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CUSTOMERS' DEPOSIT BEHAVIOUR IN DUAL BANKING INDUSTRY: A MARKET STRUCTURE ANALYSIS

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ABSTRACT

Background and Purpose: The aim of this paper is to evaluate public acceptance toward Islamic banking system in Malaysia by using the market structure analysis as proposed in industrial organizational studies. The structural approach framework was used to evaluate the nature and changes of market concentration in the Malaysian Islamic and conventional deposit markets.

Methodology: The well-known market concentration measure, namely concentration ratio (CR) is calculated to study the changes in saving behaviour among depositors in both banking markets. The concentration ratios of deposits for both banking markets are evaluated by using the banking firms' level data for the period 1997–2016. Pearson and Spearman correlation analysis was also used to investigate the relationship between the total deposits and bank-specific variables.

Findings: It is found that interest or profit rate paid to the depositors are the factor that greatly affect the depositors' choice of banks to save their money. Besides, experience doing businesses is more important to Islamic banks compared to conventional banks in order to attract depositors.

Contributions: The findings demonstrate that societies, especially the Islamic community, are still loyal to conventional banks, which have more experience in the banking operation. The findings of this

study are expected to open the eyes of the Muslim community to use Islamic banking services, which are certainly sharia-compliance.

Keywords: Concentration ratio, deposit, dual banking, market structure, perception.

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1.0 INTRODUCTION

The Islamic banking system in Malaysia is unique and interesting to study as Malaysia has emerged as the first country that implemented a dual banking system. Hence, the Islamic banking system is operated side by side with the conventional banking system. Islamic banking activities in Malaysia are conducted either by Islamic banking or through Islamic banking windows or subsidiaries, which are set up by conventional banks. The development of Islamic banking in Malaysia is not achieved within a day, but it has taken decades to develop. The history of Islamic banking in Malaysia originated with the establishment of Tabung Haji (the Pilgrims Management and Fund Board) in 1963 by the government. The experience in managing Tabung Haji has given the government an idea to introduce a well-coordinated and systematic Islamic financial system. Malaysia had implemented Islamic banking system since 1983, but its implementation becomes more active since 1993 when conventional banks are permitted to offer Islamic windows under the interest-free banking scheme.

The important aspect that was emphasized at the beginning of the establishment of Islamic banking was the acceptance of the community toward it. Is this system able to compete with the long-established conventional banking system? In the early stage of its establishment, the society was unsure with the operations of the new banking system and its ability to provide banking services that can meet their needs. However, the reputation of the Islamic banking system is beyond the expectation. Today, Malaysia is one of the biggest Islamic banking hubs in the world besides Bahrain. In fact, many countries have shown their interest in adopting the Malaysian banking model in their respective countries (Mokhtar, Abdullah, & Alhabshi, 2008).

Islamic banking in Malaysia has emerged as one of the important components in the Malaysian financial system. The total asset of the banking system concentrated in the Islamic banking system has increased from 17% in 2010 to 25% in 2016. Besides, the total deposits in the Islamic banking system have grown by 91% from 2010 (RM218.412 billion) to 2016

(RM418.017 billion). In addition, the number of institutions offering Islamic banking system has also increased from two in 1999 to 16 in 2018, which clearly shows the public acceptance of this new banking system. Many studies mentioned that the Islamic banking system is not limited to Muslims but also attracted non-Muslims to use its services (Djapri, 2013; Haron, Ahmad, & Planisek, 1994). However, many studies on customer perception or attitudes toward Islamic banking are done by conducting survey research to collect data. This study differs from previous studies because it uses the secondary data to investigate the acceptance of customer toward Islamic banking in Malaysia. The present study uses an industrial organization approach to review the acceptance of the public on the Islamic banking system based on the customer's preferences to deposit their savings in Islamic banks. Knowledge of this issue is crucial for banks operating in a highly competitive industry. In fact, this study is able to assess the capabilities of embryonic Islamic banks in attracting customers compared to conventional banks that have long been in operation and have a strong position in the industry.

The development of Islamic banking system is particularly fascinating, especially in new emerging markets such as Malaysia and several Middle Eastern countries, but less academic research has been done on the operations and functions of Islamic banks. Henceforth, the aim of this paper is to evaluate public acceptance toward Islamic banking system in Malaysia at the micro level using the market structure analysis. Malaysia is chosen because it is unique countries with multiracial, where 60% of the population are Muslims, and 40% are non-Muslims. Public acceptance of Islamic banking system in this study is done by analysing the structural changes occurring in the Islamic and conventional banking deposit market, which involves the data analysis for a long period of 20 years, from 1997 to 2016.

The present study differs from the previous studies because the issue of consumer preference toward Islamic banking is evaluated by using the market structure measure, namely concentration ratio in order to analyse the changes in the depositors' behaviour in Islamic banking compared to the conventional banking market. Hence, we used the industrial organizational approach in order to investigate the changes in the market structure of the deposits market in the Islamic banking industry compared to the established conventional system. Besides, previous studies on the issue of consumer preferences were done by conducting the survey among the consumers. However, the present study is interesting because we used the data on deposits to investigate the changing behaviour of the customers toward the Islamic and conventional banking system. Through such a study, the actual behaviour of bank customers can be analysed without involving the customer's value judgment. The analysis is based on facts derived from the actual data of deposits reported by banks operating in the

banking industry in Malaysia. Moreover, the research on this issue is still limited, particularly a comparative study; hence, this study could add to the existing literature and empirical evidence in the field.

2.0 LITERATURE REVIEW

The discussion on the literature of this study focuses on the discussion of concepts and empirical studies related to the customer's perception toward Islamic banking compared to the conventional banking system. This section is divided into three parts. The first sub-section briefly describes the distinction between Islamic and conventional banking system. The second sub-section provides empirical evidence on customers' perception toward Islamic and conventional banking system. Meanwhile, the empirical studies that used market analysis are discussed in the last part.

2.1 Islamic Vs. Conventional Banking System

Islamic banking system refers to the interest-free banking system where the banking activity is consistent with the principle of Sharia law that are the rules and practices based on the Quranic teachings and prescriptive practices of Prophet Muhammad (Bank Negara Malaysia, 2010). Islamic banking differs significantly from conventional banking because Sharia-compliant finance does not allow for the charging of *riba* (interest payments) in banking activities (Beck, Demirgüç-Kunt, & Merrouche, 2013). Islamic banking is relying on the idea of profit and loss sharing where business risk and profit are shared between the customer and banks according to the terms in the contract.

2.1.1 Deposit Products

Deposit is money kept by the customers in their accounts of conventional and Islamic banks. The depositors in conventional banks expect an interest payment based on the amount they deposited. Conventional banks accept deposits on the basis of loan where banks will invest the deposits in any type of avenues, including non-sharia compliant avenues and hence, depositors will earn non-sharia compliant return. The bank and account holders' relationship is based on debtor and creditor. On the other hand, an Islamic saving account, which is based on *Sharia* Law works on profit sharing rather than interest payment. Deposits in the Islamic banks are based on *wadiah* (*guaranteed custody*) or *mudharabah* (*profit-sharing*). *Wadiah* means safekeeping or safe custody. It is based on the contract in the form of trust between depositors and banks. There are two types of *Wadiah*: *wadiah yad-dhamanah* and *wadiah yad-amanah*.

Wadiah yad-dhamanah is safekeeping with a guarantee where the depositors give the banks permission to use the money for investment purposes. Meanwhile, *wadiah yad-amanah* is an act of trust where the bank, as a trustee, is given the right to keep the money in its safe custody. Whereas *mudharabah* is a type of partnership between the depositor (*raab ul maal*) and the bank (*mudarib*). Customers deposits are invested in various businesses or investment project based on the profit-sharing basis as agreed by both parties. In terms of function, there is no difference between deposits in Islamic and conventional banking, but the practice and the contract involved in both system is very different. The deposits in Islamic banks do not carry any interest rate as in conventional banks, but it is participating in the profits of the bank.

2.2 Customer Perception

Many studies on customer perception toward Islamic banking are based on the survey conducted among customers in order to evaluate their preference toward Islamic banking market. According to Nawi, Yazid, and Mohammed (2003), the previous studies on customer perception toward Islamic banking can be categorized into four categories. The first category is the study on consumer preference in Muslim countries such as Pakistan or non-Muslim countries such as Singapore. Hassan (2007) did a study on this category for the Pakistani banking industry. He found that demographic factor plays an important role in the selection of Islamic or conventional banking in Pakistan. According to him, Islamic banking is more popular among the young, highly educated, and a high-income group of society. The overall customers were satisfied with the products and services offered by Islamic banks compared to conventional banks. In recent study, Aziz and Afaq (2018) found that attitude and awareness among the bank's customers have a positive influence on the intention to adopt Islamic banking services in Pakistan.

Besides, Rammal and Zurbruegg (2007) conducted a study to analyse the understanding of Muslims residents in Australia about the profit and loss sharing financial instruments. The majority of the respondents were willing to use and purchase Islamic banking products, but their knowledge about profit and loss sharing is still lacking. Erol, Kaynak, and Radi (1990) and Erol and El-Bdour (1989) conducted a study in Jordan and found that reputation, efficient, and confidentially were the three elements taken into account when making banking transactions. According to them, religion is not the reason for choosing the Islamic bank. Customers select any bank due to its products and services, whether it is Islamic or conventional. Philip and Cunningham (1997) conducted a study to evaluate the awareness of Muslims and non-Muslims in Singapore toward Islamic banking. The findings show that

Muslims in Singapore used the Islamic banking system as it is a religious claim, but their understanding of the Islamic banking system is equivalent to non-Muslims, which is very low.

The second category is the study on perception toward Islamic banking, focusing on the general group of the consumer not matter whether they are Muslims or non-Muslims. Faisal, Akhtar, and Rehman (2014) did this kind of study for the Indian banking industry. Their findings found that the level of awareness of Islamic banking is higher among Muslims in India, but they were less aware of the features and institutions of Islamic banking. On the other hand, non-Muslims address issues like security, profitability, and risk minimization in the selection of banking services. The awareness of Islamic banking among non-Muslims in India is very low. Hence, their study suggested the implementation of suitable marketing strategies in order to increase people awareness of Islamic banking among the societies in India. The finding differs from Saiti (2015), although the understanding of Islamic banking system is higher among Muslims, non-Muslim communities possessed a positive perception toward the Islamic banking system in Malaysia. Mohamad and Majid (2016) also provide the same finding in their study among the non-Muslims community in Kedah. This may be due to the more Islamic environment in Malaysia as the majority of its people are Muslims. In addition, aggressive government efforts in introducing and developing the Islamic banking system in Malaysia since 1983 have also opened up space for non-Muslims to understand the Islamic banking system.

The third category compared the consumer based on the banking system, Islamic and conventional banking, for instance, Saad (2012) conducted a study to assess the level of customer satisfaction over services provided by Islamic and conventional banks in Malaysia. The findings show that the majority of respondents are very satisfied with conventional banking services compared to Islamic banks. Thus, Islamic banks must improve the quality of services so that it can compete with conventional banks that have a stronger position in the market. Ahmad, Kasshif, and Safwan (2011) have also conducted a survey to investigate the satisfaction of bank customers toward products provided by Islamic and conventional banks in Pakistan. Their findings show that customers are more satisfied with the products and services offered by Islamic banks as compared to conventional banks. They also found that gender affects the level of satisfaction in Islamic banking, where men are more satisfied than women. However, the gender factor is not significant in the conventional banking system. Hence, they suggested to bank managers to improve their products by considering the demographic characteristics of the customers. Moreover, many recent studies in dual banking industry show that bank customers have positive attitudes towards Islamic banking compared to conventional banking (Chaouch, 2017; Okumuş, 2015; Rezwan, Shabnaz, & Shajahan, 2015).

The fourth category is the study conducted among the non-Muslims customers of Islamic banking as done by Hossain and Roy (2017) for Bangladesh banking industry. Their findings show that the non-Muslim community in Bangladesh has a positive perception of the Islamic banking system. Most respondents used Islamic bank services for deposit purposes. Most of them are attracted to the deposit rate offered by the Islamic banking system. The non-Muslim community has also highlighted that the offering of Islamic banking products and services is broad and unlimited to Muslim communities only. They even acknowledged the change in behaviour among non-Muslim communities who choose Islamic banks as opposed to conventional banks. Abdullah, Sidek, and Adnan (2012) conducted a study to assess the perception of non-Muslims toward Islamic banking products and services in Malaysia. The findings show that non-Muslim communities in Malaysia have knowledge and understanding of the Islamic banking system, and the majority of the respondents in this study have accounts in both banking systems. High educational background made this community able to find information regarding Islamic banking system. In fact, they believe that the Islamic banking system is able to dominate conventional banking in Malaysia in the future.

Previous studies on customer perceptions of the banking system, regardless of the Islamic or conventional banking system, mainly used survey to collect primary data. This study differs from past studies because changes in the behaviour of bank customers are analysed using secondary data. Deposit trends among the depositors will be analysed to investigate the acceptance and awareness of customers toward Islamic banking compared to the established conventional banking system. In addition, the Malaysian banking industry is unique and interesting to study because changes in the depositors' behaviour can be analysed for two banking systems, namely the Islamic and conventional systems. The question is, are the Islamic banks able to increase the degree of competition to attract customers with the existence of a strong conventional bank? Therefore, different from the previous study, this study will use the industrial organizational framework in order to analyse changes in the behaviour of depositors in the dual banking system in Malaysia.

2.3 Market Structure Analysis

In the field of an industry organization, a structural approach is used to examine the market structure of an industry. Structural approach refers to the use of structural characteristics of the market such as concentration and the firm's market share to classify the structure of an industry. Many studies use the structural approach to examine the degree of concentration and competition in the banking industry (Mia, 2018; Mohammed, Ismail, & Muhammad, 2016;

Hakim & Chikr, 2014; Nabieu, 2013; Sahoo & Mishra, 2012). Those studies used concentration ratio to classify the market structure of the banking industry. This study also utilized the structural approach, but the analysis of concentration in terms of deposits is used to analyse the changing behaviour of depositors in the Islamic banking system compared to the conventional banking system. The most well-known concentration measure among the researchers is concentration ratio (CR). By calculating the CR, the present study is able to analyse the acceptance of customers toward Islamic banking compared to the conventional banking system. This is because the choice to deposit money in a bank depends on the customer's taste and loyalty toward the chosen bank. Customers will deposit money in the bank that they trust and like. Hence, besides using the measures to analyse the market power gained among the banks, the trend of deposits in banking institutions can also be used to analyse the acceptance of customers toward the banks.

Many previous studies used concentration measures of total deposits to classify the market structure of banking industry, such as Hakim and Chikr (2014) and Al-Muharrami, Matthews, and Khabari (2006) for the Arab Gulf Country Cooperation (GCC), Staroselskaja (2011) for Lithuania, Ariss (2010) for 13 countries that implemented dual banking system, and Abdul Majid and Sufian (2007a, 2007b) for the Malaysian banking industry. However, the focus of the study is to evaluate the market power of the banks in the industry. According to Adelman (1951), there are two meanings of economic power; power in terms of size, and power over competitors or customers. The second meaning of market power shows that firms that have many customers are powerful. Therefore, this study assumes that banks, which have a large number of deposits are the banks that are trusted by customers, and thus, show their acceptance of the bank.

3.0 METHODOLOGY

This section is divided into three parts. The first part briefly describes the data used in this study. The second part explains the calculation of concentration measures and its uses to investigate the customers' deposit behaviour. Meanwhile, the Pearson correlation method is discussed in the last part.

3.1 Data

The data set in this study was drawn from Bureau van Dijk's (BvD's) BankScope database for the period of 1997–2016. The sample in this study is limited to commercial banks operating in both Islamic and conventional banking industry in Malaysia. The sample of banks is limited

to commercial banks because these banking categories provide products and services that are close substitutes for each other. According to industrial organizational theory, the sample in this study is accurately defined in terms of the product; hence, fulfilling the definition of a relevant market. The financial data is expressed in Malaysian Ringgit (MYR).

3.2 Concentration Measure

Concentration measure in this paper is calculated for total customer deposits based on the formulas presented in the following section using Excel. The well-known concentration measure is Concentration Ratio of n largest firms in the market (CR_n). According to Harrison and Rude (2004), the concentration ratio is a simple measure that addresses an inequality dimension by stressing the relative position of the largest firm. The n bank concentration ratio shows the market share obtained by the largest firm in the industry. For instance, CR_3 measures the market share of the three largest firms, while CR_8 measures the market share of the eight largest firms. Theoretically, there is no rule to determine the value of n , therefore, the number of banks included in the measurement of CR is a rather arbitrary decision.

Previous studies used the CR_n to investigate the market structure of the banking industry (Mohammed et al., 2016; Mohammed, Ismail, Muhammad, Jalil, & Noor, 2015; Ariss, 2010; Abdul Majid & Sufian, 2007a). However, the present study used the concentration ratio to analyse the acceptance of customers toward Islamic banking compared to conventional banking. Hence, banks with high deposit amount are the preferred bank among customers. Simplicity and limited data requirement make the n bank concentration ratio one of the most frequently used measures of concentration in the empirical literature (Deltuvaitė, Vaškelaitis, & Pranckevičiūtė, 2007). The formula for CR_n is shown in equation (1).

$$CR_n = \sum_{i=1}^N s_i \quad (1)$$

$$\text{where } s_i = x_i / \sum_{i=1}^N x_i \quad (2)$$

where s_i = the market share of i 'th largest bank in the industry

x_i = the size of firm i

N = the number of firms in the industry.

The range of CR_n is between zero and one.

3.3 Correlation Analysis

3.3.1 Pearson Correlation Analysis

The Pearson correlation analysis is used in this study to investigate the strength of the linear relationship between two variables. The relationships among the variables can be positive, negative, or not related. The value of the correlation coefficient is between -1 and $+1$. The larger the absolute value of r , the stronger the linear relationship between two variables. The formula for r can be expressed as follows:

$$r = \frac{n(\sum X_i Y_i) - (\sum X_i)(\sum Y_i)}{\sqrt{n(\sum X_i^2) - (\sum X_i)^2} \cdot \sqrt{n(\sum Y_i^2) - (\sum Y_i)^2}} \quad (3)$$

where r = coefficient of correlation

n = number of data points

The Pearson's correlation coefficients are calculated to analyse the relation between total customer deposits with bank's age (the number of years the bank was established), return on assets (ROA) and interest or profit paid to the depositors for each bank. The null hypothesis for testing the Pearson correlation stated that there is no linear relationship between two variables ($H_0: \rho = 0$). In contrast, the alternative hypothesis stated the existence of a linear relationship between two variables ($H_1: \rho \neq 0$). The null hypothesis will be rejected if the p -value is significant. Hence, we will calculate the three correlation coefficients as follow:

- (i) P1: The correlation coefficient between the total deposits and the bank's age
- (ii) P2: The correlation coefficient between the total deposits and ROA
- (iii) P3: The correlation coefficient between the total deposits and interest, or profit attributable to depositors.

3.3.2 Spearman Rank Correlation

Spearman's correlation coefficients are calculated to investigate the strength and direction of the monotonic relationship between two variables. With the assumption that the data violated the fewer assumptions about the population, for instance, the data does not have any specific distribution. The monotonic relationship investigates, whether as the value of one variable increases, causes the value of another variable increases or decreases. The Spearman

correlation coefficients are calculated with the assumption that the data has a tied rank. The formula for rho, ρ is as follows:

$$\rho = \frac{\sum_i(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_i(x_i - \bar{x})^2 \sum_i(y_i - \bar{y})^2}} \quad (4)$$

where i = paired scores.

The null hypothesis for testing the Spearman correlation that both tested variables are independent ($H_0: \rho = 0$). In contrast, the alternative hypothesis stated that both variables are dependent ($H_1: \rho \neq 0$). The null hypothesis will be rejected if the p -value is significant. The tested hypotheses are as follow:

- (i) H1: Total deposits and bank's age are independent.
- (ii) H2: Total deposits and ROA are independent.
- (iii) H3: Total deposits and interest or profit are independent.

4.0 RESULTS AND DISCUSSION

This section describes the results obtained from the analysis of data based on the research methodology described in the previous section. The first part provides the analysis of the trends of concentration in Malaysian dual banking market. In addition, the correlation analysis is reported in the second part.

4.1 Market Structure Analysis

Table 1 shows the trends in total deposits and total loans in Islamic and conventional banking system, respectively. The value of concentration for the CR_n 's of the total deposit is slightly higher for Islamic banking compared to the conventional banking market. A higher concentration in terms of deposits shows higher market power gained by the banks, particularly large banks, due to the support by customers. These findings show that banks are able to acquire a bigger market share in deposits without expanding their size.

The trend of market concentration, particularly CR_4 and CR_8 show that customer deposits are concentrated in the hand of few banks in the Islamic banking system. Those banks are Bank Islam Malaysia Berhad (BIMB), Bank Muammalat, Maybank Islamic, CIMB Islamic, and Public Islamic. A good reputation shown by the banks caused the customers to choose these banks for saving their deposit. Besides, changes in the CR_n of the Islamic banking system

show that Bank Islam Malaysia Berhad (BIMB) had lost its monopoly status with the establishment of Bank Muammalat Malaysia Berhad (BMMB) in October 1999, where the CR_1 estimate for the total deposits decreased to 0.34 in 2000 (from 0.55 in 1998). Also, the upgrading of the Islamic banking system from an Islamic banking subsidiary to full-fledged Islamic banks in 2005 has given the customers more choices of Islamic banks to save their deposits. The changes in CR_1 as shown in Table 1 also provide information regarding the changes in the position of leading banks in the Islamic banking market, in which since 2004 Maybank Islamic has become the major industry player replacing BIMB, which had held the position since 1983. BIMB became the second largest player in the industry until 2008. Since 2009 onwards, CIMB had replaced BIMB's position as the second largest bank, whereas BIMB and Public Islamic are now the third and fourth largest players in the Islamic deposit market, respectively. The changes in the deposit market position clearly show the changes in saving behaviour among the banks' customers that they are still fanatic and believe the Islamic banking institution owned by a conventional bank as the parent bank.

Table 1: CR for Islamic and conventional banking system

Year	Islamic					Conventional				
	CR ₁	CR ₂	CR ₃	CR ₄	CR ₈	CR ₁	CR ₂	CR ₃	CR ₄	CR ₈
1997	0.67	0.81	0.91	0.96	0.99	0.24	0.33	0.40	0.46	0.66
1998	0.55	0.72	0.85	0.89	0.95	0.20	0.31	0.40	0.47	0.65
1999	0.45	0.62	0.71	0.80	0.97	0.20	0.33	0.44	0.51	0.68
2000	0.34	0.55	0.69	0.77	0.96	0.22	0.36	0.46	0.54	0.74
2001	0.30	0.51	0.69	0.79	0.95	0.24	0.37	0.47	0.55	0.75
2002	0.27	0.49	0.64	0.74	0.94	0.22	0.34	0.43	0.51	0.71
2003	0.22	0.39	0.51	0.56	0.95	0.21	0.32	0.42	0.52	0.72
2004	0.23	0.44	0.60	0.68	0.87	0.20	0.33	0.43	0.53	0.73
2005	0.22	0.41	0.54	0.63	0.87	0.21	0.34	0.44	0.53	0.65
2006	0.17	0.33	0.48	0.57	0.82	0.21	0.35	0.48	0.57	0.77
2007	0.17	0.32	0.44	0.54	0.77	0.20	0.35	0.48	0.56	0.77
2008	0.17	0.32	0.43	0.53	0.76	0.20	0.36	0.49	0.57	0.78
2009	0.18	0.34	0.47	0.56	0.81	0.20	0.36	0.49	0.57	0.78
2010	0.19	0.34	0.47	0.56	0.81	0.20	0.34	0.48	0.56	0.78
2011	0.22	0.35	0.48	0.57	0.84	0.25	0.40	0.54	0.63	0.84
2012	0.26	0.39	0.50	0.59	0.84	0.27	0.44	0.54	0.63	0.85
2013	0.26	0.38	0.50	0.59	0.84	0.28	0.45	0.55	0.65	0.84
2014	0.32	0.42	0.52	0.61	0.83	0.21	0.35	0.48	0.59	0.83
2015	0.25	0.46	0.55	0.64	0.86	0.22	0.37	0.50	0.62	0.84
2016	0.29	0.41	0.51	0.61	0.85	0.21	0.37	0.50	0.62	0.84

Source: Author's calculation using Excel.

Figure 1 shows the trend of deposits in five highly selected Islamic banks for the period of 1997 to 2016. The selection of the bank to save money among customers did not show a significant change in the conventional banking system. The five preferred banks are Maybank, CIMB Bank, Public Bank, Hong Leong Bank, and Rashid Hussain Bank (RHB).

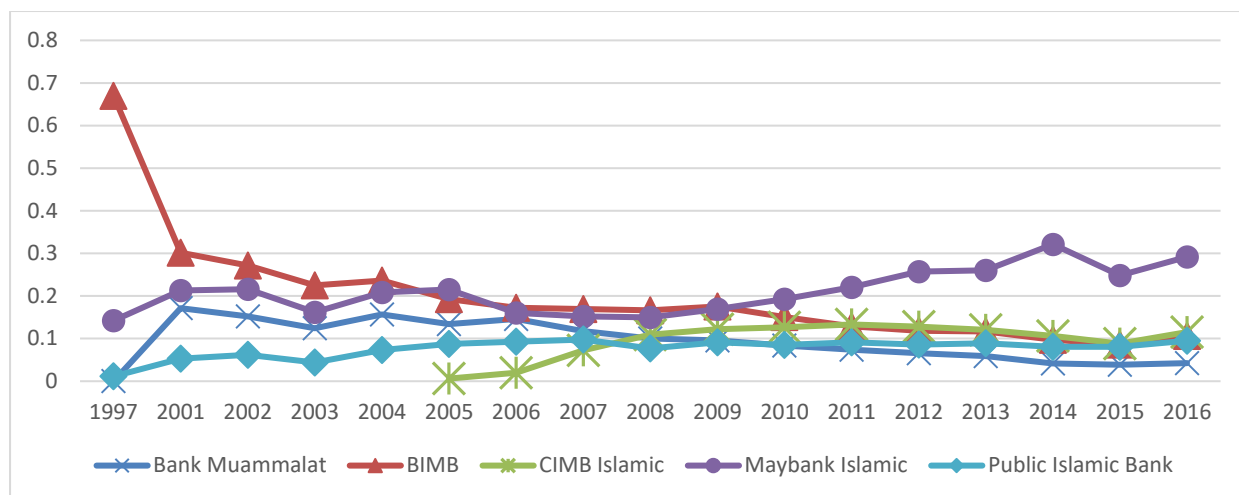


Figure 1: Selection of Islamic bank by depositor, 1997-2016

The trend of bank selection among depositors is shown in Figure 2. The leading bank in conventional banking deposit market is Maybank, followed by Public Bank (1997–2011) and CIMB (2014–2016). Surprisingly, the leading bank in 2012 and 2013 was a foreign bank, Hong Kong and Shanghai Bank Corporation (HSBC), followed by Maybank, Public Bank and CIMB.

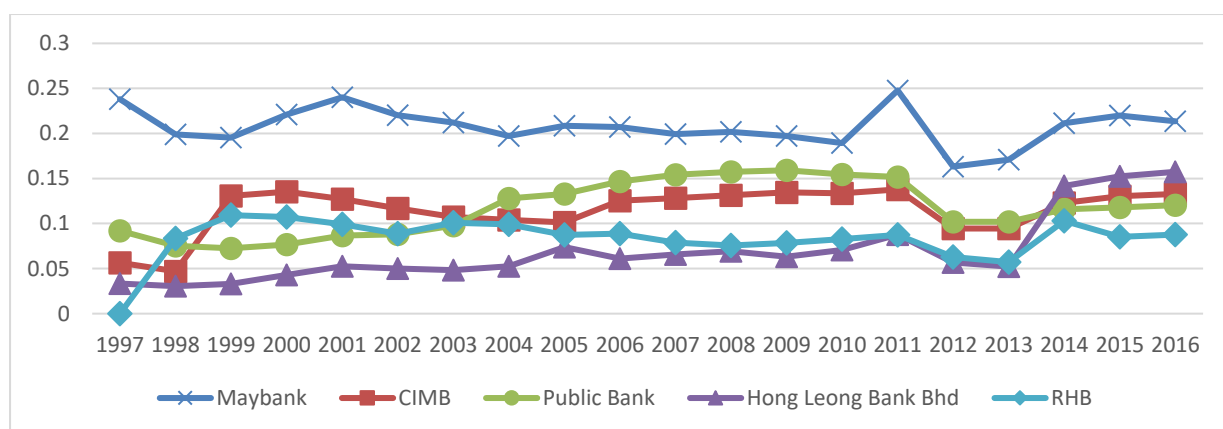


Figure 2: Selection of conventional bank by depositor, 1997–2016

The analysis on CR₄ and CR₈ show that in the earlier period of establishment, customer deposits in Islamic banking are concentrated in the hand of the four largest banks. This shows the behaviour of customers who are still uncertain about the ability of Islamic banks to manage their deposits. However, the degree of concentration shows a decline, especially after 2005; for instance, the CR₄ for Islamic banking system decreased from 0.96 (1997) to 0.57 (2006). Hence, it provides evidence that customers had begun to save their money in other Islamic banks that are less preferred before this. Further, the CR₄ for both banking system also did not

show a significant difference after 2005. This finding clearly demonstrates changes in the behaviour of depositors who have begun to believe the banking services provided by Islamic banks, especially Islamic bank subsidiaries that were granted permission to operate as full-fledged Islamic banks after 2005.

The trend in concentration shows the parent banks influenced the selection of banks among customers in the Islamic banking industry in the conventional banking system. Hence, a good reputation by the practitioners of conventional banks gives an impact to the Islamic banks that was formed by the same bank group. This finding clearly shows that customers still lack confidence in the ability of Islamic banks to provide banking services compared to the long-established and experienced conventional banks. This finding supports the earlier finding by Osman, Ali, Zainuddin, Wan Rashid, and Jusoff (2009), who claim that customers are more satisfied with the services provided by conventional banks. Therefore, in order to build a good reputation among customers, Islamic banks have to offer attractive deposit packages. For instance, Al-Awfar deposit scheme, which was introduced by Bank Islam, has attracted many customers to save their money in the financial institution that suits the sharia compliance. This is a good move and should be emulated by other Islamic banks in order to attract more customers to engage in financial activities that are sharia compliance. In addition, the trend of deposit market concentration shows that brand loyalty is higher among conventional bank customers due to the consistency in the selection of banks to save their deposit. In contrast, the selections of Islamic banks by customers often change, as shown in Figure 1. Thus, Islamic banks should improve the quality of services to increase customers' loyalty to the banks. A number of studies also suggested the same steps that Islamic banks should improve the quality of services in order to face the competition with conventional banks that have a strong position in the market (Al-Hunnayan & Al-Mutairi, 2016; Saad, 2012; Metawa & Almosawi, 1998)

Figure 3 shows the selection of banks by depositors for the whole banking industry. As shown in Figure 3, the market share for Maybank has decreased from 25% in 1997 to 18% in 2016. The most preferred banks in the whole banking industry are Maybank, Public Bank, CIMB, and Hong Leong Bank. These entire banks are conventional banks. The market share of deposits among Islamic banks is low, which is less than 10%. In 2000, BIMB was at 15th position in the industry as a whole in terms of deposit. After 17 years of operation, BIMB only has 2% of deposits in the industry. The finding corroborates with Osman et al. (2009), who stated that the rank of BIMB in the market is still poor. This position clearly shows that public acceptance of the Islamic banking system is still not encouraging. However, recent developments have shown that public acceptance toward the Islamic banking system has

grown. For instance, Maybank Islamic achieved its sixth position in the deposit market by having a 5% deposit share in the banking industry in 2012. This is a good indicator, and Islamic banks should take this opportunity by conducting suitable marketing strategies to increase people awareness of Islamic banking.

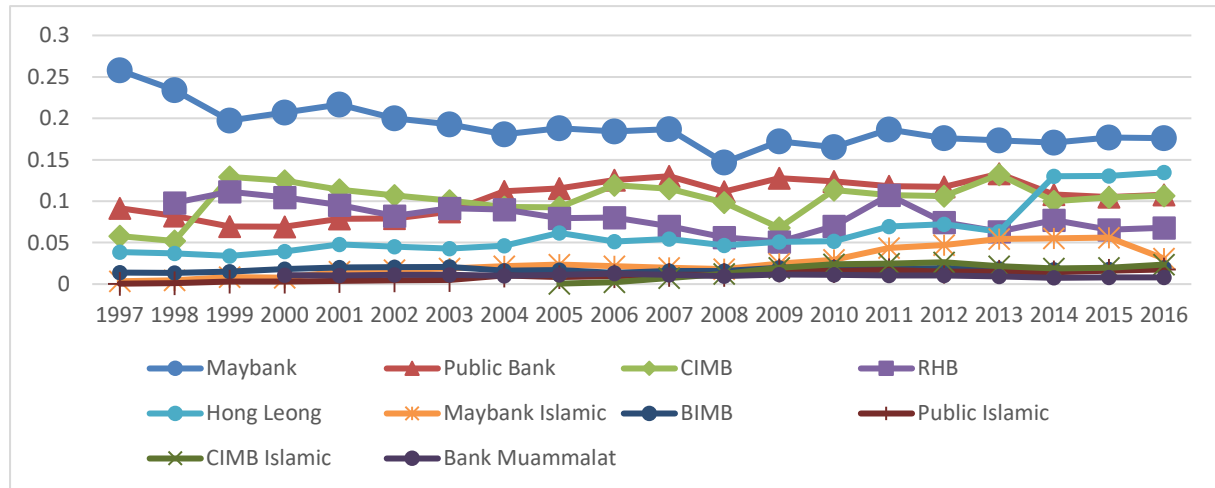


Figure 3: Selection of banks by depositor in Malaysian banking industry

4.2 Correlation Analysis

Pearson correlation coefficients for both the Islamic and conventional banking system are shown in Table 2. The strong relationship between the tested variables exists if the value of correlation coefficients exceeded 0.5.

Table 2: Pearson correlation for a dual banking system

Correlation Coefficient	Islamic	Conventional
P1: Correlation between total deposits and bank's age	0.566*	-0.0038
P2: Correlation between total deposits and ROA	0.0331	0.0971
P3: Correlation between total deposits and interest or profit attributable to depositors.	0.9323*	0.9319*

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

Source: SPSS output

The analysis of the correlation coefficients, P1 between total deposits and the bank's age reveals that there is a strong positive correlation between the variables in the Islamic banking market, which shows that as the bank's age increases, the total deposits increases. However,

the correlation coefficient is negative and insignificant for conventional banking market. This result provides evidence that experience in doing businesses is important to Islamic banks in order to attract more depositors compared to conventional banks, which have more experience with a long history of the establishment. Operational experience is not important for conventional banks. The findings clearly show the public's confidence toward conventional banks even though the bank is a new bank. The correlation coefficients, P2 are positive but show an insignificant relationship between total deposits and bank performance (ROA). Hence, a bank's performance does not affect the decision of depositors to deposit money in the bank. Besides, the correlation coefficients, P3 show the existence of a significant and strong positive relationship between total deposits and interest or profit attributable to the depositors. This finding supports the evidence that depositors in both banking markets are very concerned about the returns received from their saving in the banks. This finding is similar to Kontot, Hamali, and Abdullah (2016), who stated that high return is the important factor that influenced the customers' decision. Hence, banks in both banking streams should ensure that the returns received by the depositors are reasonable to maintain customers' loyalty to the bank, particularly Islamic banks.

Table 3 shows the Spearman correlation coefficients for both banking systems. The Spearman correlation coefficients validate the Pearson correlation results, which provide evidence on the existence of a positive relationship between total deposits with the bank's age, ROA, and interest or profit paid to depositors. The result of the hypothesis testing rejects the null for all three hypotheses. Hence, providing several conclusions as follow: First, total deposits and bank's age are dependent on the Islamic and conventional banking system. This result supports the existence of 'learning by doing' theory in the Malaysian dual banking industry. However, the magnitude of the relationship is higher for Islamic banks compared to conventional banks. Therefore, experience in doing businesses is more important to Islamic banks in order to attract more depositors.

Table 3: Spearman correlation coefficients in the dual banking system

Hypothesis	Islamic	Conventional
H1: Total deposits and bank's age are independent	0.7332***	0.3677***
H2: Total deposits and ROA are independent	0.1408**	0.0232
H3: Total deposits and interest or profit are independent	0.9463***	0.9511***

, * indicate the respective 5% and 1% significance levels.

Source: Stata outputs

This finding also supports our earlier finding, where the total deposits of Islamic banks are still low in the earlier period and then show an increased after 2005 (see Figure 3). Second, total deposits and ROA are dependent for the Islamic banking system only; hence, providing the evidence that the performance of Islamic bank influenced the number of deposits received by the banks. This means that Islamic banks should perform well in order to maintain customers' loyalty to the banks. Third, total deposit and the interest or profit paid to the depositors is dependent; hence, providing further evidence to support the earlier finding of Pearson correlation.

5.0 CONCLUSION

The analysis of the market structure for deposits indicates that consumers still chose conventional banks to save their money. The results showed only after 2012 that Islamic banks became the preferred bank among the held in depositors with Maybank Islamic being held at in the deposit market as a whole. This is a good sign, and Islamic banks should offer quality services to the customers in order to maintain customers' loyalty to the banks. Quality improvement in terms of bank personnel and the bank physical facilities are important factors to attract more customers. The services offered by the Islamic banks need to be upgraded in order to remain in the market, which is highly competitive particularly with the competition from conventional banks. In addition, it is undeniable that customer literacy and awareness of the Islamic banking system has also contributed to the changes in saving behaviour among customers. This situation indirectly reflects the success of the government's efforts in developing the Islamic banking system in Malaysia since 1983. In fact, the position of Islamic banks in the deposit market clearly demonstrates the ability of these banks to compete with the long-established conventional banks in the banking industry. However, it is undeniable that the selection of society toward Islamic banks is heavily influenced by the reputation of the banks as conventional practitioners. This clearly demonstrates the attitude of the community that is still loyal to conventional banks. It is hoped that this study will open the eyes and hearts of the community, especially the Muslim community, to change their perceptions of Islamic banking and subsequently use the banking services provided by Islamic banks. Behavioural changes among Islamic depositors not only develops Islamic banking but also in the future, it can affect the perception of non-Islamic depositors to engage with the Islamic banking system whose operations are sharia-compliant. Besides, bank managers should implement effective marketing strategies to increase people awareness of Islamic banking.

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