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How Do Islamic Stock Markets React to Country-based and Global Financial Factors in BRIC and G7? Evidence from a Novel MMQR Approach

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Abstract: The purpose of the study is to compare the effect of country-based and global financial factors on Islamic stock market returns of BRIC (developing) and G7 (developed) country groups covering data from March 26, 2015, to March 31, 2021, for BRIC countries and July 27, 2015, to March 31, 2021, for G7 countries. A newly developed method of moment quantile regression (MMQR) is used to detect the asymmetric effects on Islamic stock market return across bullish, bearish, and normal market conditions, which is essential to better analyzing the stock market return. The outcome demonstrates that exchange rates have a significantly positive effect on stock market returns while CDS has a significant negative impact on the stock market return in G7 countries in both bearish and normal markets. On the contrary, we observe that the link between CDS and Islamic stock returns is negative but statistically insignificant in the case of BRIC. Additionally, we consider the Morgan Stanley Capital International (MSCI) world index and the CBOE Volatility Index (VIX) as the global financial factors. We find that the estimatedcoefficients of the MSCI world index have significant and positive effects on the stock market return in the case of both BRIC and G7 countries at all quantile levels. VIX has a significant negative impact on the Islamic stock return of the G7 across all quantiles. On the other hand, it has significant negative impacts only in transition (Q6) and a bullish period in the case of BRIC. The outcomes of the research will assist portfolio risk managers, international investors, and policymakers in building diversified portfolios and making investment decisions throughout the market's busts and booms.

Keywords: Islamic stock market return, Country-based financial factors, Global financial factors, BRIC, G7.

JEL Classification: G11, G15, G17

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Introduction

Islamic finance is not only a rapidly enlarging sector, but it has also formally acceded to the financial markets. Islamic finance is a way of handling financial transactions in accordance with Islamic law's guiding principles (Bhatti & Bhatti, 2010). The restriction of the receiving and payment of interest is the main aspect of Islamic finance. Many Islamic investors wish to make purely shariah-compliant investments based on their moral standards. One aspect of Islamic finance that picks the attraction of a lot of investors is the formation of Islamic stock market indices.

However, the assertion that financial factors have an impact on stock market performance is a well-known theory in the literature on financial economics. Researchers have been making a significant effort over the last two decades to empirically measure these financial implications. The conventional developing (Ertugrul & Ozturk, 2013; Musa Gün, 2018; Tokmakçıoğlu et al., 2018; Mensi et al., 2014; Mishra, 2016; Mensi et al., 2023; Bagchi and Paul, 2023; Bhargava et al., 2023) and developed (Aman, 2019; Benigno, 2016; Shahzad, 2018; Lou & Luo, 2017; Habibi &Lee, 2019; Zhang et al., 2023) markets are the subject of several investigations. However, studies on the Islamic stock market gets less attention than those on the conventional stock market (Aloui et al., 2015; Naifar, 2016: Hammoudeh et al., 2014; Kumar & Sahu, 2017; Shahzad et al., 2017; Ozcelebi et al., 2023, Kang et al., 2023). This study builds on existing studies to explore whether country-based (exchange rate, CDS) and global financial factors (VIX, MSCI world index) influence Islamic stock returns of developing (BRIC) and developed (G7) markets. Islamic stock markets appear to differ from conventional stock markets in several ways. Shariah-compliant stocks are deemed to be less sensitive and less hazardous to market movements compared to their conventional counterparts. (Abbes, 2012).

Credit default swap (CDS) is one of the indicators used to assess sovereign credit risk. It can be clarified as a sort of insurance against a specific company's default risk. The company is referred to as the reference entity, and the default is referred to as a credit event. It is expected that a rise in the CDS will negatively affect the stock market return (Coronado et al., 2012).

VIX is one of the most crucial indices in the global trading and investment sector. It is also known as the "Fear Index" for investors. Theoretically, there has always been a negative link between VIX and stock market returns (Hatipoğlu &Tekin, 2017).

Morgan Stanley Capital International (MSCI) World Index is used to track the performance of large and mid-cap corporations across developed countries. It has a positive effect on country-based stock market return. Consequently, an increase in the MSCI World Index signals a robust global economy that upgrades market economies and stock returns.

The exchange rate (E/R) is crucial to understanding the regional economic environment. A decline in currency value will raise stock prices if export-oriented companies dominate the market. In contrast, stock prices will drop because of currency depreciation if import-oriented companies dominate the stock market (Gokmenoglu et al., 2021).

There has been no research on the effect of country-based and global financial variables on Islamic stock market returns using a novel method of moment quantile regression (Machado and Silva, 2019) in developing and developed countries such as BRIC and G7. The current study aims to fill this gap by investigating the effect of the country-based and global financial factors on Islamic stock market. Furthermore, we consider country-based and global financial factors using the method of moment quantile regression to detect the asymmetric effect on Islamic stock market return across bullish (upper quantile), bearish (lower quantile), and normal (intermediate quantile) market circumstances.

Our study makes three most noteworthy contributions to the existing empirical literature.

First, according to our knowledge, none of the earlier researchers have examined whether the country-based and global financial factors affect BRIC and G7 Islamic stock markets. We seek to explore the impact of global financial factors on the stock market in addition to country-based financial factors as international investors are mostly interested in how stock markets move with global variables.

Second, we select G7 and BRIC countries because G7 is a group made up of the seven major advanced economies while BRIC countries are the four major developing economies and risk and returns vary in developed and developing countries according to the nature of economic uncertainties, political reasons and vice versa. Therefore, BRIC countries are beginning to be a direct competitor to the G7.

Third, we adopt the method of moment quantile regression (Machado and Silva, 2019) to analyze the effect of financial variables on the Islamic stock market return under bullish (upper quantile), bearish (lower quantile), and normal (intermediate quantile) market circumstances. In the literature, there is no research

paper conducted on the effect of financial factors on the Islamic stock market index using the method of moment quantile regression.

The remainder of the paper is organized into the sections below: Section 2 presents a review of previous literature. Section 3 discusses data and variables. Section 4 presents the methodology. Section 5 presents estimation results and discussion. Section 6 presents the conclusions.

Literature Review

The papers that investigate the Islamic stock market index are extremely rare because the literature on Islamic finance is quite limited and mainly consists of theoretical rather than empirical evidence. So, we review the literature within the scope of this study, which investigates the link between financial factors and stock market return.

Credit default swaps are one of the credit derivative instruments that build the foundation of stock markets. It could be interpreted as an insurance transaction made to ensure the creditor's receivable. A high CDS indicates that the default risk of the economy is increasing. It is predicted that a rise in the CDS will negatively correlated with the stock market (Coronado et al., 2012). Since the CDS is the market's most liquid instrument for credit derivatives, it responds more quickly to new information on credit risk than any other credit derivative instrument.

Many studies have been published on the relationship between CDS and conventional stock market return (Chan- Lau and Sook Kim, 2004; Aman, 2019; Shahzad et al., 2018; Kang & Yoon, 2018; Yang et al., 2018; Mensi et al., 2023; Zhang et al., 2023), but research on the link between CDS and the Islamic stock index is relatively rare.

Hachicha et al. (2022) scrutinize the hedging instrument to hedge the Dow Jones conventional and Islamic stock market return over the period from January 2000 to April 2019. Using a rolling-window procedure, they find that the link in the EMERGC return and CDS, along with those in the EMERGI return and the CDS, are quite high and positive. In this sense, Aloui et al. (2015) investigate the link between macroeconomic factors and Islamic stocks in GCC countries over the period of July 10, 2008, to July 13, 2013. Applying a DCCX-MGARCH model shows that USCDS as a global macroeconomic factor is having positive effects on the Islamic stock index.

CBOE volatility index (VIX) is a well-known forecaster of upcoming short-term volatility in the U.S. stock markets and shows the implied volatility of the S&P 500

index for the following thirty days. The VIX is known as the"investor fear index" because it has been associated with the high degrees of market instability in the United States (Whaley, 2000).

There are many studies exists on the link between VIX and conventional stock market return (Hatipoğlu & Tekin 2017; Mensi et al. 2014; Chandra & Thenmozhi 2015; Cheuathonghua et al. 2019), but only a few studies have dealt with the link between VIX and Islamic stock market return (Naifar 2016; Hammoudeh et al. 2014; Kumar & Sahu 2017; Karim and Naeem 2022; Ozcelebi et al., 2023, Kang et al., 2023).

Naifar (2016) investigates the dependence between DJIMI returns and international risk factors over the period from January 2003 to October 2014. Using the quantile regression approach, VIX has significantly negative effects, but US-CDS has significantly positive effects on DJIMI returns. Hammoudeh et al. (2014) investigate the differences between equity markets in conventional and Islamic financial structures over the period January 4, 1999, to July 22, 2013. Using a copula approach, the result shows that the DJIM has a negative average dependence on the VIX. Karim & Naeem (2022) analyze the impact of global factors on the Islamic financial markets, such as Dow Jones Global Sukuk and Dow Jones Islamic World Sukuk, using the data from December 2008 to May 2021. Employing the time-varying parameter vector auto regressions (TVP-VAR) technique, the outcome shows that during the crisis period, VIX has a remarkable link with the Islamic markets.

K. H. Shahzad et al. (2017) investigate dependence structure across the conventional stock markets (US, UK, Japan), global Islamic stock market, and several financial factors over the period from July 1996 to June 2016. Employing the VAR model, the result shows there is a significant risk in terms of return and volatility across conventional and Islamic stock markets and selected key risk factors such as VIX.

Wahyudi & Sani (2014) investigate the link among Jakarta Islamic Index (JII) return and macroeconomic variables over the period from January 2002 to December 2011. Using the VAR Toda Yamamoto causality test result, it is shown that the exchange rate and VIX index significantly affect the Islamic stock markets in Indonesia.

The MSCI World index is a market capitalization-weighted stock market index that includes 1,508 international constituents, maintained by Morgan Stanley Capital International (MSCI). According to MSCI, the index consists of a set of stocks from all developed markets worldwide. Additionally, there is always a positive link between the MSCI world index and the stock market. Thus, a growing

MSCI world stock market signals a strong global economy, which stimulates market economies and stock returns.

Several studies investigate and find a positive relationship between the MSCI world index and conventional stock returns (Abugri, 2008; Faisal & Khan, 2007; Harvey, 1991; Ferson & Harvey, 1997) but very few studies (Essayem, Gormus, & Guven, 2022) look into the relationship between the MSCI world index and Islamic stock returns.

In this regard, Faisal & Khan (2007) investigate the effects of macroeconomic variables and global factors on stock returns in Pakistan from July 2000 to June 2005. Applying multivariate EGARCH and vector auto-regressive models, the result shows that the exchange rate has a significantly negative impact and the MSCI World Index has a significantly positive impact on the Pakistan stock return.

Abugri (2008) examines the correlation among stock returns and macroeconomic volatility in Latin American markets from January 1986 to August 2001. Using the vector autoregressive (VAR) model, the MSCI world index has a positive and significant effect on stock market return in Brazil, Mexico, Argentina, and Chile, in that order.

International trade and trade balance are important factors in determining how exchange rates affect a country's economy. Moreover, the influence of the exchange rate on the stock market depends on whether the firms are primarily importers or exporters. Investors are compelled to move money from country-based to foreign assets when a country's currency depreciates, which decreases stock valuations.

Despite a vast amount of literature emphasizing the impacts of exchange rates on conventional stock returns (Ali et al., 2020; Mechri et al., 2019; Mohapatra & Rath, 2015; Alam & Rashid, 2014; Khan & Khan, 2018; Chellaswamy et al., 2020; Bhargava et al., 2023; Bagchi and Paul, 2023) few empirical studies have dealt with the impacts of exchange rates on Islamic stock returns (Majid & Yusof, 2009; Vejzagiv & Zarafat, 2021; Kumar & Sahu, 2017; Karim et al., 2012).

In this context, Majid & Yusof (2009) investigate the relationship between Islamic stock returns and macroeconomic variables in Malaysia from May 1999 to February 2006. After employing the ARDL model, results find a negative relationship between the exchange rate and the Islamic stock index.

Kumar & Sahu (2017) investigate the relationship between Dow Jones Islamic Market India and macroeconomic variables from January 2006 to July 2015. Using

the VAR model, the result shows that exchange rates have negative and insignificant relationships with stock returns.

Vejzagiv & Zarafat (2021) examine the link between stock market returns and macroeconomic variables in Malaysia using data from September 2006 to September 2012. Applying the vector error correction model, the result shows that the exchange rate has a significant and negative effect on the FTSE Bursa Malaysia Hijrah Shariah Index.

Karim et al. (2012) analyze the impact of macroeconomic variables on the Islamic stock market in Malaysia, covering the data from 2000 to 2011. Employing the VAR model, the result shows that the real exchange rate is found to have an influence on Islamic finance only during crisis periods.

Data Description and Preliminary Statistics:

Our dataset consists of daily Islamic stock indices, the exchange rate, country based CDS, Morgan Stanley Capital International (MSCI) world index and the CBOE Volatility Index (VIX) for BRIC and G7 country group.

We use daily data from 26th March 2015 to 31st March 2021 for BRIC countries and 27th July 2015 to 31st March 2021 for G7 countries without taking weekend observations into account (Saturday and Sunday). This generates a total of 6,280 observations for BRIC and 10,381 for G7 respectively. For empirical analysis, we consider the first difference in the natural logarithmic series of each variable.

The daily Islamic stock market indices (lnISLAMIC_RET) for both BRIC and G7 countries are obtained from investing.com and DataStream. Islamic stock indices for BRIC countries are SP BMI Brazil Shariah Index (Brazil), MSCI Russia Islamic Index (Russia), Dow Jones Islamic Market India (India), and Dow Jones Islamic Market Great China Index (China).

Islamic stock indices for G7 countries are S&P/TSX 60 Shariah-GSPTXSI (Canada), Dow Jones Islamic Market UK-DJIUK (UK), Dow Jones Islamic Market Japan-DJIJP (Japan), and Dow Jones Islamic Market US-IMUS (U.S.), Dow Jones Islamic Market Europe-DJIEU (We use DJIEU as a proxy for France, Italy, and Germany because the Islamic stock index is still unavailable for those countries).

Furthermore, we consider two country-based factors: credit default swaps (lnCDS_ret) and exchange rates of the country to the U.S. dollar (lnE/R_ret). To represent the U.S. exchange rate, we use the dollar index as a proxy.

In addition to country-based factors, we also examine global factors like the CBOE Volatility Index (lnVIX_ret) and the world index from Morgan Stanley Capital International (lnMSCIW_ret). We extract country-level 5-year CDS spreads from DataStream and exchange rate, MSCI world index and VIX are taken from investing.com.

Table 1: Descriptive statistics (BRIC)

	lnISLAMIC_RET	lnE/R_ret	lnCDS_ret	lnMSCIW_ret	lnVIX_ret
Mean	0.001374	0.000667	-0.000627	0.000324	-3.93E-05
Median	0.000610	0.000000	0.000000	0.000565	-0.007590
Maximum	0.709114	0.557249	0.627842	0.120837	0.846974
Minimum	-0.668627	-0.491806	-0.820322	-0.140208	-0.859046
Std. Dev.	0.049841	0.034492	0.034890	0.010841	0.122591
Skewness	1.968219	2.165502	-2.163607	-1.597261	0.479370
Kurtosis	103.2622	112.3971	133.7816	45.61918	12.49120
Jarque-Bera	2105891.***	2507171.***	4463281.1***	476133.5***	23721.20***

*Note: *** shows 1% level of significance.*

Table 2: Descriptive statistics (G7)

	lnISLAMIC_RET	lnE/R_ret	lnCDS_ret	lnMSCIW_ret	lnVIX_ret
Mean	0.000289	3.67E-05	-0.008935	0.000325	0.000157
Median	0.000656	0.000000	0.000000	0.000592	-0.007508
Maximum	0.494188	0.037722	0.835000	0.120837	0.840761
Minimum	-0.438085	-0.084016	-0.725370	-0.140208	-0.852833
Std. Dev.	0.029186	0.005557	0.058011	0.011099	0.124001
Skewness	0.363055	-0.364818	0.499788	-1.624347	0.473749
Kurtosis	101.9601	11.29805	44.57478	44.18470	12.45893
Jarque-Bera	3386149.***	23991.62***	747271.3***	737451.2***	39047.01***

*Note: *** shows 1% level of significance.*

Table 1 and Table 2 provides the summary statistics of the variables for BRIC and the G7. The average of all variables is positive in both country groups apart from lnCDS_ret and lnVIX_ret in BRIC with CDS in G7. The skewness and kurtosis normality tests indicate that all series are not normally distributed for both country groups.Moreover, the Jarque-Bera test statistics of country groups in this table demonstrate that the null hypothesis of normality is rejected at the 1% level of significance.

Table 3: Cross-Section Dependence Test (BRIC)

	Variable	Breusch and Pagan LM	P- Value
BRIC	lnISLAMIC_RET	227.775***	0.0000
	lnE/R_ret	1432.778***	0.0000
	lnCDS_ret	310.3790***	0.0000

Note: Under the null hypothesis of cross-section independence. *** p <0.01.

Table 4: Cross-Section Dependence Test (G7)

	Variable	Breusch and Pagan LM	P- Value
G7	lnISLAMIC_RET	8304.764***	0.0000
	lnE/R_ret	8239.731***	0.0000
	lnCDS_ret	3651.614***	0.0000

Note: Under the null hypothesis of cross-section independence. *** p <0.01.

Using first- or second-generation panel unit root tests depends on the results of a cross-sectional dependence test. Therefore, the Breusch-Pagan Lagrange Multiplier (LM) test is used to determine applicable panel unit root test. Evidence from Table 3 and Table 4 suggests the existence of cross-section dependence among BRIC and G7 countries at 1% level of significance. The applicability of the second-generation panel unit root tests for this investigation is thus supported by the cross-section dependence test. Hence, Table 5 and Table 6 illustrates second-generation panel unit test results for BRIC and G7 respectively.

Table 5: Panel Unit Root Tests (BRIC)

	CIPS	
Variable	Intercept	Intercept and Trend
lnISLAMIC_RET	-35.85***	-35.83***
lnE/R_ret	-35.16***	-35.08***
lnCDS_ret	-30.93***	-30.92***

*Note: *** shows 1% level of significance*

Table 6: Panel Unit Root Tests (G7)

	CIPS	
Variable	Intercept	Intercept and Trend
lnISLAMIC_RET	-49.80***	-49.57***
lnE/R_ret	-33.01***	-33.01***
lnCDS_ret	-21.49***	-21.52***

*Note: *** shows 1% level of significance.*

In Table 5 and Table 6, CIPS statistics show that all the variables (lnISLAMIC_RET, lnE/R_ret and lnCDS_ret) ofBRIC and G7 are stationary.

Table 7: Unit Root Test (BRIC and G7)

	Philips-Perron Test	
Variable	Intercept	Intercept& Trend
lnMSCI_ret	-27.93***	-27.94***
lnVIX_ret	-41.14***	-41.16***

*Note: *** shows 1% level of significance.*

Table 7 presents the findings for the non-stationarity of the cross-sectional invariant variables lnMSCI_ret and lnVIX_ret. We employ Philips-Perron Test in Table 7, showing lnMSCI_ret and lnVIX_ret are stationary. So, allvariables of BRIC and G7 are stationary. Hence, we apply the MMQR approach to estimate our model.

Methodology

In the empirical analysis, we follow the studies such as Hammoudeh et al. (2014), Naifar (2016), S. J. H. Shahzad etal. (2017) to test the effect of lnE/R_ret, lnCDS_ret, lnMSCIW_ret and lnVIX_ret on lnISLAMIC_RET in BRIC and G7 countries within panel data framework using Method of moment quantile regression approach. The functional relationships between the variables are given as follows:

$$lnISLAMIC\_RETit = \beta 0 + \beta 1\ lnE/R\_retit + \beta 2 lnCDS\_retit + \beta 3 lnMSCIW\_retit + \beta 4 lnVIX\_retit + \varepsilon it \quad \text{.....(1)}$$

We consider the first difference in the natural logarithmic series of each variable; where, *lnISLAMIC_RET* is the Islamic stock return at time *t* of country *i and lnE/R_ret, lnCDS_ret, lnMSCIW_ret, lnVIX_ret* is the exchange rate return, credit default swap return, MSCI world index return, and CBOE volatility index return at time *t* of country *i*,respectively. e_{it} denotes error term.

We use the Breusch and Pagan LM test (Breusch & Pagan, 1980) to examine the cross-section dependence among the BRIC and G7 countries under the null hypothesis of no cross-section dependence due to the huge T in the dataset. Moreover, stationarity of cross-sectional variant (*lnISLAMIC_RET*, *lnE/R_ret*, and *lnCDS_ret*) and invariant (*lnMSCIW_ret*, *lnVIX_ret*) variable has been analyzed. We apply panel unit root test (Pesaran, 2007) for variant and Philips-Perron unit root test (Phillips & Perron, 1988) for invariant variables. Under the null hypothesisof unit root, there is cross-sectional dependence between the BRIC and G7 country groups.

We apply ordinary least square (OLS) method to analyze the impact of country-based (*lnE/R_ret*, and *lnCDS_ret*)and global (*lnMSCIW_ret*, *lnVIX_ret*) factors on Islamic stock return of BRIC and G7. But OLS frequently encounters heteroscedasticity and is sensitive to extreme outliers, which can dramatically influence the results. So,we deploy the method of moment quantile regression ((Machado & Santos Silva, 2019)) to avoid misleading OLSresults.

The method of moment quantile regression is an appropriate statistical approach to examine the effects of heterogeneity at different market phases (bearish, normal, and bullish) for nine quantiles, where 0.1, 0.2, and 0.3 specify the bearish market; 0.4, 0.5, and 0.6 represent the normal market; and 0.7, 0.8, and 0.9 denote the bullish market. We also provide graphs of the MMQR magnitudes of all explanatory variables for nine quantiles in BRICand G7 countries. The advantage of MMQR over other quantile regression methods is that it employs fixed effectsthat have an impact on the entire distribution and can detect the impacts on the conditional distribution without relocating the position of the independent variables.

Results and Discussion

In this section, we use methods of moment quantile regression approach to explain the impacts of country-based andglobal financial factors on Islamic stock return in BRIC and G7 across quantiles.

Table 8: Impacts of the Country-based and Global Financial Variables on Islamic Stock Returns of BRICCountries.

Dep. Var: lnISLAMIC_RET	Location	Scale	Quantile level									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	OLS
lnE/R_ret	-0.019	0.014	-0.037	-0.029	-0.025	-0.022	-0.019	-0.017	-0.013	-0.008	-0.001	-0.018
	-0.68	0.57	-0.84	-0.85	-0.82	-0.76	-0.7	-0.6	-0.45	-0.24	0.00	-0.87
	0.495	0.571	0.399	0.395	0.414	0.444	0.486	0.545	0.654	0.807	0.998	0.383
lnCDS_ret	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000	-0.000**
	-1.19	0.8	-1.33	-1.38	-1.36	-1.30	-1.21	-1.08	-0.85	-0.54	-0.16	-2.25
	0.236	0.426	0.184	0.168	0.175	0.195	0.228	0.281	0.396	0.59	0.876	0.025
lnMSCIW_ret	0.586***	-0.036	0.631***	0.612***	0.601***	0.593***	0.587***	0.580***	0.570***	0.558***	0.537***	0.586***
	9.1	-0.63	6.23	7.68	8.51	8.93	9.1	9.03	8.52	7.4	5.59	7.53
	0.000	0.531	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
lnVIX_ret	-0.009	-0.006	-0.000	-0.004	-0.006	-0.008	-0.009	-0.009*	-0.012*	-0.014**	-0.017**	-0.0089
	-1.49	-1.19	-0.09	-0.58	-0.95	-1.23	-1.46	-1.67	-1.88	-1.99	-1.96	-1.28
	0.135	0.232	0.932	0.564	0.342	0.219	0.145	0.096	0.061	0.047	0.050	0.201
C	0.001*	-0.014***	-0.016***	-0.009***	-0.004***	-0.002***	0.001***	0.003***	0.007***	0.012***	0.019***	0.001
	1.82	27.17	-26.76	-24.38	-17.92	-8.59	2.67	12.27	21.44	28.43	31.22	1.48
	0.069	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.138

*, **, *** indicates 10%, 5%, and 1% level of significance, respectively. Brackets and parentheses denote z values and p values, respectively.

Table 9: Impacts of the Country-based and Global Financial Variables on Islamic Stock Returns of G7Countries.

Dep. Var: lnISLAMIC_RET	Location	Scale	Quantilelevel									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	OLS
lnE/R_ret	0.306***	-0.113	0.438**	0.380**	0.346***	0.322***	0.301***	0.282***	0.259***	0.228***	0.178**	0.306***
	3.85	-1.43	3.00	3.38	3.64	3.8	3.89	3.88	3.71	3.18	2.06	5.48
	0.000	0.151	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.001	0.04	0.000
lnCDS_ret	-0.001*	0.001	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001	-0.001	-0.000	-0.001***
	-1.79	1.22	-1.74	-1.82	-1.85	-1.83	-1.78	-1.68	-1.46	-1.06	-0.39	-2.95
	0.074	0.224	0.082	0.069	0.065	0.067	0.075	0.093	0.143	0.290	0.696	0.003
lnMSCIW_ret	0.601***	0.140*	0.436**	0.509***	0.551***	0.581***	0.606***	0.629***	0.658***	0.697***	0.759***	0.601***
	8.03	1.9	3.2	4.83	6.18	3.8	8.35	9.24	10.06	10.37	9.35	17.61
	0.000	0.058	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
lnVIX_ret	-0.016***	0.005	-0.022**	-0.019***	-0.018***	-0.017***	-0.016***	-0.015***	-0.014***	-0.013***	-0.011**	-0.016***
	-3.37	1.03	-2.47	-2.84	-3.1	-3.29	-3.4	-3.44	-3.34	-2.94	-2.03	-5.3
	0.001	0.305	0.013	0.004	0.002	0.001	0.001	0.001	0.001	0.003	0.042	0.000
C	-0.000	0.009***	-0.010***	-0.006***	-0.003***	-0.001***	0.001*	0.002***	0.003***	0.006***	0.020***	-0.001
	-0.33	19.63	-42.61	-36.17	-27.15	-13.38	1.86	17.17	30.18	40.68	49.29	-0.48
	0.738	0.000	0.000	0.000	0.000	0.000	0.063	0.000	0.000	0.000	0.000	0.6300

*, **, *** indicates 10%, 5%, and 1% level of significance, respectively. Brackets and parentheses denote z values and p values, respectively.

From Tables 8 and 9, the OLS estimation result shows that exchange rate has a significant positive effect on G7. Islamic stock returns and CDS has a significant negative impact on both BRIC and G7 Islamic stock returns, whichis consistent with the study of Aloui et al. (2015).

Regarding the global factors, the MSCI world index has a significantly positive impact on Islamic stock market returns in both country groups. VIX has a significantly negative impact on Islamic stock returns only in G7 countries. These negative findings are in line with the study of Hammoudeh et al. (2014). Overall, the OLS resultsshow that country-based and global financial factors influence G7 and BRIC Islamic stock returns (except for VIXand exchange rate in BRIC).

From the method of moment quantile regression results, we can notice that the exchange rate indicates a significantly positive link with Islamic stock returns for G7 countries which is in line with the study of Isa et al. (2012). Moreover, the magnitude of the coefficient is decreasing consistently from the lowest to the highest quantilelevel. Therefore, the exchange rate has a stronger impact during a bear market. This result indicates there is a slightly asymmetric dependency between those variables.

CDS has a significant negative impact on the stock market in G7 countries in both bearish and normal markets. However, during bullish market conditions in the G7 stock market, results suggest that there is an insignificant link between CDS and Islamic stock returns. On the contrary, we observe that the link between CDS and Islamic stock returns is negative but statistically insignificant in the case of BRIC.

As mentioned above, we consider the MSCI world index and VIX as global factors. We find that the estimated coefficients of the MSCI world index have significant and positive effects on the stock market return in the case ofboth BRIC and G7 countries at all quantile levels which is in line with Essayem et al. (2022). A rise in the MSCI world stock market index implies a healthy global economy, which has a positive influence on market economies and stock returns.

Moreover, the magnitude of its coefficient decreases as the quantile increases in BRIC, but the coefficient increases as the quantile increases in G7. In the case of BRIC countries, when the Islamic stock market is in a bullish phase, the positive effect of the MSCI World Index weakens and is not as strong as when it is in a bearish phase. In the caseof the G7, however, the situation is exactly the opposite. This is a clear sign of asymmetric link between MSCI and Islamic stock returns of BRIC and G7.

In all quantiles, VIX has a significant negative impact on the Islamic stock return of the G7. On the other hand, ithas significantly negative impacts only in transition (Q6) and a bullish period in the case of BRIC.

While the level of the coefficient is increasing from the lower to the upper quantile in BRIC countries, it's decreasing from the lower to the upper quantile in G7 countries. Therefore, VIX has asymmetric effects on the Islamic stock returns of both BRIC and G7, implying that the effects are stronger in the bullish phase of BRIC andin the bearish phase of G7 Islamic stock returns. The negative link between VIX and stock market returns are in accordance with the studies of Hammoudeh et al. (2014) and Naifar (2016).

Furthermore, we present the level of coefficient for BRIC and G7 in figure 1 and figure 2.

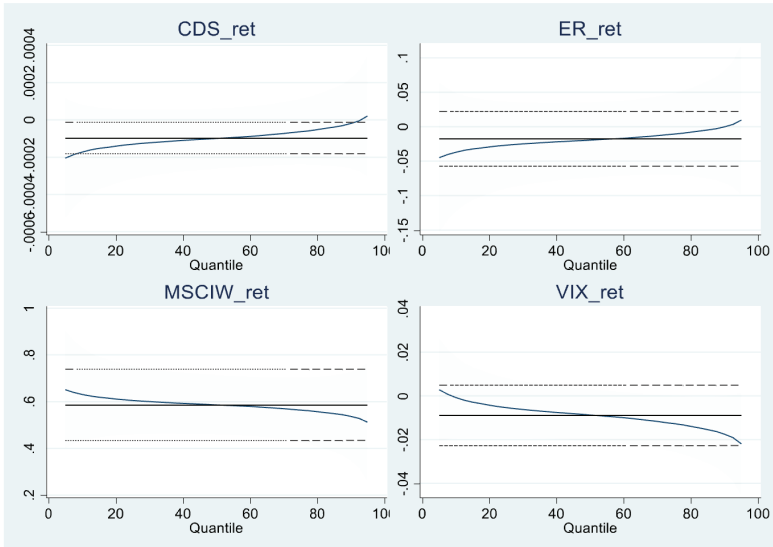

Figure 1: Coefficients of MMQR (BRIC)

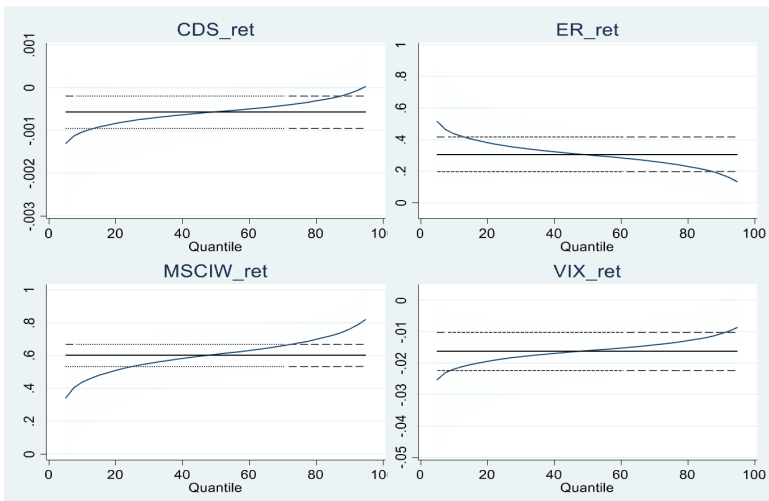

Figure 2: Coefficients of MMQR (G7)

Conclusion and Policy Implications

Using daily data of exchange rate, CDS, MSCI world index, VIX and Islamic stock index in BRIC and G7, this paper uses the method of moments quantile regression approach in order to investigate the relationship between financial factors and Islamic stock return. The empirical results of this paper show that country-based financial factors such as exchange rate have a significant positive impact on Islamic stock market returns in G7 countries, whereas CDS has a significant negative impact (in both bearish and normal periods). But both country-based factors (exchange rate and CDS) have a negative sign but a statistically insignificant relationship with Islamic stock returns in BRIC countries.

The country-based financial factors in developing (BRIC) markets, such as exchange rates and CDS, have a lower predictive capability for Islamic stock returns compared to the situation in developed (G7) markets. One plausible explanation is that country-based financial factors are intertwined and controlled in emerging economies, making them less relevant in predicting Islamic stock volatility.

In terms of global factors, the MSCI world index has a significant positive relationship with BRIC and G7 Islamic stock returns, whereas the VIX has a significant negative relationship with BRIC (transition and bullish period) and G7 (all quantiles).

The outcomes of the research have valuable implications for the portfolio risk manager, international investors and policy makers through market busts and booms. First, during the bullish period in G7 countries, the relationship between the CDS and the Islamic stock return is insignificant. This implies that during the market boom, investors don't pay attention to the CDS. Second, the effect of the MSCI world index on Islamic stock returns is positive in both BRIC and G7 country groups. So, there is no diversification benefit between the country groups. Third, the VIX has a significant negative impact on BRIC Islamic stock returns during transitions (Q6) and bullish periods, as well as on G7 stock returns across all quantiles, suggesting that there are diversification benefits between the country groups when the market is in a bearish phase.

Regarding the limitations of this study, there are no studies available related to the relationship among financial factors and the Islamic stock index in BRIC and G7. Since BRIC and G7 are consists of non-Muslim nations, there has been virtually no research on the impact of financial factors on Islamic stock indices in those regions. Therefore, it was challenging to compare with other studies to find areas

of agreement and disagreement. Depending on the availability of data, this study can be extended to sub-sector levels to compare how the Islamic sub-sector stock returns react to changes in global financial factors.

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