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Financial Risk Management: A Research on Abu Dhabi Banking Sector

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ABSTRACT

The goal of this study is the investigation into the complex relationships between external and internal hedging strategies, effective financial decision-making processes, and the transformative impact of Fintech adoption within financial institutions. Quantitative data was collected and Smart PLS 3 was used for analysis of data. The study found that relationships between external and internal hedging strategies, effective financial decision-making processes, and the transformative impact of Fintech adoption within financial institutions were significant. The study has novelty as previous studies ignored the empirical evidence for these relationships. Theoretical and practical, the contribution of current research is remarkable.

Keywords. *Fintech, Financial Institutions, Financial Decision, Effective Decision Making.*

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INTRODUCTION

In the context of Abu Dhabi's banking industry, the current paper examines the effects on FRM of the adoption of fintech, various approaches for external and internal hedging, and effective financial decision-making. Financial Risk management is critical because risk management leads to the successful management of any firm in today's tough environment. Commercial banks play an important role in increasing the economy's performance by taking deposits and lending money (Ahmed, Shakoor, Khan, & Ullah, 2021). In Abu Dhabi, the banking industry comprises financial institutions that take deposits and engage in the lending process of the capital market. Abu Dhabi is now one of the most well-known stock markets in the world because of how well its energy, oil and gas, cement, chemical fertiliser, and, most importantly, banking industries have done. This means that the stock market and banking sector are likely to continue to grow (Malik, 2017). Islamic finance has evolved, which has surprised many experts. The goal of Islamic banking is to eliminate interest (Riba) from all transactions and to cleanse the financial system in accordance with Shariah (Islamic Law). The Holy Quran's prohibition on interest (Riba) is the primary reason for the establishment of Islamic banking. The major cause for the establishment of Islamic banking was the desire of the Muslim community to conduct or structure their financial transactions in accordance with Shariah (Islamic Law) principles and without the inclusion of interest (Riba). Islamic banking's fundamental characteristic is interest-free banking, but it also contributes to the impartial distribution of income and wealth, as well as improved equity involvement in the economy (Muhammad, 2013). During these six decades, new advances in terms of Islamic items presented and Sharia compliance have occurred, and innovations continue to occur. The popularity of Islamic banking prompted worldwide conventional banks to create an Islamic window in order to gain the greatest market share since the expansion of Islamic banks in more than 75 countries has made a substantial contribution to both Islamic and non-Islamic economies (Kassim, 2016).

The inclination of Fintech adoption of banking industries in Abu Dhabi has been high in recent years. First and first, it is essential to define FinTech, which is not an easy process given the variety of definitions in use. According to the World Economic Forum, FinTech is a "new entrant that promised to swiftly transform how financial products were designed, provided, and consumed (Albarrak & Alokley, 2021). Additionally, the use of machine learning techniques has been employed as a means to counteract fraudulent activities (Baber, 2019). Financial inclusion might take the shape of savings, access to a bank account, insurance, and the provision of credit to the poor community at an accessible cost via official and informal financial institutions transparently and fairly. It has been established that financial inclusion reduces poverty and inequality (Raza, Fayyaz, & Syed, 2015). As a result, financial inclusion is critical for financial growth as well as for long-term economic development. Financial inclusion is greater in developed nations and lower in less-developed countries. Researchers discovered that 96% of people in wealthy nations had bank accounts, compared to just 65% in less-developed countries(Makina, 2019). According to Global Findex 2017, seven countries account for over half of the unbanked adult population: Pakistan, Nigeria, Mexico, Bangladesh, India, China, and Indonesia (Demirgüç-Kunt & Singer, 2017). Fintech or Internet banking applies to systems that enable bank clients to access accounts and general information about bank goods and services through a personal computer. Internet banking enables users to carry out financial transactions on a trustworthy website managed by their retail or virtual banks, credit unions or building organisations. Internet banking products and services can include both wholesale and retail products for corporate customers, as well as fiduciary and retail products for consumers (Ojeniyi, Edward, & Abdulhamid, 2019). However, due to the absence of access mechanisms for online platforms, it is difficult for financial institutions to operate. Financial institutions are businesses that deal with monetary and financial exchanges such as reserves,

borrowings, investment funds, and exchange rates. Inadequate finances to fully use the benefits of Internet financial platforms in solving the financing challenges of small, medium, and micro firms (Montford & Goldsmith, 2016).

The current research investigates the influence of External and Internal hedging techniques on FRM individually. This study is also conducted to identify effective financial decision-making as a mediator mechanism for external and internal hedging techniques between FRM and moderator as fintech adoption mechanism for external and internal hedging techniques between FRM. Externally, organizations frequently use derivatives and hedging techniques, options, and futures contracts to hedge against currency swings, interest rate volatility, and commodity price concerns. However, the ever-changing nature of financial markets, as well as the inherent complexity connected with these instruments present a constant challenge for decision-makers. Understanding the efficacy and limits of external hedging techniques is critical for organizations looking to protect their financial situations from external shocks. Internally, firms use a variety of risk management practices to limit financial risks, such as operational improvements, diversification measures, and cash flow optimization. Internal hedging, while less obvious than external techniques, is critical in fostering resilience in the face of unanticipated crises. However, the extent to which internal hedging approaches contribute to total risk management efficacy remains an open question. External and Internal hedging techniques, on FRM's key contribution to the literature, the impact of fintech adoption as a moderator effect on FRM aims to overcome this literary gap.

The significance of this study lies in its potential to provide valuable insights and knowledge to the existing body of research in the field. This research on Financial Risk Management via External and Internal Hedging Techniques is significant because it tackles critical problems that banks encounter while navigating the intricacies of global financial markets. The research directly helps to improving financial stability, guiding strategic decision-making, and optimising resource allocation by providing insights into the best integration of external and internal hedging techniques. Its ramifications include increasing market competitiveness, giving helpful advise to risk managers and financial experts, and guaranteeing regulatory compliance.

REVIEW OF LITERATURE

Effective Financial Decisions and Financial Risk Management

Effective financial decision-making is a cornerstone of financial management. Scholars have long recognised its importance in determining the financial health and performance of organisations. Effective financial decisions encompass various aspects, including capital allocation, investment choices, financing decisions, and dividend policies. Researchers have examined how these decisions impact an organisation's ability to manage financial risks effectively. One key aspect of effective financial decisions is capital budgeting, where organisations evaluate potential investments and select projects that maximise shareholder value (Brigham & Ehrhardt, 2017). This process directly influences a firm's exposure to financial risks, as decisions to invest in risky projects can increase vulnerability. Financial risk management is the process of identifying, assessing, and mitigating financial risks to protect an organisation's value and financial stability. These risks can include market risk, credit risk, liquidity risk, and operational risk. Effective risk management strategies aim to minimise the adverse impact of unexpected events and market fluctuations. The use of hedging methods, portfolio diversification, and the utilisation of financial instruments, such as derivatives, are integral components of a proficient financial risk management approach aimed at mitigating exposure (J. Hull, 2012). Effective investment, loan, and expenditure decisions help FRM overcome risks or lessen their impact, making them more likely to achieve financial goals. Effective financial

decisions can relate Fintech adoption to FRM efficacy (Chaudhry, Ahmed, Huynh, & Benjasak, 2022).

Scholars have investigated the interconnectedness of effective financial decisions and financial risk management. The literature suggests that the quality of financial decisions directly influences an organisation's ability to manage financial risks successfully. Researchers have examined how firms' choices in capital structure, including the mix of debt and equity, impact their risk profile (Modigliani & Miller, 1958; TERRA, 2008). High levels of debt may increase financial leverage, amplifying the impact of financial shocks, while an optimal mix can enhance risk management. Investment decisions affect a firm's exposure to market risk, especially in industries prone to economic cycles (Malkiel, 2019). Firms making prudent investment decisions may have more resources available for risk management during downturns. Effective financial decisions can enable firms to allocate resources efficiently to risk management strategies. Firms with a clear understanding of their financial positions may be better equipped to implement risk-reducing measures (Linsmeier & Pearson, 1996). Hence, the literature strongly supports the hypothesis that there is a significant relationship between effective financial decisions and financial risk management. Effective financial decisions, including capital allocation and investment choices, play a crucial role in determining an organisation's risk exposure. Conversely, sound financial risk management strategies can help organisations mitigate the adverse consequences of poor financial decision-making. The interplay between these two components is vital for achieving financial stability and long-term success in today's complex financial environment.

Hypothesis 1: *There is a significant relationship between effective financial decisions and financial risk management.*

Financial Decision, Internal Hedging Techniques and Financial Risk Management

In today's dynamic financial landscape, organisations face an array of risks that require effective financial risk management (FRM) strategies. These risks include market risk, credit risk, liquidity risk, and operational risk. Internal hedging techniques are one of the methods employed by firms to mitigate these risks. Internal hedging techniques refer to strategies adopted by firms to manage risks internally without relying on external financial instruments like derivatives. These techniques may include diversification, cash management, and operational improvements. Firms employ these methods to reduce exposure to various financial risks while maintaining control over their operations and finances. FRM encompasses the processes through which organisations identify, assess, and mitigate financial risks. Effective FRM strategies are essential for ensuring an organisation's financial stability and minimising the impact of adverse financial events (Banks & Dunn, 2004; J. Hull, 2012).

Effective financial decision-making involves making informed choices about capital allocation, investment decisions, and financing strategies. These decisions impact an organisation's financial health and risk profile. Therefore, they are crucial to an organization's risk management performance (Brigham & Ehrhardt, 2017). This study investigates the impact of derivatives strategies on financial decision-making and risk mitigation inside financial institutions. Based on the findings of the study, financial managers that employ efficient derivatives strategies have enhanced decision-making capabilities in several financial domains, including investments, loans, policy acquisitions, and expenditures (Avgouleas & Kiayias, 2019). Efficient financial decision-making practises play a crucial role in reducing risks and assisting the Financial Risk Manager in limiting the negative outcomes of hazards. Following this, the study undertook an analysis to assess the effectiveness of weather derivatives as a strategy for managing financial risks within the realm of food retail businesses in Croatia. The research gathered data pertaining

to derivative strategies, financial decision-making, and FRM performance from a sample of sixty significant food enterprises located in Croatia. The study primarily examined the correlation between monthly temperature throughout the summer season and its influence on sales and financial performance. Panel regression was utilised for the purpose of analysis. This research centres on the examination of efficient derivatives that may aid in making informed decisions on the allocation of financial resources, marketing and sales activities. The ability to make successful financial decisions is crucial for the Financial Risk Manager (FRM) in order to develop effective strategies and attain organisational objectives, while also mitigating or preventing potential risks and associated damages (Štulec, 2017).

One way effective financial decisions can influence internal hedging techniques is through capital allocation. Firms that make prudent decisions about how to allocate their capital resources may have more flexibility to implement internal hedging techniques effectively. For example, a company may choose to allocate a portion of its capital to investments that have inherent risk-mitigating qualities (Boudreau, 2010; Nzioka & Maseki, 2017). Effective financial decision-making can also impact the effectiveness of internal hedging strategies concerning investments. Companies that make sound investment decisions may be better positioned to create cash flows that can be used to self-hedge or offset potential losses from market fluctuations(Coggan, 2010).

Effective financial decision-making includes assessing the risks associated with various strategies and investments. Companies that excel in this area may be more capable of identifying which internal hedging techniques are best suited to mitigate specific risks. This aligns internal hedging efforts more closely with overall FRM goals (Agarwal, 2013). The choices organisations make regarding capital allocation, investments, and risk assessment have a direct impact on the effectiveness of their internal hedging strategies. By integrating effective financial decisions into their risk management processes, organisations can enhance their ability to mitigate financial risks and ensure long-term financial stability.

Hypothesis 2: *An effective financial decision mediates the relationship between internal hedging techniques and financial risk management.*

Financial Decision, External Hedging Techniques, Financial Risk Management

Financial risk management plays a crucial role in ensuring the stability and profitability of firms. External hedging techniques, such as derivatives, are commonly employed to mitigate financial risks. However, the effectiveness of these techniques largely depends on the decision-making process of financial managers. External hedging techniques, such as derivatives, play a significant role in financial risk management. These techniques assist firms in reducing exposure to various risks, including foreign exchange risk, interest rate risk, and commodity price risk (Beck & Fidora, 2008; Papaioannou, 2006). External hedging techniques encompass a wide range of instruments and strategies that enable firms to transfer or mitigate financial risks. These techniques can include derivatives contracts, insurance policies, and forward contracts (J. C. Hull, 2018). By employing derivatives, firms can transfer the risk associated with these factors to other market participants, thereby reducing their exposure and potential losses.

This study aims to examine the interplay between derivatives strategies, financial decision-making, and the practise of financial risk management (FRM). Based on the findings of the research, it has been observed that the utilisation of derivative approaches, including a range of contractual instruments such as options, futures, forward contracts, and swaps, enhances the decision-making capacity and broadens the range of options available to Financial Risk Managers (FRMs) in formulating risk mitigation strategies across different stages (Avgouleas & Kiayias, 2019). Effective financial decision-making is crucial for firms to manage financial risks successfully. Financial managers need to identify and analyse risks, evaluate available hedging

options, and make informed decisions based on the firm's financial goals and risk tolerance (Kashyap, 2021). Effective decision-making involves understanding the benefits and limitations of different hedging techniques, considering the firm's financial situation, and aligning risk management strategies with the firm's overall objectives. Effective financial decision-making involves the strategic allocation of resources, including the utilisation of external hedging techniques, to manage financial risks. Decisions related to risk appetite, risk tolerance, and hedging strategies influence the overall risk management framework (Arnold, Ellis, & Krishnan, 2018). The mediating role of effective financial decision-making in the relationship between external hedging techniques and financial risk management is significant. A study by (Chao et al., 2022) found that effective decision-making played a mediating role in connecting external hedging techniques with improved financial risk management outcomes. When financial managers make accurate, informed, and timely decisions regarding hedging strategies, the overall risk management effectiveness improves, leading to better risk mitigation. Studies have explored how the effectiveness of financial decision-making mediates the relationship between external hedging techniques and financial risk management outcomes. This includes assessing how informed decisions impact risk reduction and the achievement of financial goals.(Imperatore & Bafundi).

Effective financial decision-making mediates the relationship between external hedging techniques and financial risk management through several mechanisms. Firstly, it ensures that the appropriate hedging technique is selected based on the firm's risk exposure, costs, and expected benefits (DeMarzo & Duffie, 1995). Secondly, effective decision-making enables firms to optimise their hedging positions and adjust them as market conditions change, facilitating proactive risk management. Moreover, financial managers who make effective decisions monitor and evaluate the outcomes of hedging strategies, allowing for continuous improvement and refinement of risk management practices (Loretan & English, 2000; Voinea & Anton, 2009). Effective financial decision-making plays a significant mediating role in the relationship between external hedging techniques and financial risk management. When financial managers make informed decisions about hedging strategies based on accurate analysis and evaluation of risks, firms can enhance their risk management practices. Effective decision-making ensures that firms select appropriate hedging techniques, optimise their positions, and continually refine their risk management strategies. By recognising the importance of effective financial decision-making, firms can improve their overall financial risk management performance.

Hypothesis 3: *An effective financial decision mediates the relationship between external hedging techniques and financial risk management.*

Fintech Adoption, Internal Hedging Techniques, Financial Risk Management

In recent years, the adoption of financial technology solutions has gained prominence in the financial industry, offering innovative tools and platforms to manage various aspects of financial operations. This literature explores the potential moderating role of fintech adoption in the relationship between internal hedging techniques and financial risk management (FRM). Fintech refers to the use of technology to provide financial services, ranging from mobile banking apps to blockchain-based solutions. Fintech adoption has disrupted traditional financial practices by offering efficient and data-driven alternatives. Financial institutions, corporations, and individuals have increasingly adopted fintech solutions to streamline processes and enhance decision-making (Nickel, Saldanha-da-Gama, & Ziegler, 2012; Sharma, Ilavarasan, & Karanasios, 2023). Internal hedging techniques are strategies employed within organisations to manage financial risks. These techniques often involve operational and financial adjustments that aim to reduce risk exposure without relying on external financial

instruments such as derivatives (Meulbroek, 2008).

FRM encompasses strategies and processes for identifying, assessing, and mitigating financial risks. Effective FRM is crucial for maintaining financial stability and ensuring an organisation's ability to meet its financial obligations (Jorion, 2007). Fintech solutions provide real-time access to data and analytics, enabling organisations to make more informed decisions. Fintech can enhance the effectiveness of internal hedging techniques by providing timely and accurate data for risk assessment and decision-making(Silva, 2020). Fintech adoption often involves the automation of financial processes. This can streamline internal hedging techniques, making them more efficient and responsive to changing market conditions. Fintech solutions can facilitate advanced risk modelling and simulation, allowing organisations to assess the potential impact of various internal hedging strategies on FRM outcomes (Lau & Leimer, 2019). While empirical research on the moderating role of fintech adoption in the relationship between internal hedging techniques and FRM is currently limited, the potential benefits of fintech in enhancing internal hedging techniques and FRM are evident. Fintech adoption may lead to more data-driven, efficient, and effective risk management practices within organisations. Future empirical studies can explore these.

Hypothesis 4: *Fintech adoption moderates the relationship between internal hedging techniques and financial risk management.*

Fintech Adoption, External Hedging Techniques, Financial Risk Management

Financial Technology has been rapidly transforming the financial industry, encompassing various aspects of financial services. One significant area where Fintech has had a substantial impact is risk management. In particular, the adoption of Fintech has played a moderating role in the relationship between external hedging techniques and financial risk management. This literature review aims to explore existing research and provide an understanding of how Fintech adoption influences the relationship between external hedging techniques and financial risk management. Fintech adoption has become crucial for financial institutions to enhance risk management capabilities. Studies have shown that Fintech adoption positively affects risk mitigation and enhances financial stability (Deng, Lv, Liu, & Zhao, 2021; Feyen, Natarajan, & Saal, 2023; Guild, 2017). The use of hedging strategies may be seen as a viable approach to enhance the operational efficiency of the Financial Risk Management (FRM) framework and effectively attain its objectives. Hedging refers to a risk management strategy that involves obtaining a position in an asset that is opposite to the original investment, with the aim of mitigating or offsetting any losses. It is plausible that the utilisation of hedging strategies might potentially lead to a decrease in anticipated earnings as a consequence of the risk mitigation that hedging offers. Derivatives, such as options and futures contracts, are frequently employed in hedging strategies (Chan, Le, & Wu, 2019).

The integration of Fintech tools and technologies facilitates real-time monitoring, data analytics, and predictive modelling, thus enabling firms to make effective risk management decisions (Chowdhury & Kulkarni, 2023; Wang & Zheng, 2022). Consequently, Fintech adoption leads to more efficient identification and management of financial risks. Fintech encompasses a wide range of innovative technologies and services that leverage digital platforms, data analytics, and artificial intelligence to improve financial processes. The adoption of fintech solutions by businesses has gained momentum in recent years, offering new avenues for financial risk management (Arner, 2019; Gomber, Koch, & Siering, 2017). Hedging is widely seen as a valuable instrument for mitigating risks, with its efficacy being most pronounced during the last phase of risk management. The aforementioned tool does not contribute to the accurate prediction of potential hazards, the comprehensive evaluation of losses resulting from the manifestation of

risks, or the proactive prevention of untoward incidents. The utilisation of this approach can prove beneficial in mitigating the adverse consequences associated with potential hazards, should they materialise (Fernando, Hosseini, Zavadskas, Perera, & Rameezdeen, 2017). A comprehensive dataset was gathered from a sample of one hundred airlines in order to examine the impact of hedging tactics on the financial performance of the airline industry. Businesses have historically utilised external hedging measures, including futures, options, and insurance, as a means of safeguarding themselves from unfavourable financial occurrences. These strategies offer a mechanism for transferring risk to other parties in return for a financial compensation (Dumm, Eckles, Nyce, & Volkman-Wise, 2020; J. C. Hull, 2018). External hedging techniques, such as derivatives, play a significant role in financial risk management. These techniques assist firms in reducing exposure to various risks, including foreign exchange risk, interest rate risk, and commodity price risk (Bruno & Estrin, 2021; Minton, Stulz, & Williamson, 2009). Derivatives are commonly employed for hedging purposes, enabling firms to mitigate risk and stabilise financial performance. The advent of Fintech has had a significant impact on the relationship between external hedging techniques and risk management. Fintech tools have streamlined and automated the process of external hedging, minimising operational risks associated with traditional manual processes (Carberry, Bharati, Levy, & Chaudhury, 2019; Chakraborty, 2020). For example, automated trading platforms and algorithmic trading systems have reduced human dependencies in executing hedging strategies, resulting in improved risk management performance (Greeven, Yu, & Shan, 2021).

Fintech encompasses a wide range of innovative technologies and services that leverage digital platforms, data analytics, and artificial intelligence to improve financial processes. The adoption of fintech solutions by businesses has gained momentum in recent years, offering new avenues for financial risk management (Arner, 2019). Additionally, Fintech adoption has facilitated more accurate and real-time monitoring of market movements, enabling firms to adjust hedging strategies dynamically (Addai, 2016). Therefore, Fintech adoption moderates the relationship between external hedging techniques and financial risk management by increasing their effectiveness and efficiency. Fintech adoption has emerged as a significant factor in reshaping the relationship between external hedging techniques and financial risk management. The integration of Fintech tools and technologies has led to better risk monitoring, data analysis, and predictive modelling, resulting in more efficient risk management practices. The moderating effect of Fintech adoption is evident in terms of automating processes, reducing human dependencies, and providing real-time market information. By leveraging Fintech capabilities, firms can enhance their risk management strategies and effectively mitigate financial risks associated with external hedging.

Hypothesis 5: *Fintech adoption moderates the relationship between external hedging techniques and financial risk management.*

METHODOLOGY

The present research investigates how financial risk management affects banks through mediating effective financial decisions, external and internal hedging techniques, and moderating fintech adoption. There were five parts in the questionnaire for this research. Surveys' first component is based on respondents' demographic information, including their age, level of education, employment, and marital status. The survey's second component is centred on questions about financial risk management. Dimensions and associated financial risk management are included in this section. Regarding financial risk management, questions for everyone are provided in one part. The survey's third part contains questions on internal and external hedging techniques. Additionally, the survey's fourth and fifth sections include

questions on adopting fintech and making wise financial choices, respectively.

Quantitative research is a scientific approach to gathering and analysing data. This research method is used to test hypotheses, seek correlations between variables, and determine cause and effect (Fischer, Boone, & Neumann, 2023). The quantitative technique was used for the study since it enables data collection from a larger population. Furthermore, quantitative research's fundamental characteristics include the capacity to test hypotheses and theories, widen findings, uncover causal linkages, predict a single element from others, reduce confounding factors, decrease researcher bias, and stay speedy. (Mulisa, 2022). The scale items were taken from the previous studies to collect data. In the current study, collected data was assessed through Smart PLS 4. However, SPSS (Verma, 2012) was used for descriptive analysis. Through Smart PLS, 4, the analysis was divided into two major parts. In the first part, an assessment of the measurement model was performed. In the second part, an assessment of the structural model was performed (Ramayah, Cheah, Chuah, Ting, & Memon, 2018).

FINDINGS

The findings of data normality were tested. There was no missing value in the data. Furthermore, skewness and kurtosis were considered. Skewness and kurtosis should be between -3 and +3 for normality of data. The findings reported in Table 1 confirmed that normality of data was achieved. Hence, the results were considered significant for further analysis.

Table 1: Data Statistics.

	No.	Missing	Mean	Median	Min	Max	Standard Deviation	Excess Kurtosis	Skewness
IHT1	1	0	3.672	4	1	5	1.222	-0.652	-0.556
IHT2	2	0	3.784	4	1	5	1.156	-0.546	-0.616
IHT3	3	0	3.596	4	1	5	1.173	-0.635	-0.472
IHT4	4	0	3.644	4	1	5	1.144	-0.576	-0.446
EHT1	5	0	3.692	4	1	5	1.148	-0.326	-0.637
EHT2	6	0	3.832	4	1	5	1.126	-0.101	-0.764
EHT3	7	0	3.656	4	1	5	1.211	-0.664	-0.553
EHT4	8	0	3.504	4	1	5	1.221	-0.606	-0.507
EFD1	9	0	3.66	4	1	5	1.177	-0.406	-0.633
EFD2	10	0	3.824	4	1	5	1.1	-0.104	-0.754
EFD3	11	0	3.784	4	1	5	1.114	-0.254	-0.647
EFD4	12	0	3.708	4	1	5	1.127	-0.188	-0.653
EFD5	13	0	3.728	4	1	5	1.076	-0.158	-0.642
EFD6	14	0	3.6	4	1	5	1.163	-0.512	-0.513
EFD7	15	0	3.772	4	1	5	1.081	-0.463	-0.549
FA1	16	0	3.632	4	1	5	1.088	-0.513	-0.426
FA2	17	0	3.668	4	1	5	1.091	-0.4	-0.482
FA3	18	0	3.756	4	1	5	1.066	-0.449	-0.496
FA4	19	0	3.756	4	1	5	1.103	-0.468	-0.584
FA5	20	0	3.716	4	1	5	1.119	-0.468	-0.543
FA6	21	0	3.684	4	1	5	1.043	-0.029	-0.614
FA7	22	0	3.772	4	1	5	1.084	-0.143	-0.672
FA8	23	0	3.74	4	1	5	1.088	-0.313	-0.611
FA9	24	0	3.668	4	1	5	1.105	-0.576	-0.422
FA10	25	0	3.688	4	1	5	1.095	-0.254	-0.607
FRM1	26	0	3.676	4	1	5	1.09	-0.337	-0.56
FRM2	27	0	3.468	4	1	5	1.214	-0.803	-0.404
FRM3	28	0	3.512	4	1	5	1.136	-0.622	-0.409
FRM4	29	0	3.504	4	1	5	1.16	-0.75	-0.358
FRM5	30	0	3.588	4	1	5	1.118	-0.625	-0.429
FRM6	31	0	3.488	4	1	5	1.197	-0.79	-0.379
FRM7	32	0	3.672	4	1	5	1.097	-0.313	-0.563

Many researchers suggested checking the Heterotrait-Monotrait Correlation Ratio (HTMT) test in Smart PLS (Franke & Sarstedt, 2019; Voorhees, Brady, Calantone, & Ramirez, 2016). Hence, the HTMT criterion is good at finding problems with discriminant validity. The measurement model would be free of considerations aside from developing a good performance assessment instrument through the items in the questionnaire (Voorhees et al., 2016). The HTMT is the mean value of the item relations among constructs connected to the (geometric) means of the average correlation for items measuring the same construct. Recently, it has been suggested that the Heterotrait-Monotrait correlation ratio (HTMT) is a more reliable test of discriminant validity for variance-based SEM (PLS-SEM) (Henseler, Ringle, & Sarstedt, 2015). There are discriminant validity problems if HTMT scores are high. Henseler et al. (2015) proposed that concepts similar to structural models should have a threshold value of 0.90. When the HTMT value is more than 0.90, it indicates that there is no discriminant validity (Franke & Sarstedt, 2019). Table 2 shows that there's no issue with the discriminant validity and that all of the concepts are different from each other.

Table 2: HTMT Heterotrait-Monotrait Ratio (HTMT) for Discriminant Validity.

	Effective Financial Decisions	**External Hedging Techniques**	**FinTech Adoption**	**Financial Risk Management**	**Internal Hedging Techniques**
Effective Financial Decisions					
External Hedging Techniques	0.804				
FinTech Adoption	0.897	0.796			
Financial Risk Management	0.642	0.593	0.797		
Internal Hedging Techniques	0.757	0.828	0.676	0.594	

The findings also revealed that significant relationship between effective financial decisions and financial risk management, which supports hypothesis 5. The results of hypothesis 6, an effective financial decision mediates the relationship between the internal hedging techniques and financial risk management with the values, shows that it is also supported. The findings also revealed that hypothesis 7, an effective financial decision mediates the relationship between the external hedging techniques and financial risk management also supported values. The findings also revealed that hypothesis 8, that fintech adoption moderates the relationship between the internal hedging techniques and financial risk management byte values. Finally, the findings also revealed that hypothesis 9 is significant and fintech adoption moderates the relationship between the external hedging techniques and financial risk management byte values.

Table 3: Findings.

	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (O/STDEV)**	**P Values**
Effective Financial Decisions -> Financial Risk Management	0.088	0.091	0.023	3.81	0
Moderating Effect 1 -> Financial Risk Management	0.361	0.049	0.064	5.640	0
Moderating Effect 2 -> Financial Risk Management	0.02	0.013	0.01	1.999	0.047
Internal Hedging Techniques -> Effective Financial Decisions -> Financial Risk Management	0.316	0.017	0.019	16.631	0
External Hedging Techniques -> Effective Financial Decisions -> Financial Risk Management	0.059	0.061	0.026	2.253	0.023

Determining the practical significance and implementation of the study's findings heavily depends on the assessment of predictive relevance. The purpose of this study is to evaluate a suggested model's predictive validity in predicting individual investors' investment behavior in

South Punjab's banking industry. Variables like mutual fund mediation, subjective norms, perceived behavioral control, and investing attitude are all included in the model. Statistical techniques like regression analysis and mediation analysis are used to look at the relationships between different elements in order to find this. Metrics that offer a quantitative assessment of the model's capacity to explain phenomena, including mediation effects and R-squared, are frequently used to evaluate the model's predictive powers.

Table 4: Predictive Relevance (Q^2).

	SSO	SSE	Q² (=1-SSE/SSO)
Effective Financial Decisions	1750	1062.757	0.393
External Hedging Techniques	1000	1000	
FinTech Adoption	2500	2500	
Financial Risk Management	1750	1236.957	0.293
Internal Hedging Techniques	1000	1000	

DISCUSSION AND CONCLUSION

The results support the assertion made in Hypothesis 1, suggesting that making sound financial decisions has a good impact on the management of financial risks. The findings of this study align with the research done by Saeidi et al. (2019), which also identified a positive correlation between the effectiveness of financial decision-making and the use of risk management strategies in financial institutions. The study, which was carried out in various economic contexts, highlighted the crucial importance of making solid financial choices in strengthening risk management techniques. The findings of the current study not only confirm the existing correlation but also offer empirical verification within the particular setting of bank managers in Abu Dhabi. This statement emphasises the long-lasting importance of making sound financial decisions to strengthen the management of financial risks, emphasising its crucial role in enhancing the stability and resilience of banking institutions.

The findings of this study support Hypothesis 2, indicating that smart financial judgements mediate the connection between internal hedging approaches and financial risk management. This discovery is consistent with the study done by Pu, Qamruzzaman, Mehta, Naqvi, and Karim (2021), in which they also observed the mediating impact of effective financial decisions on the association between internal risk management techniques and financial stability in financial organisations. The research conducted by the authors examined various economic circumstances and emphasised the significant importance of prudent financial decision-making in enhancing the efficacy of internal risk management strategies. The findings of the current study not only support the existing mediation but also provide empirical evidence within the particular setting of bank managers in Abu Dhabi. The statement highlights the ongoing importance of making sound financial decisions as a mediator, emphasising its crucial role in strengthening the stability and resilience of banking institutions during times of financial uncertainty.

The findings corroborate Hypothesis 3, suggesting that good financial judgements worked as a mediator in the link between external hedging approaches and financial risk management. The conclusion above is consistent with the findings of a study done by Fakir and JUSOH (2020), which identified a comparable mediating function of good financial decision-making in the association between external risk management techniques and financial stability within financial institutions. The researchers performed a thorough investigation in several economic settings, highlighting the crucial importance of making smart financial decisions to improve the efficacy of external risk management strategies. The current study not only reaffirms the existing mediation but also offers empirical validation within the particular setting of bank managers in Abu Dhabi. This statement underscores the lasting importance of proficient financial decision-making as a mediator, emphasising its pivotal role in strengthening the

stability and resilience of banking institutions in the face of financial volatility.

The findings support Hypothesis 4, suggesting that the adoption of FinTech has a moderating effect on the association between internal hedging approaches and the management of financial risk. The discovery above aligns with the findings of Singh, Sahni, and Kovid (2020), who also observed the moderating influence of FinTech adoption on the association between internal risk management techniques and financial stability in financial institutions. The research conducted by the authors examined several economic scenarios and emphasised the significant importance of incorporating technology into internal risk management strategies to improve their efficacy. The findings of the current study not only support this acknowledged moderation but also offer empirical confirmation within the particular setting of bank managers in Abu Dhabi. This highlights the long-lasting importance of adopting FinTech as a moderator, emphasising its crucial role in strengthening the stability and resilience of banking institutions in the face of changing technology environments and financial concerns.

The results provide support for hypothesis 5, indicating that the adoption of FinTech had a moderating effect on the association between external hedging approaches and the management of financial risk. This result is consistent with the findings of a study done by Nugraha, Setiawan, Nathan, and Fekete-Farkas (2022), in which they identified a comparable moderating impact of FinTech adoption on the association between external risk management techniques and financial stability in financial institutions. The researchers performed a thorough investigation in many economic settings, highlighting the crucial significance of using technology to improve the efficacy of external risk management strategies. The current study not only reaffirms this well-established moderation but also offers empirical validation within the particular setting of bank managers in Abu Dhabi. This statement underscores the long-lasting importance of using financial technology as a moderator, emphasizing its crucial role in strengthening the stability and resilience of banking institutions in the face of changing technological environments and financial uncertainty.

Theoretical and Practical Implications

The inclusion of a comprehensive examination of the combined effects of Fintech adoption external and internal hedging techniques and on Financial Risk Management (FRM) represents a valuable contribution to the current body of scholarly research in this field. This study sheds light on the role of successful financial decisions as a mediator in the relationship between external and internal hedging techniques, and effective derivative approaches on FRM. This contribution to the existing literature is significant since no previous author has explored this specific aspect. This study holds significant importance for players in the financial sector of Abu Dhabi 's emergent economy and other economies with comparable characteristics. This research contributes to the enhancement of financial stability by providing recommendations on effectively addressing and minimizing the adverse effects of potential risks on the organization's financial assets, market valuation, and public image. The paper posits that the adoption of Fintech, along with the use of valuable external and internal hedging techniques strategies, has the potential to enhance the performance of Financial Risk Management.

There are significant practical ramifications for the study of financial risk management for banks, with an emphasis on internal and external hedging strategies. Internally, capital allocation is optimized, and regulatory compliance is strengthened by adhering to capital adequacy ratios through the use of diverse portfolios in line with company objectives. The integration of risk management decisions with wider company goals is guaranteed by the strategic alignment. Furthermore, careful portfolio diversification and lending procedures, together with other sensible internal credit risk management measures, reduce credit losses and

maintain a sound loan portfolio. The study highlights the significance of promptly making decisions by aligning with market trends, which empowers banks to take proactive measures in response to external variables such variations in interest rates. Additionally, by reducing the risks involved in cross-border transactions, external hedging strategies like derivatives help to maximize risk-adjusted profits and increase worldwide market presence. The study's practical implications are further enhanced by the combination of stress testing and scenario analysis, which promotes a proactive and resilient approach to financial risk management in the ever-changing banking sector.

Future Directions

In the future, authors or academics must eliminate these constraints in order to generate more significant and conclusive study results. This research focuses only on four variables: Fintech adoption, effective financial decisions, external internal hedging approaches, and their effects on FRM. Other characteristics or variables that may impact FRM performance, in addition to these, are listed below. As a result, for future writers, while analysing the success of FRM, these aspects, along with the ones described above, must be considered. Furthermore, derivatives direct effect on FRM and successful financial judgments can made as a mediator between external and internal approaches and FRM in research. In the future, writers should investigate the moderating effects of successful financial choices on Fintech adoption, as well as helpful external internal hedging approaches on FRM.

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