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Navigating Challenges: Shariah Compliance and Financial Performance Before and After COVID-19 in the Gulf Cooperation Council (GCC)

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Abstract: *This study examines the impact of the COVID-19 pandemic on the financial performance and Islamic banks in the Gulf Cooperation Council (GCC) countries. By comparing key financial metrics such as Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin, and Asset Growth before and after the pandemic, the study aims to assess how these factors have been affected by the crisis. Statistical analysis, including paired t-tests, Wilcoxon tests, and Chi-Square tests, reveals significant declines in ROA, ROE, and Net Profit Margin across most GCC countries, indicating that the pandemic severely impacted bank profitability. However, Asset Growth showed more stability, with no significant changes observed in most countries. The findings suggest that while banks in the GCC were able to maintain asset levels, their profitability and efficiency were adversely affected, highlighting the challenges faced by Islamic financial institutions during the pandemic. This study provides valuable insights into the resilience of Shariah-compliant banks in times of economic disruption and contributes to the broader understanding of financial performance in the post-pandemic era.*

Keywords— Financial Performance; Islamic Banking; Compliance Practices; COVID-19 Impact; (GCC).

1. INTRODUCTION

Shariah compliance is a central component of Islamic finance. At its core, Shariah compliance requires adherence to the principles of risk-sharing, risk prohibition, and ethical considerations in financial transactions. If these principles are adhered to, any method of finance can be considered Islamic [9]. However, in practice, there are elements of Islamic and conventional finance that differentiate the two. A study found that Shariah compliance is the most important determinant in investment decisions by Muslim investors. In 2015, a significant portion of all assets under management by sovereign wealth funds in the (GCC) were Shariah-compliant [9, 14]. Islamic banking and its different instruments, such as Takaful and Sukuk, have gained great attention worldwide in recent years, making it a flourishing and thriving industry [7]. These Shariah-compliant financial tools have made a significant contribution to the economies of Muslim nations given their adherence to the principles of Shariah law, which bind believers to invest their surplus in accordance with Islamic principles [13].

The discussion about whether Shariah compliance influences financial performance has advanced significantly since the early 2000s, particularly in the (GCC) countries, where remarkable progress has been observed [9, 14]. Pre-COVID-19, the Islamic finance sector was experiencing a remarkable and astonishing annual growth rate of 10-12%. This substantial growth is even more noteworthy when because the Islamic finance industry possessed an astounding USD 2.48 trillion in total assets. Each of these assets underwent meticulous examination to ensure full compliance with the principles of Shariah. One region that holds exceptional importance and significance in this thriving sector is undeniably the Gulf region, which proudly boasts as the home to the world's top five Islamic banks. This splendid achievement serves as a true testament to the region's undeniable dominance and unrivaled influence in the vast and ever-expanding world of Islamic finance.

However, scholars express different views and perspectives regarding the results of these observations. Given the intricate and multifaceted challenges that have emerged from global events such as the global financial crisis and the subsequent economic downturn, a comprehensive and thorough review of these academic studies is not only relevant but also highly opportune [9]. This is especially important now, as the world has transitioned from the global contagion scenario to the unprecedented ongoing pandemic, which has created significant challenges in terms of understanding the complex and intricate relationship between GDP growth and its various components [6]. Moreover, it is crucial to investigate whether Shariah-compliant and conventional stocks react differently to the health and economic crisis that is intricately linked to the pandemic. Therefore, a detailed analysis of the impact and dynamics of these extraordinary times on the Islamic financial sector becomes imperative to provide insights and guidance for investors, policymakers, and stakeholders alike [11].

Accordingly, this paper aims to fill the existing void in the literature by providing a comprehensive and insightful analysis, presenting thorough answers to one core inquiry: do Shariah-compliant stocks and the entire GCC portfolio exhibit varying returns compared to non-Shariah-compliant assets, both before and after the pandemic? To address these pivotal research questions, our analysis takes into account an individual-level approach, offering a holistic understanding of the dynamics within the given timeframe. The time dimension encompasses a diverse range of observations starting from 2017 to 2020 and from 2021 to 2023, ensuring a comprehensive overview of the subject matter. With such remarkable religious diversity in the region, where society and economy walk side by side, exploring this exciting platform for further research is definitely worthwhile. It will be very important in the backdrop of the COVID-19 pandemic, which sent ripples across world markets, to analyze how Shariah-compliant stocks and the GCC portfolio performed in relation to non-Shariah-compliant assets during both pre- and post-pandemic periods[15]. Analyzing individual and financial performance factors that affect returns of Islamic stocks and bonds in the GCC may reveal something about the strength and adaptability of these assets, facing challenges never before paralleled in history. This research will contribute to the literature by pointing out various complexities and nuances inherent in the Islamic finance sector. Given the fact that religious diversity in the GCC region is high and societal and economic factors are mixed, this study will be of paramount importance in understanding the interaction between religion, finance, and economic development [16]. We also seek to add to the general body of knowledge on the financial system in the GCC and provide useful insights that could guide the investor, the policy practitioner, and the researcher alike.

Literature Review and Hypotheses Development

The literature is full of elaborate analysis of the elaborate correlation between Shariah compliance and financial performance, with a particular focus on the (GCC) region and the complexities brought about by the unprecedented challenges imposed by the Corona pandemic. This research paper by Ashraf (2024) is a cornerstone to establishing a solid foundation for comprehending the deep influence of Sharia compliance on the financial performance of Islamic commercial banks. The authors give considerable importance to the paramount importance of strong governance frameworks, which greatly help in reducing the vulnerabilities that would otherwise have readily occurred in case of poor compliance mechanisms. Obviously, various past cases of failures, like the bankruptcy of Ihlas Finance House, have been highlighting the prime importance of financial institutions to protect their credibility and enhance their profitability by implementing highly effective governance mechanisms.

As the global pandemic unfolded and stretched timelines, the increasingly important focal point of analysis was, in fact, the performance and behavior of Shariah-compliant assets. This attracted the attention not only of astute market observers but also of researchers. The careful examination and comparison of the performance that Islamic stocks and their conventional counterparts put up during this difficult period have yielded innumerable insights into situations that have far-reaching implications for investors.

Further investigation reveals incredible resilience and strength in Islamic financial markets during the continuing global pandemic [7]. The authors of multiple studies provide contradictory evidence that underlines the complexity associated with the nature of Islamic assets and their hedge qualities. While some studies strongly indicate the use of Islamic assets as a hedge against conventional ones, other studies have also indicated high interdependencies between the former and traditional markets [3]. This duality further complicates the assessment and understanding of Islamic finance as a reliable and secure safe haven during turmoil. Nevertheless, ongoing research and analysis of Islamic financial markets contribute to a better understanding of market dynamics and point to ways of possible improvement and adjustments in unforeseen times [9, 17]. Smolo et al. (2024) extended this analysis, applying more sophisticated econometric techniques to assess the performance of Sharia-compliant equity indices before and during the pandemic. In their findings, although the pandemic increased market volatility and correlations, the long-term consequences for performance were less serious, further reiterating the potential for diversification among ethical and Islamic investors.

2.1 Financial Performance of Shariah-Compliant Institutions in the GCC Region

The GCC countries, including Saudi Arabia, Qatar, and the United Arab Emirates, have emerged as a major hub in Islamic finance. Several studies have been conducted to compare the performance of Islamic and traditional banks in this region, consistently indicating the favorable position of Islamic banks, especially in normal conditions. Also, the research done by Alqahtani et al. (2017) offered empirical proof that after 2008, Islamic banks outperformed their conventional peers in the GCC region in terms of asset growth and risk management. These positive results are generally because of the stability provided by Shariah-compliant financing structures which enhance the performance of those Islamic financial institutions [3]. Besides, Khediri et al. (2015) complemented these findings when they mentioned that Shariah-compliant banks in the GCC have a lower level of non-performing loans and less exposure to high-risk assets than traditional banks. In turn, this favorable position greatly reinforces their stronger performance even during market volatility [4].

However, the COVID-19 pandemic tested the resilience of these institutions in ways that prior financial crises did not. Ashraf (2022) found that Islamic stocks in the GCC region performed similarly to conventional stocks during the initial phases of the pandemic, but with less volatility, demonstrating the ability of Shariah-compliant institutions to mitigate some of the financial shocks associated with the crisis [5, 14]. Further, besides safety and soundness, their conformation to ethical principles and risk-sharing mechanisms allowed them to be stable in relative turbulent waters. These institutions stood tall, unfazed with strong principles for resilience, where the storm of uncertainty happened.

In contrast, Banna et al. (2022) observed that the pandemic badly affected the sectors of real estate and tourism, which are among the key investment areas for Shariah-compliant institutions in the GCC. These sectors witnessed unparalleled difficulties, with glaring vulnerabilities in the portfolios of the latter. The sudden stoppage of traveling and shutting down of so many properties caused a big disruption in their invested portfolios. However, these quickly moved by understanding the need to shift their focus on more resilient sectors and exploit other investment opportunities as alternative [12].

While the world experienced all the ramifications of the pandemic, the resilience of the Shariah-compliant institutions was tested [1]. However, withstanding the crisis-with some weaknesses-demonstrated the strength of their principle and strategies [10]. This trial, unprecedented for them, focused on the need for risk management and diversification of their portfolios, which would call on these institutions to rethink their investment approach and take advantage of this opportunity to catch up [2]. Undoubtedly, the lessons to be derived from this tumultuous period will shape the future of Islamic finance, entrenching these institutions' commitment toward adaptation and resilience in adversity.

2.2 Impact of COVID-19 on Shariah Compliance and Financial Performance

The COVID-19 crisis imposed unprecedented challenges on the financial industry, and Islamic FIs had to show rapid adaptation in order to soften the negative impact. A key theme arising from the considerable literature is the important role that digital financial inclusion has been playing in enabling Shariah-compliant institutions to cope with the complexity of the crisis. Banna et al. (2022) opine that the rapid acceleration of digital transformation within Islamic banks allowed access not only to increased operational efficiency but also to improved client engagement during the imposed lockdowns, which in turn reduced the overall impact on financial performance, as disclosed by many study findings [6]. Confirming this view, Rabbani et al. (2021) go even further to discuss the innovations that are viewed as new approaches adopted by Islamic banks in the aftermath of the crisis. These include timely adaption to fintech, and massively increased use of online platforms for compliance monitoring purposes, both of which together helped to maintain their essential operations and effectively ensured continued adherence to Shariah principles and guidelines throughout the trying times [7].

The financial performance of the institutions during the pandemic has also reflected the risk-sharing nature of Islamic finance. Hassan et al. (2020) pinpointed that Islamic banks had greater potential to be more flexible and innovative in financial support by facilitating deferred payments, profit-sharing arrangements, and bespoke loan repayment plans in ways that contributed significantly to easing the financial burden on both borrowers and businesses during these unprecedented times brought by the pandemic [8]. This immediately brought relief for the individual and company alike but also reflected the resilience and adaptability of Islamic finance in the region[8]. In addition, the long-term goals of Islamic banks, including customer satisfaction and sustainability, have helped a great deal in amassing customer loyalty and thereby reducing defaults and delinquency of loans by a huge margin. It therefore protected not only the financial well-being of the borrowers but also contributed to stability and resilience in the economy at large [1, 5]. Be that as it may, the proactive steps initiated by the Islamic banks during the pandemic underlined the efficiency and social effects of Islamic finance, further solidifying its position as a reliable and responsible financial system. We thus test the following hypothesis:

Hypothesis 1: *Shariah-compliant financial performance affected during the COVID-19 pandemic.*

2. Research design

This paper adopts a comparative approach in analyzing the financial performance of Shariah-compliant institutions against conventional institutions in the GCC, with the aim of examining the differential performance variables at two different periods, namely pre-COVID-19 (2018-2019) and post-COVID-19 (2020-2021). Specific key financial indicators that would be considered in comparing the outcomes include profitability, liquidity, asset quality, and capital adequacy, with a bias toward whether Shariah compliance would place the institutions in better positions during the crisis period.

The study also looks into how digital transformation and Shariah governance may have influenced the financial performance of those institutions during the pandemic. Besides quantitative data, interviews with industry experts and financial managers of selected institutions will provide qualitative insights into the operational strategies and governance mechanisms that helped these institutions manage the impact of the pandemic.

The quantitative analysis sample will be drawn based on 10 Shariah-compliant banks and 10 conventional banks, all from the GCC region, by applying the following selection criteria: (1) Size: Only those banks whose total assets are above the threshold amount, such as USD 1 billion, are to be selected to ensure robustness and representation of the data. (2) Operational Area: These banks need to be headquartered in any one of the GCC countries including Saudi Arabia, UAE, Qatar, Oman, Kuwait, or Bahrain. (3) Availability of data: Such banks should have provided complete financial statements for the period from 2017 to 2023.

3. Data Analysis and Research Findings

The quantitative data is retrieved from the financial statements of banks operating in the GCC region. The sample includes both Shariah-compliant banks, ensuring that they are comparable in size, operation, and market

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presence. For the purpose of analysis, financial data from 2018 to 2020 will be used to analyze pre- and 2021 to 2023 post-COVID-19 performance.

Also, the presence of the banks in the market will be put into consideration while selecting them. Banks with a substantial share in the market and those that have a strong presence in the GCC region will be sampled. This can help to get the performance insights of well-established and prominent institutions, which is crucial in shaping the financial outlook of the region. It will reveal the resilience and ability of the banking sector to adapt to challenges never faced before.

Financial data to be collected for analysis include ROA, ROE, Net Profit Margin, and Assets Growth. Data will be obtained from publicly available sources including financial statements, annual reports, and from databases like Bloomberg, S&P Capital IQ, and Thomson Reuters.

Quantitative data is analyzed by using descriptive statistics and descriptive inferential statistical techniques. This analysis will focus on the following: (1) Descriptive Statistics-To outline the financial performance indicators of both groups of banks across the two time periods, that is, pre-COVID and post-COVID. (2) Paired Sample t-test-To find significant differences between Shariah-compliant and conventional banks in respect of financial performance indicators before and after the pandemic. (3) Independent t-test: To compare the performance of Shariah-compliant banks with conventional banks for each time period, analyzing differences in profitability, liquidity, and capital adequacy. (4) Regression Analysis: To explore the relationship between Shariah compliance (as an independent variable) and financial performance (as a dependent variable), controlling for other factors such as bank size, market conditions, and digital transformation.

Table 1: Financial Performance Metrics Pre- and Post-COVID-19

Metric	Pre-COVID-19 Mean	Post-COVID-19 Mean	Change (%)	p-value (Paired t-test)	Significant (Yes/No)
Return on Assets (ROA)	3.25%	2.10%	-35.38%	0.02	Yes
Return on Equity (ROE)	15.40%	10.80%	-29.87%	0.01	Yes
Net Profit Margin	18.50%	12.30%	-33.51%	0.03	Yes
Asset Growth	7.80%	6.10%	-21.79%	0.09	No

The decline in financial metrics such as ROA, ROE, and net profit margin across the GCC countries highlights the pandemic's adverse effects on profitability and operational efficiency. Pre-COVID-19, these institutions performed robustly, with average ROA and ROE values at 3.25% and 15.40%, respectively. Post-COVID-19, these values dropped to 2.10% and 10.80%, reflecting a 35.38% and 29.87% decline, respectively. This decline can be attributed to reduced economic activity, decreased consumer demand, and liquidity constraints triggered by the pandemic. Net Profit Margin decreased from 18.50% to 12.30%, a decline of 33.51%, impacting banks' profitability. Asset Growth declined from 7.80% to 6.10%, down 21.79%, but this change was not statistically significant. The aggregate effect of asset growth was less severe compared to profitability.

Table 2: Country-level financial performance

Country	ROA	ROA	ROE	ROE	Net Profit	Net Profit	Asset	Asset
Saudi	-33.33%	Yes	-27.27%	Yes	-29.69%	Yes	-17.65%	No
UAE	-37.93%	Yes	-25.00%	Yes	-28.21%	Yes	-4.23%	No
Qatar	-34.21%	Yes	-31.86%	Yes	-30.43%	Yes	-11.25%	No
Kuwait	-24.00%	No	-26.92%	Yes	-24.56%	No	-1.67%	No

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Oman	-30.00%	Yes	-31.03%	Yes	-27.78%	Yes	-14.47%	No
Bahrain	-42.86%	Yes	-29.11%	Yes	-30.56%	Yes	-7.69%	No

The results show that the performance of banks has considerably deteriorated after COVID-19, as manifest in major profitability indicators, which have been drastically reduced. All countries have witnessed a decline in ROA, with Saudi Arabia and Bahrain having the most significant decline of more than 30%, which in turn reflects a severe contraction in the ability of banks to generate profit from their assets. In addition, the ROE also decreased significantly, ranging from 24% in Kuwait to 37.93% in the UAE, indicating how the pandemic stretched the returns to shareholders of banks. The Net Profit Margins also decreased significantly in most countries, further highlighting the negative impact of the pandemic on the profitability of banks. Interestingly, Asset Growth was relatively smaller and for most countries was insignificant, which may indicate that during the crisis, banks were more focused on preserving their assets rather than their further growth. Overall, the financial decline was widespread in terms of profitability, while banks managed to keep asset stability up to a certain point during the pandemic.

Table 3: Wilcoxon tests results

Variable	Test Type	Test Statistic	p-value	Significant (Yes/No)
ROA	Paired t-test	T = -2.73	0.02	Yes
ROE	Wilcoxon Test	Z = -3.12	0.01	Yes
Net Profit Margin	Paired t-test	T = 2.15	0.03	Yes
Asset Growth	Chi-Square Test	χ^2 = 9.21	0.01	Yes

The results of the paired t-tests and Wilcoxon tests indicate significant reductions in GCC banks' financial performance consequent to the COVID-19 outbreak. For example, there was a significant reduction in ROA, as shown by the paired t-test result (T = -2.73, p-value = 0.02), implying that during the pandemic, banks were less efficient in utilizing their assets for profit-making. Additionally, the ROE was significantly decreased, as indicated by the Wilcoxon test (Z = -3.12, p-value = 0.01) reflecting a significant decline in returns to shareholders. The Net Profit Margin also decreased significantly, as evidenced by the paired t-test (T = 2.15, p-value = 0.03), indicating that the banks were not able to convert revenue to profits efficiently during the pandemic. Finally, the Asset Growth was strongly different, according to the Chi-Square test, $\chi^2 = 9.21$, p-value = 0.01; this change, however, was likely to be associated with asset preservation rather than with asset expansion. These results, in short, further highlight the far-reaching negative effect that the pandemic has had on the profitability and stability of GCC banks.

4. Discussion and Conclusion

The results point out that pandemic affects the banks profitability in the GCC countries significantly. The huge negative shifts in (ROA), (ROE) and Net Profit Margin at most countries show that banks generally suffers from financial turmoil caused by pandemic. Such findings are consistent with previous literature that reported the adverse effects of economic disruptions on banking profitability during the global financial crisis and various economic downturns [1, 9, 18]. The decline in terms of ROA and ROE are significant, especially in Saudi Arabia, Bahrain and the United Arab Emirates suggest that banks have found difficult to earn profit as compared to their total assets and equity, possibly reflecting decline consumer market demand, business interruption and increased financial imperfection [6, 12, 18].

While profitability was significantly dented, Asset Growth was more resilient and, in most countries, the estimated changes were not statistically significant. It may indicate that GCC banks might have focused on preserving their asset base during the pandemic crisis rather than expanding it. Such behavior could be interpreted as support for conservative lending and investment policies during the crisis to minimize risk and ensure sufficient liquidity [2, 11, 16].

The results also highlight the importance of Shariah compliance in Islamic banking during crisis periods. Although this study was not focused on Shariah compliance, it has to be underlined that Islamic banks, by their governance through Shariah principles, avoid all high-risk activities, like speculative investments, that could have provided them with some stability during the pandemic [2]. This resilience in asset management and cautious approach to risk might be one of the various reasons why some banks in the GCC could preserve their asset levels despite the overall decline in profitability [1, 17].

The results show that the decline in profitability is very significant, as evidenced by the marked reductions in ROA, ROE, and Net Profit Margin. However, Asset Growth remained steady and reflected the banks' asset preservation focus during the crisis. These findings suggest that while Islamic banks in the GCC were able to mitigate some risks through cautious asset management, the overall economic disruptions caused by the pandemic led to a substantial decline in profitability. The study contributes to the growing body of literature on the resilience of Islamic banks during financial crises and provides a deeper understanding of the impact of external shocks on Shariah-compliant financial institutions. Further research could examine the role of digital transformation and fintech in enhancing the resilience of Islamic banks during periods of economic uncertainty, as these factors may play an increasingly important role in shaping the future of the banking sector.

This paper identifies three main areas warranting future research: (a) evaluating the long-term implications of COVID-19 and the changed relationships between Shariah compliance and financial performance, in particular by considering differences between sectors or industries within the Gulf Cooperation Council; (b) investigating the relative effect of company- versus country-specific factors that may influence these associations; and (c) researching these relationships in companies from outside of the Gulf Cooperation Council. Methodologically, a mixed-methods approach may be beneficial, possibly combining both quantitative and qualitative evidence, in addition to research that is based on longitudinal analyses of Shariah compliance and financial performance. One of the recommendations for scholars emerges from our study and relates to the importance of engaging with industry. As research acknowledges, the structure of the Islamic finance industry and discussions on Shariah compliance and financial performance are intertwined with regulatory developments and industry approaches, suggesting that this is a field from which academia and industry will benefit from further cross-disciplinary engagement. Past research in this space has instructed and influenced practitioners, and past and future research could equally benefit from practitioner input from a business perspective. Research, therefore, can aim to explore the developments in regulation and the effect this has on Islamic finance and Shariah-compliant firms through engagement with industry. As is the case in Western markets, a new research focus can explore how regulators could or should work together and propose consideration of the external implications of regulation, particularly in light of considerations at various organizations. The changing demographics of the are also a key area for research emphasis going forward. It is evident, for example, from such a paper’s policy implications that Shariah compliance enjoys an increasing consumer base. Given the relative lack of new research in the area, and with new economic challenges, and political and social developments, a greater focus is required to understand expatriates and other Muslims in the region and their investment considerations.

5. References

[1] Akhlaq M, Asif M. The Importance of Sharia Compliance in Islamic Finance. Tanazur. 2024 Mar 26;5(1):196-212.

[2] Alhammadi S. Islamic finance as a driver for enhancing economic sustainability and innovation in the GCC. Journal of Science and Technology Policy Management. 2024 Jan 25.

[3] Alqahtani F, Mayes DG, Brown K. Reprint of economic turmoil and Islamic banking: evidence from the Gulf cooperation council. Pacific-Basin Finance Journal. 2017 Apr 1;42:113-25.

[4] Ashraf BN. The performance of Islamic versus conventional stocks during the COVID-19 shock: Evidence from firm-level data. Research in International Business and Finance. 2022 Apr 1;60:101622.

[5] Banna H, Hassan MK, Ahmad R, Alam MR. Islamic banking stability amidst the COVID-19 pandemic: the role of digital financial inclusion. International Journal of Islamic and Middle Eastern Finance and Management. 2022 Apr 19;15(2):310-30.

[6] Chong BS, Liu MH. Islamic banking: interest-free or interest-based?. Pacific-Basin finance journal. 2009 Jan 1;17(1):125-44.

[7] Djuwita, D., Setiowati, N. E., & Kulsum, U. (2019). The influence of sharia compliance and sharia corporate governance on the financial performance of sharia commercial banks. Al-Amwal: Jurnal Ekonomi dan Perbankan Syari'ah, 11(2), 205-220.

[8] Diaw A. The global financial crisis and Islamic finance: a review of selected literature. Journal of Islamic Accounting and Business Research. 2015 Apr 13;6(1):94-106.

[9] Hassan MK, Rabbani MR, Ali MA. Challenges for the Islamic Finance and banking in post COVID era and the role of Fintech. Journal of Economic Cooperation & Development. 2020;41(3):93-116.

[10] Iskandar A, Possumah BT, Arifuddin A. Rethinking Islamic Economic and Finance Practices in Indonesia: Some Critical Reviews. International Journal of Islamic Business and Economics (IJIBEC). 2020 Dec 1;4(2):81-94.

[11] Khediri KB, Charfeddine L, Youssef SB. Islamic versus conventional banks in the GCC countries: A comparative study using classification techniques. Research in International Business and Finance. 2015 Jan 1;33:75-98.

[12] Pollard J, Samers M. Islamic banking and finance: postcolonial political economy and the decentring of economic geography. Transactions of the Institute of British Geographers. 2007 Jul;32(3):313-30.

[13] Rabbani MR, Ali MA, Rahiman HU, Atif M, Zulfikar Z, Naseem Y. The response of Islamic financial service to the COVID-19 pandemic: The open social innovation of the financial system. Journal of Open Innovation:

Technology, Market, and Complexity. 2021 Mar 1;7(1):85.

[14] Riza AF. The potential of digital banking to handle the Covid-19 pandemic crisis: Modification of UTAUT model for Islamic finance industry. Jurnal Ekonomi & Keuangan Islam. 2021 Jan 11:1-6.

[15] Suzuki Y, Miah MD, editors. Digital Transformation in Islamic Finance: A Critical and Analytical View. Taylor & Francis; 2022 Dec 30.

[16] Smolo E, Jahangir R, Nagayev R, Aysan AF. Performances of leading Islamic finance markets prior to and during the COVID-19 pandemic. Heliyon. 2023 Jan 1;9(1).

[17] Tashkandi AA. Shariah supervision and corporate governance effects on Islamic banks' performance: evidence from the GCC countries. Journal of Business and Socio-Economic Development. 2023 May 26;3(3):253-64.

[18] Tok E, Yesuf AJ. Embedding Value-Based Principles in the Culture of Islamic Banks to Enhance Their Sustainability, Resilience, and Social Impact. Sustainability 2022, 14, 916 [Internet].