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Effects of Risk Committee on Agency Costs and Financial Performance

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Abstract: This study aimed to explore the influence of risk committee characteristics on agency costs and financial performance as well as investigate whether the attributes of a risk committee moderate the association between the agency costs and financial performance of financial firms listed in the Saudi Stock Market (TASI). We primarily concentrate on six attributes of risk committees (risk committee existence, size, independence, meetings, financial expertise, and busyness) and their impact on agency costs and financial performance. This study employed the ordinary least squares (OLS) and generalized methods of moments (GMM) models to explore these relationships. Using a sample of 455 observations representing the financial corporations listed on the TASI for the period from 2010 to 2022, we found that risk committees' existence, risk committee independence, and financial expertise have negative and significant associations with agency costs, but a positive influence on financial performance. However, risk committee size and busyness are positively related to agency costs and adversely associated with firms' financial performance. Furthermore, we showed that agency costs influence banks' financial performance negatively, yet risk committees oversee this risk and enhance banks' financial performance. The findings of this study have implications for financial firms, policymakers, and regulators. Beyond making empirical contributions by investigating a relatively unexplored topic in a developing Middle Eastern economy, this analysis provides valuable insights into optimizing risk committee characteristics and structures to improve financial monitoring within the framework of Saudi Arabia. This area of research has been relatively limited compared to studies conducted in developed countries.

Keywords: corporate governance; risk committee characteristics; agency costs; financial performance; financial sectors

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1. Introduction

After several recent corporate failures, many proposals have been made to improve corporate governance, with a focus on risk management. An effective risk management system can assist a company to achieve its goals, improve its financial reporting, and protect its reputation. Risk management committees are considered to be vital internal mechanisms of corporate governance that improve monitoring quality, lower agency costs, and thus reduce opportunistic behavior by managers (Subramaniam et al. 2009). In support of this, Tao and Hutchinson (2013) found that corporations with separate risk committees have higher performance, as risk committees play an important role in mitigating asymmetric information. Agency theory also highlights the importance of mitigating asymmetric information between management and shareholders by increasing the level of disclosure (Jensen and Meckling 1976). In this regard, the risk committee plays an important role by

providing detailed risk reports to shareholders. This transparency allows shareholders to make more informed decisions and reduces the opportunity for managers to engage in opportunistic behaviors (Subramaniam et al. 2009). The risk reports, in turn, help integrate risk management into strategic decision-making, which assists the board of directors in making effective decisions that improve firm performance (Stulz 2022).

Nevertheless, many financial institutions have not effectively integrated risk management practices into their corporate governance, which has led to widespread failures globally. This has led to increased scrutiny of the performance, accountability, and risk-taking behavior of financial institutions. One of the main factors contributing to the financial crisis was weak corporate governance monitoring of risk management. Beasley et al. (2005) argue that public policy problems may arise if firms do not have a corporate governance mechanism to oversee enterprise risk management. On the other hand, prior studies (e.g., BCBS 2015; Berger et al. 2016; Elamer et al. 2016; Erkens et al. 2012; Gupta et al. 2013) cite the complexity and opaqueness of financial institutions' business models as a cause of poor corporate governance and risk management practices. Due to both the recent financial crisis and the complexity of financial institutions, many public policymakers, economists, and regulators emphasize the importance of addressing risk management and supporting risk governance mechanisms at financial institutions (Aljughaiman and Salama 2019; Lundqvist 2015). Aljughaiman and Salama (2019) argue that risk governance mechanisms include the creation of a separate board-level risk committee. While risk management activities were previously the responsibility of the audit committee, many corporate governance amendments now highly recommend establishing a dedicated risk committee at the board level. This is because risk committees, which oversee the firm's risk management practices, provide a focused approach to mitigating agency costs by addressing specific risk-related issues. This oversight can complement the broader mandate of audit committees, which typically focus on financial reporting and compliance (CMA 2017). Additionally, risk committees comprise members with expertise in risk management, enabling a deeper understanding of the firm's risk profile and the development of effective risk mitigation strategies (Kleffner et al. 2003). This specialization ensures that the committee can identify and address risks more efficiently than a generalist audit committee. This practice is supported by factors such as substantial regulatory amendments, the complexity of the risk environment, and financial scandals (BCBS 2015; Ng et al. 2012; Walker 2009). Therefore, a separate risk committee is more beneficial for firms with complex structures, high leverage and agency costs, or complex risk structures (Deloitte 2011).

In this respect, many financial institutions have created dedicated risk committees to oversee the enterprise risk management systems (Battaglia et al. 2014; BCBS 2015; Elamer et al. 2017; Ng et al. 2012). By having a separate risk committee with independent members with the necessary knowledge and expertise, financial institutions can better maintain a reasonable level of risk and improve risk governance to oversee risk management (Elamer et al. 2017). According to Elamer et al. (2017), a risk committee's responsibilities can include reviewing the procedures and policies, supervising risk transfer strategies, determining the methods needed to perform risk management activities throughout the organization, and maintaining direct communication with the organization's executive members, such as the CEO and other senior executives, to ensure that management implements a thorough risk management system, sets risk management objectives, and formulates a firm-wide risk management strategy. While prior studies, such as Walker (2009) and the BCBS (2010), have argued that independent risk committees are important for financial firms, there is limited evidence to support a relationship between these committees, agency costs, and firm financial performance. Mongiardino and Plath (2010) found that banks still have much room to improve their risk management practices. Other studies have emphasized the importance of creating a separate risk committee to manage all types of bank risks (Aljughaiman and Salama 2019). Therefore, this study aims to investigate the association between risk committee characteristics and agency cost risk for financial institutions that are listed in the Saudi stock market.

Saudi corporate governance regulations require companies to establish a separate risk management committee with at least three members, including a non-executive chair. The committee members must have relevant financial and risk management expertise. The committee meets at least every six months, or more often if needed. The risk management committee's duties include the following: advising the board on risk management issues, reporting risk exposures to the board and recommending actions to manage them, reassessing the company's risk tolerance and exposure on a regular basis, reviewing risk management policies, reviewing and updating the risk management strategy regularly, taking into account internal and external factors, implementing a comprehensive risk management strategy, overseeing the risk management system and assessing its effectiveness, and identifying and managing risks to the company (CMA 2017).

Empirically, Zemzem and Kacem (2014) examined the impact of risk committees' existence on the financial performance of 17 lending firms in Tunisia from 2007 to 2011. They found a negative relationship between risk committees and financial performance. In contrast, Minton et al. (2011) examined the impact of risk committees on the financial performance of 252 US banks from 2003 to 2008. They found a positive relationship between the existence of a risk committee on the board of a bank and financial performance. In terms of risk management, some studies (Aljughaiman and Salama 2019; Ellul and Yerramilli 2013; Hines and Peters 2015; Lingel and Sheedy 2012) found a negative relationship between risk governance and certain types of risk-taking. Given the above, there is mixed evidence on the relationship between risk committees and firm performance, and, in examining certain types of risk, more research is needed to determine the impact of risk committees on agency costs and firm performance in different contexts. This paper therefore aims to examine the impact of risk committees' characteristics on agency costs and the financial performance of financial firms in the Saudi Stock Market (TASI) between 2010 and 2022. Specifically, we explore the link between risk committees' existence, risk committee size, independence, meetings, expertise, busyness and agency costs, and financial performance. We found that risk committees' existence and risk committee independence and expertise have a negative and significant association with agency costs, but a positive influence on financial performance. However, risk committee size and busyness are positively related to agency costs and adversely associated with financial performance. Furthermore, we investigate the possible moderating impact of risk committee attributes on the relationship between agency costs and financial performance. We showed that agency costs influence banks' financial performance negatively, yet risk committees oversee this risk and enhance banks' financial performance.

This study contributes to the previous literature in several ways. First, we add to the prior literature investigating the association between boards of directors and agency costs (Almulhim 2022; Ertugrul and Hegde 2008; Singh and Davidson 2003) and the developing literature on the association between risk governance and firm performance and risk-taking (Aebi et al. 2012; Aljughaiman and Salama 2019; Battaglia and Gallo 2015; Ellul and Yerramilli 2013; Hines and Peters 2015; Lingel and Sheedy 2012). Specifically, to the best of our knowledge, this is the first study to investigate the influence of risk committee characteristics on agency problem risk in financial institutions listed on the Saudi stock market. Saudi Arabia's strategic location in the Middle East, along with its significant emerging economy and G20 membership, makes it a unique context for this study. In 2017, the Saudi Stock Exchange (TASI) was the largest equity market in the Middle East, boasting a total market value of approximately USD 452 billion (Rehman 2018; World Bank 2018). This substantial valuation accounted for nearly 66% of Saudi GDP that year. The evolving institutional environment in Saudi Arabia, highlighted by the introduction of Saudi Vision 2030, presents a unique scenario for this research. Vision 2030 aims to shift the kingdom from an oil-dependent economy to a knowledge-based economy and attract foreign investments (Nurunnabi 2017; Vision 2030 2016). Furthermore, unlike other studies, we extend our analysis to examine the moderating role of risk committees in the relationship between agency costs and financial performance.

The remainder of this paper is as follows: Section 2 contains the literature review and hypothesis development, Section 3 contains the data and methodology, Section 4 contains the results, and Section 5 contains the conclusion.

2. Literature Review and Hypothesis Development

Agency theory, a cornerstone in the corporate governance literature, posits that conflicts of interest arise between principals (shareholders) and agents (managers) due to the separation of ownership and control in modern corporations (Jensen and Meckling 1976). This divergence in interests can lead to agency costs, which are the expenses incurred to align the interests of managers with those of shareholders. These costs include monitoring expenditures by the principal, bonding costs by the agent, and residual loss, which is the reduction in welfare experienced by shareholders due to divergent decisions made by managers (Fama and Jensen 1983).

In the context of risk committees, their role can be seen as a mechanism to mitigate agency costs by providing an additional layer of oversight and accountability. Effective risk committees help ensure that managerial actions are closely aligned with shareholder interests, particularly in areas involving significant risk and uncertainty. For instance, the presence of a risk committee can reduce moral hazard by monitoring managerial decisions that involve high levels of risk-taking, thereby protecting the firm's assets and shareholder value (Aebi et al. 2012). Moreover, risk committees can address adverse selection by ensuring that managers do not engage in projects that may benefit them personally at the expense of shareholders (Coles et al. 2008).

Risk committees are specialized sub-groups within the board of directors that focus on identifying, assessing, and managing risks that could impact the organization's financial performance and sustainability (Yatim 2010). The effectiveness of such committees hinges on several factors, such as the expertise, independence, and busyness of their members. The following sections discuss these characteristics and their influence on agency costs and financial performance.

2.1. Existence of Risk Committee, Agency Costs and Financial Performance

Agency theory posits that risk committees play a crucial role in ensuring that managers effectively manage risk and align investments with strategic goals, thereby mitigating agency costs and enhancing financial performance (Jensen and Meckling 1976). The presence of a risk committee can help prevent financial crises by reducing performance issues associated with moral hazard and adverse selection (Aebi et al. 2012; Minton et al. 2014; Yatim 2010). Traditionally, financial institutions have prioritized asset growth and cost reduction over risk management, which has often been treated as a secondary function (Aebi et al. 2012). However, the global financial crisis underscored the necessity of prioritizing risk management, especially for banks and financial institutions with significant leverage (Oluwafemi et al. 2013).

The relationship between risk management committees and firm performance has been the subject of extensive research, yielding mixed results. Aebi et al. (2012) reported that US banks with a Chief Risk Officer (CRO) on the board performed poorly during the financial crisis, suggesting that merely having a CRO is insufficient without proper integration into the risk management framework. Conversely, Minton et al. (2011) found that US banks with dedicated risk committees outperformed their peers between 2003 and 2008, highlighting the potential benefits of specialized oversight in risk management.

Further studies have provided additional insights but also presented conflicting evidence. For instance, Hines and Peters (2015) found no significant relationship between risk committees and firm performance in the US from 1994 to 2008, suggesting that the effectiveness of risk committees may depend on other contextual factors such as the broader governance environment and specific industry practices. Yatim (2010) observed that corporations with risk committees in Malaysia exhibited poorer performance and higher agency

costs, indicating that the mere existence of risk committees does not guarantee better outcomes and may be influenced by the quality and implementation of their practices.

In Tunisia, Zemzem and Kacem (2014) identified a negative relationship between the existence of risk committees and financial performance between 2002 and 2011, further complicating the understanding of how risk committees influence firm outcomes. These mixed findings suggest that, while risk committees have the potential to mitigate agency costs and enhance financial performance, their effectiveness is contingent upon various factors, including the size of the committee, the committee's independence, the expertise of committee members, and the overall governance framework of the firm. Based on the mixed evidence from these studies, the following hypotheses are developed:

H1a: *There is a significant relationship between the existence of a risk committee and agency costs.*

H1b: *There is a significant relationship between the existence of a risk committee and the firm's financial performance.*

2.2. Risk Committee Size, Agency Costs, and Financial Performance

The size of a risk committee plays a critical role in its effectiveness. Prior studies indicated that a risk committee should have at least three members and that it should have enough power and resources to do its job well (Erkens et al. 2012). DeFond and Francis (2005) argued that the committee should have adequate authority and resources to perform effectively. Agency theory suggests that a larger risk committee with members who have different knowledge and skills is better able to monitor managers' risk-taking behavior and make sure that investments align with the company's goals. This can help to prevent financial crises by reducing the chances of adverse selection and moral hazard, which can hurt a company's performance. In other words, a larger risk committee with members who have more knowledge and skills is more likely to be effective in monitoring managers' risk-taking behavior and making sure that investments align with the company's goals. This can help to mitigate agency costs, enhance financial performance, and avoid financial crises (Aebi et al. 2012; Jensen and Meckling 1976; Yatim 2010).

Prior studies provide mixed evidence on the relationship between risk committee size and corporate financial performance. For instance, Bédard et al. (2004) and Hines and Peters (2015) found that larger risk committees are associated with better financial performance. They argue that larger committees benefit from greater diversity and expertise, which can lead to more effective decision-making and oversight.

Conversely, other studies, such as Zemzem and Kacem (2014), Ng et al. (2012), Ellul and Yerramilli (2013), and Aebi et al. (2012), reported that larger risk committees are linked to poorer financial performance. These studies suggest that larger committees may face coordination and management challenges, making them less effective at monitoring management. Additionally, Battaglia and Gallo (2015) found no significant relationship between risk committee size and performance in Indian and Chinese banks, highlighting that the impact of committee size may vary across different contexts and institutional frameworks.

The conflicting results in the literature indicate that the effectiveness of risk committees may depend on various contextual factors, such as the specific industry, regulatory environment, and the quality of risk management practices within the organization. Larger risk committees may offer potential benefits through enhanced diversity and expertise, but these advantages can be offset by increased complexity and coordination issues.

Given the mixed evidence, it is clear that more research is needed to determine the optimal size of risk committees for different types of financial institutions. Based on the reviewed literature, the following hypotheses are proposed:

H2a: *There is a significant relationship between risk committee size and agency costs.*

H2b: *There is a significant relationship between risk committee size and a firm's financial performance.*

2.3. Risk Committee Independence, Agency Costs, and Financial Performance

Agency theory posits that independent directors on the board can enhance corporate governance by providing unbiased oversight, as they are not directly tied to the company and have a reputation to uphold as effective overseers (Dionne and Triki 2005). Independent directors are therefore expected to exercise better control over management, aligning managerial actions with shareholder interests and potentially reducing agency costs. Several studies have explored the efficacy of independent directors. Hudson et al. (2001) and Wu et al. (2009) demonstrated that boards with more independent members are likely to make more objective decisions, be less influenced by management, and be more aligned with shareholder interests. This suggests that independent directors can enhance governance quality.

The relationship between director independence and firm performance, however, has yielded mixed results. Bhagat and Black (2002) found no significant relationship, which questions the effectiveness of monitoring by independent directors. On the other hand, Borokhovich et al. (2004) found that adding outside directors to the board was associated with increased risk-taking through the use of interest rate derivatives, highlighting a potential downside of increased independence.

Marsden and Prevost (2005) found no significant link between risk committee independence and board effectiveness, suggesting that mere independence may not be sufficient for effective risk oversight. Conversely, Zemzem and Kacem (2014) reported a positive relationship between the proportion of independent risk committee members and financial performance in Tunisian lending businesses, indicating that independence can contribute positively in certain contexts.

Kallamu et al. (2013) also found a positive correlation between the percentage of independent directors on the risk committee and both financial performance and market valuations, reinforcing the notion that independence can enhance firm outcomes. However, Yeh et al. (2011) found a strong negative relationship between the proportion of independent directors and financial performance among the largest financial institutions from industrial countries, suggesting that too much independence might hinder effective decision-making.

The mixed evidence from these studies indicates that the impact of risk committee independence on firm performance and agency costs is context-dependent. Given the conflicting findings, it is clear that more research is needed to understand the conditions under which independent risk committees can be most effective. Therefore, the following hypotheses can be developed:

H3a: *There is a significant relationship between risk committee independence and agency costs.*

H3b: *There is a significant relationship between risk committee independence and a firm's financial performance.*

2.4. Risk Committee Meetings, Agency Costs, and Financial Performance

The primary function of risk committees is to ensure risks are regularly examined, evaluated, handled, and communicated, so risk management actions are not delayed. According to agency theory, regular committee gatherings are essential as infrequent meetings can result in ineffectiveness. The number of meetings per year also signifies the level of effort dedicated to fulfilling the committee's roles and responsibilities. Jackling and Johl (2009) argue that frequent board meetings can help connect the company to the outside world and improve its performance. This is a more concise and idiomatic way to state the findings. Smith (2003) also recommends that risk committees meet at least three times a year. Abbott and Parker (2000) found that more meetings make fraudulent reporting and activities less likely. However, Ferrero-Ferrero et al. (2012) found that more board meetings are only helpful during crises and can hurt company performance during times of growth. Based on this evidence, it seems that the number of committee meetings has a big impact on how well the committee works and how well it achieves its goals. With

respect to the Financial Reporting Council (FRC) (2014), all board committee directors of UK corporations shall attend the yearly general meeting. This is mandatory to enable all committee directors to share their perspectives with the board of directors. Additionally, the (FRC) mandates all risk committees to have at least four meetings per year or more if necessitated by particular situations.

Agency theory suggests that regular risk committee meetings can help to reduce conflict between shareholders and managers. The theory proposes that more frequent risk committee meetings improve communication among stakeholders involved in risk management. Additionally, by meeting more often, risk committees can more closely examine critical risk management aspects, such as risk appetite, risk avoidance, and risk awareness. The frequency of risk committee meetings is therefore a measure of the committee's dedication and diligence (Cheung et al. 2010; Battaglia et al. 2014).

Not much research has looked at the relationship between how often risk committees meet and how well a company performs financially. Hoque et al. (2013) showed no link between the frequency of risk committee meetings and financial performance. Ellul and Yerramilli (2013), on the other hand, found a positive association between the frequency of risk committee meetings and financial performance. However, Ng et al. (2012) and Aebi et al. (2012) indicated an adverse correlation between the frequency of risk committee meetings and financial performance. We therefore build our fourth hypothesis as follows:

H4a: *There is a significant relationship between risk committee meetings and agency costs.*

H4b: *There is a significant relationship between risk committee meetings and a firm's financial performance.*

2.5. Risk Committee Expertise, Agency Costs, and Financial Performance

Research has consistently shown that directors with the right skills and experience can significantly improve a company's financial performance by reducing uncertainty and effectively managing challenges (Dionne et al. 2013; Al-Hadi et al. 2016). Financial experts on the board are particularly valuable as they can identify beneficial risks for shareholders and persuade management to capitalize on these opportunities (Minton et al. 2014). This is especially critical for financial companies, which are inherently complex and require specialized knowledge to navigate effectively.

According to agency theory, directors equipped with the necessary skills and qualifications play a crucial role in protecting the company's interests by enhancing transparency and safeguarding shareholder rights. Skilled directors are expected to ensure that the company is not exposed to undue business risks and that robust risk management practices are in place. By adhering to best practices in risk management, these directors help the company mitigate business risks, which can positively influence financial performance (Aldhamari et al. 2020).

The literature on the relationship between director expertise and firm performance has produced compelling evidence. Dionne et al. (2013) found that directors with specific expertise in risk management can significantly enhance a firm's ability to manage risk, thereby improving financial performance. Al-Hadi et al. (2016) supported these findings, demonstrating that qualified directors are better equipped to identify and manage risks, leading to improved company outcomes.

Minton et al. (2014) argued that financial experts on risk committees are particularly adept at identifying strategic risks that can be advantageous to shareholders. This expertise allows them to guide management in taking calculated risks that align with the company's strategic objectives. Such insights are vital for financial firms, which often deal with high levels of complexity and risk.

On the other hand, some studies suggest that merely having financial experts on the board is not a panacea. The effectiveness of these directors also depends on their ability to work cohesively with other board members and management. For instance, Aldhamari

et al. (2020) highlighted the importance of collaborative dynamics in ensuring that risk management practices are effectively implemented. Without a collaborative approach, even the most skilled directors may struggle to influence the company's risk management strategies positively.

In synthesizing these findings, it is clear that the presence of directors with the right skills and experience is crucial for effective risk management and improved financial performance. However, their impact is also contingent on the board's overall dynamics and the firm's specific context. Based on this synthesis, the following hypotheses are proposed:

H5a: *There is a significant relationship between risk committee expertise and agency costs.*

H5b: *There is a significant relationship between risk committee expertise and a firm's financial performance.*

2.6. Risk Committee Busyness, Agency Costs, and Financial Performance

The busyness of risk committee members—measured by the number of other board memberships they hold—can significantly impact a company's financial performance and agency costs. If risk committee directors are overloaded with responsibilities from serving on multiple boards, they may lack the time and focus needed to perform their duties effectively. This lack of attention could lead to the approval of riskier projects that might harm the company's bottom line (Almulhim 2022).

Research by Fich and Shivdasani (2006) supports this concern, showing that companies with risk committee directors who serve on multiple boards tend to be less profitable. The primary argument here is that overcommitted directors may struggle to provide the necessary oversight, leading to increased agency costs and suboptimal financial outcomes.

Conversely, other studies suggest that busy directors can bring valuable external knowledge and broader networks to the companies they serve. Field et al. (2013) found that busy boards might help companies increase their value, leveraging their diverse experiences and connections. However, this positive relationship tends to be weaker for older, more established firms, suggesting that the impact of director busyness may vary depending on the company's maturity and specific needs.

Brown et al. (2019) provide additional nuance by demonstrating that companies that reduced the number of directorships held by their board members saw improvements in financial performance. This finding indicates that while the benefits of having well-connected directors are acknowledged, there is a threshold beyond which their busyness becomes detrimental.

Despite the varying perspectives, a consensus exists that director busyness affects both agency costs and firm performance, albeit in complex ways. On one hand, overcommitted directors may increase agency costs by being less effective at monitoring management, as noted by Almulhim (2023). On the other hand, Field et al. (2013) argue that the benefits of having directors with extensive external connections and knowledge can, in some cases, outweigh the drawbacks.

To synthesize, the current state of research suggests a nuanced relationship between risk committee busyness and financial performance. The effectiveness of busy directors appears to depend on the balance between their external commitments and their ability to leverage outside experiences for the company's benefit. Therefore, the following hypotheses can be developed:

H6a: *There is a significant relationship between risk committee busyness and agency costs.*

H6b: *There is a significant relationship between risk committee busyness and a firm's financial performance.*

3. Data and Methodology

3.1. Data Sample

We conducted our study on the Saudi Stock Exchange (TASI), particularly financial sectors for a 10-year period from 2010 to 2022. This study's initial sample was all financial institutions listed on the TASI, which are 40 companies. However, we excluded three financial companies with missing risk committee characteristics or financial performance data for at least three consecutive years. This reduced the sample to 37 corporations. We dropped an additional two companies due to mergers and acquisitions that happened during our study sample (Aljughaiman and Salama 2019). This study's final sample was therefore 35 financial companies with 455 observations over time. Table 1 illustrates the classification of the study industries. In addition, risk committee variables (risk committee existence, size, independence, meetings, expertise, and busyness) are collected from firms' annual reports and websites. Agency costs, financial performance, and control variables are all collected from the Bloomberg database.

Table 1. Classification of industries of sample corporations.

Industries	Number of Firms	Proportion of Firms Per Industry
Banks	8	22.9
Insurance	27	77.1
Total	35	100

3.2. Measures

3.2.1. Financial Performance Variables

Following prior studies in the literature (e.g., Cochran and Wood 1984; Baysinger and Butler 1985; Hoskisson et al. 1994; Jackling and Johl 2009; Patel 2018; Aljughaiman et al. 2024a), we employ two proxies for the performance of firms, namely, return on assets (ROA) and return on equity (ROE). Both variables are considered accounting-based measures since they are related to measuring historical performance and thus experience more inward- and backward-looking focus. They are used to assess several factors, such as the effectiveness of the previous advice and recommendations provided by the board of directors to the firm's management team (Kiel and Nicholson 2003). We measure our dependent variables as shown in Equations (1) and (2) below:

$$ROA = \frac{net\ income}{total\ assets} \quad (1)$$

$$ROE = \frac{net\ income}{total\ equity} \quad (2)$$

3.2.2. Agency Costs Variable

A bank's performance can improve when its board of directors and committees reduce agency problems. For example, a risk committee that is not effective may not monitor the bank closely enough, which can lead to bad decision-making and higher agency costs (Almulhim 2022). As shown in Equation (3) below, agency costs in banks are measured by dividing cash by total assets. A higher value indicates higher agency costs (Farag et al. 2018; Trinh et al. 2020).

$$AGENCY = \frac{cash}{total\ assets} \quad (3)$$

3.2.3. Risk Committee Variables

We employ six characteristics of risk committees (risk committee existence, size, independence, meetings, expertise, and busyness) to explore their association with agency costs and financial performance. Risk committee existence (RCE) takes a value of 1 if the financial

institution has a separate risk committee and 0 otherwise. Risk committee size (RCSZ) is the total number of members on the risk committee. Risk committee independence (RCIND) is the total number of independent members to the total number of risk committee directors. Risk committee meetings (RCMETs) are the total number of risk committee meetings per year. Risk committee expertise (RCEXP) is the total number of members with risk backgrounds to the total number of risk committee directors. Risk committee busyness (RCBUSY) is the total number of members who have at least two board seats to the total number of the risk committee directors.

3.2.4. Control Variables

Following prior studies in the literature, such as (Almulhim 2022), we use several control variables to explore the association between risk committee characteristics, agency costs, and financial performance. In detail, corporate size, corporate age, book-to-market value, and financial leverage. Corporate size (ASSETS) is the natural logarithm of the total assets. Corporate age (LAGE) is the corporate age since its establishment. Book-to-market value (BTMV) is the book value of equity divided by the market value of equity. Financial leverage (FLEVG) is the total debt divided by total assets. In addition, we control for year and industry effects by employing dummy variables for both. This can make our model more robust and consistent. Table 2 illustrates the above-defined variables in terms of measurements and data sources.

Table 2. Measurements and data sources of study variables.

Variables	Measurements	Data Sources
Dependent variables		
Return on assets (ROA)	Net income/total assets	Bloomberg
Return on equity (ROE)	Net income/total equity	Bloomberg
Agency costs (AGENCY)	Cash/total equity	Bloomberg
Independent variables		
Risk committee existence (RCE)	1 if the financial institution has a separate risk committee and 0 otherwise.	Company reports
Risk committee size (RCSZ)	Total number of members on the risk committee.	Company reports
Risk committee independence (RCIND)	Total number of independent members/total number of the risk committee directors.	Company reports
Risk committee meetings (RCMETs)	Total number of risk committee meetings per year.	Company reports
Risk committee expertise (RCEXP)	Total number of members with risk backgrounds/total number of the risk committee directors.	Company reports
Risk committee busyness (RCBUSY)	Total number of members who have at least two board seats/total number of the risk committee directors.	Company reports
Control variables		
Corporate size (ASSETS)	Nature logarithm of the total assets.	Bloomberg
Corporate age (LAGE)	Corporate age since its establishment.	Bloomberg
Book-to-market ratio (BTMV)	Book value of equity divided by the market value of equity.	Bloomberg
Financial leverage (FLEVG)	Total debt divided by total assets.	Bloomberg

3.3. Estimation Models

To explore the influence of risk committee attributes on agency costs and financial performance, we employ the OLS regression model using different financial performance measures, in addition to our control variables and year and industry dummies. Additionally, to address the issue of heteroscedasticity, robust standard errors are employed in the model. We also use the system GMM as a robustness check to address endogeneity issues, such

as dynamic endogeneity, omitted variable bias, and reverse causality. Equations (4)–(6) illustrate the study models as follows:

$$AGENCYit = \beta 0 + \beta 1\ RCEit + \beta 2\ RCSZit + \beta 3\ RCINDit + \beta 4\ RCMETit + \beta 5\ RCEXPit + \beta 6\ RCBUSYit + \beta 7\ ASSETSit + \beta 8\ LAGEit + \beta 9\ \text{BTMV}it + \beta 10\ FLEVGit + \varepsilon it \quad (4)$$

$$ROAit = \beta 0 + \beta 1\ RCEit + \beta 2\ RCSZit + \beta 3\ RCINDit + \beta 4\ RCMETit + \beta 5\ RCEXPit + \beta 6\ RCBUSYit + \beta 7\ ASSETSit + \beta 8\ LAGEit + \beta 9\ \text{BTMV}it + \beta 10\ FLEVGit + \varepsilon it \quad (5)$$

$$ROEit = \beta 0 + \beta 1\ RCEit + \beta 2\ RCSZit + \beta 3\ RCINDit + \beta 4\ RCMETit + \beta 5\ RCEXPit + \beta 6\ RCBUSYit + \beta 7\ ASSETSit + \beta 8\ LAGEit + \beta 9\ \text{BTMV}it + \beta 10\ FLEVGit + \varepsilon it \quad (6)$$

For Equation (4), *AGENCYit* is agency costs; *RCEit* is risk committee existence; *RCINDit* is risk committee size; *RCINDit* is risk committee independence; *RCMETit* is risk committee meetings; *RCEXPit* is risk committee expertise; *RCBUSYit* is risk committee busyness; *ASSETSit* is corporate size; *LAGEit* is corporate age; BTMV*it* is book-to-market ratio; *FLEVGit* is financial leverage; *εit* is the error term. For Equations (5) and (6), *ROAit* and *ROEit* are return on assets and return on equity, respectively.

4. Results

4.1. Descriptive Statistics and Correlations

Table 3 illustrates the descriptive statistics of the risk committee attributes, agency costs, financial performance, and control variables. For the financial performance, the mean (standard deviation) of ROA and ROE were 2.2% and 1.2% (0.7% and 4.3%), respectively. Regarding the agency costs variable, AGENCY had an average value of 8.6% and a standard deviation of 0.034%. Moving to the risk committee variables, RCE had a minimum value of 0 and a maximum value of 1. RCAZ had a minimum value of 3 and a maximum value of 5. RCIND had an average percentage of 64% and a maximum percentage of 83%. RCMET had a minimum value of 2 and a maximum value of 6. RCEXP (RCBUSY) had an average percentage of 52% (66%). With regard to the control variables, the mean values (of ASSETS, LAGE, BTMV, and FLEVG) were 7.9 million, 38 years, 75%, and 26%, respectively.

Table 3. Descriptive statistics.

Variables	Observation	Mean	SD	Min	Max
ROA	455	0.022	0.007	0.004	0.038
ROE	455	0.012	0.043	0.019	0.226
AGENCY	455	0.086	0.034	0.001	0.287
RCE	455	0.989	0.331	0.000	1.000
RCSZ	455	4.108	0.847	3.000	5.000
RCIND	455	0.642	0.128	0.433	0.830
RCMET	455	3.77	1.091	2.000	6.000
RCEXP	455	0.522	1.077	0.433	0.600
RCBUSY	455	0.666	0.221	0.400	0.100
ASSETS	455	7.915	0.332	5.187	8.704
LAGE	455	38.77	15.83	5.000	66.00
BTMV	455	0.755	0.443	0.001	1.889
FLEVG	455	0.261	0.053	0.013	0.531

Note: ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCE is risk committee existence, RCSZ is the risk committee size, RCIND is the risk committee independence, RCMET is risk committee meetings, RCEXP is risk committee expertise, RCBUSY is risk committee busyness, ASSETS is company size, LAGE is company age, BTMV is book to market value, and FLEVG is financial leverage.

We employed the Pearson correlation matrix test to check that our explanatory variables had no multicollinearity issues. Table 4 shows that the highest association among our study variables was between RCSZ and RCMET with about 70%. This implies that the larger the size of the risk committee is, the greater the number of meetings held by the committee. More importantly, our data have no multiclonality issues as all correlations are below 80%.

Table 4. Pearson correlation matrix for the risk committee, agency costs, and financial performance association.

	ROA	ROE	AGENCY	RCE	RCSZ	RCIND	RCMET	RCEXP	RCBUSY	ASSETS	LAGE	BTMV	FLEVG
ROA	1.000												
ROE	0.847 *	1.000											
AGENCY	−0.764 *	−0.786 *	1.000										
RCE	0.131	0.127	−0.379 *	1.000									
RCSZ	0.125	0.003	−0.425 *	0.225	1.000								
RCIND	0.011 *	0.073 *	−0.448 *	0.136 *	0.504 *	1.000							
RCMET	−0.043	−0.045	0.393	0.086	0.707 *	0.581 *	1.000						
RCEXP	0.114 *	0.069	−0.448 *	0.130	0.371 *	0.466 *	0.552 *	1.000					
RCBUSY	−0.228 *	−0.273 *	0.464 *	−0.042 *	−0.587 *	−0.439 *	−0.446 *	−0.363 *	1.000				
ASSETS	0.561 *	0.522 *	−0.715 *	0.226 *	0.485 *	0.023	0.170	0.063	−0.262 *	1.000			
LAGE	0.335 *	0.433 *	0.448	0.005	0.314	0.163	0.162	0.004	−0.237 *	0.764 *	1.000		
BTMV	−0.118	−0.272 *	0.092	−0.031	−0.218 *	−0.106 *	−0.361 *	−0.338 *	0.128	−0.052	−0.188	1.000	
FLEVG	−0.074	−0.054	0.116 *	−0.375	−0.206 *	−0.095	−0.092	−0.060	−0.060 *	−0.127	−0.304 *	0.245	1.000

Note: ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCE is risk committee existence, RCSZ is the risk committee size, RCIND is the risk committee independence, RCMET is risk committee meetings, RCEXP is risk committee expertise, RCBUSY is risk committee busyness, ASSETS is company size, LAGE is company age, BTMV is book to market value, and FLEVG is financial leverage. * means significance level at 5%.

4.2. Multivariate Analyses

4.2.1. Effects of Risk Committee on Agency Costs and Financial Performance

Table 5 presents the results of the baseline models utilizing pooled OLS with robust standard errors to address potential heteroscedasticity concerns. The results show that risk committee existence (RCE) is positive and statistically significant for both return on assets (ROA; $\beta = 0.003$ at $p < 0.05$) and return on equity (ROE; $\beta = 0.019$ at $p < 0.1$). This suggests that the existence of an effective risk committee enhances financial performance, supporting Hypothesis 1 (H1). These findings align with previous research by Minton et al. (2011) and Bhuiyan et al. (2021), which indicated that effective risk committees are positively associated with firm performance. This highlights the importance of having risk committees to manage risk and enhance financial performance. In contrast, RCE has an insignificant relationship with agency costs. This study also finds that risk committee size (RCSZ) has a significant and negative impact on ROE ($\beta = -0.069$ at $p < 0.1$). This supports Hypothesis 2 (H2), which states that risk committee size can have a negative association with firm performance. This finding is consistent with the recent literature stating that large risk committees may create higher challenges in managing and monitoring team performance (Ellul and Yerramilli 2013; Ng et al. 2012; Zemzem and Kacem 2014). RCSJ is positively associated with agency costs and implies that agency costs would be increased by risk committee size, which is the opposite of our prediction that the literature has suggested. RCSZ is positively associated with agency costs, which means that agency costs can be increased by risk committee size. The estimated coefficients of risk committee independence (RCIND) are positive and statistically significant for both measures of the firm's financial performance ($\beta = 0.009$ at $p < 0.05$; $\beta = 0.070$ at $p < 0.05$). This supports Hypothesis 3 (H3), which states that an increase in the percentage of independent risk committees would be reflected positively in financial performance. This suggests that having independent members on the risk committee can encourage decision-making free from management team influence, allowing for a stronger focus on shareholder interests. These findings are in accordance with the studies by Zemzem and Kacem (2014) and Kallamu et al. (2013). Contrary to expectations, risk committee meetings (RCMETs) are not linked to financial performance, so Hypothesis 4 (H4) is rejected. However, risk committee expertise (RCEXP) has a significant and positive association with financial performance in both measurements, and it can reduce agency costs at a p-value of 0.05. Finally, risk committee busyness (RCBUSY) is significantly and negatively associated with financial performance and significantly increases agency costs. Risk committees with busy members are more likely to increase agency costs and reduce the performance of firms. These findings are in line with previous studies in the literature (Almulhim 2023; Fich and Shivdasani 2006).

Table 5. Risk committee, agency costs, and financial performance.

VARIABLES	(1) ROA	(2) ROE	(3) AGENCY
RCE	0.003 **	0.019 *	−0.398
	(1.997)	(1.698)	(0.896)
RCSZ	−0.002	−0.069 ***	0.489 **
	(0.734)	(3.208)	(2.257)
RCIND	0.009 **	0.070 **	−6.039 ***
	(2.071)	(2.212)	(4.543)
RCMET	−0.001	0.011	−0.017
	(0.579)	(0.244)	(0.125)
RCEXP	0.009 *	0.023 *	−0.534 **
	(1.680)	(0.558)	(2.277)
RCBUSY	−0.012 ***	−0.108 ***	4.464 ***
	(3.219)	(3.785)	(4.855)
ASSETS	0.094 ***	0.710 ***	−6.791 ***
	(4.332)	(4.531)	(8.993)
LAGE	−0.003	−0.004	0.063 **
	(0.681)	(0.894)	(6.603)
BTMV	0.002 **	0.026 ***	−1.976 **
	(2.012)	(3.124)	(6.154)
FLEVG	−0.012	−0.153 **	0.367 ***
	(1.242)	(2.262)	(2.696)
Constant	−0.191 ***	−1.175 ***	−0.367 ***
	(4.071)	(3.425)	(8.494)
Observations	455	455	455
R-squared	0.490	0.612	0.446
Year/Industry dummy	*YES/YES*	*YES/YES*	*YES/YES*

Note: ***, **, and * denote significance levels of 1%, 5%, and 10%, respectively. Robust standard errors are found in parentheses. ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCE is risk committee existence, RCSZ is the risk committee size, RCIND is the risk committee independence, RCMET is risk committee meetings, RCEXP is risk committee expertise, RCBUSY is risk committee busyness, ASSETS is company size, LAGE is company age, BTMV is the book-to-market value, and FLEVG is financial leverage.

The size of a company (ASSETS) is positively and significantly linked to financial performance at a *p*-value of 1%. However, it is negatively and significantly linked to agency costs, which suggests that larger firms may mitigate agency costs. The book-to-market ratio is positively and significantly linked to financial performance but negatively and significantly linked to agency cost performance at $p < 0.05$, respectively. Financial leverage is negatively and statistically significantly associated with a firm's financial performance. In contrast, our findings suggest that financial leverage may increase agency costs.

4.2.2. Effects of Risk Committee on Agency Costs and Financial Performance (Robustness Check)

To ensure robustness and mitigate or control endogeneity, we will implement a different econometric estimation method. According to Almulhim and Aljughaiman (2023), the primary estimating approach that effectively addresses issues of endogeneity, simultaneity, and causality concerns is the generalized method of moments (GMM). Additionally, GMM is considered a more suitable model compared to other estimators for the endogeneity problem (Aljughaiman et al. 2024b; Wintoki et al. 2012). Thus, we examined our data using the GMM system approach to ensure the robustness of our findings in Table 6.

The two-step GMM estimations used in this study lagged the dependent variables, financial performance and agency costs. We followed Wintoki et al. (2012) to use this technique to account for any endogeneity (reverse causality), which could not be observed in our initial results. Table 6 presents the results of the Arellano–Bond second-order autocorrelation test for both measures of firm performance. The *p*-values of 0.285, 0.391, and 0.136 indicate that there is no significant serial autocorrelation in this test. With a *p*-value greater than 10%, the Hansen J test is not statistically significant, indicating that the instruments used are valid and do not correlate with the error term.

Table 6. Risk committee, agency costs, and financial performance (system GMM).

VARIABLES	(1) ROA	(2) ROE	(3) AGENCY
RCE	0.009 *	0.032 **	−0.115
	(0.268)	(0.873)	(0.874)
RCSZ	−0.001 *	−0.064 **	0.947 ***
	(0.042)	(0.882)	(0.847)
RCIND	0.012 ***	0.070 *	−2.015 **
	(0.591)	(0.315)	(0.327)
RCMET	−0.018	0.019	−0.018
	(0.071)	(0.183)	(0.153)
RCEXP	0.015 **	0.043 **	−0.412 *
	(0.052)	(0.082)	(0.153)
RCBUSY	−0.017 **	−0.172 **	1.662 **
	(0.661)	(0.753)	(0.432)
ASSETS	0.096 **	0.670 ***	−1.610 ***
	(0.080)	(0.136)	(1.730)
LAGE	−0.013	−0.016	0.069 ***
	(0.032)	(0.285)	(0.118)
BTMV	0.012 *	0.044 **	−0.543 *
	(0.011)	(0.775)	(0.061)
FLEVG	−0.019	−0.038 **	0.134 **
	(0.158)	(0.667)	(0.346)
Constant	−0.132 **	−1.610 *	−0.258 **
	(0.486)	(0.113)	(0.091)
Observations	455	455	455
AR(1)	0.000	0.000	0.000
AR(2)	0.285	0.391	0.136
Hansen test of over-identification (*p*-value)	0.572	0.622	0.338
Year/Industry dummy	*YES/YES*	*YES/YES*	*YES/YES*

Note: ***, **, and * denote significance levels of 1%, 5%, and 10%, respectively. Robust standard errors are found in parentheses. ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCE is risk committee existence, RCSZ is the risk committee size, RCIND is the risk committee independence, RCMET is risk committee meetings, RCEXP is risk committee expertise, RCBUSY is risk committee busyness, ASSETS is company size, LAGE is company age, BTMV is the book-to-market value, and FLEVG is financial leverage.

The two-step GMM estimation method shown in Table 6 still reveals a similar relationship between the characteristics of the risk committee and both firm performance and agency costs compared to the OLS findings. Hypotheses H1, H2, and H4 are again accepted, and these findings are robust.

4.2.3. Effects of Risk Committee Index on Agency Costs and Financial Performance (Additional Test)

Table 7 also extend our analysis by merging our main risk committee variables into one index that reflects the risk governance effectiveness. Specifically, we merge the risk committee variables of (1) size, (2) independence, (3) busyness, (4) number of meetings, (5) number of financial experts, and (6) dedicated risk committee. We follow Aljughaiman and Salama's (2019) approach in building our risk committee index. We create an index that has a value ranging between 0 and 6. The value of this index is accumulated based on the dummy variables that we mentioned previously. In detail, we create dummy variables for each risk committee's characteristics. (1) Dummy of RC size takes the value of 1 if the RC size value is more than its mean value, (2) Dummy of RC independent takes the value of 1 if the RC independent value is more than its mean value, (3) Dummy of RC meeting takes the value of 1 if RC meeting value is more than its mean value, (4) Dummy of RC busyness takes the value of 1 if RC busyness value is less than its mean value, (5) Dummy of RC financial experts takes the value of 1 if RC financial experts value is more than its mean value, and (6) Dummy of RC dedicated takes the value of 1 if banks has a separated risk committee, otherwise 0.

Table 7. Additional test: risk committee index, agency costs, and financial performance.

VARIABLES	(1) ROA	(2) ROE	(3) AGENCY
RCIndex	0.099 ***	0.019 **	−0.062 ***
	(0.053)	(0.074)	(0.013)
ASSETS	0.094 ***	0.710 ***	−0.174 ***
	(0.026)	(0.013)	(0.194)
LAGE	−0.006 *	−0.002	0.004 *
	(0.001)	(0.008)	(0.002)
BTMV	0.016 *	0.007 **	−0.058 *
	(0.035)	(0.062)	(0.052)
FLEVG	−0.027 *	−0.050 **	0.047 **
	(0.04)	(0.022)	(0.094)
Constant	−0.191 ***	−1.175 *	−0.367 **
	(0.018)	(0.520)	(0.963)
Observations	455	455	455
R-squared	0.512	0.638	0.481
Year/Industry dummy	*YES/YES*	*YES/YES*	*YES/YES*

Note: ***, **, and * denote significance levels of 1%, 5%, and 10%, respectively. Robust standard errors are found in parentheses. ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCIndex is the risk committee index, ASSETS is company size, LAGE is company age, BTMV is the book-to-market value, and FLEVG is financial leverage.

4.2.4. Moderating Role of Risk Committee Index on Agency Costs and Financial Performance (Additional Test)

We also extend our analysis by investigating the moderating role of risk committees in the association between agency cost and financial performance. Table 8 shows the analysis for this test. The results in Table 8 show that risk committee activities control agency costs at banks, leading to improved financial performance. In more detail, Table 8 shows that agency costs influence banks' financial performance negatively, but risk committee oversight mitigates this risk and enhances banks' financial performance. The results confirm the important role of risk committees in overseeing all types of risks at firms in the financial industry.

Table 8. Additional test: moderating role of risk committee index on agency costs and financial performance.

VARIABLES	(1) ROA	(2) ROE
AGENCY	−0.047 ***	−0.174 ***
	(0.013)	(0.194)
RCIndex	0.099 ***	0.019 **
	(0.053)	(0.074)
AGENCY*RCIndex	0.062 **	0.189 **
	(0.094)	(0.094)
ASSETS	0.094 ***	0.710 ***
	(0.026)	(0.013)
LAGE	−0.006 *	−0.002
	(0.001)	(0.008)
BTMV	0.016 *	0.007 **
	(0.035)	(0.062)
FLEVG	−0.027 *	−0.050 **
	(0.04)	(0.022)
Constant	−0.191 ***	−1.175 *
	(0.018)	(0.520)
Observations	455	455
R-squared	0.490	0.612
Year/Industry dummy	*YES/YES*	*YES/YES*

Note: ***, **, and * denote significance levels of 1%, 5%, and 10%, respectively. Robust standard errors are found in parentheses. ROA is the return on assets, ROE is the return on equity, AGENCY is agency costs, RCIndex is risk committee index, AGENCY*RCIndex is the moderating factor of agency costs and risk committee index, ASSETS is company size, LAGE is company age, BTMV is the book-to-market value, and FLEVG is financial leverage.

5. Conclusions

The main goal of this paper was to explore the link between risk committee characteristics on agency costs and financial performance as well as the moderating impact of risk committee characteristics on agency costs and financial performance. The studied sample contained financial firms listed on the Saudi Stock Market (TASI) for 13 years from 2010 to 2022. This topic had not previously been investigated with respect to the TASI. In addition, our contribution was extended by targeting the comprehensive attributes of the risk committee (risk committee existence, size, independence, meetings, expertise, and busyness) rather than focusing on particular mechanisms of the risk committee. We also extended our contribution by analyzing the moderating effects of the risk committee on agency costs and financial performance. Regarding methodology, we employed OLS as the primary estimation tool in this paper, together with the system GMM model in order to control for any possible endogeneity issues.

Regarding the results of this paper, we found that risk committees' existence, risk committee independence, and expertise have a negative and significant association with agency costs, but a positive influence on financial performance. However, risk committee size and busyness are positively related to agency costs and adversely associated with financial performance. Furthermore, we investigate the possible moderating impact of risk committee attributes on the relationship between agency costs and financial performance. We showed that agency costs influence banks' financial performance negatively, yet risk committees oversee this risk and enhance banks' financial performance.

Overall, this study has implications for financial firms, policymakers, and regulators. Financial firms can leverage these insights to enhance their governance practices by carefully considering the composition of their risk committees. Specifically, it is crucial to avoid overloading committee members with excessive responsibilities. Busy members, as indicated by this study, are more likely to contribute to increased agency costs and decreased firm performance. Firms should ensure that risk committee members have adequate time and resources to fulfill their duties effectively. This might involve setting limits on the number of committees a member can serve on or ensuring that members are not overburdened with other board responsibilities.

Policymakers can utilize the findings to refine regulatory frameworks governing risk management in financial institutions. Regulations could mandate specific qualifications for risk committee members, ensuring they have the necessary expertise and time to dedicate to their roles. Furthermore, guidelines could be established to limit the number of directorships a single individual can hold, thereby preventing the negative impacts of overcommitment on governance quality and firm performance.

Our work has some limitations, such as that we employed only one measure of agency costs. Future work therefore can employ more proxies for agency costs to explore its impact on financial performance. Moreover, our sample covered the period from 2010 to 2022, and we found that different characteristics of risk committees have different effects on agency costs and financial performance. Future studies may examine this association before and during the COVID-19 pandemic.

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