Comparative Performance on Derivatives Usage between Islamic and Conventional Banks in Malaysia

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ABSTRACT--- *The action of derivative trading has accelerated in the world especially towards the financial and economic markets around the globe. Since the instruments of derivatives are increasingly used in most of the banks, investment activities have been altered due to the factors that led the scenario of Lehman Holding Inc. as well as the conditions that brought about the 2007 subprime crisis. The aim of this study is to assess the evaluation of the performance of four commercial banks and two other Islamic banks. The collected sample secondary data in this case about Derivatives is categorized into two sections that is from 2010 to 2018 and the other phase is from 2015 to 2018. The four commercial banks include Public Bank, Maybank, RHB and Hong Leong Bank whereas Islamic banks include Maybank Islamic and AmBank Islamic. Therefore, the secondary data on commercial and Islamic banks about the Total Derivative Assets (TDA), Total Liabilities (TL), Earnings Per Share (EPS), Total Net Income (TNI), Inflation Consumer Annual Prices (I), Total Deposits (TD) and GDP Annual Growth in percentage all from the financial statements from the specified banks.*

Keywords--- *Derivatives, Stock Market Crisis, Foreign Direct Investment, Capital Intensity, Investment Growth.*

I. INTRODUCTION

Derivatives are considered as various instruments of finance that can be derived from several prevailing assets. Therefore, the derivative value can emanate from the evaluation of the prices of assets as well as their value. By considering the level of advancement in technology and globalization in current situation, the trading of derivatives has been successfully in operation in both private and banking sector in more developed and less developed countries (Amadeo, 2020). The action of derivative trading has accelerated in the world especially towards the financial and economic markets around the globe. Since the instruments of derivatives are increasingly used in most of the banks, investment activities have been altered due to the factors that led the scenario of Lehman Holding Inc. as well as the conditions that brought about the 2007 subprime crisis. In addition, the stock market in China showed a decline in prices which was caused by the investors who were triggered to relieve their assets in relation to the exchange of cash in liquid form in order to own their contracts. More so, the china's emerging

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economy has made it to be a strong participant in financial markets performances in the entire world due to the volatility differences especially those economies from South East Asia more so Malaysia.

Most significant is that, studies suggest that there have been various difficulties in the relationships between the operations of banking sector and the adoption of derivatives (Amadeo, 2020). Therefore, this study addresses the issue of limited literature that is found with the usage of derivatives in order to evidence the effectiveness and efficiency operations of banking industry (Bondarenko, 2020). Most significantly, the aim of this study is to assess the evaluation of the performance of four commercial banks and two other Islamic banks. In Malaysia's context, the launched derivative at first was majorly for the biggest product in the country especially the Palm Crude Oil. It is evident that Malaysia is considered as one of the biggest exporter of palm crude oil around the globe. Furthermore, in 1980s Malaysia signed and launched the agreement with the Future Contract of Crude Palm Oil. With this contract, it has become the most trending future contract in the economy of Malaysia. However, the growth about the Crude Palm Oil has got some structural changes about the derivatives in the market of Malaysia. Most important is that, the system of trade futures was attributed by the system of Open Outcry. The derivative markets in Malaysia were encumbered to combine their derivatives into a single derivative commonly known as the 'Bursa Derivative Malaysia Berhad' due to the Asian Financial Crisis in late 1990s in Malaysia. Also, in 2008, the crude oil future that is new was majorly dominated by the United States which was established to the Malaysian derivative market. However, the new future of crude palm oil performance has not been good enough to the investors in the country compared to the crude palm oil future on the perspective Malaysia. Such incidence has portrayed the importance and significance of future crude palm oil in the country since there is existence of lack of substitutes and complement financial commodities about crude palm oil contract in the market derivatives. Therefore, from 2015, Malaysia utilizes more stock market from china that is influenced by the turbulence that has forced the usage of many cash to yield into difficult situation about financial market (Boot, 2014). Such situation has affected the trading and investment in financial markets especially the commercial banks and Islamic banks in the Malaysia's context in relation to other economies especially China.

II. LITERATURE REVIEW

Derivatives the signed contract always between more than one party for specifying conditions such as values about specified variables, and contractual party obligations in which the payments are officiated. Such assets in this case include total deposits, inflation, and growth domestic product among others. However, there exist several other assets such as interest rates, currencies and bonds, which create the marginal of effective evaluation of derivatives (Booth et al., 2017). The components of the financial institutions' structure of capital especially the total deposits and stock are taken as derivatives whereby the underlying assets are considered as the technical perspectives.

1) Total Derivative Asset

A study on the impact of derivatives markets on financial integration, risk and economic growth has been conducted and analysis has shown that derivative markets turned-out to be an asset that strongly influences the financial status of a country (Haiss & Sammer, 2015). They discovered that the positive contribution brought about by the financial sector towards economic development in economies with mature markets is not observed in the current data unlike that in past years. The total derivative asset involves the financial instruments especially the future options or contracts that can be got from other kinds of assets. In this particular context, total derivative asset can be categorized into two forms of exchange traded derivatives and derivatives about over the counter (Booth et al., 2017). The nature of the legality of such products is gauged into various ways especially trading ways. It is evident that other participants in the market are engaged in both derivatives. For instance, the market derivatives in the perspective of Europe have got the sentiment amount totaling to 660 trillion Euros.

2) Total Liabilities

Total liabilities refer to balance sheet that represents the total of the banks' long-term debt, miscellaneous expenses and current liabilities. Therefore, the total liabilities involve total amount that the financial institution is to clear or to pay (Farlex, 2020). Liabilities the financial institutions that are exposed to the risks of exchange rate found to use derivatives to hedge the premiums. This means that total liabilities and total derivative assets behave positively in returns to the market values (Giraldo-Prieto et al., 2017). It is being argued that managers of the bank give attention towards the measurements and evaluations of total liabilities among financial institutions. This is done because shortage of total liabilities, which leads to inability of meeting it's medium and short-term liabilities that in turn leads to financial distress (Obari, 2015). Besides, the risk of liquidity can be measured by using liquidity gap where it measures the difference between liabilities and assets in present and future time.

3) Earnings Per Share

Earnings per share is abbreviated as EPS that can be calculated as the financial institutions over the outstanding shares in its overall stock. The outcome from the estimations acts the figure for an indication of the profitability level of the company. It is observed that the more the earnings per share the company has, the higher the level of profitability is attained (Chen et al., 2019). A research study on profitability, earnings per share on stock return with size as moderation. The main objective of their study was to investigate on The influence of profitability and earnings per stock share on the returns of stock has been examined and the role of moderating variable in companies owned by the company in the Indonesia Stock Exchange between 2011 and 2016 become the focus of the study (Jasman, 2017). The findings showed that profitability has no any effect on the stock return well as earnings per share and size negatively had significant on stock return.

4) Total Deposits

A total deposit is referred to as a term that is always involved in the balance sheet in any financial institution. To the nonprofessional's language, a deposit depicts the situation of placing some money in the recognized bank financial entity. It is observed that the total deposits calculations from the perspective of the bank, several deposits are put into consideration that are summed up to estimate total deposits (Chen et al., 2019). According to (Boot, 2014), the total deposits involve the money that is placed into the financial banking institutions to be kept safe. Such deposits are directly transferred to the deposit accounts especially checking accounts, money markets accounts and savings account. In this case, the holder of the account has got the full right to withdraw funds that are deposited in relation to the terms and conditions that govern account agreement. The aggregate derivatives on both exchange rate and interest rates on total deposits found to be related positively. However, the total deposits reduce the financial institution's insolvency risks in the specified period of time. Also, the robust total deposits of the bank have shown a positive effect on the degree of derivative usage and the profitability level and during the post-crisis period, the total derivatives reduce the level of bank profitability level (Ghosh, 2017).

5) Total Net Income

Net income entails the amount of money that remains after the expenses in operation, taxes, preferred stock and interests are subtracted from the total revenue of the company. It is evident that net income changes from the company to company as well as from firm to firm. This is because net income is measured in terms of dollars which in turn changes with the size of the company. In this context, investors prefer to gauge the earnings of the company through price to earnings ratio. This helps the company to know how much it is paid for every dollar about the company's net income generation (Del Gatto et al., 2012). Financial statements among banks behave differently from various companies in which the investors evaluate. For instance, there exist no account receivables to evaluate whether met income rises of falls. Besides, there are various unique features of financial institutions statements that involve income statement and balance sheet can be laid out. In addition, investors who have got information on how companies have been argued to earn income and how to evaluate the attributors of revenue and bank statements (Chesney & Stromberg, 2019).

6) Inflation

In this context, inflation refers to the un conditional increase on prices for the goods and services. This means that one has to work hard in order to fulfill needs since the cost of living is hiked (Amadeo, 2020). A study on commodity derivatives Inflation and trading-opportunities and threats which examined Indian markets has opened new avenue for their traders and investors so that they could engage in commodity derivatives. Individual who wish to diversify their shares suggested to refer bonds and real estates, commodities act as the best providers of risk management (Geetha, 2013). Managers of money and investors prefer commodity derivatives to real commodities. The main objective of investors and traders is to directly buy real assets that create a better hedge against the risk of inflation. Inflation problems emanate especially when the unexpected inflation is experienced by the economy that does not depict the rise of incomes among the people (Del Gatto et al., 2011). In addition, if the income of the individuals does not change in relation to the prices of goods, the purchasing powers of the people is declined. This situation leads the economies to be stagnant in terms of economic growth and development. Most significant is that the inflation growth rate which is excessive wreaks havoc about the retirement savings since it reduces the bargaining power of money in that the investors and savers are squirreled out.

7) Growth Domestic Product

Growth domestic product refers to the final value of the total goods and services that are produced in the economy always for a stipulated period of time. The importance of derivatives market has been found in the development of China and Japan which is closely related to U. S and Japan. In this era, the relevance of both derivatives markets and financial market is known globally. This paper investigated on the relationship between economic development and derivatives market in all the four economies. The Granger-causality test was used in this study for vector error correlation model (VECM) to investigate the changing relationship for the data between 1998 to 2017 (Vo et al., 2019). The results showed that the derivatives market positively lead to economic development in the short run but it changes in the long run. However, for the case of China, the derivatives market had a negative influence on economic development in short run and negatively in the long run. The effect of growth domestic product growth has been argued on the profitability of the banks in China's context. In their study, they found out that cost efficiency affects positively the profitability of the bank. However, lower profitability level of the banks can cause by higher taxes that are paid by the financial institutions. Furthermore, there is a negative impact of GDP towards the bank profitability (Tan et al., 2017).

III. METHODOLOGY

The regression analysis is taken at the level of cross-section data where the ordinary least square estimations is attained. Secondary data has been extracted on the derivatives of two crisis period that is from 2015-2018 and 2010-2018. In this case, the dependent variable is total derivative assets whereas the independent variables are total deposits, GDP, inflation, earnings per share, total net income and total liabilities.

IV. RESULTS AND DISCUSSION

The regression analysis is taken at the level of cross-section data where the ordinary least square estimations is attained about the derivatives of two crisis period that is from 2015-2018 and 2010-2018. In this case, the dependent variable is total derivative assets whereas the independent variables are total deposits, GDP, Inflation, earnings per share, total net income and total liabilities.

Dependent Variable: TDA
Method: Panel Least Squares
Date: 11/06/19 Time: 10:50
Sample: 2010 2018
Periods included: 9
Cross-sections included: 6
Total panel (balanced) observations: 54

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TL	0.014536	0.002516	5.778467	0.0000
EPS	-171.4540	90.75028	-1.889295	0.0650
TNI	-0.766143	0.208100	-3.681616	0.0006
TD	0.005468	0.002691	2.031585	0.0479
I	1.003124	164.8581	0.006085	0.9952
GDP	-168.6958	171.9839	-0.980882	0.3317
C	250.0388	1021.982	0.244661	0.8078

R-squared	0.764805	Mean dependent var	1469.580
Adjusted R-squared	0.734780	S.D. dependent var	2023.707
S.E. of regression	1042.199	Akaike info criterion	16.85648
Sum squared resid	51050357	Schwarz criterion	17.11431
Log likelihood	-448.1248	Hannan-Quinn criter.	16.95591
F-statistic	25.47238	Durbin-Watson stat	0.572463
Prob(F-statistic)	0.000000		

Figure 1: Case I Regression analysis about the crisis period from 2010-2018

1) Interpretation for Case I

It is observed that when all the independent variables in the model are held constant, the total derivative assets will be 250.0388 units. However, when EPS, TNI, TD, Inflation and GDP are hold constant, a unit change in total liabilities increases the level of total derivative assets by 0.0145. Also, a unit change in EPS leaving other factors constant, leads to the reduction in total derivative assets by 171.450 units. Furthermore, in this phase of 2010-2018, a unit change in total deposits holding other factors constant leads to the increase of total derivative assets by 0.0055. in particular, inflation has got a positive relationship towards the level of TDA whereas GDP has got negative impact towards TDA due to its negative direction on the coefficient value. By interpreting the P-value, the criterion is that when the P-value is less than the level of significance (5%), the null hypothesis is rejected. In this case, total liabilities, total net income and total deposits have got lower P-values than the level of significance (0.05). This implies that total deposits, total net income and total liabilities are statistically significant. This implies that such variables consistently determine the level of total derivative assets. Besides, the Prob(F-statistic, 0.000) shows that the overall model in this phase is statistically significant. This shows that all the included variables have got role towards the total derivative assets. Furthermore, R-square in this case shows that there is a high variation of independent variables in bringing the impact on the dependent variable (total derivative assets).

Dependent Variable: TDA
Method: Panel Least Squares
Date: 11/06/19 Time: 10:59
Sample: 2015 2018
Periods included: 4
Cross-sections included: 6
Total panel (balanced) observations: 24

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TL	0.045793	0.006808	6.726838	0.0000
EPS	-306.7641	86.14611	-3.560975	0.0024
TNI	-0.834762	0.424150	-1.968081	0.0656
TD	-0.036227	0.014596	-2.481989	0.0238
I	198.2135	187.7728	1.055603	0.3059
GDP	-492.9200	333.7160	-1.477064	0.1579
C	2707.439	1440.145	1.879977	0.0774

R-squared	0.956171	Mean dependent var	2247.705
Adjusted R-squared	0.940702	S.D. dependent var	2601.423
S.E. of regression	633.4754	Akaike info criterion	15.97881
Sum squared resid	6821947.	Schwarz criterion	16.32241
Log likelihood	-184.7457	Hannan-Quinn criter.	16.06997
F-statistic	61.81226	Durbin-Watson stat	1.545551
Prob(F-statistic)	0.000000		

Figure 2: Case II Regression analysis about the crisis period from 2015-2018

2) Interpretation for Case II

It is evident from the regression model above that, when all the factors in the period of 2015-2018 are held constant, the total derivative assets are 2707.439 units. A unit change in total liabilities leaving other factors constant leads to the increase in TDA by 0.0458. However, a unit change in EPS, TNI, TD and GDP holding other factors constant, total derivative reduces by 306.764, 0.835, 0.036 and 492.920 respectively. This implies that total deposits, growth domestic product, total net income and earnings per share have got negative relationship with the total derivative assets. In this phase of 2015-2018, total liabilities, total deposits and earnings per share are statistically significant since their P-value are less than the level of significance (5%). Most significant is that the 2015-2018 phase has got more R-square value than that of 2010-2018. This implies that the independent variables included in the study in phase 2015-2018 have much impact on variation of total derivative assets.

V. CONCLUSION

In this perspective, the findings showed that growth domestic product in both phases of the period of crisis (2010-2018 and 2015-2018) had much impact towards the variation of total derivative assets. This situation helps both commercial and Islamic banks in the phases of crisis alters the hedging and speculating the total derivative assets which as well yields the exchange of balanced services that are officiated. The findings in this study at both levels of period crisis found out that earnings per share influences the derivatives of the banks more than any other independent variable.

This paper provides managers of all Islamic and commercial banks the views and knowing of determinants that may affect the effectiveness and efficiency of the bank in a specific period of time. The findings from this research show that the operation of 2015-2018 crisis period is affected by more other factors, while the 2010-2018 are particularly affected by only two variable factors that are price and labor of fixed assets. It is thus advantageous for bank managers to plan, implement and execute them to improve the efficiency of their banks in order to compete with famous commercial banks. This research has thus found out that commercial banks are more efficient in their operations compared to Islamic banks. Although this was so during the study period and it's not concluded that it is always that way. It is very important for senior bank managers, associates of banks and other stakeholders to know the factors that affect the efficiency and performance of Islamic banks and commercial banks since this may lead to more profitability of these banks. It is also very relevant to improve the bank streams of managers, investors, regulators, borrowers and depositors through assessing better banking rules and regulations. In turn this may help to them to revise the policies on the financial institutions since the efficiency evaluation is important in judging the past performance of the banks. This study recommends that banks should establish derivative accounting and procedures of evaluation including educational derivative so as to demystify Malaysia derivative market. This will help the offices on finance to have knowledge on all advantages and disadvantages concerning the practice of hedging since most Islamic banks have no specific policy on utilization of derivatives and management of financial risks.

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