

# INNOVATIVE APPROACHES TO TOURISM RISK MANAGEMENT: INCREASING RESILIENCE AND ADAPTATION TO CRISIS

Marbawi<sup>1</sup>, Nurfaliza<sup>2</sup>, Aiyub Yahya<sup>3</sup>

<sup>1,2,3</sup>Faculty of Economics and Business, Universitas Malikussaleh

Corresponding Email: [marbawi@unimal.ac.id](mailto:marbawi@unimal.ac.id), [Nurfaliza@unimal.ac.id](mailto:Nurfaliza@unimal.ac.id), [aiyub@unimal.ac.id](mailto:aiyub@unimal.ac.id)

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## Abstract

*The tourism industry is increasingly vulnerable to various crises, such as natural disasters, political instability, and health emergencies. Traditional risk management approaches often focus on reactive measures and short-term solutions, failing to address the root causes of vulnerability and build long-term resilience. This study explores the limitations of traditional tourism risk management practices and investigates the potential of innovative strategies to enhance the resilience and adaptability of the tourism sector in the face of crises. Through a comprehensive literature review, the study identifies key characteristics of innovative risk management approaches, including proactive planning, systems thinking, adaptive management, and multi-stakeholder collaboration. The findings highlight the importance of effective governance structures, strong leadership, and a culture of learning and knowledge sharing in the successful implementation of these strategies. The study also reveals the critical role of technology and digital tools in enhancing resilience and adaptability, as well as the potential of community-based approaches to risk management. However, the research acknowledges the need for further investigation into the factors that enable or hinder the adoption of innovative practices in different tourism contexts, as well as the specific challenges posed by different types of crises. The study concludes by emphasizing the importance of a holistic and proactive approach to tourism risk management, engaging diverse stakeholders, and fostering a culture of resilience and adaptability. The findings provide valuable insights for tourism practitioners, policymakers, and researchers seeking to develop more effective and sustainable risk management strategies in the face of an increasingly complex and uncertain global environment.*

**Keywords:** *tourism risk management, resilience, adaptability, crisis management, innovative strategies*

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## 1. INTRODUCTION

The tourism industry is highly susceptible to various risks and crises, such as natural disasters, political instability, economic downturns, and health emergencies (Ritchie & Jiang, 2019). These events can have severe consequences for tourism destinations, businesses, and communities, leading to declining visitor numbers, revenue losses, and damage to infrastructure and reputation (Sönmez et al., 2019). The COVID-19 pandemic has further highlighted the vulnerability of the tourism sector and the need for effective risk management strategies (Gössling et al., 2020). Traditional approaches to tourism risk management have often focused on reactive measures and short-term solutions, failing to address the underlying factors that contribute to the industry's vulnerability (Hall, 2010). Therefore, there is a growing recognition of the importance of developing innovative and proactive approaches to enhance the resilience and adaptability of the tourism sector in the face of crises (Prayag, 2018).

While previous research has examined various aspects of tourism risk management, there is a lack of a comprehensive theoretical framework that integrates the concepts of resilience and adaptation in the context of crisis management (Prayag, 2018). Existing theories, such as the disaster management framework (Faulkner, 2001) and the tourism disaster management framework (Ritchie, 2004), provide valuable insights but do not adequately address the dynamic and complex nature of contemporary crises (Möller et al., 2018). This study aims to bridge this theoretical gap by proposing a new framework that incorporates innovative approaches to risk management and emphasizes the importance of building resilience and adaptive capacity in the tourism sector. Empirical studies on tourism risk management have primarily focused on specific case studies or individual crisis events, such as natural disasters (Tsai & Chen, 2011), terrorism (Saha & Yap, 2014), or economic crises (Papatheodorou et al., 2010). However, there is a lack of comparative research that examines the effectiveness of different risk management strategies across various types of crises and tourism contexts (Ritchie & Jiang, 2019).

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Furthermore, limited empirical evidence exists on the factors that influence the successful implementation of innovative risk management practices in the tourism industry (Prayag, 2018). This study aims to address these empirical gaps by conducting a cross-case analysis of innovative risk management approaches in different tourism settings and identifying the critical success factors for their implementation. The novelty of this research lies in its holistic approach to tourism risk management, which integrates the concepts of resilience and adaptation in the context of crisis management. By proposing a new theoretical framework and conducting a comparative analysis of innovative risk management strategies, this study contributes to the advancement of knowledge in the field of tourism risk management. The identification of critical success factors for implementing innovative practices also provides practical implications for tourism stakeholders, enabling them to develop more effective and proactive risk management strategies. Furthermore, the findings of this study can inform policy development and decision-making processes, promoting a more resilient and adaptable tourism sector in the face of future crises.

**1.2 Problem Formulation**

The main research problem addressed in this study is the lack of effective and innovative approaches to tourism risk management that can enhance the resilience and adaptability of the industry to various crises. Specific research questions include:

1. What are the limitations of traditional tourism risk management approaches in addressing the challenges posed by crises?
2. How can innovative risk management strategies contribute to increasing the resilience and adaptability of the tourism sector?
3. What are the key factors that influence the successful implementation of innovative risk management practices in the tourism industry?

**1.3 Research Objectives**

The primary objectives of this research are:

1. To critically analyze the limitations of traditional tourism risk management approaches in dealing with crises.
2. To explore and evaluate innovative risk management strategies that can enhance the resilience and adaptability of the tourism sector.
3. To identify the key factors that facilitate or hinder the successful implementation of innovative risk management practices in the tourism industry.

**2. LITERATUR REVIEW****2.1 Tourism Risk Management****2.1.1 Definition and Scope**

Tourism risk management is a systematic approach to identifying, assessing, and mitigating potential threats and vulnerabilities that may affect the tourism industry (Ritchie, 2009). It encompasses a wide range of risks, including natural disasters, political instability, economic crises, health emergencies, and security threats (Sönmez et al., 1999). Effective risk management strategies are essential for minimizing the negative impacts of crises on tourism destinations, businesses, and communities (Ritchie & Jiang, 2019).

**2.1.2 Traditional Approaches and Limitations**

Traditional approaches to tourism risk management have often focused on reactive measures, such as crisis communication and recovery efforts, rather than proactive planning and preparedness (Faulkner, 2001). These approaches have been criticized for their short-term focus and failure to address the underlying factors that contribute to the industry's vulnerability (Hall, 2010). Moreover, traditional risk management strategies have often been based on a narrow view of risks, focusing primarily on specific hazards rather than considering the complex interactions between different types of risks (Möller et al., 2018).

**2.2 Resilience in Tourism****2.2.1 Concept and Dimensions**

Resilience in tourism refers to the capacity of tourism systems to absorb disturbances, adapt to changing conditions, and maintain essential functions and structures in the face of crises (Prayag, 2018). It is a

multidimensional concept that encompasses economic, social, environmental, and institutional aspects (Lew, 2014). Building resilience in tourism requires a holistic approach that considers the interdependencies between different stakeholders and the broader context in which tourism operates (Cochrane, 2010).

### **2.2.2 Factors Influencing Resilience**

Several factors have been identified as critical for enhancing resilience in tourism, including diversity, connectivity, adaptability, and collaboration (Biggs et al., 2012). Diversity refers to the variety of tourism products, markets, and stakeholders, which can provide a buffer against shocks and stresses (Espiner et al., 2017). Connectivity involves the linkages and networks between different actors in the tourism system, which can facilitate information sharing and collective action (Luthe & Wyss, 2014). Adaptability relates to the capacity of tourism stakeholders to learn from experiences, adjust their strategies, and innovate in response to changing conditions (Prayag, 2018). Collaboration among tourism stakeholders, including public and private sectors, is essential for coordinating risk management efforts and building resilience (Pennington-Gray et al., 2011).

## **2.3 Adaptation in Tourism**

### **2.3.1 Concept and Strategies**

Adaptation in tourism refers to the process of adjusting to actual or expected changes and their effects, in order to moderate harm or exploit beneficial opportunities (IPCC, 2014). Adaptation strategies can be classified into three main categories: coping, incremental adaptation, and transformational adaptation (Kajan & Saarinen, 2013). Coping strategies involve short-term adjustments to deal with immediate impacts, while incremental adaptation involves more systematic changes to existing practices and structures (Becken & Hay, 2012). Transformational adaptation, on the other hand, involves fundamental changes in the tourism system, such as shifting to new business models or destinations (Lew & Cheer, 2018).

### **2.3.2 Barriers and Enablers**

Various barriers and enablers have been identified in the literature that influence the adoption and effectiveness of adaptation strategies in tourism. Barriers include lack of awareness and knowledge, limited financial and human resources, institutional constraints, and conflicting stakeholder interests (Becken et al., 2013). Enablers, on the other hand, include strong leadership, effective communication and coordination, access to information and technology, and supportive policies and regulations (Moyle et al., 2018). Overcoming these barriers and leveraging enablers is crucial for successful adaptation in the tourism sector (Nguyen et al., 2019).

## **2.4 Innovative Approaches to Tourism Risk Management**

### **2.4.1 Integrating Resilience and Adaptation Innovative**

Integrating Resilience and Adaptation Innovative approaches to tourism risk management emphasize the integration of resilience and adaptation principles into crisis planning and response (Hall et al., 2018). This involves a shift from reactive to proactive strategies, focusing on building the capacity of tourism systems to withstand and recover from shocks, while also adapting to long-term changes (Orchiston et al., 2016). Integrating resilience and adaptation requires a systems perspective that considers the complex interactions between different components of the tourism sector and the broader socio-ecological context (Becken, 2013).

### **2.4.2. Collaborative and Participatory Approaches**

Collaborative and participatory approaches are key elements of innovative tourism risk management (Jiang & Ritchie, 2017). These approaches involve engaging a wide range of stakeholders, including tourism businesses, government agencies, local communities, and tourists, in the process of risk assessment, planning, and decision-making (Pennington-Gray et al., 2015). Collaborative risk management can lead to more effective and inclusive strategies that reflect the diverse needs and perspectives of different stakeholders (Dredge & Jamal, 2015). Participatory approaches also promote social learning and capacity building, which are essential for enhancing resilience and adaptation in the face of crises (Tsao & Ni, 2016).

### **2.4.3 Technology and Innovation Technology**

Technology and Innovation Technology and innovation play a crucial role in enabling innovative approaches to tourism risk management (Gretzel et al., 2015). Advances in information and communication

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technologies (ICTs), such as social media, mobile applications, and big data analytics, can enhance situational awareness, early warning systems, and crisis communication (Sigala, 2018). Innovative technologies, such as virtual and augmented reality, can also be used for training and simulation exercises, improving preparedness and response capabilities (Ivanov et al., 2019). Moreover, technological innovations can support the development of new business models and services that are more resilient and adaptable to changing market conditions (Boes et al., 2016).

**3. RESEARCH METHODOLOGY****3.1 Research Type**

This study employs a quantitative research approach to investigate innovative approaches to tourism risk management, focusing on strategies that enhance resilience and adaptation to crises. Quantitative research involves the collection and analysis of numerical data to draw conclusions and test hypotheses (Creswell & Creswell, 2018). This approach allows for a systematic and objective examination of the relationships between key variables and the identification of patterns and trends in the existing literature.

**3.2 Data and Data Sources****3.2.1 Secondary Data**

The research relies on secondary data, which refers to data that has been collected and published by other researchers or organizations (Johnston, 2017). Secondary data is a valuable resource for quantitative research, as it provides a cost-effective and time-efficient means of accessing a large volume of relevant information (Vartanian, 2011). In this study, secondary data is obtained from various sources, including academic journals, conference proceedings, industry reports, and government publications.

**3.2.2 Article Data**

Sources The primary sources of data for this research are academic journal articles. Articles are selected from reputable databases, such as ScienceDirect, Taylor & Francis Online, Sage Journals, and Emerald Insight, which cover a wide range of disciplines related to tourism, risk management, resilience, and adaptation. The selection of articles is based on specific criteria, including relevance to the research topic, publication date (prioritizing recent studies), and the quality of the journal (assessed through impact factors and peer-review processes).

**3.2.3. Reference Books**

In addition to journal articles, reference books are consulted to provide a broader understanding of the key concepts and theories related to tourism risk management, resilience, and adaptation. Reference books are selected based on their relevance, authoritativeness, and currency. These books offer in-depth insights into the historical development of the field, seminal works, and influential frameworks and models.

**3.3 Data Analysis Method****3.3.1 Qualitative Method:**

In-depth Literature Study The data analysis method employed in this research is a qualitative approach, specifically an in-depth literature study. Qualitative research aims to provide a rich and nuanced understanding of a phenomenon by exploring the meanings, experiences, and perspectives of individuals or groups (Merriam & Tisdell, 2016). In the context of this study, an in-depth literature study involves a systematic and critical review of the existing literature on innovative approaches to tourism risk management, resilience, and adaptation.

**3.3.2 The in-depth literature**

Study follows a structured process, including: a. Searching for relevant literature using keywords and Boolean operators b. Screening and selecting articles based on inclusion and exclusion criteria c. Analyzing and synthesizing the content of the selected articles d. Identifying key themes, concepts, and relationships e. Critically evaluating the findings and identifying gaps in the current knowledge f. Drawing conclusions and formulating recommendations for future research and practice

## **4. RESEARCH RESULTS**

### **4.1 Limitations of Traditional Tourism Risk Management Approaches**

Reactive and Short-term Focus The analysis of the literature reveals that one of the primary limitations of traditional tourism risk management approaches is their reactive and short-term focus (Faulkner, 2001; Ritchie, 2009). Many destinations and businesses tend to respond to crises only after they occur, rather than proactively planning and preparing for potential risks (Prideaux et al., 2003). This reactive approach often leads to inadequate and ineffective crisis management strategies, as stakeholders are caught off guard and lack the necessary resources and capabilities to cope with the situation (Hystad & Keller, 2008).

#### **4.1.2 Lack of Holistic and Systemic Perspective**

Another significant limitation identified in the literature is the lack of a holistic and systemic perspective in traditional risk management approaches (Becken, 2013; Calgaro et al., 2014). Tourism is a complex and interconnected system, involving multiple stakeholders, sectors, and dimensions (Hall, 2010). However, traditional approaches often focus on isolated risks and fail to consider the interdependencies and cascading effects of crises (Möller et al., 2018). This narrow view hinders the development of comprehensive and integrated risk management strategies that address the root causes of vulnerability and build system-wide resilience (Lew, 2014).

#### **4.1.3 Insufficient Stakeholder Collaboration and Communication**

The literature also highlights the insufficient stakeholder collaboration and communication in traditional risk management practices (Jiang & Ritchie, 2017; Pennington-Gray et al., 2015). Effective crisis management requires the involvement and coordination of diverse stakeholders, including government agencies, tourism businesses, local communities, and tourists (Dredge & Jamal, 2015). However, traditional approaches often suffer from fragmented and siloed decision-making processes, leading to duplication of efforts, conflicting actions, and lack of trust among stakeholders (Morakabati et al., 2017). This lack of collaboration and communication hinders the development of collective resilience and adaptive capacity in the face of crises (Orchiston et al., 2016).

## **4.2 Contribution of Innovative Risk Management Strategies to Resilience and Adaptability**

### **4.2.1 Proactive and Long-term Planning**

Innovative risk management strategies emphasize the importance of proactive and long-term planning (Ritchie, 2008; Tsai & Chen, 2011). By anticipating and assessing potential risks, destinations and businesses can develop contingency plans, allocate resources, and build capacities before crises occur (Méheux & Parker, 2006). Proactive planning allows for a more rapid and effective response to crises, minimizing the negative impacts and facilitating faster recovery (Mair et al., 2016). Moreover, long-term planning enables the identification of underlying vulnerabilities and the development of strategies to address them, enhancing the overall resilience of the tourism system (Lew & Cheer, 2018).

#### **4.2.2 Systems Thinking and Adaptive**

Management Innovative risk management approaches adopt a systems thinking perspective and emphasize adaptive management (Becken, 2013; Farrell & Twining-Ward, 2005). By recognizing the complex and dynamic nature of tourism, these approaches consider the interactions and feedbacks between different elements of the system (Baggio, 2008). Adaptive management involves continuous monitoring, learning, and adjustment of strategies based on new information and changing circumstances (Gunderson, 1999). This flexible and iterative approach enables tourism stakeholders to respond more effectively to the evolving nature of crises and to build adaptive capacity over time (Biggs et al., 2012).

#### **4.2.3 Multi-Stakeholder Collaboration and Co-Creation**

Innovative risk management strategies prioritize multi-stakeholder collaboration and co-creation (Dredge & Jamal, 2015; Jiang & Ritchie, 2017). By engaging diverse stakeholders in the process of risk assessment, planning, and decision-making, these approaches foster a shared understanding of risks and a collective sense of responsibility for crisis management (Pennington-Gray et al., 2015). Collaborative platforms, such as public-private partnerships and community-based initiatives, enable the pooling of resources, knowledge, and expertise (Waugh &



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Straib, 2006). Moreover, co-creation processes allow for the integration of local knowledge and perspectives, leading to more context-specific and socially acceptable risk management strategies (Espiner & Becken, 2014).

**4.3 Key Factors Influencing the Successful Implementation of Innovative Risk Management Practices****4.3.1 Governance and Institutional Arrangements**

The literature identifies governance and institutional arrangements as critical factors influencing the successful implementation of innovative risk management practices (Dredge, 2015; Hall, 2011). Effective governance structures facilitate coordination, decision-making, and resource allocation among stakeholders (Beaumont & Dredge, 2010). Clear roles and responsibilities, transparent communication channels, and supportive policies and regulations are essential for enabling collaborative risk management (Waligo et al., 2013). Moreover, institutional arrangements, such as legal frameworks and funding mechanisms, provide the necessary incentives and resources for the adoption of innovative practices (Aall, 2011).

**4.3.2 Leadership and Champions**

Leadership and the presence of champions are also identified as key factors in the successful implementation of innovative risk management practices (Becken & Hughey, 2013; Nguyen et al., 2019). Strong and visionary leadership is essential for driving change, mobilizing resources, and fostering a culture of resilience and adaptability (Pforr & Hosie, 2008). Champions, who are individuals or organizations that actively promote and support innovative practices, play a crucial role in raising awareness, building capacity, and facilitating stakeholder buy-in (Hall & Baird, 2015). The commitment and actions of leaders and champions can serve as catalysts for the wider adoption of innovative risk management approaches (Sheppard & Williams, 2016).

**4.3.3 Knowledge Management and Learning**

Knowledge management and learning are identified as critical factors for the successful implementation of innovative risk management practices (Morakabati et al., 2020; Py`o & Saarinen, 2020). Effective knowledge management systems enable the collection, storage, and dissemination of information related to risks, vulnerabilities, and best practices (Ritchie, 2008). Sharing knowledge and experiences among stakeholders promotes mutual understanding, trust, and collective learning (Norris et al., 2008). Moreover, continuous learning, through monitoring and evaluation processes, allows for the refinement and adaptation of risk management strategies over time (Pelling et al., 2008). A culture of learning and knowledge sharing is essential for fostering innovation and building long-term resilience in the tourism sector (Filimonau & De Coteau, 2020).

**5. Conclusion**

This study explores the limitations of traditional tourism risk management approaches and investigates the potential of innovative strategies to enhance the resilience and adaptability of the tourism sector in the face of crises. The findings highlight the reactive, short-term focus, lack of holistic perspective, and insufficient stakeholder collaboration as major drawbacks of traditional risk management practices. In contrast, innovative approaches that emphasize proactive planning, systems thinking, adaptive management, and multi-stakeholder collaboration are shown to contribute significantly to building resilience and adaptive capacity in tourism destinations and businesses.

The research also identifies key factors that influence the successful implementation of innovative risk management practices, including governance and institutional arrangements, leadership and champions, and knowledge management and learning. Effective governance structures, supportive policies, and clear roles and responsibilities are essential for enabling collaborative risk management. Strong leadership and the presence of champions are crucial for driving change, mobilizing resources, and fostering a culture of resilience. Knowledge management systems and a culture of learning are vital for promoting innovation, sharing best practices, and facilitating continuous improvement in risk management strategies.

**Implications**

The findings of this study have important implications for tourism practitioners, policymakers, and researchers. Destination managers and tourism businesses should adopt a more proactive and holistic approach to risk management, considering the interdependencies and cascading effects of crises on the entire tourism system. Engaging in multi-stakeholder collaboration and co-creation processes can lead to more effective and socially

acceptable risk management strategies. Policymakers should focus on creating supportive institutional arrangements, such as legal frameworks and funding mechanisms, to incentivize the adoption of innovative risk management practices. They should also foster a culture of learning and knowledge sharing among tourism stakeholders to build long-term resilience. For researchers, this study highlights the need for further investigation into the factors that enable or hinder the implementation of innovative risk management practices in different tourism contexts. Future research could explore the role of technology and digital tools in enhancing resilience and adaptability, as well as the potential of community-based approaches to risk management. Longitudinal studies could provide valuable insights into the long-term effectiveness of innovative strategies in building resilience and adaptive capacity in the tourism sector.

### **Limitations**

This study has several limitations that should be acknowledged. First, the reliance on secondary data sources may limit the depth and contextual richness of the findings. Future research could benefit from primary data collection methods, such as interviews or surveys with tourism stakeholders, to gain more nuanced insights into their experiences and perspectives on risk management. Second, the study focuses on a broad conceptualization of crises and risks, which may overlook the specific challenges and requirements of different types of crises, such as natural disasters, political instability, or health emergencies. Further research could delve into the unique characteristics and implications of specific crisis types for tourism risk management. Additionally, the study primarily examines the supply-side perspective of tourism risk management, focusing on the strategies and actions of destinations and businesses. Future research could incorporate the demand-side perspective, exploring the role of tourists' risk perceptions, behavior, and decision-making in shaping the effectiveness of risk management strategies. Finally, the study's qualitative nature and reliance on a limited number of case studies may restrict the generalizability of the findings. Large-scale, quantitative studies could provide more representative and generalizable results, enabling comparisons across different tourism contexts and regions. Despite these limitations, this study makes a valuable contribution to the understanding of innovative approaches to tourism risk management and their potential to enhance resilience and adaptability in the face of crises. The findings provide a foundation for future research and offer practical insights for tourism stakeholders seeking to improve their risk management practices and build a more resilient and sustainable tourism sector.

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**INNOVATIVE APPROACHES TO TOURISM RISK MANAGEMENT: INCREASING RESILIENCE AND ADAPTATION TO CRISIS**

*Marbawi<sup>1</sup>, Nurfaliza<sup>2</sup>, Aiyub Yahya<sup>3</sup>*

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Every company will always try to achieve good conditions in running their business. To achieve a situation to achieve its goals, both long-term goals, namely being able to increase the value of the company and increasing the prosperity of owners or shareholders, as well as short-term goals, for example maximizing company profits with the resources it has. This is the main goal of companies going public or companies that are registered on the IDX. The financial sector is one group of companies that plays a role in the capital market because the financial sector supports the real sector in the Indonesian economy. Growing companies want good company value conditions, namely by maximizing shareholder prosperity.

The prosperity of shareholders will increase if the price of the shares they own also increases. Maximizing company value can be done by increasing earnings per share or earnings per share. The higher the earnings per

share of a company, the greater the value of the company. One approach to estimating the value of a company is to use the Price Earnings Ratio (PER). PER is a tool that helps investors make decisions by comparing the price per share with net profit per share to see whether investing in the company will be profitable (Angga & Dermawan, 2023). In 2020, most other industrial financial markets experienced significant declines due to the impact of the Covid-19 pandemic. The banking industry is an exception, with banking company share prices tending to increase at the beginning of the year. This was followed by a phenomenon that occurs in banking companies, namely that share prices fluctuate every year. There are several companies that have experienced deflation and inflation every year since the last five years, which has had an impact on the value of the company.

One of the factors that influences company value is profitability. Profitability is a very useful measure in looking at banking profits, because the profits generated by a company show the company's profitability (Yusra 2016 in Martha et al., 2023). The use of a company's equity and own capital to obtain profits is called profitability. The profitability ratio that functions and is often used to predict stock prices or stock returns is ROA or ROI. ROA or ROI is used to measure a company's effectiveness in generating profits by utilizing the assets it owns. Several previous research results found that profitability as measured by Return On Assets had a positive effect on company value in manufacturing companies listed on BEI in 2015-2017 and according to research (Khafifah et al., 2022) based on data the profitability variable could have a positive and significant effect. in influencing company value in banking companies on the Indonesian Stock Exchange during the Covid-19 pandemic. This is also related to research (Mangesti Rahayu et al., 2020) which states that actually every change in profitability ratios also affects company value, both positively and negatively. Liquidity can also affect company value. The use of owned Liquidity assets can describe a measure of a company's ability to pay its bills on time when the payment date arrives. In other words, this ratio is used to measure the company's ability to pay obligations that are due soon. From several previous studies, it was found that stating liquidity as measured by the current ratio was proven to have a significant impact on company value in the mining industry on the IDX (Tio & Prima, 2022) and different research results were also found which stated that liquidity had a negative and insignificant effect on company value. . This means that the higher the liquidity, the more likely it is to reduce the value of the company (Maulidah, 2020).

Then, capital structure can also influence the value of the company which is the composition of funding between equity (own funding) and debt in the company. The indicator used to determine the size of the capital structure used by a company uses the debt to equity ratio, which is a comparison between total debt and equity. From several previous studies, it was found that capital structure (DER) has a positive and significant effect on company value in banking companies listed on the Indonesian Stock Exchange (BEI) for the 2019 - 2021 period (Marsalena, 2023). The results of this research are in line with research conducted by (Wirianata & Wijoyo, 2020) indicating that capital structure has a significant effect on increasing company value in manufacturing industrial companies listed on the BEI from 2016 to 2018.

The fourth factor observed to see company value is firm size. Firm size is a scale where the size of the company can be classified according to various ways, including total assets, log size, stock market value, etc. (Luh et al., 2019). Based on the results of research conducted by several sources, firm size has an influence on company value. The larger the firm size, the higher the company value. The results of this study also support research by Luh et al. (2019) regarding "The Influence of firm Size and Leverage and Profitability on Company Value in Food and Beverages Companies on the IDX", where the results show that firm size has a simultaneous or significant effect on company value. This means that if the firm size variable increases it will increase the company value in food and beverages sub-sector companies. The results of this research are in line with research (Rohmah et al., 2019) which states that firm size has a significant effect on the value of case study companies at Sharia Commercial Banks in 2013-2017.

## 2. Research Method

This research was conducted on banking companies listed on the Indonesian Stock Exchange, namely 47 companies on the Indonesian Stock Exchange. Data is obtained by visiting the official website, namely [www.idx.co.id](http://www.idx.co.id), [www.britama.com](http://www.britama.com) and [www.finance.yahoo.com](http://www.finance.yahoo.com) The sampling method used purposive sampling so that a sample of 31 companies was obtained.

### 2.1 Operational Definition of Variables

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Company value is an investor's perception of the company's level of success in managing company resources entrusted to them which is often linked to share prices which reflect increased shareholder prosperity (Herwinda & Safri, 2023). The formula for calculating company value is:

$$PER = \frac{\text{Harga Saham}}{\text{Pendapatan Saham}} \dots\dots\dots(1)$$

Profitability is the ability of a company to obtain profits either from investments by the company or from sales of company investments or by utilizing their funding sources both internally and externally (Kusuma & Zainul, 2019). which is formulated as follows :

$$ROA = \frac{\text{Laba Bersih} \times 100\%}{\text{Total Aset}} \dots\dots\dots(2)$$

Liquidity is one of the financial ratios used with the aim of measuring a company's ability to pay debts or short-term obligations in a timely manner and to measure the company's ability to finance the company's operational activities (Azhar Cholil, 2021). The formula used is as follows :

$$CR = \frac{\text{Total Aset Lancar}}{\text{Total Kewajiban Lancar}} \dots\dots\dots(3)$$

Capital Structure is Capital structure is the mix of long-term funding sources used by a company. Good fund management will also have a good impact on the company (Novitasari, 2021). The formula used is as follows :

$$DER = \frac{\text{Total Utang}}{\text{Ekuitas}} \dots\dots\dots(4)$$

Firm size is one of the variables considered in determining the value of a company. Firm size is a reflection of the total assets owned by a company. Companies themselves are categorized into two types, namely small-scale companies and large-scale companies (Rahayu & Sari, 2021). The formula used is as follows :

$$SIZE = LN (\text{Total Aset}) \dots\dots\dots(5)$$

**2.2 Data analysis method**

This research uses a panel data regression analysis model to test the influence of independent variables, namely profitability, liquidity, capital structure and firm size on the dependent variable, namely company value. Data processing in this research uses Eviews 10. The model in this research is as follows:

$$PER_{it} = \alpha + \beta_1 ROA_{it} + \beta_2 CR_{it} + \beta_3 DER_{it} + \beta_4 SIZE_{it} + e_{it}$$

Keterangan :

- $PER_{it}$  = company value in company I period t
- $\alpha$  = constant
- $\beta_1, \beta_2, \beta_3, \text{ dan } \beta_4$  = regression coefficient
- $PER_{it}$  = return on asset in company i period t
- $CR_{it}$  = current ratio in company i period t
- $DER_{it}$  = debt to equity ratio in company i period t
- $SIZE_{it}$  = firm size in company i period tt
- $i$  = *cross section*
- $t$  = *time series*
- $e_{it}$  = *error term* in company i period t

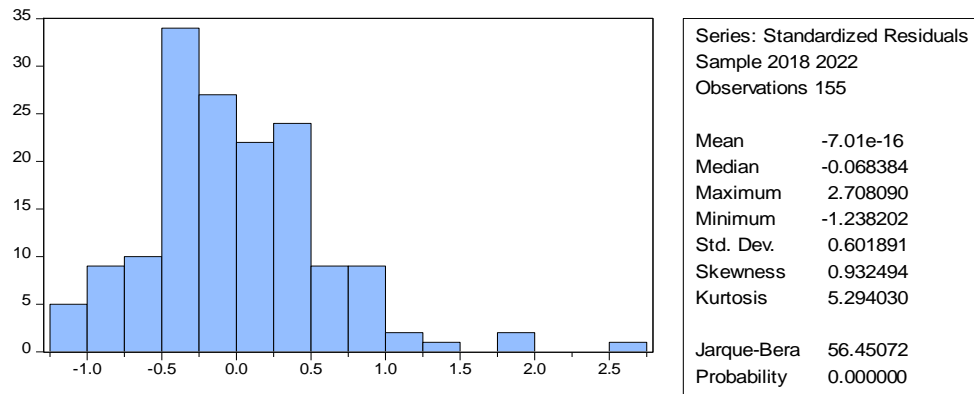
**3. Results and Discussion**

**3.1 Classic assumption test**

**3.1.1 Normality test**



The normality test is used to determine whether the regression in this study has normally distributed residuals or not. According to (Ghozali, 2016) a good regression model is a regression model that has a normal or close to normal distribution, so it is appropriate to carry out statistical testing. The normality test carried out in this study used the Jarque-Bera test. The results of the Jarque-Bera test in this study can be seen in the image below as follows:



Source: Eviews 10 Output (Data Processed by Researchers), 2024

**Figure 1 Normality Test**

Based on Figure 1 above, it shows that this model has a probability value of  $0.000000 < 0.05$ , so it can be concluded that the data is not normally distributed. This is because this data uses cross section panel data, which has different data trends each year, so the assumption of normality can be ignored.

### 3.1.2 Multicollinearity Test

The multicollinearity test is needed to determine whether there are independent variables that are similar between the independent variables in a model. In this multicollinearity test, it can be seen from the value of the correlation coefficient. The correlation value of an independent variable must be below 0.8. If two independent variables exceed 0.8, it can be concluded that there are symptoms of multicollinearity in a study. The following is a matrix table of multicollinearity test results.

**Table 1 Multicollinearity Test**

	ROA	CR	DER	SIZE
ROA	1.0000	0.2229	-0.2718	-0.0961
CR	0.2229	1.0000	-0.1439	-0.1450
DER	-0.2718	-0.1439	1.0000	0.4454
SIZE	-0.0961	-0.1450	0.4454	1.0000

Source: Eviews 10 Output (Data processed by researchers), 2024

Information: Company Value (PER), Profitability (ROA), Liquidity (CR), Capital Structure (DER) and Profitability Measure (SIZE).

Based on table 1 above, it shows that this model is free from multicollinearity problems or passes the multicollinearity test by looking at the output values between independent variables in the regression, there is no output exceeding 0.8.

### 3.1.3 Heteroscedasticity Test

The heteroscedasticity test is a test used to determine whether there is an inequality in the variance of the residuals in the regression model from the residuals of one observation to another observation. If the residual variance from one observation to another remains the same, it is called homoscedasticity and if the variance is different, it is called heteroscedasticity. (Ghozali, 2016) states that a good regression model is a model that has no symptoms of heteroscedasticity. The results of heteroscedasticity testing in this research are as follows: For heteroscedasticity problems, according to (Ghozali, 2016) in his book, the decision making criteria for the Breush-pagan test are as follows:

1. If the significance value is  $> 0.05$ , then heteroscedasticity does not occur
2. If the significance value is  $< 0.05$ , then heteroscedasticity occurs

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Variabel	Coefficient	Std. Error	Statistic	Prob.
C	-1.9733	0.7177	2.7494	0.0067
ROA	0.84451	0.4230	1.9963	0.0477
CR	-0.0332	0.0411	0.8086	0.4200
DER	-0.0500	0.0265	1.8822	0.0617
SIZE	0.0844	0.0254	3.3192	0.0011

Source: Eviews 10 Output (Data processed by researchers), 2024

Based on Table 2 above, it can be seen that for all independent variables in the results of the Breusch-pagan-Godfrey test above, the Chi-Square values were 0.0031 and 0.0000 <significance value 0.05 (5%), so in conclusion this research is not free from heteroscedasticity. However, this is still used, because the data is a time series which is real data and the validity of the data is guaranteed.

**Tabel 3 Autocorrelation Test**

Durbin-Watson stat	1.9871
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Source: Eviews 10 output (data processed by researchers), 2024

The autocorrelation test can be seen from the Durbin Watson value. In this study, the Durbin Watson value was 1.9871. This value is measured by tolerance in the autocorrelation test, namely -2 and 2. Based on the criteria put forward by (Gujarati & Porter, 2012), this value is still in the range free from autocorrelation symptoms, so it can be concluded that the model in this study is free from autocorrelation symptoms .

**3.1.4 Model Selection Techniques**

The research model used in this research is a panel data regression analysis procedure or panel regression. The software used in this model selection technique is with the help of E-views 10 software, because the selected research sample contains data from inter-time periods and between companies. So that the model used in this research is good and appropriate, a model selection technique is needed, namely there are three models in panel data regression analysis including the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). Then one of the three models will be selected for panel data regression.

**3.2 Test Chow**

Chow test is a test carried out to determine which model is the common effect model or fixed effect model which is most appropriate to use in estimating panel data. Gujarati and Porter (2018) said that the basis for making chow test decisions is to look at the probability value, if the test results are significant (probability < 0.05) then the model chosen is FEM, however if the chow test results are not significant (probability > 0.05) then the model chosen is chosen is CEM. The Chow test results in this research are as follows

**Table 4 Chow Test Results**

Effects Test	Statistic	d.f.	Prob.
Cross-section Chi-square	123.9746	30	0.0000

Source: Eviews 10 output (data processed by researchers), 2024

Based on table 4 above, it shows that the probability value in the Chow test is 0.0000 < 0.05. Therefore, based on the results of the Chow test, the best model in this research is the Fixed Effect Model (FEM).

**3.3 Hausman test**

The Hausman Test is a test carried out to determine the best model between the Common Effect Model (CEM) and the Fixed Effect Model (FEM). According to Gujarati & Porter (2012) the basis for making Hausman test decisions is to look at the probability value. If the significance value is <0.05 then the best model is panel data

regression (FEM). If the significance value is > 0.05 then the best model is panel data regression (REM). The Hausman Test results in this research are as follows:

**Table 5 Hausman Test Results**

Test Summary	Chi-Sq.Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.058340	5	0.8410

Source: Eviews 10 output (data processed by researchers), 2024

Based on table 5 above, it can be seen that the probability is 0.8410 > 0.05, so it can be concluded that the Hausman test chooses the Random Effect Model (REM) as a good model, so the estimated data for hypothesis testing in this study uses panel data regression with Random Effect Model (REM).

### 3.4 Panel Data Regression Estimation

Based on the model selection that has been carried out, the best model used is the Random Effect Model (REM), namely:

**Table 6 Panel Data Regression Estimates with Random Effect Model (REM)**

Variabel Dependen Nilai Perusahaan (PER)			
Variable	Coefficient	t-Statistic	Prob
C	0.7646	0.7799	0.4366
ROA	0.2500	0.5511	0.5824
CR	-0.0072	-0.1944	0.8461
DER	-0.0540	-2.0841	0.0388
SIZE_IT	0.0215	0.6321	0.5283
R-squared			0.0307
Adjusted R-squared			0.0049
F-statistic			0.4550
Prob(F-statistic)			0.8971
Durbin-Watson stat			1.8504

Source: Eviews 10 Output (Data processed by researchers), 2024

Information: Company Value (PER), Profitability (ROA), Liquidity (CR), Capital Structure (DER) and Profitability Measure (SIZE).

Significant 1%, 5% and 10% are expressed in \*\*\*, \*\*, \*

Based on table 6 above, the equations in this research can be prepared as follows:

$$PER = 0.7646 + 0.2500*ROA - 0.0072*CR - 0.0540*DER + 0.0215*SIZE + e$$

### 3.5 Hypothesis test

Hypothesis testing in this research uses the t test. The test results are used to see the influence of the independent variable on the dependent variable partially. The t-test decision making criteria is to look at the ttable value and probability value. The error level applied in this study is 5%. The results of hypothesis testing in this research are as follows:

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Based on Table 6, the results of panel data regression estimation using the random effect model, it can be seen that profitability has a t-value of 0.5511 with a probability value of 0.5824. The profitability (ROA) value is statistically significant at 1%, 5% or 10%. So it can be concluded that profitability (ROA) has a positive and insignificant effect on company value (PER) in banking companies listed on the Indonesian stock exchange for the 2018-2022 period. This shows that H<sub>1</sub> in this study was rejected, where this result is not in accordance with the hypothesis which states that profitability (ROA) has a positive and significant effect on firm value (PER) in banking companies listed on the IDX for the 2018-2022 period. The results of this research are in line with research conducted by (Sondakh et al., 2019) stating that profitability (ROA) has a positive and insignificant effect on company value. This means that the higher the ROA value does not determine that the company's value is good in the eyes of investors because there are many other factors that are taken into account by an investor, such as other factors, for example regarding similar industry conditions, fluctuations, exchange rates, transaction volume, stock exchange conditions, economic, social, political and stability conditions. national of a country. This is also related to research (Mangesti Rahayu et al., 2020) which states that actually every change in profitability ratios also affects company value, both positively and negatively.

**3.5.2 The Effect of Liquidity (CR) on Company Value (PER)**

Based on table 4.8 Panel Data Regression Estimation Results with Random Effect Model, it can be seen that liquidity has a t-count value of -0.1944 with a probability value of 0.8461. The liquidity value (CR) is not statistically significant at either 1%, 5% or 10%. So it can be concluded that liquidity (CR) has a negative and insignificant effect on firm value (PER) in banking companies listed on the Indonesian stock exchange for the 2018-2022 period. This shows that H<sub>2</sub> in this study was rejected, where this result is not in accordance with the hypothesis which states that liquidity (CR) has a positive and significant effect on firm value (PER) in banking companies listed on the IDX for the 2018-2022 period. The results of this research are in line with research conducted by (Margali et al., 2020), (Maulidah, 2020) which states that liquidity has a negative and insignificant effect on company value. This means that the higher the liquidity, the more likely it is to reduce the company value.

**3.5.3 The Influence of Capital Structure (DER) on Company Value (PER)**

Based on table 4.8 Panel Data Regression Estimation Results with Random Effect Model, it can be seen that the capital structure has a t-value of -2.0841 with a probability value of 0.0388. The capital structure (DER) value is statistically significant at 1%, 5% and 10%. So it can be concluded that capital structure (DER) has a negative and significant effect on company value (PER) in banking companies listed on the Indonesian stock exchange for the 2018-2022 period. This shows that H<sub>3</sub> in this study was rejected, where this result is not in accordance with the hypothesis which states that capital structure (DER) has a positive and significant effect on firm value (PER) in banking companies listed on the BEI for the 2018-2022 period. The results of this research are in accordance with the results of research conducted by (Callista & Wi, 2022) which states that capital structure (DER) has a negative and significant effect on company value (PER). This means that the better the capital structure of a company, the company profits will increase and the company value will also increase. This is also related to research (Alnori & Alqahtani, 2019) which states that profits from debt and other factors related to agency costs can then result in an optimal capital structure. So the smaller the loan (debt), the better the company's capital structure.

**3.5.4 The Influence of Firm Size (SIZE) on Company Value (PER)**

Based on table 4.8 Panel Data Regression Estimation Results with Random Effect Model, it can be seen that firm size has a t-count value of 0.6321 with a probability value of 0.5283. The firm size (SIZE) value is statistically significant at 1%, 5% or 10%. So it can be concluded that firm size (SIZE) has a positive and insignificant effect on company value (PER) in banking companies listed on the Indonesian stock exchange for the 2018-2022 period. This shows that H<sub>4</sub> in this study was rejected, where this result is not in accordance with the hypothesis which states that firm size (SIZE) has a positive and significant effect on company value (PER) in banking companies listed on the BEI for the 2018-2022 period. The results of this research are in line with research found by (Riyanti & Munawaroh, 2021), (Kolamban et al., 2020) which states that firm size has a positive and insignificant effect on company value. This means that companies with large amounts of assets are unable to utilize their assets effectively, resulting in asset hoarding because the turnover of company assets will take longer.



## 5. Conclusion

1. The Profitability Variable (ROA) has a positive and insignificant effect on company value (PER) in banking companies listed on the Indonesia Stock Exchange for the 2018-2022 period.
2. The Liquidity Variable (CR) has a negative and insignificant effect on company value (PER) in banking companies listed on the Indonesia Stock Exchange for the 2018-2022 period.
3. The capital structure variable (DER) has a negative and significant effect on company value (PER) in banking companies listed on the Indonesia Stock Exchange for the 2018-2022 period.
4. The firm size variable (SIZE) has a positive and insignificant effect on company value in banking companies listed on the Indonesia Stock Exchange for the 2018-2022 period.

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**INNOVATIVE APPROACHES TO TOURISM RISK MANAGEMENT: INCREASING RESILIENCE AND ADAPTATION TO CRISIS**

Marbawi<sup>1</sup>, Nurfaliza<sup>2</sup>, Aiyub Yahya<sup>3</sup>

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