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## ***Abstract***

The financial crisis of 2007-2008 has caused huge loss to conventional banking and financing, however, the Islamic banking and financing are different with the conventional banking and financing. The difference like prohibition of interest may help Islamic banking and financing have a better experience during the financial crisis like the financial crisis of 2007-2008. Owing to it, this research is to find whether Islamic banking and financing have more chance than conventional banking and financing to survive from the financial crisis. Based on the data and related analysis, the financial market in US which are deeply influenced by financial crisis during the period of 2007-2008 still have a strong and positive impact on the Islamic financial market. And there is no difference between change in total return of Islamic market and change in total return of market in US during the financial crisis. However, based on data and analysis, prohibition of interest may help Islamic banking and financing survive from the financial crisis like the financial crisis of 2007-2008. And Islamic banking and financing have more profitability and less risk than the conventional banking and financing. Owing to it, Islamic banking and financing have more chance than conventional banking and financing to survive from the financial

***Key Word:*** financial crisis, Islamic banking and financing, conventional banking and financing

## **1. Introduction**

The financial crisis of 2007-2008 which start as a credit shock really do harm to the financial market in that period. It also bring mass loss to the financial market, especially the conventional banking and financing. For example, Lehman Brothers, one of the biggest financial institutions, goes bankrupt because of the influence of financial crisis (Bourkhis & Nabi, 2013). However, different with the experience of conventional banking and financing, Islamic banking and financing have better performance during the financial crisis (Shafique, Faheem, & Abdullah, 2012). And global financial crisis has less impact on Islamic banking and financing than conventional banking and financing (Shafique et al., 2012). Owing to it, it is meaningful to compare Islamic financial system and conventional financial system to find why Islamic banking and financing can have different experience with conventional financial system and explore whether Islamic banking and financing have more chance to survive from financial crisis like the crisis of 2007-2008. Then, to find answer the questions, I create five research questions including 1) what is the background of Islamic banking and finance, and how does it develop? 2) What are the main differences between conventional banking and financing and Islamic banking & financing? 3) Which characters of Islamic banking and finance institutions help themselves survive from 2007-2008 financial crisis? How to help? 4) Which weaknesses of Islamic banking and financing may harm the performance of Islamic banking and financing industry during the financial crisis? 5) Which problems of Islamic banking and financing may impede its development after the financial crisis? The reason why I create the fifth research question is that Islamic banking and financing are less profitable and efficient than conventional banking and

financing after financial crisis (Ouerghi, 2014). The answer of these research questions will help us to find which character of Islamic financial system help it survive from financial crisis. Then we can combine the advantages find in third questions and disadvantages find in fourth and fifth questions to check whether Islamic banking and financing is a good way for investors to survive from financial crisis like crisis of 2007-2008.

## **2. Literature review**

### 2.1 Development of Islamic banking and finance

#### 2.1.1 Islamic finance in ancient world

Islamic banking is refer to the banking system according to the Islamic law and is based on the principle of collaboration between the fund provider and fund user (Idowu, Capaldi, Fifka, Zu, & Schmidpeter, 2015). Since the earliest stages of Islamic history, the Muslims had ability to build a special system with no interest to mobilize fund for satisfying need of consumers and helping productive activities (Abedifar, Ebrahim, Molyneux, & Tarazi, 2015). According to Alharbi (2015), the origin of Islamic banking can be dated back to the age 1,400 years ago, and some Islamic books have showed that some banking activities which are similar to the modern banking activities have existed during the 1st century of Islam. However, the intellectual growth caused by Protestant Reformation made western banking dominant resulting in Islamic banking activities dormant (Abedifar et al., 2015).

### 2.1.2 Establishment of modern Islamic banking and finance

Unevaluable Islamic finance service make the development of business owned by Muslims constraint (Dana, 2011), so the growing need of fund force Islamic economists and bankers start to develop the alternative model of financial intermediation (Abedifar et al., 2015). In 1967, the first Islamic official bank, Nasser Social Bank, was established in Egypt to satisfy the growing demand (Çakmak, 2017). Then, in 1973, the Islamic Development Bank was founded by Organization of Islamic Countries to provide the fund and help the economic development of Islamic countries according to the Islamic law which is also named *Shari'ah*(Sands, 2003). Next, the first private Islamic bank, the Dubai Islamic Bank, was founded in 1975 as a joint stock company(Alharbi, 2015).

### 2.1.3 The expand of Islamic banking and finance

Since 1975, the number of Islamic banks increases rapidly. By the early of 2010s, Islamic banking has taken up a significant shares global financial market. And over 400 Islamic banks keeps operating in more than 50 countries (Idowu et al., 2015). In addition, more and more conventional banks establish Islamic windows to provide relative service(Alharbi, 2015).

## 2.2 Main differences between Islamic system and conventional system

The main difference between Islamic financial system and conventional financial system is that the Islamic banking and financing have to obey the rule of *Shariah* which is refer to the legal system complying with the code of conduct required by Holy Qur'an (Parashar, 2010). In addition, *Shariah* prohibits commercial transaction from being relative to *riba*

which is interest, *gharar* which is refer to uncertainty, deception and risk, *maisir* which is refer to gambling and non-halal activities(Ariss, 2010). Then, according to Cerović, Suljić Nikolaj, and Maradin (2017), except for prohibition of *riba*, risk-sharing is also one of the main difference between Islamic system and conventional system. The next part will introduce the difference specifically in the aspects of deposit and investment.

### 2.2.1 Deposit

Although Islamic banking and conventional banking has same performance that both providing high return to the depositors with long-term deposits, there is still a difference in the aspect of sharing risk and reward (Hanif, 2014). According to Hanif (2014), conventional banks undertake the total risk and can have total reward after serving the depositors at fixed rate. However, for Islamic banking, the both total risk and total reward are shared with depositors.

### 2.2.2 Financing and investments

Depository institutions collect saving from individuals and lend the pooled deposits to government, business and individuals for profits (Melicher & Norton, 2019). Conventional banks can lend fund for a fixed return. However, because of requirement of *no-riba* or no-interest, Islamic banks cannot get fixed return by charging interest (Hanif, 2014). Hanif (2014) has said that conventional banks can provide three kind of loans including short-term loan, overdrafts and long-term loan to clients who need it. However, the Islamic banking cannot lend these types of loan except for *Qarz e Hasna* which is refer to interest-free loan. For conventional banking, lending money and get it back with interest is its

fundamental function, Islamic fundamental function is participating in partnership business (Ariff, 1988). Then, in general, Islamic banking and financing are not allowed to trade in financial risk products like derivative products (Beck, Demirgüç-Kunt, & Merrouche, 2010).

### 2.3 Why can Islamic banking and finance help it survive from financial crisis?

#### 2.3.1 The causes of financial crisis of 2007-2008

According to Derbel, Bouraoui, and Dammak (2011), the cash of subprime mortgages in 2006 start the development of financial crisis which is revealed in 2007. In addition, the Bank of International Settlement said that excessive and flip lending by banks may cause crisis (Dewi & Ferdian, 2009). Except for it, according to the paper of Jickling (2009), there many causes of financial crisis of 2007-2008. The causes of financial crisis includes housing bubble, global imbalances, securitization, rating agency, failed risk management system and so on (Jickling, 2009). In addition, according to the summary of crisis provided by Mishkin (1997), there are there cause of crisis including 1) insufficient market discipline in the financial system due to the lack of profit and loss sharing, 2) the size of derivative keeping expanding, 3) the concept that if size of company is big, it will not be failed.

#### 2.3.2 How Islamic banking and financing survive form financial crisis

Many studies have showed some factors can enable Islamic banking to respond more flexibly to the financial crisis (Ouerghi, 2014). Different with the conventional banking based on interest, principle of profit and loss sharing is basis of Islamic banking and financing and make them more stable than conventional system which is based on

interest (Ouerghi, 2014). The principle of profit and loss sharing is based on the concepts of *mudaraba* which means profit-sharing and *musharaka* which means joint venture. Because of these concepts, the borrowers can share profit and loss with banks, and then the banks can also share profit and loss with depositors resulting in Islamic banking can do much better than conventional banking in the aspect of absorbing external shocks(Trabelsi, 2011). The operation of Islamic banking and financing is based on Sharia principles which prohibit Islamic banking financing from selling debt. Owing to it, Islamic banks do not spend money on the financial products related to debt selling, like mortgage back securities, which are the main reasons why financial crisis happen (Chapra, 2011; Ouerghi, 2014). Except for it, as M. M. Hasan and Dridi (2010) said, Islamic banking and finance can stimulate the growth of economic, and it is less possible to produce the risk like bubble which can help them survive from financial crisis.

## 2.4 Weakness of Islamic banking and financing may harm it during the financial crisis

### 2.4.1 Weaknesses or problems of Islamic banking and financing

According to the paper of Hassoune (2002), Islamic banking and financing do not do well in the aspect of concentration risk, liquidity and operational efficiency. Then, Imam and Kpodar (2016) have said that it is difficult to manage risk because of some reasons like the prohibition of using derivatives and other financial products. In addition, lack of economic of scale and lack of liquid instrument are also harm the development of Islamic banking and financing(Imam & Kpodar, 2016).

### 2.4.2 Relationship between weakness of Islamic financial system and financial crisis

The literatures reviewed do not directly mentioned how the weakness influence the performance of Islamic banking and financing during the financial crisis, but some paper directly showed the challenges highlighted by financial crisis. So, the rest of this part will shows the weakness which influence the performance of Islamic banking and financing through introducing the challenges which are areas where Islamic banking and financing do not do well. One of the challenges is that tools and infrastructure for liquid risk management in many jurisdictions are not incomplete resulting in the liquid risk may increasing (M. M. Hasan & Dridi, 2010). Then the lack of unified accounting and regulatory standards is key challenges for Islamic banking and financing during the financial crisis (M. M. Hasan & Dridi, 2010). In addition, M. M. Hasan and Dridi (2010) point out that lack of specialists of Islamic financial system and incomplete or untested legal framework are also challenges for Islamic banking and financing during financial crisis.

## 2.5 How the problems of Islamic banking and financing influencing their development after financial crisis

According to the study of Ouerghi (2014), the Islamic banking and financing is more profitable than conventional financial system during financial crisis, but less profitable than conventional banking and financing after financial crisis. Except for it, Ouerghi (2014) also said that Islamic banking and financing are less financial stable than conventional banking and financing, but large Islamic banks have better performance than large conventional banks. In addition, Elnahass, Izzeldin, and Abdelsalam (2014) have said that the limited investments options caused by prohibition of interest are the constraints for Islamic banking system. As Z. Hasan (2014) said, Islamic banking and financing serves real

economy. Owing to it, when the crisis was transmitted to real economy in 2009, the profitability of Islamic banking and financing declined (Ouerghi, 2014).

### **3. Methodology and data**

#### 3.1 Dataset

##### 3.1.1 Discussion and Explanation of the Dataset

To test whether the financial market in the US has an impact on the Islamic financial market during the financial crisis, I choose two index including SPX Index and DJIM Index. SPX index which is S&P 500 index represents the benchmark of the market in the United States (Tillinghast, 2017), and DJIM Index which is Dow Jones Islamic Market Index measures the investable equity screened for Shariah compliance in the world (Omar, Abduh, & Sukmana, 2013). Then, to check whether there is a difference between a change in the total return of the Islamic market and a change in the total return of the market in the US during the financial crisis, I choose DJIMT Index which is Dow Jones Islamic Market World Total Return Index and NDDUUS Index which is MSCI USA Net Total Return USD Index. Next, to check the influence of interest rate, I choose SPX index and FEDL01 Index which is the US Federal Fund Effective Rate which can represent the interest in US. Furthermore, to compare the profitability and risk of Islamic banking and financing with conventional banking and financing, I choose return on asset ratio and debt-asset ratio. According to Ghebreorgis and Atewebhran (2016), the return on assets can measure profitability, and the debt-asset ratio can be used to measure risk.

### 3.1.2 Discussion of Sample

While comparing the profitability and risk of Islamic banking and financing with the conventional banking and financing, the sample includes the return on asset ratio and debt-asset ratio of ten Islamic banks and ten conventional banks during the financial crisis of 2007-2008. The Islamic banks include Al Rajhi Bank, Abu Dhabi Islamic Bank, Dubai Islamic Bank, Qatar Islamic Bank, Kuwait Finance House, Al Baraka Banking Group, Qatar International Islamic Bank, Bank Al-Jazira, Al Salam Bank-Bahrain, and United Bank Ltd/Pakistan. And the conventional banks include JPMorgan Chase, Wells Fargo, Bank of America, PNC Financial Services Group, Citigroup, Bank of New York Mellon, Toronto-Dominion Bank, Capital One Financial Corp, Banco Santander, and Deutsche Bank. While testing whether the financial market in the US has an impact on the Islamic financial market during the financial crisis, the sample of SPX Index and DJIM Index includes the data of these indexes from 2007-2008. Then, while testing whether there is a difference between a change in the total return of the Islamic market and a change in the total return of the market in the US during the financial crisis, the sample of both Dow Jones Islamic Market World Total Return Index and MSCI USA Net Total Return USD Index includes the data of these indexes from 2007 to 2008. Next, while testing the influence of interest rate, the sample of SPX index and US Federal Fund Effective Rate includes the data of these indexes from 2007 and 2008.

## 3.2 Methodology

### 3.2.1 Discussion and Explanation of the Methodology

This research is belong to the descriptive, quantitative, and empirical research based on data. I use regression between SPX Index and the DJIM Index to test whether the financial market in the US has an impact on the Islamic financial market during the financial crisis. Then, I use a z-test: two samples for means to test whether there is a difference between a change in the total return of the Islamic market and a change in the total return of the market in the US during the financial crisis. Because the interest is forbidden in Islamic banking and financing, I cannot directly know how prohibition of interest can help Islamic banking and financing survive from the financial crisis like the financial crisis of 2007-2008. Owing to it, in order to test whether prohibition of interest is one of the reasons why Islamic banking and financing can survive from the financial crisis, I choose to test whether the interest rate in the US has an impact on the financial market in the US during the financial crisis. If the outcome said that the interest has impact, especially the negative impact, on the market in United States, it means that the prohibition of interest can be the reason why Islamic banking and financing can survive from the financial crisis. Owing to it, the SPX index which represent the performance of market in US is the dependent variable of this linear regression model, and the US Federal Fund Effective Rate which represent the interest in US is the independent variable of this linear regression model. Furthermore, I choose to use z-test: two samples for means to analyze the return on assets ratio and debt-asset ratio of these Islamic banks and conventional banks. And I can use z-test to find the difference between the Islamic

banking and financing with conventional banking and financing in the aspect of return on asset ratio which can represent the profitability and the debt-asset ratio which can represent the risk.

### 3.2.2 Hypothesis

3.2.2.1. Ho 1: SPX index has no impact on DJIM index during financial crisis.

3.2.2.2. Ho 2: There is no difference between change in total return of Islamic market and change in total return of market in US during the financial crisis.

3.2.2.3. Ho 3: Interest rate has no impact on SPX index during the financial crisis

3.2.2.4. Ho 4: There is no difference between the return on asset of Islamic banking and financing with the return on asset of conventional banking and financing.

3.2.2.5. Ho5: There is no difference between the debt-asset ratio of Islamic banking and financing with the debt-asset ratio of conventional banking and financing.

### 3.2.3 Models

The first and third hypothesis use the same simple linear regression models. And the this simple linear regression models is

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

For the first hypothesis, the performance of DJIM Index during the financial crisis is the dependent variable, and the performance of SPX index during the financial crisis is the independent variable.

For the third hypothesis, the performance of SPX Index during the financial crisis is the dependent variable, and the performance of interest rate is the independent variable.

#### ***4. Analysis and Findings***

##### **4.1 First null hypothesis**

According to the Appendix A- Regression for first Hypothesis, the null hypothesis is SPX index has no impact on DJIM index during financial crisis, and the P – value of null hypothesis is too close to 0 and small than 0.05. Then, the null hypothesis that SPX index has no impact on DJIM index during financial crisis should be rejected. Owing to it, this analysis can provide a conclusion that SPX Index has an impact on the DJIM Index during the financial crisis. Because SPX index which is S&P 500 index represents market in the United States, and the DJIM Index can represents Islamic financial market, I can get the conclusion that the market in United States which is deeply influenced by financial crisis has an impact on Islamic financial market.

According to the Appendix B – Correlation for first hypothesis, the correlation between SPX Index and DJIM Index is 0.865860869 which is larger than 0.7. Owing to it, SPX index which represent the market in US has a strong positive relationship with the DJIM Index which represents Islamic financial market during the financial crisis. So, I can get a conclusion that market in United States which is deeply influenced by financial crisis has a positive and strong impact on Islamic financial market.

#### 4.2 Second null hypothesis

For the second hypothesis, the null hypothesis is that there is no difference between change in total return of Islamic market and change in total return of market in US during the financial crisis. I use the data of Dow Jones Islamic Market World Total Return Index and MSCI USA Net Total Return USD Index to calculate the change. Then, I use the change for doing a z-test: two samples for means to test null hypothesis. According to the Appendix C – z-test for second hypothesis, the p – value of two – tail is 0.87517527 which is more than 0.05 resulting in that the null hypothesis cannot be rejected. Owing to it, there is no difference between change in total return of Islamic market and change in total return of market in US during the financial crisis.

#### 4.3 Third null hypothesis

For third hypothesis, the null hypothesis is that interest rate has no impact on SPX Index which represents the market in US during the financial crisis. Then, I use data of US Federal Fund Effective Rate which can represent the interest rate and SPX Index to do a regression and get conclusions. According to the Appendix D – Regression for third hypothesis, the P – value is 0.00345137 which is less than 0.05. Owing to it, I can get the conclusion that the null hypothesis should be rejected. Therefore, the interest rate has an impact on performance of market in US during the financial crisis.

Then, according to the Appendix E – Correlation for third hypothesis, the correlation between US Federal Fund Effective Rate and SPX index is -0.130679399 which is less than 0. Owing to it, interest has weak but negative relationship with performance of market in

US during the financial crisis. Therefore, interest has negative impact on the performance of market in US. And the interest is forbidden in Islamic banking and financing, so prohibition of interest may help Islamic banking and financing survive from the financial crisis like the financial crisis of 2007-2008.

#### 4.4. Fourth null hypothesis

The null hypothesis is that there is no difference between the return on asset of Islamic banking and financing with the return on asset of conventional banking and financing, so I choose to do a z-test: two samples for means to test null hypothesis. According to the Appendix F – z-test for fourth hypothesis, the p – value of two – tail is 0 which is less than 0.05. Owing to it, I can get the answer that the null hypothesis that there is no difference between the return on asset of Islamic banking and financing with the return on asset of conventional banking and financing should be rejected. Then, by comparing mean of Islamic return on asset ratio and conventional return on asset ratio, I find that the mean of return on asset of Islamic banking and financing is more than the mean of return on asset of conventional banking and financing. Therefore, I can get the conclusion that Islamic banking and financing has more profitability than conventional banking and financing.

#### 4.5 Fifth null hypothesis

Because the null hypothesis is that there is no difference between the debt-asset ratio of Islamic banking and financing with the debt-asset ratio of conventional banking and financing, I still choose to use z-test: two samples for means to test null hypothesis.

According to the Appendix G – z-test for fifth hypothesis, the p – value of two – tail is much less than 0.05. Owing to it, I can get the answer that the null hypothesis that there is no difference between the debt-asset ratio of Islamic banking and financing with debt-asset ratio of conventional banking and financing should be rejected. Then, by comparing the Islamic debt-asset ratio and conventional debt-asset ratio, I find that the mean of debt-asset ratio of Islamic banking and financing is less than the mean of the debt-asset ratio of conventional banking and financing. Therefore, I can get a conclusion that Islamic banking and financing has less risk than conventional banking and financing.

## ***5. Conclusion***

Islamic banking and financing are different form the conventional banking and financing. During the financial crisis, the conventional banking and financing suffered a lot of loss. Owing to it, it is meaningful to explore whether Islamic banking and financing can have different experience during financial crisis and have more chance to survive from the financial crisis. This research use variety of indexes and some ratios like return on asset which can represent the profitability and debt-asset ratio which can represent the risk in order to evaluate whether Islamic banking and financing have more chance to survive from the financial crisis like crisis of 2007-2008. Then, the data and analysis said that the financial market in US which influenced by financial crisis still has strong positive impact on Islamic banking and financing during the financial crisis. And there is no difference between change in total return of Islamic market and change in total return of market in US during the financial crisis. Owing to it, Islamic banking and financing are still influenced by financial crisis of 2007-2008. However, based on the negative influence of interest on

the financial market in US, prohibition of interest may help Islamic banking and financing which forbid interest survive from the financial crisis. Finally, according to the comparison of Islamic banking and financing with conventional banking and financing in the aspect of profitability and risk, Islamic banking and financing has more return on asset which can represent the profitability than conventional banking and financing during the financial crisis. Except for it, Islamic banking and financing also have less debt-asset ratio which can represent risk than the conventional banking and financing during the financial crisis. Owing to it, Islamic banking and financing have more chance than conventional banking and financing to survive from the financial crisis like the financial crisis of 2007-2008.

## ***6. Limitation***

One of the limitations is that I cannot find the data of some Islamic banks like some Islamic banks in Iran. Except for it, it is better to add more data of more Islamic banks and conventional banks. And some big and famous Islamic banks are too new to find the data of 2007-2008. Then, the literature review has mentioned that the real economy may influence the performance of Islamic banking and financing. However, it is real hard to find an index to represent the performance of real economy during the financial crisis resulting in this research do not analysis the influence caused by real economy on the performance of real economy. Except for the influence of real economy on the performance of Islamic banking and financing, there are still other factors, like incomplete or untested legal framework, may do harm to the performance of Islamic banking and

financing during the financial crisis. However, I still do not find any kind of data or index to represent these factors for analyzing these factors. In addition, because the number of data is too big, I cannot attach the data of these hypothesis on this paper.

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## APPENDIX

### *Appendix A- Regression for first Hypothesis*

SUMMARY OUTPUT									
<i>Regression Statistics</i>									
Multiple R	0.865860869								
R Square	0.749715044								
Adjusted R Square	0.749215474								
Standard Error	0.007924634								
Observations	503								
<i>ANOVA</i>									
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>				
Regression	1	0.094244849	0.094244849	1500.718896	8.3555E-153				
Residual	501	0.031462711	6.27998E-05						
Total	502	0.12570756							
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Intercept	-5.85216E-05	0.000353568	-0.16551731	0.868603593	-0.00075318	0.000636137	-0.00075318	0.000636137	
X Variable	0.697712728	0.018010553	38.7391068	0.00000000000000000000000000000000	0.662327209	0.733098247	0.662327209	0.733098247	

### *Appendix B – Correlation for first hypothesis*

	<i>Column 1</i>	<i>Column 2</i>
<i>Column 1</i>	1	
<i>Column 2</i>	0.865860869	1

**Appendix C – z-test for second hypothesis**

z-Test: Two Sample for Means		
	<i>Variable 1</i>	<i>Variable 2</i>
Mean	-0.0004486	-0.000621269
Known Variance	0.00024446	0.000375487
Observations	513	513
Hypothesized Mean Difference	0	
z	0.15708828	
P(Z<=z) one-tail	0.43758764	
z Critical one-tail	1.64485363	
P(Z<=z) two-tail	0.87517527	
z Critical two-tail	1.95996398	

**Appendix D – Regression for third hypothesis**

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple F	0.130679399							
R Square	0.017077105							
Adjusted R Square	0.015099393							
Standard Error	0.019572736							
Observations	499							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	0.003307915	0.003307915	8.634778371	0.00345137			
Residual	497	0.190396724	0.000383092					
Total	498	0.193704639						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.000745291	0.000876294	-0.850503185	0.39545494	-0.002466989	0.000976407	-0.002466989	0.000976407
X Variable	-0.024243967	0.008250459	-2.93849934	0.00345137	-0.040454044	-0.00803389	-0.040454044	-0.00803389

**Appendix E – Correlation for third hypothesis**

	<i>Column 1</i>	<i>Column 2</i>
Column 1	1	
Column 2	-0.130679399	1

**Appendix F – z-test for fourth hypothesis**

z-Test: Two Sample for Means		
	<i>Islamic Return on Asset</i>	<i>Conventional Return on Asset</i>
Mean	4.107537179	0.959125316
Known Variance	5.725191634	0.502491372
Observations	78	79
Hypothesized Mean Difference	0	
z	11.14801358	
P(Z<=z) one-tail	0	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0	
z Critical two-tail	1.959963985	

**Appendix G – z-test for fifth hypothesis**

z-Test: Two Sample for Means		
	<i>Islamic Total Debt/Total Assets</i>	<i>Conventional Total Debt/Total Assets</i>
Mean	12.440765	29.06539114
Known Variance	202.6196602	157.1358349
Observations	80	79
Hypothesized Mean Difference	0	
z	-7.818003829	
P(Z<=z) one-tail	2.66454E-15	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.000000000000053290705	
z Critical two-tail	1.959963985	