Research Article

Rangga Adhitia Hermawan[1]*, Pajar[2], Avivah Sri Handayani[3], Shella Meylani[4], Niken Intan Pratiwi[5], Yesie Handayani[6], Masno Marjohan[7]

Literature Review: The Effectiveness of Risk Management Training in Financial Institutions in the Digital Era

*Corresponding Author: **Rangga Adhitia Hermawan**: Pamulang University, Indonesia: ranggaadhitiahermawan@gmail.com
Pajar: Pamulang University, Indonesia: pajar.ar@gmail.com
Avivah Sri Handayani: Pamulang University, Indonesia: avivahh24@gmail.com
Shella Meylani: Pamulang University, Indonesia: sheilameilany27@gmail.com
Niken Intan Pratiwi: Pamulang University, Indonesia: nikenintanpratiwi276@gmail.com
Yesie Handayani: Pamulang University, Indonesia: ms.yesie18@gmail.com
Masno Marjohan: Pamulang University, Indonesia: dosen00124@unpam.ac.id

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Abstract: *The rapid development of digital technology has significantly changed the landscape of the financial industry. The digitisation of financial services offers convenience and efficiency, but also brings new challenges in terms of risk. Effective risk management is key to ensuring the stability and sustainability of financial institutions in the digital age. The method used is a literature study taken from several national journals and expert articles accessed online. This method aims to summarise the current understanding of a topic. The literature review presents previously published material and analyses new facts. Digital financial risk management strategies in retail companies require a comprehensive, adaptive, and technology-based approach. The digital financial sector faces increasingly complex risks as technology adoption accelerates. There are several challenges and threats in risk management for financial institutions in the digital era, one of which is technological advancement. The emergence of increasingly sophisticated technology has a significant impact on the structure of life. Digital financial risk management requires adaptive technology-based strategies to address complex risks in the digital era. The roles of AI, blockchain, and IoT are key in risk mitigation. Financial institutions, including Islamic and conventional banks, need to enhance regulatory compliance, digital literacy, and service innovation to compete with fintech companies and sustain customer trust.*

Keywords*: Training, Risk Management, Finance, Digital Era*

Introduction

The rapid development of digital technology has significantly changed the landscape of the financial industry. The digitisation of financial services offers convenience and efficiency, but also brings new challenges in terms of risk. Effective risk management is key to ensuring the stability and sustainability of financial institutions in the digital age. Appropriate risk management training is necessary to equip human resources with the skills needed to address these challenges. This article aims to review the effectiveness of risk management training in the context of digital finance through a literature review of various academic and industry sources. (Widihartono & Ahmadi, 2024).

In the business world, knowledge of risk management is one of the important elements in business management, both in the service and industrial sectors. Risk management is also a preventive measure for a company, which is very important for business actors to implement (Rudi et al., 2021; Suhaimi, 2020). Therefore, it is necessary to first map out the risks that may occur according to the existing work units so that the company can operate smoothly (Firmansyah, 2022).

The digital finance era has brought significant transformation to the financial industry, introducing convenience and efficiency through technologies such as big data, artificial intelligence (AI), blockchain, and cloud computing. However, this digitalisation has also increased complexity and vulnerability to various risks, such as cyber, operational, and compliance risks. Therefore, risk management training is crucial for organisations to effectively identify, analyse, and manage risks. This study aims to evaluate the effectiveness of risk management training in the context of the digital financial era. (Faza et al., 2024).

Digital financial technology, or fintech, has proven to be an effective solution to various problems faced by small and medium-sized businesses in various regions. The use of this technology can improve efficiency in financial management, facilitate access to capital, and expand market networks through e-commerce platforms (Purnamasari et al., 2024).

A methodical strategy for managing risks associated with digital finance is risk management in digital finance. This technique seeks to detect, evaluate, and mitigate various hazards arising from the use of digital technology in financial services. The complexity of risks associated with IT, cybersecurity, regulation, and operations is increasing along with the rapid digitalisation of the financial industry. To keep their operations running smoothly in the digital age and reduce the likelihood of losses, financial institutions must have a comprehensive plan for risk management.

Risk management in the digital finance sector can be divided into several main stages. The first stage is risk identification, where companies recognise potential threats that may arise in digital-based financial services. These threats can include cyber security, hacking attacks, system failures, or digital fraud that can harm both the company and its customers. By identifying these various threats early on, companies can develop more effective strategies for dealing with existing risks.

Literature Review

Training

Training is key to improving employee skills, knowledge, and performance in an ever-changing and competitive globalised era. By providing the right training, organisations can ensure that employees have the necessary competencies to meet the demands of a dynamic market and achieve organisational goals. (Giovanni & Ali, 2024).

Risk Management

No one in the corporate sector can afford to turn a blind eye to the possibility of financial loss. A more targeted approach to managing potential hazards is necessary due to the increasing complexity of corporate operations. At the highest level of leadership, risk management is a management process. Like other forms of management, risk management is based on the idea that organisations can only use its resources if something goes wrong. The goal of risk management is to identify, evaluate, and mitigate potential threats. In theory, you should do this before you experience a loss. Regarding risk, unless the actions and their components are implemented, there is no way to ensure that negative outcomes can be avoided at all times. The business world requires risk management or risk assessment to help them control these dangers. For risk management to be successful, it must permeate the entire organisation and become an integral part of the process. However, many people use risk management during the operational or project implementation phase to make decisions. The challenges posed by risk are even greater (Hutapea et al., 2024).

Digital Finance

When people talk about 'digital finance,' they mean using various forms of digital technology and specialised software to better manage their money. Accounting software or digital finance applications can track all monetary transactions, such as income, expenses, and cash flow, thanks to accurate and regular transaction recording in digital finance. Accurate and durable financial reporting may have a strong foundation in competent record-keeping. Individuals can have access to a wide variety of financial products, including loans, investments, insurance, and more, using digital platforms enabled by digital financial management. Digital financial management is not without security risks, but new technologies are always being developed to be more secure and reliable for user data (Hanggondosari, 2023).

Method

The method used is a literature study taken from several national journals and expert articles accessed online. According to Sugiyono (2019), literature study research is a theoretical study, references, and scientific literature related to the culture, values, and norms that develop in the social situation under study. Literature study can also be defined as research that collects data from research reports, scientific books, articles, and relevant journals. Searching for literature sources in this article through the Google Scholar database. The literature sources used in the preparation involved 5 libraries consisting of 4 national journals and 1 book. The selection of literature source articles is carried out by reviewing the titles, abstracts and results that discuss risk management training in the digital financial era.

Results and Discussion

The Complexity of Risks in Digital Finance

The integration of digital technologies such as Artificial Intelligence (AI), Blockchain, and Internet of Things (IoT) has undeniably transformed financial services. However, these advancements bring with them increasingly sophisticated risks, including cybersecurity threats, data breaches, and compliance challenges. Retail companies and financial institutions must, therefore, adopt comprehensive, technology-driven risk management strategies that not only address existing threats but also anticipate future challenges as the industry continues to digitize (Faza et al., 2024).

The Digital Fraud Risk and Cyber Attack Risk are among the most pressing concerns, with financial institutions being prime targets due to the high volume of sensitive data they process. The study suggests that blockchain technology, with its transparent and immutable ledger system, could play a critical role in mitigating these risks by enhancing data integrity and reducing vulnerabilities to fraudulent activities (Nainggolan & Risman, 2025). Meanwhile, AI-powered tools are becoming increasingly effective at detecting anomalous behaviors in real-time, offering a dynamic approach to risk mitigation.

The Role of Training in Risk Management

One of the key findings from the literature is the importance of training programs in equipping employees with the necessary skills to handle complex digital tools and navigate the evolving risk landscape. The shift towards digital finance requires financial institutions to invest heavily in digital literacy and cybersecurity training. Employees who are well-trained in these areas are better able to recognize risks, understand regulatory changes, and respond to threats in a timely and efficient manner.

Studies, such as Giovanni and Ali (2024), indicate that institutions with a robust training culture experience better risk management outcomes. In addition to technical skills, training in compliance and ethical decision-making are equally critical, especially as financial institutions must balance technological innovation with regulatory adherence.

Comparative Effectiveness of Risk Management in Islamic vs. Conventional Banks

A comparative analysis of Islamic and conventional banks reveals that while both face similar operational risks, their approaches to risk management differ significantly due to the distinct nature of Islamic finance. Islamic banks face additional challenges related to Sharia compliance, requiring them to implement stricter auditing processes to ensure that financial transactions do not violate Islamic principles such as riba (interest), gharar (uncertainty), and maysir (gambling).

The literature suggests that conventional banks generally have an advantage in managing operational risks due to their longer history, larger technological infrastructures, and greater resources. However, Islamic banks are not exempt from digital transformation. They too must integrate digital financial management tools while maintaining the integrity of Sharia compliance. This dual challenge requires these institutions to invest in regulatory technology (RegTech) that can automate compliance processes and ensure that financial transactions adhere to Islamic law (Masrukhan et al., 2024).

Disruptive Influence of Fintech

Another significant finding from the literature is the rise of fintech companies. These firms, characterized by their agile and customer-centric models, are reshaping the financial landscape. Fintechs are often perceived as more innovative and flexible than traditional financial institutions, presenting both a challenge and an opportunity for established banks. In this context, the emergence of fintech companies can be both disruptive and beneficial, pushing traditional institutions to innovate their service offerings, enhance user experience, and adopt advanced digital technologies.

For Islamic financial institutions, partnering with fintech firms represents an opportunity to expand their customer base, particularly among younger, tech-savvy generations. This partnership not only helps in promoting financial inclusion but also enables Islamic banks to offer more tailored and efficient financial products that align with Sharia principles. The rapid growth of fintech in Indonesia underscores the importance of adapting risk management strategies to include partnerships with these emerging players, enhancing the overall competitiveness and sustainability of traditional financial institutions (Rahmah, 2024).

Regulatory Challenges and Economic Influences

The success of digital risk management strategies is closely tied to external factors such as government regulations, economic conditions, and market dynamics. The regulatory framework set by bodies such as Indonesia's OJK (Otoritas Jasa Keuangan) plays a pivotal role in shaping the effectiveness of risk management strategies. Institutions that fail to comply with evolving regulations may face penalties, loss of customer trust, and operational disruptions.

Moreover, macroeconomic factors, such as inflation, interest rate fluctuations, and market instability, further complicate risk management. Financial institutions must remain agile, adapting their strategies to these external pressures while ensuring internal processes are resilient enough to withstand economic shocks (Sukma et al., 2025).

In conclusion, the study emphasizes that digital financial risk management in the digital era requires a holistic and adaptive approach. Institutions must integrate cutting-edge technologies such as AI, blockchain, and IoT into their risk management frameworks, while also focusing on human capital through continuous training and development. Additionally, the rise of fintech companies presents both a competitive threat and an opportunity for collaboration, especially for Islamic banks. By fostering partnerships with fintech firms and enhancing digital literacy across all levels, financial institutions can create a more robust and responsive risk management environment. Furthermore, adherence to regulatory guidelines and the ability to adapt to economic fluctuations will determine the sustainability and success of these institutions in an increasingly digital world.

Conclusion

Digital financial risk management requires adaptive technology-based strategies to address complex risks in the digital age. The role of AI, blockchain, and IoT is key to risk mitigation. Financial institutions, including Islamic and conventional banks, need to improve regulatory compliance, digital literacy, and service innovation in order to compete with fintech and maintain customer trust in the long term.

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