

Credit Risk Management Practices and Pakistani Bank's Financial Performance: The Comparison of Conventional and Islamic Banks

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Abstract

The development of any economy is heavily reliant on bank loans, which are distributed to various sectors such as industry, agriculture, and business. While all sectors face credit risks, the financial sector is particularly vulnerable. The research objective of this study is to investigate how the practices of credit risk management effect the performance associated with financial affairs of Islamic and commercial banks in Pakistan. The study included a population of 34 conventional and Islamic banks and the data utilized was taken from primary and secondary sources both in order to achieve its objectives. The results demonstrate that monitoring and identifying credit risks possess a positive and an epic impact on the financial performance connected with banks. However, the effect of credit risk appraisal on financial performance is negative, whereas the impact of credit risk control on financial performance is positive but it is statistically insignificant. The insights of the study particularly for the people in management and administration such as administrators and managers help them establish such approaches and principles which strengthen credit risk management.

Keywords: Financial performance, Credit risk, Commercial banks, Islamic banks, Return on assets

1 Introduction

Banking was originated from Italy, where the first conventional bank named as Italian Bank was established in 1773 (Al-Sulaiti [2022](#); Al Halbusi et al. [2022](#); Li et al. [2022](#)). Later, in the 16th and 17th century the idea of banking spread all through Europe. In the nineteenth century, banks were

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viewed as the most numerous and Jews supervised this sector on account of their significant effect on the financial markets (Abaalzat et al. [2021](#); Al-Sulaiti et al. [2021](#); Ismail et al. [2009](#)). Around then, all Americans and Europeans banks were controlled by Jews and, rather than gold and silver, the concept of money was introduced. The first sketch of the Islamic banking system was evident in the 1970s, the Islamic banking sector was largely developed in Islamic countries, such as Pakistan, Bangladesh, Iran and the Arab region (Al-Sulaiti [2007](#); Al-Sulaiti and Almwajeh [2007](#); Al-Sulaiti and Baker [1998](#); Khalid et al. [2005](#); Sulaiti et al. [2006](#)). In the 21st century, the banking sector has improved the efficiency of fierce competition with foreign banks, spreading rapidly around the world. Effective risk management is seen by academics and regulators as the foundation for bank management. Risk management is one of the determinants of bank equity performance (Sensarma & Jayadev, [2009](#)). Banks often face many fundamental risks, including credit risk, interest rate risk, liquidity risk, market risk, currency risk and solvency risk (Toumi, [2011](#)). However, lending is considered a major source of credit risk for commercial banks (Wheelen, [2000](#)). As this may directly affect the solvency of financial institutions, it should be stressed that credit risk is the most expensive risk for financial institutions (Chijoriga, [1997](#)). The term credit risk deals with the chance of not getting back loan from borrowers (Saunders & Allen, [2011](#)). Therefore, based on the above definition, it is clear that credit risk arises once the lender or other counterparty is liable to the creditor who fails to meet the debt obligation (Luy, [2010](#)).

Risk and efficiency are correlated and bank risk is particularly determined by credit risk since the nature of banking transactions is often influenced by the poor economic and financial situation of the country in which these banks operate Apatachioae, ([2015](#)). The bank's administration must know how to deal with the risks of over-exposure to credit risk (Kimotho, [2015](#)). Gatuhu ([2013](#)) clarified that Collection policy, credit risk control and risk appraisal are for the most part affected the performance of the firm. (Ahmad, [2012](#)). studied the risk of liquidity and its effect on the financial performance of banks in Pakistan. The outcome demonstrates that credit and liquidity risk unfavorably affects the performance of banks in Pakistan.

Credit risk management studies are limited particularly in conventional and Islamic banks. Mostly conventional and Islamic banks face more credit risk (Abachi and Iorember [2017](#); Goshit and Iorember [2020](#); Goshit et al. [2020](#); Jelilov et al. [2020](#); Khalid and Baker [1997](#); Khalid and Fontenot [2004](#)). Yet, the fundamental practices of dealing with a bank have not been sufficiently explored (Dabwor et al. [2020](#); Iorember et al. [2019](#); Iorember et al. [2020](#); Iorember and Jelilov [2018](#); Iorember et al. [2021](#)). Likewise, the previous literature, which exists by different researchers, has different results that make it impossible to obtain convincing results (Balsalobre-Lorente et al. [2023](#); Jaffar et al. [2022](#); Jaffar et al. [2021](#); Mansourian et al. [2019](#); Shah et al. [2023](#); Zhuang et al. [2022](#)). The fluctuation of the results indicates that more research is needed on this issue and the time needed to conduct a thorough study on this topic (Ali et al. [2015](#); Jaffar [2020](#); Jaffar [2020](#); Jaffar et al. [2019](#); Su et al. [2021](#)). Therefore, the main research question is:

How the financial performance of banks in Pakistan is affected by using different credit risk management practices?

1.1 Research objectives

The aim of this study is to evaluate the impact of different credit risk management strategies on the financial performance of Pakistani banks. Specifically, the objectives of this research are to:

- Explore how credit risk identification impacts the financial performance of banks.
- Analyze what impact credit risk appraisal has on financial performance of banks.
- Investigate how credit risk control affects the financial performance of banks.
- Evaluate what effect credit risk monitoring has on the financial performance associated with

banks.

2 Literature review

2.1 Brief history of the banking sector in Pakistan

The banking sector has emerged as a crucial player in the 21st century economy, undergoing significant changes, employees' wellbeing and sustainable developments (Jaffar et al. [2019](#); Jawad et al. [2023](#); Jiakui et al. [2023](#); Mohammadi et al. [2021](#); Shoib et al. [2022](#)). In Pakistan, two primary types of banks exist, namely, Islamic and conventional banks. Additionally, the country has created financial institutions, private banks, foreign banks, investment banks, specialized banks, and microfinance banks for sustainable economic development (Hafeez et al. [2023](#); Iorember et al. [2022](#); Lebni et al. [2021](#); Mubeen et al. [2021](#); Peter et al. [2017](#); Soroush et al. [2021](#)). The State Bank of Pakistan (SBP) exhibits an indispensable role while promoting Islamic finance based on Sharia principles and an appropriate administrative structure. There are three different kinds of Islamic banking institutions (IBIs) operating in Pakistan: full-fledged Islamic banks, conventional bank subsidiaries that offer Islamic banking services, and independent Islamic banking branches of conventional banks. In order to construct a solid financial system that fosters economic development through Sharia-compliant financial operations, the SBP has established comparable conditions and made it possible for Islamic banks to operate concurrently with conventional banks. (State Bank of Pakistan, 2021).

2.2 Empirical Studies

To build up any economy, the financial sector assumes a key part (Farzadfar et al. [2022](#); Liu et al. [2021](#); Local Burden of Disease [2021](#); Micah et al. [2023](#); Moradi et al. [2021](#); Zafar et al. [2022](#)). There is a well-established connection between economic advancement and the financial segment (Aqeel et al. [2022](#); Ge et al. [2022](#); Hussain et al. [2017](#); Yu et al. [2022](#); Zhang et al. [2022](#)). An efficient financial part is expected to improve mental health, the utilization of national monetary assets and progressive financial advancement must be accomplished by utilizing assets effectively (Asad et al. [2017](#); Azadi et al. [2021](#); Li et al. [2022](#); Mubeen et al. [2021](#); Schmidt et al. [2022](#); Shuja et al. [2020](#)). The banking division must be sufficiently sound enough to maximize economic growth and employees' wellbeing (Aqeel et al. [2021](#); Azhar et al. [2018](#); Geng et al. [2022](#); NeJhaddadgar et al. [2022](#); Zeidabadi et al. [2022](#)). However, these financial institutions are facing different types of risk in which capital risk, market risk, reputational risk and any associated risks are involved (Aman et al. [2022](#); Aqeel et al. [2021](#); Li et al. [2021](#); Paulson et al. [2021](#); Toqeer et al. [2021](#)). Of every one of these risk, risk of credit is a major risk that a financial institution particularly banks face (Mamirkulova et al. [2022](#); Rahmat et al. [2022](#); Wang et al. [2021](#); Yao et al. [2022](#); Zhou et al. [2021](#)).

“Credit Risk is the chance of occurring losses because of non-payment of loans from last many years it became the credit risk” (Nduku, [2016](#)). Credit risk is the critical factor for the banking sector due to its nature that decides the survival, reputation, growth and profit of the banks ([Abiola, 2014](#)). Credit risk is an extremely powerful risk that influences the performance of the bank (Aman et al. [2021](#); Aman et al. [2019](#); Fattahi et al. [2020](#); Khazaie et al. [2021](#); Pouresmaeil et al. [2019](#); Yoosefi Lebni et al. [2021](#)). A study demonstrates that the risk of Islamic banks is proficiency of administration, total assets size and risk-weighted assets however Loss provision risk, weighted risk are the major credit risks that are faced by conventional banks (Ahmad & Ahmad, [2004](#)).

Based on the comparative case studies (2017) examined the non-governmental and conventional institutional risk of microfinance. The outcome demonstrates that credit and operational risks are faced by both banks. The literature demonstrates that microfinance institutions face credit risk, yet a group loan, a level of advances and expansion activities can lessen the risk of credit. The Researcher additionally proposes that the financial institutional administration and its internal

environment likewise lessen the risk of credit (Naima, 2017).

Banks with very high trade relationships tend to have higher credit risk. Also, small banks have more leverage, less ROA is more dangerous for their survival. Also, conventional banks with large boards, senior financial directors and independent boards are identified as having relatively low credit risk ([Switzer & Wang, 2013](#)). [Kavun and Vorotintcev \(2016\)](#) have contended that effective and high-quality credit risk measurement models are required for making a pattern of risk management in the financial division to make a particular risk management environment for precisely dealing with the credit risk.

[Kiprop \(2017\)](#) proposed that the financial performance of institutions is positively affected by the identification of credit risk. He expressed that the financial performance of different organizations is affected by the risk management approach used by the management of the particular financial institution. As indicated by [Al-Tamimi and Al-Mazrooei \(2007\)](#), identification of credit risk is an initial phase in the credit risk management process. However, to set up a good credit risk management in the organization, the initial step is to consider the risks and their effect on the association. Credit risk monitoring is a critical procedure that ensures that banks successfully manage credit risk management ([Javid, 2009](#)). Different financial organizations used credit risk monitoring technique to identify the error and mistake at an early stage. Thus, this can positively affect the company's performance ([Al-Tamimi & Al-Mazrooei, 2007](#)). [Khan and Ahmad \(2001\)](#) research about different credit risk management practices used by various financial institutions and found that the least effort was put on measuring, mitigating and monitoring risks, and more focused on credit risk management policies and internal control systems.

A study by S. F. [Ahmed and Malik \(2015\)](#) demonstrates that the collection and credit risk control policies are connected to increase the performance of loans. Credit risk appraisal has a positive and significant effect on the bank's performance. [Njeru \(2016\)](#) contemplated the "Effectiveness of credit appraisal on loan performance of commercial banks in Kenya" and the outcomes demonstrated that credit appraisal is an important factor that could influence business performance. [Rajagopal \(1996\)](#) attempted to analyze the use of different credit risk management practices and a proposed model at deciding the costs of their monetary items in light of the borrower's credit risk appraisal. The findings of this study indicate that the profitability of banks is greatly enhanced by using effective credit risk management approach to identifying risk. Viable credit risk administration applies to the implementation of reporting and review structures to guarantee that risks are appropriately recognized and evaluated and that suitable controls and responses are established ([IRM, AIRMIC, & ALARM, 2002](#))

3 Methodology

This investigation adopts a positivist approach and employs a deductive method to generate quantitative results suitable for future discussions, which is according to the guidelines (Aman et al. [2019](#); Azizi et al. [2021](#); Hussain et al. [2021](#); Hussain et al. [2019](#); Lebni et al. [2020](#); Mamirkulova et al. [2020](#); Mubeen et al. [2020](#)). The researchers collected data through a cost-effective survey, emphasizing quantitative data collection. Primary and secondary both of sources are used to collect data for this study using a cross-sectional research method (Abbas et al. [2019](#); Maqsood et al. [2021](#); Moradi et al. [2020](#); NeJhaddadgar et al. [2020](#); Shuja et al. [2020](#); Yoosefi Lebni et al. [2020](#)). Conventional and Islamic banks in Pakistan, which are 28 and 6 respectively, are included in the study population because the study examines the performance of both bank types in 2017. With no sampling in this study, the researchers used a non-probability sample technique and included all conventional and Islamic banks in Pakistan.

In this investigation, the researchers employed questionnaires to gather primary data. The questionnaires were divided into two sections: the first section requested the names of banks from which data was collected, while the second section comprised questions on credit risk management

practices. To ensure consistency, the researchers used a structured questionnaire. Both Islamic and traditional bank credit managers oversaw the distribution of the questionnaires. To supplement their findings, the researchers analyzed the published annual accounts of the banks in question over the past five years to calculate their financial performance. Specifically, the researchers used the ROA ratio as a measure of financial performance. Additionally, they developed regression equations using this information.

$$ROA = \beta_0 + \beta_1 CRI + \beta_2 CRA + \beta_3 CRC + \beta_4 CRM + \mu.$$

ROA = Return on Asset, a ratio that is determined by dividing net revenue by total assets

B0= constant term

$\beta_1 + \beta_2 + \beta_3 + \beta_4$ are the coefficients of the regression

μ = Possible error

The researchers recommended that data be gathered from all 34 conventional and Islamic banks in Pakistan, and they then used regression, descriptive statistics and correlation analysis to compile the information. Regression analysis was utilised in the study to see whether different credit risk management strategies had an impact on banks' financial performance. Additionally, data on input, coding, input and measurements were quantified using SPSS tools.

4 Data Analysis & Results

Table 4.1: Items Reliability Statistics

Variable	Cr. Alpha	No. of Items
CRI	.869	5
CRA	.861	5
CRC	.739	6
CRM	.860	6

The size of data measuring the reliability was 22. Because the reliability of all items is greater than 0.70 so, all items in the survey contributed significantly to the research which shows relatively high reliability of the items.

4.1 Descriptive Statistics

Table 4.2 Descriptive Statistics

Variables	Mean	Std. Deviation
ROA	1.0015	1.44578
CRI	2.0059	.73606
CRA	2.1353	.89133
CRC	1.9118	.72562
CRM	1.9559	.72562

Source: Research Findings

This table shows the average and standard deviation values of all items. Likert scale is used to measure these items. This table shows the average or means the value of ROA of all banks in Pakistan which is 1.0015 with 1.44578 standard deviations. Credit risk appraisal is an important variable having the highest mean value of 2.1353. This shows that the banks of Pakistan practice the credit risk appraisal to a great extent on average and standard deviation of this item is 0.89133. Secondly, the credit risk identification shows the mean value of 2.0059 which shows that the banks practice the credit risk identification technique to a great extent. Credit risk monitoring and credit risk control practices are also being used by Pakistani banks to a great extent. Mean values of both variables are 1.9118 and 1.9559 respectively and both have the same standard deviation that is

0.72.

Table 4.3 Regression Analysis

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-1.599	.788		2.030	.052
CRI	.783	.285	.399	2.752	.010
CRA	-.470	.176	-.290	-2.668	.012
CRC	.222	.245	.111	.906	.373
CRM	.822	.291	.413	2.825	.008

DV: Bank financial performance

The table shows the multiple regression results between the credit risk management practices and the bank's financial performance in Pakistan. Here, ROA is the dependent variable and CRI, CRA, CRC, CRM are independent variables. Beta coefficients of CRI is .783, its t-statistic is 2.752, and the significant value is 0.010 which means that CRI has a significant and positive impact on the financial performance of banks in Pakistan. Although the beta value of the CRA is -.470, the t-statistic is -2.668, and the significant value is 0.012 which means that CRA has a significant but negative impact on the financial performance of banks in Pakistan. This table shows that the beta value for CRC is 0.222, t-statistic is 0.906 and the significant value is 0.373 which means that CRC is not significantly impacted on the financial performance of the Bank of Pakistan (ROA), the beta for CRM is 0.822 and the t-statistic value is 2.825 and the significant value is 0.008 which means that CRM has a significant and positive impact on the financial performance of banks in Pakistan.

5 Discussion

The study found a significant correlation between the identification of credit risk and the financial performance of the bank. At the same time, there is a direct correlation between the identification of credit risk and the financial performance of banks in Pakistan. These results support the results of Kiprop (2017) that the identification of risk positively influences company performance. The results of this study show that credit risk appraisal negatively influences the performance of banks in Pakistan. Along these lines, CRA influences the bank's performance in Pakistan. The results of this study confirm the conclusions of NJERU et al. (2016) which examined the effectiveness of credit ratings on the performance of commercial banks in Kenya and the recognition that credit appraisal is an important element that can influence company performance.

The review likewise uncovered an insignificant connection between banks financial performance and credit risk control. The findings clearly show that techniques of credit risk control do not affect the performance of the banks in a positive direction. The findings of this study are additionally reliable with Ahmed and Malik (2015), who studied the credit risk factors which can influence the loan performance of banks in Pakistan. Credit risk managers are selected for data collection and a regression model was used to interpret the results. The outcomes demonstrated that the credit risk control and collection policies are connected to the increase in credit performance, however, the relationship is insignificant. Client appraisal and credit policies have a critical and positive effect on credit performance.

The outcomes demonstrated a critical positive connection between the monitoring of credit risk and the bank's performance. In this way, there is a direct link between credit risk monitoring and

the financial performance of banks in Pakistan. The outcome of the investigation is additionally reliable with the findings of Sania and Shehla (2012), which examined the risk management techniques and practices of Pakistani banks. The outcomes demonstrate that understanding risk the management, controlling, and analyzing credit risk is the fundamental driver of risk management practices.

6 Conclusions

The major purpose of this research study is to understand how the financial performance of commercial and Islamic banks in Pakistan is affected by credit risk management practices. The descriptive research model is used in this research study. The population of this study is 34 Islamic and conventional banks. This study used primary and secondary data to achieve its objectives. The outcomes demonstrate that the financial performance of banks is positively and significantly affected by monitoring and identification of the credit risks. Results of the study further explained that the financial performance of the banks is significantly but negatively affected by Credit risk appraisal. The credit risk control has an insignificant however not adverse effect on the financial performance of the bank. This study enables managers and administrators in Pakistan to make supportable prudential principles and approaches to strengthen credit risk management.

6.1 Recommendations and imitations

This examination assessed the management of credit risk practices and their impact on the execution of commercial and Islamic banks in Pakistan from a financial perspective. So, the results of this study are limited to only two banks and other types of banks are not included in this study. The other limitation of this study is that in this study the combine results of commercial and Islamic bank were analyzed and interpreted. The examination recommends additionally inquire about the effect of credit risk practices in the prospect of loan default. This study enables managers and administrators in Pakistan to make supportable prudential principles and approaches to strengthen credit risk management.

7 References

- Abaalzat, K. H., Al-Sulaiti, K. I., Alzboun, N. M., & Khawaldah, H. A. (2021). The Role of Katara Cultural Village in Enhancing and Marketing the Image of Qatar: Evidence From TripAdvisor. *SAGE Open*, 11(2), 21582440211022737. <https://doi.org/10.1177/21582440211022737>
- Abachi, P., & Iorember, P. T. (2017). Macroeconomic and household welfare impact of increase in minimum wage in Nigeria: A computable general equilibrium model. *American Journal of Economics*, 7(5), 249-258.
- Abbas, J., Aqeel, M., Jaffar, A., Nurunnabi, M., & Bano, S. (2019). Tinnitus perception mediates the relationship between physiological and psychological problems among patients. *Journal of Experimental Psychopathology*, 10(3), 2043808719858559. <https://doi.org/10.1177/2043808719858559>
- Abiola, I., & Olaus, A. S. (2014). The impact of credit risk management on the commercial banks performance in Nigeria. *International Journal of Management and Sustainability*, 3(5), 295-306. <https://ideas.repec.org/a/pkp/ijomas/v3y2014i5p295-306id965.html>
- Ahmad, N. H., & Ahmad, S. N. (2004). Key factors influencing credit risk of Islamic bank: A Malaysian case. *The Journal of Muamalat and Islamic Finance Research*, 1(1), 65-80. <https://jmifr.usim.edu.my/index.php/jmifr/article/view/4>
- Ahmed, S. F., & Malik, Q. A. (2015). Credit risk management and loan performance: Empirical

- investigation of micro finance banks of Pakistan. *International journal of economics and financial issues*, 5(2), 574-579. <https://dergipark.org.tr/en/pub/ijefi/issue/31969/352159?publisher=http-www-cag-edu-tr-ilhan-ozturk>
- Al Halbusi, H., Al-Sulaiti, K., & Al-Sulaiti, I. (2022). Assessing Factors Influencing Technology Adoption for Online Purchasing Amid COVID-19 in Qatar: Moderating Role of Word of Mouth. *Frontiers in Environmental Science*, 10, 942527. doi:10.3389/fenvs.2022.942527
- Ali, N., Anwer, M., & Raza, M. (2015). The cement industry of Pakistan: A swot analysis. *Journal for Studies in Management and Planning*, 1(2).
- Al-Sulaiti, I. (2022). Mega shopping malls technology-enabled facilities, destination image, tourists' behavior and revisit intentions: Implications of the SOR theory. *Frontiers in Environmental Science*, 10. <https://doi:10.3389/fenvs.2022.965642>
- Al-Sulaiti, K. I. (2007). Country of origin effects on consumer behavior.
- Al-Sulaiti, K. I., & Almwajeh, O. (2007). Applying Altman Z-score model of bankruptcy on service organizations and its implications on marketing concepts and strategies. *Journal of International Marketing and marketing research*, 32(2), 59.
- Al-Sulaiti, K. I., & Baker, M. J. (1998). Country of origin effects: a literature review. *Marketing Intelligence & Planning*, 16(3), 150-199. <https://doi:10.1108/02634509810217309>
- Al-Sulaiti, K. I., Abaalzamat, K. H., Khawaldah, H., & Alzboun, N. (2021). Evaluation of Katara Cultural Village Events And Services: a Visitors' Perspective. *Event Management*, 25(6), 653-664. <https://doi:10.3727/152599521x16106577965099>
- Al-Tamimi, H. A. H., & Al-Mazrooei, F. M. (2007). Banks' risk management: a comparison study of UAE national and foreign banks. *The journal of risk finance*, 8(4), 394-409. <https://doi.org/10.1108/15265940710777333>
- Aman, J., Lela, U., & Shi, G. (2021). Religious Affiliation, Daily Spirituals, and Private Religious Factors Promote Marital Commitment Among Married Couples: Does Religiosity Help People Amid the COVID-19 Crisis? *Front Psychol*, 12, 657400. <https://doi:10.3389/fpsyg.2021.657400>
- Aman, J., Mahmood, S., Nurunnabi, M., & Bano, S. (2019). The Influence of Islamic Religiosity on the Perceived Socio-Cultural Impact of Sustainable Tourism Development in Pakistan: A Structural Equation Modeling Approach. *Sustainability*, 11(11), 3039. <https://doi:10.3390/su11113039>
- Aman, J., Nurunnabi, M., & Bano, S. (2019). The Relationship of Religiosity and Marital Satisfaction: The Role of Religious Commitment and Practices on Marital Satisfaction Among Pakistani Respondents. *Behav Sci (Basel)*, 9(3). doi:10.3390/bs9030030
- Aman, J., Shi, G., Ain, N. U., & Gu, L. (2022). Community Wellbeing Under China-Pakistan Economic Corridor: Role of Social, Economic, Cultural, and Educational Factors in Improving Residents' Quality of Life. *Frontiers in Psychology*, 12, 816592. <https://doi:10.3389/fpsyg.2021.816592>
- Apătăchioae, A. (2015). The performance, banking risks and their regulation. *Procedia economics and finance*, 20, 35-43. [https://doi.org/10.1016/S2212-5671\(15\)00044-1](https://doi.org/10.1016/S2212-5671(15)00044-1)
- Aqeel, M., Raza, S., & Aman, J. (2021). Portraying the multifaceted interplay between sexual harassment, job stress, social support and employees turnover intension amid COVID-19: A Multilevel Moderating Model. *Foundation University Journal of Business &*

- Economics, 6(2), 1-17. <https://fui.edu.pk/fjs/index.php/fujbe/article/view/551>
- Aqeel, M., Rehna, T., Shuja, K. H., & Abbas, J. (2022). Comparison of Students' Mental Wellbeing, Anxiety, Depression, and Quality of Life During COVID-19's Full and Partial (Smart) Lockdowns: A Follow-Up Study at a 5-Month Interval. *Front Psychiatry*, 13, 835585. <https://doi.org/10.3389/fpsy.2022.835585>
- Aqeel, M., Shuja, K. H., Rehna, T., Ziapour, A., Yousaf, I., & Karamat, T. (2021). The influence of illness perception, anxiety and depression disorders on students mental health during COVID-19 outbreak in Pakistan: a Web-based cross-sectional survey. *International Journal of Human Rights in Healthcare*, 15(1), 17-30. doi:10.1108/ijhrh-10-2020-0095
- Asad, A., Irfan, M., & Raza, H. M. A. (2017). The Impact of HPWS in Organizational Performance: A Mediating Role of Servant Leadership. *Journal of Managerial Sciences*, 11, 25-48. doi: <https://www.qurtuba.edu.pk/jms/past.html>
- Azadi, N. A., Ziapour, A., Lebni, J. Y., Irandoost, S. F., & Chaboksavar, F. (2021). The effect of education based on health belief model on promoting preventive behaviors of hypertensive disease in staff of the Iran University of Medical Sciences. *Archives of Public Health*, 79(1), 69. <https://doi.org/10.1186/s13690-021-00594-4>
- Azhar, A., Wenhong, Z., Akhtar, T., & Aqeel, M. (2018). Linking infidelity stress, anxiety and depression: evidence from Pakistan married couples and divorced individuals. *International Journal of Human Rights in Healthcare*, 11(3), 214-228. <https://doi.org/10.1108/ijhrh-11-2017-0069>
- Azizi, M. R., Atlasi, R., Ziapour, A., & Naemi, R. (2021). Innovative human resource management strategies during the COVID-19 pandemic: A systematic narrative review approach. *Heliyon*, 7(6), e07233. <https://doi.org/10.1016/j.heliyon.2021.e07233>
- Balsalobre-Lorente, D., He, C., Pilař, L., & Shah, S. A. R. (2023). Tourism, urbanization and natural resources rents matter for environmental sustainability: The leading role of AI and ICT on sustainable development goals in the digital era. *Resources Policy*, 82, 103445. <https://doi.org/10.1016/j.resourpol.2023.103445>
- Chijoriga, M.M. (1997), Application of credit scoring and financial distress prediction models to commercial banks lending: the case of Tanzania, Unpublished PhD Dissertation, WirtsCHAftsnnversitat Wien (WU), Vienna.
- Dabwor, D. T., Iorember, P. T., & Yusuf Danjuma, S. (2020). Stock market returns, globalization and economic growth in Nigeria: Evidence from volatility and cointegrating analyses. *Journal of Public Affairs*, n/a(n/a), e2393. <https://doi.org/10.1002/pa.2393>
- Farzadfar, F., Naghavi, M., Sepanlou, S. G., Saeedi Moghaddam, S., Dangel, W. J., Davis Weaver, N., . . . Larijani, B. (2022). Health system performance in Iran: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet*, 399(10335), 1625-1645. [https://doi.org/10.1016/S0140-6736\(21\)02751-3](https://doi.org/10.1016/S0140-6736(21)02751-3)
- Fattahi, E., Solhi, M., Kasmaei, P., Rastaghi, S., Pouresmaeil, M., . . . Gilan, H. D. (2020). Prioritization of needs among students of University of Medical Sciences: A needs assessment. *J Educ Health Promot*, 9, 57. <https://doi.org/10.4103/0445-7706.281641>
- Gatuhu, R. N. (2013). *The effect of credit management on the financial performance of microfinance institutions in Kenya*. Doctoral dissertation, University of Nairobi. <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/60220>
- Ge, T., Ullah, R., Abbas, A., Sadiq, I., & Zhang, R. (2022). Women's Entrepreneurial Contribution

- to Family Income: Innovative Technologies Promote Females' Entrepreneurship Amid COVID-19 Crisis. *Front Psychol*, 13, 828040. <https://doi.org/10.3389/fpsyg.2022.828040>
- Geng, J., Ul Haq, S., Ye, H., Shahbaz, P., Abbas, A., & Cai, Y. (2022). Survival in Pandemic Times: Managing Energy Efficiency, Food Diversity, and Sustainable Practices of Nutrient Intake amid COVID-19 Crisis. *Frontiers in Environmental Science*, 13, 945774. <https://doi.org/10.3389/fenvs.2022.945774>
- Goshit, G. G., & Iorember, P. T. (2020). Measuring the Asymmetric Pass-through of Monetary Policy Rate to Unemployment in Nigeria: Evidence from Nonlinear ARDL. *Nigerian Journal of Economic and Social Studies*, 62(3), 369-387. doi: <https://www.njess.org/journal/njess/articles?id=51>
- Goshit, G. G., Jelilov, G., Iorember, P. T., Celik, B., & Davd-Wayas, O. M. (2020). Asymmetric effects of monetary policy shocks on output growth in Nigeria: Evidence from nonlinear ARDL and Hatemi-J causality tests. *Journal of Public Affairs*, n/a(n/a), e2449. <https://doi.org/10.1002/pa.2449>
- Hafeez, A., Dangel, W. J., Ostroff, S. M., Kiani, A. G., Glenn, S. D., . . . Mokdad, A. H. (2023). The state of health in Pakistan and its provinces and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet Global Health*, 11(2), e229-e243. doi: [https://doi.org/10.1016/S2214-109X\(22\)00497-1](https://doi.org/10.1016/S2214-109X(22)00497-1)
- Hussain, T., Li, B., Aman, J., & Ali, S. (2017). Natural Resource Management for the World's Highest Park: Community Attitudes on Sustainability for Central Karakoram National Park, Pakistan. *Sustainability*, 9(6), 972. <https://doi.org/10.3390/su9060972>
- Hussain, T., Wei, Z., & Nurunnabi, M. (2019). The Effect of Sustainable Urban Planning and Slum Disamenity on The Value of Neighboring Residential Property: Application of The Hedonic Pricing Model in Rent Price Appraisal. *Sustainability*, 11(4), 1144. <https://doi.org/10.3390/su11041144>
- Hussain, T., Wei, Z., Ahmad, S., Xuehao, B., & Gaoli, Z. (2021). Impact of Urban Village Disamenity on Neighboring Residential Properties: Empirical Evidence from Nanjing through Hedonic Pricing Model Appraisal. *Journal of Urban Planning and Development*, 147(1), 04020055. [https://doi.org/10.1061/\(asce\)up.1943-5444.0000645](https://doi.org/10.1061/(asce)up.1943-5444.0000645)
- Iorember, P. T., & Jelilov, G. (2018). Computable General Equilibrium Analysis of Increase in Government Agricultural Expenditure on Household Welfare in Nigeria. *African Development Review*, 30(4), 362-371. <https://doi.org/10.1111/1467-8268.12344>
- Iorember, P. T., Goshit, G. G., & Dabwor, D. T. (2020). Testing the nexus between renewable energy consumption and environmental quality in Nigeria: The role of broad-based financial development. *African Development Review*, 32(2), 163-175. doi:10.1111/1467-8268.12425
- Iorember, P. T., Iormom, B., Jato, T. P., & Abbas, J. (2022). Understanding the bearable link between ecology and health outcomes: the criticality of human capital development and energy use. *Heliyon*, 8(12), e12611. <https://doi.org/10.1016/j.heliyon.2022.e12611>
- Iorember, P. T., Jelilov, G., Usman, O., Isik, A., & Celik, B. (2021). The influence of renewable energy use, human capital, and trade on environmental quality in South Africa: multiple structural breaks cointegration approach. *Environ Sci Pollut Res Int*, 28(11), 13162-13174. <https://doi.org/10.1007/s11356-020-11370-2>
- Iorember, P., Usman, O., & Jelilov, G. (2019). Asymmetric Effects of Renewable Energy

- Consumption, Trade Openness and Economic Growth on Environmental Quality in Nigeria and South Africa. Retrieved from <https://EconPapers.repec.org/RePEc:pra:mprapa:96333>
- IRM, AIRMIC, & ALARM. (2002). *A Risk Management Standard. Islamic Banking and Finance*. Palgrave Macmillan.
- Ismail, S., Khalid, A.-s., & Abdulrazak, R. S. (2009). An exploratory study of MRP benefit? determinant relationships: ACE analysis model. *Journal for International Business Entrepreneurship Development*, 4(1), 119.
- Jaffar, A. (2020a). The Impact of Coronavirus (SARS-CoV2) Epidemic on Individuals Mental Health: The Protective Measures of Pakistan in Managing and Sustaining Transmissible Disease. *Psychiatr Danub*, 32(3-4), 472-477. <https://doi:10.24869/psyd.2020.472>
- Jaffar, A. (2020b). The Role of Interventions to Manage and Reduce Covid-19 Mortality Rate of the COVID-19 Patients worldwide. *Foundation University Journal of Psychology*, 4(2), 33-36. doi: <https://doi.org/10.33897/fujp.v4i2.158>
- Jaffar, A., Al-Sulaiti, K., Balsalobre-Lorente, D., Shah, A. R. S., & Shahzad, U. (2022). *Reset the industry redux through corporate social responsibility: The COVID-19 tourism impact on hospitality firms through business model innovation* (1st ed.): Routledge.
- Jaffar, A., Aqeel, M., Shaher, B., A, J., Sundas, J., & Zhang, W. (2019). The moderating role of social support for marital adjustment, depression, anxiety, and stress: Evidence from Pakistani working and nonworking women. *J Affect Disord*, 244, 231-238. <https://doi:10.1016/j.jad.2018.07.071>
- Jaffar, A., Mubeen, R., Iorember, P. T., Raza, S., & Mamirkulova, G. (2021). Exploring the impact of COVID-19 on tourism: transformational potential and implications for a sustainable recovery of the travel and leisure industry. *Current Research in Behavioral Sciences*, 2, 100033. <https://doi:10.1016/j.crbeha.2021.100033>
- Jaffar, A., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The Impact of Entrepreneurial Business Networks on Firms' Performance Through a Mediating Role of Dynamic Capabilities. *Sustainability*, 11(11), 3006. <https://doi:10.3390/su11113006>
- Javid. (2009). *Project manager skills necessary for Project success*. <http://faculty.kfupm.edu.sa/CEM/soliman/CEM520/CEM520-SamplePresentationsofStudentspapers/CEM520TermpaperPresentationJavid.pdf>
- Jawad, A., Wang, L., Ben Belgacem, S., Pawar, P. S., Najam, H., & Abbas, J. (2023). Investment in renewable energy and electricity output: Role of green finance, environmental tax, and geopolitical risk: Empirical evidence from China. *Energy*, 269, 05115. doi:10.1016/j.energy.2023.126683
- Jelilov, G., Iorember, P. T., Usman, O., & Yua, P. M. (2020). Testing the nexus between stock market returns and inflation in Nigeria: Does the effect of COVID-19 pandemic matter? *J Public Aff*, 20(4), e2289. <https://doi:10.1002/pa.2289>
- Jiakui, C., Najam, H., Liu, J., & Abbas, J. (2023). Green technological innovation, green finance, and financial development and their role in green total factor productivity: Empirical insights from China. *Journal of Cleaner Production*, 382(381), 135131. <https://doi:10.1016/j.jclepro.2022.135131>
- Kavun, S., & Vorotintcev, M. (2016). *Credit Risk Assessment for Financial Institutions Activity*.

- Journal of Finance and Economics*, 4(5), 142-150. [doi: DOI:10.12691/jfe-4-5-3](https://doi.org/10.12691/jfe-4-5-3)
- Khalid, A. S., Al Khulaifi, A., & Al Khatib, F. (2005). Banking services and customer's Satisfaction in Qatar: A statistical analysis. *Studies in Business and Economics*, 11(1).
- Khalid, A.-S., & Baker, M. J. (1997). Qatari consumers perceptions and selections of domestic vs. Foreign airline services: Department of Marketing, University of Strathclyde.
- Khalid, A.-S., & Fontenot, R. (2004). Country of origin [COO] influence on foreign vs. domestic products: Consumers' perception and selection of airlines in the Arab Gulf Region. *Global Business Research-Academy for Global Business Advancement*, 1(1), 260-277.
- Khalid, S., & Amjad, S. (2012). Risk management practices in Islamic banks of Pakistan. *The Journal of Risk Finance*, 13(2), 148-159. <https://doi.org/10.1108/15265941211203198>
- Khan, M. K. R., & Syed, N. A. (2013). Liquidity Risk and Performance of the Banking System (RETRACTED). *JISR management and social sciences & economics*, 11(2), 55-70. <https://doi.org/10.1108/13581981211218342>
- Khan, T., & Ahmed, H. (2001). *Risk management: an analysis of issues in Islamic financial industry (occasional papers)* (No. 91). The Islamic Research and Teaching Institute (IRTI). <https://ideas.repec.org/p/ris/irtiop/0091.html>
- Khazaie, H., Lebni, J. Y., Mahaki, B., Chaboksavar, F., Kianipour, N., . . . Ziapour, A. (2021). Internet Addiction Status and Related Factors among Medical Students: A Cross-Sectional Study in Western Iran. *Int Q Community Health Educ*, 272684X211025438. <https://doi.org/10.1177/0272684X211025438>
- Kimotho, G. W. (2015). *Relationship between Enterprise risk management practices and the Financial performance among Commercial state corporations in Kenya*. Doctoral dissertation, University of Nairobi. <http://hdl.handle.net/11295/94898>
- Kiprop, L. F. (2017). Effect of Risk Identification On Performance of Financial Institutions. *International Journal of Business Strategy*, Vol.2, Issue 1 No.5, pp 75- 87, 2017. <https://pdfs.semanticscholar.org/2701/6eb658ca530ba7ab7b3e17f0fc7598d37521.pdf>
- Lassoued, N. (2017). What drives credit risk of microfinance institutions? International evidence. *International Journal of Managerial Finance*, 13(5), 541-559. <https://doi.org/10.1108/IJMF-03-2017-0042>
- Lebni, J. Y., Togholi, R., Kianipour, N., NeJhaddadgar, N., Salahshoor, M. R., . . . Ziapour, A. (2021). Nurses' Work-Related Quality of Life and Its Influencing Demographic Factors at a Public Hospital in Western Iran: A Cross-Sectional Study. *Int Q Community Health Educ*, 42(1), 37-45. <https://doi.org/10.1177/0272684X20972838>
- Lebni, J. Y., Togholi, R., NeJhaddadgar, N., Salahshoor, M. R., Mansourian, M., . . . Ziapour, A. (2020). A study of internet addiction and its effects on mental health: A study based on Iranian University Students. *J Educ Health Promot*, 9(1), 205. https://doi.org/10.4103/jehp.jehp_148_20
- Li, X., Dongling, W., Baig, N. U. A., & Zhang, R. (2022). From Cultural Tourism to Social Entrepreneurship: Role of Social Value Creation for Environmental Sustainability. *Front Psychol*, 13, 925768. <https://doi.org/10.3389/fpsyg.2022.925768>
- Li, Y., Khalid, A.-S., Dongling, W., & Al-Sulaiti, I. (2022). Tax Avoidance Culture and Employees' Behavior Affect Sustainable Business Performance: The Moderating Role of Corporate Social Responsibility. *Frontiers in Environmental Science*, 10.

<https://doi:10.3389/fenvs.2022.964410>

- Li, Z., Wang, D., Hassan, S., & Mubeen, R. (2021). Tourists' Health Risk Threats Amid COVID-19 Era: Role of Technology Innovation, Transformation, and Recovery Implications for Sustainable Tourism. *Front Psychol*, 12, 769175. <https://doi:10.3389/fpsyg.2021.769175>
- Liu, Q., Qu, X., Wang, D., & Mubeen, R. (2021). Product Market Competition and Firm Performance: Business Survival Through Innovation and Entrepreneurial Orientation Amid COVID-19 Financial Crisis. *Front Psychol*, 12, 790923. <https://doi:10.3389/fpsyg.2021.790923>
- Local Burden of Disease, H. I. V. C. (2021). Mapping subnational HIV mortality in six Latin American countries with incomplete vital registration systems. *BMC Med*, 19(1), 4. <https://doi:10.1186/s12916-020-01876-4>
- Luy, D. D. (2010). *Evaluation of credit risk management policies and practices in a Vietnamese joint stock commercial bank's transaction office*. <https://urn.fi/URN:NBN:fi:amk-2010111814712>
- Mamirkulova, G., Mi, J., & Abbas, J. (2022). Economic Corridor and tourism sustainability amid unpredictable COVID-19 challenges: Assessing community well-being in the World Heritage Sites. *Frontiers in Psychology*, 12, 797568. doi:10.3389/fpsyg.2022.797568
- Mamirkulova, G., Mi, J., Mahmood, S., Mubeen, R., & Ziapour, A. (2020). New Silk Road infrastructure opportunities in developing tourism environment for residents better quality of life. *Global Ecology and Conservation*, 24, e01194. <https://doi:10.1016/j.gecco.2020.e01194>
- Mansourian, M., Qorbani, M., Mehr, B. R., Ziapour, A., Lebni, J. Y., & Safari, O. (2019). Secrecy in drug abusers: A qualitative study in Iran. *Journal of Postgraduate Medical Institute*, 33(3), 256-262. doi:<https://jpmi.org.pk/index.php/jpmi/article/view/2492>
- Maqsood, A., Rehman, G., & Mubeen, R. (2021). The paradigm shift for educational system continuance in the advent of COVID-19 pandemic: Mental health challenges and reflections. *Current Research in Behavioral Sciences*, 2, 100011. <https://doi:10.1016/j.crbeha.2020.100011>
- Micah, A. E., Bhangdia, K., Cogswell, I. E., Lasher, D., Lidral-Porter, B., Maddison, E. R., . . . Dieleman, J. L. (2023). Global investments in pandemic preparedness and COVID-19: development assistance and domestic spending on health between 1990 and 2026. *The Lancet Global Health*. doi: [https://doi.org/10.1016/S2214-109X\(23\)00007-4](https://doi.org/10.1016/S2214-109X(23)00007-4)
- Mohammadi, A., Pishgar, E., Firouraghi, N., Bagheri, N., Shamsoddini, A., & Kiani, B. (2021). A geodatabase of blood pressure level and the associated factors including lifestyle, nutritional, air pollution, and urban greenspace. *BMC Res Notes*, 14(1), 416. doi:10.1186/s13104-021-05830-2
- Moradi, F., Tourani, S., Ziapour, A., Hematti, M., Moghadam, E. J., . . . Soroush, A. (2020). Emotional Intelligence and Quality of Life in Elderly Diabetic Patients. *Int Q Community Health Educ*, 272684X20965811. doi:10.1177/0272684X20965811
- Moradi, F., Ziapour, A., Najafi, S., Rezaeian, S., Faraji, O., . . . Soroush, A. (2021). Comparing the Associated Factors on Lifestyle Between Type 2 Diabetic Patients and Healthy People: A Case-Control Study. *Int Q Community Health Educ*, 272684X211022158. <https://doi:10.1177/0272684X211022158>
- Mubeen, R., Han, D., & Hussain, I. (2020). The Effects of Market Competition, Capital Structure,

- and CEO Duality on Firm Performance: A Mediation Analysis by Incorporating the GMM Model Technique. *Sustainability*, 12(8), 3480. <https://doi.org/10.3390/su12083480>
- Mubeen, R., Han, D., Alvarez-Otero, S., & Sial, M. S. (2021). The Relationship Between CEO Duality and Business Firms' Performance: The Moderating Role of Firm Size and Corporate Social Responsibility. *Front Psychol*, 12, 669715. <https://doi.org/10.3389/fpsyg.2021.669715>
- Mubeen, R., Han, D., Raza, S., & Bodian, W. (2021). Examining the Relationship Between Product Market Competition and Chinese Firms Performance: The Mediating Impact of Capital Structure and Moderating Influence of Firm Size. *Front Psychol*, 12, 709678. <https://doi.org/10.3389/fpsyg.2021.709678>
- Mwangi, G. N. (2012). *The effect of credit risk management on the financial performance of commercial banks in Kenya*. Doctoral dissertation. <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/14834>
- NeJhaddadgar, N., Ziapour, A., Mardi, A., & Zare, M. (2020). Correlation between general health and sexual function in older women in an Iranian setting. *J Educ Health Promot*, 9(1), 300. https://doi.org/10.4103/jehp.jehp_316_20
- NeJhaddadgar, N., Ziapour, A., Zakkipour, G., Abolfathi, M., & Shabani, M. (2022). Effectiveness of telephone-based screening and triage during COVID-19 outbreak in the promoted primary healthcare system: a case study in Ardabil province, Iran. *Journal of Public Health*, 30(5), 1301-1306. <https://doi.org/10.1007/s10389-020-01407-8>
- Njeru, M., Shano, M., & Wachira, A. (2016). Effectiveness of credit appraisal on loan performance of commercial banks in Kenya. *International Journal of Recent Engineering Research and Development*, 1(6), 9-14. <http://www.ijernd.com/papers/v1-i6/2.IJERND-A 116.pdf>
- Paulson, K. R., Kamath, A. M., Alam, T., Bienhoff, K., Abady, G. G., . . . Kassebaum, N. J. (2021). Global, regional, and national progress towards Sustainable Development Goal 3.2 for neonatal and child health: all-cause and cause-specific mortality findings from the Global Burden of Disease Study 2019. *The Lancet*, 398(10303), 870-905. [https://doi.org/10.1016/s0140-6736\(21\)01207-1](https://doi.org/10.1016/s0140-6736(21)01207-1)
- Peter, S., Aqeel, M., Akhtar, T., & Farooq, K. (2017). The moderating role of pregnancy status among coping strategies, depression, anxiety and stress across Pakistani married women. *Foundation University Journal of Psychology*, 1(2), 67-93. doi: <https://doi.org/10.33897/fujp.v1i2.55>
- Pouresmaeil, M., Solhi, M., Ziapour, A., & Fattahi, E. (2019). Prioritizing health promotion lifestyle domains in students of Qazvin University of Medical Sciences from the students and professors' perspective. *J Educ Health Promot*, 8, 228. doi:10.4103/jehp.jehp_250_19
- Rahmat, T. E., Raza, S., Zahid, H., Mohd Sobri, F., & Sidiki, S. (2022). Nexus between integrating technology readiness 2.0 index and students' e-library services adoption amid the COVID-19 challenges: Implications based on the theory of planned behavior. *J Educ Health Promot*, 11(1), 50. https://doi.org/10.4103/jehp.jehp_508_21
- Rajagopal, S. (1996). Bank Risk Management-A Risk Pricing Model. *SBI Monthly Review*, 35(11), 553-567.
- Rozzani, N., Mohamed, I. S., & Yusuf, S. N. S. (2017). Risk management process: Profiling of Islamic microfinance providers. *Research in International Business and Finance*, 41, 20-27. <https://doi.org/10.1016/j.ribaf.2017.04.009>

- Saunders, A., & Allen, L. (2010). *Credit risk management in and out of the financial crisis: new approaches to value at risk and other paradigms*. John Wiley & Sons.
- Schmidt, C. A., Cromwell, E. A., Hill, E., Donkers, K. M., Schipp, M. F., Johnson, K. B., . . . Hay, S. I. (2022). The prevalence of onchocerciasis in Africa and Yemen, 2000-2018: a geospatial analysis. *BMC Med*, 20(1), 293. doi:10.1186/s12916-022-02486-y
- Sensarma, R., & Jayadev, M. (2009). Are bank stocks sensitive to risk management?. *The journal of risk finance*, 10(10), 7-22. <https://doi.org/10.1108/15265940910924463>
- Shah, S. A. R., Zhang, Q., Balsalobre-Lorente, D., & Pilař, L. (2023). Technology, Urbanization and Natural Gas Supply Matter for Carbon Neutrality: A New Evidence of Environmental Sustainability under the Prism of COP26. *Resources Policy*, 82, 103465. doi:10.1016/j.resourpol.2023.103465
- Shoib, S., Gaitan Buitrago, J. E. T., Shuja, K. H., Aqeel, M., de Filippis, R., Abbas, J., . . . Arafat, S. M. Y. (2022). Suicidal behavior sociocultural factors in developing countries during COVID-19. *Encephale*, 48(1), 78-82. <https://doi:10.1016/j.encep.2021.06.011>
- Shuja, K. H., Aqeel, M., & Ahmed, A. (2020). COVID-19 Pandemic and Impending Global Mental Health Implications. *Psychiatr Danub*, 32(1), 32-35. doi:10.24869/psyd.2020.32
- Shuja, K. H., Shahidullah, Aqeel, M., Khan, E. A., & Abbas, J. (2020). Letter to highlight the effects of isolation on elderly during COVID-19 outbreak. *Int J Geriatr Psychiatry*, 35(12), 1477-1478. <https://doi:10.1002/gps.5423>
- Soroush, A., Ziapour, A., Jahanbin, I., Andayeshgar, B., Moradi, F., . . . Cheraghpouran, E. (2021). Effects of Group Logotherapy Training on Self-Esteem, Communication Skills, and Impact of Event Scale-Revised (IES-R) in Older Adults. *Ageing International*, 47(4), 758-778. <https://doi:10.1007/s12126-021-09458-2>
- Su, Z., McDonnell, D., Cheshmehzangi, A., Li, X., & Cai, Y. (2021). The promise and perils of Unit 731 data to advance COVID-19 research. *BMJ Glob Health*, 6(5), e004772. doi:10.1136/bmjgh-2020-004772
- Sulaiti, K. A., Ahmed, Z. U., & Beldona, S. (2006). Arab Consumers' Behavior Towards Credit Card Usage. *Journal of Transnational Management*, 12(1), 69-86. https://doi:10.1300/J482v12n01_05
- Switzer, L. N., & Wang, J. (2013). Default risk estimation, bank credit risk, and corporate governance. *Financial Markets, Institutions & Instruments*, 22(2), 91-112. <https://doi.org/10.1111/fmii.12005>
- Toqeer, S., Aqeel, M., Shuja, K. H., Bibi, A., & Abbas, J. (2021). Attachment styles, facebook addiction, dissociation and alexithymia in university students; a mediational model. *Nature-Nurture Journal of Psychology*, 1, 28-37. doi:https://doi.org/10.47391/NNJP.4
- Toumi. (2011). *Comparison of Leverage and Profitability of Islamic and Conventional Banks*. Paper presented at the 6th International Finance Conference on Financial Crisis anl kacem, Lotfi, Ad Governance.
- Wang, C., Wang, D., Duan, K., & Mubeen, R. (2021). Global Financial Crisis, Smart Lockdown Strategies, and the COVID-19 Spillover Impacts: A Global Perspective Implications From Southeast Asia. *Front Psychiatry*, 12(1099), 643783. <https://doi:10.3389/fpsy.2021.643783>
- Wheelen. (2000). *Strategic Management and Business Policy*. New York: Addison-Wesley

Publishing.

- Yao, J., Ziapour, A., Toraji, R., & NeJhaddadgar, N. (2022). Assessing puberty-related health needs among 10–15-year-old boys: A cross-sectional study approach. *Archives de Pédiatrie*, 29(2). <https://doi:10.1016/j.arcped.2021.11.018>
- Yoosefi Lebni, J., Khorami, F., Khosravi, B., Jalali, A., & Ziapour, A. (2020). Challenges Facing Women Survivors of Self-Immolation in the Kurdish Regions of Iran: A Qualitative Study. *Front Psychiatry*, 11, 778. <https://doi:10.3389/fpsy.2020.00778>
- Yoosefi Lebni, J., Moradi, F., Salahshoor, M. R., Chaboksavar, F., Irandoost, S. F., . . . Ziapour, A. (2021). How the COVID-19 pandemic effected economic, social, political, and cultural factors: A lesson from Iran. *Int J Soc Psychiatry*, 67(3), 298-300. doi:10.1177/0020764020939984
- Yu, S., Draghici, A., Negulescu, O. H., & Ain, N. U. (2022). Social Media Application as a New Paradigm for Business Communication: The Role of COVID-19 Knowledge, Social Distancing, and Preventive Attitudes. *Front Psychol*, 13, 903082. <https://doi:10.3389/fpsyg.2022.903082>
- Zafar, M. Z., Shi, X., Yang, H., & Chen, J. (2022). The Impact of Interpretive Packaged Food Labels on Consumer Purchase Intention: The Comparative Analysis of Efficacy and Inefficiency of Food Labels. *Int J Environ Res Public Health*, 19(22), 15098. <https://doi:10.3390/ijerph192215098>
- Zeidabadi, S., Mangolian Shahrbabaki, P., & Dehghan, M. (2022). The Effect of Foot Reflexology on the Quality of Sexual Life in Hemodialysis Patients: A Randomized Controlled Clinical Trial. *Sexuality and Disability*, 41(1), 1-12. doi:10.1007/s11195-022-09747-x
- Zhang, X., Husnain, M., Yang, H., Ullah, S., & Zhang, R. (2022). Corporate Business Strategy and Tax Avoidance Culture: Moderating Role of Gender Diversity in an Emerging Economy. *Front Psychol*, 13, 827553. <https://doi:10.3389/fpsyg.2022.827553>
- Zhou, Y., Draghici, A., Mubeen, R., Boatca, M. E., & Salam, M. A. (2021). Social Media Efficacy in Crisis Management: Effectiveness of Non-pharmaceutical Interventions to Manage COVID-19 Challenges. *Front Psychiatry*, 12, 626134. doi:10.3389/fpsy.2021.626134
- Zhuang, D., Al-Sulaiti, K., Fahlevi, M., Aljuaid, M., & Saniuk, S. (2022). Land-use and food security in energy transition: Role of food supply. *Frontiers in Sustainable Food Systems*, 6. <https://doi:10.3389/fsufs.2022.1053031>

8 Appendix

I. Correlation Matrix

	ROA	Credit Risk Identification	Credit Risk Appraisal	Credit Risk Control	Credit Risk Monitoring
ROA	1				
Credit Risk Identification	.689**	1			
Credit Risk Appraisal	-.404*	-1.29	1		
Credit Risk Control	.046	.210	.158	1	
Credit Risk Monitoring	.672**	.577**	-1.195	-2.51	1

** Correlation among the variable is significant at the level 0.01

* Correlation among the variable is significant at the level 0.05

II. Financial performance data

Bank	Year	Net income	Total assets	ROA
Zarai taraqiati bank ltd	2012	2,589,527	131,859,354	1.96%
	2013	1,804,470	148,650,116	1.21%
	2014	5,456,282	163,851,997	3.33%
	2015	5,343,110	187,883,870	2.84%
	2016	3,379,244	215,944,177	1.56%
Bank of Punjab	2012	1,744,558	332,110,474	0.53%
	2013	1,914,720	352,674,257	0.54%
	2014	2,841,535	420,400,438	0.68%
	2015	4,717,799	472,283,329	1.00%
	2016	4,863,920	545,219,306	0.89%
Askari bank	2012	1,296,106	353,182,401	0.37%
	2013	-5,377,240	395,096,761	-1.36%
	2014	4,093,724	447,611,701	0.91%
	2015	4,902,661	536,188,740	0.91%
	2016	5,226,947	619,673,098	0.84%
Faysal bank limited	2012	1,419,844	313,123,471	0.45%
	2013	1,849,906	355,279,707	0.52%
	2014	2,476,959	388,125,784	0.64%
	2015	4,222,364	430,072,860	0.98%
	2016	4,301,772	444,464,661	0.97%
National bank of Pakistan	2012	15,665,428	1,316,349,257	1.19%
	2013	5,306,783	1,372,249,263	0.39%
	2014	16,071,184	1,549,659,081	1.04%
	2015	20,076,583	1,711,874,167	1.17%
	2016	23,087,260	1,981,416,562	1.17%
United bank ltd.	2012	19,247,439	962,346,358	2.00%
	2013	19,730,771	1,083,632,716	1.82%

	2014	24,024,803	1,182,453,113	2.03%
	2015	27,009,626	1,486,186,813	1.82%
	2016	28,002,302	1,661,742,260	1.69%
Habib Bank limited	2012	22,791,598	1,610,474,474	1.42%
	2013	23,027,095	1,715,271,378	1.34%
	2014	31,482,566	1,864,617,696	1.69%
	2015	35,101,591	2,218,432,986	1.58%
	2016	34,206,25	2,507,182,331	1.36%
Allied bank	2012	11,847,511	634,091,755	1.87%
	2013	14,783,175	734,761,815	2.01%
	2014	15,202,000	843,097,566	1.80%
	2015	15,314,275	992,739,247	1.54%
	2016	14,700,136	1,071,044,303	1.37%
Samba Bank	2012	300,886	34,853,837	0.86%
	2013	84,313	40,001,540	0.21%
	2014	226,081	50,581,060	0.45%
	2015	430,603	80,166,336	0.54%
	2016	544,602	101,414,491	0.54%
Silk Bank Limited	2012	-344,271	89,080,494	-0.39%
	2013	-1,156,562	91,770,195	-1.26%
	2014	86,860	102,735,853	0.08%
	2015	-1,711,605	133,102,871	-1.29%
	2016	738,553	135,033,822	0.55%
Soneri Bank Ltd	2012	1,104,193	158,629,397	0.70%
	2013	1,036,857	169,233,872	0.61%
	2014	1,582,055	213,175,307	0.74%
	2015	2,212,768	253,341,829	0.87%
	2016	1,878,844	278,520,706	0.67%
Standard Chartered	2012	6,045,864	399,055,450	1.52%
	2013	10,699,319	405,329,850	2.64%
	2014	9,814,885	409,567,883	2.40%
	2015	9,288,426	447,347,791	2.08%
	2016	9,617,785	473,331,718	2.03%
Summit Bank Ltd.	2012	-2,717,026	134,289,066	-2.02%
	2013	-1,813,475	125,499,781	-1.45%
	2014	241,620	148,444,294	0.16%
	2015	238,203	188,365,695	0.13%
	2016	-2,191,479	214,986,059	1.02%
Industrial Development Bank	2012	-23,866	4,546,879	-0.52%
	2013	101,996	3,797,099	2.69%
	2014	366,670	4,237,571	8.65%
	2015	753,255	4,108,497	18.33%
	2016	217,151	4,078,954	5.32%
SME Bank Ltd.	2012	-399,758	8,968,085	-4.46%

	2013	-430,699	7,023,822	-6.13%
	2014	-386,418	5,730,608	-6.74%
	2015	-300,542	8,981,803	-3.35%
	2016	-270,904	9,642,472	-2.81%
The Punjab Provincial Cooperative Bank Ltd.	2012	106,896	14,552,526	0.73%
	2013	478,728	16,609,486	2.88%
	2014	83,859	17,985,397	0.47%
	2015	89,725	19,314,865	0.46%
	2016	103,948	19,173,591	0.54%
Citi Bank N. A.	2012	1,477,142	85,196,217	1.73%
	2013	1,675,236	59,886,389	2.80%
	2014	3,090,561	81,253,972	3.80%
	2015	3,609,224	88,643,485	4.07%
	2016	3,201,105	112,050,384	2.86%
Js Bank Ltd.	2012	820,890	84,018,777	0.98%
	2013	837,764	114,748,759	0.73%
	2014	1,898,267	179,381,111	1.06%
	2015	2,465,324	220,806,686	1.12%
	2016	2,458,634	268,825,591	0.91%
Mcb Bank Ltd.	2012	21,235,235	771,458,246	2.75%
	2013	21,950,141	821,278,304	2.67%
	2014	24,774,446	941,606,486	2.63%
	2015	25,035,112	1,020,980,021	2.45%
	2016	22,174,145	1,076,690,236	2.06%
Meezan Bank Ltd.	2012	3,508,116	274,436,510	1.28%
	2013	3,956,776	329,724,631	1.20%
	2014	4,570,086	437,510,268	1.04%
	2015	5,067,942	535,949,933	0.95%
	2016	6,602,423	663,267,675	1.00%
Nib Bank Ltd.	2012	262,080	190,855,177	0.14%
	2013	1,580,078	178,793,465	0.88%
	2014	-620,697	194,995,301	-0.32%
	2015	2,617,293	243,496,512	1.07%
	2016	1,420,364	243,944,868	0.58%
Bank Al Habib Limited	2012	5,519,418	453,353,942	1.22%
	2013	5,198,257	461,021,913	1.13%
	2014	6,436,370	579,785,248	1.11%
	2015	7,331,752	640,284,560	1.15%
	2016	8,144,579	751,819,534	1.08%
Sindh Bank Limited	2012	886,976	92,291,098	0.96%
	2013	665,904	75,032,454	0.89%
	2014	1,079,479	124,871,480	0.86%
	2015	1,245,476	128,103,914	0.97%

	2016	1,403,291	146,205,654	0.96%
Bank of Khyber	2012	1,078,059	82,177,638	1.31%
	2013	1,154,029	108,170,168	1.07%
	2014	1,309,420	126,106,255	1.04%
	2015	1,789,214	155,158,733	1.15%
	2016	2,020,476	206,400,274	0.98%
First Women Bank Limited	2012			
		43556	22,506,345	0.19%
	2013	-206,073	20,761,377	-0.99%
	2014	-499,891	18,787,098	-2.66%
	2015	53,427	21,346,622	0.25%
	2016	11,322	18,520,564	0.06%
Deutsche Bank Ag	2012	350,827	28,948,564	1.21%
	2013	317,763	27,804,001	1.14%
	2014	588,619	21,707,565	2.71%
	2015	1,015,571	21,113,983	4.81%
	2016	419,526	24,493,571	1.71%
Bank Al Falah	2012			
		4,556,121	536,567,969	0.85%
	2013	4,675,950	611,427,624	0.76%
	2014	5,787,463	743,958,799	0.78%
	2015	7,51,329	903,415,757	0.83%
	2016	7,939,126	919,442,840	0.86%
Habib Metropolitan Bank Limited	2012			
		3,396,358	304,310,087	1.12%
	2013	3,526,768	311,395,637	1.13%
	2014	4,942,150	397,674,817	1.24%
	2015	7,673,483	489,885,635	1.57%
	2016	6,128,690	526,442,652	1.18%
Al Baraka	2012			
		-644,940	73,866,558	-0.87%
	2013	-41,231	87,759,404	-0.05%
	2014	145,923	94,348,780	0.15%
	2015	240,446	86,932,510	0.28%
	2016	-155,527	126,798,633	-0.12%
Industrial and Commercial Bank of China Ltd.	2012			
		-180,307	22,047,616	-0.82%
	2013	294,405	62,044,805	0.47%
	2014	915,166	75,950,387	1.20%
	2015	1,775,329	140,254,295	1.27%
	2016	1,427,316	243,978,738	0.59%
MCB Islamic Bank Ltd	2015	52,307	26,887,541	0.19%
	2016	79,917	28,568,502	0.28%
NiB Bank Ltd.	2012	262,080	190,855,177	0.14%
	2013			
		1,580,078	178,793,465	-
	2014	(620,697)	194,995,301	0.32%
	2015	2,617,293	243,496,512	1.07%
	2016	1,420,364	243,944,868	0.58%

The Bank of Tokyo	2012	45,501	8,272,048	0.55%
	2013	12,892	9,294,395	0.14%
	2014	27,177	7,845,367	0.35%
	2015	45,293	10,823,366	0.42%
	2016	10,875	10,358,653	0.10%
Dubai Islamic bank	2012	344,724	63,509,562	0.54%
	2013	136,860	80,256,612	0.17%
	2014	600,513	101,552,999	0.59%
	2015	430,555	157,131,182	0.27%
	2016	855,540	152,133,399	0.56%