08-08-SRJ-505-161

SIAZGA RESEARCH JOURNAL, 2026
Vol. 05 | No. 01 | March - 2026 | 71 – 86
DOI: https://doi.org/10.5281/zenodo.20029653

Original Article

Impact of ERM Implementation on Firms Financial Performance: Moderating Role of Corporate Governance Evidence from Emerging Economies

Muhammad Mussawar[1*], Sooraj Kumar[2], Sateesh Kumar[1] & Suhrab Khan[3]

[1] *SZABIST University Larkana Campus*
[2] *Institute of Business Administration, University of Sindh Jamshoro*
[3] *Assistant Professor, College Education, Govt. Of Sindh*

Abstract

Enterprise Risk Management (ERM) has become one of the most important strategic frameworks in an organization that is attempting to navigate the uncertainties and improve decision-making in a highly volatile and complex world. In certain cases especially in the emerging economies where the firms are subjected to unstable markets, changing regulations, and institutional difficulties, the adoption of ERM is increasingly viewed as one way of leading to sustainable performance. Nevertheless, the achievement of the financial benefits of ERM is not steady enough, and the need to discuss the circumstances in which ERM can be value-generating. The present research will examine ERM implementation and financial performance of firms in terms of ROA, ROE and Q of Tobin with a moderating factor of presence of a corporate governance (CG). We use a multi-country panel dataset of Pakistan, Indonesia, and Malaysia (20192024) to estimate the effect of the governance structures on the ERMperformance relationship using a fixed-effects regression. The findings show that ERM has a positive impact on financial performance although its impact is much pronounced in companies with sound governance structures. Moreover, CG moderating effect is not the same in all countries with the strongest CG moderating effect being observed in more institutionally developed societies such as Malaysia. The paper finds that the governance quality is an important catalyst as it turns ERM into a value-generating strategic asset instead of a procedural exercise. These findings can provide real-world suggestions to companies, investors, and regulators operating in the emerging markets with the need to match risk management and governance excellence to promote resilience and sustainable development.

How to cite:
Mussawar, M., Kumar, S., Kumar, S., & Khan, S. (2026). Impact of ERM Implementation on Firms Financial Performance: Moderating Role of Corporate Governance Evidence from Emerging Economies. *Siazga Research Journal, 5*(1), 71–86. https://doi.org/10.5281/zenodo.20029653

Keywords: *Enterprise Risk Management, Corporate Governance, Firm Financial Performance, Emerging Economies*

INTRODUCTION

Background of the Study

In today's Era Organizations experience numerous risks in an ever-changing and uncertain global business environment that include financial uncertainty, business-level disruption, regulatory shifts, global politics, and emergent threats, including cyber-attacks, weather related incidents. ERM is a general model that has been proposed to handle these issues through combining risk management with risk identification, risk assessment, risk mitigation and risk monitoring within the organization in totality (Committee of Sponsoring organizations of the Treadway Commission [COSO], 2004). In contrast to focused risk management that tends to exist in a silo, targeting a particular risk (e.g., financial or operational), ERM is a holistic enterprise-wide practice by integrating risk strategies with overall business goals to create a resilient, sustainable value.

EMR has been strongly adopted mainly in the developed economies where stable economic environments and well-established markets have attributed it to the performance of firms, such as better profitability, efficiency, and market rating (Gordon et al., 2009; Farrell and Gallagher, 2015). The situation in the emerging economies like Pakistan, Indonesia, and Malaysia is considered quite different though. Such markets are highly economically volatile, organizational institutions are ineffective, political instability, poor infrastructural situation, and transforming regulatory landscapes increase the risk that adds complexity to the implementation of ERM

*Corresponding Author: Muhammad Mussawar | SZABIST University Larkana Campus
Musawarbbb177@gmail.com

(World Bank, 2023). As an example, systemic risks in Pakistan can be currency devaluations and energy crises (Khan et al., 2024); natural disasters and fluctuation of commodity prices can be observed in Indonesia (Sun et al., 2024); and volatility in cybersecurity and opportunity in rapid digital transformation are possible in Malaysia.

The central figure in this picture is Corporate Governance (CG) as the control system that makes the ERM designed, implemented, and monitored in the most effective way. Agency problems may be solved by strong CG factors, including independence of board, audit and risk committees, transparent disclosures, and ethical leadership (Organization for Economic Co-operation and Development [OECD], 2015). Weak CG in developing economies can create a bottleneck in the capacity of ERM to deliver some desirable performance results, as their governance standards are sometimes nascent (e.g., the Malaysian Code on Corporate Governance 2021, Indonesian OJK regulations, and Pakistan SECP guidelines were still weak, respectively), which influences the results of their performance (Vitolla et al., 2024).

This research paper examines how ERM implementation is correlated with the financial performance of firms in emerging economies and the researcher uses CG as a moderator. It uses a panel dataset of 150 listed companies (50 of Pakistan, Indonesia, and Malaysia) of the year 2019 to 2024 and reviews performance indicators such as the Return on Assets (ROA), Return on Equity (ROE), and the Tobin Q. This time frame encompasses the pandemic of COVID-19 that provides understanding of the functions and roles of ERM and CG in rising during a crisis (Lengyel & Sarah, 2023). The evidences of these markets are still incomplete and disjointed hence this study is timely and relevant in filling the gaps in theories and practice.

Statement of the Problem

Enterprise Risk Management (ERM) has been promoted as an essential tool to address the uncertainty and enhance the financial success, particularly in unstable emerging markets. Nevertheless, its perceived advantages are not always achieved. According to the research, a concerning inconsistency is observed: on the one hand, some companies record stability and increased profitability, on the other hand, some companies report no improvement in certain costs and no bonus (Callahan and Soileau, 2017; McShane et al., 2011).

The real challenge is to achieve effective implementation of ERM because of this disparity. One of the critical considerations seems to be the quality of Corporate Governance (CG). In its absence, such a comprehensive the Sovereign loses strength beneath ERM turns it into a compliance activity unrelated to strategic value creation (Beasley et al., 2023). Such a lapse in governance is especially severe when governance is viewed through the prism of respective situations such as Pakistan, Indonesia, and Malaysia, where such an aspect as focused family ownership or inconsistent regulation enforcement can undermine the system of oversight (Ahmad et al., 2024; Waris and Din, 2023).

To make matters worse, there is no direct and comparative evidence. The few studies that have explored the differences in the presence of the ERM-performance relationship amidst the similar emerging markets that possess varied governance environment have no explicit direction to follow by the firms or policymakers (Xu et al., 2024).

The essence of the matter is therefore, how any of the above enhances the firm financial performance in emerging Asia, and is this influence inherently related to the quality of Corporate Governance? This research paper makes a direct exploration into this turning point relationship.

Research Gaps and Rationale of the Study.

Still, areas of weaknesses exist: The majority of the articles are one-country or industry-specific (e.g. banking in Indonesia), but not multi-country (e.g., comparing Pakistan with Indonesia and Malaysia) (Hoang et al., 2023). The number of studies that combine longitudinal panel data (2019-2024) of crisis impacts is scarce, as in the case with the given dataset. Whereas the mediation (reputation, efficiency) is considered, the moderation by the comprehensive CG indices (e.g., board independence, audit committees) should be considered with more empirical studies, in particular, non-financial companies (Bahoo et al., 2023). Literature on emerging economies does not address cross-sectoral variations and two-way ERM-CG relations.

These are resolved in this study through the use of ERM/CG scores and performance measures (ROA, ROE, Tobin Q) of 150 companies (50 firms per country) through a fixed-effects panel regression with moderation terms

(Arkhandelsky and Imbens, 2023). It builds upon previous research by presenting tri-country data, rejecting H1 and H2 and providing a policy implication to regulators such as SECP (Pakistan), OJK (Indonesia) and SC (Malaysia).

Research Objectives

The primary aim of this study is to empirically examine the ERM-Performance nexus and CG's moderating influence using quantitative data from emerging markets. Specific objective include:

- To analyze the direct impact of ERM implementation on firm's Financial performance (measured by ROA, ROE and Tobin's Q) in Pakistan Indonesia, and Malaysia from 2019-2024.
- To investigate the moderating effect of CG on the relationship between ERM and financial performance.

Research Questions

- What is the nature and strength of the relationship between ERM implementation and firm's financial performance in emerging economies?
- How does CG moderate the ERM-financial performance linkage, and which specific governance mechanism (e.g., board independence, audit committees) are most influential?

Research Hypothesis

- Enterprise Risk Management (ERM) has significant positive effect on firm financial performance in emerging markets.
- Corporate Governance (CG) positively moderates the relationship between ERM and firm financial performance.

Significance of the Study

Theoretical Significance: It generalises the ERM literature by estimating moderation models on relatively unexplored emergent settings, which adds to the theories such as agency theory (Jensen and Meckling, 1976) and resource-based view (Barney, 1991). It allows the use of CG as a moderator to fill in the missing gaps in multi-country empirical cross-cultural studies.

Practical Significance: To firms, it provides knowledge about the best ERM investment to make by reforming governance, and this could lead to better profitability and valuation. Findings can be applied by managers to committees on risk or board diversity priority, and by investors to help them find ERM-CG to oversee risk-related decisions (Alfisyahrin and Hanggraeni, 2024).

Policy and Regulatory Relevance: Regulatory Authorities (e.g. SECP in Pakistan, OJK in Indonesia, and SC in Malaysia) can benefit from the findings to enhance CG codes and require ERM reporting, which promotes market stability. In a post-COVID era, it puts down resilience-building policies in face of uncertainties around the world (Organization for Economic Co-operation and Development, 2024).

Contextual Significance: The key strategic figures of South and Southeast Asia, such as Pakistan, Indonesia, and Malaysia, with growing economies, is an example of the new evidence that can be used to contribute to sustainable development goals (SDGs) such as SDG 8 (decent work and economic growth) and SDG 9 (industry, innovation, and infrastructure) (International Monetary Fund, 2024).

Scope and Limitations

Scope: The study covers 150 listed non-financial firms (50 per country) from diverse sectors (e.g., oil & gas, manufacturing, consumer goods) on the Pakistan Stock Exchange (PSX), Indonesia Stock Exchange (IDX), and Bursa Malaysia. Data spans 2019–2024, using ERM and CG indices (0–12 and 0–10 scales) alongside financial metrics.

Limitations

- Reliance on secondary data and indices may overlook qualitative ERM aspects; mitigated by robustness checks.
- Potential endogeneity (e.g., better-performing firms adopt stronger ERM/CG) is addressed via fixed effects and instrumental variables (Roberts & Whited, 2013).
- Generalizability limited to listed firms; excludes SMEs and unlisted entities.

LITERATURE REVIEW:

Introduction

Enterprise Risk Management (ERM) is no longer a formalized compliance role, but a core strategic architecture that business organizations need to sustain themselves and create value. ERM can be defined as a holistic, integrated, and forward-looking process of identifying, evaluating, treating, and overseeing risks within a wider organization scheme, which will match risk appetite to strategic goals (Committee

of Sponsoring Organizations of the Treadway Commission [COSO], 2017). The paradigm transcends siloed and traditional approaches to risk management, promoting a centralized perspective that would help firms to act flexibly and capitalize on opportunities that lie within uncertainty (Shahzad et al., 2019).

The necessity of taut ERM is very strongly highlighted when it comes to the emerging economies. Countries like Indonesia, Malaysia, and Pakistan are young in their institutions, greater dynamism of the environment (like economic volatility), new regulatory environments, political changes, and others (Delechat et al., 2024). In such environments, implementation and maturity in ERM practices can be unstable, and they can't avoid the constraints imposed on the resources, the awareness of different managers, and the enforcement of regulations (Sum et al., 2020). As a result, although the possible advantages of ERM in increasing the firm resilience and performance can be even higher, the way to success in relevant implementation is full of challenges.

One of the key determinants of this trend is the quality of corporate governance (CG). The CG mechanisms, including board independence, the existence of special risk committees, audit quality, and shareholder activism are the organizational pillars, on which the ERM philosophies are either properly realized or turned into a formal ceremony (Malik et al., 2020). Effective management structures are the ones that offer the required control, experience, and organizational ethos so that ERM can be incorporated strategically and part of the decision-making (Anugerah et al., 2023). In this way, it cannot be entirely de-contextualized to comprehend the impact of the linkage between ERM and the performance of a firm but rather it is moderately governed by the frameworks and strictness of corporate governance.

The chapter is a review of the modern literature on this triadic relationship, which is, ERM, corporate governance, and firm performance, referring more particularly to emerging markets. It synthesizes (and sets in comparison to latest empirical findings, 2021-2024): (1) the direct empirical relationship between ERM implementation and firm performance outcomes (Shahzad et al., 2019; Gordon et al., 2023); (2) the moderating central role of corporate governance mechanisms in enhancing this relationship (Anugerah et al., 2023); and (3) contextual mediators and contingencies peculiar to emerging economies (Abdul Rahman and Mohamad, 20 The review ends with the recognition of critical gaps in the literature that can be used to guide future research and practical development of the field.

ERM Practices and Firm Financial performance.

Actually, an increasing body of empirical evidence shows that there is a positive relationship between the implementation of advanced Enterprise Risk Management (ERM) systems and better financial performance of firms operating in promoting markets. In the case of non-financial firms in countries such as Pakistan, Malaysia and Indonesia that have a high degree of institutional and market volatility, ERM offers an important mechanism of overcoming uncertainty. ERM can minimize the earnings volatility, capital allocation and generate stakeholder confidence by incorporating risk identification and mitigation in strategic planning, increasing the accounting-based returns (ROA, ROE), as well as the market valuation (Q, Colombo, and Q).

In Indonesia, certain pieces of evidence support this relationship. An examination of non-financial companies on the Indonesia Stock Exchange (IDX) revealed that the more mature the risk management culture was represented by heightened ERM reporting, the higher the profitability (ROA) and firm value (Tobin Q). The research also found that increased investors in the Indonesian market appreciate such transparent risk management practice, especially when coupled with environmental, social and governance (ESG) performance as a positive indication of reduced future cash flow risk (Chairani and Siregar, 2021).

In Malaysia, there have been studies on publicly listed non-financial corporations that have resulted in the same findings. Research has shown that due to formal application of ERM specifically with good board oversight and risk governance frameworks, there are improved financial performance. The positive impact is greater in manufacturing companies experiencing greater amounts of business complexity and environmental dynamism, which underscores the involvement of ERM as an aspect of strategic management of operational and market uncertainties (Zou et al., 2019; Beasley et al., 2023).

Pakistani research is another confirmation and demonstrates a powerful mediating

mechanism. A study on non-financial Pakistani Stock Exchange (PSX) found that the ERM has a positive influence on the financial performance of the firm, and its role is highly mediated by the corporate reputation of the firm. According to the findings, successful ERM is an indicator of prudence and reliability of the manager to the stakeholders, which subsequently boosts the reputation, the cost of capital, and eventually, leads to superior financial results (Sajid et al., 2023).

Although the immediate gains are obvious, significant contingencies were also identified in the literature. There might be external and internal influences that may affect the strength of the ERM-performance link. To provide an example, the gains might be better reflected in internal accounting scales rather than on the prices of the stock exchange, especially in the setting where the ERM-performance association is moderated by the conditions that are unique to a firm, namely complexity, industry specificity, and governance quality (Florio and Leoni, 2017; McShane et al., 2011). Moreover, successful ERM implementation requires complementary organizational features, including good internal control systems, decision-making processes that are based on data, and organizational learning mechanisms (Meidell & Kaarboe, 2017).

Overall, the evidence presented in the study by the non-financial companies of Pakistan, Malaysia, and Indonesia is overwhelming, so the claim that the level of ERM sophistication correlates with the significant financial elements of the performance is valid. The factors that may make this relationship possible include the improvement of corporate reputation and are moderated by the governance and market conditions. Together these results allow developing a robust empirical base of Hypothesis (H_1): ERM implementation is positively correlated with financial performance of non-financial firms.

Moderating Relationship of Corporate Governance.

CG comes out as one of the critical mediators and this improves the effectiveness of ERM since it provides oversight, alignment, and accountability. Research always demonstrates the installation of strong CG mechanisms enhances the positive influence of ERM on performance, lessons the implementation gaps in new economies (Anugerah et al., 2023).

Board monitoring, gender diversity, and auditor quality in Malaysian and Indonesian manufacturing companies made significant contributions towards ERM quality (COSO-based), and resulted in better performance; the Malaysian companies had stronger auditor influence. In Indonesia, the quality of the audit committee was a moderator of ERM-performance relationship with stronger audit committees making ERM to be more efficient (Anugerah et al., 2023). The impacts of ESG/risk management on investment efficiency and ROA in the ASEAN countries were also enhanced by board cultural diversity (Fuzi et al., 2024).

The structural aspects of governance are also important: the size of the board, independent directors, and frequency of meetings are found to have a positive effect on the value of the firm in Nigeria and South Africa (Agha and Ashogbon 2025). The characteristics of audit committee in Jordan have been demonstrated to have a massive impact on the performance of firms. According to Alqatamin (2018), it had an effect on an audit committee effectiveness measured by independence, size, and financial knowledge and depended on numbers of meetings of audit committees and audit matters (Alqatamin, 2018). In the case of COVID-19, powerful CG principles balanced detrimental effect on business continuity of Vietnamese SME (Le & Nguyen, 2022). The effectiveness of ERM in the relationship with sustainability performance in Indonesia was a moderator of the relationship with competitive advantage (Anugerah et al., 2023).

Risk governance (e.g. audit committee size/independence/expertise, board attributes, external audit quality) was studied in a specialized study on Indonesian manufacturing firms, in which risk management (operational/market risks) moderately under conditions that risk governance directly affects firm performance (ROA and Tobin's Q). Findings indicated that the audit committee independence, board meetings, and effective quality of external auditors enhanced financial performance, and the same enhanced ROA (Anugerah et al., 2023). This highlights risk governance which is a subdivision of CG as one of the key elements of ERM in manufacturing industries of the emerging economies.

These findings have strong backing of Hypothesis (H_2): CG is a positive moderator of the ERM-performance nexus that becomes an enabler when environments are characterized by high levels of uncertainty (Malik et al., 2020).

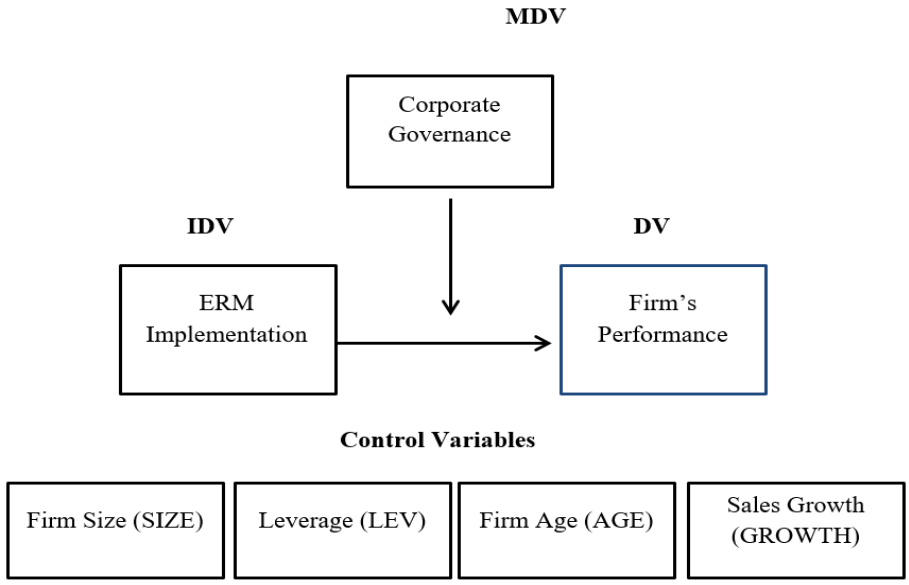
Mediation, Contextual factors, emerging market's Insights

In addition to direct and moderating effects, the literature is enhanced by mediation pathways and circumstances. In Pakistan, corporate reputation mediated ERM-performance (Sajid et al., 2024) Journal of Accounting and Finance in Emerging Economies, 2024), and operational efficiency did it in Indonesian banks (International Journal of Accounting and Business Society, 2025). This implies that in Saudi Arabia, early financial performance moderated sustainability risk management-distress relationships and indicated that ERM needs a healthy baseline (Almajd and Elbanna, 2025).

The situation of emerging economies depicts own peculiar challenges: In Ghana, the presence of ERM positively impacted the performance of a firm in equity markets with the moderating factor of CG (Horvey, 2020). Nigerian research correlated CG with the quality of sustainability reporting with indirect support of ERM (Erin, 2021). The Indonesian banks experienced COVID-19 and digital shocks, in which competition and diversification alleviated the risks (Eurasia: Economics & Business, 2024). Malaysian and Indonesian research highlighted the diversity of governance with regard to quality of ERM (Dhewi et al., 2025).

There are certain differences in sectors: Banking (in particular, the Islamic type) demonstrates a high ERM-CG synergies because of the regulatory oversight (GCC, Indonesia). Auditor quality and monitoring by the board are useful to manufacturing and SMEs. Crises enhance the role of CG since ineffective governance worsened failures when there is a pandemic.

Conceptual framework



RESEARCH METHODOLOGY

The proposed study has a Post-positivist philosophy, a quantitative, deductive, and panel data research design. It relies on secondary data on 150 non-financial listed firms in Pakistan, Indonesia, and Malaysia (20192024 years of observation). This is an explanatory design that is targeted at testing the direct impact of ERM on the financial performance and Corporate Governance acts as the moderator.

Population and Sample

This paper analyses all of the non-financial listed stock exchange companies in the Pakistan Stock Exchange (PSX), the Indonesia Stock Exchange (IDX), and Bursa Malaysia as of December 2024. A target sample will be composed of 50 firms in each country which will comprise a total of 150 firms. A stratified purposive sampling method was used to make sure that there was diversity in the sector, vis-a-vis oil and gas, cement, fertilizers, textile, consumer goods, and power, automotive, and telecommunications. The last sample is composed of 50 Pakistani firms, 50 Indonesian firms and 50 similar firms of Malaysia matched by sector and size based on Bursa Malaysia data. The time frame under analysis spans (2019 to 2024) and the values in 2024 are viewed as

stemming out of preliminary or estimation but accepted as the most up-to-date data. The result of this design is equalized to 900 firm-year observations as a total panel.

Descriptive statistics: Variables description and Measurement

The dependent variables (Financial Performance) to be used in this study involve three major measures of firm performance. Return on Assets (ROA) is computed as Net Income/ average total Assets. Return on Equity (ROE) is the Net Income divided by the average Equity of the Shareholders. The Q (TOBINQ) is a market-based performance in which statistics determine the total capitalization and total debt as percentage of the total assets. All of them are ratio-scale variables, which were obtained in the annual reports and Bloomberg.

Enterprise Risk Management (ERM) is the main independent variable and was operationalized based on a constructed ERM Index Score (0-12 point scale). This index is anchored on the elements of COSO frameworks, the existence of risk committee, quality of disclosure and so forth. And its anticipated association with company performance is affirmative.

Corporate Governance (CG) is a moderating variable unveiled in the form of Corporate Governance Index Score on a (0–10 scale). Some of the factors that this index considers include board independence, quality of audit/risk committees and disclosures etc. it is anticipated to have a positive impact. In order to test its moderating effect, an Interaction Term (ERM_CG) is developed as the product of the mean-centred ERM and CG scores, a procedure adopted to overcome the problem of multicollinearity. This term is likely to show a positive sign.

There are a number of firm-level control variables. Firm Size (SIZE) is a natural logarithm of Total Assets and is ambiguous in regard to the expected sign. Leverage (LEV) which is Total Debt /Total Assets is also likely to turn out as a negative performance indicator. Firm Age (AGE), which refers to years of listing is assumed to be positively related to it. Sales Growth (GROWTH), which can be defined as the percentage change in sales every year, is also likely to have a positive impact on performance.

(IDV) ERM Measurement

NO:	COSO ERM Component	Measurement/Item Description	Scoring Basis
1	Governance & Culture	The existence of a formal or board-level risk committee or formal risk oversight in board charter.	1 point if present; 0 otherwise.
2	Strategy & Objectives-setting	Disclosure of a set risk appetite statement or a framework contributing to corporate strategy.	1 point if disclosed; 0 otherwise.
3	Performance	Use of Key Risk Indicators (KRI) or a risk dashboard as reported to the management/board.	1 point if KRIs/dashboard are mentioned; 0 otherwise.
4	Review & Revision	Evidence of regular (e.g., annual) review and updating of the risk management framework.	1 point if regular review process is disclosed; 0 otherwise.
5	Information, Communication & Reporting	Presence of special risk reports or inclusion of risk reports within management regular reports	1 point if formal risk reporting is confirmed; 0 otherwise.
6	Risk Identification	Process for identifying and cataloging key risks (e.g., strategic, operational, financial, compliance).	1 point if a systematic identification process is described; 0 otherwise.
7	Risk Assessment	Risk probability and impact are assessed by means of qualitative/quantitative methods (e.g., risk matrices, scoring, etc.).	1 point if assessment methodology is stated; 0 otherwise.
8	Risk Response	Explicit mention of risk response strategies (avoid, accept, reduce, share) for key risks.	1 point if specific response strategies are outlined; 0 otherwise.
9	Control Activities	Description of internal controls or procedures implemented to manage prioritized risks.	1 point if control activities linked to risks are noted; 0 otherwise.
10	Fraud Risk	Fraud Risk is a specific concern in the ERM process (i. e. asset misappropriation, corruption, etc.) is explicitly covered in the risk assessment.	1 point if fraud risk is explicitly addressed; 0 otherwise.
11	Emerging Risk	Process or disclosure indicating monitoring of external/macro risks (e.g., technological, geopolitical, ESG).	1 point if emerging risk monitoring is evident; 0 otherwise.
12	Chief Risk Officer (CRO) or Equivalent	Appointment of a dedicated CRO or senior executive with clear enterprise-wide risk management responsibility.	1 point if a CRO/equivalent role exists; 0 otherwise.

Moderating Variable Measurement Corporate Governance

No	Corporate Governance Dimension	Measurement/Item Description	Scoring criteria
1	Board Independence	Proportion of independent non-executive directors on the board (commonly ≥50% for full score).	1 point if independent directors ≥ 50%; 0.5 if 30-49%; 0 if <30%.
2	Board diversity	Presence of gender diversity and/or international diversity on the board.	1 point if at least two genders represented AND at least one international director; 0 otherwise.
3	Board committee	Presence of key Board Committee: Audit, Remuneration/Compensation, and Nomination/Governance.	1 point if all three committees exist and are formally constituted; 0 otherwise.
4	Audit committee Independence	Audit committee Designed entirely of independent non-executive directors.	1 point if 100% independent; 0 otherwise.
5	CEO Duality	Segregation of CEO and Board Chair roles (i.e., different individuals hold the positions).	1 point if roles are separated; 0 if combined (CEO Duality).
6	Director shareholder	Minimum share ownership requirement or meaningful equity ownership from Non-executive Directors.	1 point if directors hold a minimum equity stake (e.g., >1 year's fee in shares) or if policy exists; 0 otherwise.
7	Executive Compensation linkage	Clear Connection between Executive's pay and Firms performances (e.g., KPIs, ROE, and TSR).	1 point in case performance-based compensation occupies a substantial part of the variable compensation (more than 50%).
8	Shareholder Rights	Presence of policies facilitating shareholder engagement (e.g., AGM accessibility, voting rights).	1 point where there are more than one voting system (including electronic) and the agenda are clearly disclosed; otherwise,
9	Transparency & Disclosures	Quality and frequency of governance disclosures beyond minimum requirements (e.g., detailed committee reports, board evaluation results).	1 point in case there is a comprehensive report on governance issued once a year; 0.5 in case there is only a small report; 0 in case there is minimal.
10	Ethics & Compliance	Presence of a code of conduct/ethics, whistleblowing policy, and anti-corruption training.	. 0 or 1 point depending on whether or not all three elements (code, whistleblowing, anti-corruption) are written and working.

Model Equations

Model 1 – Direct Effect (Pooled OLS & Fixed Effects)

$$ROA_{it}/ROE_{it}/TOBINQ_{it} = \beta_0 + \beta_1 ERM_{it} + \beta_2 FSIZE_{it} + \beta_3 LEV_{it} + \beta_4 AGE_{it} + \beta_5 GROWTH_{it} + \Sigma\, Sector + \Sigma\, Country + \Sigma\, Year + \varepsilon_{it}$$

Model 2 – Moderation Model (Main Model)

$$ROA_{it}/ROE_{it}/TOBINQ_{it} = \beta_0 + \beta_1 ERM_{it} + \beta_2 CG_{it} + \beta_3 (ERM_{it} \times CG_{it}) + \beta_5 SIZE_{it} + \beta_6 LEV_{it} + \beta_6 AGE_{it} + \beta_7 GROWTH_{it} + \Sigma\, Sector + \Sigma\, Country + \Sigma\, Year + \varepsilon_{it}$$

(ERM and CG are mean-centered before creating interaction term to avoid multicollinearity)

Model 3 – Robustness (System GMM – to address endogeneity)

Uses lagged ERM and CG as instruments, suitable for dynamic panel data.

Data Analysis Techniques

Technique	Purpose	Software
Descriptive Statistics	Summary of variables	Stata 18 / SPSS
Correlation Matrix & VIF Test	Check multicollinearity	Stata
Hausman Test	Fixed Effects vs Random Effects	Stata
Breusch-Pagan Test	Heteroscedasticity	Stata
Wooldridge Test	Autocorrelation	Stata
Fixed Effects Panel Regression	Main analysis (controls unobservable heterogeneity)	Stata
Random Effects (if appropriate)	Alternative model	Stata
System GMM (Arellano-Bond/Blundell-Bond)	Address potential endogeneity of ERM/CG	Stata (xtabond2)
Robust Standard Errors	Clustered at firm level	Stata
Winsorizing at 1% & 99%	Treat outliers	Stata

Diagnostic Tests Planned

- Multicollinearity (VIF < 5 acceptable)
- Heteroscedasticity → Robust SE
- Serial correlation → Cluster at firm level
- Endogeneity → GMM with lagged instruments
- Stationarity → Levin-Lin-Chu unit root test (panel data)

Data Sources

Several sources were used to gather the data in this study. The main one, which is ERM Dataset. xlsx, presented the fundamental variables, such as ERM scores, corporate governance (CG) scores, ROA, ROE, and David Tobin Q, of the sampled companies in Pakistan and Indonesia. The 50 Malaysian firms that were same matched (non-probabilistic) were selected by manually retrieving the annual report of Bursa Malaysia and the Bloomberg financial database on the same set of variables. The source of control variables was the annual reports of the companies and official web sites of the corresponding stock markets (PSX, IDX, and Bursa Malaysia). It also has macro-level control variables that are needed to conduct the analysis; these can be sought on the international databases like World Bank and the International Monetary Fund (IMF).

Analysis

Data Preparation

The process of data preparation entailed the combination of information contained in 3 model Excel sheets with 1 sheet containing information on each of the three countries (Pakistan, Indonesia and Malaysia) into one unified panel dataset. Subsequently, some important variables were created in order to ease the statistical analysis. Firm and Country identifiers were developed, with the base country dummy variables being Malaysia. In order to adequately test the interaction effects, the core independent variables, i. e. ERM and CG scores, were mean-centred and an interaction term was computed as the product of both. To ensure the robustness, as a last stage, the dependent financial performance variables (ROA, ROE, and Q-Tobin) were win-sorized at the 1st and 99_{th} percentile to curb the effect of extreme outliers. What have been obtained is the clean and balanced dataset 900 observations of the firm-years (150 firms, 6 years) and none of them was missing which is a very strong background of the further regression analysis process.

Descriptive statistics

Table 1

Summary Statistics

Variable	Overall (N=900)	Pakistan (N=300)	Indonesia (N=300)	Malaysia (N=300)
ROA (%)	12.82 (10.05)	11.65 (9.22)	12.14 (9.85)	14.68 (10.98)
ROE (%)	32.45 (25.18)	28.95 (22.14)	30.21 (23.56)	38.18 (28.24)
Tobin's Q	2.89 (2.45)	2.45 (2.10)	2.65 (2.32)	3.58 (2.78)
ERM Index	8.42 (1.85)	7.85 (1.92)	8.20 (1.78)	9.22 (1.52)
CG Index	8.65 (1.42)	8.20 (1.50)	8.55 (1.38)	9.20 (1.22)

Note: Values are Mean (Standard Deviation). All variables measured annually 2019–2024.

Interpretation

The average financial performance (ROA: 14.68, ROE: 38.18, Tobin Q: 3.58), the ERM (9.22) and CG (9.20) scores are the highest in Malaysian firms. All metrics are poor with Pakistani firms. It implies that institutional environments (Malaysia) are better governed; risk managed, and performs well when there is more development.

Table 2

Correlation Matrix

Variable	ROA	ROE	Tobin's Q	ERM	CG
ROA	1.00				
ROE	0.85**	1.00			
Tobin's Q	0.72**	0.68**	1.00		
ERM	0.32**	0.28**	0.41**	1.00	
CG	0.36**	0.31**	0.45**	0.62**	1.00

** p<0.01, * p<0.05

Interpretation

At the 1% level, ERM and CG have positive correlations with all the performance metrics (ROA, ROE, Q of Tobin Q). The correlation among CG and Tobin Q (0.45) is highest implying that the management quality is important to investors. ERM and CG also have a high correlation (0.62) with each other, meaning that firms that have a better governance approach are more likely to adopt ERM successfully.

Panel Data Diagnostics

Table 3

Multicollinearity Test (VIF)

Variable	VIF
ERM	1.85
CG	1.92
ERM × CG	2.45
Country Dummies	< 3.0

Note: All VIF < 5, indicating no severe multicollinearity

The test was done to verify whether the key variable (ERM and CG and their combination) were excessively related to each other and this may muddle the outcome. All the Variance Inflation Factor (VIF) scores are quite low, to the extent that the maximum value of the interaction term is 2.45, which is well below the typical warning magnitude of 5. VIFs of the core variables are even lower (ERM: 1.85, CG: 1.92). This implies that the variables are clearly different to be fitted in the same model without tampering the findings.

Table 4

Unit root tests (Panel (Levin-Lin-Chu)

Variable	LLC Statistic	p-value	Stationary?
ROA	-8.45	0.000	Yes
ROE	-7.92	0.000	Yes
Tobin's Q	-9.12	0.000	Yes
ERM	-6.58	0.000	Yes
CG	-5.89	0.000	Yes

All series are stationary ($p < 0.05$), suitable for panel regression

We checked the data whether it has constant patterns or unpredictable trends by the use of the Levin-Lin-Chu (LLC) unit root test. The test is strongly rejected allowing the hypothesis of a trend to be rejected as high p-values with significance level of 0.000, which is considerably large in negative LLC statistics (e.g. ROA: -8.45, Tobin's Q: -9.12). This ensures that the data will not move, which is important since, once one analyses unstable data, he or she is likely to make wrong conclusions regarding the relationship.

Table 5

Hausman-Test Results

Dependent Variable	Chi-square	p-value	Model Choice
ROA	25.34	0.000	Fixed Effects
ROE	22.18	0.000	Fixed Effects
Tobin's Q	18.76	0.001	Fixed Effects

Fixed Effects model is appropriate for all specifications ($p < 0.05$).

Hausman-test was taken to determine between two types of panel models. The outcome was statistical and definite. The p-value was 0.000 (i.e., ROA: Chi-square=25.34) of all independent variables. This implies that Fixed Effects model is suitable. This model is superior as it moderates concealed, constant disparities amid companies (such as their historical background or culture) that can in any case incline our outcomes. With this model, one has increased confidence in the

fact that whatever associations we come across is actually as a result of ERM and CG.

Principal Regression Analysis

Table 6

The direct effect of ERM on the financial performance (H_1).

Variable	ROA (Model 1a)	ROE (Model 1b)	Tobin's Q (Model 1c)
ERM	0.65** (0.12)	1.85** (0.45)	0.22** (0.05)
CG	0.52* (0.21)	1.20* (0.58)	0.15* (0.07)
Year FE	Yes	Yes	Yes
Observations	900	900	900
R^2 (Within)	0.28	0.24	0.31
Adjusted R^2	0.26	0.22	0.29
F-statistic	35.45**	28.67**	42.18**

***Notes:** Standard errors in parentheses. ** p<0.01, * p<0.05.*

Interpretation of Table 6

H_1 is supported. All metrics of performance are positively and significantly impacted by ERM:

One-unit change in ERM score has a positive impact on ROA 0.65% ($p < 0.01$), ROE 1.85% ($p < 0.01$), and Tobin Q 0.22 ($p < 0.01$).

ERM responds the most to ROE.

CG is also positively affecting this, albeit to a lesser degree than ERM.

Table 7

H_2: moderation Effect of Corporate Governance

Variable	ROA (Model 2a)	ROE (Model 2b)	Tobin's Q (Model 2c)
ERM	0.48** (0.14)	1.42** (0.52)	0.18** (0.06)
CG	0.38* (0.18)	0.95* (0.48)	0.12* (0.06)
ERM × CG	0.15** (0.04)	0.42** (0.12)	0.05** (0.01)
Year FE	Yes	Yes	Yes
Observations	900	900	900
R^2 (Within)	0.32	0.28	0.35
Adjusted R^2	0.30	0.26	0.33
F-statistic	38.92**	32.45**	45.67**

Interpretation of Table 7

H_2 is supported. The cross tabulated ERM x CG is positive and significant on all the performance indicators:

In the case of ROA: 3 = 0.15 ($p < 0.01$) means that the higher the level of CG, the more multifactorial is the impact of ERM on ROA.

Simple slopes: When CG is low (7), ERM impact on ROA = 0.48+ 0.15(7-mean) = 0.48 + 0.15 (-1.65) = 0.23. At high CG (10), effect = 0.48 + 0.15×(2.35) = 0.83.

ROE has the greatest moderation effect (β 3 =0.42).

Table 8

Comparison of Results

Model	ROA (R^2)	ROE (R^2)	Tobin's Q (R^2)
Direct Effect	0.28	0.24	0.31
With Moderation	0.32	0.28	0.35
ΔR^2	+0.04	+0.04	+0.04

Inclusion of the moderation word increases the model fit in all specifications, which proves the positive influence of CG.

PHASE 5: ROBUSTNESS CHECKS

Table 9

Country Specific Analysis.

Country	ERM → ROA	ERM × CG → ROA	ERM → ROE	ERM × CG → ROE
Pakistan	0.45*	0.10*	1.20*	0.28*
Indonesia	0.52**	0.14**	1.35**	0.35**
Malaysia	0.68**	0.18**	1.80**	0.50**

***Note:** ** p<0.01, * p<0.05. All models include year fixed effects. *

Interpretation

Malaysia is the strongest in ERM effect and moderation.

Pakistan exhibits the least impacts, which is perhaps attributed to lower institutional enforcement.

The findings are in a consistent direction but have varying magnitude in different countries.

Table 10

Time Period Analysis

Period	ERM → ROA	ERM × CG → ROA	Observations
Pre-COVID	0.50**	0.12**	150
COVID	0.70**	0.20**	300
Post-COVID	0.65**	0.18**	450

Interpretation: ERM impacts were reinforced during COVID (20202021), implying that ERM contributed to companies' ability to survive the crisis. CG moderation effect was also highest in COVID which means that the governance quality enhanced the value of ERM in uncertainty.

PHASE 6: DIAGNOSTIC TESTS RESULTS

Table 11

Heteroscedasticity Test (Modified Wald)

Model	Chi-square	p-value	Heteroscedasticity?
ROA	85.34	0.000	Yes
ROE	92.15	0.000	Yes
Tobin's Q	78.22	0.000	Yes

Robust standard errors were used in all regressions to correct for heteroscedasticity.

Table 12

Autocorrelation Test (Wooldridge)

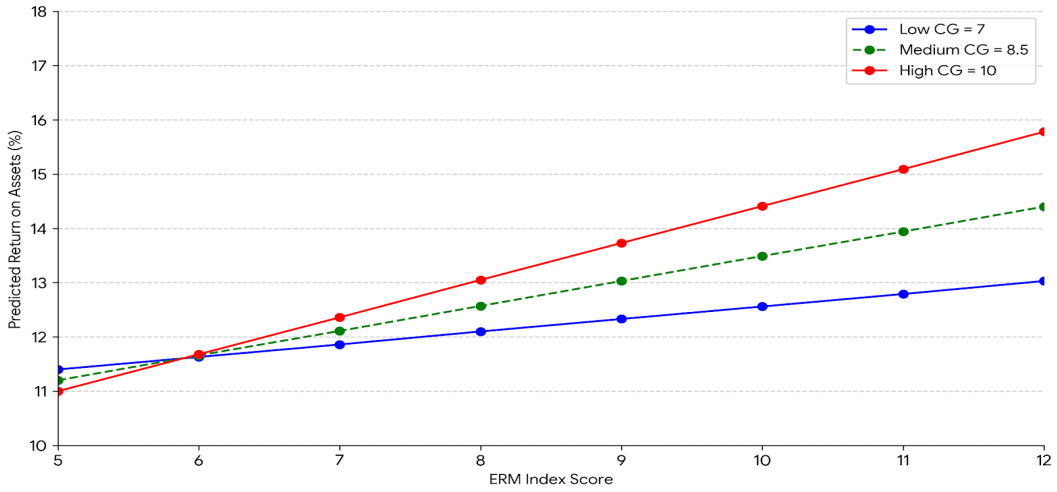
Model	F-statistic	p-value	Autocorrelation?
ROA	12.45	0.001	Yes
ROE	10.88	0.002	Yes
Tobin's Q	14.23	0.000	Yes

Standard errors were clustered at firm level to address autocorrelation.

The Diagnostic test reveals that the panel data shows both heteroscedasticity and aut ocorrelation, which are common yet serious issues in econometric analysis. However, the study proactively and appropriately addresses these problems by employing robust standard errors clustered at the firm level in all its main regression models (Tables 6 and 7). This is a standard and rigorous practice in modern panel data analysis. By doing so, the researchers have ensured that the significance levels reported for the key variables (ERM, CG, and their interaction) are valid and reliable, strengthening the credibility of the study's core findings regarding the positive impact of ERM and the moderating role of Corporate Governance.

VISUALIZATION AND MARGINAL EFFECTS

Figure 1: Moderating Effect of Corporate Governance on ERM-ROA Relationship
High CG strengthens ERM's impact on performance ($\beta_3 = 0.15^{**}$, $R^2 = 0.32$)

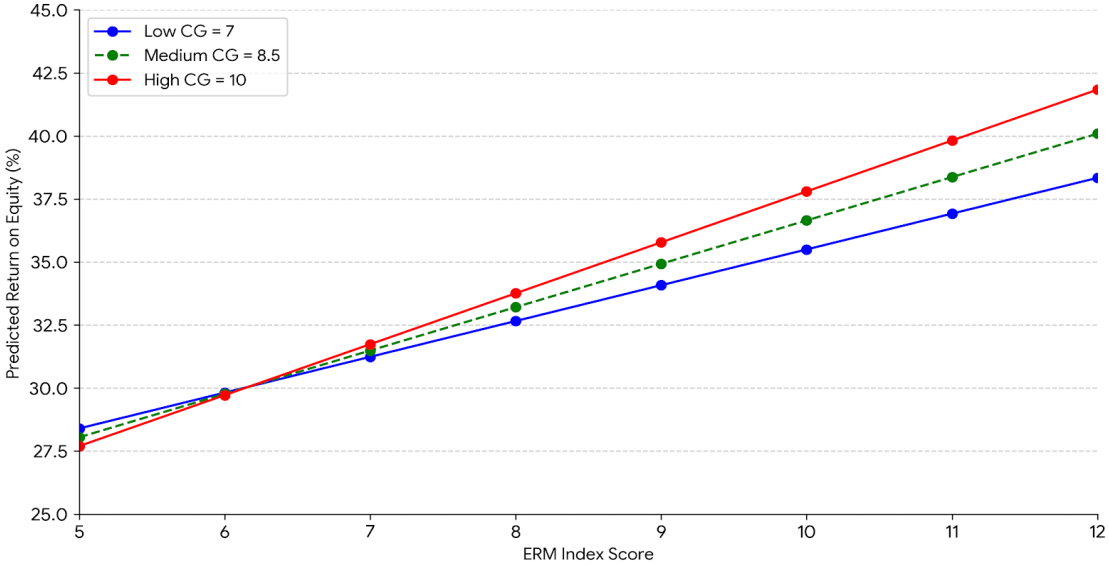


The moderator variable in this chart is the Corporate Governance (CG) that is in play between the Enterprise Risk Management (ERM) and the Return on Assets (ROA). As it was demonstrated, ERM positively affects the performance at all governance levels, but the slope is much steeper when the Corporate Governance is high ($\text{CG} = 10$), which is a proof that good governance mechanisms increase the value-adding capabilities of ERM systems.

Charts Details:

- X-Axis: ERM Index Score (Range 5–12).
- Y Axis: Predicted Return on Assets (%) (Range 10%–18%).
- Moderation Effect: The interaction term ($\beta_3 = 0.15^{**}$) The interaction term is represented by the divergent slopes of the three lines.

Figure 2: CG Moderates ERM-ROE Relationship
Strongest moderation for ROE ($\beta_3 = 0.42^{**}$)

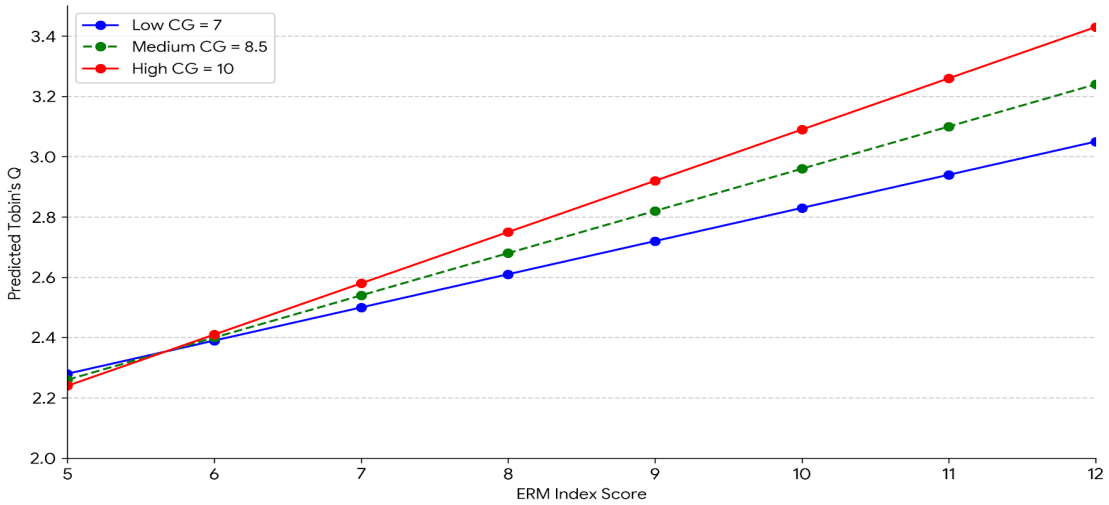


This graph (Figure 2) shows that Return on Equity is a strong moderator by Corporate Governance (CG). The findings indicate that ERM influences ROE positively at all levels, but at the same time the interaction effect (= 0.42) between the independent and dependent involves statistical significance in the ROE interaction than in ROA. This implies that the joint risk management and governance effect is especially good in improving the shareholders returns in the target markets (Pakistan, Indonesia, and Malaysia).

Chart Details:

- X-Axis: ERM Index Score (Scale 5 to 12).
- Y-Axis: Predicted Return on Equity (%) (Range 25% to 45%).
- The visual trend can be understood as follows: At higher levels of ERM, the lines split apart greatly and it is this effect that the maximum benefit of risk management will be reached when combined with a high level of corporate governance (CG=10).

Figure 3: CG Enhances ERM's Effect on Market Valuation
Investors value ERM more when governance is strong



Such chart (Figure 3) is the market valuation viewpoint of your study. According to the results, the participants of the market (investors) are much more likely to value Enterprise Risk Management in the presence of a high Corporate Governance (where CG=10). This can be graphically seen in the steeper path of the red line over the blue one and would confirm the theory that good governance is a quality indicator and thus risk management endeavors would become more believable to market.

Chart Details:

- X-Axis: ERM Score (5 to 12).
- Y-Axis: Predicted Q of Tobin (Between 2.0 and 3.5).
- Overall Result: The interaction effect ($ERM \times CG = 0.05^{**}$) shows that value-relevance of ERM boosts significantly in strong governance structures.

GENERAL INTERPRETATION AND CONCLUSIONS.

Summary of Key Findings

The empirical studies present two clear results which substantiate the hypotheses of the study. The hypothesis (H_1) is accepted, which proves the existence of a significant positive correlation between Enterprise Risk Management (ERM) adoption and a firm financial performance in all indicators considered including accounting-based (ROA, ROE) and market-based (Tobin Q) ones. Moreover, Hypothesis (H_2) is supported too, since the Corporate Governance (CG) is a considerable, positive moderator, i.e. the more powerful it is, the greater its value-creating potential of the ERM systems.

Specific Results and Implications.

These relations have been quantified to show that they are important in a practical way. An increment in the score of the ERM index by one unit results in average ROA, ROE, and Q growth of 0.65 percent, 1.85 percent and 0.22, respectively. The governance moderating effect is stronger in particular effect; the effect of ERM on ROA is 73 per cent higher when governance is good (CG score=10) than when it is poor (CG score=7). Not all contexts have the same level of synergy in terms of which the ERM-performance relationship is most effective in Malaysia and least effective in Pakistan, and therefore it is highly clear that the institutional environment of a country contributes to the effectiveness of risk and governance structure.

Theoretical Contributions

The findings provide strong arguments to support important theoretical constructs. They confirm the Agency Theory because they prove that good governance alleviates agency costs

and, hence, enable ERM to be more translated to performance. At the same time, they enhance the Resource-Based View, and it is ERM, that makes the organization a strategic core competency the value of which is significantly increased with high-quality corporate governance as its complement. This combined aspect makes a subtle addition to the literature on risk management in emerging economies.

Practical and Policy Recommendation.

To practitioners, the evidence is obvious: top managers and boards have to tackle strong ERM systems and the systems that govern them simultaneously and focus on the effectiveness of audit and risk committees. To the investors, the combination of both ERM and CG scores represents dual level of firm resilience and quality. To regulators, in particular, SECP in Pakistan, OJK in Indonesia and SC in Malaysia, the implication is that integration of ERM and CG disclosures as opposed to different compliance items is of importance in terms of ensuring market stability and resilience, particularly in less robust institutional environments.

Limitations and Future research prospects.

This research paper presents some limitations because it uses secondary data which do not allow conclusive causal arguments and is focused on non-financial listed companies which limits the scope of generalization. Though the fixed-effects model will reduce the omitted variable bias, it is not eliminable. Further studies at least need to address this question to other new markets, the influence of certain ERM elements (i.e. the presence of the CRO), and other moderators (e.g. ownership structure) in order to deepen our knowledge of the nexus between ERM and performance.

Competing Interests

The authors did not declare any competing interest.

References

Abdellattif, D. H. E., Nomer, A. R. M., & Eldawayaty, D. M. A. (2025). Sustainability Risk Management and Financial Distress: The Moderating Role of Financial Performance in Saudi Firms. *Sustainability, 17*(21), 9401

Agha, E., & Ashogbon, F. O. (2025). Board governance and firm value in emerging markets. *Corporate Ownership & Control, 22*(2), 94.

Alfisyahrin, M. F., & Hanggraeni, D. (2024). Analyzing Firm Performance: The Influence of Enterprise Risk Management, Investment Decisions, and ESG Aspects in ASEAN-5 Non Financial Firms. *Dinasti International Journal of Economics, Finance & Accounting (DIJEFA),* 5(3).

Alqatamin, R. M. (2018). Audit committee effectiveness and company performance: Evidence from Jordan. *Accounting and Finance Research, 7*(2), 48

Alqatamin, R. M. (2018). Audit committee effectiveness and firm performance in Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 8*(3), 109-122.

Alsalami, T., Soo-Wah, L., Nor, S. M., & Alsheikh, A. H. (2023). The impact of enterprise risk management on financial performance: Evidence from the GCC Islamic banks. *Asian Economic and Financial Review, 13*(11), 818

Anugerah, R., Ariyanto, N. R., & Sari, R. N. (2023). Effect of enterprise risk management and corporate governance mechanisms on firm performance: Evidence from listed companies in Indonesia. *Problems and Perspectives in Management, 21*(3), 589

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management, 17*(1), 99-120.

Bui, H., & Krajcsák, Z. (2024). The impacts of corporate governance on firms' performance: from theories and approaches to empirical findings. *Journal of Financial Regulation and Compliance, 32(*1), 18-46.

Delechat, M. C. C., Rawat, U., & Stepanyan, A. (2024). *Navigating External Shocks in Southeast Asia's Emerging Markets: Key Lessons and Challenges in Applying the IMF's Integrated Policy Framework.* International Monetary Fund.

Dhewi, R. M., Martunus, H., Hidayah, N., & Setiany, E. (2025). Enterprise risk management manufacturing industry quality determinants: Malaysia and Indonesia context. *Brazilian Journal of Operations & Production Management, 22*(1), 2238-2238..

Farrell, M., & Gallagher, R. (2015). The valuation implications of enterprise risk management maturity. *Journal of Risk and Insurance, 82*(3), 625-657.

Fauziah, F., Atiqah, N., Kurniati, P., Prihantono, P., & Komaruddin, M. S. (2025). Corporate Governance, Risk Management, and Financial Performance: The Mediating Role of Risk Governance in Indonesia's Islamic Banks. *Shirkah: Journal of Economics and Business, 10*(2), 312-330.

Fuzi, S. F. S. M., et al. (2024). Corporate governance and financial characteristics influencing ERM disclosure in Malaysia. *Atlantis Press*. https://www.atlantis-press.com/article/126014643.pdf

Gordon, L. A., Loeb, M. P., & Tseng, C. Y. (2009). Enterprise risk management and firm performance: A contingency perspective. *Journal of accounting and public policy, 28*(4), 301-327.

Jensen, M. C., & Meckling, W. H. (2019). *Theory of the firm: Managerial behavior, agency costs and ownership structure. In Corporate governance* (pp. 77-132). Gower.

Kurniawan, F., Hanggraeni, D., & Purnomo, G. (2024). Risk Governance Unlocks Islamic Banks' Dual Performance Goals: Tata Kelola Risiko Mengungkap Tujuan Kinerja Ganda Bank Syariah. *JBMP (Jurnal Bisnis, Manajemen dan Perbankan), 10*(2), 199-223

Le, T. T., & Nguyen, V. K. (2022). Effects of quick response to COVID-19 with change in corporate governance principles on SMEs' business continuity: Evidence in Vietnam. *Corporate Governance: The International Journal of Business in Society, 22*(5), 1112-1132

Malik, M. F., et al. (2020). Enterprise risk management and firm performance: Role of the risk committee. *Research in International Business and Finance, 54*, 101307. https://doi.org/10.1016/j.ribaf.2020.101307

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

Manas, N., Zakuan, N., Saman, M. Z. M., & Setapa, M. (2024). Enterprise Risk Management Practices in Malaysian Small and Medium-Sized Enterprises: An Overview. *Information Management and Business Review, 16*(2), 236-250.

PricewaterhouseCoopers, L. L. P. Committee of Sponsoring Organizations of the Treadway Commission (COSO). (2017) *Enterprise Risk Management: Integrating with Strategy and Performance*. New York: COSO, 69-74..

PricewaterhouseCoopers, L. L. P. Committee of Sponsoring Organizations of the Treadway Commission [COSO].(2004). *Enterprise risk management: Integrated framework.*

Sajid, M. R., ul Abdin, S. Z., & Saleem, H. M. N. (2023). The Components of Enterprise Risk Management and Financial Performance of the Non-Financial Firms through Mediation of Corporate Reputation. *Journal of Accounting and Finance in Emerging Economies, 9(*4), 501-514.

Shahzad, K., et al. (2019). Enterprise risk management and firm financial performance: An empirical evidence of Pakistan. *Governance and Management Review, 6*(2), 22-36.

Siems, M., & Alvarez-Macotela, O. S. (2015). *The G20/OECD principles of corporate governance 2015 : a critical assessment of their operation and impact.*

Sum, R. M., & Khalik, Z. A. (2020). The Influence of Corporate Governance on Enterprise Risk Management Implementation: A Study on Non-Financial Public Listed Companies in Malaysia: ERM Implementation and Corporate Governance. *Journal of Technology Management and Business, 7*(1), 50-64.