2-1-2020

Political uncertainty and firm performance: Does Shariah compliance matter?

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Political Uncertainty and Firm Performance: Does Shariah Compliance Matter?

A Thesis Submitted to

The Department of Management

in partial fulfillment of the requirements for

the degree of Master of Science in Finance

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(Under the supervision of Dr. Neveen Ahmed & Dr. Mohamed Bouaddi)

January/2020

Political Uncertainty and Firm Performance: Does Shariah Compliance Matter?

Abstract

The purpose of this thesis is to investigate the relationship between political uncertainty and the performance of Shariah compliant firms. This thesis will examine the relationship between political instability and the performance of Shariah compliant versus non-Shariah complaint firms. This relationship will be examined on two samples. The first sample includes panel data of 12 emerged countries and 6 emerging countries, while the second sample covers US data. Two measures of political instability will be used. The first one is the International Country Risk Guide (ICRG) Index and the second one is elections period. Two OLS models are implemented; both models provide evidence that Shariah compliance has a positive significant effect on firms' performance. The panel data provide evidence that Shariah compliant firms perform better during periods of political instability. However, presidential elections negatively affect performance of Shariah complaint firms in the US.

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Chapter I

1. Introduction

Recently, Shariah compliant finance boomed globally; Islamic Finance assets grew from US $ 200 billion up to US $ 1.8 trillion in the period from 2003 to 2013 (IMF, 2017). Demand for Shariah-compliant indices has also increased worldwide. According to a study by PwC (2011), Shariah-compliant indices reported an annual growth rate of 26 % for the first ten years of this century. They were first introduced in 1960s; and since then hundreds of Shariah Complaint Indices were launched all over the world to accommodate the interest in Shariah Compliant Investment. Among the most famous Shariah complying indices are Dow Jones Islamic Market Index (DJIM) and FTSE Global Islamic Index Series (GIIS).

Shariah compliant finance follows Shariah principles. Shariah prohibits investing in certain activities including: alcohol, pork products, pornography, weapons, or gambling. In addition, Shariah principles require that the risk of a transaction must be shared between the borrower and the lender. Thus, Shariah complaint firm have specific financial characteristics associated with leverage and liquidity[1].

In recent years, many studies tried to capture the effect of Shariah compliance on firms' performance and whether the special financial characteristics of Shariah complaint firms result in better performance or under performance in comparison to conventional firms. In this thesis, the effect of political uncertainty on performance of Shariah firms and how it differs in comparison to non -Shariah firms will be examined.

Political uncertainty (periods of political changes, significant events or unrest) affects the performance of stock market. The reason is that those periods of uncertainty triggers different investors' behaviors. The magnitude of effect of such uncertainty is likely to differ

[1] Shariah complaint firms must have a debt ratio < 33 %, cash ratio < 33% and receivables ratio < 49%, for screening calculations refer to research methodology in chapter 3

depending on other firm- specific and country-specific variables. Even though both Shariah and non -Shariah firms are likely to be affected by political uncertainty; yet the effect will vary due to the distinguished nature of Shariah compliant firms.

Shariah complaint firms cannot rely on debt in capital expenditure or in running operation; thus, limiting sources of financing for new projects or growing the business. However, Shariah complaint firms are likely to benefit from maintaining lower leverage during periods of crisis/uncertainty; this is because a lower leverage level reduces risk of bankruptcy and inability to pay debt.

Political instability affects the stock market; however, the effect varies from one firm to another. Stock performance and volatility of returns depend on the type of industry and the degree of exposure of a firm's operation to threats associated with political uncertainty (Beaulieu et. al.2005). Thus, excluding investment in volatile industries such as alcohol and gambling is likely to positively impact performance of Shariah compliant firms during periods of political or economic uncertainty/crisis (Al-Khazali et al. (2014); Jawadi et al. (2014); Ho et al. (2014)). Other studies argue that there is no significant difference in performance of Shariah vs. non-Shariah firms' performance (Hassan and Girard (2011); Setiawan & Oktariza (2013)).

The contribution of this thesis is to add to the limited literature available on Shariah compliant firms by investigating how political uncertainty/instability affects performance of Shariah complaint firms in comparison to non-Shariah firms.

The rest of this thesis is structured as follows: 2) Literature Review & Hypothesis Development, 3) Data & Research Methodology, 4) Results and discussion and 5) Conclusion and References.

Chapter II

2. Literature Review &Hypothesis Development

2.1 Literature on Performance of Shariah vs. Non Shariah:

In this section, literature on performance of Shariah and non-Shariah firms will be covered to identify the main arguments on how Shariah firms perform versus non-Shariah firms; particularly whether there is a significant difference in their performance.

Shariah compliance directly affects firms' fundamentals including type of business activity, leverage level, riskiness and sources of financing. Shariah screening is tied to transparency and efficiency in managing limited financial resources and thus adding value in the long run.

Pepis and Jong (2019) applied a long-term event study approach using data for 28 years covering the period from 1990 to 2018 to investigate the effect of Shariah compliance on long-term performance of firms. Return on asset (ROA) and return on sales (ROS) as well as rebalanced annual stock returns were used to investigate the performance of shariah firms versus a control group of non-shariah firms. The study concluded that in the long-term shariah compliant firms resulted in higher ROA and ROS in comparison to the control group. This suggests that reducing debt level and receivables to abide by shariah promotes efficient management of resources and adds strategic value for firms in the long run.

Akguc & Al Rahahleh (2018) examined the relationship between shariah compliance and operating performance. The study applied a multivariate regression model on data of Shariah complaint and non-Shariah compliant firms in GCC area to investigate how profitability is affected by Shariah compliance. The study concluded that complying with

shariah adopted leverage and liquidity ratios results in higher profitability margins. This is because Shariah-complaint firms have lower cost structure and debt and require efficient management of assets and resources.

Setiawan & Oktariza (2013) investigated the relationship between risk and return for Shariah and non-Shariah companies listed on Indonesia Stock Exchange using data from 2009 to 2011. They investigated the relationship between returns and firm-specific financial ratios (Debt/ Equity Ratio, Earnings per share, Price Earnings Ratio, Net Profit Margin, Return on Equity, and Price to book value) for both Shariah and non-Shariah companies. Risk-adjusted returns measured by Sharpe Ratio, Treynor ratio and Jensen's Alpha proved that there is no significant difference between the performance of Shariah complaint and non-Shariah complaint firms. In addition to that, their results proved that returns of both Shariah and non-Shariah firms are significantly affected by Debt to Equity Ratio, Earnings per share and Return on Equity.

Low leverage level is one of the main factors that distinguish shariah complaint firms in terms of risk and return. High leveraged firms are more likely to experience a decline in market value of equity in comparison to low leveraged firms during periods of downturn (Opler and Titman, 1994). This indicates that shariah complaint firms provide a less risky investment; which raises the concern about risk-return trade of shariah complaint firms versus their counterparts.

Al-Zoubi and Magheyreh (2007) applied several Value-at-Risk (VaR) methodologies to investigate the relative risk performance of Dow Jones Islamic Index versus its conventional index. Using data to cover the period from 1996 to 2005, they concluded that the Islamic index presented a less risky investment when compared to the conventional Dow

Jones World Index. The authors concluded that the Shariah adopted profit and loss sharing principle results in a significantly lower risk in comparison to the market.

To capture risk-return tradeoff between Shariah and non shariah complaint firms, Albaity and Ahmad (2011) compared the returns and volatility of two Islamic indices and two socially responsible indices listed in UK and US versus the performance of the conventional indices. The study proved that there is no significant difference between the returns of any of the indices, thus no risk premium is required for Islamic indices. The study also investigated the sensitivity of the indices to news and concluded that bad news has a greater impact on all indices in comparison to good news. This indicates that all markets are sensitive to bad news; where markets become more volatile when stock prices decrease significantly. This is primarily due to investors' perception of higher level of risk as stock prices fall.

Colina and Gatti (2009) created a hypothetical Shariah compliant portfolio from listed Italian companies and compared its performance to the benchmark. The study concluded that the Shariah compliant portfolio beat the benchmark during periods of boom, growth and crisis while it underperformed the benchmark during moderate periods. The plausible shariah complaint index was mostly dominated by the well-established Italian retail and goods sectors. Thus, the study proves that abiding by shariah financial rules do not contradict with efficient stock picking strategies used by portfolio managers to create a well-diversified portfolio.

Hussein and Omran (2005) compared the performance of the Islamic Index in Dow Jones against the performance of Dow Jones World Index. The study applied CAPM, Treynor ratio and Sharpe ratio while subdividing the data into three periods. The data was subdivided into full period, bull period and bear period. During the full and bullish period, the Shariah complying index was reported to outperform the conventional index. However, the

Islamic Index in Dow Jones underperformed Dow Jones World Index in bearish period. According to the study the screening criteria adopted by Islamic Index in Dow Jones results in excluding large global firms and thus the index comprises of smaller firms that are subject to higher volatility of returns.

A more comprehensive study by Hassan and Girard (2011) used data of seven indexes chosen from the Dow Jones Islamic Market Index (DJIM) to examine the performance of Shariah versus non-Shariah complaint indexes using data from 1996 to 2005. The study controlled for several factors: "market risk, size, book-to-market, momentum, local and global factors". They concluded that the variance in returns between Shariah and conventional indices is not significant; where both the Shariah and conventional indexes have similar reward to risk and diversification benefits. Moreover, the study concluded that shariah screening resulted in investing in growth focused small-cap industries while conventional indices include more value-focused industries of mid-cap size of higher environmental risk such as energy and chemicals industries.

A study by Rejeb and Arfaoui (2019) applied a standard GARCH model to monthly data of market returns of ten shariah indices and their counterparts during the period from 1996 to 2016. The period under study includes several financial events such as Brother Lehman collapse, extreme market movements into 2008, GFC and the Eurozone crisis (EZDC). The study proved that both conventional and Islamic indices are affected by the financial crisis due to volatility spillover during subprime crisis. Nevertheless, shariah complaint indices outperform conventional indices in terms of informational efficiency.

Other studies proved that Shariah complying firms outperform non-Shariah complying firms in times of crisis (Al-Khazali et al. (2014); Jawadi et al. (2014); Ho et al. (2014)). Jawadi et al. (2014) compared the performance of three Dow Jones Islamic Indices

(World, USA and Europe) to the performance of their benchmarks before and after the subprime crisis. The study concluded that even though both Islamic and conventional indices were affected by the crisis, however the Islamic index performed better during the downturn. Al-Khazali et al. (2014) reached the same conclusion by applying stochastic dominance (SD) analysis to nine Dow Jones Islamic Indexes and their benchmark and comparing their performance during the global financial crisis in 2007 to 2012. According to Farooq and Alahkam's (2016) findings, Shariah firms perform better during crisis due to their distinguished financial characteristics of low leverage and low account receivables. Such financial characteristics reduce their vulnerability to bankruptcy and failure to collect receivables from customers during periods of crisis.

A study by Miniaoui et.al (2015) sheds the light on performance of shariah complaint indices and conventional indices in GCC countries during 2008 financial crisis. They applied GARCH model to six GCC markets (Kuwait, Bahrain, UAE, Saudi Arabia, Oman and Qatar) to investigate the effect of the financial crisis on volatility of returns across shariah complaint indices and conventional indices. The study concluded that the effect of the financial crisis on Shariah complaint indices differed across GCC countries. Risk affected volatility of Shariah indexes and their counterparts in three countries (Saudi Arabia, Oman and Qatar); while no significant affect was captured on volatility of returns for the rest of the countries. The study concluded that the effect of the financial crisis on volatility of returns varied across GCC countries regardless of Shariah compliance. Thus, implying that both shariah and non-shariah indices in GCC countries are subject to similar risk.

Touiti and Henchiri (2016) investigated the behavior and market efficiency of twenty Shariah complaint indices from Dow Jones family and their conventional counterparts during subprime crisis. They attempted to capture the effect of the crisis on performance of indices using risk-adjusted return measurements (Sharpe ratio (SR), Treynor index (TI) and Jensen's

alpha). They concluded that Islamic indices are vulnerable to crisis; both Islamic and conventional indices recorded higher volatility and lower returns during subprime crisis. Nevertheless, four Islamic indices outperformed their counterparts in period of crisis in terms of returns. Mixed results about performance of Shariah complaint indices during crisis are in line with the study by Hassan and Girard (2010).

Albaity and Ahmad (2011) conducted a comparative study to investigate the difference in returns and volatility between three Islamic indices listed in USA, United Kingdom and Malaysia. They applied a Generalized ARCH-GARH model (GARCH-M) for daily data covering 8 years. The study concluded that there is no significant difference in the returns of the three indices. The study reported leverage effect for the two indices listed in USA and United Kingdom, but no leverage effect was reported for the index listed in Malaysia. The paper argues that this is due to larger market capitalization of the US and UK indices in comparison to the Malaysia Index.

2.2 Literature on Political Risk, Stock Returns

This section highlights the findings of several studies that investigated how political instability affects firms' performance. Political Instability creates an uncertain environment; which triggers different investors' behaviors depending on their perception on how different financial investments would behave during uncertainty. The degree by which political instability impacts firms' performance during periods of uncertainty is directly linked to firm specific characteristics and operational activity.

Sun and Liu (2018) used the five components of the International Country Risk Guide (ICRG) Rating model: Government Stability, Socioeconomic Conditions, Investment Profile, Internal Conflict and External Conflict, to investigate how political risk affect volatility of

stock returns. The study included data from China, United Kingdom, Mexico and Iran and applied a GARCH (1,1) model. Government Stability and socioeconomic conditions were reported to have significant impact on stock returns and volatility on all countries; as government instability and unstable economic conditions might result in change in laws and rules thus causing uncertainty about future performance of different industries. The study concluded that developing countries are more vulnerable to political risks in comparison to developed countries due to higher level of challenges encountered by developing countries and more critical political decisions, which could reshape the business environment. Similar results were obtained by Vortelinos and Saha (2016) who used monthly data of 66 countries for 13 years to investigate the effect of political risk on stock returns and volatility. Vortelinos and Saha (2016) applied an Ordinary Least Squared method using twenty political indicators extracted from The ICRG Index as proxy for political instability. Inflation rate, stock market capitalization, Gross Domestic Product, trade integration and interest rate were used as control variables to run the regression. The study proved that the effect of political risk on returns and volatility differs depending on country of operation; due to the effect of socioeconomic conditions in shaping the perception of investors about the level of risk associated with political events and required returns.

Malik et al. (2009) investigated the effect of major political events on performance of stocks listed on Karachi Stock Exchange. The study applied Phillips Person unit root test to investigate how trading volume and returns were affected by resignation of President Pervaiz Musharraf. They reported high fluctuations in trading volumes and stock returns due to high volatility of stock prices during intense political events. This is because intense political events confuse the market participants and their perception about risk aversion resulting in increase in short selling and traded volumes.

Beaulieu et al. (2005) investigated the effect of political risk on volatility of stock returns of firms listed on the Canadian Stock Exchange using data from 1990 to 1996. The study applied a GARCH model to investigate how news related to Quebec's independence from Canada affected the volatility of returns. The study concluded that the volatility of returns is highly associated to the extent of firms' exposure to political risk, where firms that operate internationally or have high potential for growth are less affected by negative news. Locally operating firms with high assets in place were reported to have higher volatility of returns, due to difficulty of relocating.

Chau et.al (2014) used data of conventional and Islamic indices in MENA region to investigate how political uncertainty arising from Arab Spring affected stock market volatility. The study applied several asymmetric GARCH models to measure volatility of conventional and Islamic indexes in 6 MENA countries. The study concluded that political instability results into high volatility of returns due to reduced business confidence and investors perception about up rises and protests as an increased risk in the market. According to the study, both conventional and Islamic indices were affected by political instability; however Islamic indices were more volatile. This is because Islamic indices in the MENA region invest heavily in oil and gas industries; which are more vulnerable to political turmoil.

Ahmed (2018) applied a Generalized Method of Moments (GMM) framework to investigate the effect of political instability on Shariah compliant and conventional indices in developing and developed countries. ICRG index was used to investigate how the level of political risk affects prices of MSCI Islamic stock market indices and its conventional counterpart over the period from 2005 to 2016. The study proved that shariah complaint indices are less sensitive to political uncertainty in developed countries than their counterparts, which could be attributed to nature of industries that shariah complaint indices invest in. In developing countries, both shariah and non-shariah complaint indices were

significantly affected by political uncertainty; as political instability in weaker economies is accompanied by reduced country credit ratings thus increasing required equity premium in the market. The study concluded that political uncertainty induces higher risk environment to equity market and increases required equity risk premium by investors; both shariah and non-complaint firms are not immune to this unsuspected risk.

According to above literature, political instability triggers uncertainty. Nevertheless, the effect of this uncertainty on firm's performance is correlated to firm specific characteristics and country specific characteristics; we build our first hypothesis:

H_{01}: Shariah compliant firms perform better during political instability

2.3 Literature on Elections and Stock Performance

Several studies investigated the effect of elections on stock returns and volatility. Elections are usually accompanied by uncertainty about future policies and laws adopted by new governments; causing a disturbance in the stock market.

Chien et.al (2014) applied an ordinary least square model to investigate the relationship between DJI returns as proxy of market returns and US presidential elections using data of 27 presidential elections. The study provided evidence that stock market returns are affected by elections; as movement in returns following elections period reflects investors' perception about the future of economy under the new ruling government. Hence, market returns will increase in case investors are optimism and confident in the new government and decreases incase investors are pessimistic about the changes to be implemented by the new ruling government.

Bouoiyour and Selmi (2017) applied an event study methodology to investigate the effect of political uncertainty associated with presidential elections on stock returns. The study concluded that different industries react differently to political uncertainty; depending

on the announced presidential campaign. Industries that are expected to benefit from new rules and changes in laws witnessed an increase in returns post-election announcement while industries expected to be negatively impacted by new rules and regulations witnessed a drop in returns.

Bialkowski et.al. (2006) investigated the effect of national elections on stock market volatility using data of 27 OECD countries. They applied a volatility event-study approach using a GARCH Model and concluded that index return variance elevates significantly in elections week due to uncertainty of election results changes that would occur in the business environment depending on the new ruling government.

Boutchkova et al. (2011) investigated the relationship between political stability and stock market volatility across different industries. A regression model was run using panel data, where the independent variable is the industry volatility. Several independent variables were used to control for political factors including ICRG index as proxy for political risk, autocracy level and dummy variable for national elections. The study proved that the effect of political instability varies across industries, as volatility of returns increases for more politically sensitive industries in comparison to other industries. Politically sensitive industries include trade dependent and labor-intensive industries. Local political risks were reported to affect industries that are labor intensive and trade dependent due to risk associated with new stricter labor laws. Nevertheless, industries with international trade exposures are affected by political risks in countries of trading partners due to raised concerns about changes in macroeconomics policies by newly elected governments.

Goodell and Bodey (2012) investigated the changes in Price to earnings (P/E) ratios during six US presidential election cycles; providing evidence that P/E ratios decrease as results of elections becomes more predictable. This is due to decrease in volatility and in uncertainty about future growth and risk.

Goodell and Vähämaa (2013) investigated the effect of US presidential elections on implied volatility of S&P 500 index options; using VIX implied volatility index. A linear regression model was applied to investigate how market perception about the winner of elections will affect volatility; using the change in market prices of Iowa Electronic Markets (IEMs) over five election periods as proxy for market opinion. IEMs are presidential future contracts; with the payoff based on the election outcome. The study showed evidence that a strong positive relationship exists between implied volatility and market expectations about whether the expected winner will result in macroeconomic policy changes.

Based on above literature, national elections are accompanied by uncertainty, which affects performance of all firms' and stock market. However, different industries react differently depending on the nature of each industry and how investors interpret the effect of new laws and regulations on different business sectors.

We build our second hypothesis:

H_{02}: National elections affect performance of shariah complaint and non- shariah complaint firms

Chapter III

3. Data and Research Methodology

This chapter discusses data used and research methodology applied to investigate the effect of political instability on firms' performance. This study uses panel data of 12 developed and 6 developing countries from 2010-2017[2] to investigate the effect of political instability on firms' performance. Section 3.1 discusses the data used and sources of data. Section 3.2 includes summary statistics of the data used. Finally, Section 3.3 explains the methodology used to identify Shariah complaint firms, the model implemented and chosen variables.

3.1 Data

Financial performance: financial performance is measured by two variables; Tobin's Q (Total market value of firm divided by total book value of firm) and Adjusted market returns (Calculated as the return of a given company minus the relevant index return representing a given market.). The two variables are obtained from DataStream.

Political instability: The study uses the political index of The International Country Risk Guide (ICRG) by PRS group as a measurement of political stability[3]. This political index is used by previous literature [4] as proxy of political instability; where a risk rating of a country is determined based on 12 risk components. A country score is collected out of 100 points (maximum 100 and minimum 0) based on the total score received in the twelve components; below table explains the 12 components and the fixed weight of each:

[2] Twelve emerged countries (Netherlands, Australia, France, Canada, United Kingdom, Italy, Ireland, USA, Spain, Sweden, Hong Kong, Singapore) and six emerging countries (Brazil, Chile, Colombia, Russia, Greece, Mexico)

[3] The ICRG is a researcher data set released by the political risk services group, comprising of 22 variables that rate political, financial and economic risks for 146 countries, a separate risk rating index is available for each of the three categories. This paper uses the annual averages political risk rating dataset available on PRS website as proxy of political risk.

[4] See previous work of Boutchkova et al. (2011) , Vortelinos and Saha (2016) and Sun and Liu (2018)

Component	Component Points (max.)
Government Stability	12
Socioeconomic Conditions	12
Investment Profile	12
Internal Conflict	12
External Conflict	12
Corruption	6
Military in Politics	6
Religious Tensions	6
Law and Order	6
Ethnic Tensions	6
Democratic Accountability	6
Bureaucracy Quality	4

Table (1): ICRG Political index components, Source: PRS International Country Risk Guide

Several control variables are used including firms' specific variables and country level variables; obtained from DataStream. Country-level variables include GDP, inflation rate and interest rate as proxy for macroeconomic conditions. Those variables are chosen based on previous literature conducted to investigate the effect of political instability on performance including the work of Vortelinos and Saha (2016); Beaulieu et al. (2005) and Hassan and Girard (2011). Firms' specific variables include size, asset growth, dividend payout and earning per share as proxy for firm financial characteristics. Table (2) below explains how control variables are calculated:

Control Variable	Definition
Size	Natural logarithm of total assets is use as proxy for size
Asset growth	Represents asset growth rate in comparison to previous year; calculated as (current year's total assets / last year's total assets - 1) * 100
EPS	Earning per share; represents how much the company makes for each share of its stocks; calculated as (net income of the company - dividend on preferred stocks) / weighted average number of shares outstanding
Dividend payout	Calculated as dividends per share / earnings per share * 100
GDP	Gross Domestic Product is the total production of goods and service across a country within any given year.
Inflation	The consumer price index (CPI) as a proxy for inflation

Table (2): Control variables

3.2 Summary statistics

3.2.1 Descriptive statistics

Table (3)

Descriptive Statistics (2010-2017)

	Mean	Median	Maximum	Minimum	St.Dev.	No.of Obs
Log Tobin's Q	0.233310	0.219232	2.000000	-4.045714	0.460895	47111
Adjusted returns	0.020420	-0.028717	3.508341	-1.644039	0.496262	47111
Political Stability Variable						
ICRG	79.96100	81.41667	88.58333	55.75000	6.191272	47111
Firm Specific Variables						
Size	5.109126	5.191525	10.26781	-0.080748	1.314030	47111
EPS	-0.265570	0.028000	450.4000	-1234.459	24.71168	47111
Dividend payout	17.71449	0.000000	100.0000	0.000000	25.76655	47111
Asset Growth	16.95316	4.860000	994.4200	-99.39000	71.65494	47111
Country Level Variables						
GDP	2.377640	2.400000	25.10000	-9.200000	1.801430	47111
Inflation	2.159901	1.900000	15.50000	-1.700000	1.662902	47111
Interest rate	5.162410	4.200000	52.10000	1.300000	5.764616	47111

Source: Author's calculations

Table (3) shows the descriptive statistics for the sample. It shows the mean, median, maximum, minimum, standard deviation and number of observation. The mean for log Tobin's Q is 0.233 with a maximum of 2 and minimum of -4.04 and a standard deviation of 0.46. The average for adjusted returns is 0.02 with a maximum of 3.5 and a minimum of -1.6 and a standard deviation of 0.49. ICRG has mean of 79.96 with a maximum of 88.5 and a

minimum of 55.75 and a standard deviation of 6.19. The mean for size is 5.1 with a maximum of 10.2 and minimum of -0.08. EPS has mean of -0.2 with a maximum of 450.4 and a minimum of -1234.4. Dividend payout has a mean of 17.7 with a maximum of 100 and minimum of zero. The mean for asset growth is 16.9 with a maximum of 994.4 and a minimum of -99.3. For GDP the mean is 2.3 with a maximum of 25.1 and a minimum of -9.2. Inflation has a mean of 2.15 with a maximum of 15.5 and a minimum of -1.7. The mean for interest rates 5.16 with a maximum of 52.1 and a minimum of 1.3.

3.2.2 Correlation Matrix

Table 4 shows the correlation matrix for the sample. There is a positive correlation between adjusted returns and log Tobin's Q, GDP, inflation, size, EPS, dividend payout and asset growth; while there is a negative correlation between adjusted returns and ICRG and interest rates. There is a positive correlation between log of Tobin's Q and ICRG, GDP, EPS, Dividend payout and asset growth. While there is a negative correlation between log of Tobin's Q and inflation, interest rates and size. There is a positive correlation between ICRG and GDP and asset growth. While there is a negative correlation between ICRG and inflation, interest rates, size, EPS and dividend payout. There is a positive correlation between GDP and size, dividend payout and asset growth. While there is a negative correlation between GDP and inflation, interest rates and EPS. There is a positive correlation between Inflation and interest rates, size, EPS, dividend payout and asset growth. There is a positive correlation between Interest rates and size and dividend payout. While there is a negative correlation between interest rates and EPS and asset growth. There is a positive correlation between size and EPS and dividend payout. While there is a negative correlation between size and asset growth. There is a positive correlation between EPS and dividend payout and asset growth. There is a negative correlation between dividend payout and asset growth.

3.2.3 Multicollinearity test

The variance inflation factor (VIF) test was conducted to check for presence of multicollinearity between the x-variables (Shariah, ICRG, GDP, Inflation, Interest rate, Size, Asset growth, Dividend payout and EPS). As per test results reported in **Appendix (1),** the reported magnitude of multicollinearity is within the tolerance level of VIF below 5. Thus, indicating absence of multicollineratiy between the x-variables chosen to run the regression model.

Table (4): Correlation matrix

Corr.	Adjusted returns	Log (Tobin's Q)	ICRG	GDP	Inflation	Interest rate	Size	EPS	Dividend Payout	Asset growth
Adjusted returns	1.000000									
Log (Tobin's Q)	0.251994	1.000000								
ICRG	-0.014290	0.136547	1.000000							
GDP	0.113795	0.008621	0.286125	1.000000						
Inflation	0.036709	-0.114096	-0.428119	-0.007465	1.000000					
Interest rate	-0.003090	-0.087472	-0.464830	-0.097606	0.511500	1.000000				
Size	0.056314	-0.087280	-0.221600	0.024501	0.111312	0.115250	1.000000			
EPS	0.050386	0.007595	-0.034205	-0.008208	0.001561	-0.006812	0.057732	1000000		
Dividend Payout	0.098316	0.088510	-0.098852	0.039090	0.044258	0.082466	0.305217	0.050264	1000000	
Asset growth	0.170820	0.129851	0.056237	0.037097	0.005814	-0.011306	-0.050551	0.001597	-0.061659	1.000000

Source: Author's calculations

3.3 Research Methodology

3.3.1 Shariah compliance screening methodology

This study applies S&P shariah screening methodology on panel data of the selected 18 countries. According to S&P methodology, shariah complaint firms exclude several business sectors including: gambling, tobacco, alcohol, weapons, pork, casinos and entertainment, gambling, pornography and financial sector (with the exception of Islamic banks); firms involved in those activities were identified as non-shariah firms.

The second step is to calculate leverage compliance and cash compliance; where shariah complaint firms must abide to below ratios:

Cash compliance

- Accounts Receivables / Market value of Equity (36-month average) < 49 %
- (Cash + Interest Bearing Securities) / Market value of Equity (36-month average) < 33%

Leverage compliance:

- Debt / Market Value of Equity (36-month average) < 33 %

Firms that passed the two screening criteria was labeled as shariah complaint using a dummy variable (Shariah complaint=1, non-shariah complaint=0)

3.3.2 Model

The study uses two multiple regression models to investigate the effect of political instability on firms' performance. The first model uses ICRG index as proxy of political instability and applies an ordinary least square model to panel data of 12 developed and 6 developing countries from 2010 to 2017.

The second model investigates how uncertainty associated with national elections affects firms' perform using US data from 2010-2018; where a dummy variable is used to identify election years (election year=1, non-election year = 0)

Fixed parameters for cross-section and period are used, which refers to a statistical model where the mean for each control variable is fixed rather than taking the means as a random sample from the population. We estimate the fixed estimator through running an Ordinary Least Squares regression in which we have a constant standard deviation for the control variables.

OLS Model 1: ICRG and firms' performance

$$\boldsymbol{Log(Tobin's\ Q)} = \beta_0 + \beta_1\, ICRG + \beta_2 Shariah\_dummy\ + \beta_3 Size + \beta_4 Asset\_\ growth\ + \beta_5\, EPS + \beta_6 Dividend\_payout + \beta_7\, GDP + \beta_8\, Inflation + \beta_9 Interest\_rate + Error$$

$$(\boldsymbol{Adjusted\ Market\ Returns}) = \beta_0 + \beta_1\, ICRG + \beta_2 Shariah\_dummy\ + \beta_3 Size + \beta_4 Asset\_growth + \beta_5\, EPS + \beta_6 Divided\_payout + \beta_7\, GDP + \beta_8\, Inflation + \beta_9 Interest\_rate + Error$$

OLS Model 2: Elections and Performance (based on US data)

$$\boldsymbol{Log(Tobin's\ Q)} = \beta_0 + \beta_1\, Elections\_dummy + \beta_2 Shariah\ \_\ dummy + \beta_3 Size + \beta_4 Asset\_growth + \beta_5\, EPS + \beta_6 Dividend\_payout + \beta_7\, GDP + \beta_8\, Inflation + Error$$

Chapter IV

4. Results

4.1 Results of OLS Model 1: ICRG and firms' performance

Regression results of the first model are presentenced in Table (5) below. The results provide evidence that financial performance as measured by (*Adjusted market returns*) and (*log Tobin's Q)* is positively affected by political stability (as measured by *ICRG*) and shariah compliance as measured by (*Shariah_ dummy*). Moreover, (*Cross Effect _ICRG _Shariah*) is reported to have a negative significant relationship with firm's performance, thus indicating that shariah complaint firms outperform non- shariah compliant during periods of political instability. This is aligned with previous work of Al-Khazali et al. (2014); Jawadi et al. (2014); Ho et al. (2014) who provided evidence that Shariah complaint firms perform better during periods of instability due to their operation in less volatile industries and reduced vulnerability to bankruptcy in case of political turmoil. Thus, we accept our first hypothesis that shariah compliant firms perform better during periods of uncertainty.

In terms of firm's specific control variables, (*Dividend_ payout)* and (*Asset_ growth*) are both reported to have a positive significant relationship with (*Adjusted market returns)* and (*log Tobin's Q);* implying that firms' investment in assets and dividend payout policy impact stock prices; and thus impacting stock returns and market perception of stock value. This is justified since one of the main ways for companies to attract investors is high dividends payout ratio, especially in bearish times when there is less growth opportunities for investment so there is less need to retain earnings. Consequently, high dividend payout ratio results in an increased demand on the stock of a company; thus driving its value upwards. Moreover, constant asset growth can be linked to an increase in operating assets; which is reflected in future growth opportunities. Consequently, promising future growth

would drive the market value of a company upwards, leading to a higher market-to-book value ratio (Tobin's Q).

A significant negative effect of *size* on *Adjusted market returns* and *log (Tobin's Q)* is reported which could be attributed to the fact that the smaller the size of the company; the more returns required by the market to invest in that company due to higher inherent risk. On the other hand, larger firms are more established and less risky; hence they incur lower required return by the market to invest in.

A significant positive relationship between (*GDP)* and (*Adjusted market returns)* was reported which could be attributed to the fact that higher GDP levels for a given country is associated with successful growing economies. Growing economies are characterized by a successful micro-economy on the collective level, which means high performing companies in the stock market. Hence, GDP growth and companies returns are positively correlated. This is in-line with the theory that the long-term GDP growth rate can be taken as a proxy for the long-term market growth. Moreover, referring to the demand side of the GDP equation, higher GDP indicates higher business spending or investments or government spending, which usually means more resources available to be invested in capital markets. Hence, capturing potential growth opportunities and high business growth; thus higher returns.

In terms of country specific macroeconomic control variables, *(Inflation)* and *(Interest_ rate)* were reported to a significant negative relationship with firm's performance. When inflation increases, costs and expenses of companies increase. However, companies cannot fully pass this increase to consumers resulting in smaller profit margins and less expansionary capital investments. Thus, companies are limited in capturing future growth opportunities, which negatively impact their market value.

Table (5)	Dependent Variable Measures of Financial Performance (1) Adjusted market returns	 (2) Log (Tobin's Q)
Constant	0.095975* (0.124350)	1.312007*** (0.066776)
Shariah_ dummy	0.168451** (0.089236)	0.228418*** (0.048854)
ICRG	0.002822** (0.001485)	0.003721*** (0.000740)
Cross Effect _ICRG _Shariah	-0.002137** (0.001102)	-0.001500** (0.000604)
Size	-0.066423*** (0.008075)	-0.284023*** (0.006192)
GDP	0.017992*** (0.001853)	0.010559*** (0.000901)
Dividend _ payout	0.000718*** (0.000177)	0.001024*** (9.41E-05)
Asset _growth	0.001178*** (3.14E-05)	0.000432*** (1.92E-05)
Inflation	-0.009301*** (0.002459)	-0.011727*** (0.001073)
EPS	2.95E-05 (8.71E-05)	8.47E-05 (6.93E-05)
Interest_ rate	-0.008865*** (0.001612)	-0.000944* (0.000889)
Observations	52178	48111
R-squared	0.361056	0.778362
Adjusted R-squared	0.210819	0.723677

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$\beta_0 + \beta_1\, ICRG + \beta_2 Shariah\_dummy + \beta_3 Size + \beta_4 Asset\_growth + \beta_5\, EPS + \beta_6 Dividend\_payout + \beta_7\, GDP + \beta_8\, Inflation + \beta_9\, Interest\_rate + \beta_{10} Cross\ Effect\_ICRG\_Shariah + Error$$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

4.2 Results of OLS Model 2: Elections and firms' performance

Results of the second regression model based on US data and political elections as a measure of political uncertainty are reported in Table (6) below. According to the results, financial performance as measured by (*Log Tobin's Q)* is positively affected by shariah compliance as measured by (*Shariah _dummy*); indicating that the US shariah - compliant firms are characterized by better performance. Moreover, the regression provides evidence that US national elections as measured by *(Elections _dummy)* has a significant negative effect on firms' performance. This is aligned with previous work of Chien et.al (2014); Sun and Liu (2018); Bialkowski et.al (2006); providing evidence that uncertainty surrounding elections negatively affects firms' performance due to ambiguity surrounding the new government and possible changes in the business environment.

Based on a second regression run reported in Table (7) below, performance of Shariah complaint firms is negatively affected by national elections in the US; where (*Cross Effect_ Elections_ Shariah*) is reported to be significantly negative. This implies that non-shariah firms perform better during the US national elections; which could be attributed to perception of investors about potential negative changes related to the shariah complaint business sectors in the US.

Based on our dataset, the US Shariah complaint firms are mostly associated with Healthcare, Technology and Industrial sectors[5]. Accordingly, regression is re-run three cross effect variables to investigate the effect of elections on healthcare, technology and industrial sectors. Results of the regression reported in Table (8) provide evidence that healthcare, technology and industrial sectors are significantly negatively affected by presidential

[5] Classification of sectors is based on DataStream classification, which classifies business sectors into main sectors: Basic materials, Consumer cyclical, Consumer non-cyclical, Energy, Healthcare, Industrial, Technology, Telecommunications and Utilities.

elections as measured by (*Cross Effect_ Elections_ Healthcare*), (*Cross Effect_ Elections _Technology*) and (*Cross Effect _Elections _Industrial*) respectively. This is in line with previous work of Bouoiyour and Selmi (2017); Boutchkova et al. (2011) who provide evidence that the effect of elections varies across industries; depending on whether a specific industry is expected to benefit from the agenda of the new president or otherwise.

As for the control variables, (*Dividend_ payout)* and (*Asset_ growth)* are reported to have a significant positive relationship with (*log Tobin's Q);* while (Size) and (inflation) are reported to have a significant negative effect *on (log Tobin's Q).* This is in line with results of the first model including the full dataset.

(GDP) is reported to have a negative significant relationship with firm's performance, which is different than the results obtained by the first model of the full dataset, which could be attributed to risk characteristics of US during presidential elections.

Table (6)	Dependent Variable Measures of Financial Performance (1) Log (Tobin's Q)
Constant	1.557634*** (0.073654)
Shariah_ dummy	0.034667*** (0.006600)
GDP	-0.022935*** (0.005633)
Inflation	-0.033295*** (0.003168)
Asset Growth	0.000446*** (5.07E-05)
Dividend Payout	0.001026*** (0.000214)
Size	-0.189529*** (0.012599)
Elections_ dummy	-0.012712** (0.006998)
Observations	12301
R-squared	0.762043
Adjusted R-squared	0.715590

(1) Parenthesis implies St. Error.
(2) *, **, *** indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$= \beta_0 + \beta_1\, Elections\_dummy + \beta_2 Shariah\_dummy + \beta_3 Size + \beta_4 Asset\_growth + \beta_5\, Dividend\_payout + \beta_6\, GDP + \beta_7 Inflation + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (7)	Dependent Variable Measures of Financial Performance (1) Log (Tobin's Q)
Constant	1.535898*** (0.072043)
Shariah_ dummy	0.043329*** (0.005549)
Asset Growth	0.000446*** (5.07E-05)
Size	-0.188056*** (0.012569)
Dividend Payout	0.001023*** (0.000214)
GDP	-0.020339*** (0.004924)
Inflation	-0.031940*** (0.003028)
Cross Effect_ Elections_ Shariah	-0.075313*** (0.016090)
Observations	12301
R-squared	0.762473
Adjusted R-squared	0.716103

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1\, Elections\_ dummy + \beta_2 Shariah\_ dummy + \beta_3 Size + \beta_4 Asset\_ growth + \beta_5\, Crosseffect\_elections\_shariah + \beta_6 Dividend\_payout + \beta_7\, GDP + \beta_8\, Inflation + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (8)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	1.562634*** (0.073014)
Inflation	-0.033192*** (0.003101)
Dividend_ payout	0.001019*** (0.000214)
Size	-0.190600*** (0.012606)
EPS	-0.000137 (0.000105)
GDP	-0.022460*** (0.005268)
Asset_ growth	0.000448*** (5.08E-05)
Shariah_ dummy	0.033870*** (0.006193)
Cross Effect_ Elections_ Healthcare	-0.025190** (0.013143)
Cross Effect_ Elections _ Industrial	-0.010231* (0.012670)
Cross Effect_ Elections _Technology	-0.025983** (0.012635)
Observations	12301
R-squared	0.762171
Adjusted R-squared	0.715659

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$= \beta_0 + \beta_1\, Elections\ \_dummy + \beta_2 Shariah\ \_dummy + \beta_3 Size + \beta_4 Asset\ \_\ growth + \beta_5\, EPS + \beta_6 Dividend\ \_payout\ + \beta_7\, GDP + \beta_8\, Inflation + \beta_9\, Cross\ effect\ \_\ Elections\ \_\ Healthcare + \beta_{10} Cross\ effect\_\ Elections\ \_Technology + \beta_{11} Cross\ effect\_\ Elections\ \_Industrial + Error$$

where the dependent variable used was log (Tobin's Q)

4.3 Sensitivity analysis

A sensitivity analysis was conducted for regression model 1. As per results reported in Table (9) to Table (17) in Appendix (2), the first run provided evidence that a significant positive relationship exist between (*Shariah_ dummy*) and the two dependent variables (*Log Tobin's Q and Adjusted market returns*), which is in line with the results of our regression. The regression was then re- run after adding ICRG variable, which confirmed the presence of significant positive relationship between political stability and firms' performance. Each of the control variables was added gradually and the regression was rerun. Results of the several runs conducted confirmed the presence of a negative significant relationship between *(Cross Effect_ ICRG_ Shariah)* and the two independent variables and a positive significant relationship between the control variables *(GDP, Asset growth* and *Dividend* _ payout) and the two dependent variables. Moreover, results confirmed the presence of a significant negative relationship between the two control variables (*Inflation* and *Interest_ rate*) and the two independent variables.

A second sensitivity analysis was conducted for the US model. Results reported in Table (18) to Table (24) in Appendix (3) confirm the presence of a significant negative relationship between elections and firms' performance and a significant negative relationship between (*Cross Effect_ elections_ shariah)* and firms' performance. Moreover, results of the runs confirms the presence of a significant positive relationship between two control variables (*Asset growth* and *Dividend* _ payout) and firms' performance and the presence of a significant negative relationship between three control variables *(Inflation, GDP*, Size) and firms' performance.

CHAPTER V

5. Conclusion

This thesis aims to shed the light on performance of Shariah firms versus non-Shariah firms and how it's affected by political uncertainty. Literature covering performance of shariah complaint equities and political risk is covered in depth in **Chapter I** of this thesis. Following previous studies, two measures of political uncertainty are chosen: the political index ICRG by PRS group and national elections period. The political index ICRG is used extensively in literature as a political risk rating. Moreover, national elections is considered a period of uncertainty due to its high impact on future of business environment; thus it allows for capturing the effect of uncertainty on firm's performance.

Data of listed Shariah and non-Shariah firms is collected from 18 countries during the period (2010-2018) to investigate how different political uncertainties affect performance. Two OLS regression models are run; where the first model includes the full panel dataset for the period 2010-2017 to investigate the effect of political stability as measured by ICRG index on firms' performance. The second model is run using a US dataset to investigate how national elections in the United States during the period 2010-2018 affected firms' performance.

Results of the first model and second model are discussed in **Chapter III**. The first model provides evidence that shariah compliance is positively related to firms' performance during periods of political instability. This could be attributed to their specific financial characteristics and their operation in less volatile industries. The second model provides evidence that shariah compliance is associated with better performance in the US; however shariah compliant firms are negatively affected by national elections. Firms' performance during election years is tied to expected changes in the business environment. Hence, performance of industries expected to benefit from the agenda of the newly elected president

is positively affected by elections, while industries expected to be penalized from new rules or regulations are negatively affected.

This thesis provides a better understanding of how Shariah compliance affects performance, specifically during periods of uncertainties, which allow investors interested in shariah complaint equities to manage investments efficiently and reduce risks.

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Appendix (1)

Variance Inflation Factor (VIF) Test:

Results of VIF test provide evidence that no multicollineratiy exist between any of the x-variables; as VIF was reported to be within the acceptable tolerance level (below 5) for all x-variables.

Variable	R- squared	VIF
Shariah_ dummy	0.033206	1.03434651
ICRG	0.361547	1.566286007
GDP	0.100889	1.112209727
Inflation	0.327666	1.487355987
Interest_ rate	0.353225	1.546132735
EPS	0.00458	1.004601073
Dividend payout	0.024909	1.025545308
Asset growth	0.005866	1.005900613

Appendix 2

Table (9)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.013123***	0.169348***
	(0.003548)	(0.001961)
Shariah_ dummy	0.038024***	0.126555***
	(0.005836)	(0.126555)
Observations	66894	61148

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation
$\beta_0 + \beta_1 Shariah\_dummy + Error$
where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (10)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.747242***	-0.404564***
	(0.094273)	(0.049823)
Shariah_ dummy	0.059857***	0.125387***
	(0.006422)	(0.003476)
ICRG	0.008760***	0.007158***
	(0.001172)	(0.000621)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation
$$\beta_0 + \beta_1 Shariah\_dummy + \beta_2 ICRG + Error$$
where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (11)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.798253***	-0.487567***
	(0.101069)	(0.053442)
Shariah_dummy	0.184112**	0.325857***
	(0.088992)	(0.046882)
ICRG	0.009399***	0.008200***
	(0.001258)	(0.000666)
Cross Effect_ ICRG_ Shariah	-0.001535 *	-0.002483***
	(0.001097)	(0.000579)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation
$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2 ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + Error$
where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (12)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.368190*** (0.110218)	-0.182923*** (0.056485)
Shariah_dummy	0.244901*** (0.083306)	0.286501*** (0.046806)
ICRG	0.003795*** (0.001389)	0.004017*** (0.000713)
Cross Effect_ ICRG_ Shariah	-0.003137 *** (0.001027)	-0.002063*** (0.000578)
GDP	0.023959*** (0.001675)	0.013973*** (0.000860)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$\beta_0 + +\beta_1 Shariah\_dummy \ + \beta_2\, ICRG \ + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + Error$$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (13)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.325148*** (0.110540)	-0.143825** (0.056730)
Shariah_dummy	0.237879*** (0.083298)	0.286840*** (0.046780)
ICRG	0.003637*** (0.001389)	0.003745*** (0.000713)
Cross Effect_ ICRG_ Shariah	-0.003063 *** (0.001027)	-0.002070*** (0.000578)
GDP	0.021410*** (0.001754)	0.013158*** (0.000867)
Inflation	-0.011215*** (0.002283)	-0.007116*** (0.001016)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2\, ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + \beta_5\, Inflation + Error$$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (14)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.200164** (0.112282)	-0.135502** (0.057183)
Shariah_ dummy	0.199894** (0.083486)	0.283274*** (0.046882)
ICRG	0.002678** (0.001397)	0.003703*** (0.000714)
Cross Effect_ ICRG_ Shariah	-0.002596 ** (0.001029)	-0.002026*** (0.000579)
GDP	0.019820*** (0.001771)	0.013006*** (0.000877)
Inflation	-0.009386*** (0.002301)	-0.006934*** (0.001029)
Interest_ rate	-0.009399*** (0.001500)	-0.000969* (0.000837)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2\, ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + \beta_5\, Inflation + \beta_6\ Interest\_rate + Error$$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (15)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.200164** (0.112282)	-0.135502** (0.057183)
Shariah_dummy	0.199894** (0.083486)	0.283274*** (0.046882)
ICRG	0.002678** (0.001397)	0.003703*** (0.000714)
Cross Effect_ ICRG_ Shariah	-0.002596 ** (0.001029)	-0.002026*** (0.000579)
GDP	0.019820*** (0.001771)	0.013006*** (0.000877)
Inflation	-0.009386*** (0.002301)	-0.006934*** (0.001029)
Interest_ rate	-0.009399*** (0.001500)	-0.000969* (0.000837)
Observations	59247	54146

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2\, ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + \beta_5\, Inflation + \beta_6\ Interest\_rate + Error$$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (16)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.160290*	-0.141961**
	(0.110547)	(0.057028)
Shariah_ dummy	0.187051**	0.288570***
	(0.082287)	(0.046816)
ICRG	0.001982*	0.003744***
	(0.001376)	(0.000712)
Cross Effect_ ICRG_ Shariah	-0.002276 **	-0.002064***
	(0.001014)	(0.000578)
GDP	0.018565***	0.012457***
	(0.001741)	(0.000875)
Inflation	-0.009647***	-0.007337***
	(0.002269)	(0.001027)
Interest_ rate	-0.009399***	-0.001108*
	(0.001472)	(0.000832)
Asset_ growth	0.001114***	0.000228***
	(2.82E-05)	(1.79E-05)
Observations	58178	53709

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation
$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2\, ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + \beta_5\, Inflation + \beta_6\ Interest\_rate + \beta_7\, Asset\_growth + Error$
where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Table (17)

	Dependent Variable	
	Measures of Financial Performance	
	(1) Adjusted market returns	(2) Log (Tobin's Q)
Constant	-0.191627* (0.119279)	-0.108333* (0.060767)
Shariah_ dummy	0.189301** (0.089332)	0.291484*** (0.050149)
ICRG	0.002307* (0.001486)	0.003260*** (0.000760)
Cross Effect_ ICRG_ Shariah	-0.002338 ** (0.001103)	-0.002112*** (0.000620)
GDP	0.018062*** (0.001857)	0.011809*** (0.000925)
Inflation	-0.008820*** (0.002462)	-0.008858*** (0.001100)
Interest_ rate	-0.009152*** (0.001615)	-0.001300* (0.000913)
Asset_ growth	0.001102*** (3.03E-05)	0.000243*** (1.93E-05)
Dividend_ payout	0.000667*** (0.000178)	0.000849*** (9.65E-05)
Observations	52362	48111

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following equation

$\beta_0 + +\beta_1 Shariah\_dummy + \beta_2\, ICRG + \beta_3 Cross\ Effect\_ICRG\_Shariah + \beta_4\, GDP + \beta_5\, Inflation + \beta_6\ Interest\_rate + \beta_7\, Asset\_growth + \beta_8 Dividend\_\ payout + Error$

where the dependent variables used were Adjusted Returns and Log (Tobin's Q) alternatively.

Appendix 3

Table (18)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	0.391144*** (0.002405)
Elections_ dummy	-0.012161** (0.005140)
Observations	13471

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1 \, Elections\_ dummy + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (19)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	0.391197*** (0.002404)
Elections_ dummy	-0.006845* (0.005388)
Cross Effect_ elections_ shariah	-0.054275*** (0.016562)
Observations	13471

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1 \, Elections\_dummy + \beta_2 \, Crosseffect\_elections\_shariah + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (20)

	Dependent Variable Measures of Financial Performance (1) Log (Tobin's Q)
Constant	0.362086*** (0.003213)
Shariah _ dummy	0.061741*** (0.005362)
Cross Effect_ elections_ shariah	-0.075213*** (0.015755)
Observations	13471

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1\, Shariah\_dummy + \beta_2\, Crosseffect\_elections\_shariah + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (21)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	0.398630*** (0.010533)
Shariah _ dummy	0.062987*** (0.005370)
Cross Effect_ elections_ shariah	-0.081320*** (0.015835)
GDP	-0.016262*** (0.004464)
Observations	13471

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + Cross\ Effect\_\ elections\_\ shariah + \beta_2\ Shariah\_dummy + \beta_3\ GDP + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (22)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	0.489414*** (0.013877)
Shariah _ dummy	0.057582*** (0.005375)
Cross Effect_ elections_ shariah	-0.085507*** (0.015773)
GDP	-0.032656*** (0.004738)
Inflation	-0.029145*** (0.002917)
Observations	13471

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1\, Cross\ Effect\_ elections\_ shariah + \beta_2\, Shariah\_dummy + \beta_3\ GDP + \beta_4\ Inflation + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (23)

	Dependent Variable
	Measures of Financial Performance
	(1) Log (Tobin's Q)
Constant	0.487516*** (0.013868)
Shariah _ dummy	0.057862*** (0.005368)
Cross Effect_ elections_ shariah	-0.084285*** (0.015756)
GDP	-0.032830*** (0.004732)
Inflation	-0.029575*** (0.002915)
Asset_ growth	0.000219*** (4.82E-05)
Observations	13468

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1\, Cross\ Effect\_elections\_shariah + \beta_2\, Shariah\_dummy + \beta_3\ GDP + \beta_4\ Inflation + \beta_5\ \ Asset\_growth + Error$$

where the dependent variable used was Log (Tobin's Q)

Table (24)

	Dependent Variable Measures of Financial Performance (1) Log (Tobin's Q)
Constant	1.556868*** (0.070074)
Shariah _ dummy	0.045062*** (0.005376)
Cross Effect_ elections_ shariah	-0.083588*** (0.015592)
GDP	-0.023935*** (0.004718)
Inflation	-0.030447*** (0.002885)
Asset_ growth	0.000393*** (4.90E-05)
Size	-0.189444*** (0.012174)
Observations	13468

(1) Parenthesis implies St. Error.
(2) *, **, *** Indicate statistical significance at the 10,5, 1% levels respectively

The above regression was conducted using the following

$$= \beta_0 + \beta_1\, Cross\ Effect\_elections\_shariah + \beta_2\, Shariah\_dummy + \beta_3\ GDP + \beta_4\ Inflation + \beta_5\ \ Asset\_growth + \beta_6\ \ Size + Error$$

where the dependent variable used was Log (Tobin's Q)