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The Impact of Enterprise Risk Management on Financial Performance in the Uk Banks

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Abstract

This study explores the effect of Enterprise Risk Management (ERM) implementation on the financial performance of banks in the United Kingdom, grounded in various ERM-related theories and regulatory guidelines. It also examines whether firm size moderates the relationship between ERM implementation and financial performance. A quantitative approach was employed, using a structured questionnaire distributed via email. A total of 90 valid responses were collected from banking professionals. The data were analyzed using Partial Least Squares Structural Equation Modeling (SmartPLS 4). The results indicate that ERM implementation has a significant positive impact on the financial performance of UK banks. However, firm size was not found to significantly moderate this relationship. These findings suggest that while ERM contributes to better financial outcomes, its effectiveness is not dependent on the size of the institution. The study provides practical implications for banking professionals seeking to enhance risk management frameworks and supports the importance of systematic ERM practices across banks of varying sizes. Additionally, it contributes to the academic literature by reinforcing the value of ERM in the financial services sector and identifying areas for further research.

Keywords: Enterprise Risk Management, Financial Performance, UK Banking Sector, Risk Management, Firm Size

Introduction

In an increasingly complex and dynamic financial environment, effective risk management has become essential, particularly within the banking sector. Enterprise Risk Management (ERM) has emerged as a comprehensive approach, now integrated into regulatory policies, corporate governance frameworks, and internal management systems. Since the global financial crisis, ERM has gained heightened attention as financial institutions strive to systematically identify, assess, report, and mitigate risks.

A growing body of literature (Van Liebergen, 2017; Leo et al., 2019; MetricStream, 2018; Oliver Wyman, 2017) has examined evolving risk management practices and the

associated challenges in banking. Power (2004) described the widespread adoption of ERM as a societal shift—an "explosion" of risk consciousness—and positioned ERM as a global standard or "world model" for modern banking institutions (Power, 2003a, p.10).

ERM plays a pivotal role in international capital regulation and corporate governance. Regulatory bodies have increasingly mandated ERM frameworks in response to emerging risks. Key global initiatives—such as the COSO ERM Framework and the Basel Accords (both introduced in 2004)—alongside national regulations like the Sarbanes-Oxley Act (2002) and the Emergency Economic Stabilization Act (2008) in the U.S., as well as ERM directives by the Central Bank of Nigeria, reflect the institutionalization of ERM worldwide (Desender, 2009; McShane et al., 2011).

Despite its growing adoption, empirical research on the impact of ERM on organizational performance has produced mixed findings. Some studies suggest a positive relationship, while others report inconclusive or negative results (Setapa et al., 2020; Saeidi et al., 2021), indicating the need for further investigation. Accordingly, this study aims to: (1) evaluate the impact of ERM on the financial performance of UK banks across three core dimensions—ERM Structure, ERM Governance, and ERM Process; and (2) investigate the moderating effect of firm size on the ERM–performance relationship.

Literature Review

Enterprise Risk Management (ERM)

Enterprise Risk Management (ERM) represents an integrated and strategic approach to risk management, replacing fragmented, siloed methods (Beasley, Clune, & Hermanson, 2006). ERM considers all risk types across all organizational levels, providing a comprehensive framework. Interest in ERM has surged over the past two decades, driven by regulatory demands, credit rating agencies, and professional bodies (Arena et al., 2010; Eryilmaz et al., 2018).

Numerous studies have highlighted ERM's positive impact on firm performance, reinforcing its role as a key driver of organizational resilience and sustainability (Farrell et al., 2019; Kulathunga et al., 2020; González et al., 2023; Jurdi et al., 2021). As a result, ERM has evolved from a voluntary tool into a strategic necessity.

ERM in Banking Sector

Due to the increasing complexity and risk exposure in banking, ERM has become a vital component of financial institutions' governance and regulatory frameworks. Post-global financial crisis, banks have emphasized the need for effective risk identification, measurement, reporting, and mitigation (Van Liebergen, 2017; Leo et al., 2019). Power (2004) referred to the proliferation of ERM as a "risk management explosion," describing it as a "world model" that has become standard in the banking sector (Power, 2003a).

Regulators worldwide have promoted ERM adoption through formal frameworks. At the global level, the COSO ERM Framework and the Basel II/III Accords (both introduced in 2004) are widely used. Nationally, regulations such as the Sarbanes-Oxley Act (2002) and the Emergency Economic Stabilization Act (2008) in the U.S., as well as ERM directives by the

Central Bank of Nigeria (2008, 2012), underscore the institutionalization of ERM (Desender, 2011; McShane, Nair, & Rustambekov, 2011).

ERM Structure and Financial Performance

A robust ERM structure establishes a clear organizational framework with defined roles, standardized processes, and efficient communication across all levels. This facilitates the integration of risk considerations into both daily operations and strategic planning (Aksel, 2009; Saeidi et al., 2021; Iqbal et al., 2019). Embedding risk management within the corporate structure fosters a risk-aware culture and consistent decision-making (Shad, 2015; Shatnawi et al., 2022). Empirical evidence suggests that a well-designed ERM structure enables better alignment between key risk indicators (KRIs) and performance metrics (KPIs), contributing to operational resilience and improved financial outcomes (Al-Nimer et al., 2021; Can, 2024). In increasingly complex banking environments, such structures are critical for profitability and stability.

H1: ERM Structure has a significant effect on the financial performance of UK banks.

ERM Governance and Financial Performance

ERM governance involves strategic oversight, accountability, and integration of risk insights into leadership decisions (Kulinich, 2023). This includes structures such as risk committees, board-level oversight, and the involvement of roles like the Chief Risk Officer (Ahmed & Manab, 2016; Ballester, 2020). Effective governance practices—such as frequent risk reviews and clear accountability—are shown to enhance ERM implementation and firm performance (Subramaniam et al., 2011; Daud et al., 2010; Maruhun et al., 2018). However, findings remain mixed; while some studies report strong positive effects (Muthuveloo & Ping, 2017; Nahar et al., 2016), others note negligible impact (Salaudeen et al., 2018; Cavezzali & Gardenal, 2015).

This study evaluates governance through four dimensions: risk information sharing, clarity of accountability, compliance risk mitigation, and transparency of compliance costs (Shad & Lai, 2015).

H2: ERM Governance has a significant effect on the financial performance of UK banks.

ERM Process and Financial Performance

ERM is an ongoing cycle involving risk identification, assessment, treatment, and disclosure. Each stage contributes to organizational resilience and value creation. Risk identification entails scanning internal and external environments for potential threats (Sanchez-Cazorla et al., 2016), while risk assessment evaluates the likelihood and impact of these threats to support prioritization and capital allocation (Aven, 2019; Alexander, 2005). Risk treatment involves implementing mitigation strategies such as avoidance, reduction, transfer, or acceptance (Klotz et al., 2019). Risk disclosure promotes transparency and stakeholder trust (Ibrahim & Hussainey, 2019; Azad et al., 2021).

Research indicates that firms with well-structured ERM processes are more capable of anticipating disruptions and maintaining financial stability, especially in banking, where risk exposure is substantial (Assibi, 2024).

H3: ERM Process has a significant effect on the financial performance of UK banks.

Firm Size as a Moderating Variable

Firm size significantly influences ERM adoption and effectiveness. Larger firms tend to have more complex operations and greater regulatory exposure, necessitating formal risk management structures (COSO, 2004; Yazid et al., 2012; Beasley et al., 2006). Research confirms that size affects both the maturity of ERM systems and their impact on performance (Hoyt & Liebenberg,2011; Pagach & Warr, 2007). Larger banks, in particular, face higher stakeholder expectations and more intense regulatory scrutiny, driving stronger ERM integration (Ahmed, 2023; Gao et al., 2025). Moreover, Rahman (2022) found that firm size amplifies the positive effects of ERM on financial outcomes in highly regulated industries.

H4: Firm size significantly moderates the relationship between ERM implementation and financial performance.

Research Methodology

Sample and Data Collection

A questionnaire survey was conducted to gather data from UK banks. The surveys were distributed to directors or managers via email. The variables and corresponding measures were selected and adapted from existing literature to ensure their reliability and validity. This study employs a cross-sectional design, with questionnaires distributed to directors and managers of various UK banks at a single point in time.

The target population consists of 117 UK bank headquarters, categorized as follows: 71 large banks, 46 Small and medium enterprises. For this study, "large banks" are defined as those with assets exceeding $1.202 billion, "Small and medium enterprises" as those with assets lower than $1.202 billion dollars (Federal Reserve History, 2023). A total of 90 completed questionnaires (55 from large banks and 35 from small and medium enterprises) were considered valid for analysis.

Method and Analysis

This study measures ERM implementation using three key components of the ERM Integrated Framework: ERM Structure (5 items), ERM Governance (4 items), and ERM Process (9 items). In addition, firm size is introduced as a moderating variable to examine its effect on the relationship between ERM implementation and financial performance. Financial performance is assessed using six indicators: total cost, net profit margin, return on sales, return on investment, return on assets, and return on equity.

The survey instrument is adapted from validated constructs in prior research and standardized to fit the context of this study. The items used to measure ERM implementation are drawn from COSO (2004), Lai (2014), Shad (2015), Kakiya (2021), and Ali et al. (2020), as well as Setapa and Zakwan (2019).

Hypotheses were tested using Structural Equation Modeling with Partial Least Squares (PLS-SEM) in SmartPLS 4. Following Hair et al. (2019), a two-step approach was applied—first assessing the measurement model for reliability and validity, then evaluating the structural model to test relationships. Bootstrapping was used to determine the significance of path coefficients and indicator loadings.

A Proposed Conceptual Framework

The theoretical framework is shown in Figure 1.

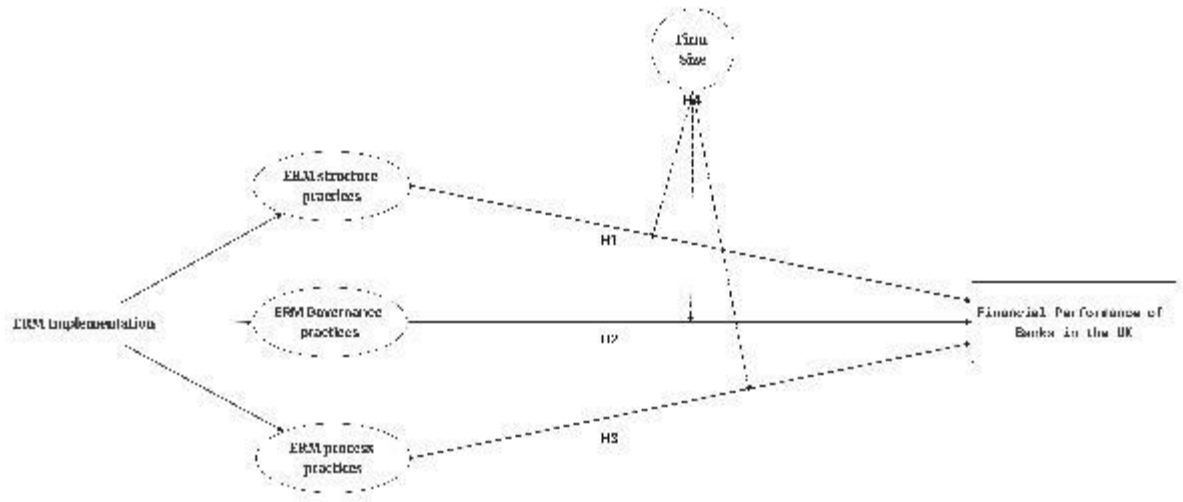

Figure 1. The Proposed Conceptual Framework

Results and Discussions

Respondents and Demographic Profile

The response rate from UK banks was relatively low, with only 91 out of 427 distributed questionnaires returned, yielding a response rate of 21.31%. Despite this, the quality of the data was high, as 90 responses (98.90%) were deemed usable. The sample profile from UK banks revealed a balanced gender distribution (50% male, 50% female) and a predominantly mid-career workforce, with 72.3% of respondents aged between 26 and 45. Educationally, 48.9% held postgraduate degrees (master's or doctorate), indicating a well-qualified respondent base. Most participants had substantial experience within their institutions, with 71% having worked for more than five years. Additionally, executive directors in these banks showed moderate to long-term tenure, with 74.5% having served between 6 and 15 years. Notably, 61.1% of the sample represented large banks (assets above $1.202 billion), suggesting that the data predominantly reflects the practices and experiences of well-resourced institutions. This demographic and organizational diversity enhances the reliability and contextual relevance of the findings for the UK banking sector.

Measurement Model

The measurement model evaluates the relationship between latent constructs and their corresponding observed variables, ensuring the reliability and validity of the questionnaire. To assess the model's adequacy, several criteria were examined, including factor loadings, composite reliability (CR), Cronbach's alpha, average variance extracted (AVE), and convergent validity (Fornell & Larcker, 1981, Hair et al., 2019).

As presented in Table 1, all item loadings exceed the acceptable threshold of 0.70, ranging from 0.708 to 0.911, demonstrating that the items reliably measure their intended constructs. This suggests that each indicator is a suitable representative of its corresponding latent variable. The internal consistency reliability, measured using Cronbach's alpha, ranged from 0.865 to 0.911 across all constructs—surpassing the recommended minimum value of 0.70 (Nunnally,1994)—indicating high internal consistency.

Composite reliability values, which assess the overall reliability of each construct, fall between 0.902 and 0.927, further confirming the constructs' reliability and meeting the threshold suggested by Hair, (2019). The average variance extracted (AVE) values, which reflect the proportion of variance captured by the construct relative to the variance due to measurement error, range from 0.585 to 0.724. All AVE values exceed the 0.50 benchmark recommended by Fornell (1981), supporting the model's convergent validity.

Based on these findings, the measurement model demonstrates strong reliability and convergent validity, affirming that the constructs used in this study accurately capture the dimensions of ERM implementation and financial performance in the context of UK banks.

Table 1
Convergent Validity

		UK BANKS (*N*=90)			
Construct	Item	Loading (>0.70)	CR (>0.70)	Cronbach's alpha (>0.70)	AVE (>0.50)
ERM Process	EP1	0.851	0.927	0.911	0.585
	EP2	0.781			
	EP3	0.749			
	EP4	0.777			
	EP5	0.784			
	EP6	0.727			
	EP7	0.760			
	EP8	0.708			
	EP9	0.741			
ERM Governance	EG1	0.889	0.913	0.872	0.724
	EG2	0.857			
	EG3	0.801			
	EG4	0.853			
ERM Structure	ES1	0.835	0.902	0.865	0.649
	ES2	0.821			
	ES3	0.795			
	ES4	0.758			
	ES5	0.816			
Financial Performance	FP1	0.911	0.913	0.884	0.636
	FP2	0.744			
	FP3	0.751			
	FP4	0.829			
	FP5	0.795			
	FP6	0.743			

The hypotheses in this study were tested through structural model analysis using the path coefficients (β), t-values, and R^2 values, as illustrated in Table 2. The R^2 value for financial performance (FP) is 0.606, indicating that approximately 60.6% of the variance in financial performance is explained by the ERM components—ERM Structure (ES), ERM Governance (EG), and ERM Process (EP)—along with the moderating effect of firm size. Bootstrapping with 5000 resamples was employed to estimate the statistical significance of the relationships.

The path analysis results in Table 2 support all three hypotheses. ERM Governance (H2) has the strongest effect on financial performance (β = 0.400, t = 6.313, p < 0.001), followed by ERM Process (H3: β = 0.295, t = 4.201, p < 0.001), and ERM Structure (H1: β = 0.233, t = 3.155, p = 0.002). All three relationships are statistically significant at the 0.05 level or better. Therefore, the findings provide empirical support for Hypotheses H1, H2, and H3, confirming that each of the three ERM dimensions—structure, governance, and process—has a significant positive impact on the financial performance of UK banks.

Table 2
Structural Estimates (Direct Effect/ EG, EP and ES -> FP

NO.	Path	Beta (β)	t-Value	p-value	Decision
H1	EG -> FP	0.400	6.313	0.000	Supported
H2	EP -> FP	0.295	4.201	0.000	Supported
H3	ES -> FP	0.233	3.155	0.002	Supported

To examine Hypothesis H4, the moderating effect of bank size on the relationship between ERM implementation (i.e., ERM Structure, Governance, and Process) and financial performance was tested using interaction terms. Table 3 presents the results of the moderation analysis for the UK sample. The interaction effects of size on the relationships between ERM Governance and Financial Performance (Size × EG → FP: β = 0.100, t = 0.923, p = 0.356), ERM Process and Financial Performance (Size × EP → FP: β = -0.103, t = 0.975, p = 0.330), and ERM Structure and Financial Performance (Size × ES → FP: β = -0.027, t = 0.276, p = 0.783) were all statistically insignificant. Additionally, the direct effect of firm size on financial performance was also not significant (β = -0.051, t = 0.504, p = 0.614).

Table 3
Moderation Effect of Bank Size in UK Samples

NO.	Items	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
H4	EG -> FP	0.316	0.322	0.208	1.523	0.128	NOT Supported
	EP -> FP	0.168	0.158	0.236	0.712	0.477	
	ES -> FP	0.458	0.468	0.238	1.928	0.054	
	Size -> FP	0.080	0.083	0.145	0.550	0.582	
	Size x EG -> FP	0.064	0.059	0.161	0.396	0.692	
	Size x EP -> FP	0.094	0.106	0.179	0.526	0.599	
	Size x ES -> FP	-0.165	-0.172	0.182	0.908	0.364	

This finding is partly consistent with existing research, which presents mixed views on the role of firm size in ERM effectiveness. In the UK banking context, strict compliance with Basel III—emphasizing stress testing, liquidity, and market risk—supports integrated ERM practices across institutions of all sizes (Birindelli, 2022). Additionally, UK banks prioritize qualitative risk assessment and centralized oversight (Ashby et al., 2012), enabling smaller banks to adopt flexible and effective ERM frameworks. These regulatory and structural features may explain why firm size does not significantly moderate the ERM–performance relationship in UK banks. Recent European studies further confirm that size alone does not guarantee stronger ERM outcomes or improved financial performance (Bolivar et al., 2024; Gržeta, 2022).

In conclusion, H1, H2, H3 are all supported, but H4 are not supported.

Conclusions

This study confirms a significant and positive relationship between ERM implementation specifically its structure, governance, and process components and the financial performance of UK banks. Among these, ERM governance exhibited the strongest influence, followed by ERM process and structure. These results suggest that well-structured ERM frameworks and strong governance practices play a vital role in enhancing organizational resilience and financial outcomes in the UK banking sector.

Unlike prior studies suggesting potential variability due to organizational size, this study finds that bank size does not significantly moderate the relationship between ERM practices and financial performance. This implies that both large and small banks can benefit equally from implementing comprehensive risk management systems.

The findings have several important implications. First, UK banks should prioritize strengthening ERM governance mechanisms, such as active board oversight, the presence of a Chief Risk Officer, and a dedicated risk committee, to enhance their risk mitigation capabilities. Second, the consistency of ERM's impact across different bank sizes indicates that even smaller institutions should not shy away from investing in robust ERM practices. Lastly, regulators and policymakers may use these insights to encourage standard ERM adoption across the sector, emphasizing that ERM is not only a compliance requirement but also a driver of financial sustainability and competitiveness.

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