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Determinants of Commercial Banks Profitability in Malaysia

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Abstract

The main goal of this study is to identify the factors that influence the profitability of commercial banks in Malaysia by examining recent data from 2010 to 2020. To achieve this objective, the study uses Return on Assets (ROA) as a measure to assess the relationship between capital adequacy, credit risk, management efficiency, and liquidity risk. The research collects data on ROA, capital adequacy, credit risk, management efficiency, and liquidity risk from Bursa Malaysia and company websites. Additionally, secondary data sources are utilized to gather information and provide evidence for the analysis. The aim of the investigation is to assess whether the determinants of commercial bank profitability in Malaysia are capital adequacy, credit risk, management efficiency, and liquidity risk. Multiple Linear Regression is employed to examine the factual relationship and evaluate the hypotheses, and the software used to analyze the results is E-views 2012.

Keywords: Determinants, Commercial Banks, Profitability, Return on Asset, Capital Adequacy, Credit Risk, Management Efficiency, Liquidity Risk

Introduction

This study aims to evaluate the determinants of commercial banks' profitability in Malaysia using data from 2010 to 2020. The banking sector in Malaysia is diverse and well-developed, with 27 commercial banks, 11 investment banking institutions, 18 Islamic banking institutions, and non-bank financial organizations. Profitable banks are crucial for the long-term viability of the economy, as they can serve as stabilizing forces during financial crises. Factors that influence commercial bank profitability include interest rates, overall state of the economy, capital adequacy, management efficiency, asset quality, and liquidity. The study conducted by Ongore and Kusa (2013) found that liquidity management and external factors had no significant impact on the performance of Kenyan banks, while all other variables had a substantial impact.

Malaysia has had a trade-to-GDP ratio of over 130 percent since 2010, making it one of the most open economies in the world. Malaysia's economy has been growing at an annual rate of 5.4 percent since 2010 and is expected to achieve high-income status by 2024.

However, the COVID-19 pandemic has had negative consequences for Malaysians, particularly those living in poverty. As of July 2020, 5.6 percent of Malaysian families are classified as poor. Despite the challenges, Malaysian banks continue to lend to creditworthy individuals, and the riskiest loans represent only 10.8 percent of all loans.

Literature Review
Profitability Theories

A bank's profitability is a critical statistic for evaluating its financial performance. According to this definition, profitability is a business' ability to make money from its sales (Ghafeer, 2016). This notion of profit is essential for every organisation or business to continue. As well as the net amount of fixed and variable cost profit is also defined as the excess of income after subtracting expenses and costs from the total amount of revenue.

In Islam, profit in Arabic is called Al-ribh, which means the development or expansion of the company, implying the surplus and increase of capital as a result of the company's operations. ROE (Return on Equity) and ROA (Return on Assets) are often used to measure profitability. A bank's ability to convert assets into net income is illustrated in this example. In banking, ROE is a measure of the bank's return on equity (ROE) (Ben, 2021). This is important information for the bank's shareholders, who can see whether or not they have made money.

Several studies have been conducted on the profitability of Vietnamese banks, with factors such as capital adequacy, level of risk, productivity, and bank operating expenses found to have a positive impact, while foreign ownership, cost-to-income ratio, and degree of credit risk have a negative effect (Batten & Vo, 2019). Additionally, Do, Nguyen, and Nguyen (n.d.) identified several of internal and external factors affecting commercial banks' profitability in Vietnam during the years from 2013 to 2017. The authors found that state ownership, asset size, and macroeconomic variables such as GDP and inflation had no statistically significant effect, but the capital structure, liquidity risk, and profitability were linked for the first time.

According to Durah et al (2016) a bank's profitability can be evaluated using various metrics. Profitability refers to the ability of a company to generate profits from its sales Profitability is an important measure of a financial institution's overall financial health and can be evaluated using various methods based on factors such as sales, total assets, and working capital (Brigham, 2015). To determine a company's earnings per unit of business, factors such as total assets, sales volume, cash, and investments can be taken into account (Brigham, 2015).

Return on Asset (ROA)

According to Husnan and Pudjiastuti (2015), ROA is a tool that measures a company's net income in relation to its total assets. On the other hand, Hanafi (2016) describes ROA as an analytical instrument that quantifies a company's potential to generate net income based on the amount of specific assets it possesses.

The ROA ratio is a key indicator of a bank's financial success, with a higher value reflecting better performance. This ratio measures a company's ability to manage its assets effectively and generate profits.

Return on Assets (ROA) is a profitability measure that evaluates a company's effectiveness in utilizing its assets to generate profits, according to (Brigham, 2015). This ratio assesses how well a company has spent its money over a specific period. A higher ROA implies that the company has greater potential to earn profits.

ROA, which is calculated as net profit after taxes divided by total assets, is a common measure of a bank's ability to generate profits using its assets (Polat & Al-khalaf, 2014). Several studies have found a positive correlation between ROA and the capital adequacy ratio, including (Polat and Al-khalaf, 2014; Asma and Khadidja, 2015). ROA is also frequently used as a dependent variable in academic research on financial performance (Polat & Al-khalaf, 2014).

Capital Adequacy

According to Munir (2017), while profitability and capital adequacy ratios show a strong correlation, size does not have an effect on this relationship, and operational efficiency has a negative impact. To ensure the stability of their financial systems during crises and protect depositors' funds, Islamic banks are required to maintain sufficient capital, and their high levels of equity demonstrate their ability to meet their financial obligations (Zarrouk et al., 2016).

Credit Risk

In the banking sector, credit risk is referred to as the possibility that a customer will not be able to pay their debts or fulfill their financial obligations to the bank. This type of risk is considered to be the most crucial for banks because the interest earned on loans and credit products plays a significant role in generating their profits (Almekhlafi et al., 2016). Adekunle, Alalade, and Agbatogun (2015) defined credit risk in the banking industry as the possibility of a borrower defaulting on their debts or failing to fulfill their financial obligations to the bank.

Loans and advances are typically the most significant source of risk for financial institutions (Okafor and Fadul, 2019). Effective credit risk management is critical to achieving good performance in commercial banking, as noted by (Sadgrove, 2016). Therefore, commercial banks must use credit management tools and procedures to monitor and analyze lending risks. Credit risk is vital to the operations of a bank as lending money is a core aspect of its business.

Management Efficiency

Efficiency in banking refers to the ability of a bank to utilize its resources optimally to maximize revenue (Aguenaou, 2017). The study employed the CAMEL framework, where Capital Adequacy, Asset Quality, Management Efficiency, and Earnings are considered. In the Moroccan banking industry, the significance of liquidity and performance were crucial in assessing the relevance of the banking association. The study found that profitability had an inverse relationship with management efficiency, while the other factors had a positive effect.

Efficiency refers to the ability of a bank to maximize output by minimizing input. Banks that operate efficiently can achieve higher output levels using fewer resources, which can contribute to their long-term sustainability. According to Cvilikas and Dumbliauskiene (2016), efficiency can be measured by the optimal ratio between input and output in the product development process, which determines the best allocation of available resources to achieve the maximum potential output. Panta and Bedari (2019) observed that the level of cost efficiency in Nepalese commercial banks has significantly increased over time, with smaller banks exhibiting higher cost efficiency than medium-sized banks.

Liquidity Risk

Liquidity refers to a firm's capacity to pay off its short-term obligations, including matured debt. A high level of liquidity in a bank may negatively impact its profitability.

Conversely, a lower level of liquidity may result in increased profitability, but may also lead to reduced liquidity. Saunders and Cornett (2011) noted that in the event of a sudden increase in withdrawals by depositors, banks may need to quickly liquidate their assets to meet their obligations.

According to Ruozi and Ferrari (2013), liquidity risk arises for banks due to factors such as an increase in withdrawal demand, market disruption, or a lack of market depth, which may lead to a shortage of funds to cover withdrawal requests.
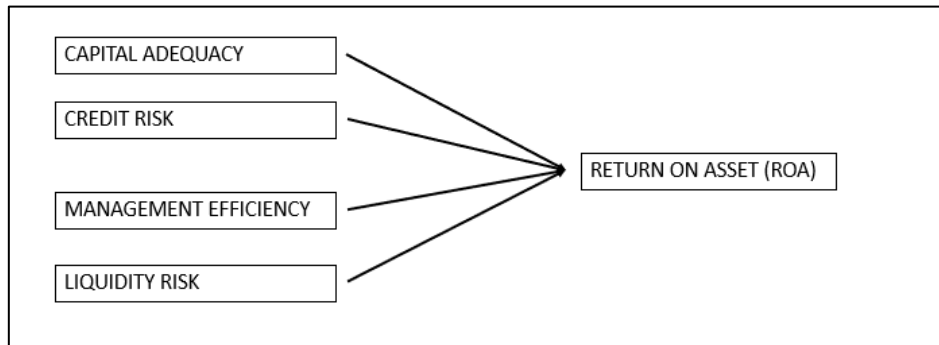
Figure 1. Theoretical Framework for the study (Sabrina, 2019)

Analysis and Results
Multiple Linear Regressions

In multiple linear regression there are three or more observable variables, depending on 2 or more explanatory factors or regresses. The theoretical multiple model regression employed for this investigation are as follows:

$$ROA = C + \beta_1 CAP + \beta_2 CR + \beta_3 ME + \beta_4 LR + \epsilon$$

Where,

ROA = Return on Asset
C = Constant number of equations
CAP = Capital Adequacy
CR = Credit Risk
ME = Management Efficiency
LR = Liquidity Risk
ϵ = Error

Table 4.1

Result of Multiple Regression Analysis

Variables	Coefficient	P-Value
C	0.038219	0.0337
CAP	-0.137167	0.0383
CR	0.096452	0.0995
ME	-0.009757	0.0645
LR	-0.90563	0.5778
Adjusted R-Squared	00.174393	
F-Statistics	0.108344	
Probability (F-Statistic)	2.640368	

Regression analysis is employed to examine the association between multiple variables and determine whether the influence of the dependent variable is accounted for by the independent variables. As a result, the econometric equation is solved to obtain the coefficient value, and the econometric formula is expressed as follows:

ROA= 0.0382 + (-0.1372)CAP + 0.09645 CR +(-0.009758) ME + (-0.9056) LR+E:

According to the equation, only credit risk had a positive correlation with return on asset, while the other independent variables (capital adequacy, management efficiency, and liquidity risk) had a negative correlation with return on asset.

F-statistic

The result is 2.6404 based on table 4.1, and the F-statistic P-value is 0.04451. The null hypothesis must therefore be rejected because the value has a significance level of less than 5 percent. This shows that at least one of the determinants is useful in evaluating the profitability of the commercial banks in Malaysia.

R-squared

Based on table 4.1 the value is 0.174393 which means that 17.44% of the changes in the commercial banks' return on asset can be explained by the changes in independent variables which are capital adequacy (CAP), credit risk (CR), management efficiency (ME) and liquidity risk (LR).

Adjusted R-squared

The value of adjusted R-squared is 0.108344, 10.83%. It shows that 10.83% of the changes in company return on asset is explained by capital adequacy (CAP), credit risk (CR), management efficiency (ME) and liquidity risk (LR) adjusted for the degree of freedom.

T-Statistics

Using the p-value approach, the relationship between the dependent variable and the independent factors can be expressed based on the above results by creating a t-test using the probability of the variables. The first component is capital adequacy (CAP), and the coefficient value is -0.1372, which represents a decrease of 13.72% for each one percent increase in gross domestic product, assuming other factors remain constant. The probability

value is 0.0337, which is less than the 5 percent significance level. Therefore, the null hypothesis can be rejected, indicating that changes in the CAP would have a significant impact on return on assets.

The second component is credit risk (CR), and the coefficient value is 0.09645, which indicates an increase of 9.645% for each one percent increase in inflation rates, assuming other variables remain constant. The probability value is 0.0995, which is greater than the 5 percent significance level. Thus, the null hypothesis cannot be rejected, indicating that changes in credit risk would have an insignificant effect on return on assets.

The third component is management efficiency (ME), and the coefficient value is -0.009757, representing a decrease of 0.9757% for each one percent increase in inflation rates, assuming other variables remain constant. The probability value is 0.0645, which is greater than the 5 percent significance level. Therefore, the null hypothesis cannot be rejected, indicating that changes in management efficiency would have an insignificant effect on return on assets.

The fourth indicator is liquidity risk (LR), and the coefficient value is -0.9056, indicating a decrease of 90.56% for each one percent increase in exchange rates, assuming other factors remain constant. The probability value is 0.5778, which is greater than the 5 percent significance level. Thus, the null hypothesis cannot be rejected, indicating that changes in liquidity risk would have an insignificant effect on return on assets.

Correlation Analysis

Correlation analysis is the analysis that seeks to see the existence in any linear relationship between dependent and independent variables. The hypotheses that are related to the covariance analysis are such follows

Table 4.2
Result of Correlation Analysis

Variables	Correlation	Probability
Correlation	-0.272403	0.0442
Probability	-0.162790	0.2350
ROA,	-0.287742	0.0332
CAP	-0.214575	0.1157

Notes: The dependent variable is return on assets (ROA). The independent variables are capital adequacy (CAP), credit risk (CR), management efficiency (ME) and liquidity risk (LR).

The study conducted a correlation analysis to determine the relationship between the independent variables (capital adequacy, credit risk, management efficiency, and liquidity risk) and the dependent variable (return on asset) in commercial banks in Malaysia. The results of the analysis were presented in Table 4.2, which shows the correlation matrix between the variables. A correlation value close to -1 indicates a strong negative relationship, a correlation value close to +1 indicates a strong positive relationship, and a correlation value of zero indicates no relationship between the variables.

The analysis found that capital adequacy has a weak negative relationship with return on asset (correlation value of -0.2724), and the probability value is significant at 0.05 level of significance (0.0442). This indicates that capital adequacy has a significant relationship with return on asset. On the other hand, credit risk has a weak negative relationship with return

on asset (correlation value of -0.1628), but the probability value is not significant at 0.05 level of significance (0.2350), indicating that credit risk has an insignificant relationship with return on asset.

Furthermore, management efficiency has a negative relationship with return on asset (correlation value of -0.2877), and the probability value is significant at 0.05 level of significance (0.0332), indicating that management efficiency has a significant relationship with return on asset. Likewise, liquidity risk also has a negative relationship with return on asset (correlation value of -0.2146), but the probability value is not significant at 0.05 level of significance (0.1157), indicating that liquidity risk has a statistically insignificant relationship with return on asset.

In summary, the study found that capital adequacy and management efficiency have a significant relationship with return on asset, while credit risk and liquidity risk have an insignificant relationship with return on asset. Additionally, none of the independent variables have a positive relationship with return on asset.

Conclusion

The study employed various tests and regression analysis on panel data using E-View software to obtain significant findings. The objective of this study is to contribute to the existing literature on the determinants of commercial banks profitability in Malaysia. Specifically, the study investigates the impact of four key factors, namely capital adequacy (CAP), credit risk (CR), management efficiency (ME), and liquidity risk (LR), on the profitability of commercial banks, as measured by Return on Asset (ROA).

Capital Adequacy

The study's primary measure of bank performance was return on assets (ROA), with capital adequacy playing a critical role in preventing banks from becoming insolvent before they can absorb losses. Regulatory authorities use the capital adequacy ratio (CAR) to assess a bank's capital adequacy and resilience to stress tests, and the correlation analysis revealed a negative association between capital adequacy and ROA.

According to Mili et al (2014), capital adequacy is a crucial indicator of bank profitability, in both developed and developing countries. The capital adequacy ratio (CAR), calculated using risk-weighted credit exposures, demonstrates a bank's available capital to absorb various risks. The primary objective is to demonstrate that banks can withstand losses up to a certain amount before becoming insolvent. In addition, the cost-to-income ratio reflects rising costs relative to profits and provides insight into a bank's management quality. Profitability and cost efficiency exhibit a negative correlation, with a negative coefficient indicating that the bank's ability to save money declines as profits increase.

Research has shown a negative correlation between capital adequacy and ROA, with a negative coefficient (Dawood, 2014). The capital adequacy ratio measures a bank's ability to meet obligations and manage credit and operational risks. Depositors' funds are adequately protected when a bank has high profitability and capital adequacy ratios. Pradhan and Shrestha (2016) discovered a negative correlation between capital adequacy and ROA, which highlights the importance of maintaining adequate capital levels to ensure long-term financial stability.

Credit Risk

The analysis of credit risk in the study revealed a negative correlation between credit risk and return on asset, indicating that an increase in credit risk leads to a decrease in the bank's profitability. The importance of financial management in banking cannot be overstated, as a bank's primary source of revenue is its ability to finance its clients. According to Abbas et al (2014), a bank's level of capital plays a crucial role in its ability to endure losses and insolvency, and to achieve long-term growth. The bank's management of credit risk is a key determinant of its performance and overall quality.

According to Funso et al (2012),The study found that as a bank increases the number of loans offered to clients, it leads to better financial performance, while credit risk has a negative impact on the efficacy of ROA-related factors.Credit risk can be attributed to various factors such as bad management, ineffective loan policies, interest rate volatility, weak capital and liquidity ratios, inadequate credit appraisal, improper lending procedures, bad lending underwriting, government intervention, and ineffective central bank regulation.

Management Efficiency

The findings of the study reveal a negative correlation between management efficiency and return on asset, indicating that as management efficiency increases, return on asset decreases. In examining the banks, the researchers analyzed various factors such as operating costs, asset quality, management efficiency, size, capital adequacy, and liquidity (Flamini et al., 2009; Athanasoglou et al., 2006). The study adopted the acronym CAMEL, which stands for Capital Adequacy, Asset Quality, Management Efficiency, Earning Performance, and Liquidity, to determine the bank's profitability. The study shows that capital adequacy has the greatest impact on a bank's efficiency, while profitability has a negative relationship with management efficiency.

According to Olukotun et al (2013), bank failures frequently result from poor management and significant capital exposure risks. Such risks may arise from operational inefficiencies, insufficient capital, banking regulations or prudential guidelines, among other factors, causing a loss of credibility for the banking system and significant losses for depositors. For example, in 2017, Diamond and Skye banks in Nigeria were taken over or sold due to issues such as low profit margins, high administrative expenses, poor risk management, non-performing loans, and corporate governance problems. However, Suganya and Kengatharan (2018) reported that management efficiency did not significantly impact profitability.

Liquidity Risk

The correlation analysis test shows a negative coefficient value, indicating a negative correlation between liquidity risk and return on assets. Liquidity risk, defined as the risk of being unable to sell assets at a reasonable price, is a major concern for banks. According to Muranaga and Ohsawa (2002), liquidity risk occurs when banks are required to sell their assets quickly and at a fair market value but cannot do so due to weak market conditions or the urgency of the situation. This can result in financial hardship and loss of income for the bank. Large withdrawals of deposits can also cause liquidity traps for banks (Kumar, 2008).

Other factors that can create serious liquidity concerns for banks include large, long-term commitment loans, which may become difficult to liquidate during acute liquidity crises (Kashyap et al., 2002). In fact, studies have found a negative and significant relationship between liquidity and profitability in Sri Lanka (Shafana, 2013). Moreover, liquidity risk has

been shown to have a negative impact on both return on assets and return on equity, especially for Islamic banks with wider funding gaps, which are forced to rely more heavily on external funding to cover their funding needs during a crisis, thus increasing their funding costs (Noraini, 2012).

Recommendations

For future research, it is recommended that the scope of examination into factors contributing to commercial banks' profitability in Malaysia should be expanded. This could include examining other countries besides Malaysia, such as Japan, Indonesia, and Thailand, which were not included in this study. It is expected that commercial banks worldwide will experience a significant increase in profitability as a result of such research. To achieve more precise and exact findings, future studies should incorporate additional dependent and independent variables, such as Growth Rate of GDP, Inflation Rates, Exchange Rates, and Return on Equity. Also, it is suggested that more data and samples be included since this study only covers data from 2010 to 2020. Increasing the sample size will lead to greater accuracy and specificity in study findings, as a larger degree of freedom will allow for a more reliable and comprehensive conclusion.

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