

Do Financial Indicators Affect the Performance of the Banking Ecosystem of Bahrain? A Study of Covid-19 Unprecedented

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Abstract

The main objective of this study is to address the growth of the banking system in Bahrain and analyze the impact of Covid-19 on its financial performance due to the global pandemic effect. The sample has been taken from the banking sectors of Bahrain, which include three clusters: Islamic banking, conventional banking, and entire banks. Data were collected from the Central Bank of Bahrain (CBB), with quarterly data extracted from 2019-2020. This paper measures the impact of pre- and post-Covid-19 financial performance of Bahraini banks to determine the factors affecting the financial indicators that influence the banking sectors of Bahraini banks. The outcomes of the t-statistic failed to reject the null hypothesis, indicating no significant difference between the pre- and post-financial performance of the complete banking sectors of Bahrain. Furthermore, the study diagnoses the factors analysis, including capital adequacy, asset quality, profitability, and liquidity of the banking system of Bahrain. Islamic banking maintained a strong financial position in the pre- and post-Covid-19 periods, along with capital adequacy, asset quality, and profitability. It was observed that pre-Covid-19 conventional banks performed below par in terms of capital adequacy, asset quality, and liquidity, but post-Covid-19, the profitability ratio improved. The entire banking sector, before Covid-19, worked under pressure to generate profit, but after the coronavirus crisis, it recorded profits due to timely actions taken by the Government of Bahrain to reduce the adverse impact of Covid-19. This is a time of survival and growth for the banking industry during uncertainty, aiming to facilitate knowledge-driven insights for financial success.

Keywords: Banking system, Islamic banking, COVID-19, Financial performance, Bahrain.

Introduction

This year brings us new hope for a life with bold new promises. The world has promoted the Covid-19 vaccination, and it has spread worldwide, with people being aware of the vaccination and its precautions. The worldwide financial economy is optimistic for growth. It witnessed that the net worth of financial services was USD

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20.5 trillion in the year 2020, and it is projected to grow to USD 22.5 trillion in the first quarter of 2021, with a compound annual growth rate of 9.9% (EDB Bahrain, 2021).

Bahrain's economy is recovering from the coronavirus recession. The government of Bahrain has started supporting credit growth, made a successful budget, targeted business opportunities, and exploited competitive intelligence (Fitch Solutions, 2021). The country has good networks with foreign collaborations to promote fiscal policies, ensure the continued participation of foreign investors, and facilitate the growth sector (Bahrain bh, 2021).

Bahrain is home to 400 authorized financial institutions, with a perfect regional, local, and international mixture (Bahrain bh, 2021). It has a strong emerging banking system with 114 banks, including 23 retail banks, 69 wholesale banks, and 36 overseas banks, combining both conventional and Islamic banks. Bahrain banks are regulated by the Central Bank of Bahrain (CBB), which ensures transparency and consistency with international standards. Bahrain is also known as the Middle East's financial hub (Corporate Finance Institute, 2021).

Bahrain is not limited to conventional banking but also flourishing in Islamic finance worldwide. Fitch Ratings stated that Islamic Banks in Bahrain are estimated to increase by 37.21% in 2021-2022, driven by factors such as merger acquisitions, economic recovery, increased awareness of Islamic products, continued financial growth in Islamic finance, and the greater use of fintech, peer-to-peer lending, crowdfunding, bitcoins, and blockchain (Fitch Ratings, 2021). Domestic banking assets are expected to reach 17.2% by the end of 2020 (Trade Arabia, 2021). S&P Global Ratings stated that Islamic finance would grow globally by 10-12 percent in 2021-2022, with a slow recovery of 10.6 percent in 2020 (S&P Global, 2021).

Islamic banking and finance have witnessed remarkable growth from US\$1.9 billion to US\$32.7 billion at the end of July 2020, a nearly 17-fold increase from 2000-2020. The market share of Islamic banks also increased from 1.8% in 2000 to 15.3% in July 2020. This growth has been possible due to various products, a clear mission, vision, and supervision by the Central Bank of Bahrain (Central Bank of Bahrain, 2021; Zawya, 2021).

In the field of fintech, GCC nations have performed well, with Bahrain and Saudi Arabia becoming the world's top fintech ecosystem countries. Research conducted by Startup Genome on dozens of countries based on various factors, including funding, exits, talent, policymaker, and funder, concluded that Bahrain and Riyadh are the best financial ecosystem-based countries (Startup Genome, 2020). Bahrain aims to become a fintech incubator and destination provider, generating revenue not only from oil but also through fintech, blockchain, and crowdfunding. The government of Bahrain has

given the green signal for this project, considering GCC countries (Global Finance Magazine, 2021).

Objectives

The main aim of the objective is to plan how to identify the problem and find out the logical and reasoning way to solve the defined problem.

- To find the impact of the pre-post Covid-19 financial performance of the banking system in Bahrain.
- To determine the factors affecting the financial performance of banking sectors of the Pre-Post Covid-19 of Bahrain.

To achieve our objective, “first we studied the rise of the banking system in Bahrain, which is divided into Islamic banks, Conventional banks, and entire banks. Secondly, we analyzed the effect of Covid-19 on the financial performance of Islamic banking and the challenges and opportunities faced by the Islamic banking industry.

Literature Reviews

Literature reviews provide us with strong evidence of the identified problems that have been studied worldwide.

According to Ali Malek, Islamic banking is an ethical and viable investment in the Middle East. It has demonstrated sustainability and resilience in the face of shocks. Additionally, Middle Eastern countries have non-oil revenue sources such as income tax, excise duty, customs, etc. Malek's study focused on Islamic banking operations, financial instruments, and profitability during the Covid-19 pandemic. Despite the pandemic, Islamic finance, banking, and the capital market are functioning smoothly in Bahrain (Malek, 2020).

Goodell examined the socioeconomic impact of the pandemic and made projections for the future. The study explored strategies for sustaining financial institutions during Covid-19 and identified the socioeconomic impact before and after the pandemic, providing insights into future investment opportunities (Goodell, 2020).

Anil Afandi stated that financial indicators have an impact on the performance of Islamic banks in Indonesia. However, factors such as capital adequacy ratio, deposit ratio, and non-performing financing do not significantly affect the financial supply to Islamic banks in Indonesia. This suggests that Covid-19 has had a positive and significant impact on the financial supply to Islamic banks in the country (Afandi, 2021).

Abdulla investigated the banking sector during the Coronavirus pandemic, highlighting the accelerated adoption of digital transformation, mobile transactions, and the Unified Payments Interface (UPI) in the banking system. The study focused on strategies such as preservation, innovation, and crisis management. The findings indicated that the Bahrain banking system supports preservation and innovation strategies, contributing to operational efficiency, market share, customer well-being, and support systems. Embracing digitalization is crucial for efficiency (Abdulla, 2021).

Masruki et al. (2014) explained the significance of transparency, accountability, and Shariah compliance in the context of Malaysia's internal control regulations. The Shariah Committee Report (SCR) in Malaysia serves as the regulatory body monitoring foreign-owned Islamic banks, and it also issues a rulebook for Islamic banks in Bahrain. In their study, Masruki, Khairulannuar, and Dhar (2020) analyzed six Islamic banks from Bahrain and Malaysia that followed different accounting standards, namely the International Financial Reporting Standards (IFRS) and Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). The authors' findings indicated that the supervisory and regulatory role of the Shariah Committee in Bahraini Islamic banks is more effective than in Malaysia.

Hassan and Zulfahmi (2021) examined participatory banking in Turkey, noting that despite Turkey's history and Muslim population, participatory banking has not received strong feedback in the country. The study aimed to explore the problems, solutions, and suitable strategies for participatory banks in Turkey. Interviews were conducted with experts directly and indirectly involved with participatory banks. The findings were derived from a SWOT analysis of participatory banks in Turkey, revealing both external and internal factors. Skilled personnel are required to facilitate the functioning of participatory banks, and the government and regulators in Turkey should develop policies to promote participatory banking (Hassan & Zulfahmi, 2021).

Research Methodology

Research methodology explains the methods that will be employed to achieve the project's objectives. In this study, the researcher analyzes the impact of the financial performance of Bahraini banks before and after the Covid-19 pandemic and examines the factors that have influenced the performance of Bahraini banks in both periods. Secondary data is utilized as the research relies on data obtained from various sources such as the Central Bank of Bahrain (CBB) website, including annual reports, statistical bulletins, annual manpower surveys, compliance and enforcement reports, insurance market reviews, financial stability reports, and economic reports. The research period spans from 2019 to 2020, and quarterly financial indicators data

were collected. The sample consists of three clusters of banks: Islamic banks, conventional banks, and all banks in Bahrain. Table 1 provides an overview of the financial variables used in the study, including capital adequacy, asset control, profitability, and liquidity. Each variable includes both retail and wholesale banks in Bahrain.

Table 1: Details of Financial ratio of Banks of Bahrain.

Financial Indicators	Ratio	Details of Ratio
Capital Adequacy	CARR	Retail
	CARW	Wholesale
	CARR1	Retail: Tier 1
	CARW1	Wholesales: Tier 2
Profitability	NPLR	Retail: Non- Performing Ratio
	NPLW	Wholesale: Non-Performing Ratio
	SPR	Retail: Special Provision
	SPW	Wholesale: Special Provision
Asset Quality	ROAR	Retail: Return on Assets
	ROAW	Wholesale: Return on Assets
	ROER	Retail: Return on Equity
	ROEW	Wholesale: Return on Equity
Liquidity	LARR	Retail: Liquidity Assets Ratio
	LARW	Wholesale: Liquidity Assets Ratio
	LDRR	Retail: Loan Deposited Ratio
	LDRW	Wholesale: Loan Deposited Ratio

Source: CBB, Bahrain.

Factor analysis is a technique used to reduce the number of variables in a dataset. When researchers have multiple variables, factor analysis helps in identifying underlying factors and reducing the complexity of the data (Reise, Comrey, & Waller, 2000). Principal Component Analysis (PCA) is a commonly used method for variable reduction in factor analysis (Tabachnick & Fidell, 2001; Field, 2005). Varimax rotation, a type of orthogonal rotation, is applied to aid in the interpretation of the rotated factors (Hair et al., 2006). Orthogonal rotation ensures that the resulting factors are independent of each other. However, there is no definitive rule for selecting between orthogonal and oblique rotation techniques. In this study, Varimax orthogonal rotation is utilized.

A cluster analysis is conducted to solve the problem by grouping variables that exhibit strong correlations into clusters (Hair, Anderson, Tatham, & Black, 1998).

The t-test is an inferential statistic employed to determine significant mean differences between two groups. In this study, the focus is on comparing the pre and post-Covid-19 financial performance of Islamic, conventional, and Entrepreneurial Banks.

These hypotheses are defined to fulfill the study's objectives, Null Hypothesis H₀, and Alternative Hypothesis H_{a1}.

- Ho1: Pre-Covid19 Islamic Banks = Mean Post-Covid19 Islamic Banks
- Ha1: Pre-Covid19 Islamic Banks \neq Mean Post-Covid19 Islamic Banks
- Ho2: Pre-Covid19 Conventional Banks = Mean Post-Covid19 Conventional Banks
- Ha2: Pre-Covid19 Conventional Banks \neq Mean Post-Covid19 Conventional Banks
- Ho3: Pre-Covid19 Entire Banks = Mean Post-Covid19 Entire Banks
- Ha3: Pre-Covid19 Entire Banks \neq Mean Post-Covid19 Entire Banks

Data Analysis and Interpretation

This part of the study takes care of the analysis of applied tools. It observed the pre and post-financial performance of Covid-19, a cluster of Islamic Banks, Conventional Banks, and Entire Banks.

Table 2: T-Statistics of Islamic Banks of Bahrain.

Financial Indicators	Pre	Post
CARR	17.6	20.0
CARW	18.6	17.5
CARR1	14.8	17.3
CARW1	17.5	16.1
NPLR	9.7	7.7
NPLW	1.2	1.5
SPR	37.5	42.0
SPW	88.9	75.4
ROAR	0.3	0.2
ROAW	0.4	0.0
ROER	3.7	1.9
ROEW	3.3	0.0
LARR	16.9	17.4
LARW	16.4	16.6
LDRR	97.2	80.8
LDRW	69.0	66.5

Mean	26.36	24.06
Variance	1046.15	802.12
Observations	15	15
Hypothesized Mean Difference	0	
df	28	
t Stat	0.207	
P(T<=t) one-tail	0.419	
t Critical one-tail	1.701	
P(T<=t) two-tail	0.837	
t Critical two-tail	2.048	

Source: Authors Estimated.

Here, t-stats is lesser than the t-critical value, and p-value is more than 5%, So that we fail to reject the null hypothesis. There is difference between the pre and post financial indicators.

The interpretation of table 2 indicates that no relationship exists between the Pre-Post Covid-19 financial ratio of Islamic banks in Bahrain. There is an unequal mean of the pre-post financial position of Islamic banks in Bahrain. There is no difference between pre and post covid-19 in Islamic Banks. Most Islamic banks' investors do not affect by the coronavirus. There are enjoying the profit before and after the event has happened of Covid-19.

Table 3: T-Statistics of Conventional Banks of Bahrain.

Financial Indicators	Pre	Post
CARR	18.63	19.30
CARW	17.67	18.10
CARR1	17.33	17.95
CARW1	16.63	17.12
NPLR	4.63	5.05
NPLW	4.63	4.98
SPR	65.33	65.52
SPW	73.33	73.03
ROAR	0.60	0.70
ROAW	0.47	0.50
ROER	6.10	6.98
ROEW	-2.43	0.53
LARR	32.97	34.00

LARW	22.10	21.80
LDRR	66.17	67.02
LDRW	68.97	66.67

Mean	26.30	26.66
Variance	782.60	755.15
Observations	15	15
Hypothesized Mean Difference	0	
df	28	
t Stat	-0.036	
P(T<=t) one-tail	0.486	
t Critical one-tail	1.701	
P(T<=t) two-tail	0.972	
t Critical two-tail	2.048	

Source: Authors Estimated.

Table 3, The outcome of t-statics shows that no significant difference between the pre and post-financial indicators of convectional banks in Bahrain. Meaning that conventional bank customers are not reacting differently in pre-Covid-19 and post-Covid-19.

Table 4: T-Statistics of Entire Banks of Bahrain.

Financial Indicators	Pre	Post
CAR	18.27	18.60
CAR1	16.90	17.25
NPLR	4.50	4.92
SPR	64.93	64.30
ROA	0.43	0.50
ROE	1.53	3.07
LAR	24.67	24.80
LDR	70.50	70.67

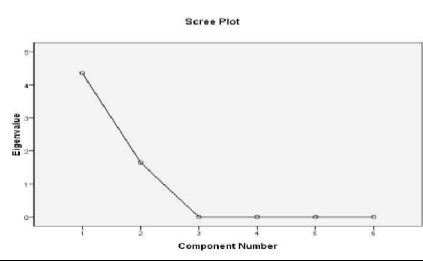
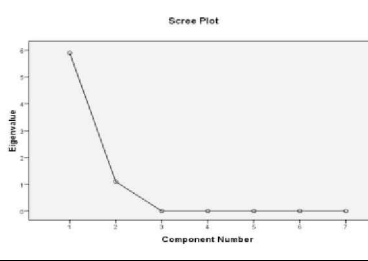
Mean	26.21	26.50
Variance	882.48	859.82
Observations	7	7
Hypothesized Mean Difference	0	
df	12	
t Stat	-0.018	
P(T<=t) one-tail	0.493	
t Critical one-tail	1.782	
P(T<=t) two-tail	0.986	
t Critical two-tail	2.179	

Source: Authors Estimated.

Table 4 identified no significant difference between the pre and post Covid-19 financial indicators of Entire banks in Bahrain. The P-value is more than 5%, meaning there is no difference between the pre and post entire banking in Bahrain.

Diagnostic Analysis

Diagnostic study of Islamic, Conventional, and entire banks in Bahrain. To run the factor analysis for the reduction of financial variables are used for the study.

<p>Pre-Covid19 Islamic Banks</p> 	<p>Post-Covid19 Islamic Banks</p> 
<p>Pre-Covid19 Conventional Banks</p>	<p>Post-Covid19 Conventional Banks</p>

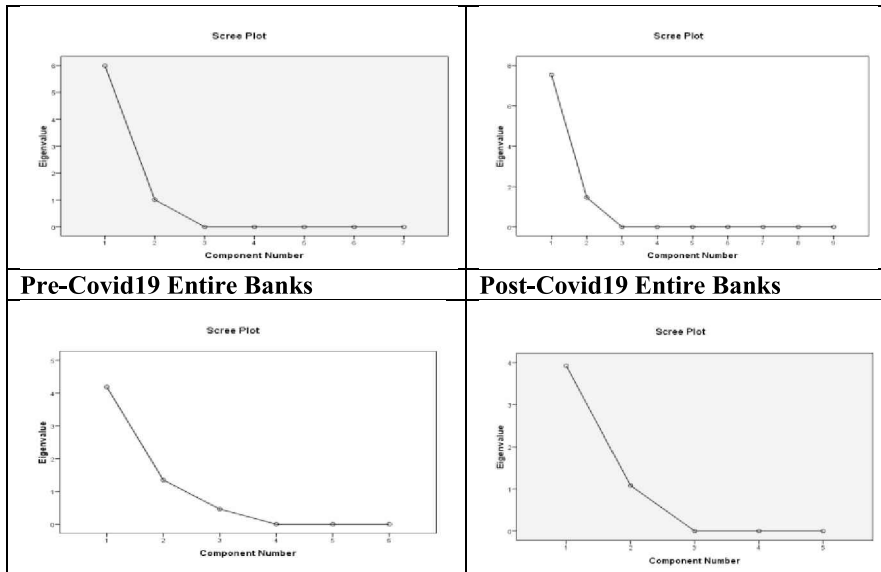


Figure 1: Scree Plot of Financial Indicators of the Different Banks.

Source: Authors Estimated by SPSS.

The explanation of figure 1 shows the scree plot, which shows the curve of the x and y series, which are called eigenvalues. The point of slope curve is leveling, meaning that shape elbow is showing, indicating the number of factors extracted from the variables. Most Scree plots have two factors extracted by the Islamic banks, Conventional banks, and Entire banks.

Table 5: Total Variable Explained of Pre-Post Covid19 of Islamic, Conventional and Entire Banking.

Banks	Duration	Factors	Component Eigenvalues		Initial		Extraction SS			Rotation SS	
			Total	% of Var	Cum %	Total	% of Var	Cum %	Total	% of Var	
Islamic Banks	Pre-Covid19	1	4.35	72.55	72.55	4.35	72.55	72.55	3.65	60.86	
		2	1.65	27.46	100.00	1.65	27.46	100.00	2.35	39.14	
	Post-Covid20	1	5.90	84.29	84.29	5.90	84.29	84.29	4.54	64.87	
		2	1.10	15.71	100.00	1.10	15.71	100.00	2.46	35.13	
	Convention Banks	Pre-Covid19	1	5.99	85.50	85.50	5.99	85.50	85.50	5.97	85.32
			2	1.01	14.50	100.00	1.01	14.50	100.00	1.03	14.68
Post-Covid20		1	7.53	83.69	83.69	7.53	83.69	83.69	7.51	83.48	
		2	1.47	16.31	100.00	1.47	16.31	100.00	1.49	16.52	
Entire Banks	Pre-Covid19	1	4.19	69.83	69.83	4.19	69.83	69.83	3.47	69.80	
		2	1.35	22.49	92.32	1.35	22.49	92.32	1.39	23.14	
	Post-Covid20	1	3.92	78.41	78.41	3.92	78.41	78.41	3.85	76.91	
		2	1.08	21.59	100.00	1.08	21.59	100.00	1.15	23.09	

Source: Authors Estimated.

The interpretation of table 5 shows that the variance of the statement includes the factors; this present study focused on the two factors that will be extracted by combining the relevant variables. Generally, the eigenvalues are related to each linear component (factor) before extraction, after extraction, and after rotation. Before extraction, SPSS identified 16 linear components with the data set. The eigenvalues associated with each factor represent the variance explained by that linear component. Financial indicators are explained in the factors.

Islamic Banks: Prior to COVID-19, factor 1 explained 60.86% of the total variance, and factor 2 explained 39.14%. Several other statements also accounted for the variance of Islamic banks, each with eigenvalues greater than one. After COVID-19, factor 1 explained 64.87% of the total variance, and factor 2 explained 35.13%. It is evident that the initial factors explain a relatively larger portion of the variance compared to the later factors. The standard measurement of factor eigenvalues exceeds 1.

Conventional Banks: Prior to COVID-19, factor 1 accounted for the majority of the financial indicators of conventional banks, explaining 85.32% of the total variance, while factor 2 explained 14.68%. Other statements also contributed to the variance of conventional banks, each with eigenvalues greater than 1. After COVID-19, factor 1 explained 83.48% of the total variance, and factor 2 explained 16.52%.

Entire Banks: Prior to COVID-19, factor 1 explained 69.80% of the total variance in the financial indicators of all banks, and factor 2 explained 23.14%. It also accounted for the variance of Islamic banks, which had eigenvalues greater than 1. After COVID-19, factor 1 explained 76.91% of the total variance, and factor 2 explained 23.09%.

Table 6: Pre-Post Covid19 Sound Financial Indicators of Islamic Banking.

Pre-Cov19			Post-Covi19		
Financial Factors	Factors 1	Factors 2	Financial Factors	Factors 1	Factors 2
CARR	0.958		CARR	0.957	
CARR1	0.929		CARR1	0.930	
ROAW	0.902		ROAR	0.977	
LDRW	0.985		LDRW	0.944	
NPLR		0.958	NPLW		0.953
LARW		0.997	SPR		0.953
			ROER		0.521
Average	0.943	0.978	Average	0.952	0.809

Source: Authors Estimated

Table 6, This matrix refers to the loadings of each variable into each factor which is highly loaded with the help of SPSS. The researcher excluded 0.4 loadings from the statements (Field, 2005). Pre and covid-19 Islamic banking considered capital adequacy, Asset quality, profitability, and liquidity ratio. This means that Islamic banks are Bahrain's most strongly financially performing banks in pre-post Covid-19.

Table 7: Pre-Post Covid19 Sound Financial Indicators of Conventional Banking.

Pre-Cov19			Post-Covi19		
Financial Factors	Factors 1	Factors 2	Fin. Indicators	Factors 1	Factors 2
CARR	0.997		CARR	0.999	
CARR1	0.999		CARW	0.885	
ROAR	0.999		CARW1	0.913	
ROER	0.998		NPLW	0.999	
LARW	0.999		SPR	0.994	
LDRW	0.996		ROAR	0.981	
LARR		0.996	ROER	0.972	
			LDRR	0.999	
			SPW		0.997
Average	0.998	0.996	Average	0.968	0.997

Source: Authors Estimated.

Table 7, The financial indicators are loaded on the factors Pre-Covid-19, factors that have not loaded the profitability of conventional banks, and 2 factors comprise capital adequacy, asset quality, and liquidity. But Post-Covid-19 observed that the net profit ratio is sparking in the wholesale market along with capital adequacy, assets quality, and liquidity. Meaning that the Coronavirus crisis was fruitful for the banking system throughout Bahrain. After the Covid-19 profit are enjoying by the conventional banks in Bahrain.

Table 8: Pre-Post Covid19 Sound Financial Indicators of Entire Banking.

Pre-Cov19			Post-Cov19		
Financial Factors	Factors 1	Factors 2	Financial Factors	Factors 1	Factors 2
CAR	0.935		CAR1	0.922	
CAR1	0.966		NPLR	0.998	
ROA	0.894		ROA	0.999	
ROE	0.872		ROE	0.999	
LDR		0.963	LDR		0.999

Average	0.917	0.963	Average	0.980	0.999
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Source: Authors Estimated

The outcomes of the factors loading are reflected in table 8, which shows that the Entire banking in Bahrain pre covid-19 interpreted that capital adequacy, Asset quality, and liquidity not included profitability. But Post covid-19 results are represented well because of capital adequacy in retail banking in Bahrain. Profit is also reflected by retail banking, and Asset quality is performing in the return of assets and returns of equity. The liquidity ratio is also performing in retail bating in Bahrain.

Conclusion

This paper examines the impact of pre-Covid-19 and post-Covid-19 on the financial performance indicators of Bahrain Banks, including Islamic banks, conventional banks, and entire banks. The quarterly data covers the period from 2019 to 2020. A t-test is applied to determine the impact of pre-post Covid-19 financial performance of the banks in Bahrain. All three clusters of banks in Bahrain are observed, and there is no significant difference in the pre-post Covid-19 financial performance. Further diagnostic analysis, such as factor analysis, is conducted to reduce the financial variables and draw conclusions. The diagnostic investigation reveals that Islamic banks in Bahrain are more efficient both before and after the coronavirus pandemic, including capital adequacy, asset control, profitability, and liquidity. These financial indicators are also examined for retailer and wholesaler banks. The cluster of conventional banks was not profitable pre-Covid-19, but post-Covid-19, a profit was observed. This suggests that during the coronavirus pandemic, people turned to internet banking, mobile banking, and payment systems like UPI and IMPS to avoid leaving their homes and protect themselves from the pandemic. Retailers and wholesalers benefited from this trend. The third cluster, consisting of entire banks in Bahrain, showed no profit pre-Covid-19, but post-Covid-19, they experienced profit along with capital adequacy, asset control, and liquidity, especially in retail banking. The study indicates that entire banking utilized internet portals for monetary transactions, while physical transactions were avoided. This resulted in profit for retail banking after the coronavirus pandemic. In conclusion, Islamic banking in Bahrain demonstrates efficient performance in both retail banking and wholesale banking due to the trust people have in Islamic banking, which adheres to Shariah laws and follows the regulations of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) in Bahrain. The groups of conventional banks and entire banks also achieved profits post-coronavirus. This study provides valuable insights for industrialists, bankers, investors, traders, foreign institutional investors (FIIs), and foreign direct investors (FDIs). The banking sector of Bahrain presents a promising investment opportunity for the Developing 8 (D8) countries, as Bahrain boasts the world's largest fintech ecosystem.

REFERENCES

- Ali , M., Rashid , H. A., Ali , M. H., Usman, M., & Sohail , A. (2021). Assessment of Customers E-loyalty in digital banking During Covid-19: An application of 8C model. *International Journal of Disaster Recovery and Business Continuity*, 12(1), 1054-1062.
- Abdulla, Y. (2021). *The Banking Sector During COVID-19: The Case of Bahrain Islamic Bank*. Bahrain: IGI Global.
- Afandi, M. A. (2021). Financing Supply of Islamic Banking During COVID-19 Outbreak in Indonesia. *Journal of Islamic Economic and Business Research*, 1(1), 114-124,.
- Bahrain.bh. (2021, May 13). Retrieved July 14, 2021, from Banking and Finance: https://www.bahrain.bh/wps/portal!/ut/p/a1/pZJfT8IwFMW_CjzscfSu--_bJlgSQAoiC-kG-2obu3YCui3t0BMNBHB2Le2v3N7zr1FCZqjRJAtz4niUpBiv0-8xe09eBYO8CCwZzZE9153EvbA6oOrgfgrALbd2wP-g_8UYi-Ay_SAR13rztH60QggCq4nw8ebLkDfPqd_RglKMqEqUIxzeW2krUixYIKA9JNwwVtGgM2DWWbosUF
- Barbara G. Tabachnick and Linda S. Fidell (2001). *Using Multivariate Statistics, Fourth Edition*. Needham Heights, MA: Allyn & Bacon. ISBN 0-321-05677-9. Hardcover.
- Central Bank of Bahrain. (2021, June 14). Retrieved July 2021, 2021, from Islamic Finance: <https://www.cbb.gov.bh/banking/>
- Corporate Finance Institute. (2021, May 25). Retrieved July 13, 2021, from Overview of Banks in Bahrain: <https://corporatefinanceinstitute.com/resources/careers/companies/top-banks-bahrain/>
- Dicuonzo, G., Donofrio, F., Fusco, A., & Dell'Atti, V. (2021). Blockchain Technology: Opportunities and Challenges for Small and Large Banks During COVID-19. *International Journal of Innovation and Technology Management*, 18(4), 78-98.
- EDB Bahrain. (2021, June 02). Retrieved July 11, 2021, from Financial Services Industry in Bahrain Analysis for 2021: <https://www.bahrainedb.com/bahrain-pulse/2021-financial-sector-outlook/>

- Field, A. (2005) Reliability analysis. In: Field, A., Ed., *Discovering Statistics Using SPSS*. 2nd Edition, Sage, London, Chapter 15.
- Fitch Solutions. (2021, June 13). Retrieved July 14, 2021, from Bahrain Banking & Financial Services Report: <https://store.fitchsolutions.com/all-products/bahrain-banking-financial-services-report>
- Global Finance Magazine. (2021, April 08). Retrieved from Bahrain's Bet On Fintech: <https://www.gfmag.com/magazine/april-2021/bahraains-bet-fintech>
- Goodell, J. W. (2020, July). COVID-19 and finance: Agendas for future research. *Finance Research Letters*, 35.
- Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006) *Multivariate Data Analysis*. 6th Edition, Pearson Prentice Hall, Upper Saddle River.
- Hair, J., Anderson, R., Tatham, R. and Black, W. (1998) *Multivariate data analysis*. 5th Edition, Prentice Hall, New Jersey.
- Hassan, R., & Zulfahmi. (2021). Participatory Banking (PB) Taking Measures Against Covid-19 in Turkey Issues and Proposed Strategies. *Turkish Journal of Islamic Economics*(8 (Special Issue)), 445-467.
- Irfan, M. (2021). Do Shariah Indices converge? Evidence from Gulf Cooperation Council countries. *International Journal of Business Excellence*, 23(2), 251 - 269. doi:DOI: 10.1504/IJBEX.2021.113448
- Irfan, M., & Tanwar, S. (2018). Economic and Sustainable Development of Entrepreneurial Practices : A Philanthropic Approach of Islamic Finance in India. *Indian Journal of Economics and Research*, 7(1), 12-21. doi:DOI: 10.17010/aijer/2018/v7i1/122139
- Malek, M. A. (2020). *Impact of Covid-19 on Islamic Banking in The Middle East*. Bahrain: Post Pandemic Economy – Challenges & Solutions.
- Masruki, R., Khairulannuar, H., & Dhar, B. K. (2020). Shariah Accountability Practice of Malaysian Foreign-Owned Islamic Banks and Bahrain Islamic Banks. *International Journal of Advanced Science and Technology*, 29(04), 5768 - 5782.
- Nobanee, H., & Ahmed, F. A. (2020). *Applying the CAMELS Performance Evaluation Approach for National Bank of Bahrain*. UAE: Abu Dhabi University.
- Reise, S. P., Waller, N. G., & Comrey, A. L. (2000). Factor analysis and scale revision. *Psychological Assessment*, 12(3), 287-297. HYPERLINK

"<https://psycnet.apa.org/doi/10.1037/1040-3590.12.3.287>" \t "_blank"
<https://doi.org/10.1037/1040-3590.12.3.287>

S&P Global. (2021, May 03). <https://www.spglobal.com/>. Retrieved July 11, 2021, from Islamic Finance 2021-2022: Toward Sustainable: <https://www.spglobal.com/ratings/en/research/articles/210503-islamic-finance-2021-2022-toward-sustainable-growth-11933944#:~:text=S%26P%20Global%20Ratings%20believes%20the,exceeding%20maturities%20explain%20this%20performance.>

Startup Genome. (2020, Nov 26). Retrieved from Riyadh and Bahrain among world's top fintech ecosystems to watch, according to new report: <https://www.finextra.com/pressarticle/85196/riyadh-and-bahrain-among-worlds-top-fintech-ecosystems-to-watch-according-to-new-report>

Trade Arabia. (2021, June 10). Retrieved July 13, 2021, from Bahrain's Islamic banking sector set to grow: Fitch: http://www.tradearabia.com/news/BANK_383370.html

Zawya. (2021, May 03). Retrieved July 11, 2021, from Global Islamic finance set to grow 12% driven by sukuk, takaful: https://www.zawya.com/mena/en/business/story/Global_Islamic_finance_set_to_grow_12_driven_by_sukuk_takaful-ZAWYA20210503091948/