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Determinants of Profitability: Evidence from Banking Sector in Malaysia

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ABSTRACT

Profitability, the keyword, refers to a company's capacity to create earnings from sales after paying all necessary costs for a particular time. Every company's management views it as one of their top priorities, and without it, their operations would come to an end. The goal of this paper is to examine and determine factors that impact the profitability of Malaysia's banking sector over the period of 2011-2020 in a sample of 8 commercial banks listed in Bursa Malaysia. This study employed a panel data and static model which is the Fixed Effect Model to look at the link between bank profitability and the independent variables of bank size, liquidity, leverage, and capital adequacy. The empirical result showed bank size is the only important factor in bank profitability, while liquidity, leverage, and capital adequacy are not significant towards profitability. The data demonstrate that bank size had the biggest influence on bank profitability in Malaysia of all the characteristics studied. These suggested that monitoring credit and liquidity risk is crucial for bank decision-makers and should be taken into account to diversify resources and cut costs.

Keywords: *profitability, bank size, liquidity, leverage, capital adequacy*

1.0 INTRODUCTION

Profitability is, without a doubt, one of the most significant factors for businesses, as higher profit margins or profits for shareholders allow companies to reinvest in their operations, hire more people, develop new technologies, and implement improvements, allowing them to boost and increase their business value. Banks are not an exception; in reality, these companies, like any other business, are concerned with competitive strategies, efficiency levels, and risk assessment, to increase revenues. Furthermore, because they are a crucial component of a country's financial system, the function of the financial system plays a significant part in the effectiveness of the economic system (Vera-Gilces et al., 2020).

Financial ratios can be used to evaluate the profitability of a firm. The most prominent ratios, according to a previous study, return on equity, return on investment, and net interest margin (Flamini et al., 2009; Naceur & Goaied, 2008; Saona, 2011). Bank profitability, on the other hand, is determined by both internal and external variables. Only a stable economy with strong profitability can generate enough financial resources for long-term expansion, attracting both local and international interest and investment. Profitability is a useful tool for predicting future business success as well as a reliable basis for evaluating business results (Tharu & Shrestha, 2019).

According to Dao and Nguyen (2020) profitability has long been shown to be one of the key markers for the health of the banking industry. To be more precise, profitable banks have the capacity to diversify their operations in a way that effectively manages unsystematic risks. Malaysian banks, which are among Southeast Asia's largest, provide a diverse variety of financial and banking services. The Malaysian financial institutions are governed by Bank Negara Malaysia, which was established in 1959. It is the country's central bank, with responsibility for maintaining monetary and financial stability. Commercial banks, Islamic banks, Development Financial Institutions (DFIs), and Investment Banks are the four categories of banking in Malaysia. Malaysia's banking sector includes 27 commercial banks (19 of which are international), 16 Islamic banks, 11 investment banks, and non-bank financial entities (Bank Negara Malaysia, 2016).

It has been stated that every company's long-term viability depends mostly on its level of profitability. Although achieving profitability is the main objective of all commercial endeavours, the factors that influence profitability in developing nations have received less attention (Alarussi & Alhaderi, 2018). Thus, the goal of this research is to look at the determinants that impact banking institution profitability in Malaysia, with an emphasis on bank-specific features (internal factors) such as bank size, liquidity, leverage, and capital adequacy. Firm-level impacts are the most important type of influence in explaining variance in performance, according to earlier research (Goddard et al., 2009). As a result, the focus of this research is on bank-specific characteristics.

2.0 LITERATURE REVIEW

2.1 Profitability

Ayanda et al. (2013) defined bank profitability as a situation in which the money earned over a given period exceeds the money spent during that same period, whereas (Almumani, 2013) defined bank profitability as the return on assets, which is calculated using a formula that divides a bank's net profits by its total assets. There are several techniques to account for bank performance among the diverse interpretations by academic researchers, however, most academic researchers included (Staikouras & Wood, 2011) studies agreed that financial ratio, return on assets (ROA), is the most renowned approach employed. From 1994 to 1998, this research looked at the variables that influence European banks.

Internal and external variables impact the profitability of financial organisations. Internal determinants included bank-specific characteristics such as liquidity, bank size, and leverage, whilst external determinants included environmental elements outside banks' control. According to previous research, numerous studies that included both internal and external factors concluded that only internal variables influence bank profitability, whereas exterior determinants have no impact at all. This is supported by (Abuzar, 2013), which found that only internal variables such as cost, liquidity, and bank size have a favourable influence on the bank's profitability in Sudan, whereas external drivers have no effect.

Several studies, including Krishnan (2014), indicated that bank size is the most important indicator of a bank's profitability when only internal variables are considered. This condition is backed by resource-related theory, which states that as the size of the organisation grows, the company's financial resources become more accessible, resulting in a cheap cost of capital and great profitability. As a result, the financial indicator of return on assets is utilised in this section to focus solely on bank-specific factors that impact bank performance, with bank size, leverage, and liquidity as independent variables and profitability

as the dependent variable. The influences on internal components are the only macroeconomic elements that are considered in this study.

Alarussi et al. (2018) examine the elements determining profitability in 120 firms listed on Bursa Malaysia for the years 2012 to 2014 that were taken from the annual reports of the companies. The data were analysed using fixed-effects and pooled ordinary least squares regression. The results demonstrate a significant positive link between profitability, WC, assets turnover ratio, and business size (total sales). The findings also indicate a negative relationship between profitability and both the leverage ratio and the debt-equity ratio. Profitability is not significantly correlated with liquidity (current ratio).

2.2 Bank size

The size of a bank is generally described as the net total assets of banks. As the slogan "too big to fail" indicates, the current financial crisis has raised worries that banks that become too large may represent a risk to their financial viability. Banks may be motivated to participate in high-risk transactions because regulators function as the creditor of last resort. Banks are likely to desire fast expansion to become more lucrative. Because of their product and service variety, large banks, for example, may have a higher and more steady flow of income than small banks. However, some banks are losing money because of their expansion. These factors have a positive and negative impact on the relationship between bank size and profitability.

Profitability rises as the bank's size increases. According to Goddard et al. (2004), who studied the link between bank size, profitability, and growth in 148 countries and including around 15,000 commercial banks from 1988 to 2010, banks with a big scale expand at a modest pace but are believed to profit more than banks with a small scale. The profitability of a bank changes depending on its size, according to researchers.

Mergers and acquisitions of banks are smart strategies for a bank to grow in size. Bank mergers are required, according to Gyamerah & Benjamin Amoah (2015) since the size of the bank has a significant impact on profitability. According to the poll, the association between profitability and bank size is favourable when utilising quarterly data. This was based on the quarterly balance sheet and income statement data from Ukrainian banks from 2005 to 2009.

When Staikouras and Wood (2011) researched the factors impacting European bank profitability, they discovered that the outcome is negative for large-scale banks but favourable for small-scale banks. According to this survey, when banks develop, diseconomies of scale emerge, meaning that greater bank size may result in losses. Furthermore, marginal returns decline as a bank's size expands, resulting in lower average earnings. In terms of information and operational efficiency, smaller banks have a competitive edge. In summary, because huge banks cannot always ensure profit, there existed a negative association between bank size and profitability.

2.3 Leverage

The definition of leverage, according to Boadi et al., (2013), is total debt divided by total assets. One of the predictors of profitability has been leveraged. However, the study looked at insurance businesses in Ghana and found that there is a positive association between liquidity profitability and leverage.

According to Pattitoni et al., (2014), the higher the debt, the lower the return on equity. The findings of this study suggest that bank profitability and leverage have a negative connection. If a further study on Small and Medium Businesses (SMBs) is conducted, the same results will be obtained. The link between leverage and profitability, according to this study, is nonlinear.

However, Habib et al., (2016) intend to explore the relationship between profitability and leverage on economic efficiency firms using a sample size of 667 non-financial firms from Malaysia from 2013 onwards, with both dependent variables being the firm's equities price and market value, and independent variables being earnings per share, book value, and vector variable, among other variables. According to him, stockholders play a vital part in determining the firm's true worth because some investors like to raise the firm's wealth when making an investment decision. Furthermore, lowering internal expenses, such as environmental costs, will simply raise external costs, such as shareholder costs.

2.4 Liquidity risk

Liquidity risk refers to the chance of a company losing money if it fails to satisfy its short-term obligations (Bordeleau & Graham, 2010). It is because liquid assets like cash and government securities provide poor yields, a bank incurs an opportunity cost by keeping them. As a result, banks frequently maintain liquid assets that can be rapidly converted into cash to avoid insolvency due to liquidity shortages and to maximise profits. In contrast to Molyneux and Thornton (1992), which found a negative link between bank profitability and liquidity, Bourke, (1989), found a positive association between bank profitability and liquidity.

The liquidity ratio, bank size, and management effectiveness were all found to have a substantial impact on the profitability of Syrian banks (Al-Jafari & Alchami, 2014). As a result, banks will be obliged to maintain high liquidity levels to fulfil depositor demand in a narrow financial market with few options for diversified income during difficult times.

According to Sulieman (2014), who investigated liquidity risk and its influence on 22 Pakistani banks from 2004 to 2009, he observed a substantial association between banks' liquidity risk and their risk of default. This is due to a rise in deposits, which results in increased bank profitability and decreased reliance on the central bank.

However, several researchers have found a negative correlation between profitability and liquidity risk. Bordeleau and Graham (2010) looked into both US and Canadian institutions that were engaged between 1997 and 2009. According to the data, liquidity risk and bank profitability have a nonlinear relationship. As a consequence of the findings, it is clear that keeping liquid assets on hand will lower the liquidity risk. As a result, it will have resulted in

significant bank profitability. On the other hand, a bank's profitability may suffer if it has too many liquid assets. It also raises the possibility of running out of money.

Waleed et al. (2016) investigated the effect of the trade-off between liquidity and profitability in the banking sector of the Pakistan Stock Exchange from 2010-2015. They discovered a clear relationship between bank liquidity ratios and Tobin q, return on equity, return on assets, and net profit margin. The link between liquidity and return on investment and earnings per share, however, is minimal. Thus, the results are mostly reasonable given that policymakers are developing new rules for a suitable amount of liquidity for banks. This will increase shareholder earnings while also maximising the bank's use of its resources.

2.5 Capital Adequacy

Deposit is one of the profitability indicators that is regarded as a liability, and we know that it is one of the most important sources of funding in commercial banks, with a significant impact on profitability. High deposits indicate a bank's profitability, whilst low deposits indicate a bank's low profitability. According to Staikouras and Wood (2011), the equity-to-assets ratio may be used to assess a bank's capital strength (EA). This ratio should be used to give an average level of financial safety and soundness by representing the bank's capacity to absorb any unanticipated losses or risks.

The dependent variable is shown to be highly influenced by capital sufficiency (bank profitability). Existing research, such as Thota's (2013), backs up this assertion. According to the researcher, commercial banks' net income on assets rises as their capital adequacy rises at the same time. As a result, commercial bank profitability rises, suggesting a positive relationship between capital adequacy and bank profitability. Second, banks with high capital, which is often less risky, will have higher projected earnings and, as a result, financial crises such as liquidation will be avoided since predicted funding costs will be lower (Dietrich & Wanzenried, 2009). This analysis also demonstrates that profitability and capital sufficiency have a persistent positive relationship.

Other authors, however, have rejected this claim, including (Pasiouras & Kosmidou, 2007). They claimed that because banks' capital sufficiency is high, there is a negative link between the equity-to-asset ratio and bank profitability, indicating that the banks' performance is less at risk. When a bank is a low risk, it will have lower profits since it will take efforts to keep itself secure. This statement is comparable to the conventional risk hypothesis, in which the two variables have a negative association. Furthermore, one of the factors contributing to the adversely associated association between capital adequacy and bank profitability is inefficiency in utilising and managing capital. They discovered that the equity-to-asset ratio is inversely related to bank profitability (Aremu, 2013; Mustapha, 2013).

According to Batten and Vo (2019), they examine the factors that influence bank profitability in Vietnam from 2006 to 2014. Their study employed panel data methods with a special dataset, and the results show that profitability is significantly impacted by bank size, capital sufficiency, risk, expenditure, and productivity. The finding implies that macroeconomic factors and features of the banking sector have an impact on bank profitability. However, we discover that across profitability indicators, the direction of causation varies.

3.0 METHODOLOGY

To investigate the internal variables that impact banks' profitability in Malaysia, this study focused solely on the 8 listed commercial banks on the Malaysian stock exchange, with a data collecting period spanning 2011 to 2020. The reason behind choosing the local banks in Malaysia is to identify their performance of them, and whether their result will turn out positive or negative with the size of the banks, leverage, and liquidity towards profitability. Besides that, the year 2011 to 2020 and the available data during this period are important steps that need to be considered in choosing these 8 local commercial banks. 8 local commercial banks listed below were chosen to identify their performance in terms of their profitability:

Table 1: List of local commercial banks in Malaysia

No.	Local Commercial Banks
1.	Affin Bank Bhd
2.	Alliance Bank Malaysia Bhd
3.	AmBank Malaysia Bhd
4.	Hong Leong Bank Bhd
5.	Malayan Banking Bhd
6.	MBSB Bank Bhd
7.	Public Bank Bhd
8.	RHB Bank Bhd

3.1 Model specification

This model is accurate in analysing the factors that affect commercial banks' profitability in Malaysia. In order to capture the link between the factors that influenced profitability, this study used panel data and a static model called the Fixed Effect Model. The empirical model is therefore expanded as shown below.

$$PROFIT_{it} = \alpha + \beta_1 BS_{it} + \beta_2 LV_{it} + \beta_3 LQ_{it} + \beta_4 CA_{it} + \varepsilon_{it} \quad (1)$$

P_{it} = Profitability i at time t
BS_{it} = Bank size i at time t
LV_{it} = Leverage i at time t
LQ_{it} = Liquidity i at time t
CA_{it} = Capital adequacy i at time t

Table 2. The variables, proxy, symbol and expected sign used

Variables	Proxy	Symbol	Expected sign
Dependent variable			
Profitability	Return on asset	PROFIT	N/A
Independent variable			
Bank size	Size	BS	Positive
Leverage	Debt to equity	LV	Positive
Liquidity	Current Ratio	LQ	Positive
Capital adequacy	Equity to asset ratio	CA	Positive

4.0 FINDINGS

4.1 Descriptive analysis

Table 3 below shows descriptive statistics for dependent and independent variables such as profitability (PROFIT), bank size (BS), leverage (LV), liquidity (LQ), and capital adequacy (CA) that have been used as proxies for this study. In a group of numbers, the mean is the most common or average value. The leverage (LV) has the highest mean of 116.48 percent, indicating that the bank is expanding its debt financing aggressively. Next, among all variables, profitability (PROFIT) has the smallest standard deviation, indicating that there is very little fluctuation in the dataset and that it is closer to the mean, potentially increasing profitability in the future. It also reveals that the liquidity (LQ) minimum is 0.08, the lowest rate suggested in Malaysia's banking sector's current ratio. Finally, when it comes to the minimum rate, profitability (PROFIT) has a lower rate of 2.83 when compared to the other variables.

Table 3: Descriptive analysis

Variable	Mean	Std. Dev	Min	Max
PROFIT	1.29	0.38	0.45	2.83
BS	8.15	0.42	7.24	8.93
LV	116.48	47.32	46.87	250.36
LQ	1.17	1.24	0.08	9.33
CA	16.37	3.11	5.68	25.09

Notes: Profitability (PROFIT), Bank Size (BS), Leverage (LV), Liquidity (CR), Capital adequacy (EA)

4.2 Panel Specification Test

The next step is to figure out which panel data estimator is carried out using a static model such as pooled ordinary least squares (POLS), random effects (RE), or fixed effects (FE) model, which is best for this study. The F-test (p-value 0.0000) shows it is less than 0.05, the BP-LM (p-value 0.0000) suggests it is less than 0.05, and the Hausman test (p-values 0.001) also suggests it is less than 0.05, as shown in Table 4. As a result of the panel specification tests, the fixed effects (Fe) utilising the Hausman test model is the most acceptable analytical since the p-value is 0.0010, which is less than 0.05 if the rules of thumb are followed (Pasiouras & Kosmidou, 2007).

Table 4: Panel Specification Test

Model	F-Test (p-value of the tests)	BP-LM	Hausman	Technique
Model 1	0.0000	0.0306	0.0000	Fixed Effect

4.3 Regression Result: Determinants of Profitability

Table 5 demonstrates that bank size (BS) has a negative relationship and association with profitability (PROFIT). This is so because a bank's bank size (BS) is crucial. It implies that a bank with more assets and a greater size would be more profitable overall. The profitability (PROFIT) indicates that the size of the bank (BS) influences its performance, with giant scale banks making more money than small scale banks. According to Pasiouras and Kosmidou (2007), economies of scale have allowed banks to benefit greatly and are expected to continue to do so in the future, outpacing small banks in terms of profit.

Meanwhile leverage (LV) demonstrates negative effect and there is not significant to profitability. In other words, leverage (LV) has little bearing on profitability (PROFIT). According to the research Yoon and Jang (2005), the firm's leverage had a detrimental effect on the company's profitability because of the high debt rates. Furthermore, liquidity (LQ) as measured by the current ratio shows a positive but not statistically significant with profitability (PROFIT). This is due to the fact that profitability is not reliant on cash flow, and liquidity (LQ) is crucial for financial institutions like banks where it is used to pay for businesses' ongoing commitments. Although profitability is not based on monetary base, Alarussi and Alhaderi (2018) asserts that liquidity is crucial to satisfy the firm's responsibilities. However, the equity to asset ratio, which measures capital adequacy (CA), has a negative sign and is not statistically significant, indicating that the factors cannot be taken as absolute predictors of the profitability of banking institutions in Malaysia.

Table 5: Determinants of Profitability

Variables	Fixed Effects
BS	-1.6981***
	(0.5613)
LV	-0.0016
	(0.001)
LQ	0.0468
	(0.0362)
CA	-0.0143
	(0.018)
Constant	15.6***
	(4.4791)
Breusch-Pagan	0.306
Hausman	0.0000
Groups (obs)	80

Notes:
(1) t statistics in parentheses
*(2) * p < 0.1, ** p < 0.05, *** p < 0.01*
(3) Definition of variables: Bank Size (BS), Leverage (LV), Liquidity (LQ) and Capital adequacy (EA)
(4) The chosen model is Fixed Effect, and this model is successful as our P-value is < 0.05

5.0 CONCLUSION

In conclusion, the goal of this study is to assess the performance of Malaysia's commercial banks in terms of their profitability for 10-year period beginning in 2011 and ending in 2020. This study concentrates on eight commercial banks that are listed in Bursa Malaysia. In order to examine the relationship between bank profitability and the independent variables of bank size, liquidity, leverage, and capital adequacy, this study used panel data and a static model (Fixed Effect Model). Test statistics demonstrate the model's significance and outcome consistency. Three investigations, including a panel specification test, a study of descriptive statistics, and a study of profitability, made up the findings. The bank size (BS) exhibits a negative relationship and significant at a 1 percent level association with profitability (PROFIT). This suggests that bank size may have a detrimental impact for bureaucratic and other reasons. As a result, one may anticipate that the size-profitability connection is not linear. While, the leverage (LV) and liquidity (LQ) and capital adequacy (CA), did not show any significant effect on profitability (PROFIT). The findings of earlier studies may not have been consistent due to data collection from various nations and the time used.

The study suggests, for bank decision-makers, monitoring credit and liquidity risk is essential and should be taken into consideration in order to diversify resources and reduce costs. One of the goals of the research's future directions is to broaden the area of analysis by including time and dividing the data sample into groups of nations. The second piece of advice is for future researchers to utilise multiple banks, different sorts of data, or different years from this work to provide the most intriguing results. Additionally, incorporating data from other ASEAN nations may be advised for future scholars.

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