

EXAMINING THE INTERCONNECTEDNESS OF GCC ISLAMIC AND CONVENTIONAL INDICES: INSIGHTS FROM A QUANTILE VAR NETWORK ANALYSIS

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Received on: 25-11-2024

Accepted on: 10-06-2026

<https://doi.org/10.57144/hi.v49i3.1215>

Abstract

Utilizing daily data spanning from 2015 to 2024 and employing quantile VAR spillover models, the present study investigates the interconnections of the GCC Islamic vs. Conventional Indices, specifically focusing on Kuwait, Oman, Bahrain, Qatar, Jordan, UAE, and Saudi Arabia. The study's findings suggest an average of 51.59% interconnectedness among the designated indices. Thus, the findings reveal a weak connection between Islamic indices compared to overall markets. Saudi Arabia is the strong net transmitter (11.55%) of spillover after Bahrain (16.47%), while Jordan is the biggest net recipient 14.19% of spillover, followed by Oman 13.78%. Among all, Kuwait is the least connected market. Saudi Arabia's Islamic is a strong recipient of spillover shocks compared to all other Islamic indices. Thus, the study reveals diversification avenues and recommends that investors may consider Kuwait for parking their funds because of the least connectivity and greater diversification.

Keywords: Quantile Connectedness; GCC Islamic Indices; Global Indices.

1. Introduction

Islamic capital markets have gained prominence expansion over the last decade. The assets reached from US\$ 10 billion in 1985 to US\$ 2.7 trillion in 2020, as reported by (IFSB, 2021).

The expansion is caused by Muslim investors' significant growth and demand to invest in *Shari'ah*-based securities. Many Islamic indices have emerged based on the rapid growth of the Islamic finance industry.¹ These indices are filtered out to screen stocks of Islamic realism and conventional stocks through *Shari'ah* by applying various legal and ethical considerations that these stocks are *Shari'ah* compliant regarding business operations and financial screening.² The most important feature that the Islamic capital market distinguishes from conventional is that the activities are carried out in ways that are by the principles of Islam. Furthermore, Islamic capital provides *Shari'ah* -compliant investment instruments, whereby Islamic equity offers better risk-adjusted results than conventional; this is observed during financial crises.³

Investors are involved in investment strategies and portfolios to achieve higher diversification; it is important to understand the co-movement of prices of different indices. The dedication provided by the global index shows that Islamic indices offer the selection pattern of Islamic investors showing higher selectivity in their investment choices. These investors' shifts provide tremendous interest in *Shari'ah*-compliant investments and equity indices. This is due to their more profitable-sharing and equitable nature. The increased growth of the global financial industry is considerably reported in Islamic investments due to the good returns. It is based on more ethical operations desired by some investors, specifically Islamic countries.

Many Islamic countries are based on Gulf Cooperation Council (GCC) countries. These countries comprise six Arabian countries (Saudi Arabia, Qatar, Oman, United Arab Emirates, Kuwait, and Bahrain). It is an economic block that retains the global economic landscape for various reasons. The combined GDP of the region grew from USD 377 billion to USD 1640 billion in 2019 (WDI). Blessed by natural resources, GCC economies particularly rely on hydrocarbon products. Earlier countries relied on oil products. However, the recent issue of oil prices has enabled countries to consider the non-oil sectors. As part of the long-run strategy, the development of financial markets is on priority. Because the finance sector plays a role in enhancing funds for nonoil sector development. Therefore, GCC stock markets have garnered a major contribution from investors. Furthermore, the GCC region has evidence of a considerable rise in the issuance of Islamic financial instruments over the past ten years and rapid growth of Sharia-compliant equity and Sukūk.⁴ They have encouraged *Shari'ah* institutions to develop their line of instruments to get advantage from potential growth.

The increased globalization has connected economies, environmentally and politically. Markets are interconnected and prevail because of financial globalization and the mechanism of market transactions, which has cumulatively spurred a substantial shock to diverse economies, resulting the volatility.⁵ These volatilities in stock markets are caused by uncertainty. The uncertainty of US markets has also impacted on these markets.⁶ National and international investors rigorously observe the GCC stock market.⁷ Furthermore, crises have caused the uncertainty of equity markets.⁸ COVID-19 and the 2008 global financial crises have affected the GCC countries.⁹ The findings examined the impact of COVID-19 on stock market volatility, revealing that the Pandemic stock market was volatile.

Despite these market uncertainties, the *Shari'ah* stock markets outperformed in these uncertainties. The specific characteristics of Islamic finance and the risk characteristics, the Islamic institution, as compared to its conventional counterpart during financial instability, does not result in the same risks. Islamic finance attracted many investors to put their funds in interest-free instruments. Therefore, the global capital market can offer conventional and Islamic instruments diversification alternatives. Many investors take it as an advantage to improve portfolio returns, specifically from Islamic investments, which are less risky. According to financial philosophy, the ability of Islamic indices to perform better than conventional ones is because of the smaller size of portfolios relative to conventional. Due to the lower level of diversification and higher cost of Islamic-compliant investment, it is obvious that these investments underperform conventional.

There is significant literature that evidences the nexus of Islamic and conventional indices such as, recently,¹⁰ investigated the dynamic interconnectedness between Islamic and conventional indices employing the TVP-VAR approach; the findings reveal that there is robust connectivity between the indices. Similarly,¹¹ investigate the return spillover of the Islamic-backed cryptocurrency and equity market, utilizing the QVAR approach; the results evidence the stronger connection of these assets with equity markets in GCC country.

Despite the increasing stock markets, the empirical studies comparing stock market indices of Islamic and conventional are still thin. Particularly in terms of connectivity and spillover effects using the quantile VAR approach in the context of GCC economies is very limited. Therefore, the current study fills this gap by analyzing the

connectedness between Islamic and Conventional Indices of GCC countries.

2. Literature

In the recent decade, the Global Islamic financial market has had significant momentum growth in attracting international capital flows from Muslim and non-Muslim investors, and the most wanted indices recently are Islamic indices such as FTSC, DJIM, and MSCI. Furthermore, the Islamic financial markets are continuously showing positive trends in development. The reason behind this is the development of Islamic countries as they are advanced with the accumulation of oil wealth. The investors expect that money needs to be secured and accumulated as they move towards *Shari'ah*-compliant instruments included in indices relative to non-compliant.

The literature review has provided contradictory results on the performance of conventional and Islamic indices. Such as¹² evidenced the performance of Islamic and conventional indices in India and found no difference in the performance of the Nifty *Shari'ah* Index and the Nifty index. Similarly,¹³ investigated the risk exposure of the Kuala Lumpur *Shari'ah* Index (KLCI) has outperformed than Kuala Lumpur Composite Index (KLCI). The risk-adjusted returns and beta are relatively greater than KLSI, which has lower returns in the short run. However, some studies provide contrary results for the *Shari'ah* index in terms of risk and return performance.¹⁴ period from 1996-2015. They found that the equity market's performance does not provide evidence of different market performance than conventional.

It is expected from investors that Islamic investment is less risky in any crisis. It has more stable returns. Such as¹⁵ compared the risk performance of conventional and Islamic stocks in extreme financial crises, i.e., Black Swan and Asian financial crises, through employing the black maxima approach and peak-over threshold method of DJIM, SPEU, S&P500, and SPAS500 indices from the period 1998-2015. The findings showed that Islamic markets are less risky than conventional during these extreme crises. In line with these results¹⁶, Godil et al. (2020) examined the behaviour of Islamic and conventional equity in the bullish markets from the period 1997 to 2019; the findings confirm that Islamic quality performed differently than conventional examined the behavior of Islamic and conventional equity in the bullish markets from 1997 to 2019; the findings confirm that Islamic stocks performed differently than conventional. Moreover¹⁷, investigated the volatility of conventional and Islamic indices of Malaysia in global financial crises and found that the Islamic

index is less volatile compared to the conventional. However, the crisis has significantly affected the conventional indices in the short run and Islamic indices in the long run. Recently¹⁸, examined the correlation and volatility of conventional and Islamic indices during the 2008-2009 global financial crises and the COVID-19 pandemic. The results evidence that the volatility of Islamic indices is lower than conventional during this turmoil. The COVID-19 pandemic has had an unprecedented impact globally. The researcher evidenced higher volatility during the period. There is evidence that despite the crisis, Islamic equity exhibits lower volatility than the conventional. Such as¹⁹ investigated the peak downfall of global equity indices such as S&P Dow Jones and reported that *Shari'ah* equity indices continued to perform well during COVID-19. The results suggest that Islamic equity indices are considered as hedges or resistance during these periods. Islamic equity provides a buffer against adverse economic shocks because of its specific characteristics, such as debt avoidance (less risk), sharing profit and loss, and linkages with real economies. The COVID-19 pandemic globally impacted the financial markets. These markets reacted differently based on asset risk exposures. Therefore,²⁰ examined the extent of market dependence during the pandemic. They analyzed the observed changes in dependence and asymmetries, considering gold, conventional, and Islamic indices. The gold market evidence safe heaven followed by Islamic indices.

However, the emergence of Islamic finance as a safe haven is not the main factor; instead, the huge revenues realized from the Gulf Cooperation Council (GCC), considering oil shocks, allowed its realization and fueled the growth. From the economic perspective, in October 1973, the oil embargo declared by GCC countries led to a quadrupling of oil prices from October to December. This huge shock led to the fund transfer of funds from Western countries to oil-exporting countries; at this time, GCC rapidly accumulated funds after that, Islamic finance, an embryonic concept, emerged as a feasible project. These countries represent most of the energy market, producing 21.8 percent of the global oil market. Considering the significant contribution to global markets, the GCC has played a significant role in equity markets. Therefore,²¹ examined the performance of *Shari'ah* stock and conventional during COVID-19 in GCC countries. The findings revealed that the Pandemic impacted both indices similarly; their performance is not different. Furthermore, examining the performance of *Shari'ah* and conventional indices during COVID-19 of GCC and ASEAN nations by employing Morlet's wavelet method, the findings reveal that the market of ASEAN is more volatile than GCC, and the *Shari'ah* index is more volatile than conventional.

3. Methodology

Data and Variables

To check the connectedness of Islamic and conventional indices, current study focused on GCC countries specifically, Islamic vs. Conventional Indices, of Kuwait, Oman, Bahrain, Qatar, Jordan, UAE, and Saudi Arabia. The sample includes daily data spanning from 2015 to 2024 and employing quantile VAR spillover models.

Quantile VAR (QVAR) Connectedness Approach

The current study utilizes the quantile-connectedness approach provided by²² to investigate the connectedness mechanism in each quantile. To reach connectivity measures, the first step is to estimate a Quantile VAR (p); the equation is as follows:

From the above equation, Y_t and Y_{t-j} are the $k \times 1$ dimensional vector of endogenous series based on first difference of conventional and Islamic equity indices. (τ) represent the quantile of indices range from 0 to 1, (0,1). P shows the length of the quantile VAR model. Whereas $w(\tau)$ represents the conditional mean return through $k \times 1$ dimensions. $\Phi_{j(\tau)}$ shows the VAR metrics of quantiles through $k \times k$ dimensions. $w_t(\epsilon)$ represents the error vector through $k \times 1$ dimensions and consist on $k \times k$ variance-covariance metrics.

In order to convert QVAR into the QVMA infinitely world theorem has been used:

$$Y_t = w(\tau) + \sum_{j=1}^p \Phi_{j(\tau)} Y_{t-j} + w_t(\tau) = w(\tau) + \sum_{i=0}^{\infty} \Psi_{i(\tau)} w_{t-i}$$

Then, h-step forwarded “Generalized Forecast Error Variance Decomposition (GFEVD)” proposed by is considered to provide the influence of fluctuations and in the j-series on i-series. It can computed as:

$$\psi_{ij}^g(h) = \frac{\sum \tau_{ii}^{-1} \sum_{h=0}^{h-1} (e_i' p_h(\tau) \sum(\tau) e_j)^2}{\sum_{h=0}^{h-1} (e_i' p_h(\tau) \sum(\tau) p_h(\tau)' e_i)}$$

$$\tilde{\psi}_{ij}^g(h) = \frac{\tilde{\Psi}_{ij}^g(h)}{\sum_{j=1}^k \mathcal{D}_{ij}^g(h)}$$

In the above equations, e_i is the zero vector along with value of i-th position. The standardized results can be shown in the following equation.

$$1) \sum_{j=1}^k \tilde{\gamma}_{ij}^g(h) = 1$$

$$2) \sum_{i,j=1}^k \tilde{\gamma}_{ij}^g(h) = k$$

The total directional connectivity is considered as TO'' others are computed to gain information for the overall impact on i-the series on all other j-th series.

$$C_{i \rightarrow j}^g(h) = \sum_{j=1, i \neq j}^k \tilde{\gamma}_{ji}^g(h)$$

Furthermore, the total directional connectivity from other variables j-th to i-th indicates shocks received by i-th series from other variables which is considered as FROM.

$$C_{i \leftarrow j}^g(h) = \sum_{j=1, i \neq j}^k \tilde{\psi}_{ij}^g(h)$$

Resultantly, the "NET" directional connectedness. That is determined as subtracting "TO" and "FROM" can be written as;

$$C_i^g(h) = C_{i \rightarrow j}^g(h) - C_{i \leftarrow j}^g(h)$$

When $(C_i^g(h) < 0)$ it has negative directional connectedness, it shows that i-th series is the receiver of spillover that is influenced by other network variables. When $(C_i^g(h) > 0)$ it has net positive connectedness, it means that i-th variable is transmitter, that influenced all series. The last connectivity metric by ... modified as total connectivity index (TCI), which considered as;

$$TCI(h) = \frac{\sum_{i,j=1, i \neq j}^k \tilde{\psi}_{ij}^g(h)}{k-1}$$

The total connectivity model indicates the overall connectivity of series, when TCI is higher it means series has highest total connectivity.

4. Results and Discussion

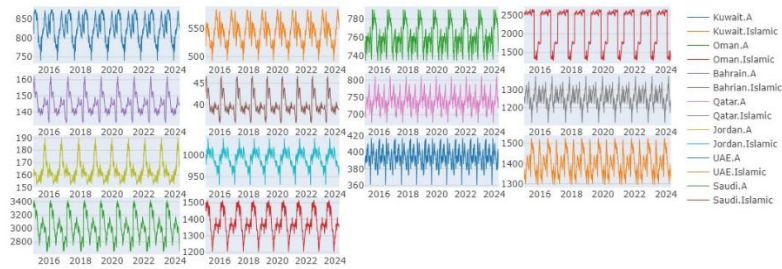


Figure 1: Indices without differences

Figure 1 shows each country's series plots of conventional and Islamic indices. Most GCC countries do not provide any difference in their indices. However, Kuwait's conventional has a higher return than the Kuwait Islamic index. Similarly, Bahrain, and Saudi Arabia's conventional indices outperform the Islamic indices. In contrast, Oman, Bahrain, UAE and Jordan Islamic indices outperformed conventional ones. Furthermore, Kuwait and Saudi Islamic indices have lower volatility than all other countries.

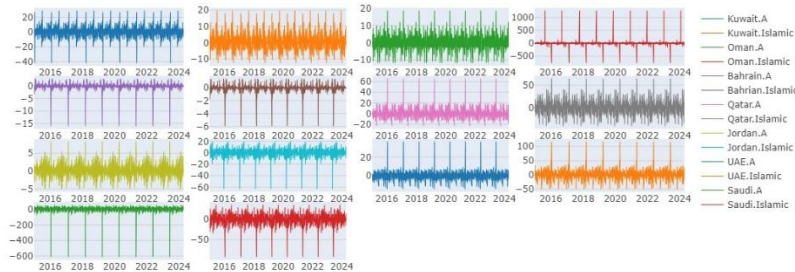


Figure 2: Indices with differences

Empirical Analysis

Table 1 provides the descriptive statistics of the volatility series of conventional and Islamic indices of GCC countries. The results show Kuwait, Bahrain, and Jordan conventional indices have higher return volatility than Islamic indices. Furthermore, conventional has a higher variance, which shows that conventional indices have larger uncertain movements than Islamic indices of these countries.

On the contrary, Oman, Qatar, and Jordan have higher mean averages of Islamic indices than conventional indices. Moreover, according to the Jarque-Bera (JB) normality test, the series is not normally distributed. So, we have taken the first difference of all series. The Elliott-Rothenberg-Stock unit root (ERS) test failed to show significance across the sample.

	Kuwait .A	Oman.A	Bahrain .A	Qatar. A	Jordan. A	UAE.A	Saudi.A
Mean	0.003	0.002	0.002	-0.017	-0.003	0	0.233
Variance	36.933	11.424	1.207	46.068	2.386	14.831	1452.889
Skewness	-0.439***	0.201**	-8.749**	2.624*	0.369*	1.917*	-11.445*
0	0	0	0	0	0	0	0
Ex.Kurtos	9.120**	4.230**	127.912***	24.838***	3.298**	22.191***	181.016***
0	0	0	0	0	0	0	0
JB	10121.582**	2176.778***	200983.2831**	77710.521**	1377.064***	61152.781**	4014327.067**

0	0	0	0	0	0	0	0
ERS	- 24.507 ***	- 7.567** *	- 13.424* **	- 11.669 ***	- 18.368 ***	- 14.087 ***	- 7.404** *
0	0	0	0	0	0	0	0
Q(10)	49.907 ***	80.840* **	105.261 ***	50.109 ***	93.348 ***	83.628 ***	26.810* **
0	0	-0.545	0	0	0	0	0
Q2(10)	262.123 ***	27.798* **	3.631	3.386	143.361 ***	24.245 ***	0.15
0	0	-1	-0.02	-0.117	-0.684	0	-0.009
	Kuwait .Islami c	Oman.I slamic	Bahrian .Islamic	Qatar. Islami c	Jordan. Islamic	UAE.I slamic	Saudi.Is lamic

	Mean	-0.008	0.362	0.001	0.002	0.009	0	0.031
	Variance	15.163	7180.479	0.198	140.339	35.396	194.896	110.647
	Skewness	0.799* **	8.176** *	- 6.513** *	0.478* **	- 3.269* **	1.400* **	- 1.807** *
0		0	0	0	0	0	0	
	Ex.Kurtos	3.894* **	167.444 ***	88.155* **	3.880* **	35.650 ***	14.470 ***	16.289* **
0		0	0	0	0	0	0	
	JB	2135.8 18***	341308 9.496** *	957549. 251***	1925.6 78***	158410 .228** *	26193. 053** *	33570.1 29***
0		0	0	0	0	0	0	
	ERS	- 11.047 ***	- 14.288* **	- 21.158* **	- 12.614 ***	- 29.287 ***	- 7.610* **	- 20.508* **
0		0	0	0	0	0	0	

$Q(10)$	47.328 ***	4.749	78.255* **	51.745 ***	51.475 ***	98.646 ***	96.339* **
0	0	0	0	0	0	0	
$Q2(10)$	37.387 ***	0.472	12.552* *	8.869	3.883	49.100 ***	14.112* **
0	0	-0.724	-0.763	0	0	-1	

Table 1: Descriptive statistics

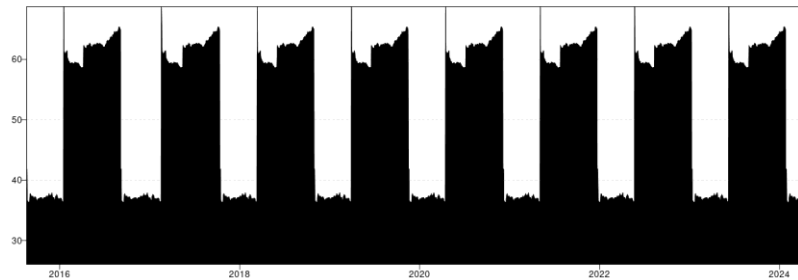


Figure 3: Total Dynamic total connectedness

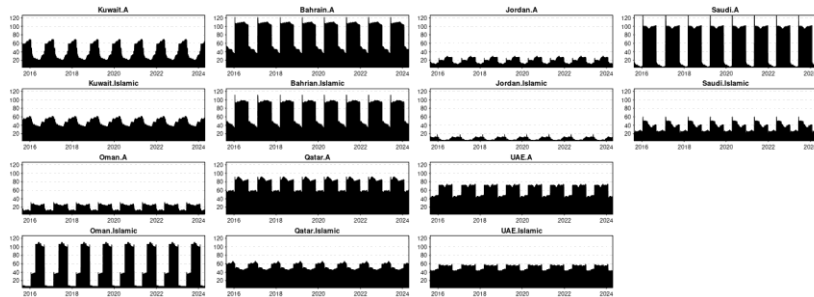


Figure 4: To others

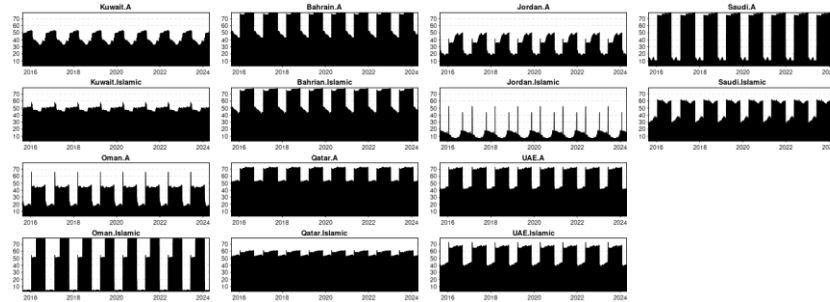


Figure 5: From other

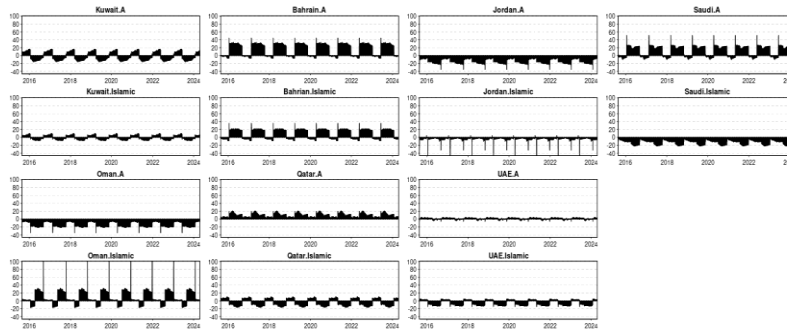


Figure 6: Net total directional connectedness

Furthermore, from the Figure 7 net plot, we distinguish between the net transmitter's blue and the net receiver's yellow color. Qatar and Bahrain, UAE and Saudi Arabia conventional, Bahrain and Oman Islamic are the net transmitters, and Oman, Jordan, and Kuwait conventional are the net receivers, and Qatar, Saudi Arabia, Jordan, Kuwait, and UAE Islamic indices are net receivers. The total connectedness index TCI is 51.59, representing the highest connectedness of conventional and Islamic indices.

It is important to note that most of the Islamic indices are the net receivers of the influence. One plausible reason is that the size of Islamic equity is small in the GCC countries, and conventional dominates the market²³. Moreover, Kuwait and Jordan, both conventional and Islamic, are net receivers; the reason could be the size of the economy. However, UAE, Saudi Arabia, Bahrain, and Oman are the net transmitters may be due to an open economy, and Kuwait is the net receiver, but the cases are due to a closed economy.

To summarize the above discussion, Saudi Arabia, UAE, and Bahrain are the net transmitters, and Kuwait, Jordan Oman are the new receivers.

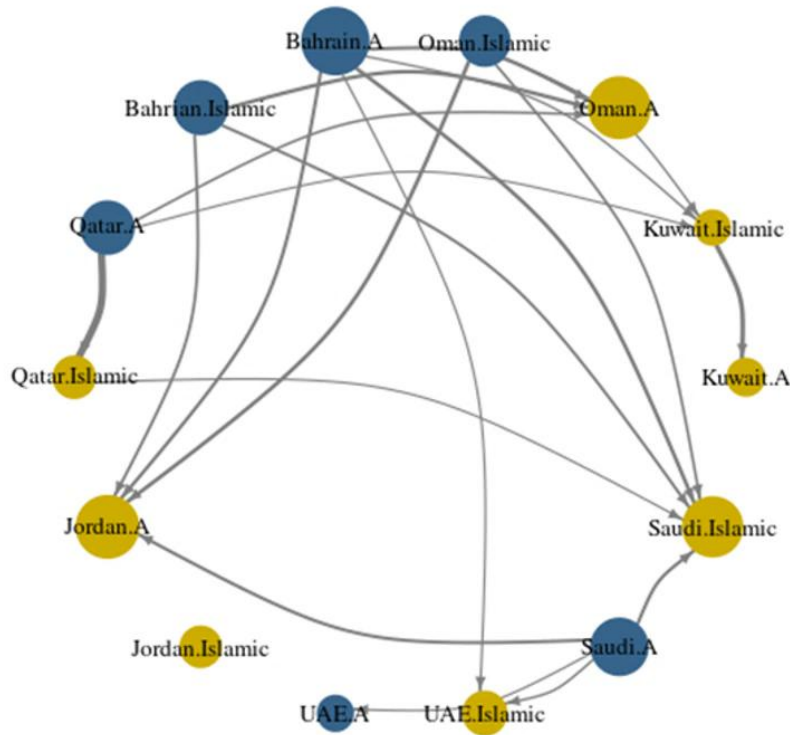


Figure 7: Network plot

Moreover, average dynamic connectedness is presented in Table 2, where we can observe that Jordan's Islamic index is least influenced by others (11.65), and the higher influence on the other indices came from Bahrain's conventional (81). The overall results do not hold a strong connectedness (51) between Islamic and conventional indices. The results align with the findings of that dominant countries are the largest spillover contributors, such as Bahrain and UAE. The results also reveal that some of the GCC countries have higher volatility spillover in Islamic indices. Furthermore, the Kuwait conventional and Islamic, Oman conventional, Qatar Islamic, Jordan conventional and Islamic, and UAE Islamic are considered as the highest directional connectedness receivers of spillover such as (-2.04, -0.83, -13.78, -4.32, -14.19, -3.79, and -5.17 respectively). In contrast, Oman Islamic, Bahrain Islamic and conventional, Qatar conventional, UAE conventional, Saudi

Arabia Islamic and conventional indices are the net transmitters of the spillover effects (8.27, 16.47, 9.88, 9.63, 1.21, 11.55, and 12.91, respectively). Moreover, Kuwait Islamic is the least connected; however, Kuwait possesses strong economic influence in the region (0.83%), followed by 2.04 Kuwait conventional and while Bahrain conventional is most significantly connected.

Furthermore, the objective of this study is to observe the connectedness between Islamic and conventional indices among GCC countries. Therefore, from analysis, it is important to note that while considering the spillover effect of Islamic and conventional indices. Kuwait conventional is most connected spillover effect with Islamic FROM (27.07) and TO (23.82), then Oman Islamic index is connected with FROM (2.31) and TO (1.71), moreover, Bahrain FROM (26.95) and TO (28.22), Qatar, FROM (27.22) TO (32.51), Jordan FROM (0.27), TO (0.58), UAE FROM (27.08), TO (28.36) and Saudi Arabia FROM (3.07), TO (6.63). From the analysis, the most connected Islamic and conventional indices are Oman and Kuwait. And the least connectedness indices are Jordan, Saudi Arabia, and Oman. Furthermore, the country analysis depicts that Kuwait has a 42.38 influence from all other country indices.

The analysis also evidenced that Bahrain, Qatar, UAE, and Saudi Arabia Conventional are the net receiver of the influence, and Kuwait, Oman, and Jordan Conventional are the net transmitter of influence. Similarly, Oman and Bahrain Islamic indices are net receivers, and Kuwait, Jordan, UAE, and Saudi Arabia are the net transmitters of the influence. The analysis provides evidence of the strong dependency of Bahrain, Qatar, and UAE; similar results are provided by²⁴, who explored the dynamic connectedness between GCC conventional and Islamic indices using the TVP-VAR model.

	Kuwait.A	Kuwait.I	Oman.A	Oman.I	Bahrain.A	Bahrain.I	Qatar.A	Qatar.I	Jordan.A	Jordan.I	UAE.A	UAE.I	Saudi.A	Saudi.I	FROM
Kuwait.A	57.62	27.07	0.71	0.59	1.3	0.98	3.32	3.41	0.87	1.05	0.46	0.21	0.52	1.9	42.38

Kuwait.I	23.82	5 1 . 8 4	1 . 2 9	2. 4	3. 0 5	2. 4 5	3. 9 5	3 . 6 5	1 . 0 2	1 . 3 4	0. 9 9	0 . 9 1	1. 5 4	1 . 7 4	48. 16
Oman.A	1.5	2 . 1 2	6 6 . 6 9	2. 3 1	4. 3 5	4. 8 2	4. 3 7	3 . 7 1	0 . 7 3	1 . 5 7	2. 1 9	0 . 9 7	3. 1 6	1 . 5 3	33. 31
Oman.I	0 . 2 4	0 . 9 4	1 . 7 1	5 8	6. 7 9	5. 7 3	4. 0 3	1 . 5 8	1 . 9 9	0 . 2 6	3. 8 1	2 . 9 9	8. 7 8	3 . 1 7	42
Bahrain.A	1 . 1 9	1 . 5 7	1 . 8 8	5. 6 8	3 5. 2 3	2 6. 9 5	4. 1 1	1 . 6 2	2 0 6	0 . 2 4	4. 7 2	3 . 1 8	8. 0 8	3 . 4 9	64. 77
Bahrain.I	1 . 0 3	1 . 4 7	2 . 1 1	5. 1 8	2 8. 2 2	3 6. 3 7	3. 8 6	1 . 7 7	1 . 8 8	0 . 4 5	4. 1 3	2 . 9	7. 2 7	3 . 3 6	63. 63
Qatar.A	2 . 1 9	2 . 5 8	2 . 5 6	4. 8	4. 8 7	4. 1 9	3 6. 4 1	2 . 7 2	1 . 5 2	0 . 3	2. 7 8	2 . 3 1	5. 6 5	2 . 6 3	63. 59
Qatar.I	2 . 6 4	2 . 8 7	2 . 4 3	2. 6 3	2. 4 9	2. 4 4	3 2. 5 1	4 3 . 1 6	1 . 0 7	0 . 2 7	1. 3 1	0 . 8 4	2. 9 5	2 . 3 9	56. 84
Jordan.A	1 . 3 2	1 . 5 2	0 . 9 7	4. 8	4. 5 4	3. 9 7	2. 5 7	1 . 2 7	6 7 . 2 9	1 . 1 2	1. 5 3	1 . 4 9	4. 5 1	3 . 1	32. 71
Jordan.I	2 . 1 6	2 . 2 1	0 . 6 5	0. 5 5	0. 6 3	0. 5 5	0. 3 9	0 . 4 4	0 . 5 8	8 8 . 3 5	1. 0 9	0 . 5 1	1. 0 5	0 . 8 3	11. 65

UAE.A	0 .4 1	0 .5 8	1 .3	4. 4 7	5. 6 1	4. 7 4	2. 8 2	1 .0 5	1 .3 7	0 .5	4 1. 1 7	2 7 .0 8	5. 5 6	3 .3 4	58. 83
UAE.I	0 .2	0 .6 7	0 .9 3	3. 9 9	4. 6	4. 0 7	2. 5 1	0 .9 4	1 .1 6	0 .1 8	2 8. 3 6	4 4 .2 1	5. 1 1	3 .0 7	55. 79
Saudi.A	0 .9 8	1 .5 9	1 .8 5	7. 7 9	8. 5 7	7. 1 3	4. 9 6	2 .1	2 .1 4	0 .2 4	4. 1 8	3 .4 7	5 0. 7 5	4 .2 5	49. 25
Saudi.I	2 .6 7	2 .1 4	1 .1 4	5. 0 8	6. 2 2	5. 4 9	3. 8 3	3 .7 7	2 .1 4	0 .3 4	4. 4 8	3 .7 6	6. 6 3	5 .3 1	47. 69
TO	4 0 .3 4	4 7 .3 3	1 9 .5 4	5 0. 2 8	8 1. 2 4	7 3. 5 2	7 3. 2 2	5 2 .5 2	1 8 .5 2	7 .8 6	6 0. 0 4	5 0 .6 1	6 0. 8 1	3 .4 7 8	670 .61
Inc.Own	9 7 .9 6	9 9 .1 7	8 6 .2 2	1 0 .8 2	1 1 .6 7	1 0 .9 8	1 0 .9 3	9 5 .6 8	8 5 .8 1	9 6 .2 1	1 0 .1 1	9 4 .8 3	1 1 .5 5	8 7 .0 9	cT CI/ TC I
NET	- 2 .0 4	- 0 .8 3	- 1 .3 8	8. 2 7	1 6. 4 7	9. 8 8	9. 6 3	- 4 .3 2	- 1 .4 1	- 3 .7 9	1. 2 1	- 5 .1 7	1 1. 5 5	- 1 .2 9	51. 59/ 47. 90
NPT	6	6	1	1 0	1 3	1 0	9	7	0	2	8	6	1 0	3	

Table 2: Average Dynamic connectedness

5. Conclusion and recommendations

The current study explores the spillover connectedness between Islamic and conventional indices of GCC countries. Employing quantile VAR, spanning from the period 2015 to 2024. The

study finds dynamic connectedness and spillover effect among the indices. There is strong connectivity among the indices. The analysis also evidenced that Bahrain, Qatar, UAE, and Saudi Arabian Conventional indices are the net receivers of the influence. Kuwait, Oman, and Jordan Conventional are the net transmitters of influence. Similarly, Oman and Bahrain Islamic indices are net receivers, and Kuwait, Jordan, UAE, and Saudi Arabia are the net transmitters of the influence. Furthermore, Bahrain, UAE, and Qatar have the highest influence, and Jordan and Oman have the least influence. When it comes to practical recommendations the study provides insightful results for policymakers and recommendations for practitioners and investors. Policy makers must understand the spillover effect of GCC country indices so that each country may promote and develop the businesses in the country through raising private equity. Similarly, the results assist investors in formulating their investment portfolio as the connectedness between conventional indices and Islamic indices provides return opportunity to the investors; they can create a portfolio of less connectedness indices to have a buffer against lowering returns. In other words, there study helps the investors to consider GCC as an investment avenue as it offer diversification.

Notes and References

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