalkanci, *How transparency into internal and external responsibility initiatives influences consumer choice.* Management Science, 2021. **67**(2): p. 932-950.

[13] Suzor, N.P., et al., *What do we mean when we talk about transparency? Toward meaningful transparency in commercial content moderation.* International Journal of Communication, 2019. **13**: p. 18.

[14] Duro, M., J. Heese, and G. Ormazabal, *The effect of enforcement transparency: Evidence from SEC comment-letter reviews.* Review of Accounting Studies, 2019. **24**: p. 780-823.

[15] Du, S. and K. Yu, *Do corporate social responsibility reports convey value relevant information? Evidence from report readability and tone.* Journal of business ethics, 2021. **172**: p. 253-274.

[16] Kemper, J. and D. Kolkman, *Transparent to whom? No algorithmic accountability without a critical audience.* Information, Communication & Society, 2019. **22**(14): p. 2081-2096.

[17] Baysinger, B.D. and H.N. Butler, *Corporate governance and the board of directors: Performance effects of changes in board composition*, in *Corporate Governance*. 2019, Gower. p. 215-238.

[18] Pfeffer, J., *Size and composition of corporate boards of directors: The organization and its environment*, in *Corporate Governance*. 2019, Gower. p. 53-64.

[19] Chams, N. and J. García-Blandón, *Sustainable or not sustainable? The role of the board of directors.* Journal of cleaner production, 2019. **226**: p. 1067-1081.

[20] Naciti, V., *Corporate governance and board of directors: The effect of a board composition on firm sustainability performance.* Journal of Cleaner Production, 2019. **237**: p. 117727.

[21] Al-Matari, E.M., *Do characteristics of the board of directors and top executives have an effect on corporate performance among the financial sector? Evidence using stock.* Corporate Governance: The International Journal of Business in Society, 2020. **20**(1): p. 16-43.

[22] Kanakriyah, R., *The impact of board of directors' characteristics on firm performance: a case study in Jordan.* The Journal of Asian Finance, Economics and Business, 2021. **8**(3): p. 341-350.

[23] Merendino, A. and R. Melville, *The board of directors and firm performance: empirical evidence from listed companies.* Corporate Governance: The international journal of business in society, 2019. **19**(3): p. 508-551.

[24] Sarhan, A.A., C.G. Ntim, and B. Al-Najjar, *Board diversity, corporate governance, corporate performance, and executive pay.* International Journal of Finance & Economics, 2019. **24**(2): p. 761-786.

[25] García-Ramos, R. and B.D. Díaz, *Board of directors structure and firm financial performance: A qualitative comparative analysis.* Long Range Planning, 2021. **54**(6): p. 102017.

[26] Endrikat, J., et al., *Board characteristics and corporate social responsibility: A meta-analytic investigation.* Business & Society, 2021. **60**(8): p. 2099-2135.

[27] Khaireddine, H., et al., *Impact of board characteristics on governance, environmental and ethical disclosure.* Society and Business Review, 2020. **15**(3): p. 273-295.

[28] Lu, Y., et al., *Board of directors' attributes and corporate outcomes: A systematic literature review and future research agenda.* International Review of Financial Analysis, 2022. **84**: p. 102424.

[29] Ali, C.B., *Agency theory and fraud*, in *Corporate Fraud Exposed: A Comprehensive and Holistic Approach*. 2020, Emerald Publishing Limited. p. 149-167.

[30] Boshnak, H.A., *The impact of board composition and ownership structure on dividend payout policy: evidence from Saudi Arabia.* International Journal of Emerging Markets, 2023. **18**(9): p. 3178-3200.

[31] Tejedo-Romero, F. and J.F.F.E. Araujo, *The influence of corporate governance characteristics on human capital disclosure: the moderating role of managerial ownership.* Journal of Intellectual Capital, 2022. **23**(2): p. 342-374.

[32] Zaid, M.A., M. Wang, and S.T. Abuhijleh, *The effect of corporate governance practices on corporate social responsibility disclosure: Evidence from Palestine.* Journal of Global Responsibility, 2019. **10**(2): p. 134-160.

[33] Michelon, G., R. Sealy, and G. Trojanowski, *Understanding research findings and evidence on corporate reporting: An independent literature review.* 2020.

[34] Mousavi, M., et al., *The effect of corporate governance structure on fraud and money laundering.* Risks, 2022. **10**(9): p. 176.

[35] Karami, M., A. Samimi, and M. Ja'fari, *The impact of effective risk management on corporate financial performance.* Advanced Journal of Chemistry-Section B, 2020. **2**(3): p. 144-150.

[36] Dvorsky, J., et al., *Business risk management in the context of small and medium-sized enterprises.* Economic Research-Ekonomska Istraživanja, 2021. **34**(1): p. 1690-1708.

[37] Saeidi, P., et al., *The influence of enterprise risk management on firm performance with the moderating effect of intellectual capital dimensions.* Economic Research-Ekonomska Istraživanja, 2021. **34**(1): p. 122-151.

[38] Abba, Z., N. Balta-Ozkan, and P. Hart, *A holistic risk management framework for renewable energy investments.* Renewable and Sustainable Energy Reviews, 2022. **160**: p. 112305.

[39] Sax, J. and T.J. Andersen, *Making risk management strategic: Integrating enterprise risk management with strategic planning.* European Management Review, 2019. **16**(3): p. 719-740.

[40] Puzyrova, P., I. Grechyshkin, and O. Yershova, *Risk management concept in innovative activities of modern enterprises.* Professional competencies and educational innovations in the knowledge economy, 2020.

[41] Lubinda, N.E., *Impact assessment of corporate governance on corruption in the ministry of works and transport Namibia*. 2022, University of Namibia.

[42] Rangkuti, Z., *The effects of Tier-1 capital to risk management and profitability on performance using multiple fixed effect panel data model.* Measuring Business Excellence, 2021. **25**(2): p. 121-137.

[43] Saeidi, P., et al., *The impact of enterprise risk management on competitive advantage by moderating role of information technology.* Computer standards & interfaces, 2019. **63**: p. 67-82.

[44] Sengul, M., A.A. Costa, and J. Gimeno, *The allocation of capital within firms.* Academy of Management Annals, 2019. **13**(1): p. 43-83.

[45] Shad, M.K., et al., *Integrating sustainability reporting into enterprise risk management and its relationship with business performance: A conceptual framework.* Journal of Cleaner production, 2019. **208**: p. 415-425.

[46] Chaudhry, N.I., M.A. Roomi, and I. Aftab, *Impact of expertise of audit committee chair and nomination committee chair on financial performance of firm.* Corporate Governance: The International Journal of Business in Society, 2020. **20**(4): p. 621-638.

[47] Saidat, Z., M. Silva, and C. Seaman, *The relationship between corporate governance and financial performance: Evidence from Jordanian family and nonfamily firms.* Journal of Family Business Management, 2019. **9**(1): p. 54-78.

[48] Uyar, A., et al., *The link among board characteristics, corporate social responsibility performance, and financial performance: Evidence from the hospitality and tourism industry.* Tourism Management Perspectives, 2020. **35**: p. 100714.

[49] Aldhamari, R., et al., *The impact of political connection and risk committee on corporate financial performance: evidence from financial firms in Malaysia.* Corporate Governance: The International Journal of Business in Society, 2020. **20**(7): p. 1281-1305.

[50] Al Farooque, O., W. Buachoom, and L. Sun, *Board, audit committee, ownership and financial performance–emerging trends from Thailand.* Pacific Accounting Review, 2020. **32**(1): p. 54-81.

[51] Pérez-Cornejo, C., E. de Quevedo-Puente, and J.B. Delgado-García, *How to manage corporate reputation? The effect of enterprise risk management systems and audit committees on corporate reputation.* European Management Journal, 2019. **37**(4): p. 505-515.

[52] Aifuwa, H.O. and K. Embele, *Board characteristics and financial reporting.* Journal of Accounting and Financial Management, 2019. **5**(1): p. 30-44.

[53] Malik, M.F., M. Zaman, and S. Buckby, *Enterprise risk management and firm performance: Role of the risk committee.* Journal of Contemporary Accounting & Economics, 2020. **16**(1): p. 100178.

[54] Thymara, M.-A., *TMSA 3 analysis of the required soft skills: the importance of soft skills to promote a safe and efficient work environment in the shipping industry and how a technical management company provides vital guidance for the wellbeing and wellness of the seafarers and shore-based employees*. 2020, University of Piraeus (Greece).

[55] ZAFAR, S. and F. MUHAMMAD, *Impact of destructive leadership and corporate governance on ethical practices in financial sector of Pakistan*. 2022, Durham University.

[56] Charas, S. and S. Lupushor, *Humanizing Human Capital: Invest in Your People for Optimal Business Returns*. 2022: BenBella Books.

[57] Lundgren, J. and O. Heljeberg, *MCO or MC... No? Multi-Club Ownership in English Football and Its Drivers*. 2021.

[58] Mudau, T.N., *The use and impact of Business Intelligence (BI) systems in management accounting: an empirical study in the South African context*. 2021.