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# Risk management papers

## Enterprise risk management in the insurance industry: Trends and future directions

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**Abstract** The research aims to describe the state of enterprise risk management (ERM) in the insurance sector. It highlights emerging trends in the application of risk management in the insurance sector and thereby reports the prominent research gaps and new avenues for research in ERM.

The research adopts a systematic literature review (SLR) approach, using 187 research papers spanning 44 years (1977–2021). The paper identifies the fact that most ERM and insurance sector research is performed in North America and Europe, while developing economies in Asia and Africa lag. The paper establishes a three-way relationship between ERM, risk management (RM) and risk-based capital (RBC) where RM is a subset of ERM and RBC is a driver of ERM. The research shows that very few studies are conducted on risk culture, three lines of defence and the role of chief risk officers. The determinants of ERM identified are board, firm size, audit and risk management committee and corporate governance. The determinants identified for firm value are return on assets, return on equity, profit, Tobin's Q, among others. This research provides a way for academicians, practitioners and policy makers to design effective strategies for implementing ERM in organisations.

**Keywords:** *risk management, enterprise risk management, ERM, insurance, risk-based capital, RBC, risk culture, systematic literature review*

## INTRODUCTION

The insurance industry is crucial to economic growth, contributing premium income to the GDP and enhancing social security by providing financial protection against loss of lives, assets and long-term investments.<sup>1</sup> The insurance sector also plays a vital role in ensuring people's trust in the financial system.<sup>2</sup> The role of insurance firms is to fulfil social obligations by paying claims to policyholders in the event of the crystallisation of insured occurrences.<sup>3</sup> Insurance companies pool customer risks and manage them at both the portfolio and the individual levels.<sup>4</sup> Therefore, risk management is of paramount significance to the insurance sector. Earlier, insurance firms would adopt traditional segregated risk management<sup>5</sup> limited to departments such as actuarial, underwriting and claims.<sup>6</sup> A more holistic framework was required that could integrate the several segregated risk management techniques at the corporate level to maximise benefits from risk management.<sup>7</sup> With traditional risk management taking a back seat, enterprise risk management (ERM) is gaining ground.<sup>8</sup> According to Altuntas *et al.*,<sup>9</sup> ERM coordinates and controls multiple risks, reducing the likelihood of significant adverse earnings and cash flow deviations. Further, firms also achieve genuine economic value by going beyond regulatory compliance. ERM also improves resilience, allowing the firm to adapt to the constantly evolving regulatory, macroeconomic, demographic and other factors<sup>10</sup> and manage risks more effectively and holistically by choosing

appropriate hedging instruments that boost operating profit.

Therefore, this study aims to present the existing state of research on ERM in the insurance industry and identify gaps in the literature that need to be addressed on this subject. Since a literature review aids in examining previous studies to gain knowledge about a subject, the research techniques used and the prevalent research gaps,<sup>11</sup> a literature review is utilised to comprehensively integrate diverse knowledge on a subject. Accordingly, this research attempts to answer the following research questions (RQs):

- RQ1. What is the state of ERM in the insurance sector?
- RQ2. What are the emerging trends in risk management applications in the insurance sector?
- RQ3. What are the prominent research gaps in the literature and new avenues for research in ERM?

Further, this paper is organised as follows. It begins by discussing the methodology and reporting the analysis, then it discusses the results, next it highlights the research gaps with future research agenda, before concluding the paper.

## METHODOLOGY

The systematic literature review (SLR) is the commonly followed methodology to conduct a literature review and systematically summarise and communicate the results of research questions. This

**Table 1:** Search protocol

Source of research papers	Total no. of papers extracted	Inclusion criteria	No. of papers excluded	Exclusion criteria	Final
EBSCO	151	<b>Content-ERM, CRO, Insurance, Risk-based capital, corporate governance, risk culture, board, risk management framework;</b> <b>Language-English;</b> <b>Type of source-Peer reviewed articles from journals</b>	120	<b>Content-Alternate risk transfer, reinsurance application in term products, longevity bonds, assets &amp; liability management, option pricing, extreme value theory, actuarial pricing &amp; valuation, modelling, agriculture insurance, &amp; duplicates</b>	31
ProQuest	75		60		15
Scopus	510		418		92
Google Scholar	310		269		41
Cross-referencing	50		42		8
<b>Total</b>	<b>1096</b>	<b>-</b>	<b>909</b>	<b>-</b>	<b>187</b>

**Table 2:** Number of publications by year: 2009–21

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Papers	11	8	17	8	8	10	11	10	16	14	15	6	3

method provides evidence-based research, producing the whole rather than one part of the truth.<sup>12</sup> The search covered a period of 44 years (1977 to 2021). Table 1 exhibits the search protocol based on which 187 articles were selected for this research.

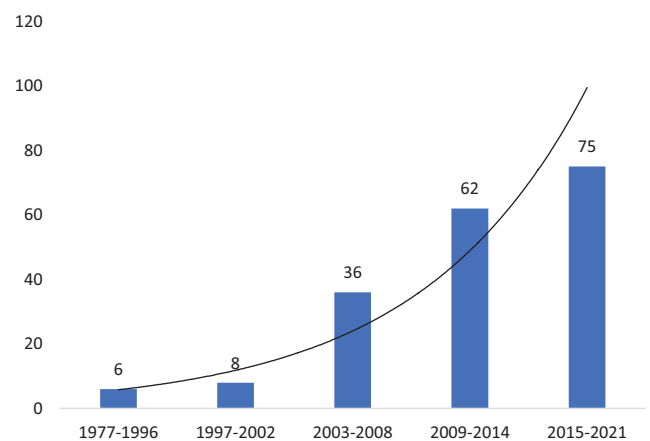
## DATA ANALYSIS

The selected literature is segmented based on the year of publication, geographical distribution, research approach and thematic analysis.

Table 2 clarifies that the additional years from 2015 to 2021 do not inflate the number of paper publications compared to the previous five-year band. The lower number of published papers during 2020 and 2021 could be due to COVID-19.

Figure 1 describes the year of publication of ERM papers that started at the beginning of the 21st century, picked up the pace around the global economic crisis (2008) and then increased in rate over the years. This indicates growing research interest in the ERM field. Figure 2 describes the geographical distribution of research published in ERM during the selected time-frame.

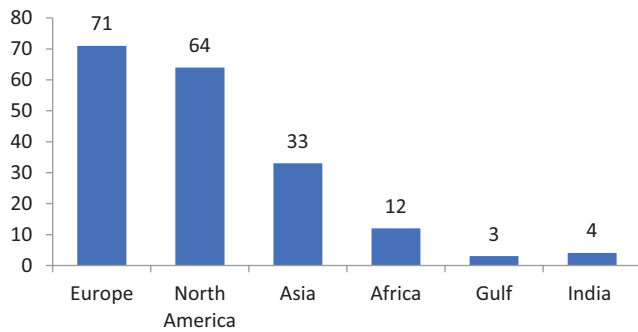
Most papers are published in Europe and North America, and some are published in Asia, in line with the fact that ERM adoption in the insurance sector

**Figure 1:** Evolution of literature on ERM

first took place in North America<sup>13</sup> and then in Europe. The selected papers were grouped into three categories: ERM (68 papers), risk-based capital (RBC) (30 papers) and risk management (RM) (89 papers).

## ERM

The papers on ERM are further classified into sub-categories: board, corporate governance, risk culture and framework, as shown in Figure 3, in line



**Figure 2:** Geographical distribution of research on ERM

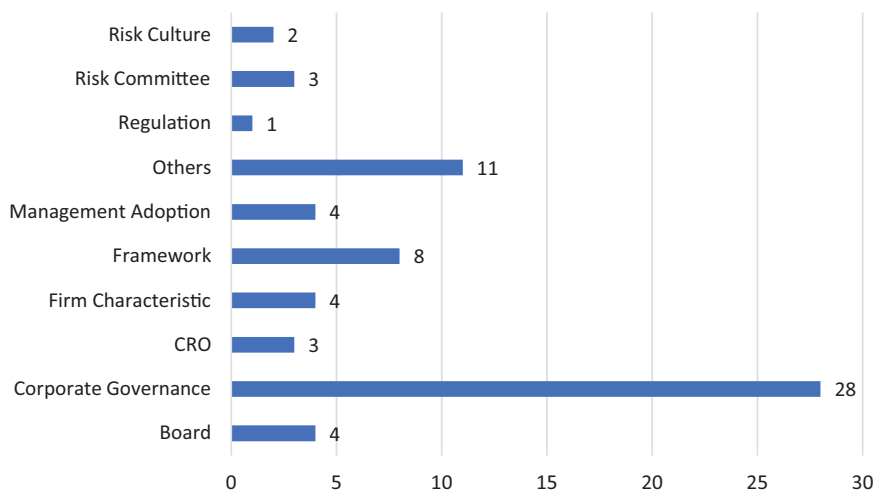
with the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework that has pillars of governance, culture, strategy and objective setting. Most papers on ERM fall under the corporate governance category. Corporate governance enables the successful implementation of ERM practices because it is about the governance of rules and regulations on which the business operates.<sup>14</sup>

Corporate governance positively impacts efficiency in non-life insurance companies under enterprise risk management.<sup>15</sup> The risk management standards (framework) used in the insurance industry is another important area that previous researchers have discussed extensively. COSO and ISO 31000 are two globally recognised ERM frameworks that many organisations

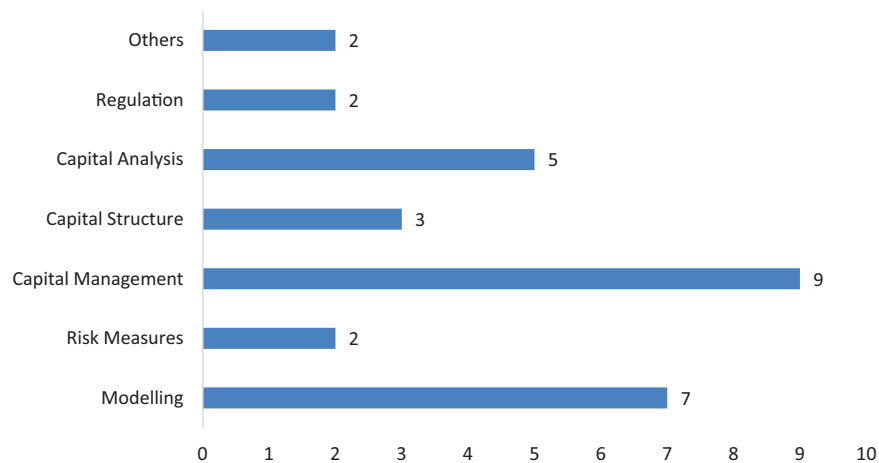
follow. Risk culture is another important factor that drives ERM; however, research is scarce in this context, showing a gap for future research. According to the Institute of Risk Management, risk culture is values, beliefs, knowledge, attitude and the collective understanding of individuals that enables openly discussing risks and their impact within an organisation. The other category of papers is on risk controls, the overall impact of ERM on firm performance, determinants of ERM and assessment of risk management committees.

### RBC

All the papers classified under RBC are shown in Figure 4. Post-2008, RBC was implemented in many jurisdictions to ensure that insurance companies maintain their solvency by keeping capital based on the risks they undertake. This category entails papers primarily based on capital management, thus underlining the importance of capital for insurance companies and how these firms allocated capital in different lines of business.<sup>16</sup> The firm needs to implement an effective capital management policy to improve its solvency position, optimise capital use and improve return on capital. It is found that the companies that had implemented risk and capital management frameworks had derived significant business advantages, built strong solvency



**Figure 3:** Thematic distribution of research papers on ERM



**Figure 4:** Thematic distribution of research papers on RBC

positions and gained medium-term competitive advantages.<sup>17</sup> Authors have reported that the focus areas of regulators and rating agencies in mandating risk-based capital on a global front.<sup>18,19</sup>

### Risk management

Risk management category papers are based on silo risk management like interest rate, liquidity risk, credit risk etc. Most research in this category centred around interest rate risk (Figure 5). In a life insurance business, under a certain class of products, customers are guaranteed a fixed maturity value irrespective of how low the interest rate falls during the tenure of the product. Therefore, interest rate risk adversely affects life insurance firms.<sup>20</sup> Life insurance is a long-term contract during which the interest rate may fall below the pricing rate of interest, biting the guarantees and making its management a prominent area of research.<sup>21</sup> The other key risk is mortality risk, which occurs when actual deaths are greater than the expected number of deaths.<sup>22</sup> As seen during COVID-19, life insurance firms experienced higher actual numbers than the expected number of claims.<sup>23</sup> Research papers based on catastrophic risk are part of mortality risk where a large number of claims results from catastrophic events like earthquake, flood and tsunami.<sup>24</sup> Opposite to mortality risk is

longevity risk, in which the insured lives longer than expected. Such risks occur in annuity products that pay periodic payments, such as a monthly pension. In such cases, the firm has to pay the annuity for a longer period than assumed in pricing.<sup>25</sup>

The other key area in the insurance industry is reinsurance, a tool to manage the risks of excessive claims from mortality risk and accidents. Insurance companies transfer the excess risk to third party reinsurance companies.<sup>26</sup> The other key research areas are operational risk, modelling, systemic risk and asset allocation.

### TYPES OF RESEARCH

Understanding the architecture of research is essential for analysing the existing state of research and exploring probable possibilities of future research. Table 3 summarises the distribution of papers based on the type of research, classified into conceptual, empirical, theoretical, etc.

Research papers based on the literature review (7) are primarily focused on different types of risk and corporate governance, followed by a few on the risk management system (see Table 4). It pointed out the need to consolidate the extant literature on ERM in the insurance industry, thereby showcasing the previous research findings in one frame. This

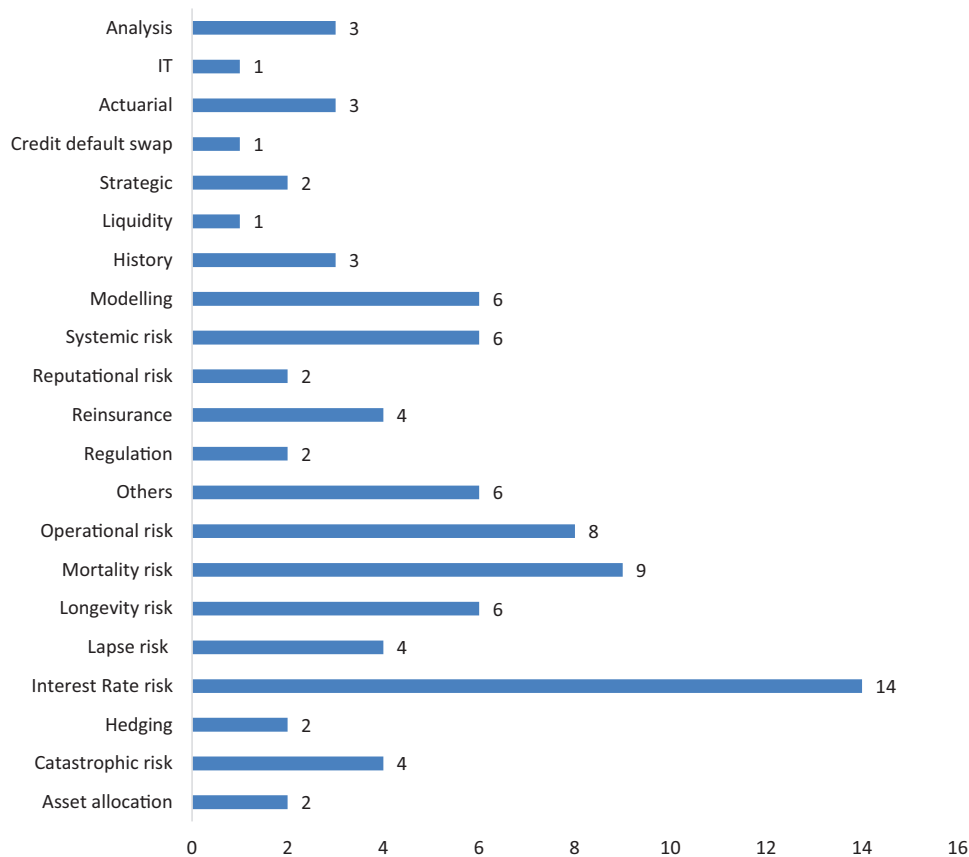


Figure 5: Thematic distribution of research papers on RM

Table 3: Types of research conducted on ERM, RBC and RM

Area	Case study	Conceptual	Empirical	Exploratory	Literature review	Modelling	Theoretical	Total
ERM	Nil	13	50	2	3	Nil	Nil	68
RBC	Nil	15	10	1	1	Nil	3	30
Risk management	3	36	33	4	3	5	5	89
<b>Total</b>	<b>3</b>	<b>64</b>	<b>93</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>187</b>

Source: Authors' computation.

also allows exploration of future research avenues in the field of ERM. The current study is one of the few of its kind to address this gap in the literature.

Most of the research papers (93) are based on empirical research. The research further outlines the

different research techniques applied in the selected papers. Out of the 14 distinct techniques, regression (43) is the most common technique used in ERM, followed by actuarial methods (18) in risk management. Actuarial techniques include a risk-neutral actuarial approach, cash flow method of

**Table 4:** Research based on literature review conducted in the areas of ERM, RBC and RM

S No.	Author (s) and year of publication	Title	Focus of review
1	Santomero and Babbel (1997) <sup>27</sup>	'Financial Risk Management by Insurers: An Analysis of the Process'	The paper reviews and evaluates risk management systems in the insurance sector.
2	Mueller and Siberon (2004) <sup>28</sup>	'Economic Capital in the Limelight'	This paper discusses the application of economic capital.
3	Boubakri (2011) <sup>29</sup>	'Corporate Governance and Issues from the Insurance Industry'	It focuses on how corporate governance affects corporate performance and also discusses issues in the insurance industry.
4	Huynh <i>et al.</i> (2013) <sup>30</sup>	'A Review of Catastrophic Risks for Life Insurers'	The paper reviews the main sources of potentially catastrophic risks facing life insurers, in particular, the mortality risk.
5	Gatzert and Martin (2015) <sup>31</sup>	'Determinants & Value of Enterprise Risk Management: Empirical Evidence from the Literature'	The literature study shows how the company size and the level of institutional ownership are significantly positively related to the implementation of ERM.
6	Eling and Pankoke (2016) <sup>32</sup>	'Systemic Risk in the Insurance Sector: A Review & Directions for Future Research'	The paper reviews the extant research on systemic risk in the insurance sector and outlines new areas of research in this field.
7	Cerrone (2019) <sup>33</sup>	'Risk Management as Increased Corporate Governance requirement in Italian Bank & Insurance Companies'	The paper explores how risk management and internal audit functions can be used effectively to strengthen governance frameworks and ensure compliance with new regulatory requirements in the financial services industry.

Source: Authors' compilation.

projection, generalised linear models, standard kernel density estimation, life table approach, extreme value theory and assets and liability management.

## DETERMINANTS OF ERM IMPACTING FIRM VALUE

The literature review has helped identify ERM determinants that impact firm performance. It is recognised that the board is the utmost important factor,<sup>34</sup> as they set up a risk management framework, policies and risk appetite statement, providing risk oversight and performing remuneration review. The quality of the board varies in terms of the composition of its members, experience, educational qualification, tenure<sup>35</sup> and the number of independent directors. It is observed

that a higher number of independent directors have a positive influence on ERM implementation.<sup>36</sup> Research shows that the implementation of ERM is more evident in larger firms compared to small firms<sup>37,38</sup> because of the large capital involved, which requires a closer review of risk management than the smaller firms. Apart from the board, the audit and risk management committee also influences ERM.<sup>39,40</sup> A robust audit and risk management committee generally has a positive impact on firm performance. Corporate governance is another crucial factor affecting the implementation of ERM and thereby affecting firm performance.<sup>41,42</sup>

Further, risk culture and risk control are influential factors governing the successful implementation of ERM.<sup>43</sup> It depends on the values, beliefs, knowledge and understanding of risk as interpreted by the organisation and the repeated

**Table 5:** List of determinants of ERM

Determinants & (measures)	Authors
Composition of board ( <i>mix of independent &amp; non-independent directors</i> ) <sup>44,45</sup>	Connelly and Limpaphayom (2004) (+); Kuo <i>et al.</i> (2017) (+)
Size of board ( <i>number of board members</i> ) <sup>46</sup>	Alhassan and Boakye (2020) (+)
Board independence ( <i>number of independent directors</i> ) <sup>47-49</sup>	Hsu and Petchsakulwong (2010) (+); Kuo <i>et al.</i> (2017) (+); Alhassan and Boakye (2020) (-)
Board qualification ( <i>highest academic or professional qualification</i> ) <sup>50</sup>	Adams and Jiang (2020) (+)
Firm size ( <i>assets under management</i> ) <sup>51-53</sup>	Hsu and Petchsakulwong (2010) (+); Wani and Ahmad (2015) (+); Farida <i>et al.</i> (2019) (+)
Diligence ( <i>from annual report</i> ) <sup>54</sup>	Hsu and Petchsakulwong (2010) (+)
Audit committee size ( <i>number of audit committee members</i> ) <sup>55,56</sup>	Hsu and Petchsakulwong (2010) (-), Alhassan and Boakye (2020) (+)
Board tenure ( <i>term of independent director</i> ) <sup>57</sup>	Hsu and Petchsakulwong (2010) (-)
Board age ( <i>average board age</i> ) <sup>58</sup>	Hsu and Petchsakulwong (2010) (-)
Board compensation ( <i>sitting fee</i> ) <sup>59</sup>	Hsu and Petchsakulwong (2010) (*)
Dollar duration ( <i>in years</i> ) <sup>60</sup>	Cummins <i>et al.</i> (2009) (+)
Risk culture ( <i>communication from top, risk education, rewards linked to risk, dealing with bad news</i> ) <sup>61</sup>	Bohnert <i>et al.</i> (2019) (+)
Risk control <sup>62</sup>	Bohnert <i>et al.</i> (2019) (+)
Emerging risk ( <i>Identification of new risks</i> ) <sup>63</sup>	Bohnert <i>et al.</i> (2019) (+)
Risk model <sup>64</sup>	Bohnert <i>et al.</i> (2019) (+)
Strategic risk management ( <i>identification of long-term risk</i> ) <sup>65</sup>	Bohnert <i>et al.</i> (2019) (+)
Corporate governance ( <i>code of conduct, ethics, following rules &amp; regulations, accountability</i> ) <sup>66,67</sup>	Bello <i>et al.</i> (2019) (+); Magee <i>et al.</i> (2019) (+)
Appointment of CRO <sup>68</sup>	Liebenberg and Hoyt (2003)(+)
Liquidity ( <i>liquidity coverage ratio</i> ) <sup>69,70</sup>	Bello <i>et al.</i> (2019) (-); Wani and Ahmad (2015) (+)
Number of risk management committee members <sup>71,72</sup>	Bello <i>et al.</i> (2019) (+); Farida <i>et al.</i> (2019) (+)
Number of risk management meetings <sup>73-75</sup>	Bello <i>et al.</i> (2019) (+); Kuo <i>et al.</i> (2017) (+); Farida <i>et al.</i> (2019) (+)
Capital <sup>76</sup>	Wani and Ahmad (2015) (+)
Underwriting ( <i>acceptance/rejection of proposal</i> ) <sup>77</sup>	Wani and Ahmad (2015) (-)
Solvency ( <i>ratio of required capital/available capital</i> ) <sup>78</sup>	Wani and Ahmad (2015) (-)

The + sign indicates the positive impact on the dependent variable, - indicates the negative impact, while \* indicates no statistically significant relationship; () parenthesis in the first column indicates the measure of the variable.

behaviour of its members. This gives rise to the need to examine risk culture as a determinant of ERM and its impact on firm performance. Table 5 summarises the various determinants of ERM that influence firm performance.

The most common proxies of firm value employed by the authors include return on assets

(ROA), return on equity (ROE), profit, cost-efficiency and Tobin's Q.

## RESEARCH FINDINGS

The research presents the existing state of ERM research in the insurance sector. It primarily



commenced in the late 1990s and early 2000s and then picked up pace after the 2008 economic crisis. Research is highly concentrated in the world's developed regions, especially in America and Europe. This indicates the early penetration and adoption of risk culture in these regions because of the high awareness of the significance of risk management in the insurance sector. From 1977 to 2021, specifically after 2008, research on risk management picked up an exponential pace. A sharp increase in publications has been observed in the last decade (2010–2021) in the area of risk management in the insurance industry. Literature analysis reveals that the research in this field is primarily empirical and further categorised into three broad themes: ERM, RM and RBC. The present research also shows the interrelationship between ERM, RM and RBC. The prime themes where most of the research has been conducted are corporate governance, interest rate risk, capital management and risk modelling under ERM, RM and RBC. Regression is the primary technique applied in most research papers, followed by actuarial methods. The key ERM determinants identified are board, firm size, audit and risk committee, risk culture and corporate governance.

The design and implementation of ERM require many stakeholders and a very compact design. Therefore, the present research segments and analyses the literature from various dimensions. It identifies the over-researched and under-researched areas in the field of ERM in the context of the insurance industry. Risk culture is a necessary factor facilitating the effective implementation of risk management across three lines of defence. According to the three lines of defence model, the first line of defence is the employees who are tasked with managing top-line and profits centres. The second line of defence is employees in the risk and compliance function, and the third line is the audit function. A good risk culture binds the three lines of defence with the common objective of risk identifying and mitigating risk.

Similarly, over the last decade, the role of CRO has gained ground in the board room, with a

specific focus on risk management. The CRO is the custodian of risk, providing oversight on risk management. However, very few studies have been conducted on risk culture, the three lines of defence and the role of chief risk officers in managing risk. Without these three factors, an ERM cannot be successful. Therefore, all three of these factors warrant more research. The paper provides a detailed systematic literature review to identify the main areas and trends of ERM research in different geographic areas over the past two decades. It establishes a three-way relationship between ERM, RM and RBC in developing risk management research. The paper also identifies the research gaps in areas such as risk culture, the role of the CRO, challenges in implementing ERM in different geographic areas, how to respond to future crises and the impact of regulation on the development of ERM. In many markets, there are challenges in implementing ERM because of a lack of risk management education and training, contributing to poor risk culture and ineffective ERM. As a result, academic research would help assess how financial institutions face challenges and how to resolve those challenges. In the two decades of the 21st century, the world observed the 2008 economic crisis and, in 2020, the financial impact of COVID-19. In the future, the climate risk may cause another problem that warrants in-depth research to make ERM more robust to sustain the shocks to the system. Of late, few regulators have started working towards developing operational resiliency to reduce customer impact if a future crisis hits. Across the world, the implementation of ERM is due to regulatory initiatives, and it would be helpful to study how regulation changes have shaped the development of ERM. Such research will help those countries where ERM is still in the early stages of development.

## **RESEARCH GAPS AND FUTURE RESEARCH AGENDA**

Based on the literature review, Table 6 summarises the key research gaps and proposes future research agendas.

**Table 6:** Research gaps and proposed research avenues

Sr. no.	Broad areas	Gap specificity	Gap area	Proposed research avenues
1	Geography	Literature reveals meagre research in Asia, the Middle East & Africa on risk management in the insurance sector	Geographical expansion	More ERM research is required in developing economies that have low insurance penetration. In many such countries, risk-based capital is in a developing phase. As RBC and ERM have two-way relationships via RM, research on ERM will help optimise capital requirements in these countries.
2	Determinants of ERM	Very few papers on risk culture	Risk culture as determinant of ERM	Risk culture is one of the key determinants of ERM & drives the entire risk management across the organisation. Without a sound risk culture, it is impossible to implement ERM. There are a lot of requirements to conduct research on risk culture, such as what the roadblocks are & how those roadblocks can be removed; further, because of the subjective nature of this topic, that may require interdisciplinary work.
3	Nature of research	Most empirical papers so far are on the impact of ERM on firm value	Impact of ERM determinants on firm's solvency	The existence of an insurance company depends on its solvency position. Most of the researchers so far have focused on the impact of ERM on firm value & very little research has happened on the impact on solvency. Future researchers can concentrate on solvency capital impact & thereby analyse firm performance.
4	Process efficiency	Very little research assessing how enhancements in ERM across the organisation help improve the risk management process and management of risks	Assessment of improvement in risk management processes	Assessing the impact of enhancing the ERM processes and improving ERM helps in the management of key risks such as credit risk, interest rate risk, mortality risk, longevity risk, etc, which is another novel area for future research.
5	Risk management	Lack of research on the role of CRO & board	Focus on the Chief Risk Officer (CRO) and board in the management of ERM	The role of CRO has gained prominence with the emergence of ERM over the last two decades. However, very few authors have focused their research on the roles & responsibilities of CROs & impact on ERM. However, many failures have been identified due to the non-performance of the board & CRO.
6	Risk management system	Lack of research on ERM practices used in different insurance companies and challenges	ERM practices	Very few papers are written on different ERM practices in various insurance companies, from developed markets to emerging economies. Such research will comprehend such practices, and there can be a two-way dialogue between industry and academia.
7	RBC	Limited research being conducted on RBC	Opportunity for research in the RBC area	RBC is important for modern-day insurance companies where capital is kept aside based on the risks that they undertake. Further, there is a very close relationship between ERM & RBC. More research is warranted in RBC for capital optimisation in conjunction with ERM.

**Table 6:** Research gaps and proposed research avenues (continued)

Sr. no.	Broad areas	Gap specificity	Gap area	Proposed research avenues
8	Type of research	Only seven papers were identified in the literature review	More literature review research is required	Most of the ERM research has happened on the empirical & conceptual side due to apparent reasons for the young nature of the subject of ERM. Given that a good number of papers are now written on ERM, the gap in research can now be identified through more focus on LR papers.
9	Research method	Only three papers found on case-study-based research	Case-study-based research	The case study provides a practical reference to a real problem faced in the industry. A case study helps identify gaps in the existing frameworks that may require changes to make the process robust. Future researchers may focus on case-study-based research papers to help create a context for the practical problem and its relevance to ERM techniques.
10	Emerging risks	There is no research on emerging risks & suggestions for averting a future crisis in insurance industries in different parts of the world.	Focus on emerging risks & supporting industry to handle future crisis	Identification of probable risk is necessary to keep in line with ERM. Future research can be directed towards assessing the emerging risks and the vulnerable areas in the system that can give origin to such types of risks.
11	Regulation	No paper has been written on how different emerging regulations impact ERM development in different countries.	Application of emerging regulations on ERM	Future researchers can also work on assessing the different regulations across the globe that facilitate ERM practices in different geographies & thereby explore best practices.
12	Uncertainty & dynamism in ERM	Literature is silent on the inclusion of uncertainty & dynamism in ERM	COVID-19 impact	Future researchers can focus on the impact of COVID-19, the economic crisis or any other uncertain macroeconomic event on risk management practices in insurance companies.

## CONCLUSION

The previous two decades of the 21st century have observed a rise in the development of ERM across the insurance industry. The main reason for the US subprime crisis commenced in 2007, and a phenomenal effect in the insurance industry was further witnessed during the recent pandemic. This highlights the poor risk management practices implemented by organisations. Traditional risk management strategies are of little value to firms in this dynamic environment. Therefore, this calls for a holistic system that integrates all components of risk. ERM offers an architecture that binds and

manages the firm risk portfolio collectively.

This will allow organisations to withstand unprecedented events and help in balancing risk-return trade-off for their shareholders.<sup>79</sup> It further helps in maximising shareholder wealth as well as value creation.<sup>80</sup>

ERM is paramount for organisations; therefore, a systematic literature review is essential to establish the significance of the topic and future avenues for research. The present study contributes to the extant literature by compiling the prominent work published in ERM specifically concentrated on the insurance industry. This research further appends

the literature by highlighting the major gaps and outlining the future avenues of research. The methodological rigor adopted in this study also adds up in highlighting the over-researched and unresearched areas and thereby guides scholars and practitioners as to the state of research in ERM in the context of the insurance industry. The industry specificity of the review makes it highly unique and significant for managers working in insurance firms. Existing research can serve as a guiding path in establishing the importance of ERM in the insurance industry. However, the present review is focused exclusively on the insurance industry, and its findings are limited to a specific sector.

The global economy has observed the nastiest economic recession in the form of the recent pandemic. This has increased the economic turbulence even more than before. Therefore, understanding ERM and its scope has attracted the interest of scholars and practitioners worldwide in business research. Does ERM offer the complete solution, or can the major portion of the recipe for addressing the future uncertainty call for rigorous research and investigation? Further, establishing a common understanding of the key determinants that lead to a successful implementation of ERM in organisations is also a crucial area of research. Therefore, this review lays the foundation for future research and serves as a road map for researchers, academicians and practitioners.

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