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Risk Assessment and Risk Tolerance in Strengthening the Effectiveness of Organizational Risk Management: A Systematic Literature Review

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ABSTRACT

This study aims to systematically examine the risk assessment process and the determination of risk tolerance levels in the context of organizational risk management. The method used is a Systematic Literature Review (SLR), which involves analyzing various scientific publications released between 2015 and 2025, obtained from databases such as Scopus, Web of Science, and Google Scholar. The findings reveal that risk assessment plays a crucial role in identifying, analyzing, and evaluating potential threats to the achievement of organizational objectives. Meanwhile, risk tolerance serves as the threshold for risk acceptance, enabling organizations to balance risks and opportunities in strategic decision-making. Factors such as organizational culture, resource capacity, and external conditions were found to influence the level of risk tolerance applied. The literature synthesis indicates that alignment between risk tolerance and risk appetite can enhance the effectiveness of risk management and strengthen an organization’s competitiveness and sustainability. This study provides a theoretical contribution to understanding the relationship between risk assessment and risk tolerance, as well as serving as a practical guide for organizations in developing adaptive and measurable risk management systems.

INTRODUCTION

Risk management is one of the fundamental aspects of organizational governance that plays a crucial role in supporting the effective and efficient achievement of objectives (Felayati, 2019; Felayati et al., 2018; Purpadita et al., 2017). The increasingly complex business environment, rapid technological transformation, regulatory changes, intensifying global competition, and high levels of economic uncertainty require organizations to have a risk management system capable of identifying, evaluating, and controlling various risks that could potentially hinder the achievement of strategic objectives. In this context, the ISO 31000-based framework and information technology governance practices have become important references in building a risk management system that is structured, systematic, and oriented toward enhancing organizational value (Purpadita et al., 2017; Susila, 2018).

Risk assessment is a central step in the risk management process because it provides the basis for an organization to understand the level of risk exposure it faces. In accordance with the ISO 31000 framework, this process involves identifying, analyzing, and evaluating risks before the organization determines the most appropriate risk treatment (L. Agung et al., 2024; Purpadita et al., 2017). Through this process, organizations not only gain insight into the likelihood of risks occurring and the magnitude of their potential impacts but are also able to set mitigation priorities based on the level of risk significance and the organization's capacity to manage them. Thus, risk assessment serves as the foundation for allocating resources more effectively, efficiently, and in alignment with the organization's strategic objectives treatment (L. Agung et al., 2024; Purpadita et al., 2017; Salim & Prasetyo, 2023).

In addition to risk assessment, establishing *a* risk tolerance level is an integral component of modern risk management systems. *Risk tolerance* describes the maximum level of risk an organization is willing to accept in carrying out its activities, while *risk appetite* indicates the level of risk the organization is willing to take to achieve its strategic objectives. These two concepts must be aligned so that risk management policies can reflect the organization's culture, resource capacity, operational characteristics, and the dynamics of the external environment—including regulatory changes, economic conditions, and industry developments (Purpadita et al., 2017; Susila, 2018). Establishing an appropriate risk tolerance enables an organization to implement proportionate risk controls, minimize the potential for significant losses, and support more accurate and sustainability-oriented decision-making processes (L. Agung et al., 2024; Purpadita et al., 2017; Salim & Prasetyo, 2023). Various studies also indicate that the integration of risk assessment and risk tolerance setting is a crucial foundation for building effective mitigation strategies while fostering *a risk-aware culture* capable of sustainably enhancing an organization's competitiveness (L. Agung et al., 2024; Purpadita et al., 2017; Yustanti et al., 2020). As the complexity of the risks faced by organizations increases, risk assessment is no longer viewed merely as a process of identifying and measuring risk levels, but has evolved into a strategic tool for determining priorities in risk management based on the probability of occurrence, the magnitude of the impact, and the organization's ability to manage those risks. The integration of risk assessment and risk tolerance setting is a critical element because it provides an objective foundation for developing mitigation policies, prioritizing controls, and allocating organizational resources. When this approach is combined with sound information technology governance practices, organizations are better equipped to foster a risk-aware culture that supports the achievement of competitive advantage and long-term sustainability ((L. Agung et al., 2024; Purpadita et al., 2017; Salim & Prasetyo, 2023; Yustanti et al., 2020).

Various studies have examined the relationship between risk assessment, risk tolerance, and the implementation of risk management in various organizational contexts. From an information technology governance perspective, the COBIT 5 and COBIT 2019 frameworks—particularly in the APO12 (*Manage Risk*) domain and related domains such as APO02 and APO13—emphasize that the processes of risk identification, assessment, and mitigation of risks must be aligned with the risk tolerance level established by management as the basis for strategic decision-making (Kurniawan et al., 2022; Ranti & Tambotoh, 2012; I. N. S. Saputra & Yuwono, 2021). Various case studies demonstrate that the consistent application of risk assessment and the establishment of risk tolerance positively contribute to improved organizational performance, operational stability, the effectiveness of internal controls, and organizational sustainability (Ardhyka et al., 2023; Hikmah & Wondabio, 2023; Jonny et al., 2021). In line with this, the implementation of COBIT 5 and COBIT 2019 demonstrates that the APO12 domain explicitly links the processes of identifying, evaluating, and mitigating information technology risks to the organization's risk tolerance, thereby enabling information technology governance that aligns with organizational objectives (Ardhyka et al., 2023; Hikmah & Wondabio, 2023; Jonny et al., 2021).

On the other hand, several studies have also used the COSO-ERM framework to evaluate the effectiveness of internal controls and risk management as a whole in supporting improved organizational governance and fraud prevention (Lestari & Mayangsari, 2023; Zulvi, 2022). Furthermore, the implementation of international standards such as ISO 31000 and ISO 27005, as well as the evaluation of information technology governance through the MEA domains (MEA01–MEA03), has been shown to enhance accountability, transparency, the quality of decision-making, and the effectiveness of governance in both public- and private-sector organizations (Budiman, 2011; Mérida et al., 2023; Sianitawati & Prasetyo, 2022). These findings indicate that the success of risk management implementation is influenced not only by the quality of risk assessment methods but also by the suitability of the governance framework used and the organization's ability to integrate the risk assessment process into strategic decision-making.

Nevertheless, various studies also indicate that the success of risk management implementation is significantly influenced by behavioral and organizational cultural aspects. A strong *risk culture*, commitment from top management, and the effectiveness of governance structures are key factors determining the success of risk management policy implementation. Therefore, changes in risk management policies must be supported by leadership commitment, effective communication, clear policy documentation, and the strengthening of organizational culture to ensure consistent implementation across all levels of the organization (H. Agung & Andry, 2020; Prasetyo, 2023; Purpadita et al., 2017; Sekali, 2024; Yustanti et al., 2020; Zulvi, 2022). Furthermore, interpretations of *risk tolerance* and *risk appetite* often differ across organizational functions and levels; therefore, coordination and governance mechanisms are needed to align the understanding of all stakeholders regarding risk management policies (H. Agung & Andry, 2020; Purpadita et al., 2017; Yustanti et al., 2020).

Based on these findings, there remains a need to present a literature synthesis that comprehensively integrates discussions on risk assessment, risk tolerance, and the relationship between the two in building an effective organizational risk management system. Most studies still address these two concepts separately or within the context of specific sectors, and thus have not provided a complete picture of the conceptual and practical relationship between them. Therefore, this article employs a *Systematic Literature Review* (SLR) approach to analyze the risk evaluation process as the foundation of organizational risk management, identify factors influencing the determination of risk tolerance, and explain the relationship between *risk evaluation*, *risk tolerance*, and *risk appetite* within the Enterprise Risk Management (ERM) framework. The scope of this study focuses on the processes of risk identification, analysis, evaluation, and prioritization; the setting of risk tolerance based on both internal and external organizational factors; and risk control and mitigation mechanisms that support strategic decision-making, in accordance with the principles of ISO 31000, COBIT 5/COBIT 2019, and COSO-ERM (H. Agung & Andry, 2020; Kojongian & Ayub, 2021;

Purpadita et al., 2017; Salim & Prasetyo, 2023). Through this synthesis, this study is expected to make a conceptual contribution to the development of risk management literature while also serving as a foundation for future empirical research aimed at building a risk management system that is more adaptive, integrated, and oriented toward creating organizational value.

METHODOLOGY

This study employs a *Systematic Literature Review* (SLR) approach to identify, evaluate, and synthesize research findings regarding the relationship between *risk evaluation* and *risk tolerance* within the framework of organizational risk management. The SLR approach was chosen because it produces a systematic, transparent, and replicable literature synthesis, thereby providing a strong conceptual foundation for explaining research developments, identifying *research gaps*, and formulating directions for future research. All stages of the research were designed in accordance with the principles of transparency and replicability as recommended in the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) guidelines, which have been widely adopted in various SLR studies (Nurfitriana & Lisdiono, 2024; Sibarani & Lusmeida, 2021).

The initial phase of the research began with the development of a systematic literature search strategy to ensure the relevance, recency, and scientific quality of the sources used. The search strategy included identifying databases, formulating keyword combinations using Boolean operators, and applying inclusion and exclusion criteria. The literature search was conducted across various international and national databases with established academic reputations, namely Scopus, Web of Science, ScienceDirect, Emerald Insight, Google Scholar, as well as several reference sources relevant to the development of risk management practices in Indonesia, such as ManRisk.id, IRMAPA.org, and Sustain.id. The use of these various databases was intended to obtain literature covering both theoretical and empirical perspectives on *risk evaluation*, *risk tolerance*, *risk appetite*, Enterprise Risk Management (ERM), ISO 31000, COSO-ERM, COBIT, and *Governance, Risk, and Compliance* (GRC) ((Aeni et al., 2024; Haryetti & Rokhmawati, 2021; Martani, 2023; I. Saputra et al., 2023).

The search strategy employed a combination of primary and supporting keywords organized using Boolean operators (*AND* and *OR*) to identify articles relevant to the research focus. The keywords used included *"risk evaluation" OR "risk assessment*,*" "risk tolerance" OR "risk limit*,*" "risk appetite*,*" "organizational risk management*,*"* and *"enterprise risk management*." This combination is designed to capture various studies that discuss the relationship between risk evaluation, risk tolerance, and organizational decision-making processes in the context of risk management (Lusantono, 2026; Nursanti & Ningsih, 2024; Oliva et al., 2024; Supriyadi et al., 2024).

Inclusion and exclusion criteria were applied to ensure that the analyzed literature met adequate methodological standards and was relevant to the research objectives. The selected articles are scientific publications in Indonesian or English published between 2015 and 2025 that directly address *risk evaluation*, *risk tolerance*, *risk appetite*, or organizational risk management, and that make empirical or conceptual contributions to the development of risk management science. Conversely, articles that were not directly related to the research focus, were not available in *full text*, or did not meet scientific standards were excluded from the synthesis process (Leng et al., 2023; Soepeno et al., 2021).

The literature selection process followed the PRISMA flowchart, which consists of four stages: *identification*, *screening*, *eligibility*, and *inclusion* (Lusantono, 2026). In the *identification* stage, all articles retrieved from various databases were compiled based on predetermined keywords. Next, in the *screening* stage, articles were filtered through an evaluation of titles and abstracts to assess their relevance to the research focus. Articles meeting the criteria then proceeded to the *eligibility* stage, which involved a comprehensive review of the article content (*full-text review*) to evaluate methodological quality, the validity of the findings, and relevance to the research objectives. Conceptual articles that did not make a significant contribution to the discussion, as well as those that did not meet methodological standards, were eliminated at this stage. The *inclusion* stage yielded six main articles that served as the basis for the literature synthesis process. All selection stages were systematically documented in a matrix containing information on article titles, author names, publication years, publication sources, research methods, and key findings, thereby enhancing the transparency and replicability of the research (Lusantono, 2026; Tewu et al., 2024).

Table 2.1 Summary of the Literature Selection Stages (PRISMA Model)

Selection Steps	Process Description	Number of Articles	Status
Identification (*Identification*)	Initial search using keywords in several major academic databases.	28	Found
Screening (*Screening*)	Review of titles and abstracts to assess topic relevance.	18	Passed initial screening
Eligibility Check (*Eligibility*)	*Full-text review* to assess methodological quality and topic relevance.	10	Eligible for analysis
Final Selection (*Inclusion*)	Selection of the most relevant and high-quality articles.	6	Used in the main analysis

Data analysis was conducted using a qualitative approach through *narrative synthesis*. This approach was chosen because it is capable of integrating various research findings with different methodological characteristics and research contexts, thereby enabling the identification of patterns, relationships, and trends in research on *risk evaluation* and *risk tolerance* (Handrawan et al., 2024; Lisdiono et al., 2022). The first stage of the analysis involved organizing all the articles that had passed the selection process into an analysis matrix containing information on the authors, year of publication, research objectives, methods used, research subjects, and key findings. This organization facilitates the process of identifying research themes, methodological developments, and the grouping of studies based on empirical and conceptual characteristics (Hidayah et al., 2024; Samudera & Husaini, 2023).

The next step is data reduction and categorization of findings. Information highly relevant to the research objectives is selected and grouped into several main themes, namely the risk assessment process in organizational risk management, the relationship between *risk tolerance* and *risk appetite*, factors influencing the determination of risk tolerance—such as organizational culture, resource capacity, leadership, governance, and the external environment—as well as the impact of integrating risk assessment and risk tolerance on the effectiveness of risk management, organizational performance, operational stability, and organizational sustainability (Hidayah et al., 2024; Voelker et al., 2008). This thematic grouping allows the synthesis process to be conducted more systematically, enabling a comprehensive analysis of the relationships among the studies.

Next, a narrative synthesis and interpretation were conducted by comparing the similarities, differences, and trends in the research findings reported in each article. The analysis focused on how each study defined, measured, and integrated the concepts *of risk evaluation*, *risk tolerance*, and *risk appetite* within the Enterprise Risk Management (ERM) framework. In addition, the synthesis also aims to identify how organizational culture, *risk culture*, leadership, communication mechanisms, policy documentation, and governance structures influence the implementation of risk evaluation and risk tolerance in various organizational contexts. Variations in the interpretation of *risk tolerance* and *risk appetite* across different functions and organizational levels are viewed as part of the characteristics of risk management implementation influenced by the organizational context; therefore, governance mechanisms are needed to align all stakeholders' understanding of risk policies (Hidayah et al., 2024; Rokhim, 2018; Supriyadi et al., 2024; Voelker et al., 2008).

The final stage—validation of the synthesis results—is conducted through a *cross-checking* process with various supporting literature to ensure consistency in interpretation, minimize potential bias, and enhance the credibility of the research findings. This validation process allows each finding to be compared with the results of other studies, ensuring that the conclusions reached are more reliable and scientifically sound (Halim, 2021; Hidayah et al., 2024).

The scope of this research analysis focuses on the relationship between *risk evaluation* and *risk tolerance* within the framework of organizational risk management. The analysis covers the processes of risk identification, analysis, evaluation, and prioritization; the establishment of risk tolerance based on both internal and external organizational factors; and risk control and mitigation mechanisms that support strategic decision-making. The study also covers the application of various international frameworks, such as ISO 31000, COSO-ERM, and COBIT 5/COBIT 2019, as a conceptual foundation for understanding the integration of risk evaluation and risk tolerance in various organizational contexts (H. Agung & Andry, 2020; Kojongian & Ayub, 2021; Purpadita et al., 2017; Salim & Prasetyo, 2023). With this scope, this study is expected to produce a comprehensive synthesis of research developments *on risk evaluation* and *risk tolerance*, while reinforcing the argument that the integration of these two concepts is a crucial foundation for developing risk mitigation policies, fostering *a risk-aware culture*, enhancing competitiveness, and ensuring organizational sustainability (Anggadwita et al., 2017; Nursanti & Ningsih, 2024; I. Saputra et al., 2023; Soepeno et al., 2021; Widagdo et al., 2022).

RESULTS AND DISCUSSION

Based on a synthesis of the six key literature sources analyzed, a comprehensive understanding was gained regarding the relationship between *risk evaluation* and *risk tolerance* as two fundamental components in building an effective organizational risk management system (H. Agung & Andry, 2020; Purpadita et al., 2017; Salim & Prasetyo, 2023). All studies indicate that the effectiveness of risk management is determined not only by an organization's ability to identify, analyze, and evaluate risks, but also by its ability to establish a level *of* risk tolerance that aligns with strategic objectives, organizational capacity, risk characteristics, and the dynamics of the business environment. Thus, *risk evaluation* and *risk tolerance* are two *mutually reinforcing* concepts; therefore, their implementation must be carried out in an integrated manner within the *Enterprise Risk Management* (ERM) framework to support adaptive, accountable, and sustainable decision-making (H. Agung & Andry, 2020; Purpadita et al., 2017; Salim & Prasetyo, 2023).

A literature review indicates that the risk assessment process is no longer viewed as a purely administrative activity focused solely on identifying and measuring risks; rather, it has evolved into a strategic tool for supporting *organizational learning* and improving the quality of decision-making. Bellora-Bienengräber et al. (2023) demonstrate that the success of the risk assessment process in *risk workshops* is significantly influenced by *an* organization's calculative *culture*. Organizations that embrace *quantitative skepticism* utilize risk assessment results not only as a compliance tool but also as a foundation for strategic reflection and continuous improvement. These findings broaden the perspective on risk management by positioning the organizational culture dimension as a factor equally as important as risk analysis methods. Thus, the effectiveness of risk assessment depends on an organization's ability to foster a culture that promotes openness, learning, collaboration, and a commitment to sustainable risk management (Prasetyo, 2023; Sekali, 2024). This perspective is also supported by various studies on ERM implementation, which confirm that *risk culture* and leadership commitment contribute significantly to the overall quality of risk management policy implementation (Lestari & Mayangsari, 2023; Zulvi, 2022).

On the other hand, the literature indicates that *risk tolerance* plays an equally important role in determining the effectiveness of organizational decision-making. Yudha and Leon (2019) found that the level of risk tolerance is significantly associated with managerial decision-making behavior at state-owned banks in Indonesia. Managers with higher risk tolerance tend to be more confident in making risk-based strategic decisions, thereby improving organizational performance. These findings suggest that *risk tolerance* is not merely an individual characteristic but rather part of an organization's capability to manage uncertainty through established policies (Ardhyka et al., 2023; I. N. S. Saputra & Yuwono, 2021). However, a literature review—also emphasizes that high risk tolerance must be balanced with an objective and systematic risk evaluation process to ensure that the resulting decisions do not lead to *excessive risk-taking* (H. Agung & Andry, 2020; Salim & Prasetyo, 2023).

The relationship between risk assessment and risk tolerance is further emphasized by Khalilzadeh et al. (2025), who identified thirteen internal and external factors that influence a project organization's level of risk tolerance. These factors include organizational experience, human resource capacity, government support, market conditions, project characteristics, and various environmental factors that interact dynamically with one another. Using the *Hybrid Fuzzy DEMATEL-ISM* approach, the study was able to map the cause-and-effect relationships among variables, thereby providing a more comprehensive picture of the process by which an organization's risk tolerance is formed. The results show that determining *risk tolerance* cannot be done normatively or uniformly but must take into account the organization's characteristics and the complexity of the environment in which it operates (Farahani et al., 2021; Hidayah et al., 2024; Samudera & Husaini, 2023; Voelker et al., 2008).

A literature review in the Indonesian context reveals that the implementation *of Enterprise Risk Management* still faces various challenges. Hasanah et al. (2025), through a systematic literature review (SLR), show that the application of ERM in Indonesia is still dominated by a *compliance-driven* approach—that is, focused on meeting regulatory requirements rather than creating strategic value for the organization. As a result, risk assessment outcomes often serve merely as reporting documents and are not yet optimally utilized as a basis for organizational strategy formulation or decision-making. Therefore, a transformation toward a *value-driven ERM* approach is essential so that risk management can provide added value toward the sustainable achievement of organizational goals (Lusantono, 2026; Tewu et al., 2024).

These findings are supported by Putri & Sari, (2024), who show that the low level of risk management maturity in Indonesia's financial services sector is primarily due to a weak link between *risk evaluation*, *risk appetite*, and *risk tolerance*. Most organizations already have procedures for identifying and evaluating risks, but have not yet been able to translate the results of these evaluations into clear risk tolerance limits to serve as guidelines for decision-making. This situation indicates that integrating these three components remains a major challenge in the implementation of ERM in Indonesia. Therefore, strengthening *risk culture*, enhancing human resource competencies, aligning business strategies with risk policies, and strengthening organizational governance are critical factors determining the success of risk management implementation (Lusantono, 2026; Tewu et al., 2024).

In addition to organizational aspects, technological developments have also become an increasingly dominant theme in risk management research. Hendra et al. (2024) demonstrate that the implementation of international standards, such as ISO 31000 and EN 50126, supported by the digitization of risk management processes, can improve the consistency of risk identification, analysis, evaluation, and mitigation. The use of information technology enables the risk evaluation process to be conducted more quickly, objectively, accurately, and in a *data-driven* manner, thereby significantly improving the quality of decision-making. These findings demonstrate that digital transformation has become a critical element in the development of modern risk management systems that are adaptive to changes in the business environment (Anggadwita et al., 2017; I. Saputra et al., 2023; Sibarani & Lusmeida, 2021).

In general, the findings of this synthesis indicate a shift in the risk management research paradigm from an administrative approach toward a more integrated strategic approach. International literature, such as Bellora-Bienengräber et al. (2023), Hendra et al. (2024), and Khalilzadeh et al. (2025), places greater emphasis on integrating risk assessment with organizational culture, digital transformation, and the development of more complex and predictive analytical models. In contrast, national research focuses more on strengthening the implementation of ERM, increasing *risk awareness*, and aligning risk policies with organizational strategy (Hasanah et al., 2025; Putri & Sari, 2024). These differences in orientation indicate that international research has evolved toward an analytical and data-driven approach, whereas research in Indonesia remains at the stage of strengthening the foundations of risk management implementation (Agung & Andry, 2020; Purpadita et al., 2017; Salim & Prasetyo, 2023; I. Saputra et al., 2023; Voelker et al., 2008).

Developments in research methodology also show a trend toward the use of multidisciplinary approaches and increasingly complex analytical techniques. The use of *the Hybrid Fuzzy DEMATEL-ISM* by Khalilzadeh et al. (2025), the integration of organizational culture perspectives by Bellora-Bienengräber et al. (2023), and the use of digitalization in risk assessment by Hendra et al. (2024) and Putri and Sari (2024) indicate that risk management research has evolved from descriptive approaches toward more adaptive, predictive, data-driven, and digitally supported approaches. These methodological developments indicate that modern risk assessment no longer relies solely on practitioners' experience but increasingly utilizes analytical models capable of describing causal relationships among variables more comprehensively (Hidayah et al., 2024; Samudera & Husaini, 2023; I. Saputra et al., 2023; Sekali, 2024; Voelker et al., 2008).

The synthesis also reveals that each study makes a distinct contribution to the development of risk management science. Bellora-Bienengräber et al. (2023) enrich the perspective on the importance of organizational culture in the risk evaluation process. Yudha and Leon (2019) provide empirical evidence on the influence of risk tolerance on managerial decision-making behavior. Khalilzadeh et al. (2025) offer an innovative " " analytical model to explain the formation of risk tolerance through causal relationships among variables. Hasanah et al. (2025) present a comprehensive synthesis of the development of Enterprise Risk Management (ERM) in Indonesia, while Putri and Sari (2024) provide an empirical overview of the maturity level of risk management in the financial services sector. Hendra et al. (2024) complement these perspectives by discussing the importance of international standardization and digital transformation in enhancing the effectiveness of risk assessment (Hidayah et al., 2024; Lusantono, 2026; Samudera & Husaini, 2023; I. Saputra et al., 2023; Sekali, 2024; Sibarani & Lusmeida, 2021; Voelker et al., 2008).

Nevertheless, the literature review also reveals a number of limitations. Most studies still focus on specific sectors, such as banking, projects, transportation, and financial services, so the generalizability of research findings to other sectors remains limited. Furthermore, cross-country and cross-sector studies are still relatively scarce, so they have not yet been able to comprehensively explain how organizational characteristics influence the relationship between *risk evaluation* and *risk tolerance*. National research is also still dominated by conceptual and descriptive approaches, while longitudinal quantitative studies capable of testing causal relationships between variables remain limited (Handrawan et al., 2024; Lusantono, 2026; Tewu et al., 2024).

Overall, the results of this SLR reveal a consistent pattern: the effectiveness of risk management is determined by the integration of *risk evaluation*, *risk appetite*, and *risk tolerance*, supported by organizational culture, good governance, and the use of digital technology. Differences in implementation across various sectors and countries are influenced more by the level of ERM maturity, organizational characteristics, and the external environment than by differences in the basic concepts of risk management itself (Agung & Andry, 2020; Purpadita et al., 2017; Salim & Prasetyo, 2023; Hidayah et al., 2024; Samudera & Husaini, 2023; Sekali, 2024; Sibarani & Lusmeida, 2021; Voelker et al., 2008).

Based on this overall synthesis, there are still several *research gaps* worth exploring in future studies. Quantitative longitudinal empirical research on the relationship between *risk evaluation*, *risk appetite*, and *risk tolerance* remains very limited, particularly in the context of organizations in Indonesia (Lusantono, 2026; Tewu et al., 2024). Furthermore, the influence of organizational culture on the effectiveness of risk management still requires more robust empirical testing (Prasetyo, 2023; Sekali, 2024). The integration of digital technology, data analytics, and *Governance, Risk, and Compliance* (GRC) platforms into the risk evaluation process also needs to be further explored as a factor capable of improving the quality of strategic decisions (Hidayah et al., 2024; I. Saputra et al., 2023; Sibarani & Lusmeida, 2021). Furthermore, cross-sector research—particularly in the public sector, the energy sector, and the SME sector—remains very limited; therefore, studies are needed to develop a more universal risk management model that can be applied to organizations with diverse characteristics (Li et al., 2023; Lusantono, 2026; Ma et al., 2020; Voelker et al., 2008). Thus, the results of this SLR not only underscore the importance of integrating *risk evaluation* and *risk tolerance* as the foundation of an organization's risk management system but also provide direction for future research in developing ERM models that are more adaptive, technology-based, and capable of enhancing organizational performance, resilience, and sustainability.

CONCLUSION

A synthesis of six studies indicates that *risk evaluation* and *risk tolerance* are two complementary components in building an effective organizational risk management system. Risk evaluation provides an objective information base regarding the level and characteristics of risk, while risk tolerance serves as a guideline for determining risk acceptance limits that align with the organization's strategic objectives and capacity. Therefore, the effectiveness of Enterprise Risk Management (ERM) is determined not only by the quality of the risk identification and analysis processes but also by the organization's ability to integrate the results of risk evaluation into strategic decision-making processes. Furthermore, organizational culture, human resource competencies, the adoption of international standards, and the use of digital technology have proven to be key supporting factors in improving the quality of risk management implementation.

This review also indicates that research on risk management has shifted from a compliance-oriented approach toward one focused on creating organizational value. Nevertheless, the implementation of ERM, particularly in Indonesia, still faces various challenges, including low integration among *risk evaluation*, *risk appetite*, and *risk tolerance*, as well as a limited body of empirical research examining the relationship between these three concepts and organizational performance. Therefore, future research is recommended to develop an empirical model that integrates the dimensions of organizational culture, digital transformation, and risk management capabilities through both quantitative and longitudinal approaches across various industrial sectors. The development of such research is expected to enrich the risk management literature while generating more practical recommendations for organizations in building adaptive, strategic, and sustainable ERM systems.

REFERENCES

Aeni, T. I., Rena, S., & Destiana, R. (2024). The Influence of the Use Financial Technology, Owner Financial Literacy, and Risk Tolerance on the Performance of MSMEs in Indonesia. *International Journal of Business Law and Education*, *5*(1), 996–1006. https://doi.org/10.56442/ijble.v5i1.494

Agung, H., & Andry, J. F. (2020). Audit Sistem Informasi Akademik Pada Universitas XYZ Menggunakan COBIT 5 Pada Domain MEA. *Kalbiscientia Jurnal Sains Dan Teknologi*, *6*(2), 97–105. https://doi.org/10.53008/kalbiscientia.v6i2.43

Agung, L., Nuraini, L., Pramesti, V. C. C., Jiwandaru, I., Jannah, I. R., Aliansyah, I. D., Pratama, J. E. P., Fawwaaz, K. N., Ardiansyah, A. W., & Alista, F. (2024). Implementasi Pembayaran Digital QRIS Untuk Meningkatkan Aksesibilitas Transaksi UMKM Di Banyuanyar. *Jurnal Pengabdian Sosial*, *1*(11), 1980–1984. https://doi.org/10.59837/ta64db21

Anggadwita, G., Luturlean, B. S., Ramadani, V., & Ratten, V. (2017). Socio-Cultural Environments and Emerging Economy Entrepreneurship. *Journal of Entrepreneurship in Emerging Economies*, *9*(1), 85–96. https://doi.org/10.1108/jeee-03-2016-0011

Ardhyka, R., Fidaiyah, A., & Meiyanti, R. (2023). Analisis Manajemen Risiko IT Menggunakan COBIT5 Pada Domain APO12. *Jurnal Informasi Dan Teknologi*, 30–38. https://doi.org/10.37034/jidt.v5i2.325

Bellora-Bienengräber, L., Harten, C., & Meyer, M. (2023). The effectiveness of risk assessments in risk workshops: The role of calculative cultures. *Journal of Risk Research*, *26*(2), 163–183. https://doi.org/10.1080/13669877.2022.2108120

Budiman, A. (2011). Pengembangan Tata Kelola TI Untuk Menunjang Kegiatan Bisnis Pada Universitas (Studi Kasus Universitas Merdeka Madiun). *Jurnal Buana Informatika*, *2*(1), 11–17. https://doi.org/10.24002/jbi.v2i1.304

Farahani, A. F., Didehkhani, H., Khalili-Damghani, K., Sarfaraz, A. H., & Hajirezaie, M. (2021). A Framework for Interactive Risk Assessment in Projects: Case Study of Oil and Gas Megaprojects in Presence of Sanctions. *Journal of Modelling in Management*, *17*(2), 569–600. https://doi.org/10.1108/jm2-07-2020-0180

Felayati, F. (2019). Analisis Dan Perancangan Tata Keloladan Pengelolaan Teknologi Informasi Berbasis Kerangka COBIT 5 DomainAlign-Plan-Organise (APO) (Studi Kasus:Diskominfo Jabar). *Jisa(Jurnal Informatika Dan Sains)*, *1*(2). https://doi.org/10.31326/jisa.v1i2.296

Felayati, F., Mulyana, R., & Witjaksono, R. W. (2018). Analisis Dan Perancangan Tata Keloladan Pengelolaan Teknologi Informasi Berbasis Kerangka COBIT 5 DomainAlign-Plan-Organise (APO) (Studi Kasus:Diskominfo Jabar). *Jisa(Jurnal Informatika Dan Sains)*, *1*(1), 14–24. https://doi.org/10.31326/jisa.v1i1.296

Halim, J. A. (2021). Indonesia's New Sovereign Wealth Fund: When Strategic Development Converges With Stabilization. *The Lawpreneurship Journal*, *1*(1), 1–29. https://doi.org/10.21632/tlj.1.1.1-29

Handrawan, M. M., Rambe, N. V., Harianto, S., & Wong, D. F. K. (2024). The Effect of Enterprise Risk Management (ERM) on the Soundness of Banking Companies in Indonesia. *Studi Akuntansi Dan Keuangan Indonesia*, *7*(1), 51–76. https://doi.org/10.21632/saki.7.1.51-76

Haryetti, H., & Rokhmawati, A. (2021). Does Good Corporate Governance Mediate Risk Management Implementation and Financial Performance of Indonesian Commercial Banks? *Journal of Southwest Jiaotong University*, *56*(3), 457–472. https://doi.org/10.35741/issn.0258-2724.56.3.39

Hasanah, U., Rodiah, S., & Jannah, S. I. N. (2025). A Systematic Literature Review on Enterprise Risk Management: Trends, Gaps, and Future Directions. *Economic: Journal Economic and Business*, *4*(3), 498–506. https://doi.org/10.56495/ejeb.v4i3.1174

Hendra, F., Mohammad, R., Amrin, A., Maarop, N., & Zagloel, T. Y. (2024). Systematic Literature Review of Risk Assessment Techniques, Standard and Guidelines for Railway. *International Journal of Technology*, *15*(4), 1148. https://doi.org/10.14716/ijtech.v15i4.6384

Hidayah, N., Azhar, Z., Setiany, E., Utami, W., & Tarmidi, D. (2024). Determinants of Erm Quality and Its Impact on Company Value. *Verslas Teorija Ir Praktika*, *25*(1), 11–23. https://doi.org/10.3846/btp.2024.19302

Hikmah, A. N., & Wondabio, L. S. (2023). Evaluasi Peranan Audit Internal Pada Penerapan Strategi Anti Fraud. *Owner*, *7*(4), 3285–3294. https://doi.org/10.33395/owner.v7i4.1657

Jonny, J., Ambarwati, A., & Darujati, C. (2021). Penilaian Risiko Data Sistem Informasi Manajemen Puskesmas Dan Aset Menggunakan ISO 27005. *Sistemasi*, *10*(1), 1=12. https://doi.org/10.32520/stmsi.v10i1.995

Khalilzadeh, M., Bozanic, D., & Puska, A. (2025). Analysis of key factors affecting risk tolerance in project-oriented firms using hybrid fuzzy DEMATEL-ISM: An empirical study. *Yugoslav Journal of Operations Research*, *35*(3), 595–617. https://doi.org/10.2298/YJOR240515005K

Kojongian, F. A., & Ayub, M. (2021). Manajemen Risiko Divisi Sistem Informasi Perguruan Tinggi Dengan Framework COBIT 5. *Jurnal Teknik Informatika Dan Sistem Informasi*, *7*(1), 274–286. https://doi.org/10.28932/jutisi.v7i1.3434

Kurniawan, S., Praningrum, & Dharmayana, I. W. (2022). Pengaruh Persepsi Dukungan Organisasi Dan Komitmen Organisasi Terhadap Kinerja Pegawai Dimediasi Oleh Kepuasan Kerja Pada Pemerintah Daerah Kabupaten Bengkulu Tengah. *TMR*, *4*(1), 61–94. https://doi.org/10.33369/tmr.v4i1.25839

Leng, P., Basuki, B., & Setiawan, R. (2023). The Maturity Level of Enterprise Risk Management Implementation in Medium-Sized Priority Sector Companies in East Java. *International Journal of Financial and Investment Studies (Ijfis)*, *3*(2), 79–93. https://doi.org/10.9744/ijfis.3.2.79-93

Lestari, F., & Mayangsari, S. (2023). Enterprise Risk Management Dalam Mencegah Dan Mendeteksi Kecurangan Di Parlemen Indonesia. *Apssai Accounting Review*, *3*(2), 176–197. https://doi.org/10.26418/apssai.v3i2.89

Lisdiono, P., Said, J., Yusoff, H., & Hermawan, A. A. (2022). Examining Leadership Capabilities, Risk Management Practices, and Organizational Resilience: The Case of State-Owned Enterprises in Indonesia. *Sustainability*, *14*(10), 6268. https://doi.org/10.3390/su14106268

Lusantono, O. W. (2026). ESG Performance Index: An Outlook From Mining Companies in Indonesia Beyond Rating and Business Performance. *Iop Conference Series Earth and Environmental Science*, *1651*(1), 012026. https://doi.org/10.1088/1755-1315/1651/1/012026

Martani, D. (2023). Boosting Government Assets as a Revenue Center: Risk and Treatment. *Accounting and Finance Studies*, *3*(4), 294–313. https://doi.org/10.47153/afs34.8332023

Mérida, Yuliana, K. A., & Pratama, A. (2023). Analisis Sistem Pengendalian Intern, Siklus Pendapatan Untuk Keberlanjutan Perusahaan. *Jin*, *2*(1), 1–12. https://doi.org/10.61635/jin.v2i1.107

Nurfitriana, F., & Lisdiono, P. (2024). Leadership During ERM Transition Implementation in the Public Sector. *Jurnal Teknologi Dan Manajemen*, *22*(1), 55–62. https://doi.org/10.52330/jtm.v22i1.242

Nursanti, T. D., & Ningsih, F. (2024). Company Value in Kompas 100 Index Period 2017-2021: The Role of Good Corporate Governance, Corporate Social Responsibility, and Financial Performance. *Jurnal Ilmiah Ekonomi Bisnis*, *29*(1), 86–104. https://doi.org/10.35760/eb.2024.v29i1.9508

Oliva, F. L., Bution, J. L., Motta, F. G., Fenner, G., Randolph-Seng, B., Papa, M., & Naqshbandi, M. M. (2024). Appetite for Risk: Theoretical Framework and Practical Application in a Technology-Based Environment. *Journal of Intellectual Capital*, *26*(1), 71–103. https://doi.org/10.1108/jic-04-2024-0108

Prasetyo, A. H. (2023). Faktor Sukses Kunci Untuk Meningkatkan Kinerja Perusahaan Melalui Manajemen Risiko Basis COSO-2017. *Jurnalku*, *3*(3), 231–241. https://doi.org/10.54957/jurnalku.v3i3.462

Purpadita, E. P., Hutajulu, M. R., & Prasetyo, A. H. (2017). Model Pengelolaan Dan Rencana Implementasi Manajemen Risiko Pada Pt. Perdana Karya Perkasa, TBK. *Journal of Management and Business Review*, *10*(1), 29–45. https://doi.org/10.34149/jmbr.v10i1.68

Putri, N. F., & Sari, D. M. (2024). Evaluasi penerapan manajemen risiko pada industri jasa keuangan di Indonesia: Pendekatan SLR. Jurnal Akuntansi dan Keuangan Terapan. *Jurnal Akuntansi Dan Keuangan Terapan*, *9*(2), 355-368.

Ranti, B., & Tambotoh, J. (2012). Implementasi Kajian Kelayakan Finansial Untuk Meningkatkan Tingkat Kematangan Manajemen Investasi Teknologi Informasi. *Jurnal Sistem Informasi*, *6*(2), 126. https://doi.org/10.21609/jsi.v6i2.285

Rokhim, R. (2018). Encouraging Microcredit Through Group Guarantee Loan Moder: The Success Story of MEKAAR Program in Indonesia. *International Review of Financial Consumers*, *3*(No. 1 Apr 2018), 15–26. https://doi.org/10.36544/irfc.2018.1-1.2

Salim, L. D., & Prasetyo, A. H. (2023). Rancangan Manajemen Risiko Dan Assesmen Risiko Pada PT Pel Berlian Pulau Mandangin Berdasarkan ISO 31000:2018. *Jurnalku*, *3*(3), 242–268. https://doi.org/10.54957/jurnalku.v3i3.463

Samudera, V. A., & Husaini, H. (2023). The Influence of Enterprise Risk Management on Corporate Performance With the Moderating Effect of Intellectual Capital. *Financial Jurnal Akuntansi*, *9*(2), 166–181. https://doi.org/10.37403/financial.v9i2.554

Saputra, I., Murwaningsari, E., & Augustine, Y. (2023). The Role of Enterprise Risk Management and Digital Transformation on Sustainable Banking in Indonesia. *Neo Journal of Economy and Social Humanities*, *2*(1), 17–30. https://doi.org/10.56403/nejesh.v2i1.85

Saputra, I. N. S., & Yuwono, B. (2021). Assessment of Capability Level and IT Governance Improvement Base on COBIT 5 and ITIL V3 2011 Framework: A Case Study PT. XYZ. *Insert Information System and Emerging Technology Journal*, *2*(1), 1–12. https://doi.org/10.23887/insert.v2i1.34404

Sekali, R. B. K. (2024). Evaluasi Atas Implementasi Budaya Risiko Pada Perusahaan Finansial ABC. *Owner*, *8*(3), 2225–2234. https://doi.org/10.33395/owner.v8i3.2167

Sianitawati, S., & Prasetyo, A. H. (2022). Rancangan Manajemen Risiko Korporat Terintegrasi Pada Perusahaan Pertambangan Batu Bara Tahun 2023-2024. *Jurnalku*, *2*(4), 482–501. https://doi.org/10.54957/jurnalku.v2i4.302

Sibarani, L., & Lusmeida, H. (2021). Impact of Good Corporate Governance Towards Corporate Value With Enterprise Risk Management as Moderating Variable (Empirical Study of Financial Companies Listed in Idx for the Period 2017-2019). *Ultima Management Jurnal Ilmu Manajemen*, *13*(1), 74–98. https://doi.org/10.31937/manajemen.v13i1.1957

Soepeno, D. A. S., Widyarini, M., & Faisal, A. (2021). Board of Directors and Commissioners Fulfillment of Commitments in Enterprise Risk Management Implementation and Supervision in Indonesian Coal Mining Company (Case Study of PT XYZ). *Salam Jurnal Sosial Dan Budaya Syar I*, *8*(6), 1767–1782. https://doi.org/10.15408/sjsbs.v8i6.23126

Supriyadi, H., Priyarsono, D. S., Achsani, N. A., & Andati, T. (2024). An Integrated GRC Approach to Combating Fraud in Microloan Services. *International Journal of Innovative Research and Scientific Studies*, *7*(4), 1580–1591. https://doi.org/10.53894/ijirss.v7i4.3457

Susila, A. A. (2018). Konsep Dasar Dan Teknik Manajemen Risiko Perbankan Syariah. *Iqtishodiyah Jurnal Ekonomi Dan Bisnis Islam*, *4*(1). https://doi.org/10.36835/iqtishodiyah.v4i1.75

Tewu, M. L. D., Bernarto, I., Suwarno, S., & Lisdiono, P. (2024). The Effect of Enterprise Risk Management and Compliance Practices on the Firm Performance of Indonesian Banking Companies. *Indonesian Journal of Business and Entrepreneurship*, *10*(1), 52–64. https://doi.org/10.17358/ijbe.10.1.52

Voelker, C., Permana, A., Sachs, T., & Tiong, R. L. K. (2008). Political Risk Perception in Indonesian Power Projects. *Journal of Financial Management of Property and Construction*, *13*(1), 18–34. https://doi.org/10.1108/13664380810882057

Widagdo, A. K., Rahmawati, R., Djuminah, Arifah, S., Goestjahjanti, F. S., & Kiswanto, F. A. (2022). The Impact of Ownership Characteristics and Gender on Earnings Management: Indonesian Companies. *Journal of Risk and Financial Management*, *16*(1), 1–15. https://doi.org/10.3390/jrfm16010017

Yustanti, E., Pratama, A., & Arrazi, A. (2020). Penerapan Framework Cobit 5 Domain Apo(align, Plan and Organise) Pada Audit Tata Kelola Teknologi Informasi. *Sisfo Jurnal Ilmiah Sistem Informasi*, *4*(2), 113–129. https://doi.org/10.29103/sisfo.v4i2.6297

Zulvi, M. S. (2022). Manajemen Risiko Teknologi Informasi Menggunakan Metode FMEA (Studi Kasus: Diskominfo Pemprov Riau). *Jurnal Komputer Terapan*, *8*(2), 381–390. https://doi.org/10.35143/jkt.v8i2.5225