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# ASSESSING THE PERFORMANCE OF ISLAMIC BANKING IN BRUNEI DARUSSALAM: EVIDENCE FROM 2011-2016<sup>1</sup>

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#### **Abstract**

Despite being among the earliest country offering Islamic banking to its people, academics know little about the performance of the industry in Brunei Darussalam. This study is aimed at fulfilling the gap by examining the performance of Islamic banking in Brunei Darussalam after 25 years of its establishment. However, due to limited availability and nonuniformity of the data presentation, the analysis is focused upon the period of 2011 to 2016. The data are collected from secondary sources such as banks' annual reports and central bank's quarterly reports for the period examined. The bank idiosyncratic factors i.e. size, capital ratio, credit risk, liquidity risk, service diversification, and bank stability are the cynosure of the analysis. Descriptive statistics, Herfindahl-Hirschman Index and z-score analysis are utilized as the tool of analysis. To make it more interesting, the performance comparison is done between Islamic bank and the banking industry. The result shows that evaluated idiosyncratic factors are indicating a better performance of Islamic banking as compared to its conventional counterpart and the overall banking industry in the country.

**Key words:** Brunei Darussalam, Herfindahl Hirschman Index, z-score, idiosyncratic, Islamic banking

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#### 1.0 Introduction

Located on the north-west of the island of Borneo, Brunei Darussalam is a country with total area of 5765-sq KM. The North side is bounded by the South China Sea and the rest are bounded by Malaysia. The population of Brunei is around 400,000 persons with more than half of the population is Malay and Muslim. The official religion is Islam with His Majesty the Sultan and Yang Di-Pertuan as the head of the Islamic faith in the country. Hence, Islam plays a central role in the life of every Muslim in Brunei Darussalam.

The influence of Islam can also be felt in the financial sectors of the country. Brunei Darussalam is among the earliest country in the world adopting Islamic banking system. Currently, Bank Islam Brunei Darussalam (BIBD) is the only Islamic commercial bank in Brunei Darussalam that serves all segments within the retail banking market. The bank was started in 1980 as the Island Development Bank and then converted to a full-fledged Islamic bank in January 1993 and changed its name to Islamic Bank of Brunei (IBB). There was a big merger in the history of Brunei financial system in 2005 between IBB and the Islamic Development Bank of Brunei which leads to the inception of BIBD.

Brunei is running the Islamic and conventional banking system in parallel. Despite its small population and area, there are currently four local banks and five foreign banks provide services here (Table 1). However, only two banks and one unit trust provide Islamic contracts for their saving and financing schemes. Those banks are local and namely BIBD and recently established Bank Usahawan, and an Islamic unit trust Perbadanan Tabung Amanah Islam Brunei (TAIB). Other banks are operated under conventional banking schemes.

Interestingly, despite Islam as the official religion of the country and the religion of majority of the Bruneian, the two biggest local banks, Baiduri as a conventional bank and BIBD as an Islamic bank, are having a strong competition among them. One of the reasons is because the understanding about riba among the Bruneian is still low<sup>2</sup>. Furthermore, this is also because both Islamic and

<sup>&</sup>lt;sup>2</sup> M. Abduh, "Islamic Banking Service Quality and Deposit Withdrawal

conventional banks operating in Brunei are offering similar products and following similar regulations set by the monetary authority of Brunei Darussalam. Therefore, apart from its name, customers are mostly in a difficult situation to significantly distinguish between the two types of banks in their products and services. However, BIBD holds the biggest banking assets in Brunei Darussalam with total assets of B\$9,033.5 million, or the equivalent to 50.4% market share out of B\$17,918.4 million. of the banking industry at the end of 2016

Table 1: List of Banks in Brunei Darussalam including TAIB

Name of the Bank	Ownership	Type
Baiduri Bank	Local	Conventional
Bank Islam Brunei Darussalam	Local	Islamic
Perbadanan Tabung Amanah Islam Brunei (TAIB)	Local	Islamic
Bank Usahawan	Local	Islamic
Maybank	Foreign	Conventional
RHB Bank	Foreign	Conventional
Standard Chartered Bank	Foreign	Conventional
Bank of China	Foreign	Conventional
UOB Bank	Foreign	Conventional

Source: Author compiles the information from various sources.

Even though Brunei Darussalam is among the first country in Southeast Asian region offering Islamic banking to its people, interestingly academics know little about its development due to limited studies done in exploring it in the country. As for that reason, the novelty of this study is laid on adding the literature of global Islamic Banking development, especially in the case of Brunei Darussalam. Secondly, this study provides new evidence of Islamic banking performance in Brunei Darussalam, by analyzing its idiosyncratic factors, especially during the period of 2011 to 2016.

The rest of this paper discusses four other parts. Chapter two provides previous literature on the area discussed and chapter three

Risk: Evidence from Brunei Darussalam", *Islamic Banking and Finance Review*, Vol.3, No.1, (2016).

describes the data and methods used for the analysis in this study. Furthermore, the discussion of the findings and conclusions will be discussed in chapter four and five respectively.

#### 2.0 Literature Review

#### 2.1 Islamic Banking in Brunei Darussalam

The first commercial bank in Brunei Darussalam is HSBC which starts its full operation in the mid of 1940s and followed by Standard Chartered Bank after ten years. Malayan Banking joins the market in 1960 and other regionally registered banks such as United Malayan Banking Corporation and Overseas Union Bank were then joining the market in 1963 and 1973 respectively. In 1964 the government establishes the National Bank of Brunei Berhad (NBB) as its first National local banks. However, due to malpractices, NBB was closed down in 1980 and at the same year the Island Development Bank Berhad (IDB) was established<sup>3</sup>.

In July 1980, IDB was established as a conventional bank. The name was changed to International Bank of Brunei (IBB) Berhad in 1986 and the operation continued with conventional methods of banking. Only in 1993 the government of Brunei decided to change its name again and this time together with its methods of banking. IBB was then becoming Islamic Bank of Brunei Berhad and started practicing Islamic banking principles.

Another local conventional bank converted into an Islamic bank is Development Bank of Brunei which was established in March 1995. The objective of its establishment is to assist the local entrepreneurs to meet their individual business needs. In order to better meet the demand of local *Bumiputera* business owners and to improve the quality of services provided, the Sultan instructed the bank to operate on Islamic banking principles and the conversion was successfully done on 1<sup>st</sup> July 2000. The name was then changed to Islamic Development Bank of Brunei (IDBB).

Actually, either Islamic Bank of Brunei or IDBB are not the

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<sup>&</sup>lt;sup>3</sup> S. Latiff, "Islamic Banking in Brunei and the Future Role of Centre for Islamic Banking, Finance and Management (CIBFM)", accessed Aug. 30, 2018, https://nscpolteksby.ac.id/ebook/files/Ebook/Accounting.pdf

first Islamic financial institution established by the government of Brunei Darussalam. Tabung Amanah Islam Brunei (TAIB) is the first Islamic financial institution in Brunei Darussalam. TAIB is an Islamic unit trust which offers products and services similar to banks, especially the savings and loans, excluding trade-financing and current account facilities. TAIB was established in 1991 with its specific objective is to facilitate savings for local Muslim who are intended to perform pilgrimage.

In 1999, the government of Brunei Darussalam has issued the Islamic Banking Act Chapter 168, an Act to provide for the licensing and regulation of Islamic banking business in Brunei Darussalam. Based on the Act, Islamic banking business shall not be transacted in Brunei Darussalam except by a company which is in the possession of a license in writing from His Majesty the Sultan and *Yang Di-Pertuan* in Council authorizing it to do so. After five years, the government of Brunei was intended to strengthen the industry in the country. In order to have a strong and sound Islamic banking which can support the economy of Brunei Darussalam, IBB and IDBB were merged in 2005 under the consent of His Majesty.

From 2005 until now Brunei Darussalam has only one Islamic commercial bank which provides various commercial banking products and services, namely Bank Islam Brunei Darussalam (BIBD). The bank is given the privilege to operate as a single Islamic bank in the country for more than 10 years. Only recently, towards the end of 2017, the government of Brunei established a Bank Usahawan for local micro, small and medium enterprises owners, which only provides *Shari'ah* compliant financing.

The government of Brunei Darussalam feels that monetary and financial stability is a prerequisite for strong economic and financial development. Without such stability, there cannot be the confidence needed to sustain new investment and business ventures, and, by extension, the opportunities needed to sustainably grow the financial sector.<sup>4</sup> As a result, *Autoriti Monetari Brunei Darussalam* (AMBD) was established in 2011 and was formed by merging certain entities

<sup>&</sup>lt;sup>4</sup> M. Abduh, S. Brahim and M. A. Omar, "A Study on Finance-Growth Nexus in Dual Financial System Countries: Evidence from Bahrain", *World Applied Sciences Journal*, Vol.20 No.8, (2012).

that formerly had operated under, or had been part of, the Ministry of Finance, namely the Brunei Currency and Monetary Board (BCMB), the Brunei International Financial Centre (BIFC), the Financial Institutions Division (FID), and part of the Research and International Division (RID) of the Ministry of Finance. Table 2 depicts the development of Islamic banking industry in Brunei Darussalam from the inception of the first bank in 1933 until 2017 when the third local bank, Bank Usahawan, was established by the government of Brunei Darussalam.

Table 2: Islamic Banking Development Milestones in Brunei Darussalam

Year	Events
1933	Establishment of Post Office Savings Bank
1940s	HSBC Bank opens its first branch in Brunei Darussalam
1950s	Standard Chartered Bank opens its first branch in Brunei Darussalam
	Regional Banks open their branches
1960	1960: Malayan banking
1964	1963: United Malayan Banking Corporation
1973	Establishment of National Bank of Brunei as the 1 <sup>st</sup> National local bank
1980	Overseas Union Bank opens its first branch in Brunei Darussalam
1986	Establishment of Island Development Bank (IDB)
	The name of IDB was changed to International Bank of Brunei (IBB)
	Establishment of Perbadanan Tabung Amanah Islam Brunei (TAIB) Conversion of IBB to Islamic Bank of Brunei Berhad
1001	Establishment of Development Bank of Brunei (DBB)
1991	Conversion of DBB to Islamic Development Bank of Brunei (IDBB)
1993 1995	IBB and IDMM were merged to become Bank Islam Brunei Darussalam (BIBD)
2000 2005	The government of Brunei introduces the Banking and Insurance Order 2006
2006	The government of Brunei introduces Islamic Banking and Takaful Order
2008	2008
2009 2011	Establishment of Centre for Islamic Banking Finance and Management (CIBFM)
2014	BIBD starts offering online banking services
2015	BIBD receives rating of A- from S&P
2016	BIBD opens representative office in Singapore
2017	BIBD introduces SME 350 programme to help local SME owners
	The government of Brunei Darussalam launches Bank Usahawan to provide shariah compliance financing for local SME owners.

Source: Author compiles the information from various sources.

#### 2.2 Idiosyncratic Factors of Bank Performance

The main reason on conducting this study in Brunei Darussalam is because limited literature of Islamic banking performance in the country. Despite being among the first country offering Islamic banking in early nineties, academics know little about the development of the industry. Another reason is because bank performance has been at the center of many studies especially after the global financial crises in 1997 and 2007. This is due to previous studies had concluded that the evaluation of a country's economic performance requires a thorough analysis upon the performance of banking industry, which includes Islamic bank.

With regard to the measurement of bank performance, many studies suggested various methods and variables that can be used to measure the performance of a bank. However, this study utilizes a combination of bank internal characteristics called idiosyncratic factors which are size, capital ratio, credit risk, liquidity risk, and service diversification.<sup>5</sup> Furthermore, in order to have a clear picture of where Islamic banking is standing as compared to conventional banking, this study adds the bank stability factor which later represented by z-score.

The first idiosyncratic dimension analyzed in this study is bank size; which will be used as a proxy for economies of scale of Islamic bank <sup>6</sup> in Brunei. Despite of non-conclusive evidence of the relationship between bank size and bank performance, this study adopts the statement saying that the greater the size of the bank, the lower the cost to raise capital, and therefore they appear to be more profitable. <sup>7,8</sup> The bigger size can also be reflected with as

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<sup>&</sup>lt;sup>5</sup> M. Jara-Bertin, J. A. Moya and A. R. Perales, "Determinants of Bank Performance: Evidence for Latin America", *Academia Revista Latinoamericana de Administracion*, Vol.27, No.2, (2014).

<sup>&</sup>lt;sup>6</sup> A. N. Berger and D. B. Humphrey, "Efficiency of Financial Institutions: International Survey and Direction for Future Research", *European Journal of Operational Research*, Vol.98, No.2, (1997).

B. K. Short, "The relation between commercial bank profit rates and banking concentration in Canada, Western Europe and Japan", *Journal of Banking and Finance*, Vol.3 No.3, (1979).

<sup>&</sup>lt;sup>8</sup> J. A. Bikker and H. Hu, "Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements",

advancement in technology and improvement in management. The variables used in this study to measure the bank size are total deposit, total assets, and total financing.

The second idiosyncratic factor is capital adequacy ratio (CAR). CAR measures the capital availability of a bank expressed as a percentage of a bank's risk-weighted credit exposures. Therefore, this ratio is designed in order to have a forecast and to promote the stability and efficiency of bank. The ratio is calculated by adding tier 1 and tier 2 capital and divide them with the calculated risk-weighted-asset. There is evidence<sup>9,10,11</sup> of positive relationship between capital ratio and bank performance.

Thirdly is the risk factors; especially credit risk and liquidity risk. In the context of banking, credit risk is the chance that a financing customer will not be able to repay principal and other investment-related cash flows according to terms specified in a credit agreement. This means the payment may be delayed or not made at all which can cause cash flow problems and affect the bank's liquidity. On the other hand, liquidity risk represents a bank's ability to accommodate the redemption of deposits and other liabilities and to cover the demand for funding in the loan or financing and investment portfolio. 13

This study uses nonperforming financing (NPF) and loan-to-deposit ratio (LDR) as proxies to measure credit risk and liquidity risk respectively. NPF is a sum of financing money which the financing customer has not made the scheduled payments for a

BNL Quarterly Review, Vol.221, (2002).

<sup>&</sup>lt;sup>9</sup> C. Lin, Y. Ma, P. Malatesta, and Y. Xuan, "Corporate Ownership Structure and Bank Loan Syndicate Structure", *Journal of Financial Economics*. Vol. 104, No. 1, (2012).

<sup>&</sup>lt;sup>10</sup> L. Angbazo, "Commercial Bank net interest margins, default risk, interest rate risk and off-balance sheet banking", *Journal of Banking and Finance*, Vol.21 No.1, (1997).

<sup>&</sup>lt;sup>11</sup> P. P. Athanasoglou, S. N. Brissimis and M. D. Delis, "Bank-specific, industry specific and macroeconomic determinants of bank profitability", *Journal of International Financial Markets, Institutions and Money*, Vol.18 No.2, (2008).

H. Van-Greuning and Z. Iqbal, *Risk Analysis for Islamic Banks*, (Washington DC: World Bank Publication, 2008), 120.
 Ibid.. 150.

specific period and LDR measures the ability of the bank to cover any unforeseen fund requirements. The higher the NPF the more the bank exposed towards credit risk, the higher the probability of lower performance of the bank. Similarly, the higher the LDR the more the bank exposed towards liquidity risk, the higher the probability of lower performance of the bank.

There are two main sources of Islamic bank's net operating income which are net income from financing and non-financing activities. In a normal situation, a bank must diversify its sources of net operating income between the two income components. The bank is said to be fully diversified when the values of those two income components are equal to each other. Previous studies have shown that banks implement diversification strategies decreasing idiosyncratic risks and therefore positively affecting the return. <sup>17,18</sup>

As suggested by previous studies<sup>19, 20</sup>, this study calculates z-score to represent bank stability as the final idiosyncratic factor examined. The z-score is an average return on asset plus equity divided by total assets and divided again by the standard deviation of return on assets. Therefore, the z-score is an important measure for bank soundness and stability since it is inversely related to the probability of bank's insolvency.<sup>21</sup>

Table 3 summarizes the idiosyncratic factors used in the analysis together with previous studies discussing those factors and

<sup>15</sup> T. Beck, "Finance and growth – lessons from the literature and the recent crisis", working paper, LSE Growth Commission, London, (July, 2012).

<sup>19</sup> K. Bourkhis and M. S. Nabi, "Islamic and Conventional Banks' Soundness during the 2007 – 2008 Financial Crisis", *Review of Financial Economics*, Vol.22, No.2, (2013).

<sup>21</sup> K. Bourkhis and M. S. Nabi, op. cit.

<sup>&</sup>lt;sup>14</sup> P. P. Athanasoglou, S. N. Brissimis and M. D. Delis, op. cit.

<sup>&</sup>lt;sup>16</sup> L. Laeven and F. Valencia, "Systemic banking crises: a new database", *Working Paper No.08/224*, (Washington, DC: IMF, November, 2008).

<sup>&</sup>lt;sup>17</sup> V. Chiorazzo, C. Milani, and F. Salvini, "Income Diversification and Bank Performance: Evidence from Italian Banks", *Journal of Financial Services Research*, Vol.33, No.3, (2008).

<sup>&</sup>lt;sup>18</sup> C. Lin, Y. Ma, P. Malatesta, and Y. Xuan, op. cit.

<sup>&</sup>lt;sup>20</sup> M. Hsieh, P. Chen, and C. Lee, "How Does Diversification Impact Bank Stability? The Role of Globalization, Regulations, and Governance Environments", *Asia-Pacific Journal of Financial Studies*, Vol.42, (2013).

the relationship found between those factors and the performance of a bank. This study uses all the idiosyncratic factors in Table 3 with the proxy variables explained in section 3.2 and listed in Table 4.

Table 3: Summary of Idiosyncratic Factors used in the Analysis

Idiosyncratic Factor's Name	References	Relationship with the Performance of the Bank
Bank Size	Short (1979); Burger and Humphrey (1997); Bikker and Hu (2002);	(+) relationship
Capital Ratio	Lin et al. (2012); Angbazo (1997); Athanasoglou et al. (2008)	(+) relationship
Credit Risk	Athanasoglou et al. (2008)	(-) relationship
Liquidity Risk	Beck (2012); Laeven and Valencia (2008)	(-) relationship
Diversification Strategies	Chiorazzo et al. (2008); Lin et al. (2012)	(+) relationship
Bank Stability	Bourkhis and Nabi (2013); Hsieh et.al. (2013)	(+) relationship

Source: Author compiles the information from various sources.

## 3.0 Data and Methods of Analysis

#### 3.1 Data

Empirical data are gathered and extracted from the annual report published on the official website of BIBD and Baiduri Bank. However, only data from 2011 onward are available and not every desired variables are obtainable from the report. Therefore, specific data provided by the Authority Monetary Brunei Darussalam (AMBD) on their website are also utilized in order to support the analysis.

#### 3.2 Variables

As discussed in chapter two, this study is aimed at evaluating the performance of Islamic banking in Brunei Darussalam by analyzing specific internal variables related to bank performance and stability. The idiosyncratic factors analyzed here are divided into five dimensions i.e. size, capital ratio, credit and liquidity risks,

diversification strategies and bank stability. Table 4 displays the variables chosen to represent each dimension. Total deposit, total assets and total financing are to represent bank size dimension while capital adequacy ratio is to characterize capital ratio dimension. Non-performing loan and non-performing financing will be used as proxies for credit risk while loan-to-deposit ratio is used to measure liquidity risk. As for diversification strategies and bank stability dimensions, this study uses Herfindahl Hirschman Index and z-score respectively.

Table 4: Variables in the Analysis

Dimension	Variables
Bank Size	> Total Deposit (TD), Total Financing (TF), and Total Asset (TA)
Capital Ratio	> Capital Adequacy Ratio (CAR)
Credit Risk	> Non-performing Loan/Financing (NPL/F)
Liquidity Risk	> Loan-to-Deposit Ratio (LDR)
Diversification Strategies	> Herfindahl Hirschman Index (HHI)
Bank Stability	> Z-Score

#### 3.3 Herfindahl-Hirschman Index and Z-Score

With regard to diversification strategies, this study uses Herfindahl-Hirschman Index (HHI) as a proxy and computed using formula in the equation (1). As for the interpretation, HHI value of 0.5 indicates complete diversification and HHI value of 1 represents the lowest level of diversification.

$$HHI = \left(\frac{NET}{NOI}\right)^2 + \left(\frac{NON}{NOI}\right)^2 \tag{1}$$

where,

NOI = Net operating income

NET = Net income from financing activities, and

NON = Non-financing income

When the return is following the normal distribution, the bank could calculate the maximum drop of the return in order to avoid equity drop by using the z-score. A higher z-score indicates lower risk for the bank to be insolvent and the lower z-score means otherwise. The formula to compute z-score is shown in equation (2).

$$z = \frac{(k+\mu)}{\sigma} \tag{2}$$

where:

k =equity capital in percentage of total assets

 $\mu$  = average return on assets

 $\sigma$  = standard deviation of return on assets as a proxy for return volatility

#### 4.0 Performance of Islamic Banking in Brunei Darussalam

Islamic banking industry in Brunei Darussalam is now celebrating its 25 years of establishment since it was firstly introduced in the country in 1993. During this period the world has witnessed a tremendous development of the industry from the increasing number of customers, branches, and various Islamic banking products and services offered by the industry. This chapter analyzes the performances of the bank by focusing the analysis upon the idiosyncratic factors i.e. bank size, capital ratio, credit and liquidity risks, diversification strategies and bank stability. In order to make it more interesting, the statistic will be displayed and compared with the overall banking industry in the country.

#### 4.1 Bank Size

The first proxy of bank size discussed here is total deposits which in this context, comprise of current, fixed, savings accounts and other deposits. Neither amount due to banks (within or outside Brunei) nor other miscellaneous liabilities are included. Previously, the figures provided by AMBD are normally exclude TAIB records, but now AMBD includes TAIB in its report. Table 5 below provides the total deposits and market share based on total deposits of Islamic banking in Brunei Darussalam from the year 2011 to 2016.

The total market share of Islamic banking in 2016 is around 47.8 percent out of the total share of banking industry plus TAIB in Brunei Darussalam. Despite annual downward trend of -3.91 percent

upon the industry's total deposit, the total deposits of Islamic banking grows in average of 11 percent per annum. This shows that Islamic banks are gaining more trust from the people and it is growing every year. It can also be seen that the trend did not cut off at year-end but in fact, remained consistent into the end of the year, hence it can be assumed that the increase is a long-term.

Table 5: Total Deposits and Market Share of Islamic Banking in Brunei Darussalam

Voor	Total Depo	Total Deposit (B\$'000)	
Year Isl	Islamic Bank	Banking + TAIB	Market Share
2011	4,416,794	18,355,000	24.06%
2012	4,217,335	16,745,480	25.18%
2013	4,369,200	16,266,650	26.86%
2014	5,404,700	15,619,000	34.60%
2015	5,242,800	13,957,000	37.56%
2016	7,114,600	14,895,390	47.76%

Total assets comprise of cash, placements and balance with banks in and outside of Brunei, loans and advances, investments and other miscellaneous assets. Similar to total deposits, Table 6 shows the consistent growth of total assets of Islamic banking in Brunei Darussalam with market share in 2016 is above 50 percent. The average growth of the assets for Islamic bank is 10.30 percent per annum while the overall industry is -3.12 percent per annum. This shows that Islamic bank had experienced positive net income and increment in net working capital every year which provide positive impacts upon stockholders' equity.

Table 6. Total Assets and Market Share of Islamic Banking in Brunei Darussalam

Voor	Total Asso	Total Assets (B\$'000)	
Year	Islamic Bank	Banking + TAIB	
2011	5,699,775	21,121,000	26.99%
2012	5,609,079	19,682,420	28.50%
2013	6,070,100	19,339,710	31.39%

2014	7,271,700	18,628,000	39.04%
2015	7,056,400	17,011,000	41.48%
2016	9,033,500	17,918,360	50.41%

Similar to previous two proxies of the bank size used in this study, Table 7 displays the consistent growth of total financing given by Islamic banking in Brunei Darussalam from the year of 2011 until 2016. The market share in 2016 is above 50 percent and the average growth for Islamic banking's total financing is 10.41 percent annually as compared to 1.43 percent annual growth at the industry level. Again, this shows growing trust from the people in the last six years to deal and patronize Islamic banking products and services.

From all the three proxies, it can be seen that Islamic bank in Brunei Darussalam has achieved a relatively better performance from 2011 to 2016 as compared to other banks and the industry in general, and its size is statistically bigger than them.

Table 7: Total Financing and Market Share of Islamic Banking in Brunei Darussalam

V	Total Finan	Total Financing (B\$'000)	
Year	Islamic Bank Banking		Market Share
2011	1,673,332	5,088,000	32.89%
2012	1,895,916	5,220,070	36.32%
2013	2,307,456	5,619,090	41.06%
2014	2,425,531	5,678,000	42.72%
2015	2,815,031	6,105,000	46.11%
2016	2,699,050	5,392,700	50.05%

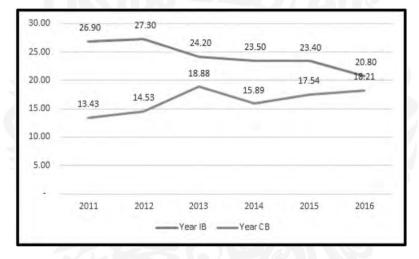
# 4.2 Capital Adequacy Ratio

The second idiosyncratic factor discussed in this study is capital adequacy ratio (CAR) which is also known as capital to risk asset ratio. As can be seen from Figure 1, the CAR values for both Islamic and conventional banks are above the 8 percent threshold set by BASEL committee. This shows that both types of banks are able to maintain an acceptable CAR values for the last six years which

confirms a good solvency level to protect bank depositors and the financial system as a whole. However, the overall observations indicate that the CAR of Islamic bank outperforms the CAR of conventional bank

Figure 1 also explain that Islamic bank in Brunei holds less risky assets than its conventional counterparts. This makes sense since Islamic bank here is very well-known for its very tedious and selective in providing financing to the customers and at the same time the bank is not encouraged to involve in gambling-like or highly-speculated investment in financial markets.

Figure 1: Capital Adequacy Ratio of Islamic (IB) and Conventional (CB) Banking in Brunei Darussalam



## 4.3 Credit and Liquidity Risks

In bank management, liquidity and credit risks are two most important risks faced by a bank, including Islamic bank. Before the global financial crisis, credit risk received more attention and liquidity risk often been omitted. However, after the global financial crisis, the situation was changed and people are getting more understanding on liquidity risk. Lack of liquidity and poor quality of financial assets are the main causes of failure in banking system. This study uses loan-to-deposit ratio (LDR) as an indicator for liquidity risk and non-performing loan (NPL) as an indicator for credit risk.

Table 8: Credit and Liquidity Risk of Islamic Banking in Brunei Darussalam

Year	Credit Risk (NPL)		Liquidity Risk (LDR)	
	Islamic Bank	Industry	Islamic Bank	Industry
2011	3.4 %	7.6 %	37.89 %	26.9 %
2012	4.1 %	6.8 %	44.96 %	30.0 %
2013	7.4 %	5.7 %	52.81 %	33.6 %
2014	5.5 %	4.9 %	44.88 %	35.7 %
2015	5.4 %	4.9 %	53.69 %	42.9 %
2016	5.7 %	5.9 %	37.94 %	40.7 %

The statistics presented in Table 8 have shown that the overall banking industry in Brunei Darussalam manages to maintain a good and healthy level of LDR. The average LDR for the banking industry and Islamic bank are 34.97 percent and 45.36 percent respectively. Although the two values are good, the comparison shows that Islamic bank has more significant reserves available for any expected and unexpected contingencies. Meanwhile for the credit risk, the NPL for the industry and NPF for Islamic bank are 5.97 and 5.25 respectively. Again, this confirms that Islamic bank credit risk management had functioned slightly better than the industry in general.

# 4.4 Diversification Strategy

The relationship between income diversification and bank performance has been the central of considerable academic debate with mixed findings. Previous studies<sup>22, 23</sup> found that diversification has no positive relationship with the bank performance. However, another studies<sup>24, 25</sup> evidenced that income diversification is

<sup>&</sup>lt;sup>22</sup> V. R. Vennet, "Cost and Profit Efficiency of Financial Conglomerates and Universal Banks in Europe", *Journal of Money, Credit and Banking*, Vol.34, No.1, (2002).

<sup>&</sup>lt;sup>23</sup> V. Acharya, I. Hansan, and A. Saunders, "Should Banks be Diversified? Evidence from Individual Bank Loan Portfolios", *Journal of Business*, Vol.79, No.3, (2006).

<sup>&</sup>lt;sup>24</sup> L. Baele, O. De Jonghe, and V. R. Vennet, "Does the Stock Markets Value Bank Diversification?", *Journal of Banking and Finance*, Vol.31, No.7, (2007).

efficiency-enhancing and thus positively affecting the bank performance. This study accepts as true that bank which perfectly diversified its income will have better performance than those which are not.

Table 9: Herfindahl-Hirschman Index of Islamic Banking in Brunei Darussalam

Year	Herfindahl-Hirschman Index
2011	NA
2012	NA
2013	0.503
2014	0.560
2015	0.540
2016	0.517

Table 9 displays the HHI values based on the formula in equation (1). Nevertheless, it is very unfortunate that the necessary data to calculate HHI from 2011 and 2012 are not available. However, the HHI values from 2013 to 2016 range between 0.50 and 0.56 which demonstrate that Islamic bank in Brunei Darussalam has almost perfectly diversified its income. The almost perfect income diversification reveals that Islamic bank in Brunei Darussalam has implemented correct strategies and performed very well for the last decade.

# 4.5 Bank Stability

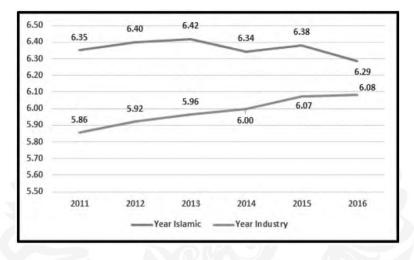
From Figure 2, it is noted that z-score of Islamic banks are always above the z-score of the industry from 2011 to 2016. The z-score is a measure of the distance-to-default, therefore, higher Z-score increases the bank's distance to default, hence more stable the bank will be. Although there are some scores smaller than the previous

<sup>&</sup>lt;sup>25</sup> D. K. Chronopoulos, C. Girardone, and J. C. Nankervis, "Are There Any Cost and Profit Efficiency Gains in Financial Conglomeration? Evidence from the Accession Countries", *The European Journal of Finance*, Vol.17, No.8, (2011).

<sup>&</sup>lt;sup>26</sup> W. Rajhi and S. A. Hassairi, "Islamic Banks and Financial Stability: A

years, but the overall scores are still above the industry's scores. This shows that Islamic bank in Brunei Darussalam is more robust and stable as compared to other banks in the country.

Figure 2: Z-Score of Islamic Bank (IB) and Banking Industry in Brunei Darussalam



#### 5.0 Conclusion and Recommendations

Despite being among the first country offering Islamic banking to its people, academics still know little about its performance in details due to limited publication of the industry in the country. Therefore, this study is aimed at assessing the performance of Islamic banking in Brunei Darussalam by specifically evaluating its idiosyncratic factors, which consist of five dimensions i.e. size, capital ratio, risks, diversification strategies, and stability. Interestingly, all variables from all dimensions are confirming that Islamic bank in Brunei Darussalam outperforms the conventional counterparts and the overall banking industry in the country.

This study seems very simple yet can be classified as preliminary study which talks about performance of Islamic banking in Brunei Darussalam. The possible implications of the study lay

Comparative Empirical Analysis between MENA and Southeast Asian Countries", *Region et Developpement*, Vol.37, (2013).

upon three different stakeholders, which are academics and researchers, practitioners, and policy makers. Firstly to academics and researchers, as there are very limited literature on the development and performance of Islamic banking in Brunei Darussalam, this study provides a significant contribution in fulfilling the gap. Future researches on the performance of Islamic banking in Brunei Darussalam could obtain meaningful information from this study.

In addition, this study could benefit academics and researchers with research interests in bank performance evaluation by providing an alternative comprehensive descriptive measurement to evaluate bank's performance. Hence, this study will not only enriching the literature of Islamic banking in Brunei Darussalam but also in the use of idiosyncratic factors to assess bank's performance.

Secondly, from the view of bank practitioners and policy makers in Brunei Darussalam, this paper provides evidence that Islamic banking had performed very well or even outperforms conventional bank throughout the years. Hence, conventional bankers and policy makers are suggested to give more attention on how the risks, diversification strategies and other factors of the idiosyncratic measurements were managed by Islamic bank. Furthermore, looking at the increasing trend of the bank size, represented by total deposit, total assets and total financing, the benefits are not only felt by the industry but also the customers.

As recommendations, future researches are suggested to use longer period of data and more sophisticated method of analysis in addition to the existing descriptive analysis. In managerial aspects, the finding implies that the performance of Islamic banking in Brunei Darussalam is superior to its conventional counterparts and therefore, when government wants to endorse new banks in the market, Islamic principles driven bank could be the best option and eventually building a robust financial system in the country as aimed.

# AL-SHAJARAH Special Issue

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