SocioEconomic Challenges, Volume 7, Issue 3, 2023
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

THE IMPACT OF FINANCIAL TECHNOLOGY AND RISK MANAGEMENT PRACTICES ON CORPORATE FINANCIAL SYSTEM PROFITABILITY: EVIDENCE FROM KUWAIT

Tariq Tawfeeq Yousif Alabdullah, **ORCID:** https://orcid.org/0000-0003-1494-6983

PhD, Associate Professor, Department of Management Information System, College of Administration and Economics, University of Basrah, & Basrah & Arab Gulf Studies Center, Iraq

Corresponding author: Tariq Tawfeeq Yousif Alabdullah, E-mail: tariqtariq1984@gmail.com

Type of manuscript: research paper

Abstract: *A vital element of the stability of banking institutions is the presence of an effective risk management system, as well as the financial stability of the corporate sector of the economy in terms of the fulfilment of assumed credit obligations. This study investigates the relationship between financial technology (Fintech) adoption, risk management practices and corporate profitability in Kuwait. The object of the study was 62 industrial enterprises registered on the stock market of Kuwait as of 2022. Methods of descriptive statistics, least squares method for estimating regression model parameters, and correlation analysis served as methodological tools of this study. This study aims to overcome the gaps in theoretical justification and empirically prove the existence of a relationship between the implementation of financial technologies and risk management methods. The results showed a positive correlation between the development of financial technologies and return on assets (correlation coefficient 0.6540), which indicates that implementing innovative financial technologies will contribute to improving the efficiency of banking institutions. The strong and positive correlation between the effectiveness of risk management and the profitability of business entities emphasizes the importance of responsible risk management practices for increasing banking institutions' profitability. Based on the results of building a regression model, it was established that fintech has a significant impact on indicators of the return on equity of economic entities ($p<0.050$, $t = 1.7700$). The originality of this study lies in its focus on Kuwait and the Middle East as a whole and in its exploration of the relationship between corporate financial system profitability, risk management strategies and Fintech adoption. The use of innovative technologies (advanced analytics, artificial intelligence and blockchain) increases the effectiveness of risk management, which contributes to rational decision-making and a better understanding of the banking institution's potential risks and development opportunities. This study contributes significantly to the existing literature by highlighting the relationships between financial technology innovation adoption, risk management and business financial performance in a market environment in the Middle East.*

Keywords: risk management practices, financial technology, corporate financial system profitibility, manufacturing, Kuwait.

JEL Classifucation: G3, G32.

Received: 09.07.2023 **Accepted:** 19.08.2023 **Published:** 30.09.2023

Funding: There is no funding for this research.

Publisher: Academic Research and Publishing UG, Germany.

Founder: Academic Research and Publishing UG, Germany; Sumy State University, Ukraine.

Cite as: Alabdullah, T.T.Y. (2023). The impact of financial technology and risk management practices on corporate financial system profitability: evidence from Kuwait. *SocioEconomic Challenges*, *7*(3), 141-151. https://doi.org/10.61093/sec.7(3).141-151.2023.

Copyright: © 2023 by the author. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Introduction

The worldwide economic downturn has demonstrated the need of risk management activities for businesses that aim to maintain customer and stakeholder loyalty (Olamide et al., 2015; Abushammala et al., 2015; Alabdullah et al., 2018; Kanaan-Jebna et al., 2022; Ahmed, 2016). The majority of businesses in Oman did not view risk management as a key element of their transactions (Alabdullah, & Naseer, 2023; Kanaan-Jebna et al., 2022; Alabdullah & AL-Qallaf, 2023; Ahmed et al., 2023). Any bank is subjected to a number of banking risks that could result in their collapse and worsening of financial circumstances under the improvements which have fueled increased market competition for financial transactions (Bilal, Salim, & Alabdullah, 2016; Alabdullah, & Ahmed, 2018). In order to lessen negative events, Oman should considerd a reliable framework for risk in management, particularly credit of risk in management (Alabdullah, & Ahmed, 2020). A vital aspect of the banking loan business is the management of risk associated with credit.The threat of current and future profit is what it is. Problems could arise if the terms of any agreements with the bank are not followed or if other obligations are not met as agreed (Azam, 2019). To lose a loan that is still owed in whole or in part, for exampledue to credit events (risk of default), which include bankruptcy and failure to pay debts that are still owed The occurrence of issues in banks is caused by postponement, credit rating change, and restructuring (Ogboi, 2013). Different types of risk exist, and they all affect how a financial organization is managed (Thottoli et al., 2019). Risk from financial perspective is defined as returns difference or unexpected changes. Risks associated with high exchange rates and currency fluctuations are just a few examples of the various financing hazards covered by the phrase "financial risk." As the stock market and unexpected declines are the primary cause of these issues, they are ascribed to change in assets which might be linked to debt, and this may result in a poor of equilibrium between commitments and responsibilities (Ahmed et al., 2020; Alsulmani, & Ahmed, 2021). Therefore, it is clear that controlling financial risks is a crucial issue that must be attended to as it affects the bank's corporate financial system profitability. Recently, a considerable lot of empirical study has been conducted on the effects of managing financial risks on the profitability of the corporate financial system as well as its drawbacks.

Recent developments in the previous studies demonstrate mentioned that the greater the amount of liquid an asset is, the lesser its return will be because a sizable component of banks' commitments (deposits) are demand-payable (Alabdullah, Ahmed, 2019). The ability of the bank to meet cash flows is ensured by proper management of liquidity risk. External events and other circumstances have an impact on uncertain liabilities (Alabdullah, Ahmed, and Abushammala, 2020). Since a lack of liquidity can have effects on a single institution at the system level, managing liquidity risk is of the utmost importance (Ahmed et al., 2019; Dzapasi, 2020). A key element in the stability of banks is risk management and corporate financial system profitability. It helps the economy grow, which could be beneficial if problems are avoided. Whereas some nations rely heavily on banks and trade for their affairs and economic activity (Alabdullah and Hussein, 2023; Alabdullah et al., 2021). The core aim of the currnt work is to evaluate and establish the relationship between management practices' risk and the viability of the bank's corporate financial system.

Literature review

This section focuses on recent research from the prior five years (AL-Fakhri & Alabdullah, 2021; Alabdullah et al., 2021; Alabdullah and Ahmed, 2021). A large number of researchers came to the conclusion that risk and performance are related. As instance, Alia, et al. (2020), in their research, they seeks to understand how risks affect the financial performance of Bahrain's recorded financial institutions. A large number of studies discovered that management techniques had an impact on performance. Sleimi (2020), for instance, he investigates how risk management strategies affect Jordanian financial institutions' performance. It is notable that majority of researchers pursue to analyse the performance effectiveness in the companies. For instance, Sukmana, Ajija, Salama, and Hudaifah's (2020), they examine the effectiveness of the performance of financial institutions in Indonesia, they found that the position and the percentage of capital adequacy had a favourable effect. Almagtome and Abbas (2020), according to their study, there is a connection between business ethics and shareholder behaviour in the financial markets, as well as between these factors and the financial success of Iraqi financial institutions. The findings demonstrated a connection and association between the total amount of profits and revenues, which led to a rise values which positively impacted the corporate financial system profitability of the

financial institutions and its trades. The goal of a research done by Alfadli & Rjoub (2020) is for understanding how the macroeconomic environment and particular changes in the financial services sector have affected the firm performance of financial institutions in the GCC nations. According to their findings, the efficiency, diversity, liquidity, and credit risk—all of which affect capital—have a negative association and significant consequences on profitability. In addition, a study by Darwish and Abdeldayem (2019) tested the influence of risk in management, business ethics, and the impact of a company's performance and the results indicated a strong relation between ethics and risk management, as high work ethics, which are favourably reflected on employees inside financial institutions. A study done by Galdeano et al., (2019), sought to understand how to enhance financial profitability in financial industry and investigate the association between controlling businesses and the bank institution in Bahrain. The findings discovered a statistically significant link between regulatory participation and corporate financial system profitability. Another study done by Pakurár, Haddad, Nagy, Popp, and Oláh (2019), they examined how internal control and corporate financial system profitability is related to each other in Jordanian financial institutions. The results of their study revealed a connection between internal control, suppliers and clients, and Jordanian financial institutions. The majority of studies concluded that the growth of financial institutions poses risks. Al Siyabi et al., (2019), they assessed that hazards of Oman's microelectronic banking services. The majority of studies concluded that the banking tool is impacted by bilateral governance. For instance, Nomran and Haron's (2019) their stud aims to ascertain how the dual board structure affects the outcomes of financial institutions in the GCC nations as well as Islamic banks in Southeast Asia. One of his research's most significant conclusions is that tiny banks in Southeast Most people discovered a connection between accountability and effectiveness. For instance, Maqbool and Zameer's (2018) analyse the relationship between corporate social responsibility and corporate financial system profitability in the context of India. The main conclusion of this study is that corporate social responsibility has a favourable effect on Indian financial institutions' financial performance. Airout & Airout (2017) tested the connection between diversity in board and sustainability in the economic, environmental, and social sectors as well as its effect on the financial performance of Jordanian banks. The findings suggest that there is proof of a connection between diversity and sustainability. Performance of financial sectors is assessed using the return on assets and bank stock prices in Jordan. According to Alharthi & Airout (2017), the study tries to demonstrate the factors that affect a bank's ability to generate profits at three different levels—ROA, stock returns, in addition to net interest, and their impact on those outcomes. The aim of his research is to show whether the constancy of the groups and their economic features have connections to the financial institutions in Oman. It tested how assets management and operational capability affected the profitability of corporate finance systems. Its findings revealed that banks with higher corporate financial system profitability and higher ratios of capital, deposits, and trusts could generate more profits.

The linkage between risk management practices and corporate financial system profitability practitioners and scholars have been interested in the link between risk in management and performance for a long time, particularly given market conditions do not provide evidence of the link between risk and value (Modigliani & Miller, 1958). Internal control and risk management (RM) systems spread among businesses in the interim to lower risks and boost productivity. Risks are interconnected (Power, 2009), particularly for complicated and globalized organizations affecting the economic downturn, where risk management historically kept a silo-based consider on financial issues only. In order to provide a more comprehensive strategy, risk management (RM) has recently developed into enterprise risk management. This strategy necessitates that risk evaluation, quantification, and leadership include the whole company, across every department and levels. Both governments and companies are working together to strengthen enterprises' capacity for risk management and to "integrate" risk management into everyday operation (Woods, 2009). The implementation of effective risk evaluation processes as well as the establishment of specialized committees, such as the company risk committee and CRO, has begun to be advised by corporate governance regulations all over the world (Lundqvist, 2015). Consequently, the subject of RM has drawn interest to publications on both accountancy and corporate governance. Specialized committees for risk and/or CRO nominations are associated with the deployment of ERM in the initial large-scale exploratory study (Yatim, 2010), which examine the factors that influence ERM among different business features. In contrast, other research uses a case study technique to examine the adoption of ERM from an organizational perspective. In a UK retailer, risk management was discovered to strengthen strategic control systems (Woods, 2009), but in the Italian context, it is suggested that the effectiveness of ERM depends on the capacity of ERM specialists to

integrate and modify the ERM system. Current scientific research on the association between ERM and profitability yields a range of conclusions. According to Beasley et al. (2008), financial institutions do not see good stock market responses when a chief revenue officer is appointed. In an analysis of US corporations, Baxter et al. (2013) show that ERM efficiency has a positive association with company value, but just throughout the worldwide financial crisis. A representative group of European financial as well as non-financial enterprises shows a comparable relationship between the implementation of ERM and business value, according to Bertinetti et al. (2013). Farrell and Gallagher (2014) show in a worldwide and cross-industry study that organizations having greater maturity in ERM exhibit higher performance because of integrated risk culture, ERM integration across the company, and the perspective of ERM as a part of strategy and planning activities. The more of using sophisticated models and/or market-driven risk indicators, as well as the existence of a CRO, have no additional impact. Additionally, they discover that the market value of the company increases as additional ERM measures are implemented, such as the adoption of a straightforward financial capital model, the hiring of a devoted risk manager, the creation of a cross-functional RM committee, and the regular communication of the risk manager to the BOD or CEO. Based on the discussion in the previous studies, we expect the hypothesis below:

H1: *These is a positive association between Risk Management and corporate financial system profitability.*

The Relationship between Fintech and Performance of Financial Institutions

Many researches have focused on financial technology and how it affects bank performance (Wang et al., 2020). Numerous researches have empirically examined the effects of financial technology on company performance, according to a survey of the literature. Researchers have examined several aspects of financial technology, such as cyber security (Meng et al., 2019), self-service and machine learning (Gomber et al., 2018), and internet and mobile banking (Ky et al., 2019). Additionally, empirical research examined bank performance in various ways, however the most popular techniques were surveys (Kianto et al., 2013), return on assets (ROA), and return on equity (ROE). The effects of COVID-19 on the link between financial technology and company performance have been the subject of additional studies that have urged for further research (e.g., Alabdullah & Asmar, 2022; Wójcik and Ioannou, 2020; Alabdullah et al., 2022). For two main reasons, this study uses a survey to gauge banks' non-financial performance. In the beginning, it aids in creating a link between bank strategies and routine tasks for both clients and workers. Second, there are uncontrollable external risks (such as COVID-19) that could have an impact on a bank's earnings and costs. In these situations, examining the financial metrics may only paint a bleak picture of a bank. Thus, the evaluating banks' performance in non-financial terms offers a more comprehensive perspective.

As a result of the discussion above, we conclude and estimate the hypothesis below.

H2: A positive link can be found in the link between Fintech and corporate performance.

Method

This research is a cross sectional and the collection of data based on annual reports. For this study, researchers gathered quantitative data from 62 industrial companies in Kuwait. Analyzing data was based on utilizing PLS method.

Variables Measurements: In this regard, FinTech and Manufacturing companies' performance. Every variable measured as explained in below:

Tabel 1. Measuring of variables

Variables	**Measurement**
ROE	Net profit ÷ total Equity
ROA	Net profit ÷ total assets
FinTech	Number of FinTech disclosure
Proxy in operational risk	Operational costs ÷ Net income
Proxy liquidity in risk	loans in total ÷ deposit in total

Source: Compiled by the authors.

Descriptive statistics

The outcome variable, that is the Global Value Standard (IVS), revealed that 0% reflects a mean (IVS) having a SD. of 1.0000 according to the descriptive data that was acquired. Additionally, the lowest and highest values showed that (IVS) was -0.518, 2.634, and -0.518, respectively. In addition, also, the data revealed that the return on assets was zero percent, or the average supporting with a SD. of one. The ROA was -1.576 and 1.157, as well, according to the lowest and highest values. The variable for ROE is also shown, and it was equal to 0%, which reflects an average with a SD. of 1.0000. In addition, the lowest and highest values of the variables showed that the return on equity was equal to -0.859 and 2.327, accordingly. Based to the generated descriptive statistics, (ROA) has a mean of 4.881, a SD. of 13.440, and lowest and highest values of 0.0750 and 50.4360, correspondingly. The lowest and greatest Performance (ROE) values were 0.009 and 44.1930, respectively, with a 2.506 as a mean and a SD. of 9.854. The Fintech of independent variables also have a mean of 3.556, a SD. of 2.1130, and a range of 3.0000 to 7.0000 for its lowest and highest values.

Table 2. Descriptive

	Mean	Min	Max	Standard Deviation
RMP	2.1230	-0.5900	2.5540	2.0000
ROA	3.2200	-1.5710	1.4310	1.0000
ROE	4.1300	-0.7790	2.1100	11.0000
FinTech	3.5560	3.0000	7.0000	2.1130

Source: Compiled by the authors.

Validity of discrimination

For investigating the validity based on PLS, there are several standards should be used. The root of square for each AVE needs to be on a high of association level and it includes the other concepts. Therefore, as revealed by Fornell & Larcker (1981) in order to compact with validity of discrimination, the root of square of every concept in its AVE has to be likened against the concepts' associations for whole other concepts.

Table 3. Validity of discrimination

	RMP	FinTech	ROA	ROE
RMP	1.0000			
FinTech	0.2200	1.0000		
ROA	0.5640	0.6540	1.0000	
ROE	0.1410	0.4790	-0.1330	1.0000

Source: Compiled by the authors.

Evaluation for the organizational model was done afterward examining the other measure and passing the other criteria. (R^2) is checked and it shows that the R^2 for internal supply is of 0.430 (ROA), 0.759 (ROE) representing that 0.28, 0.81 of the contrast in manufacturing performance can be elucidated by the predictors: elements that have been utilized in this research to extent the influence of risk in management and fin-tech on such a financial of performance represented by ROA and ROE. Consequently, the present of study's variables are importantly meets the criteria.

Table 4. Variance Explanation

	R Square	R Square Adjusted
ROA	0.4300	0.3240
ROE	0.7590	0.7660

Source: Compiled by the authors.

Testing the hypothesis

Table 5, shows the findings linked to the hypothesis that are supported as revealed in the Table5 . The findings showed that risk in management has a positive link while avoiding risk was ROA; $P<0.0000$, $t = 4.5800$. The results showed that the risk in management is insignificantly linked with a ROE, wherever it was $t = 1.3060$. This

score shows that the administration has a significant impact on performance of the manufacturing companies represented by (ROA).

The results revealed that Fintech is positively effect on performance, it was (ROA) P<0.0000, t = 4.6090. The results showed that Fintech has a significant impact on performance with a ROE where it was P<0.050, t = 1.7700. This score means that the financial technology has the significant impact on the performance of the manufacturing companies.

Table 5. Path Coefficients

Mean, STDEV, T-Values, P-Values						
	Original Sample (O)	Sample Mean (M)	Standard Deviation (SD)	T Statistics	P Values	Results
RM-> ROA	-0.551	-0.936	0.296	4.110	0.0000	Supported
RM -> ROE	0.901	0.613	0.620	1.432	0.0970	Rejected
Fintech-> ROA	0.221	-0.780	0.611	4.609	0.0000	Supported
Fintech-> ROE	0.678	0.453	0.941	1.770	0.050	Supported

Source: Compiled by the authors.

The effect of risk management on corporate financial system profitability

As a foundation for addressing numerous drawbacks related to manufacturing and financial operations, risk management for manufacturing businesses has evolved into a fundamental topic. Risks like liquidity, credit, and others are avoided by banks through the technique of risk management and supervision. Manufacturing-level risk management strives to handle and oversee company hazards. Commercial hazards involve those that are thought to be part of the business character of manufacturing.

The independent factors of the current study and their impacts on the profitability (ROA and ROE) of manufacturing businesses have been discovered in this study. as risk management that affect equity. To learn more about the target, hypotheses were developed based on the identified independent factors. The findings showed that risk management has a strong and positive relationship with corporate financial system profits, as demonstrated by the fact that (ROA) P0.000, t = 4.580. This finding suggests that management significantly affects manufacturing businesses. These results are consistent with research done by Hassan et al., (2015) who revealed a significant correlation between risk management and the performance of financial institutions. This indicates that better risk management will result in lower risk and more profitability for the corporate financial system. The studies also revealed a negligible relationship between risk management and ROE.

Impact of Fintech on manufacturing companies performance

A reasonable theory was developed that describes the relationship between variables for a comprehensive literature review survey. The research objectives of the study are then addressed by strengthening the study's hypotheses. A total of 26 annual reports have been successfully gathered throughout this study. All of the hypotheses were found to be supported by the findings of the hypothesis analysis. In regards to ROA, the Fintech is demonstrated to be significantly positive. This report (ROA) finds that fintech has a significant impact on performance. On the other hand, it was discovered that fintech had a favorable correlation with ROE. This report's (ROE) conclusions regarding fintech's significant impact on performance are presented. This result is in line with earlier research by Ntwiga (2020), which showed a substantial correlation between Fintech and banking performance. Additionally, another research by AbuRaya et al. (2021) found that fintech transactions are more effective than conventional ones and have a significant impact on banking performance. Alkhazaleh and Haddad (2021) also found a significant link between Fintech, customer satisfaction, and manufacturing company profitability.

Conclusion

This study concentrated on investigating the risk management and Kuwaiti companies' profitability - link based on choosing a listed of manufacturing organizations. This study aims at evaluating How several financial

measurements such as our ROA, ROE, and other measurements such as company size and credit rush that have affected by risk management. The goal of this research work is to clarify the connection between risk management and the financial success of manufacturing firms by investigating these factors. The study's findings showed a strong correlation between effective risk management strategies and the profitability of corporate financial systems. According to this result, Kuwaiti manufacturing enterprises tend to perform better financially when risk management measures are applied properly. Such procedures enable businesses to negotiate ambiguous economic landscapes, prevent possible losses, and seize growth possibilities. These businesses are better positioned to achieve long-term financial success by proactively identifying and managing risks. It is interesting, nevertheless, that there was no conclusive indication of risk management strategies and (ROE)- link in the study. Further research is necessary to fully comprehend the underlying causes driving this association in light of this unexpected result. It's possible that some risk management strategies have a more pronounced effect on profitability metrics like ROA while having a less pronounced impact on ROE. To identify the precise risk management tactics that affect ROE and investigate possible explanations for their varying effects on financial performance measures, more research might be done. The influence of financial technology (Fintech) on the profitability of manufacturing enterprises, especially those connected to foreign banks in Kuwait, was a significant issue investigated in line with the study's main purpose. The results showed that Fintech has certainly had a positive effect on these organizations' performance. Technology has been incorporated into risk management methods, resulting in more effective procedures, improved decision-making skills, and a better comprehension of potential risks and opportunities. Fintech innovations like advanced analytics, AI, and blockchain have been effective in expediting risk assessment and encouraging a culture of calculated risk-taking, which has eventually improved financial performance. The study's conclusions have important ramifications for manufacturing firms and financial sector officials in Kuwait. Corporations can give the installation of strong risk management frameworks top priority by realizing the favorable relationship between risk management techniques and financial performance. Additionally, the lack of a correlation between risk management and ROE should prompt a closer examination of the factors influencing risk-return dynamics. This information can help businesses create risk management plans that are more suitable to their particular requirements. Regulators and policymakers may play a crucial role in maximizing the benefits of Fintech adoption by fostering an environment that fosters innovation in the financial sector. Collaboration between established financial institutions and Fintech startups can promote a spirit of ongoing learning and progress. Regulatory organizations can also create rules that find a balance between promoting technological development and maintaining ethical risk management procedures. In summary, this study offers important new understandings risk management procedures - financial performance relationship is related in the context of Kuwaiti manufacturing firms. Strong risk management methods are crucial for establishing long-term success, as evidenced by the positive correlation between risk management and corporate financial system profitability. The research's results highlight the revolutionary effect of Fintech on the performance of foreign banks affiliated with industrial enterprises, even though the lack of a correlation with ROE demands additional investigation. The overall financial performance and resiliency of manufacturing enterprises in Kuwait's dynamic economic environment can be improved by adopting technological improvements and putting into place efficient risk management procedures.

Recommendation

The present research has shed important light on the relationship between risk management and the financial performance of manufacturing organizations' corporate finance systems. Several recommendations are emerging to direct future studies including promote understanding in this sector as academics and business insiders work to better comprehend this complicated connection. Therefore, in order to develop a more thorough understanding of risk management techniques and financial results, future research should take into account include additional variables including industry-specific hazards, corporate governance practices, and the effect of legislative changes, which means there is a need for extending the Range of Variables. In addition to using alternative conceptual frameworks, which means in order to present more information on the underlying mechanisms guiding methods of risk management and their influence on the performance of the economy, scholars may increase the depth of analysis through the use of alternatives conceptual frameworks such as agency theory, stakeholder theory, or the

resource-based view. Another recommendation is to integrating compared studies of risk management methods and financial performance across several industries, so will be possible to make cross-industry comparisons and find best practices and potential areas for development in each. Performing longitudinal studies over a number of years can provide a dynamic perspective on the connection between risk management and financial performance by exposing trends, patterns, and the long-term effects of efforts to manage risks on the financial stability of manufacturing companies. Also, utilizing Qualitative Research, which combining qualitative research with quantitative data can provide a deeper understanding of the variables affecting risk management choices. Interviewing stakeholders inside manufacturing organizations can provide insight into the goals, obstacles, and approaches used to achieve risk management. The current study also recommended insisting on financial inclusion in order to researching approaches to encourage financial inclusion through Fintech adoption will guarantee that electronic financial services are accessible to all societal segments and help manufacturing companies establish inclusive financial systems. Furthermore, it is important to encourage customer adoption of fintech technologies by investigating practical ways to do so. This can make manufacturing organizations more responsive to fintech solutions. With the collaboration with technical Experts such as inventors, investors, and technical experts working together can lead to innovative electronic finance applications that are employed by manufacturing businesses. The last recommendation lies in taking into account the multi-country Studies by taking into account differences in legal frameworks, cultural norms, and economic situations, including various nations in study can offer a worldwide view on risk management methods and financial performance in manufacturing organizations.

Author Contributions: Conceptualisation: Alabdullah, T.T.Y., Ahmed, E.R.; methodology: Alabdullah, T.T.Y., Ahmed, E.R.; project administration: Alabdullah, T.T.Y., Ahmed, E.R.; software: Alabdullah, T.T.Y., Ahmed, E.R.; investigation: Alabdullah, T.T.Y., Ahmed, E.R.; data curation: Alabdullah, T.T.Y., Ahmed, E.R.; formal analysis: Alabdullah, T.T.Y., Ahmed, E.R.; validation: Alabdullah, T.T.Y., Ahmed, E.R.; visualization: Alabdullah, T.T.Y., Ahmed, E.R.; writing-original draft preparation: Alabdullah, T.T.Y., Ahmed, E.R.; writing - review & editing: Alabdullah, T.T.Y., Ahmed, E.R.

Conflicts of Interest: Authors declare no conflict of interest.

Data Availability Statement: Not applicable.

Informed Consent Statement: Not applicable.

References

1. Abushammala, S. N., Alabdullah, T. T. Y., & Ahmed, E. R. (2015). Causal Relationship between Market Growth and Economic Growth. Comparison Study. *European Journal of Business and Management*, 7(33), 31-36. [Link].
2. Alabdullah, T.T.Y., Asmar, M. (2022). Under COVID-19 Pandemic Impact: Do Internal Mechanisms Play Fundamental Role in Corporations' Outcomes. *Business Ethics and Leadership*, 6(1), 84-92. [CrossRef].
3. Alabdullah, T. T. Y., Naseer, H. K. (2023). Corporate governance strategic performance as a significant strategic management to promoting profitability: a study in UAE. *Journal of humanities, Social Sciences and Business*, 2 (4), 620-635. [Link].
4. Alabdullah, T.T.Y., Kanaan-Jebna, Kanaan, Ahmed, E. R. (2022). The impact of platforms being analogue in some european countries on dealing with management issues. *Russian Journal of Agricultural and Socio-Economic Sciences*, 10(102), 89–96. [CrossRef].
5. Alabdullah, T. T. Y., Ahmed, E. R., Almashhadani, M., Yousif, S. K., Almashhadani, H, A., Almashhadani, R., Putri, E. (2021). How significantly to emergingeconomies benefit from board attributes and risk management in enhancing firm profitability? *Journal of Accounting Science*, 5(1). [Link].
6. Alabdullah, T. T. Y., Ahmed, E. R., & Yahya, S. (2018). The determination of firm performance in emerging nations: Do board size and firm size matter? *International Academic Journal of Accounting And Financial Management*, 5(2), 57-66. [CrossRef].
7. Alabdullah, T. T. Y., Al-Fakhri, I., Ahmed, E. R., & Kanaan-Jebna, A. 2021. Corporate Governance System and Firm Financial Performance. Acta *Scientific Computer Sciences*, 4 (6), 97-103. [Link].

8. Alabdullah, T. T. Y., Ahmed, E. R. (2021). New Insights to Investigate the Impact of Internal Control Mechanisms on Firm Performance: A Study in Oman. *Riset Akuntansidan Keuangan Indonesia*, 6(2), 205-214. [Link].
9. Alabdullah, T. T. Y., Hussein, Z. A. A. (2023). Risk Management, Female Leadership and Project Management Performance: A study in Oman. *International Journal of Scientific and Management Research*, 6(6), 77-94. [Link].
10. Alabdullah, T. T. Y., AL-Qallaf, A. J. M. (2023). The impact of ethical leadership on firm performance in Bahrain: organizational culture as a mediator. *Current advanced research on sharia finance and economic worldwide*, 2(4), 482-498. [CrossRef].
11. Kanaan-Jebna, A. M. J., Alabdullah, T. T. Y., Ahmed, E. R., & Ayyasamy, R. K. (2022). Firm Performance and the Impact of Entrepreneurial Education and Entrepreneurial Competencies. *Business Ethics and Leadership*, 6(2), 68–77. [CrossRef].
12. Ahmed, E. R. E. A. (2016). Zakat and Accounting Valuation Model. *Journal of Reviews on Global Economics*, 5(16-24), 24. [Link].
13. Kanaan-Jebna, A., Baharudi, A.S., & Alabdullah, T.T.Y. (2022). Entrepreneurial Orientation, Market Orientation, Managerial Accounting and Manufacturing SMEs Satisfaction. *Journal of Accounting Science*, 6(1), 1-14. [CrossRef].
14. AL-Fakhri, I., Alabdullah, T.T.Y. (2021). The Evolution of a Robust and Reliable Brand Experience Scale in the Malaysian Context: An Empirical Evidence. *Business Ethics and Leadership*, 5(4), 59-67. [CrossRef].
15. Ahmed, E. R., Alabdullah, T. T. Y., Çokmutlu, M. E., & Özkan, D. (2023). How Do Sustainability Assurance, Internal Control, Audit Failures Influence Auditing Practices? *Journal of Management, Accounting, General Finance and International Economic Issues*, 2 (3), 671-688. [Link].
16. Alia, B. J., & Oudatb, M. S. (2020). Financial Risk and the Financial Performance in listed Commercial and Investment Banks in Bahrain Bourse. *International Journal of Innovation, Creativity and Change*, 13(12), 160-180. [Link].
17. Azam, S. T. (2019). The Impact of Credit Risk on the Financial Performance of Commercial Banks in Bangladesh. [Link].
18. Alharthi, M. (2017). Financial performance and stability in Islamic banks: Evidence from GCC countries. *Corporate Ownership and Control*, 14(4), 103-113. [CrossRef].
19. Alfadli, A., & Rjoub, H. (2020). The impacts of bank-specific, industry-specific and macroeconomic variables on commercial bank financial performance: evidence from the Gulf cooperation council countries. *Applied Economics Letters*, 27(15), 1284-1288. [Link].
20. Almagtome, A., & Abbas, Z. (2020). Value relevance of financial performance measures: An empirical study. *International Journal of Psychological Rehabilitation*, 24(7), 6777-6791. [Link].
21. Airout, R. M., & Airout, R. M. (2017). Evaluation of Financial Performance of Islamic Banks in Jordan (2001-2010): A Comparative Study. *International Journal of Economics and Finance*, 9(9), 166-174. [CrossRef].
22. Al Siyabi, A. M. M. N., Al Araimi, S. M. M., & Pandey, J. (2019). An investigation of risk management practices in electronic banking in Sultanate of Oman. *Journal of Student Research*. [CrossRef].
23. Bilal, Z. O., & Salim, B. F. (2016). Does Basil III Implementation Impact on Financial Performance? Evidence from Omani's Commercial Banks. *International Journal of Economics and Financial Issues*, 6(3). [Link].
24. Dzapasi, F. D. (2020). The impact of Liquidity Management on Bank Financial Performance in a subdued economic environment: A case of the Zimbabwean Banking Industry. *PM World Journal*, 9(1), 1-20. [Link].
25. Darwish, S., & Abdeldayem, M. M. (2019). Risk Management and Business Ethics: Relations and Impacts in the GCC. *International Journal of Civil Engineering and Technology*, 10(10), 489-504. [Link].
26. Galdeano, D., Ahmed, U., Fati, M., Rehan, R., & Ahmed, A. (2019). Financial performance and corporate social responsibility in the banking sector of Bahrain: Can engagement moderate? *Management Science Letters*, 9(10), 1529-1542. [CrossRef].

27. Hassan Al-Tamimi, H. A., Miniaoui, H., & Elkelish, W. W. (2015). Financial risk and Islamic banks' performance in the Gulf Cooperation Council Countries. *The International Journal of Business and Finance Research*, 9(5), 103-112 [Link].
28. Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. *Future Business Journal*, 4(1), 84-93. [CrossRef].
29. Nomran, N. M., & Haron, R. (2019). Dual board governance structure and multi-bank performance: a comparative analysis between Islamic banks in Southeast Asia and GCC countries. *Corporate Governance: The International Journal of Business in Society*. [CrossRef].
30. Olamide, O., Uwalomwa, U., & Ranti, U. O. (2015). The Effect of Risk Management on Bank's Financial Performance in Nigeria. *Journal of Accounting and Auditing*, 1. [Link].
31. Ogboi, Unuafe (2013). Impact of credit risk management and capital adequacy on the financial performance of commercial banks in Nigeria. *Journal of emerging issues in economics, finance and banking*, 2(3), 703-717. [CrossRef].
32. Pakurár, M., Haddad, H., Nagy, J., Popp, J., & Oláh, J. (2019). The impact of supply chain integration and internal control on financial performance in the Jordanian banking sector. *Sustainability*, 11(5), 1248. [CrossRef].
33. Sleimi, M. (2020). Effects of risk management practices on banks' performance: An empirical study of the Jordanian banks. *Management Science Letters*, 10(2), 489-496. [CrossRef].
34. Sukmana, R., Ajija, S. R., Salama, S. C. U., & Hudaifah, A. (2020). Financial performance of rural banks in Indonesia: A two-stage DEA approach. *Heliyon,* 6(7), e04390. [CrossRef].
35. Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261e297. [CrossRef].
36. Power, M. (2009). The risk management of nothing. Accounting, *Organizations and Society*, 34(6e7), 849e855. [CrossRef].
37. Woods, M. (2009). A contingency theory perspective on the risk management control system within Birmingham City Council. *Management Accounting Research*, 20(1), 69e81. [CrossRef].
38. Lundqvist, S. A. (2015). Why firms implement risk governance e Stepping beyond traditional risk management to enterprise risk management. *Journal of Accounting and Public Policy*, 34, 441e466. [CrossRef].
39. Yatim, P. (2010). Board structures and the establishment of a risk management committee by Malaysian listed firms. *Journal of Management and Governance*, 14, 17e36. [CrossRef].
40. Beasley, M., Pagach, D., & Warr, D. (2008). Information conveyed in hiring announcements of senior executives overseeing enterprise-wide risk management processes. *Journal of Accounting, Auditing and Finance*, 23(3), 311e332. [CrossRef].
41. Baxter, R., Bedard, J. C., Hoitash, R., & Yezegel, A. (2013). Enterprise risk management program quality: Determinants, value relevance, and the financial crisis. *Contemporary Accounting Research*, 30(4), 1264e1295. [CrossRef].
42. Bertinetti, G. S., Cavezzali, E., & Gardenal, G. (2013). The effect of the enterprise risk management implementation on the firm value of European companies. *Working Paper n. 10/2013*. Universita Ca' Foscari Venezia, Department of Management. [CrossRef].
43. Farrell, M., & Gallagher, R. (2014). The valuation implications of enterprise risk management maturity. *The Journal of Risk and Insurance*, 82(3), 625e657. [CrossRef].
44. Wang, R., Liu, J., & Luo, H. (2020). Fintech development and bank risk taking in China. *European Journal of Finance*, 3, 1-22. [CrossRef].
45. Meng, W., Zhu, L., Li, W., Han, J., & Li, Y. (2019). Enhancing the security of FinTech applications with map-based graphical password authentication. *Future Generation Computer Systems*, 101(2019), 1018-1027. [CrossRef].

46. Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220-265. [CrossRef].
47. Ky, S., Rugemintwari, C., & Sauviat, A. (2019). Is Fintech good for bank performance? The case of mobile money in the East African Community. The Case of Mobile Money in the East African Community, June 5, 2019. Hal02155077. [Link].
48. Kianto, A., Andreeva, T., & Pavlov, Y. (2013). The impact of intellectual capital management on company competitiveness and financial performance. *Knowledge Management Research & Practice*, 11(2), 112-122. [CrossRef].
49. Wójcik, D. and Ioannou, S. (2020). COVID-19 and Finance: Market Developments So Far and Potential Impacts on the Financial Sector and Centres. *Tijdschrift voor economische en sociale geografie*, 111(3), 387-400. [CrossRef].
50. AbuRaya, R., Abdulla, Y., Kumaraswamy, S., & Ebrahim, R. (2021, December). FinTech global outlook and the Bahraini landscape: empirical exploratory analysis and documentary evidence. In *2021 International Conference on Decision Aid Sciences and Application (DASA)* (pp. 1007-1015). IEEE. [CrossRef].
51. Alkhazaleh, A. M. K., & Haddad, H. (2021). How does the Fintech services delivery affect customer satisfaction: A scenario of Jordanian banking sector. *Strategic Change*, 30(4), 405-413. [CrossRef].
52. Ntwiga, D. B. (2019). Fintech and banks collaboration: does it influence efficiency in the banking sector? Kenya Bankers Association 8th Banking Research Conference. [Link].