



THE EFFECT OF GLOBAL FINANCIAL CRISIS ON SAUDI STOCK EXCHANGE PERFORMANCE



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ABSTRACT

The global financial crisis has been caused as a result of bursting of a speculative bubble in the US market in 2008, percolated to the other countries in the world via commodity prices, trade flows and capital flows. The aim of this research is to explore the effect of global financial crisis on the financial performance by focusing on Saudi stock market and using data from January 2005 to January 2014. The global financial crisis was measured as a dummy variable and the Saudi stock performance was measured by the index return. Using the technique of t-test it was found that the global financial crisis has a significant effect on the Saudi stock exchange performance. This May recommend to put the spot lights on the importance of restoring confidence to the market by regulatory authorities through ensuring transparency and fair trading transactions and dealings in the stock exchange.

KEYWORDS: Global Financial Crisis, Stock Market Returns, Saudi Stock Exchange

1. INTRODUCTION

Stock markets play an important role to the real economy, and it can be considered as a leading economic confidence indicator which can point the trend of the real economy (Constantinescu, 2012). Nonetheless stock market history is peppered with events whose level of drama seems to defy explanation. They are striking enough to earn names of their own: The Great Crash of 1929, Tronics Boom and Go-Go years of the 1960s, The Nifty-Fifty bubble of the 1970s, Black Monday Crash of October 1987, the Dot.com bubble of the 1990s, 1997's East Asian financial crisis and the global financial crisis of 2008.

Equity market plays an important role in financial system. Ample evidence is available about positive impact of stock market developments on economic growth (Levine and Zervos 1996; Levine, 2002; Nieuwerburgh et al., 2006; Enisan and Olufisayo, 2009). History has shown that economic downturns, financial crises, political turmoil, and

other social factors have caused the stock markets around the world to be unstable and highly volatile for investors (Guiso, Sapienza, & Zingales, 2008). The sub-prime crisis in the U.S. in 2008 has caused the Dow Jones Index to decline by 54.9 % over a period of 2007 to 2009. Many other stock indices around the world were also adversely affected by the crisis. The recent Euro-crisis which started in late 2009 has also affected many stock markets, particularly in the European countries. The global financial crisis has started from the United States for the period of 2007 to 2009 which is considered the world's largest crisis after 1930s recession.

The global financial crisis (GFC) has been caused as a result of bursting of a speculative bubble in the US market in 2008, percolated to the other countries in the world via commodity prices, trade flows and capital flows. The effect of global financial crisis have affected countries differently which is based on their financial trade

association among the rest of the world. Similarly, the severe impact of the global financial crisis in 2008 on the performance of Saudi stock exchange might also be apparent. The Saudi Stock market is the biggest Arab financial markets (Capital Market Authority, 2014). The Saudi stock markets also ranked at the top in terms of the market development, as measured by market capitalization, compared to other Arab stock exchanges. To the author's knowledge, there is currently no study on the effect of global financial crisis on stock return in Saudi stock market. Thus, this study attempts to investigate the effect of global financial crisis on stock return in Saudi stock market.

The Saudi Stock Exchange is known as Tadawul has been opened to qualified domestic and foreign investors. The Saudi stock exchange is the biggest and most liquid in the entire Middle East and North Africa. In term of market capitalization, the Saudi stock exchange records a value of US\$590 billion. From a regional perspective, as at the end of 2013, the Saudi equity market also represents over 50% of the entire GCC equity market capitalization, and accounts for 75% of the value traded (Saudi Arabian Monetary Agency, 2014).

The aim of this study is to investigate the effect of global financial crisis on Saudi stock returns before and after the crisis period. The first section of this paper illustrates the relevant previous studies on issues pertaining to the global financial crisis and its impact on different global financial stock exchanges. The second section concentrates on the data, the econometric methodology as well as the results. Section four concludes the paper.

2. PREVIOUS RESEARCH

Lim, Brooks and Kim (2008) studied the effect of Asian financial crisis on eight Asian stock markets. They divided the crisis period into two periods namely, pre and post financial crisis periods. They found that efficiency of the Asian stock markets had been deteriorated of which Hong Kong stock market was the major victim of the crisis.

Olowe (2009) studied the severity of the global financial crisis on Nigerian stock market returns. The results of the study illustrated that stock returns in Nigerian stock market were free from the severity of the global financial crisis. On the contrary to Olowe's study, Adamu (2010) who explored the effect of the global financial crisis on the Nigerian stock exchange by classified the crisis period into two periods namely, pre and post financial crisis periods. This study empirically revealed that during the global financial crisis period, volatility in Nigerian stock market increased.

Naoui, Khemiri, and Liouane (2010) investigate the effect of the global financial crisis on stock prices of several emerging financial markets. Regression analysis was performed to examine the effects of global financial crisis on the stock markets. They have classified the emerging markets into three groups according to the degree of correlation. The results showed that the financial crisis has a negative effect on the developed stock market and the first and second group, the third group seems not to be affected by the global financial crisis.

Ravichandran and Maloain (2010) explored the effect of global financial crisis on six Gulf financial markets. They found that during recent financial crisis, all financial markets faced negative pressure but these markets become strengthened during post crisis period.

A study by Abdulle and Kassim (2012) who explored the effect of the global financial crisis on the Kuala Lumpur Stock exchange by analysing sectoral indices in the Kuala Lumpur stock exchange such as finance, manufacturing, property, industrial products and consumer products in the periods before and during the 2007 global financial crisis. Their study concentrates on effect of global financial crisis on stock return during the recent financial crisis by examining the integration with the American and Japanese Stock Exchanges. Based on the analysis, the results showed that during the period of the crisis there is a significant and negative effect of the global financial crisis on Malaysian stock returns.

Chihi, Selmi and Boujelbene (2012) examined the international transmission of the global financial crisis of the American stock market on the stock markets of developed countries. They classified the crisis periods into three periods namely are, the full period, the pre-crisis period, and the crisis period. The results indicated that there is a significant relationship between developed financial markets and stock return during the crisis period which that an indication to a clear evidence of crisis contagion.

Ali and Afzal (2012) investigated the effect of global financial crisis on stock return in India and Pakistan. The results showed that recent global financial crisis made mild negative impact on stock returns and enhanced volatility in Pakistani and Indian stock exchanges but this impact is stronger in Indian stock market.

Neaime (2012) studied the impact of global financial crisis on stock returns in several financial markets. Different models have been used to explore the effect of the crisis on stock returns, namely are GARCH, TAR and ARCH-M models. The sample consists of daily observations of the national indices of the US(S&P 500),

UK (FTSE 100), and France (CAC 40) and the 7 MENA major stock market indices of Egypt (EGX 30), Jordan (Amman Stock Exchange), Morocco (MADEX), Tunisia (Tunindex), Kuwait (Kuwait Stock Market Index), and the UAE's Dubai Financial Market General Index (DFMG) for the period January 1, 2007 – December 31, 2010. The results showed that most financial markets have been affected by the global financial crisis because the deregulated global and regional financial integration of markets with developed markets. However, Tunisia was less affected due to the establishment of appropriate mechanisms of foreign exchange reserves and strong fiscal stance.

The analyses of the literature review on the status of the effect of global financial crisis on stock returns are carried out by applying several proxies which provide a sufficient understanding of the context within which the issue studied and analysed. The review of past documented literature on the effect of global financial crisis on stock returns shows that there are inconsistency results in that effect. The aim of this study is to investigate the effect of global financial crisis on stock return in Saudi stock exchange.

3. HYPOTHESES

The aim of this study is to investigate the effect of global financial crisis on Saudi stock exchange performance. Therefore the following hypothesis is developed:

H_1 : There is a significant effect of global financial crisis on Saudi stock exchange performance.

4. RESEARCH METHOD

The database used in this study consists of daily stock returns of the Saudi stock index "TASI" collected from the stock exchange of Saudi (Tadaw) for the period January, 2005 to December 2014. The review of past documented literature on the effect of global financial crisis on stock returns shows that there are two periods of crisis. The crisis occurred due many American house-owners was not able to pay the repayments on their mortgages. The global financial crisis was measured as a dummy variable which is used in this particular study to differentiate the pre-global financial crisis period (represented as 0) and the post-global financial crisis period (represented as 1).

4.1 The Research Design:-

The main objective of this research is to explore the effect of global financial crisis on the financial performance of the listed companies in the Kingdom of Saudi Arabia. The dependent variable in this study is the stock returns, while the independent variable is the global financial crisis. Therefore the research design is as follow:

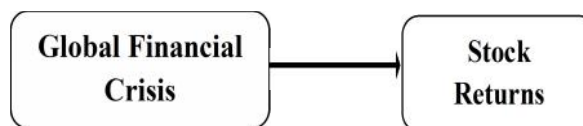


Figure 1: Research framework of the effect of global financial crisis on stock returns

4.2 The Model:-

This study assumes that the explosion of the global financial crisis occurred in January 2008. Starting from this month, this study split the total period into two sub-periods: from January 2005 to January 2008 (Before crisis period) and from February 2008 to December 2014 (After crisis period). The formula for calculating "t" is based on whether the two samples being compared have equal variances. The null and alternative hypotheses for this type of test are:

H_0 : $m_1 = m_2$; the means are equal

H_1 : $m_1 \neq m_2$; the means are different

The independent samples T-test is used in order to test the difference between expectations of two populations (μ_F and μ_{NF}). It is assumed that the separated samples namely pre-global financial crisis and post-global financial crisis come from two normally distributed populations. Furthermore, the independent samples T-test can also be employed for equal as well as different variances.

5. THE RESULTS

5.1 Descriptive Statistics of the Saudi Stock Returns Index:-

Table 1 provides the summary of the descriptive statistics for the market stock return before and after the global financial crisis in the Saudi market. The table shows the values of the minimum, maximum, mean, standard deviation, range, skewness, and kurtosis of the stock return in the Saudi financial market.

Table 1: Descriptive Statistics of the Saudi Stock Returns Index

	Global Financial Crisis		Statistic	Std. Error	
Stock return	Before	Mean	9.476712	.1937493	
		95% Confidence Interval for Mean	Lower Bound	9.083380	
			Upper Bound	9.870044	
		5% Trimmed Mean	9.299291		
		Median	9.318646		
		Variance	1.351		
		Std. Deviation	1.1624959		
		Minimum	8.8493		
		Maximum	16.0233		
		Range	7.1740		
		Interquartile Range	.5661		
Skewness	5.369	.393			
Kurtosis	30.860	.768			
Stock return	After	Mean	8.697417	.0222000	
		95% Confidence Interval for Mean	Lower Bound	8.651598	
			Upper Bound	8.743235	
		5% Trimmed Mean	8.706431		
		Median	8.740745		
		Variance	.012		
		Std. Deviation	.1109998		
		Minimum	8.3859		
		Maximum	8.8346		
		Range	.4488		
		Interquartile Range	.1057		
Skewness	-1.589-	.464			
Kurtosis	2.228	.902			

Whilst the above information is self-explainable, it is important to highlight some of the similarities and differences of the data when compared to the insight before and after the global financial crisis. For instance, the mean value for the Saudi stock returns index is 9.476712 before the global financial crisis occurred, the mean value for the Saudi stock returns index is 8.697417 after the global financial crisis occurred. This indicates that the average of the index stock return before the global

financial crisis was greater than the average return after the global financial crisis. Furthermore, the minimum and maximum values for the Saudi stock returns index before the global financial crisis occurred are 8.8493 and 16.0233 respectively. However, the value of the Saudi stock returns index after the global financial crisis occurred is 8.3859 and 8.8346 respectively. This indicates that the impact of global financial crisis on Saudi stock exchange performance is exist.

Table 2: Compare Means of the Effect of Global Financial Crisis on the Saudi Stock Returns Index

	Global Financial Crisis	N	Mean	Std. Deviation	Std. Error Mean
Saudi stock exchange performance	Before	36	9.476	1.1624959	.1937493
	After	25	8.697	.1109998	.0222000

Table 2 illustrates the mean for each of the two groups in the "Group Statistics" section before and after global financial crisis for the Saudi stock exchange performance. This result shows that the average weight for Saudi stock exchange performance is 9.476 before the existence of global financial crisis, versus 8.697 after the global financial crisis.

5.2 The Results of Hypotheses Testing:-

Table 3 illustrates the effect of global financial crisis on stock return in Saudi equity market. The results shows that P. Value of Levene's Test for Equality of Variances is greater than 0.05 which records a value of 0.06. It means that the variability in Saudi Stock

Performance is about the same before and after the global financial crisis. Therefore, the assumption of equal variances that is made when performing the two-sample t-test on these particular data is assumed. Thus, it is important to depend on the results listed in the row of "equal variances assumed".

Based on the results, it can be seen that the significance level of the 2-tailed T-test is 0.001. This indicates

that the difference between condition means is not likely due to chance. In other words, there is significant difference between Saudi Stock Exchange performance before and after the global crisis, and this performance is less after the global financial crisis which records an average value of 8.697. However, the performance of the Saudi stock exchange is better before the global financial crisis occurred which records a value of 9.47.

Table 3: The Impact of Global Financial Crisis on Saudi Stock Exchange Performance

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Saudi stock exchange performance	Equal variances assumed	3.44	.06	3.33	59	.001	.77929	.233828	.311406	1.24718
	Equal variances not assumed			3.99	35.9	.000	.77929	.195017	.383750	1.17484

5.2 Robustness Analysis:-

An additional analysis is conducted on the impact of global financial crisis on Saudi stock exchange performance. Table 4 shows that the results of Mann-Whitney U test confirm the results of T-test. It can be seen that the P. value of asymptotic significance 2-tailed test is 0.000. This indicates that there is significant

difference between mean ranks of Saudi stock performance at the 1% significance level. Furthermore, the mean ranks before and after the global financial crisis are 43.5 and 13 respectively. Therefore, the performance of Saudi Stock Exchange is deteriorated after the crisis.

Table 4: The Impact of Global Financial Crisis on Saudi Stock Exchange Performance

	GFC	N	Mean Rank	Sum of Ranks
Saudi stock exchange performance	Before	36	43.50	1566.00
	After	25	13.00	325.00
	Total	61		
Mann-Whitney U		0.000		
Wilcoxon W		325.0		
Z		-6.599		
Asymp. Sig. (2-tailed)		0.000		

6. SUMMARY AND CONCLUDING REMARKS

The theoretical framework for the study picking up on the relevant empirical evidence from previous studies. Based on the findings, the hypothesis that there is a significant impact of global financial crisis on Saudi stock exchange is accepted. The results of t-test indicated that there the Saudi stock exchange has been affected by the global financial crisis. To sum up, the performance of Saudi stock exchange is badly affected by the global financial crisis based on both the parametric T-test, and

the non-parametric Mann-Whitney U test. Therefore, it is important to restore confidence to the market by regulatory authorities through ensuring transparency and fair trading transactions and dealings in the stock exchange. This results is consistent with previous studies such as Kassim et al. (2011), Chihi et al. (2012), Ali and Afzal (2012) and Neaime (2012) who found that there is a significant effect of global financial crisis on equity stock markets in different countries.

It is suggested for future researches to use different statistical technique to explore the effect of global financial crisis on Saudi stock exchange and compare the results with other financial markets.



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