Islamic Banking versus Conventional Banking, During the Global Financial Crisis: Bahrain

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Abstract

Banks are the most influential sector in the economy with the ability to affect a country's growth. Once the global financial crisis hit, many corporations as well as banks are affected. The research objective is to study the performance of both Islamic and Conventional banking when crisis happen. Several performance indicators are used to evaluate performance with the help of the Statistical Package for the Social Sciences (SPSS) version 20.0 software to analyze the quantitative data collected from annual reports of selected banks stretching from year 2005 to 2013 in Bahrain. For the outcome, Islamic banking may perform better than conventional banking during the crisis, but in the long run the result is reversed due to conventional banking size of business.

Keywords: Islamic banking, Conventional banking, Bahrain, Global financial crisis.

1. Introduction

The recent world financial crisis that happened in 2007 other than in 1997 was one of the worst the world had encountered ever since the Great Depression during the 30s. Due to this, many organizations around the globe received the aftermath. In the point of economist, there are several reasons behind these incidents. Overflowing of foreign currency into the country, this incident happen in United States where huge inflow of money from Asian country especially China. Loan’s are easily given out to people that could not actually afford to purchase properties. As banks wanted to maintain their liquidity, they repackaged the loan and sold it to investors whom do not fully understand the pros and cons of this investment. Once the borrower failed to repay the loan, they lose their properties and investors faced the consequences. (Yale Global, 2010)

Conventional banking has long existed in the past which provides financial product complied with interest rates. In addition, the Islamic banking system was first introduced in the 60s in Egypt by Ahmad Al Najjar as the chief founder of this system. In the 70s, Organization of Islamic Countries established the first Islamic bank by the name of Islamic Development Bank in Saudi Arabia which they provide Islamic business model compliance with the Shariah law. After the Organization of Islamic Countries had taken the first step, many other Islamic countries begin to introduce the Islamic banking system. In Bahrain there are numerous conventional banks that open its window for Islamic finance product such as HSBC, Standard Chartered bank, Gulf International Bank BSC (GIB) and several more.

Both conventional banking and Islamic banking serve to provide financial product such as deposits and lending to their customers, but there are distinctive differences between these two banking system. In conventional banking, money is known to be a commodity other than been a medium of exchange and store of value. Hence, it will likely be sold at much higher price than its face value or even rented out. Adversely, Islamic banking does not define money as commodity instead as a medium of exchange and store of value, so it can’t gain profit like conventional banking does. In conventional banking, the interest rate charges on capital based on time value, whereas Islamic banking earn through trade of goods or fees from providing services. For conventional banking, interest rate is still charged even in a situation when an organization suffers losses by using the bank's funds. Whereas for Islamic banking, if these situation happen the bank will share its losses which is called Murabahah in Islamic term or commonly known as profit and loss sharing. Moreover, the act of conventional banking that defines money as a commodity is one of the many causes of the increasing rate of inflation. While, Islamic banking do not define money as a commodity their investment always link to real sector of the economic system through trades. Hence, their money is closely links to real assets that devotes in the economic growth. (Maldives Islamic Bank, 2011)

In a nutshell, Islamic banking do not speculates its money to obtain better profits rather, all its funding are back
with real assets which do not lead to increasing of inflation rates in the economy (Siddiqi, 2000). In other words, Islamic banking do not focus on own interest but rather on the interest of mankind. There are many indicators that able to assess the performance of both type of banking during or before financial crisis happen. The most prominent performance indicators are profitability, operation efficiency, liquidity and business growth of both banks in a longitudinal research time zone which stretch from year 2006 to 2013. Along the global financial crisis, either small or big businesses will be greatly affected negatively.

2. Research Objective
This research aims to study the after effect of global financial crisis on both Islamic banking and conventional banking.

3. Research Question
Does Islamic banking by the global financial crisis affect?
Does Conventional banking by the global financial crisis affect?
Are there any differences between conventional banking and Islamic banking performance during the global financial crisis.

4. Significance of Study:
Investors or customers main interest is always sought for better returns and stability from the banks especially in the midst of global financial crisis. Hence, a superior alternative banking system is needed to ease the investor's concern over their investment.
Additionally, researchers had claimed that Islamic banking is a preferred alternative banking solution over the conventional banking.

5. Literature review
There are a great number of studies that measures the performance of these banking system especially during the financial crisis. Most researchers tend to use performance indicator such as profitability, operational efficiency, liquidity and business growth to measure banks performance. Particularly, these performance indicators are to be used to gauge the banks situation during the financial crisis due to its reliability and straightforwardness.

Islamic Banking and Conventional Banking Comparison
Numerous conventional bank supply Islamic products to their customers due to the increasing demand for instance savings and current account, loan as well as unit trust (Hamim, Naziruddin and Syed, 2006). Mohamad, Hassan, & Bader (2008) mentioned that the positive growth of bank's performance are due to the increasing confidence level of Muslims and Non-Muslims towards Islamic products provided by banks especially loan financing under Islamic law gained large acceptance. Under the Islamic influence, the Islamic loan financing main characteristic are sharing of profit mechanism which means zero interest and payment is fixed for the whole tenure period. Therefore customers will not be burden by interest rate fluctuation, additionally social justice are provided (Wilson, 2009). On the other hand, interest rates fluctuation is common in conventional banks financial product, in a situation if interest rate escalate the installment payment and loan size increase as well as prolong of tenure which results to injustice and oppressive to the society (Rima, 2007; Khurshid, 2000).

There are countries that have implemented the Islamic banking concept for instance the Middle East and South East Asia country's which is the United Arab Emirates(UAE), Kuwait, Jordon, Iran, Iraq, Turkey, Indonesia and Malaysia. Nevertheless, consumers are free to choose either conventional banking or Islamic banking in these countries (Abdus and Kabir, 2008). According to Maher and Jemma (2010) the performance of Islamic banking is mere average base on measurement of profit, equity, efficiency and liquidity during the financial crisis. Furthermore, Beck, Kunt, and Merrouche (2010) research evaluate Islamic bank performance with the used of financial ration and compared with conventional banks throughout the Islamic countries.

Likewise, Islamic banking in Islamic countries particularly in the Middle East and South East Asia such as Jordon, Iran, Turkey, Indonesia and Malaysia are well accepted still the bank efficiency are dependent on the bank's size and location. For example, the efficiency of Islamic banking is much better in Middle East countries than in Africa whereas oppositely conventional banking is much better in Africa than in Middle East countries (Loghod, 2009). Moreover, Loghod (2009) stated that internal factor such as management and operation as well as external factor which is the competitors and economy plays a vital role in bank's efficiency. In reality there are impact for both banking system along the Financial crisis but due to the interest rate that was fixed by the
Islamic banks, demand for Islamic banking service hiked compared to conventional banking (Donsyah, 2003; Beck, Kunt, and Merrouche, 2010).

According to Hussein (2004) by utilizing Fourier-flexible functional model, his findings displayed that during 1985 to 2001 banks in Bahrain is seems to be stable in profit efficiency similar with Organization for Economic Co-operation and Development (OECD) banks. Generally, in term of profit efficiency Islamic banks and conventional banks do have a major difference although most of the Islamic banks are small in size. In comparison, Islamic bank outperform the conventional bank as they do not have much competitor which enable them to reduce cost of input and higher mark-up can be charged.

Samad (2004) mentioned that, the results of analysis from the financial ratio within the period of 10 years from 1991 to 2001 both banking system in Bahrain do seem to have no differences on profitability and liquidity. On the other hand, he found that conventional banks do have high credit risk compared to Islamic bank which shows its credit performance is an exceptional. Rashwan (2010) stated that Islamic banks outdo conventional banks in year 2007, while conventional banks do much better than Islamic banks in year 2009 based on Multivariate analysis of variance (MANOVA) technique analysis on the bank's financial secondary data in the year 2007, 2008 and 2009.

According to Saleh and Zeitun (2006) although there is a financial crisis happen globally, Islamic bank can still survive which signify that many consumer accepted Islamic financial products, above all Islamic product have well outdo conventional banking systems in Muslim countries. Although the financial crisis did lay an impacted on both Islamic and conventional banks but still the one that operated greater efficiency are the Islamic banks. The explanation of this implication is that conventional banking is not as liquefied as Islamic banking. This prove in term of debt equity Islamic banking system is much less risky than conventional banks (Iqbal, 2001; Hassan and Kayed, 2009). Said (2012) discover that Islamic banks shows an increased of efficiency during financial crisis based on Data Envelopment Analysis (DEA) on the end-of-year balance sheet and income statement of 49 Islamic banks in Middle East Counties and Non Middle East Counties in year 2006 to 2009.

Based on Valli and Mokhtarul (2004) results, it is concluded that pure Islamic banks do not performed well compared to Islamic banking schemes. In the financial market, Islamic banking has widened their influences specifically financing or loans. However, credit risks have posed greater exposure as Islamic banks increases it financing and loans to consumers. Due to this, tight monitoring on these risks is necessary. The reason behind the sustainability and superior performance of Islamic Banks is due to its executive's positive attitude and value toward research as well as in the area of Murabahah commodity. Ariss (2007) mentioned that as regards of financing and loan Islamic banking is becoming a potential market player.

Iman and Kpodar (2010) stated that the number of customers are growing in Islamic banking especially the non-Muslims due to the principles. Just that conventional banking don't as to ease the burden of the customers. Norman, Almsafir, and Smadi (2013) mentioned that during the non-crisis and after crisis period, conventional unit trust funds operates better but on the other hand during the financial crisis shariah-based unit trust funds does better performance. Conventional funds are riskier compared to shariah-based funds for having higher standard deviation. Plus, conventional funds have higher beta value in contrast to shariah-based funds from the outcome of systematic risk analysis, thus the changes in the market do not affect much on shariah-based fund compared to conventional funds.

Yaumidin (2007) found that a positive performance is shown from Islamic banking with its constant growth and stability. Abbas and Noureddine (2010) debated that impact of financial crisis do not affect much on Islamic banking as there are huge number of customer going for Islamic finance during the crisis. In addition, Abduh, Omar, and Duasa (2011) state that it is statically proven Islamic banking is positively fine during the financial crisis by the utilized of Co-integration test and vector error correction model to analyze data from year 2000 to 2010 reveal the potent relationship between macroeconomic variables and crisis accompany with Islamic banking total deposit.

The growth of Islamic banking industry is firm, as its financial product much more humanizing and convincing than conventional bank, furthermore it is expected that it will bring a strong impact in the industry with providing effective and creative banking solution. (Hassan and Lewis, 2007)
Performance Indicator

Profitability

In order to measure banks performance, profitability is an indicator that must be taken into account. Gross Profit ratios as well as Net Profit ratios are part of the profitability ratio to measure both Islamic bank and conventional bank performance. These profitability measurements are is used to measure both banks performance during the crisis. The result of the measurement shows that Islamic banks are doing better compared to conventional banks by both having a positive performances (Bader, Mohamad, Ariff, & Hassan 2008); (Samad, & Hassan 1999). Canbas, Cabuk, and Kilic (2005) stated that some banks went out of businesses or bankrupt, those which survive face a decreasing trend of profits based from the multivariate statistical analysis of financial structures. According to Smadi and Almsafir (2012) by reviewing several research paper on Islamic banking and conventional banking performance from year 1990 to 2010 they found that Islamic banking is performing better than conventional banking in term of the profitability and volume of lending fund.

Similarly, Almanaseer (2014) also concluded that through the analysis of data containing 24 Islamic banks from Bahrain, Kuwait, Qatar, Saudi Arabia and UAE from 2005 to 2012 the global financial crisis do not significantly affect the bank's profitability.

On the other hand, Islam, Alam and Hossain (2014) discovered that conventional banking is performing better than Islamic banking in term of profitability from the analysis of data comprised of annual report for the year 2009 to 2011 from the total of 15 banks in Bangladesh. Also, Ouerghi (2014) stated that conventional banks outperform Islamic banks in profitability during the crisis, but Islamic banks do have better profitability in the post crisis period according to the analysis of data comprising both 30 Islamic banks and 64 conventional banks in Bahrain, Kuwait, Qatar, Saudi Arabia, UAE and Malaysia from 2007 to 2010.

Operation efficiency

Operation efficiency is one of the many kinds of measurement that effectively shows the performance of both banking system. During the financial crisis, Yudistira (2004) found that conventional banks shows less efficiency in operations compared to Islamic banks. A sample of 18 bank’s were selected and an efficiency ratio had been used to calculate the efficiency level. With the used of constructed bank scope construct together with comparison of business orientation, efficiency and asset quality for both banking system, Beck, Kunt, and Merrouche (2010) also concluded that conventional bank is slightly weaker compared to Islamic bank. According to Haron and Ahmad (2008) customer who deposited in Islamic bank do not earn by interest rate but instead by profit sharing as there are not much different with the conventional bank's ways, it even gives more than what conventional banks gives.

Likewise, Almsafir and Alsmadi (2013) concluded that Islamic banking able to make equilibrium with macroeconomic variable faster compared to conventional banking. Similarly, Ouerghi (2014) mentioned that that Islamic banks efficiency is much superior to conventional banks during the crisis. But adversely, Beck, Kunt, & Merrouche (2012) concluded that based on the analysis on data comprising of both Islamic and conventional banks spanning from 1995 to 2009, Islamic banks do not have high level of efficiency compared to conventional banks.

Liquidity

The next indicator to measure the performance of both banking system is the liquidity. Liquidity shows how banks are able to freely turn their assets into moving cash. Cash inflow and outflows are the basic terms in liquidity. Ratio calculation and empirical analysis has been used by adopting data comprising of annual report of two Islamic bank, nine domestic banks and four foreign banks that grant Islamic financial service. Valli and Mokhtarul (2004) determined that Islamic banking has higher level of liquidity compared with conventional banking in the period of financial crisis. Additionally, Ouerghi (2014) mentioned that throughout both during and post crisis period, Islamic banks have better level of liquidity compared to conventional banks. But according to Almanaseer (2014), when Islamic bank's liquidity increased, the impact from the global financial crisis towards Islamic bank's performance will escalate as well.

Akhtar, Ali & Sadaqat (2011) stated that in Pakistan, conventional banks tend to consider more on projects with
long-term financing. Moreover, conventional bank have a much more superior performance in term of assets and return which translate better profitability and liquidity risk management than Islamic banks.

Business growth

Finally, identifying business growth trend is as important as the other indicator since it will help decide the banks sustainability and competitiveness. Both papers Rima (2009) as well as Kabir and Kayed (2009) investigates the competitiveness condition on a global level as well as the use of evaluating method for comparison along with the efficiency between Islamic and Conventional banks, which turns out to be the Islamic banks reviewed to have positive growth and business competitiveness. Findings reveals that the main reason behind the growth of Islamic banking was due to its feature of being interest free (Ariff, 1988).

Gait and Worthington (2007) stress that the Islamic bank operation is regulated accordance to the Islamic principle, which in other word Shariah principle. As being interest free, which is free from Riba. Marimuthu, et.al., (2010) stated that the avoidance of Riba is an imperative component in the Islamic finance. As Riba which is an a Arabic word translated from the commonly known term 'Interest rate' was exceptionally prohibited according to the Quran and Sunnah.

6. Methodology

The aim of this paper is to examine the performances of both Islamic banking and conventional banking operation during the financial crisis. Secondary data comprises of annual report from Bahrain Islamic bank representing Islamic banking system and Gulf International Bank representing commercial banking system in 2005 to 2013 are been used to gasp the bank's performance during and after the crisis. Hence, to put it into simple words: Conventional banking is doing better or Islamic banking is doing much better during the global financial crisis?

Based on the literature reviews, research objective and research question, as well as the hypotheses has been derived:

H1 : Islamic banking is superior in performance than conventional banking during the crisis.
H2 : Islamic banking outperform conventional banking in post crisis.

Statistical Package for the Social Sciences (SPSS) version 20.0 had been implemented to analyze the secondary data, plus adopting the use of diagram to clearly capture the trends and results of the analysis. Multiple Regression is used to determine which performance indicator best describe the bank's status. There are four indicators that possibly portray both banks performance which is profitability, operational efficiency, liquidity and business growth. Performance will be the dependent variable which represent by Return over asset (ROA). Whereas, profitability, operational efficiency, liquidity and business growth will be the dependent variable with respective representative of Net profit margin, Cost to income ratio, Operating cash flow ratio, and Asset growth.

Then the equation model for this paper is as below:

\[
IBp = \beta_0 + \beta_1 PIB + \beta_2 OIB + \beta_3 LIB + \beta_4 BIB + e
\]

\[
CBp = \beta_0 + \beta_1 PCB + \beta_2 OCB + \beta_3 LCB + \beta_4 BCB + e
\]

Where :

IBp = Islamic banking performance
PIB = Profitability
OIB = Operational efficiency
LIB = Liquidity
BIB = Business growth

CBp = Conventional banking performance
PCB = Profitability
OCB = Operational efficiency
LCB = Liquidity
BCB = Business growth

7. Empirical results

Pearson Correlation coefficient:

In order to identify the relationship between the variables for both regression model, Pearson correlation is to be used to identify the relationship in a more detailed manner quantitatively. From the table below, there are both positive and negative value representing these variable have negative relationship and positive relationship.

<table>
<thead>
<tr>
<th>Islamic banking</th>
<th>Performance</th>
<th>Operational efficiency</th>
<th>Business growth</th>
<th>Profitability</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>1</td>
<td>- .863**</td>
<td>- .735*</td>
<td>.530</td>
<td>-.118</td>
</tr>
<tr>
<td>Operational efficiency</td>
<td>- .863**</td>
<td>1</td>
<td>- .866**</td>
<td>-.783*</td>
<td>-.126</td>
</tr>
<tr>
<td>Business growth</td>
<td>.735*</td>
<td>- .866**</td>
<td>1</td>
<td>.857**</td>
<td>.138</td>
</tr>
<tr>
<td>Profitability</td>
<td>.530</td>
<td>-.783*</td>
<td>.857**</td>
<td>1</td>
<td>.068</td>
</tr>
<tr>
<td>Liquidity</td>
<td>-.118</td>
<td>-.126</td>
<td>.138</td>
<td>.068</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1.0
Commercial Banking

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Operational efficiency</th>
<th>Business growth</th>
<th>Profitability</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational efficiency</td>
<td>.072</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business growth</td>
<td>1.000**</td>
<td>.072</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Profitability</td>
<td>.164</td>
<td>.298</td>
<td>.164</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Liquidity</td>
<td>.066</td>
<td>.490</td>
<td>.066</td>
<td>.275</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1.1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Normality Distribution Test:

In the normality distribution testing, numerical data of Skewness and Kurtosis will be assessed to identify the variables normality. According to the normality distribution test, when Skewness and Kurtosis is between -1 and 1, the variables is known to be normally distributed. Alternatively, Razali and Wah (2011) stated that instead of solely identifying the variables normality by assessing Skewness and Kurtosis, Shapiro-Wilk can be used to assessed the normality test, if Shapiro-Wilk P-value is more than the alpha value which is 0.05, the variables is known to be normally distributed. As we can see from Table 2.0 and Table 2.1, both Islamic banking and commercial banking P-value is greater than alpha 0.05, hence conclude the variables is normally distributed.

Islamic banking

<table>
<thead>
<tr>
<th></th>
<th>Performance</th>
<th>Operational efficiency</th>
<th>Business growth</th>
<th>Profitability</th>
<th>Liquidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.042168</td>
<td>0.49538</td>
<td>0.167386</td>
<td>0.511558</td>
<td>0.04493</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>0.006473</td>
<td>0.09859</td>
<td>0.203951</td>
<td>0.125714</td>
<td>0.484645</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.566</td>
<td>-0.154</td>
<td>0.414</td>
<td>1.426</td>
<td>1.122</td>
</tr>
<tr>
<td>Std. Error of Skewness</td>
<td>0.717</td>
<td>0.717</td>
<td>0.717</td>
<td>0.717</td>
<td>0.717</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.7</td>
<td>-0.724</td>
<td>-1.04</td>
<td>3.157</td>
<td>2.996</td>
</tr>
<tr>
<td>Std. Error of Kurtosis</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.0352</td>
<td>0.338</td>
<td>-0.1032</td>
<td>0.360283</td>
<td>-0.638</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.0566</td>
<td>0.64</td>
<td>0.5097</td>
<td>0.795379</td>
<td>1.111</td>
</tr>
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</table>

Tests of Normality

<table>
<thead>
<tr>
<th>Kolmogorov-Smirnova</th>
<th>Shapiro-Wilk</th>
</tr>
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<tr>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Y</td>
<td>.272</td>
</tr>
<tr>
<td>O</td>
<td>.145</td>
</tr>
<tr>
<td>B</td>
<td>.198</td>
</tr>
<tr>
<td>P</td>
<td>.242</td>
</tr>
<tr>
<td>L</td>
<td>.253</td>
</tr>
</tbody>
</table>

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Table 2.0
Table 2.1

Multicollinearity analysis:
To test the validity of or collinearity between the variables, the Variance Inflation Factor (VIF) is one of the important indicators to test the multicollinearity. This multicollinearity test is important due to the fact if two or more variables diagnose with multicollinearity it will greatly affect the regression model. The tolerance level under the VIF testing stated that if VIF should fall below 10 which will indicate to be milder multicollinearity.

Islamic banking

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>243</td>
</tr>
<tr>
<td>B</td>
<td>165</td>
</tr>
<tr>
<td>P</td>
<td>256</td>
</tr>
<tr>
<td>L</td>
<td>970</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y
Commercial banking

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>O</td>
<td>731</td>
</tr>
<tr>
<td>B</td>
<td>972</td>
</tr>
<tr>
<td>P</td>
<td>870</td>
</tr>
<tr>
<td>L</td>
<td>742</td>
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</table>

*a. Dependent Variable: Y

Collinearity Diagnostics

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimension</th>
<th>Eigenvalue</th>
<th>Condition Index</th>
<th>Variance Proportions</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Constant)</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2.575</td>
<td>1.000</td>
<td>.00</td>
</tr>
<tr>
<td>2</td>
<td>1.162</td>
<td>1.489</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>3</td>
<td>.856</td>
<td>1.735</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>4</td>
<td>.401</td>
<td>2.535</td>
<td></td>
<td>.01</td>
</tr>
<tr>
<td>5</td>
<td>.007</td>
<td>18.646</td>
<td></td>
<td>99</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: Y

Table 3.1

Regression Analysis:

For independent variable and dependent variable in the model to be perfectly linear relationship, the standard value for R-square is to be as close as possible to 1. Whereas, if the R-square is 0, it will signifies that the variables do not have linear relationship. Based on the table below, the R-square for both model which is 0.884 and 1 indicates that variables from both model are perfectly distributed. The equation for the following model to calculate the R-square is known to be:

\[
\begin{align*}
IBp &= 0.088 - 0.03 PIB - 0.066 OIB - 0.03 LIB + 0.013 BIB + 0.016 \\
CBp &= -0.00000.8629 + 0.00000.1173 PCB + 0.0002124 OCB + 0.0002322 LCB + 1 BCB
\end{align*}
\]

Where:

- IBp = Islamic banking performance
- PIB = Profitability
- OIB = Operational efficiency
- LIB = Liquidity
- BIB = Business growth

- CBp = Conventional banking performance
- PCB = Profitability
- OCB = Operational efficiency
- LCB = Liquidity
- BCB = Business growth

Islamic banking

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.940a</td>
<td>.884</td>
<td>.768</td>
<td>.0031179</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), B, L, P, O

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Constant)</td>
<td>.088</td>
<td>.016</td>
<td>5.585</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>-.066</td>
<td>.023</td>
<td>-1.008</td>
</tr>
<tr>
<td>1</td>
<td>B</td>
<td>.013</td>
<td>.013</td>
<td>.395</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>-.030</td>
<td>.017</td>
<td>-1.723</td>
</tr>
<tr>
<td></td>
<td>L</td>
<td>-.003</td>
<td>.002</td>
<td>-1.509</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: Y

Table 4.0
### Commercial banking

#### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.000^a</td>
<td>1.000</td>
<td>1.000</td>
<td>.0000033</td>
</tr>
</tbody>
</table>

^a. Predictors: (Constant), L, B, P, O

#### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-8.629E-006</td>
<td>.000</td>
<td>-.964</td>
<td>390</td>
</tr>
<tr>
<td>O</td>
<td>2.124E-005</td>
<td>.000</td>
<td>1.059</td>
<td>350</td>
</tr>
<tr>
<td>B</td>
<td>1.000</td>
<td>.000</td>
<td>1.000</td>
<td>156352.983</td>
</tr>
<tr>
<td>P</td>
<td>1.173E-006</td>
<td>.000</td>
<td>.936</td>
<td>402</td>
</tr>
<tr>
<td>L</td>
<td>2.322E-005</td>
<td>.000</td>
<td>.254</td>
<td>812</td>
</tr>
</tbody>
</table>

^a. Dependent Variable: Y

Table 4.1

8. **Empirical result conclusion:**

In a nutshell, the equation model is perfectly linear relationship since the R-square for both Islamic banking and commercial banking equation model is very close to 1. Not to mention, variables used for computing the equation model is normally distributed since Shapiro-Wilk P-value is greater than alpha value of 0.05. Multicollinearity test shows that both the equation model do not have high multicollinearity issue which VIF is within the tolerance level, meaning to say the variables do not have inter-relationship since this problem can greatly affect the model outcome.

9. **Conclusion**

Banking industries is anticipated to be one of the most influential piece in the economic growth of an country or even the entire globe, as banks holds an exceptional large amount of funds which have the power to control economy state. Still, when global financial crisis happen many business including banks have face off the adverse effect of the crisis. Out of the many industries, the government hold much interest in banks when banks encounter this crisis, since the banks is by right must not be in serious trouble as it will further cause harm to the economy. For investor, the commercial banks is one of the common choice in investing their money for a better return. But due to the fact that the financial crisis able to affect the performance of banks and leads to less return to investor, investor begin to doubt investing in commercial banks rather they begin to look for a better and safer alternative, and this alternative is most likely Islamic banking.

Investor look for Islamic banking as an alternative since this banking industry is much safer and reliable, plus a better investment return from Islamic banking compared to commercial banking since Islamic banking do not practice "money as a commodity" as this practice is rather risky and easily affected or in other word been very volatile. Based on the analysis, commercial bank profitability perform badly during the global financial crisis while Islamic banking profitability performance maintain throughout the years even though in the crisis. Not to mention, during the crisis both Islamic and commercial banking business growth plus liquidity hinder as well, but commercial banking business growth is very much more affected compared to Islamic banking. But in term of operational efficiency, both bank efficiency towards their operational is very much alike during the crisis.

Hence, Islamic banking performance is very likely to outperform commercial banking in term of profitability, operational efficiency, business growth and liquidity during the global financial crisis . On the other hand, during the post crisis or in the long run, commercial banking clearly perform better than Islamic banking based on the analysis. Islamic banking is doing well during the crisis since all of their investment are mainly on tangible commodity, whereas commercial banking investment are not mainly on tangible commodity as they practice "money as commodity" which is very volatile. However, during the post-crisis or in the long run commercial banking perform better than Islamic banking since commercial banking investment practice easily amass large investment which in turn larger profitability. Therefore, to prevent and overcome challenges such as the crisis in the future, cooperation of managers and regulator is essential to formulate new policies and investment model to
strengthen both Islamic and commercial banking performance. Whereas, Islamic banking has huge potential for better growth in the future due to the fact many Islamic investor and non-Islamic investor begin to have an eye on the attractive Islamic banking investment model.

**Reference**


