



## The Role of Internal Control in Risk Management: A Systematic Literature Review

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### ARTICLE INFO

*Keywords:* Internal Control Quality, Internal Control Effectiveness, Internal Control Weakness, Risk Management

*Received:* 20, March

*Revised:* 22, April

*Accepted:* 24, May

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### ABSTRACT

In an increasingly complex and unstable business environment, internal control has become a crucial element in ensuring the effectiveness of risk management and strong corporate governance. This study conducts a Systematic Literature Review (SLR) of 20 peer-reviewed scientific articles published between 2000 and 2025 and indexed by Scopus, aiming to examine the role of internal control in organizational risk management across both financial and non-financial sectors. The findings indicate that the presence of high-quality internal control systems significantly enhances an organization's ability to identify, assess, and mitigate various types of risks including financial risks, legal litigation, stock price crashes, and weaknesses in financial reporting. The literature demonstrates that when internal control systems are well-designed and effectively implemented, they act as a strategic tool rather than merely an administrative mechanism.

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## **INTRODUCTION**

In a dynamic and uncertain business environment, the internal control system plays an important role as the main foundation for ensuring the continuity and reliability of an entity's operations. The function of internal control is not only limited to preventing fraudulent practices and administrative errors, but also plays a strategic role in supporting the achievement of organizational goals through optimal risk management mechanisms (Chen et al., 2020) . Risk management practices have become a key element in the corporate governance structure, especially in responding to market volatility, rapid regulatory changes, and increasing demands from stakeholders. Within this framework, internal control is positioned as an important element that influences the extent to which an organization can implement risk management effectively and efficiently (Jin, 2024) .

Organizations have faced increasing pressure to develop and implement Enterprise Risk Management (ERM) systems in the last decade. Major accounting fraud cases such as those at Enron and WorldCom exposed serious weaknesses in companies' internal control systems and financial reporting (Beasley et al., 2005) . These weaknesses led to new regulations such as the Sarbanes-Oxley Act (SOX) passed in 2002. This regulation requires companies to improve their internal control systems, particularly to comply with the requirements of Section 404 of SOX (US Congress, 2002) . In response, the private sector has taken the initiative by developing a more comprehensive internal control framework through the Committee of Sponsoring Organizations of the Treadway Commission (COSO), first published in 2004 and revised in 2013. In this framework, risk assessment is explicitly identified as a key element in ensuring effective corporate governance (COSO, 2013) .

Various empirical studies have shown a close relationship between the strength of the internal control system and the level of corporate risk taking, financial stability, and managerial strategic decisions (Tian, 2024) . For example, research by (Zhu et al., 2024) revealed how disclosure of internal control risks can be influenced by external factors such as media coverage, which ultimately impacts the organization's risk perception. However, findings across studies tend to vary and have not provided conclusive conclusions. Differences in methodology, regional context, and measurement indicators cause variations in research results. Therefore, a systematic approach is needed to review and map existing academic findings in order to present a comprehensive picture of how internal control affects risk management in various sectors and regions.

This study aims to conduct a Systematic Literature Review (SLR) of academic literature that discusses the relationship between internal control in risk management. Through this approach, this study will summarize the main findings and identify various information contained in research articles so that it can present relevant further research directions in the fields of accounting, corporate governance, and strategic management.

## **LITERATURE REVIEW**

### ***Internal Quality Control***

Internal Control Quality/ICQ has a strategic role in supporting the risk management system within an organization. With strong internal control, organizations can consistently and structuredly identify, evaluate, and handle potential risks. Baugh et al., 2021 stated that banking institutions that report material weaknesses in their internal control systems tend to take greater risks and experience a decline in financial performance in the future. This finding confirms that low quality internal control can increase the potential for operational and financial risks (Baugh et al., 2021) . In a risk management approach that refers to the COSO framework, effective internal control can strengthen the five main elements of the control system, namely: environmental control, risk assessment, control activities, information and communication systems, and monitoring functions (COSO, 2013) . The application of ICQ in the context of Enterprise Risk Management (ERM) allows organizations to not only identify threats but also take early mitigation steps before these risks impact the achievement of strategic goals.

Furthermore, Lin et al., 2023 showed that the company's attention to employee welfare, such as providing pension facilities and additional health insurance, is positively related to the increasing quality of internal control. This shows that human resource involvement is one of the determining factors in the effectiveness of organizational risk management (Lin et al., 2023) . In addition, the use of appropriate information technology also contributes to strengthening ICQ, because it helps the monitoring process and decision-making quickly and based on data (Darwis et al., 2023) . The higher the quality of internal control, the better the effectiveness of risk management in an organization. With proactive and planned control, the organization will be more resilient in facing challenges and ensuring sustainable operational continuity.

### ***Internal Control Effectiveness***

The effectiveness of the internal control system is an important aspect in the organization's risk management process. Well-functioning internal control allows organizations to recognize, analyze, and address risks in a structured manner, thereby supporting the achievement of strategic and operational goals. Research by Ilmiha & Suboh, 2024 revealed that a robust internal control system plays a significant role in avoiding accounting fraud practices in financial sector companies. Synergistic collaboration between control procedures and credible information systems supports the organization's ability to detect and respond to risks efficiently, while maintaining the reliability of financial reporting. Referring to the framework prepared by COSO, 2013, the effectiveness of internal control includes five core elements, namely: control environment, risk identification, control actions, communication and information systems, and monitoring activities. Consistency in implementing these five components is considered capable of increasing the organization's capacity to handle risks and achieve its long-term goals.

A study conducted by Kalevor et al., 2024 at a number of public universities in Ghana stated that effective internal control has been shown to contribute significantly to financial risk management. This study confirms that the existence of reliable internal control supports the integrity of the financial system and encourages overall institutional accountability. In addition, Ilmiha & Suboh, 2024 also highlighted that the effectiveness of internal control has a positive impact on stakeholder confidence in the company's financial reporting results. The success of risk management depends largely on the extent to which the organization implements internal control comprehensively and sustainably. The synergistic implementation of control components will strengthen the organization's ability to deal with risks, while ensuring long-term operational and strategic success.

### ***Internal Control Weakness***

Weaknesses in the internal control system reflect deficiencies or gaps in an organization's oversight mechanism, which have the potential to increase the likelihood of errors, fraudulent acts, or operational inefficiencies. According to Elder et al., 2009, weaknesses in internal control are an important factor that increases client risk, especially in the context of audits after the enactment of the Sarbanes-Oxley Act (SOX). They stated that these weaknesses have a significant impact on the risk management strategies implemented by auditors. In the study, it was found that companies with weaknesses in internal control tend to be charged higher audit fees, are more likely to receive modified audit opinions, and are more likely to experience auditor resignations. Research conducted by Zhang et al., 2007 revealed that factors such as the quality of the audit committee and the level of auditor independence have a significant impact on the disclosure of weaknesses in internal control. Companies that have audit committees without adequate financial competence tend to be more vulnerable to weaknesses in their control systems.

Furthermore, weaknesses in internal control can be grouped into several forms, including weaknesses in terms of technical, operational, administrative, and architectural structure of the system. This condition can be caused by various things, such as technological developments, improper system configuration, or suboptimal control design (Pathlock, nd). To reduce the negative impact of these weaknesses, organizations are advised to implement routine risk evaluations, conduct internal audits, increase human resource capacity through training, and review reports from each work unit.

### ***Risk Management***

Risk management is a structured approach used to identify, evaluate, and address risks that have the potential to hinder the achievement of organizational goals. COSO, 2004 defines risk management as a process carried out by the board of directors, management, and all organizational personnel, which is applied in strategy formulation and implemented at all levels of the organization, to identify potential events that can affect the organization, and manage risks to remain within acceptable risk tolerance limits. This shows that risk management is proactive and embedded in the organization's strategic decision-making process.

In the audit field, Elder et al., 2009 highlighted the importance of risk management for clients, especially after the enactment of the Sarbanes-Oxley Act. They classified client risk into two main types, namely audit risk and client business risk. Auditors are advised to pay special attention to inherent risk and control risk, because these two types of risks reflect the possibility of errors in the financial statements before the auditor performs further testing (Elder et al., 2009) . Therefore, the existence of weaknesses in internal control is a crucial component that must be considered in the risk assessment process. (Elder et al., 2009) also stated that auditors use various tiered approaches to respond to risks originating from internal control weaknesses. They observed that “auditors use an array of ordered strategies to manage client-related control risk,” which includes adjusting audit fees, issuing an adverse audit opinion, and the auditor's decision to resign from the audit assignment (Elder et al., 2009) . This sequence of strategies reflects the level of auditor response adjusted to the magnitude of the risk faced, indicating a systematic nature in client risk management.

### *Agency Theory and Risk Management Theory*

Agency Theory explains the contractual relationship between the principal (company owner) and the agent (management) where there is a potential conflict of interest due to differences in objectives between the two parties. Jensen & Meckling, 1976 stated that an agency relationship is a contract in which one or more parties (principals) appoint another party (agent) to perform a service on their behalf, which includes delegating some decision-making authority to the agent. This conflict can create agency costs that arise from the need to monitor the behavior of managers and ensure that their actions remain in line with the owner's objectives. In this context, internal control functions as an effective monitoring tool to reduce agency risk. The internal control system allows company owners to gain confidence that financial reports are accurate, assets are protected, and operational activities are running according to procedures. As explained by Arens et al., 2017 , internal control is a method used by an entity to protect assets, ensure accurate and reliable accounting information, encourage efficiency, and encourage compliance with established managerial policies. Therefore, from the Agency Theory perspective, internal control is an important mechanism in agency risk management, which functions to prevent abuse of authority by management and reduce asymmetric information between owners and agents.

Risk Management Theory is a theory that discusses the systematic process of identifying, evaluating, and controlling risks that can hinder the achievement of organizational goals. In the context of an organization, risk management theory emphasizes the importance of controlling uncertainty to protect assets and maintain operational continuity. Enterprise risk management is a process carried out by the board of directors, management, and other personnel within an entity, which is applied in strategy setting and throughout the organization, designed to identify potential events that can affect the entity, and manage risks to be within an acceptable level of risk, in order to provide reasonable assurance of achieving the entity's goals (COSO, 2004) . The relationship between risk

management and internal control is very close. Internal control is part of the risk management system, which functions as a monitoring and mitigation mechanism for identified risks. In the COSO ERM framework, internal control is under the Control Activities component, which is a policy and procedure to ensure that risk mitigation actions are implemented effectively.

## METHODOLOGY

This study uses a structured literature review (SLR) method. SLR is a method for examining a collection of scientific literature to develop insights, critical reflections, and future research paths (Meutia et al., 2022) . This study refers to the guidelines provided by Kitchenham et al., 2010. These guidelines were originally developed to help researchers conduct SLR in the field of software engineering but have recently been adopted by review studies in several other studies such as those conducted by Turetken et al., 2020 ; Dikici et al., 2018; Kitchenham et al., 2010. Based on this, researchers use leading electronic databases, namely Emerald and ScienceDirect which are indexed by Scopus by setting inclusion and exclusion criteria with the keywords Internal Control Quality, Internal Control Effectiveness, Internal Control Weakness, and Risk Management published in English from 2000-2025 and indexed by Scopus with the final results obtained 20 studies. The research articles obtained cover the financial and non-financial sectors.

The results of the journal search can be seen in Figure I below with the following steps:

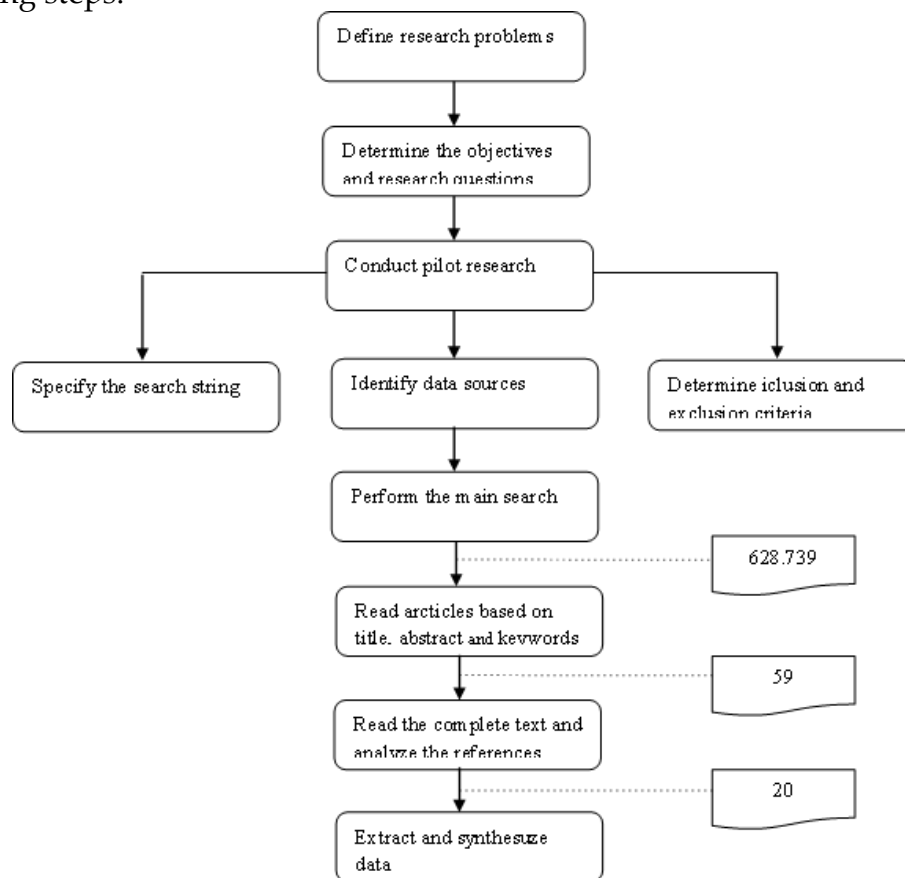


Figure 1. SLR Protocol

## RESEARCH RESULT

The SLR includes 20 articles discussing the role of internal control in risk management. The following will explain in detail the results obtained.

### *Research Analysis of the Role of Internal Control in Risk Management*

This section provides information related to the analysis that has been found with a focus on the identity and results of the research, research paradigm, list of research journal sources, and country of research, research object, theory used in the research, and variables used.

### *Identity and Research Results*

**Table 1. Identity and Research Results**

No	Title	Writer	Research result
1	Risk appetite management, internal control and corporate financialization	Jin, 2024	Empirical analysis shows that there is a significant positive relationship between management risk appetite and corporate financialization. In addition, the results of the moderation effect highlight that corporate internal control plays a negative moderating role between management risk appetite and financialization.
2	Internal controls, risk management, and cash holdings	Chen et al., 2020	The results show that companies with higher internal control quality (ICQ) are less likely to have abnormal cash holdings, either excess cash or deficit, and this effect is not driven by corporate governance quality.
3	Concentration of supply chain, internal control, and corporate risk-taking	Li et al., 2025	The findings reveal a significant positive relationship between supply chain concentration and the level of corporate risk taking. In particular, internal control plays an important moderating role in this relationship, effectively reducing the level of risk taking.

No	Title	Writer	Research result
4	Board of directors' internationalization, internal control quality, and corporate litigation risk	Wang, Meng, et al., 2025	The findings reveal that increased board internationalization is correlated with increased firm litigation risk, while improved internal control quality reduces such risk. In particular, the effect of board internationalization on litigation risk varies significantly across firms with different ownership structures.
5	Credit default risk, internal control and stock returns	Tian, 2024	Companies with high internal control quality motivate companies to implement effective risk management and reduce the impact of credit default risk on company operations compared to state-owned companies.
6	Internal control risk disclosure, media coverage and stock price crash risk: Evidence from China	Zhu et al., 2024	Our findings reveal that effective internal control risk disclosure plays an important role in reducing the risk of a company's stock price falling.
7	The impact of guarantee network on the risk of corporate stock price crash: Discussing the moderating effect of internal control quality	Yu et al., 2024	Empirical analysis leads to the following conclusions: the collateral network can significantly increase the risk of a company's stock price falling; the quality of internal control plays a positive moderating role between the collateral network and the risk of a company's stock price falling.
8	Does the risk aversion of accountant matter? Female rank-and-file accounting employees and internal control quality	Liang et al., 2024	Risk aversion of ordinary accounting employees, as represented by the proportion of female accountants, is negatively associated with the likelihood of internal control weaknesses. The results are incremental when controlling for other accounting employee

No	Title	Writer	Research result
			characteristics, such as experience and quality, which are also associated with fewer internal control weaknesses.
9	Fintech adoption, internal control quality and bank risk taking: Evidence from Chinese listed banks	He et al., 2023	The results show that fintech adoption by banks can effectively reduce bank risk taking, but this dampening effect is only significant among state-owned banks, small and medium-sized banks, and banks with a high share of non-interest income.
10	Supervisory board, internal control quality, and earnings management	Zheng & Han, 2025	The direct and indirect oversight function of the board suppresses earnings management practices, mainly through increasing management incentives and external audit quality. These two factors strengthen the effectiveness of board oversight of accrual-based earnings management, but have little effect on real earnings management.
11	Media attention, internal control quality, and legal litigation	Tang & Tang, 2025	media attention significantly improves the quality of a company's internal control. In addition, high-quality internal control effectively reduces the risk of legal litigation for the company. In addition, media attention plays a significant moderating role between the quality of internal control and the risk of legal litigation.
12	Internal Control Effectiveness, Textual Risk Disclosure, and Their Usefulness: US Evidence	Elsayed & Elshandidy, 2021	Companies with ineffective internal controls have lower levels of risk disclosure (TRD) and show significant changes in disclosure behavior, especially in cases of repeated internal weaknesses.

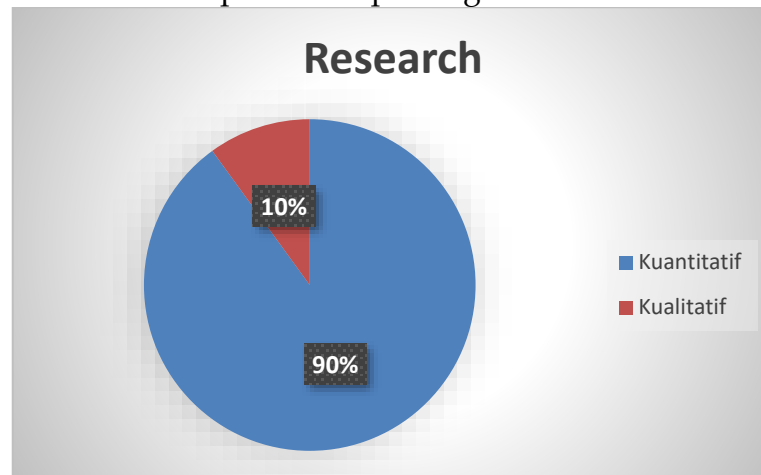
No	Title	Writer	Research result
13	Internal control, risk and Shari'ah non-compliant income in Islamic financial institutions	Hanefah et al., 2020	Companies with ineffective internal controls tend to have lower levels of Total Risk Disclosure (TRD) than companies with effective internal controls. In addition, there is a significant change in the pattern of risk disclosure in companies with repeated internal control weaknesses.
14	Risk Management and Internal Control: A Study of Management Accounting Practice	Bento et al., 2018	An effective internal control system improves the organization's ability to manage risks in a more structured and organized manner.
15	The Role of Internal Audit in Risk Management from the Perspective of Risk Managers in the Banking Sector	Tamimi, 2021	The efficiency of risk managers is a key factor in risk management, and internal audit plays a role in evaluating and ensuring the effectiveness of these practices. In addition, in Palestinian banks, the internal audit department also contributes by providing advice and recommendations to the risk management department.
16	The effect of internal controls on financial reporting quality in Iranian family firms	Lari Dashtbayaz et al., 2019	The results of the study indicate that internal control weaknesses have a significant negative relationship with the quality of financial reporting. In other words, internal control weaknesses reduce the quality of financial reporting.
17	The association between corporate governance guidelines and risk management and internal control practices Evidence from a comparative study	Sarens & Christopher, 2010	That the weaker focus of Belgian corporate governance guidelines on risk management and internal control is associated with the less developed risk management and internal control systems in Belgian

No	Title	Writer	Research result
			companies compared to Australian companies.
18	Examining government officials' perceived risk management and internal control in combating fraud in the public sector	Ilias et al., 2024	This study revealed that risk assessment, control measures, and information and communication have a positive impact on preventing fraudulent activities.
19	Corporate governance and risk management in Islamic and conventional financial institutions: explaining the role of institutional quality	Rashid et al., 2024	The results provide strong evidence that some individual CG characteristics and composite indices are significantly related to operational risk, liquidity risk, and Z-score (a proxy for solvency risk). The results also reveal that IQ contributes significantly and substantially to reducing the level of risk.
20	Relevance of internal controls for risk management: empirical evidence from the perception of its executives and reviewers in a multinational company	Beuren et al., 2023	The perceived relevance of internal control by subsidiaries directly and positively influences the perceived relevance of their special and standardized reporting for all subsidiaries.

The studies in the table show that internal control plays a very important role in corporate risk management. In general, good internal control quality has been proven to be able to reduce various forms of risk such as the risk of aggressive financial decision-making, the risk of legal litigation, the risk of falling stock prices, and weaknesses in financial reporting. These statements can be proven from the results of research contained in articles written by Jin, 2024 ; Li et al., 2025; Wang et al., 2025 ; Zhu et al., 2024 ; Yu et al., 2024 ; He et al., 2023 ; Tang & Tang, 2025 ; Elsayed & Elshandidy, 2021 ; Lari Dashtbayaz et al., 2019. These studies empirically show that strong internal control acts as a tool to mitigate strategic and operational risks for companies.

### Research Paradigm

In the research conducted using the SLR approach, there is research that uses both quantitative and qualitative paradigms.

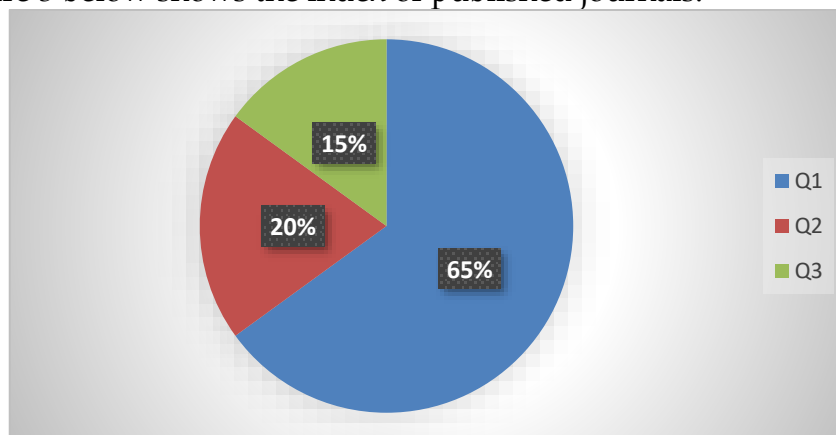


**Figure 2. Research Paradigm**

Figure 2 shows the research paradigm of 20 research journals selected through the process described previously. A total of 18 studies used a quantitative approach, and 2 studies used a qualitative approach. The qualitative approach was used in the studies written by Hanefah et al., 2020 and Beuren et al., 2023 .

### Journal Source

Figure 3 below shows the index of published journals.

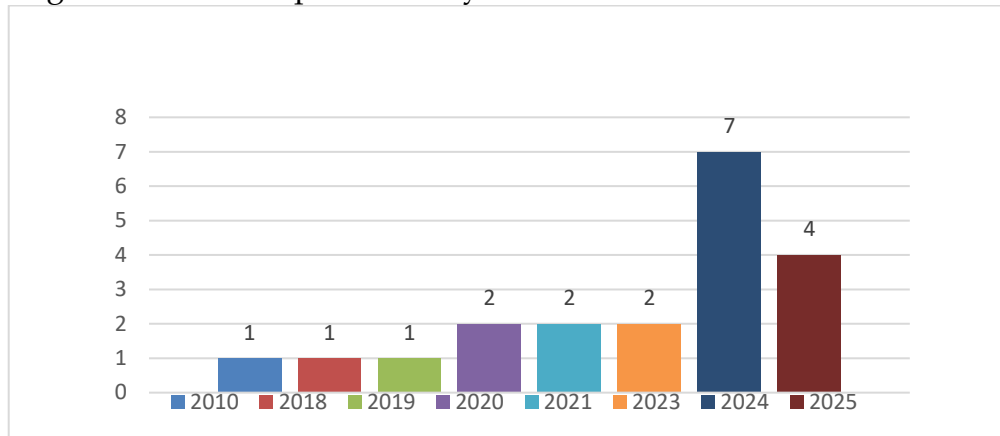


**Figure 3. Journal Source**

Figure 3 shows the reputation of journals indexed by Scopus with details of journals indexed by Q1, Q2, and Q3 totaling 13, 4, and 3 respectively. Six publications appeared in Finance Research Letters with index Q1, and for other journals including Journal of Corporate Finance, Advances in Accounting, and Journal of Islamic Accounting and Business Research indexed by Q2 and for journals indexed by Q3 including ISRA International, Journal of Islamic Finance, Advances in Management Accounting, and Edelweiss Applied Science and Technology. And for others are spread across other journals.

### **Publication Year**

Figure 4 shows the publication year of the research articles.



**Figure 4. Year of Publication of Article**

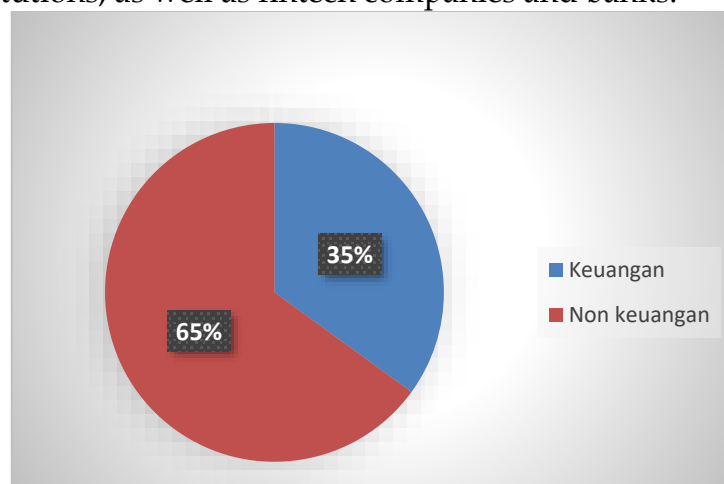
Figure 4 shows the most published articles in 2024, namely 7 research articles, then in 2025 there were 4 articles, in 2020, 2021, and 2023 there were 2 articles, and in 2010, 2018, 2019 there was 1 research article each.

### **Research Year and Research Country**

The first research was conducted from 2003 to 2023. The time span of the research conducted by the authors varies, some conducted their research for ten years, more than ten years, less than ten years, and some even conducted their research for only one year such as the research conducted by Hanefah et al., 2020 in 2018 in Malaysia; Bento et al., 2018 in 2017 in the United States; Beuren et al., 2023 in 2023 in Brazil. The sample of research countries is dominated by China, which consists of seven studies written by Jin, 2024 ; Li et al., 2025 ; Wang et al., 2025 ; Tian, 2024 ; He et al., 2023 ; Zheng & Han, 2025 ; and Tang & Tang, 2025 .

### **Research Object**

Figure 5 below shows the research objects consisting of the banking sector, financial institutions, as well as fintech companies and banks.



**Figure 5. Research Sector**

Figure 5 above shows the research objects that move in the non-financial sector, totaling 13 articles (65%) and the financial sector, totaling 7 articles (35%). Research articles whose objects move in the financial research sector are in research written by Jin, 2024 ; Chen et al., 2020 ; He et al., 2023 ; Hanefah et al., 2020 ; Tamimi, 2021 ; Lari Dashtbayaz et al., 2019 ; and Rashid et al., 2024 .

### Research Theory

Figure 6 shows various theories related to this research topic.

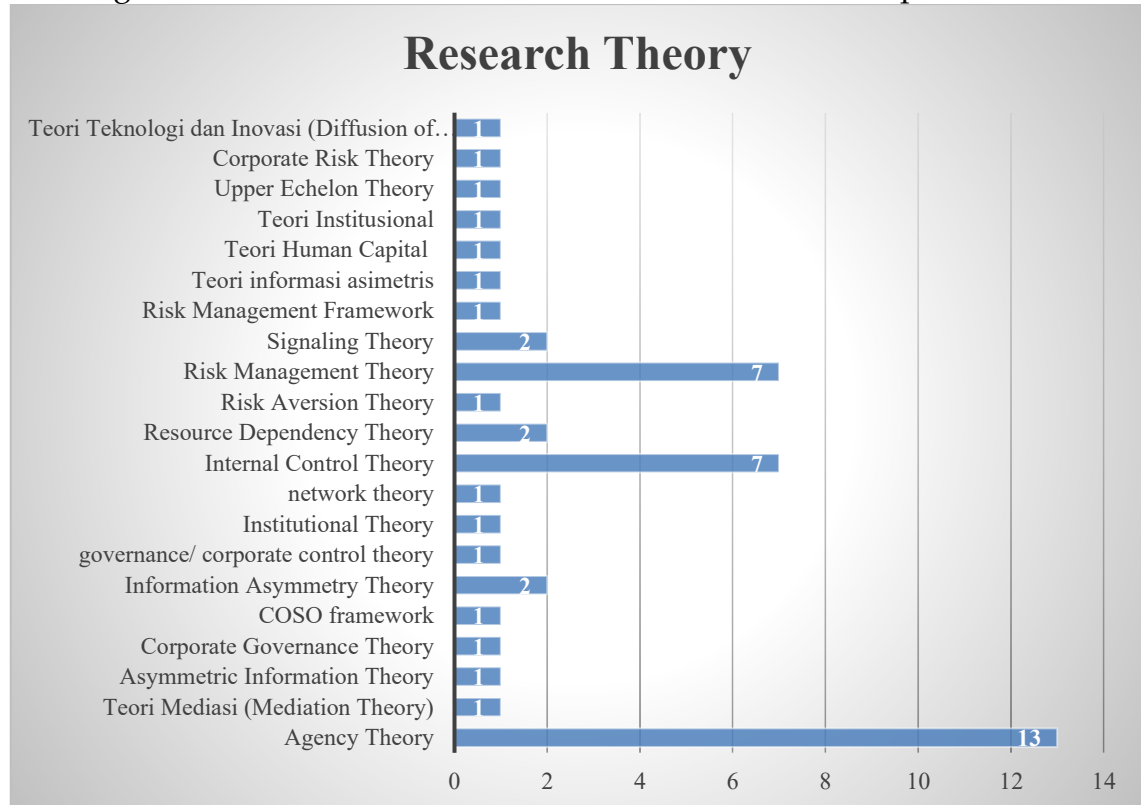


Figure 6. Research Theory

The image above shows the theories used in 20 research articles. The most widely used theories are Agency theory used in 13 research articles, Internal Control Theory and Risk Management Theory used in 7 research articles. Signaling theory, Resource Dependency theory and information asymmetry theory are found in 2 research articles. Then the rest use other theories.

### Research Variables

Table 2 below shows the various variables used from the studies that have been collected that are related to the topic of this SLR research.

**Table 2. Research Variables**

No	Independent	Moderation	Mediation	Dependent
1	Management Risk Appetite (MRP)	Internal Quality Control (ICINDEX)		Corporate Financialization (FINHOLD).
2	Internal Control Quality (ICQ)	Corporate Governance Index, Marketization, Noise, Ownership Concentration, Financial Constraint, High Growth Firms		Abnormal Cash Holdings (AbCASH).
3	Supply chain concentration	Internal control		Enterprise risk taking.
4	Board internationalization (global) and Internal control quality (interq)	Internal quality control (interq)		Corporate litigation risk.
5	Credit default risk (Default)	Internal quality control (Dib)		Stock Return (Return).
6	Internal control risk disclosure	Internal control risk disclosure	Media coverage	Stock price crash risk.
7	Guarantee Network	Quality of Internal Control		Stock Price Crash Risk.
8	% Female_Acct			Internal Control Weakness (ICW).
9	Fintech Adoption (FT)		Internal Control Quality (ICQ)	Bank Risk Taking (Risk).
10	Supervisory Board Size (Supsize)	Management Incentives (MI) External Audit Quality (EAQ)	Internal Control Quality (IC)	Earnings Management.
11	Media attention		Internal Control Quality (IC)	Legal Litigation.
12	Internal Control Effectiveness			Textual Risk Disclosure.

No	Independent	Moderation	Mediation	Dependent
13	Internal Control (Internal Control)	Risk		Shari'ah Non-Compliant Income.
14	The Role of Management Accountants, Internal Control, Information Systems and Technology Support, Risk Culture in Organizations			Effectiveness of Enterprise Risk Management.
15	The role of internal audit	The role of internal audit		Effectiveness of Risk Management.
16	Internal Controls			Financial Reporting Quality.
17	Corporate Governance Guidelines			Risk Management and Internal Control Practices.
18	Risk Management Perception, Internal Control Perception			Fraud Prevention.
19	Corporate Governance (CG)		Institutional Quality (IQ)	Risk Management.
20	Internal control			Risk Management.

Table 2 shows the various types of variables used for the study. Internal control quality variables as independent are used in studies written by Chen et al., 2020 ; Wang et al., 2025 ; Zhu et al., 2024 ; Bento et al., 2018 ; Lari Dashtbayaz et al., 2019 ; and Beuren et al., 2023; internal control quality variables as moderation are used in studies written by Jin, 2024 ; Li et al., 2025 ; Wang et al., 2025 ; Tian, 2024 ; Zhu et al., 2024 ; and Yu et al., 2024 ; internal control quality variables as mediation are used in studies written by He et al., 2023 ; Zheng & Han, 2025 ; and Tang & Tang, 2025 , and the internal control weakness variable as the dependent variable used in the study written by Liang et al., 2024 .

## **DISCUSSION**

Through a systematic literature review approach to 20 selected articles, it was found that internal control plays a crucial role in supporting the implementation of effective risk management in various sectors, both financial and non-financial. High-quality internal control has been shown to minimize various types of risks, including financial risk, litigation, stock price declines, and weaknesses in financial reporting. Several studies such as those conducted by Jin, 2024; Chen et al., 2020; and Zhu et al., 2024 show that the internal control function is not just an administrative mechanism, but also an important strategy in corporate decision-making based on risk management. In many studies, the variable of internal control quality has also been shown to be a moderating and mediating variable that strengthens the relationship between risk and organizational performance outcomes.

The majority of the studies reviewed used a quantitative approach to empirically measure the relationship between variables, although there were also qualitative approaches that provided an in-depth perspective on practitioners' perceptions of the effectiveness of control systems. The reputation of the journals that were the sources of data was relatively high because the majority were indexed in Scopus Q1 and Q2 journals, strengthening the validity of the findings. Although the focus of the studies varied, most of the research objects came from the non-financial sector. From a theoretical perspective, agency theory is the dominant framework in explaining the role of internal control as a monitoring tool that aims to reduce the risk of conflict between owners and management. In addition, the variable of internal control quality emerged as an important element, both as an independent variable, moderation, and mediation, which shows its central role in driving the effectiveness of risk management. Thus, the findings of this study confirm that strengthening an effective, adaptive, and sustainable internal control system is very important for organizations in responding to various risks and maintaining operational continuity and healthy governance.

## **CONCLUSIONS AND RECOMMENDATIONS**

Through a systematic review of 20 research articles, it can be concluded that the internal control system plays an important role in improving the effectiveness of risk management in various sectors, both financial and non-financial. Internal control not only functions as an administrative procedure, but also as a strategic tool in the decision-making process, which is able to reduce various types of risks such as financial, legal, stock price decline, and reporting weaknesses. In various studies, the quality of internal control has been shown to play a role as a key variable either as a causal, intermediary, or reinforcing factor – which shows its central role in risk management. Most studies use a quantitative approach with agency theory as a basis, which emphasizes the function of internal control as a monitoring mechanism to reduce conflicts between owners and management. Thus, responsive, systematic, and sustainable internal control improvements are needed to support good governance practices and organizational resilience to ever-changing risks.

Based on the findings that the quality and effectiveness of internal control significantly affect risk management in various sectors, it is recommended that organizations actively improve the capacity of internal control systems, either through investment in information technology, strengthening human resource competencies, or developing supervisory policies that are more adaptive to contemporary risk dynamics. Companies also need to make internal control not just an administrative procedure, but an integral part of the decision-making strategy. On the other hand, the government and regulatory authorities are advised to continue to strengthen regulations that encourage transparency and accountability through risk reporting and disclosure of internal control weaknesses.

### **ADVANCED RESEARCH**

To deepen the understanding of the relationship between internal control and risk management, further research directions need to focus on several important aspects. First, cross-country longitudinal research is needed to observe how the effectiveness of internal control evolves in the face of various global crises such as pandemics, technological disruptions, or economic instability, which affect organizational resilience. Second, a mixed methods approach—which combines quantitative and qualitative data—needs to be developed in order to capture both the empirical side and the subjective perspectives of actors in the internal control system. Third, exploration of non-financial risks such as reputation risk, environmental and social sustainability (ESG) risk, and cyber risk is still widely open for research, given the new challenges faced by organizations in the digital and globalization era. Fourth, further studies are also recommended to test the role of other mediating and moderating variables, such as organizational culture, competitive pressures, and stakeholder trust, which have the potential to strengthen or weaken the influence of internal control on the effectiveness of risk management. Thus, future research is expected to provide a broader contribution to both the development of science and the practice of risk management at the organizational level.

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