# EMPIRICAL STUDY ON THE EFFECT OF FINANCIAL PERFORMANCE ON BANK STOCK PRICES IN MALAYSIA



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# EMPIRICAL STUDY ON THE EFFECT OF FINANCIAL PERFORMANCE ON BANK STOCK PRICES IN MALAYSIA

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**Abstrak**

Sektor perbankan memainkan peranan penting dalam kestabilan ekonomi dengan berfungsi sebagai pengantara utama bagi simpanan dan pelaburan. Kajian ini meneliti kesan prestasi kewangan terhadap harga saham bank di Malaysia bagi tempoh 2010 hingga 2023. Indikator kewangan utama yang dikaji termasuk Pinjaman Tidak Berbayar (NPL), Nisbah Pinjaman kepada Deposit (LDR), Nisbah Kecukupan Modal (CAR), Nisbah Hutang kepada Ekuiti (DER), Pulangan ke Atas Aset (ROA), dan Margin Keuntungan Bersih (NPM). Kajian ini menggunakan pendekatan kuantitatif dengan analisis regresi berganda untuk menentukan hubungan antara prestasi kewangan dan pergerakan harga saham. Data sekunder dikumpulkan daripada laporan tahunan dan penyata kewangan bank yang terlibat. Keputusan analisis menunjukkan bahawa ROA mempunyai kesan positif yang signifikan terhadap harga saham, manakala NPL dan DER mempunyai hubungan negatif. Penemuan ini menunjukkan bahawa bank dengan keuntungan tinggi cenderung mendapat kepercayaan pelabur, manakala risiko kredit yang tinggi boleh mengakibatkan kejatuhan harga saham. Hasil kajian ini memberikan implikasi penting kepada pelabur, penganalisis kewangan, dan pembuat dasar dalam merumuskan strategi pelaburan dan dasar perbankan. Kajian ini juga menyumbang kepada pemahaman lebih mendalam mengenai faktor-faktor yang mempengaruhi pasaran saham di sektor perbankan Malaysia.

**Kata kunci:** Prestasi kewangan, harga saham, bank Malaysia, NPL, LDR, CAR, DER, ROA, NPM.

## Abstract

The banking sector plays a crucial role in economic stability by serving as the primary intermediary for savings and investments. This study examines the impact of financial performance on bank stock prices in Malaysia from 2010 to 2023. Key financial indicators analyzed include Non Performing Loans (NPL), Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Debt to Equity Ratio (DER), Return on Assets (ROA), and Net Profit Margin (NPM). This study adopts a quantitative approach, utilizing multiple regression analysis to determine the relationship between financial performance and stock price movements. Secondary data were collected from the annual reports and financial statements of selected banks. The findings indicate that ROA has a significant positive effect on stock prices, while NPL and DER exhibit a negative relationship. These results suggest that highly profitable banks tend to gain investor confidence, whereas high credit risk may lead to declining stock prices. The findings of this study provide important implications for investors, financial analysts, and policymakers in formulating investment strategies and banking policies. This study also contributes to a deeper understanding of the factors influencing the stock market in Malaysia's banking sector.



**Keywords:** Financial performance, stock prices, Malaysian banks, NPL, LDR, CAR, DER, ROA, NPM.

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I sincerely hope that this study will make a meaningful contribution to the academic field and the broader community. I also acknowledge that this study has its limitations, and I welcome any constructive criticism and suggestions for future improvements. May all those who have extended their kindness and support be abundantly rewarded.

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## List of Abbreviations

| | |
|---|---|
| NPL | Non Performing Loans |
| LDR | Loan to Deposit Ratio |
| CAR | Capital Adequacy Ratio |
| DER | Debt to Equity Ratio |
| ROA | Return on Assets |
| NPM | Net Profit Margin |

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study

Field of banking has pivotal role to ensure economic stability, serving as the primary intermediary for savings and investments. In Malaysia, this industry significantly influences both macroeconomic stability and microeconomic conditions, making it essential for investors and policymakers in understanding the relation among bank performance also stock prices. Given that banks constitute a substantial portion of stock indices, assessing financial stability and predicting market trends require a thorough examination of various financial performance indicators. This study sought to examine the influence of critical financial variables, namely Non Performing Loan (NPL), Loan to Deposit Ratio (LDR), Capital Adequacy Ratio (CAR), Debt to Equity Ratio (DER), Return On Assets (ROA), and Net Profit Margin (NPM) on stock prices of selected Malaysian banks from 2010 to 2023. Previous studies have established that these indicators significantly influence stock price fluctuations (Wijayanto, 2015). By exploring these financial metrics, this study seeks to optimize understanding about complex relations of bank performance and stock market behavior (Fordian et al., 2017).

The Malaysian banking industry comprises both domestic and foreign financial institutions and remains a cornerstone of the country's economic framework. That industry has prominent role to promote economic activity also stabilizing financial system under Bank Negara Malaysia supervision. Consumer expenditure and corporate investments are significantly reliant on the efficacy and stability of the banking industry. Consequently, a comprehensive understanding of the industry's

dynamics is imperative for key stakeholders, including policymakers, investors, and financial analysts.

While extensive study has been undertaken about relation towards banking performance and stock prices in developed economies, there remains a gap in literature concerning emerging markets such as Malaysia. The economic structures, regulatory environments, and investor behaviors in emerging markets differ significantly from those in developed economies, thereby necessitating localized studies tailored to these unique characteristics. Findings derived from developed markets may not be directly applicable to Malaysia, reinforcing the need for empirical study to formulate evidence based investment strategies and policy decisions. This study examines financial performance indicators that correlate with stock price movements of selected Malaysian banks over the period 2010 to 2023. The financial indicators under investigation NPL, LDR, CAR, DER, ROA, also NPM serve as critical measures regarding the financial healthiess of the bank, risk management capabilities, also investment potential. For example, a high NPL ratio may indicate increased credit risk, while a robust CAR suggests a bank's resilience against financial shocks.



The global economy has undergone significant transformations between 2010 and 2023, characterized by recovery efforts, digitalization, and geopolitical tensions. At the beginning of the decade, economies were still recovering from the 2008 to 2009 global financial crisis, which prompted governments to implement expansionary monetary policies, including quantitative easing, to stimulate growth (Krugman, 2013). While the United States experienced stable economic growth and declining unemployment, Europe grappled with the Greek debt crisis, which destabilized regional financial markets. The rise of digital economies, driven by tech giants such as Apple, Google, Amazon, and Facebook, further reshaped global financial landscapes

(Brynjolfsson & McAfee, 2014). However, global economic growth was hampered by the U.S.-China trade war in 2018 to 2019, which led to increased tariffs and supply chain disruptions (Bown, 2021).

The COVID-19 pandemic in 2020 exacerbated economic instability, triggering lockdowns and social restrictions that severely impacted industries such as tourism, aviation, and retail (Di Mauro & Baldwin, 2020). In response, governments implemented large scale fiscal stimulus measures and lowered interest rates to stabilize their economies (IMF, 2021). By 2021 until 2022, inflationary pressures emerged due to supply chain disruptions, rising energy prices, and increased raw material costs, are encouraging central banks to increase interest rates in oder to mitigare inflation (Bernanke, 2022). Additionally, recent Russia-Ukraine conflict in 2022 further destabilized global markets by disrupting energy and food supplies, particularly in Europe (World Bank, 2020). In 2023, China faced economic slowdowns due to a property industry crisis, sluggish post pandemic recovery, and declining global demand (Li et al., 2024).



Economic shifts towards green energy investments and advancements in artificial intelligence (AI) have also emerged as defining trends of this period. Transition towards sustainability particular in energy sources along with automation of labor intensive processes are transforming production structures and labor markets across industries. These profound global changes have inevitably impacted the financial industry, contributing to increased loan defaults and liquidity crises in banking institutions. Understanding how the Malaysian banking system has navigated these economic challenges provides valuable insights into its resilience and adaptability. Moreover, rate of financial including NPL, LDR, CAR, DER, ROA, also NPM serve not only as indicators of a bank's financial performance but also as

reflections of broader economic conditions. According to Noviyanti et al. (2021), these financial metrics significantly influence investor sentiment, which in turn drives stock price movements. For instance, a high ROA signals efficient asset utilization, making the bank more attractive to investors.

This written work objectively explain about financial performance indicators and stock prices in term of their relation, offering both academic and practical contributions. By place focal point into Malaysian banking industry, the study seeks to provide a localized perspective on how financial metrics interact with market dynamics (Martanorika & Mustikawati, 2018). The findings are expected to be valuable for investors, financial strategists, and policymakers in understanding key determinants of financial and economic development in Malaysia. Ratio analysis not only aids in assessing overall bank performance but also helps identify potential areas of concern and opportunities for improvement (Karim & Alam, 2013). Investors often rely on stock prices as a measure of managerial effectiveness, as upward movements in stock prices generally indicate strong financial performance and investor confidence. Conducting a fundamental analysis of stock prices, supported by financial statement data, enables investors to make informed decisions regarding their investments (Karamoy & Tulung, 2020)



Drawing from prior study, this study acknowledges several key financial performance measures, including liquidity ratios, solvency ratios, and profitability ratios, as proposed by Karim & Alam (2013), and Ongore & Kusa (2013). Specifically, liquidity ratios (NPL and LDR), solvency ratios (CAR and DER), and profitability ratios (ROA and NPM) serve as critical metrics for evaluating bank performance. This study seeks to determine the extent to which these financial indicators influence stock prices, both individually and collectively. Understanding the impact of these ratios on

stock price fluctuations is essential for investors and financial analysts in making informed investment decisions. By identifying significant financial ratios that affect stock prices, this study is intented to deliver provide actionable insights for stakeholders in the Malaysian banking industry.

### 1.2 Problem Statement

Economic stability is fundamentally linked to the banking industry, which serves as the primary channel for savings and investments. This is particularly evident in Malaysia, where the banking industry is integrated into the financial framework, influencing both macroeconomic stability and microeconomic conditions (Yusoff, 2004). Despite a substantial collection regarding study examination about literature to explore the determinants of stock prices across industries, much of the study has primarily focused on general macroeconomic factors while overlooking specific financial performance measures such as NPL, LDR, CAR, DER, ROA, and NPM.

There are significant gaps from literatures about Malaysian banks' financial performance direct implication on stock prices. More specifically, existing studies have not comprehensively evaluated all relevant financial performance indicators of major Malaysian banks over the period from 2010 to 2023. Additionally, while many studies have discussed stock prices relationship towards bank performance in various international contexts, limited attention has been given to Malaysia. This gap is particularly notable given the country's unique market structure and regulatory framework, which may affect the relevance of performance ratios such as ROA, CAR, LDR, and NPL in relation to stock price fluctuations (Amanah, 2014). Addressing this study gap, the present study aims to provide an indepth analysis of how these financial performance metrics influence stock prices, offering valuable insights for investors seeking to make data driven investment decisions (Ahmad et al., 2018).

This study also establishes a clear conceptual framework by defining key financial terms and outlining the structure necessary for understanding the complex relation of bank performance and stock prices in Malaysia. Essential financial metrics including CAR, LDR, ROA, and NPL are examined to provide a comprehensive assessment of their influence on market valuation.

By establishing a solid theoretical foundation, this study sets the stage for an empirical investigation using robust quantitative methodologies and statistical techniques. The findings are expected to be beneficial for a diverse range of stakeholders, including investors making strategic decisions, regulators aiming to enhance financial stability, and academics studying the evolving dynamics of banking performance and stock market behavior.

Moreover, this study enhances the existing literature on rising economies by analysing the changing obstacles within the banking industry, particularly in light of global economic changes, digital transformation, and geopolitical shifts from 2010 to 2023. The study also provides critical insights into policy formulation and strategic decision making within the Malaysian banking industry and beyond, as emphasized by Anonymous (2023) and Noviyanti et al. (2021).

In summary, this chapter has laid the foundation for analyzing the relation of bank performance and stock prices in Malaysia by defining essential financial metrics and establishing the study's framework. Key financial indicators, including NPL, LDR, CAR, DER, ROA, NPM, are identified as primary drivers of banks' market valuation, forming the basis for the subsequent empirical analysis.

## 1.3 Research Questions

1. What is the correlation between financial metrics of Non Performing Loans, Loan to Deposit Ratio, Capital Adequacy Ratio, Return on Assets, Debt to Equity Ratio, and Net Profit Margin over stock prices of Malaysian banks from 2010 to 2023?
2. What is the relationship between financial performance indicators over the bank stock prices in Malaysia?
3. Which financial indicators are the most crucial for investors to evaluate bank performance and stock prices?

## 1.4 Research Objectives

1. To examine the correlation between financial metrics of Non Performing Loans, Loan to Deposit Ratio, Capital Adequacy Ratio, Return on Assets, Debt to Equity Ratio, and Net Profit Margin over stock prices of Malaysian banks from 2010 to 2023
2. To investigate the relationship between the financial performance indicators over the bank stock prices in Malaysia
3. To determine the most crucial financial indicators for investors to evaluate bank performance and stock prices

## 1.5 Significance of the Study

This study is expected to make significant contributions to the existing literature by providing valuable insights into the influence of bank performance measures such as NPL, LDR, CAR, DER, ROA, NPM on stock prices in Malaysia. Given the substantial effects towards these financial metrics on investor strategies also risk management practices, outcome from this study will give a deeper understanding of their role in the Malaysian financial market.

The insights gained from this study will enable policymakers and financial analysts to refine regulatory frameworks and enhance operational efficiency within the banking industry, ultimately contributing to the financial stability of Malaysia. By offering empirical evidence, this study will enrich the existing body of theories about bank financial performance correlates stock prices, particularly in regards of emerging markets such as Malaysia (BNM, 2023). Additionally, it will provide practical implications for understanding financial ratios, aiding investors in making informed decisions and assisting policymakers in their efforts in securing financial system run stable (Karamoy & Tulung, 2020; Martanorika & Mustikawati, 2018).

### 1.6 Scope of the Study

The study will examine four Malaysian banks listed on the Malaysian Stock Exchange, comprising two conventional banks Alliance Bank Malaysia Berhad and Affin Bank Berhad and two Islamic banks Malaysia Building Society Berhad (MBSB) Bank and Bank Islam Malaysia Berhad. The study will focus on the period from 2010 to 2023, enabling a comprehensive analysis of financial trends over time.



This study will emphasize critical financial metrics, including NPL, LDR, CAR, DER, ROA, NPM. These indicators provide a holistic perspective on the financial health of the selected banks also possibility effects towards stock prices. This study relevance is underscored by the dynamic economic conditions that have influenced the banking industry within study period.

The selection of financial performance indicators instead of macroeconomic factors is justified by the direct and measurable impact of bank specific financial metrics on stock prices. While macroeconomic components including rate of interest, inflation, GDP growth considerly impact stock prices, they often do so in an indirect manner and are subject to external shocks beyond the control of individual banks

(Fama, 1981; Ibrahim et al., 2001). Previous studies have demonstrated that bankspecific financial indicators provide a more precise reflection of a bank's stability and profitability, that significantly influence investor confidence also stock valuation. Moreover, financial performance indicators allow for a more institution specific analysis, enabling investors and policymakers to assess the resilience of individual banks in various market conditions.

The study will utilise secondary data gathered from the annual reports and financial statements of the chosen banks to ensure a robust analysis of financial performance across the designated timeframe. The findings are expected to be valuable to various stakeholders, including investors seeking to refine their investment strategies, policymakers aiming to enhance the regulatory framework, and studyers focusing on the Malaysian banking industry (Amanah, 2014; Fordian et al., 2017). By adopting this multidimensional approach, the study will contribute into current literatures and offer critical insights for analyzing financial performance measures raltions into stock market behavior within an emerging market context.



### 1.7 Definition of Key Terms

These definitions establish the foundational understanding of key financial indicators analyzed in this study, which examines their role to assist financial health, stability, also operationalization efficient of Malaysia's banks.

This study employs several key financial indicators that are essential o evaluate bank performance within the Malaysian banking industry. Such parameters give beneficial understanding for financial health, stability, also operational efficiency of banks, enabling a comprehensive assessment of their performance.

One of the primary indicators is NPL, which refers to loans on which the borrower has defaulted on planned interest or principal payments for a designated duration, often 90 days or longer. A high NPL ratio signals financial distress among borrowers and poses significant risks to the stability of the lending institution (Wijayanto, 2015). An increase in NPL can indicate poor credit risk management and economic downturns that affect borrowers' ability to repay loans.

Another critical metric is the LDR, which count bank's liquidity through comparison of total loans into total deposits. High level of LDR suggests that utilization of the bank has essential portion in its deposits to give lend, potentially boosting profitability. However, excessive reliance on loans can increase liquidity risk and create difficulties in meeting withdrawal demands (Martanorika & Mustikawati, 2018). This ratio is crucial in balancing profitability and liquidity risk management.

The CAR is also such vital measurement for financial stability, representing a bank's available capital as a percentage of its risk weighted assets. CAR guarentee banks which maintain sufficient capital buffers to cover some possibility losses also mitigate systemic risks (Karamoy & Tulung, 2020). A strong CAR reflects bank's capability to overcome financial distruption and economic recession.

Furthermore, an insightful into bank's financial leverage is provide by DER, reflecting the total debt ratio relatively into equity possessed by sharehrolders. Greater dependence towards borrowed fund is indicated by high level of DER, that might increase financial risk and vulnerability to market fluctuations. While leveraging debt can enhance returns, excessive dependence on debt can lead to financial instability.

The ROA is another main beneficial indicator which give measurement onto effectively bank converts of total assets into net income. The formula to calculate is

through net income division with total assets that serves to be benchmark for operational efficiency and financial performance (Paska, 2017). High level of ROA signifies asset in application efficiency, whereas low level of ROA is believed showing inefficiencies in generating profits.

Lastly, the NPM represents revenue portion which is converted to be net profit. The determination of such profit is through division of net with total revenue, providing information for a bank's cost management efficiency and overall profitability. A higher NPM reflects strong revenue management and efectifying cost control, while a lower margin potentitally show the operationalization run uneficiently.

These financial indicators establish a foundational understanding of the key metrics analyzed in this study. By examining their impact on the financial health and performance of banks in Malaysia, this study aims to provide a comprehensive evaluation of their role in determining stock prices and overall market stability.



## 1.8 The Organisation of the Study

This study structure consists five chapters, each forming a logical progression that builds upon the previous one to provie an extensive examination towards bank performance correlation into stock prices in Malaysia.

The first chapter, Introduction, lays the foundation for the study by presenting an overview of the study. It discusses the background of the study, articulates the problem statement, and highlights the significance of the study. Furthermore, it outlines the study questions and objectives, providing a clear direction for the study. By establishing the rationale for investigating specific financial metrics, this chapter underscores the study's relevance and sets the stage for the subsequent discussions.

The second chapter, Literature Review, critically examines existing study on bank performance metrics and their influence on stock prices, particularly in the context of emerging markets such as Malaysia. This chapter synthesizes prior findings, identifies novelty for theoru, also develops the theoretical framework that underpins written work. By engaging with past studies, this chapter ensures that the study is grounded in established theories while also demonstrating the need for further exploration of this topic.

The third chapter, Study Methodology, details the study design, data collection methods, and analytical techniques employed in the study. It outlines the process of gathering secondary data from the annual reports and financial statements of selected banks, ensuring methodological rigor and transparency. This chapter is critical in validating the study's approach, as it ensures the reliability and accuracy of the data used for analysis. A clear and systematic methodology enhances the credibility of the findings and allows for potential replication in future study.



The fourth chapter, Results and Discussion, presents the empirical findings of the study, offering a detailed analysis of how financial performance indicators such as NPL, LDR, ROA influence stock prices in Malaysian banks. The findings are supported by statistical tests, visual representations such as charts and graphs, and a thorough interpretation of the results. This chapter not only provides empirical evidence but also contextualizes the findings within the broader financial landscape, offering meaningful insights into the implications of bank performance on stock market trends.

The final chapter, Conclusion and Recommendations, synthesizes outcomes and main points from this study that broader implications for investors, policymakers, and academics. This chapter also acknowledges the study's limitations and suggests

avenues for future study, thereby contributing to ongoing discussions on the relationship between financial performance and stock prices. By offering recommendations based on the study's findings, this chapter provides practical guidance that may inform investment strategies, regulatory decisions, and further scholarly inquiries.

Together, these chapters form a structured and coherent framework for analyzing the interplay between bank performance and stock prices. By combining theoretical insights with empirical analysis, this study aims to provide valuable contributions to the financial industry, benefiting stakeholders such as investors, regulators, and studyers.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 Introduction

This chapter reviews the relationship between bank performance and stock prices in Malaysia. It discusses key financial indicators such as NPL, LDR, CAR, DER, ROA, NPM. The chapter also introduces the Signaling Theory, which explains how banks communicate their financial status to investors. Additionally, relevant empirical studies are reviewed to provide context for this study.

## 2.2 Theory

Signaling theory, introduced by Spence (1973), describes the economic mechanism through which firms communicate their internal financial health and future prospects to external stakeholders in the presence of information asymmetry. Firms with strong financial performance utilize various signaling mechanisms, such as dividend distribution, capital structure decisions, and earnings reports, to convey their stability and growth potential. These signals help reduce uncertainty in the market, thereby influencing stock price fluctuations as investors respond to the perceived future profitability of the firm. Given the complexity of banking operations and the inherent financial risks involved, signaling theory is particularly relevant in the banking industry (Patres et al., 2023).

For instance, a bank may opt to raise additional debt or modify its dividend policy as a means of signaling confidence in its projected future earnings (Ross, 1977). A well performing bank can employ capital structure decisions, such as issuing bonds or distributing dividends, to communicate financial strength to the market. According to signaling theory, such actions serve as indicators of financial stability and

anticipated growth, which, in turn, can enhance investor confidence and contribute to stock price appreciation. Consequently, banks strategically utilize these signals to reinforce market confidence in their financial performance, thereby influencing stock price movements in the financial industry (Kai & Rahman, 2018).

Recent studies continue to validate the applicability of signaling theory in explaining bank financial performance. Key financial indicators such as profitability, liquidity, and capital reserves serve as essential signals that affect stock valuation. For example, banks that consistently report increasing profits or maintain a strong leverage position on their balance sheets effectively signal financial resilience, even in the presence of information asymmetry. These signals play a crucial role in shaping investor sentiment and influencing stock performance. Additionally, stability in dividend policies and the bank's ability to withstand financial crises serve as further indicators of institutional strength, reinforcing investor confidence and affecting stock price movements.



## 2.3 Financial Performance Indicators and Theoretical Implications

### 2.3.1 Non Performing Loans (NPL)

NPL refer to loans for which borrowers are defaulted on planned payments for a designated duration, often 90 days over the due date. This financial metric is crucial as it reflects a bank's credit quality and overall risk exposure. A high NPL ratio indicates potential financial distress, which can lead to reduced investor confidence and a decline in stock prices. As noted by Wijayanto (2015), the NPL ratio serves as a critical measure of a bank's risk management practices, directly influencing stock value due to the perceived level of risk associated with non performing assets.

Regulatory frameworks, such as those established by the Basel Accords, emphasize the importance of regular reporting on NPL ratios, given their direct implications for capital adequacy and risk weighted assets. Banks are required to maintain a balance between NPL and adequate provisions for potential defaults to ensure financial stability (Basel Committee on Banking Supervision, 2004). Proper management of NPL is essential for maintaining investor confidence and mitigating systemic risks within the banking industry.

Empirical study suggests that in developing economies, such as Malaysia, where economic uncertainties are prevalent, NPL ratios have a more pronounced effect on stock prices. Karamoy & Tulung (2020) highlighted that rising NPL levels often trigger negative investor sentiment, as they are perceived as indicators of declining profitability and increased financial vulnerability. Consequently, fluctuations in NPL ratios play a significant role in shaping market perceptions of a bank's financial health, influencing investment decisions and overall stock market performance.



Additionally, Sadeghi (2008) supports this argument by indicating that variations in NPL ratios significantly impact stock market performance, reinforcing the notion that NPL is fundamental determinant of financial stability also investor behavior. Given these findings, banks must proactively manage their NPL ratios to safeguard their financial standing and sustain investor trust.

### 2.3.2 Loan to Deposit Ratio (LDR)

The LDR is a financial metric that measures the relationship between a bank's total loans and its total customer deposits, typically expressed as a percentage. It serves as an indicator of how effectively a bank utilizes its deposit base to generate loans while maintaining adequate liquidity and profitability. A higher LDR suggests that a

bank is engaging in aggressive lending practices, which may lead to increased profitability. However, an excessively high LDR can indicate elevated liquidity risk, as the bank may struggle to meet withdrawal demands if its available cash reserves are insufficient. Conversely, a lower LDR reflects higher liquidity levels, but it may also indicate underutilized funds and missed lending opportunities. To ensure financial stability, regulatory authorities often impose limits on LDRs to prevent excessive risk taking or inefficient capital allocation (Berger & Bouwman, 2017; Diamond & Dybvig, 1983).

As a key measure of liquidity management, an optimal LDR reflects a bank's ability to effectively mobilize its deposits for lending while maintaining sufficient liquidity to meet obligations (Martanorika & Mustikawati, 2018). While expanding the loan portfolio can enhance profitability, a high LDR may expose the bank to significant liquidity risks, particularly in situations where withdrawal requests exceed available cash reserves.



Empirical study, such as that conducted by Ahmad et al. (2018), suggests that an optimal LDR enhances stock performance by demonstrating a bank's capacity to balance lending activities and liquidity management. However, if the LDR surpasses a critical threshold, it potentially increase investor concerns regarding bank's capability to meet sudden withdrawal demands, potentially leading to negative stock price movements (Karim et al., 2023).

### 2.3.3 Capital Adequacy Ratio (CAR)

The CAR measures a financial institution's capital in relation to its risk weighted assets, serving as a key indicator of its ability to absorb potential losses and maintain financial stability. Mathematically, CAR is calculated as the sum of Tier 1 and Tier 2

capital divided by risk weighted assets. This ratio reflects the overall financial health and risk management capacity of the banking industry. Regulatory frameworks, such as the Basel Accords, mandate a minimum CAR to enhance financial stability and mitigate insolvency risks. Under Basel III, banks are required to maintain a minimum CAR of 8% to ensure resilience against financial shocks and safeguard investor confidence (Basel Committee on Banking Supervision, 2020).

As a fundamental measure of financial strength, CAR plays a crucial role in evaluating a bank's ability to withstand adverse economic conditions. A higher CAR indicates a strong capital base, reducing the likelihood of financial distress and enhancing investor confidence, particularly during economic downturns (Karamoy & Tulung, 2020). This ratio acts as a shock absorption mechanism, ensuring that banks have adequate capital reserves to manage losses while maintaining operational stability.

Empirical evidence suggests that an increase in CAR positively influences stock prices, as it signals lower financial risk and greater security for both depositors and shareholders (Fordian et al., 2017). Between 2019 and 2023, despite economic disruptions caused by global challenges such as the COVID-19 pandemic, banks with relatively high CAR demonstrated greater resilience, resulting in more stable stock prices. Additionally, Bank Negara Malaysia's regulatory framework mandates the maintenance of sufficient CAR levels across all banking institutions to mitigate systemic risks and ensure financial soundness.

### 2.3.4 Debt to Equity Ratio (DER)

The DER is a crucial financial indicator that evaluates a company's financial leverage by comparing total liabilities to shareholders' equity. This ratio elucidates

how a firm funds its activities, either through debt or equity, serving as an indicator of financial risk and stability. The DER is computed by dividing total liabilities by shareholders' equity, reflecting the ratio of debt utilised in comparison to equity funding. A higher DER indicates a stronger dependence on debt, which can enhance returns in favourable economic climates but also heighten financial risk, especially during economic recessions. Conversely, a lower DER signifies a more conservative financial approach, reducing risk exposure but potentially limiting growth opportunities. The optimal DER varies across industries, and while it serves as a crucial indicator for investors and creditors, it has limitations, such as failing to account for off balance sheet liabilities and presenting a static view of financial health (Brigham & Houston, 2015).

In the banking industry, DER specifically reflects about degree where bank relies on debt for funding the operationalization. A higher DER indicates elevated financial risk, particularly in times of economic instability, as it suggests a greater burden of debt repayment obligations (Paska, 2017). For investors, an excessively high DER can signal potential difficulties in meeting financial obligations, leading to negative market perceptions and a decline in stock prices. While leverage can enhance returns, it also increases the likelihood of financial distress, particularly in economies such as Malaysia, where external shocks and economic downturns can have significant effects on financial institutions.

Empirical studies suggest that investors often perceive high DER levels as unfavorable due to the increased financial risk associated with debt heavy firms. Martanorika & Mustikawati (2018) noted that during periods of economic uncertainty, high DER values tend to deter investor confidence, leading to reduced demand for

shares and, consequently, declining stock prices. This underscores the importance of maintaining an optimal balance between debt and equity to ensure financial stability while maximizing growth opportunities.

### 2.3.5 Return on Assets (ROA)

ROA is a key financial metric used to evaluate the efficiency with which a company utilizes its assets to generate profits. It is calculated by dividing net income by total assets, providing insight into the operational performance of an institution. A higher ROA indicates more effective asset utilization, reflecting superior management efficiency. When comparing companies within the same industry, ROA serves as a useful benchmark, though variations in asset structures and profitability across industries necessitate careful interpretation (McKinsey & Company Inc et al., 2010). As a critical measure of operational performance, ROA is closely analyzed by investors, financial analysts, and corporate managers to identify potential improvements in asset management and profitability.



In the banking industry, ROA is particularly significant as it demonstrates how effectively a bank leverages its assets to generate earnings. A higher ROA suggests efficient resource allocation and strong financial performance (Fordian, 2017). Given the capital intensive nature of banking, this metric is crucial in assessing profitability and overall financial health. Banks with consistently high ROA values are generally perceived as well managed institutions with sound financial strategies.

Empirical evidence indicates a positive relationship between ROA and stock prices. Ahmad et al. (2018) assert that banks with higher ROA levels tend to attract greater investor confidence, as efficient management signals financial stability and growth potential. In the context of Malaysia, banks that exhibited a steady upward

trend in ROA between 2019 and 2023 were perceived as financially sound, contributing to higher stock valuations. This highlights the importance of ROA as a determinant of investor sentiment and stock market performance within the banking industry.

### 2.3.6 Net Profit Margin (NPM)

NPM is a key financial metric that evaluates an organization's ability to convert revenue into net profit after accounting for all expenses. It serves as an indicator of overall profitability and operational efficiency (Brigham & Ehrhardt, 1998). A higher NPM reflects effective cost management and profitability, whereas a lower NPM may signal operational inefficiencies or excessive expenditures. For investors and financial analysts, NPM is a critical measure for assessing a company's financial viability and benchmarking its performance against industry peers (Gitman et al., 2015).

NPM is calculated as the ratio of net profit to total revenue, representing the percentage of revenue that remains as profit after all costs have been deducted. In the banking industry, NPM is particularly significant as it highlights a bank's ability to control costs while maximizing revenue generation. An increasing NPM suggests effective resource utilization and financial stability, which are key indicators of a bank's overall health (Martanorika & Mustikawati, 2018).

Empirical evidence suggests a positive correlation between NPM and stock performance. According to Karamoy & Tulung (2020), banks with higher NPMs are often viewed favorably by investors due to their superior cost management and profitability. Consequently, NPM plays a crucial role in determining investor confidence, influencing stock market behavior, and shaping perceptions of financial stability within the banking industry.

### 2.3.7 Empirical Studies in the Malaysian Banking Industry

Numerous empirical studies have underscored the significance of financial ratios in forecasting stock performance. Fordian et al. (2017) and Martanorika & Mustikawati (2018) emphasized the relevance of financial performance indicators, particularly in developing economies such as Malaysia. Their findings suggest that investors in these markets exhibit heightened sensitivity to key financial ratios, including CAR, LDR, and ROA, due to the distinctive economic and political environments in such regions.

Several studies have identified a correlation between financial ratios particularly ROA and NPM and stock prices. However, the extent of this impact varies across industrys and external factors. Sunaryo (2020) established that ROA and NPM serve as profitability indicators, assisting investors in assessing asset utilization efficiency and revenue generation. Nonetheless, these ratios were not statistically significant in influencing stock prices in certain industries, such as the metal industry in Southeast Asia, suggesting that external market conditions and industry specific dynamics may overshadow internal financial metrics.

The impact of CAR on bank financial performance and stock prices varies across different regions. In Malaysia, Jheng et al. (2018) found that CAR did not exhibit a significant positive effect on bank stock prices, implying that a capital constrained environment may not necessarily bolster investor confidence. Conversely, study by Alnajjar & Othman (2021) in the Middle East and North Africa (MENA) region demonstrated a negative relationship between CAR and profitability ratios such as ROA and Return on Equity (ROE). This inverse relationship suggests that higher

capital reserves, while crucial for financial stability, may constrain income generating activities, thereby necessitating region specific regulatory adjustments.

LDR has also been recognized as a determinant of stock returns within the banking industry. In Malaysia, a higher LDR is generally perceived favorably, as it reflects increased credit disbursement and, consequently, higher interest income for banks. However, an excessively high LDR raises concerns regarding liquidity risks, as it suggests that a bank may have extended more loans than its available deposits, potentially leading to negative stock price reactions (Xin et al., 2022). Similar findings were reported in Indonesia, where LDR was found to correlate with stock returns due to its influence on profitability and investor perceptions (Hakim & Iswandi, 2021). Sustained increases in LDR without a corresponding strengthening of the capital base may trigger investor concerns, reducing market confidence in the bank's financial stability.

Patres et al., (2023) conducted a longitudinal study on the relationship between NPM and stock prices in Malaysia's banking industry from 2013 to 2022. Using panel regression models, their findings revealed a positive correlation, indicating that higher profitability enhances investor confidence and stock valuation. The Fixed Effect Model (FEM) was identified as the most suitable model for this analysis. These results offer valuable insights for investors regarding the role of bank profitability in maintaining economic stability and underscore the importance of policy interventions by regulators.

The impact of the DER on stock prices has also been examined in the Malaysian banking industry, particularly before and during the COVID-19 pandemic (2019–2021). Iqrad et al. (2023) applied multiple regression analysis and concluded that DER

did not have a statistically significant effect on banking stock prices during this period. This finding suggests that leverage ratios were not a primary concern for investors in the Malaysian market at the time, possibly due to market uncertainties and negative information asymmetry. Instead, other financial indicators, such as Return on Equity (ROE) and Net Interest Margin (NIM), played a more significant role in influencing stock price movements.

Further study has explored factors incluencing NPL towards Malaysia's banking industry. Said & Mahyoub (2021) analyzed data from 2010 to 2018 and found that among internal banking factors, only CAR exhibited a significant impact on NPL. External macroeconomic variables, such as GDP growth and inflation, were found to have minimal influence. The study emphasized the importance of balancing loan portfolio expansion with prudent NPL management to ensure financial stability. While the study did not explicitly examine the relationship between NPL and stock prices, it highlighted that elevated NPL levels increase financial risks, potentially eroding investor confidence and leading to stock price declines. High NPL ratios are associated with lower returns and an increased risk of insolvency, reinforcing the need for banks to mitigate credit risks to sustain investor trust.

Recent studies conducted between 2019 and 2023 have further corroborated the relevance of these financial ratios in a global economic landscape shaped by the COVID-19 pandemic. The financial distress caused by the pandemic underscored the importance of maintaining adequate CAR levels and implementing robust NPL management strategies to reassure investors. These findings highlight the evolving role of financial ratios in shaping stock market performance and reinforce the need for continuous regulatory oversight in the banking industry.

## 2.4 Summary of the Chapter

This chapter provides a thorough examination of pertinent material regarding the correlation between bank performance and stock prices in Malaysia. It examines key financial performance indicators, including NPL, LDR, CAR, DER, ROA also NPM, which play a crucial role in assessing banks' financial health and their impact on stock market performance. The chapter also explores theoretical frameworks, particularly Signaling Theory, which explains how banks communicate financial stability and growth prospects to investors. Additionally, empirical studies focusing on bank performance and stock prices, especially in the Malaysian banking industry, are reviewed to provide contextual relevance and support the study objectives. This literature review establishes the foundational knowledge and theoretical considerations necessary for the empirical investigation conducted in the subsequent chapters.

# CHAPTER THREE

# STUDY METHODOLOGY

## 3.1 Introduction

This chapter outlines the study methodology employed in this study, including the study framework, hypotheses development, study design, measurement of variables, sampling procedures, data collection procedures, and techniques of data analysis.

## 3.2 Research Framework

The major objectives of the hypothesis were to determine the effect of various fundamental financial health indicators on the share price of banks in Malaysia. Positive relationships (ROA, CAR, NPM) describe better productive operational efficiency, improvement in capitalization, and profit gain, which ultimately leads to boosting stock prices, while negative relationships (NPL, LDR, DER) describe instances where participants experience bad risks, inefficiencies, or worse, becoming over leveraged all of which could influence the confidence of any participant or investor against the stock's valuation.

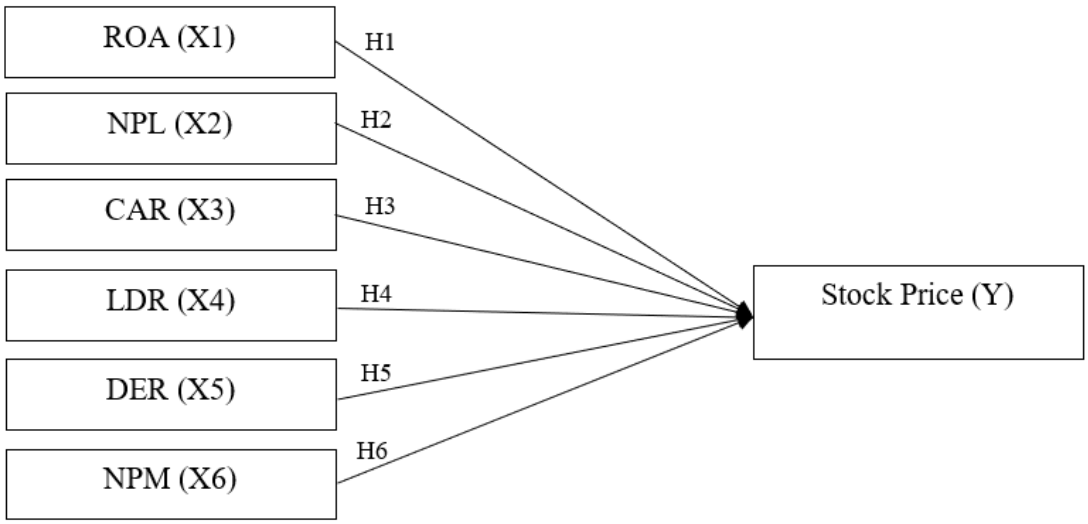

Figure 3.1
*Research Framework*

## 3.3 Hypothesis Development

This study emphasizes the effects towards financial metrics into the stock prices for banks in Malaysia amid certain issues and market conditions between the years 2010 to 2023, NPL, LDR, CAR, DER, ROA, NPM are among the metrics assessed for their effects on investor interest, and trends in stocks. The hypothesis that are presented with regard to this topic help to fill the existing studies, large variants of these relations are analyzed, their possible rejection or acceptance for various banks and in changes of economic situations is explained for the benefit of concerned parties in Malaysian banking. The hyphotheses of this study are :

***$H_1$*** **:** *ROA has a positive effect on stock price in Malaysian banks*

ROA can measure a bank's efficiency in generating profit from its total assets since the higher the ROA, the greater the profitability and operating efficiency, where this may increase investors' confidence, which in turn would positively affect the stock price since investors are drawn to banks that perform better on better profitability metrics.

***$H_2$*** **:** *NPL has a negative effect on stock price in Malaysian banks*

NPL denotes ratios of loans on default or very close to default. In layman's terms: high NPL mean bad credit quality, high credit risk, and looming financial difficulties, which are most likely to lower investor confidence and result in a deteriorated stock price since this is associated with an inability to collect loans and risk management.

***$H_3$*** **:** *CAR has a positive effect on stock price in Malaysian banks*

Capital adequacy measure relates to assessing the capacity of a bank to survive certain losses while remaining solvent. The higher the CAR, the better ability for

a bank to absorb losses: a well capitalized bank, more likely able to withstand macroeconomic shocks. According to investors, the healthy CAR is synonymous with the bank being safer and more reliable in transacting, thus having a positive effect on the bank's stock prices.

***H₄* : *LDR has a negative effect on stock price in Malaysian banks***

LDR indicates lending standards in relation to deposit amounts and when it is high, indicates aggressive lending which may however carry liquidity risks, especially if such is not matched by reserves. Investors are worried about this risk since a capital shortfall very quickly translates to losses for them thus would have an effect on stock price.

***H₅* : *DER has a negative effect on stock price in Malaysian banks***

DER indicates a measure of reliance on financial leverage, that is, higher DER indicates that the bank depends more on the debt financing route which increases the risk of insolvency during downturns in the economy. Thus, it restricts the riskiness of the asset balance sheets since investors perceive the high financial risk associated with the stock.

***H₆* : *NPM has a positive effect on stock price in Malaysian banks***

NPM indicates how much of every dollar of revenue stays in as profit after all expenses are paid. The bigger the net profit margin, the better the cost management and hence the healthy profitability of the bank. Therefore, the banks become more appealing to the investors, which would positively affect the share price normally since profitability is a major determinant of the general investor opinion.

### 3.4 Research Design

The study adopts a quantitative approach utilizing secondary data from four Malaysian banks listed on the Malaysian Stock Exchange during the period 2010–2023. The purposive sampling method has been applied to select these banks, which consist of both domestic and international institutions, ensuring a comprehensive representation of Malaysia's banking industry. This approach has also been utilized in previous studies to evaluate financial performance, such as (Noviyanti et al., 2021). The selection criteria include the banks' significant impact on the financial market, the availability of standardized financial data, and their contribution to economic stability.

A descriptive statistical analysis will be conducted in this study using SPSS software. The data collected on key variables from the selected banks, including NPL, LDR, CAR, DER, ROA, NPM, will be analyzed to summarize the central tendency and variability of key financial indicators. These measures will identify general patterns and variations in financial performance, providing an exploratory understanding of the relationship between financial dimensions and stock price movements in the Malaysian banking industry.

To further examine these relationships, multiple regression models will be employed to assess the individual and combined effects of financial performance indicators on stock prices. The regression analysis aims to determine the statistical significance and strength of these relationships. The full bank names, respective stock codes, and descriptions are provided in Table 3.1.

### 3.5 Measurement of Variables

The measurement of Variables description as a result explains how the study quantifies and operationalizes the variables to determine the relationship between bank

performance measures and stock prices. The variables were classified into dependent and independent measured as follows:

### 3.2.1 Dependent Variable

1. Stock Price

The stock price of Malaysian banks that needs to be predicted or influenced as it demonstrates the value placed by the market on the bank and an important measure of investor confidence and financial health (Fordian et al., 2017; Martanorika & Mustikawati, 2018). This element serves to be barometer towards financial performance of the bank, with high prices often indicating better profitability and operational efficiency, thus attracting investors (Karamoy & Tulung, 2020). The stability of certain financial ratios such as NPL, CAR, ROA can also impact stock prices as these ratios affect investor sentiment and confidence about the future performance of the bank directly (Amanah, 2014).



### 3.2.2 Independent Variables

As far as independent variables are concerned, they are financial performance indicators that would exert some influence on stock prices. All of them are measured through well known financial formulas, thus ensuring consistency and comparability for all:

1. Non Performing Loans (NPL) :

Portion of loans overdue more than 90 days has a low probability of recovery. A higher NPL ratio indicates poor credit management and increased risk, which can lead to decreased investor confidence and lower stock prices (Karamoy & Tulung, 2020; Wijayanto, 2015). High NPL suggest financial instability, making investors wary of potential losses, which negatively impacts stock market performance. Formula:

$$\text{NPL Ratio} = \frac{\text{Non-Performing Loans}}{\text{Total Loans}} \times 100$$

2. Loan to Deposit Ratio (LDR):

Compares the amount of loans extended to the deposits received and indicates the liquidity of a bank. An ideal LDR should be balanced; too high brings liquidity risk, and too low indicates that the bank has not been utilizing its deposits effectively, thus reducing profitability (Berger & Bouwman, 2017; Diamond & Dybvig, 1983; Martanorika & Mustikawati, 2018; Xin et al., 2022). Formula:

$$\text{LDR} - \frac{\text{Total Loans}}{\text{Total Deposits}} \times 100$$

3. Capital Adequacy Ratio (CAR):

Measures the capital strength of a bank in relation to its risk weighted assets. A strong CAR means that the bank is capable of absorbing losses. With a good Capital Adequacy Ratio, financial stability and trust among investors are engendered into an inclination towards increased stock prices. Banks that are well capitalized are perceived as less risky, and this reflection bodes well for stock market performance (Basel Committee on Banking Supervision, 2020; Fordian et al., 2017; Karamoy & Tulung, 2020). Formula:

$$\text{CAR} = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk-Weighted Assets}} \times 100$$

The basic definition of the three terms is as follows:

a. Core capital, which consists of equity capital plus disclosed reserves, forms Tier 1 Capital.

b. Tier 2 Capital comprises supplementary capital, for example, subordinated debt.

c. Risk weighted Assets, on the other hand, denote the total assets weighted by their credit ratings in which the higher risk assets are assigned higher weights as compared to lower risk assets.

4. Debt to Equity Ratio (DER):

The ratio of total liabilities of a bank to its shareholders' equity; this shows how financially leveraged a bank is. A higher DER implies a degree of more financial risk, which deter investors and devalue the stock. Debt increases apprehensions regarding a bank's capacity to fulfil the raised investor confidence obligations. Thus, the result would be in a temporary drop in investor confidence in the bank (Brigham & Ehrhardt, 2016; Gitman et al., 2015; Paska, 2017). Formula:

$$\text{D/E Ratio} = \frac{\text{Total Debt}}{\text{Shareholders' Equity}}$$



5. Return on Assets (ROA):

Efficiency of a bank in using its assets to earn net income. Generally, the higher the ROA, the better will be operational efficiency and probably profitability that will reflect positively on stock prices (Fordian et al., 2017; Karamoy & Tulung, 2020). Formula:

$$\text{ROA} = \frac{\text{Net Income}}{\text{Total Assets}} \times 100$$

6. Net Profit Margin (NPM):

Measures what portion of the revenue remaining amounts to profit after deducting all expenses. The high value of the margin gives an indication of the efficiency and profitability concerning costs which would tend to draw in investors and possible increase in stock prices. Banks, therefore, become more attractive to investors through good cost management and excellent profits gained, which could help in the better performance of banks on the stock market (Karamoy & Tulung, 2020; Martanorika & Mustikawati, 2018). Formula:

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Revenue}} \times 100$$

The criterion for variance selection was based on its both theoretical and empirical relationship with respect to financial performance as well as that one of stock prices. NPL is credit risk and the direct implication towards profitability. The evaluation of LDR is aimed at lending activities and liquidity. Regulatory compliance and financial stability are ensured by CAR. DER shows financial risk and reliance on debt. ROA and NPM are about operational efficiency and profitability The study then proceeds to measure above variables in order to measure how much each financial performance indicator will affect stock price and eventually gives insights among investors, policymakers, and analysts.

### 3.6 Sampling

The purposive sampling method of the study has selected of the four banks studied was predicated by some criteria. These banks include the two conventional banks, Alliance Bank and Affin Bank, and the two Islamic banks, MBSB Bank and Bank Islam, which enable one to compare the two banking systems. All banks are listed in the Malaysian Stock Exchange, thus ensuring that stock price data from 2010

to 2023 is available for all the banks. This choice of the banks was also as a result of credible financial data these banks offer, as well as being a big player it controls within the Malaysian banking industry, thus having a proper size and market mix for the purpose of the study. A descriptive statistical analysis will be done in this study with the data collected on the key variables from the selected banks such as NPL, LDR, CAR, DER, ROA, NPM. to give an overview of summarizing the central tendency and variability of some key financial indicators.

These measures will capture general patters as well as variation in financial performance across the selected banks, hence providing an exploratory understanding for the relationship between financial dimensions and stock price flows in the Malaysian banking industry.Whole bank names with respective stock codes and descriptions are given below :

Table 3.1
*Banks Information and Stock Codes in the Capital Market*

| No | Stock Code | Bank | Description |
|---|---|---|---|
| 1 | 2488 | Alliance Bank Malaysia Berhad | Alliance Bank offers personal loans, mortgages, and investment services to both retail clients and small and medium sized businesses (SMEs). |
| 2 | 5258 | Bank Islam Malaysia Berhad | Malaysia's first full fledged Islamic bank, specializing in Islamic compliant products and services. |
| 3 | 5185 | Affin Bank Berhad | Offers a variety of financial products with a focus on retail and corporate banking, especially for government linked projects. |
| 4 | 1171 | MBSB Bank Berhad | MBSB Bank provides solutions for financing that are Islamic compliant and are characterized by a fully operational and functional Islamic bank. |

### 3.7 Data Collection Procedures

This study employs a quantitative approach using secondary data sourced from four Malaysian banks listed on the Malaysian Stock Exchange from 2010 to 2023. The primary sources of data include audited annual reports and financial statements, ensuring reliability and accuracy. The collected data is processed and analyzed using multiple regression models to assess the impact of financial performance indicators on stock prices. The regression analysis is conducted to determine both individual effects of each financial metric and their combined influence on stock price movements over the selected period.

### 3.8 Data Analysis Techniques

#### 3.8.1 Classical Assumption Test

Classical assumption tests are necessary to check the basic underlying assumptions of the Ordinary Least Squares (OLS) technique. These assumptions ensure that estimates obtained through the regression model are unbiased, consistent, and efficient. Violation of these assumptions can lead to misleading results and incorrect inferences. The major classical assumptions tested in this study include normality, multicollinearity, heteroscedasticity, and autocorrelation.



##### 3.8.1.1 Normality Test

The normality assumption requires that residuals of the regression model be normally distributed. This assumption is crucial for hypothesis testing and confidence interval construction. The normality of residuals can be assessed graphically using a Q-Q plot or a histogram. Additionally, statistical tests such as the Kolmogorov-Smirnov tests can be conducted. If the normality assumption is violated, data transformations or nonparametric methods may be employed.

#### 3.8.1.2 Multicollinearity Test

Multicollinearity occurs when independent variables are highly correlated. This can lead to inflated standard errors, making it difficult to assess the individual impact of each independent variable. Variance Inflation Factor (VIF) is used to detect multicollinearity, where a VIF value above 10 indicates a potential problem. Remedies include removing highly correlated variables, combining them, or using principal component analysis (PCA).

#### 3.8.1.3 Heteroscedasticity Test

Heteroscedasticity occurs when the variance of residuals is not constant across levels of independent variables, potentially leading to inefficient estimates. It can be tested using the White or Breusch-Pagan tests, or visually through residual plots. If heteroscedasticity is detected, solutions include transforming the dependent variable, using weighted least squares regression, or applying robust standard errors.



#### 3.8.1.4 Auto-Correlation Test

Autocorrelation occurs when residuals are correlated across observations, particularly in time-series data. The Durbin-Watson statistic or Wooldridge test can be used to detect autocorrelation. If autocorrelation is present, solutions include adding lagged variables, applying ARIMA models, or using generalized least squares (GLS).

### 3.8.2 Multiple Regression Analysis

This study employs multiple linear regression analysis to examine the impact of financial performance variables on stock prices. The regression model is specified as follows:

$$SPit = \beta 0 + \beta 1ROAit + \beta 2NPLit + \beta 3CARit + \beta 4LDRit + \beta 5DERit + \beta 6NPMit + \varepsilon$$

Where:

SP : Stock Price

ROA : Return on Assets

NPL : Non Performing Loans

CAR : Capital Adequacy Ratio

LDR : Loan to Deposit Ratio

DER : Debt to Equity Ratio

NPM : Net Profit Margin

β0 : Constant

β1…β6 : Coefficients of independent variables

ε : Error term



**3.8.2.1 T-Test**

The T-test assesses the individual significance of each independent variable. It evaluates whether an independent variable significantly influences the dependent variable at a 5% significance level.

If p-value > 0.05: The independent variable is not significant.

If p-value < 0.05: The independent variable is significant.

#### 3.8.2.2 F-Test

The F-test determines whether all independent variables collectively influence the dependent variable. It assesses the overall significance of the regression model at a 5% significance level.

If p-value > 0.05: The regression model is not significant.

If p-value < 0.05: The regression model is significant.

#### 3.8.2.3 Coefficient of Determination (R-Squared)

The R-squared ($R^2$) value measures the proportion of variance in the dependent variable explained by the independent variables. An Adjusted $R^2$ value closer to 1 indicates a strong explanatory power, while a value close to 0 suggests a weak relationship between the variables.

### 3.9 Summary of the Chapter

This chapter has provided an overview of the study methodology, covering study design, operational definitions, data collection methods, and analytical techniques. The study employs a quantitative approach using secondary data, focusing on key financial indicators and stock prices of Malaysian banks. The purposive sampling method was used to select four major banks based on their financial significance and data availability. The data collected is analyzed using descriptive statistics and multiple regression models via SPSS software. The next chapter will present the findings and interpretation of the results based on the collected data.

# CHAPTER FOUR

# RESULTS AND DISCUSSION

## 4.1 Introduction

This chapter presents the findings of the study based on data analysis using SPSS software. The analysis examines the relationship between financial performance indicators and stock prices in Malaysian banks. The study focuses on two Islamic banks (Bank Islam Malaysia Berhad and MBSB Bank Berhad) and two conventional banks (Alliance Bank Malaysia Berhad and Affin Bank Berhad), covering the period from 2010 to 2023. The results are structured into separate sections for each bank type, followed by a comparative analysis and discussion of the overall findings.

## 4.2 Results

### 4.2.1 Results for Islamic Banks

This section presents the results for Bank Islam Malaysia Berhad and MBSB Bank Berhad, analyzed using SPSS software Version 20. The analysis includes classical assumption tests, multiple regression analysis, and hypothesis testing to ensure the validity and reliability of the model. The findings provide insights into how financial performance indicators relate to stock prices in Islamic banks.

#### 4.2.1.1 Descriptive Statistics

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| NPM | 28 | -.08 | 7.18 | .6699 | 1.31023 |
| ROA | 28 | .00 | .07 | .0204 | .01924 |
| LDR | 28 | .48 | 1.13 | .8564 | .17894 |
| DER | 28 | 3.83 | 31.08 | 9.7042 | 5.65203 |
| CAR | 28 | .12 | 3.28 | .4098 | .58927 |
| NPL | 28 | .00 | 1.02 | .0522 | .19307 |
| Stock Price | 28 | .54 | 3.40 | 1.9232 | 1.00000 |
| Valid N (listwise) | 28 | | | | |

Table 4.1
*Descriptive Statistics Islamic Banks*

The descriptive statistics of Islamic banks show various financial performance indicators based on 28 observations. The NPM has a mean of 0.6699 with a standard deviation of 1.31023, indicating that Islamic banks on average generate a profit of around 66.99 cents per unit of revenue, although there is considerable variation, with some banks even experiencing losses. The ROA has a low average of 0.0204 (2.04%) and a relatively small standard deviation of 0.01924, suggesting a consistent but modest profitability from total assets. The LDR has a mean of 0.8564, indicating that on average, Islamic banks lend about 85.64% of their deposits, which reflects a fairly balanced liquidity management with moderate variability across institutions.

The DER averages 9.7042, revealing that Islamic banks tend to rely heavily on debt financing, with a wide range between 3.83 and 31.08 and a high standard deviation of 5.65203, suggesting significant differences in financial structure. The CAR shows a relatively low mean of 0.4098, indicating limited capital buffers, although the maximum value of 3.28 and the standard deviation of 0.58927 point to

notable differences in capital strength among banks. The NPL ratio is relatively low on average at 0.0522 (5.22%), showing generally good loan quality, though the maximum of 1.02 suggests that some banks face challenges in credit performance. Finally, the Stock Price ranges from 0.54 to 3.40, with an average of 1.9232 and a standard deviation of 1.00000, reflecting considerable variation in market valuation among the Islamic banks studied.

#### 4.2.1.2 Classical Assumption Tests

**1. Normality Test**

One-Sample Kolmogorov-Smirnov Test

| | | Standardized Residual |
|---|---|---|
| N | | 28 |
| Normal Parameters[a,b] | Mean | 0E-7 |
| | Std. Deviation | .88191710 |
| Most Extreme Differences | Absolute | .114 |
| | Positive | .110 |
| | Negative | -.114 |
| Kolmogorov-Smimov Z | | .602 |
| Asymp. Sig. (2-tailed) | | .861 |

a. Test distribution is Normal.
b. Calculated from data.

Table 4.2
*Normality Test Islamic Banks*

The results of the One-Sample Kolmogorov-Smirnov Test indicate that the residuals follow a normal distribution. The test statistic (Kolmogorov-Smirnov Z = 0.602) and the significance level (Asymp. Sig. = 0.861) show that the null hypothesis is not significant, which indicates that the residuals are normally distributed. This satisfies one of the key assumptions of multiple regression analysis.

## 2. Multicollinearity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.411 | .892 | | 1.583 | .128 | | |
| | NPM | -.088 | .142 | -.115 | -.622 | .541 | .703 | 1.422 |
| | ROA | 28.549 | 9.942 | .549 | 2.872 | .009 | .663 | 1.508 |
| | LDR | -.358 | 1.084 | -.064 | -.331 | .744 | .645 | 1.550 |
| | DER | .022 | .034 | .126 | .666 | .513 | .673 | 1.485 |
| | CAR | .321 | .313 | .189 | 1.026 | .317 | .715 | 1.399 |
| | NPL | -.998 | .834 | -.193 | -1.196 | .245 | .936 | 1.068 |

a. Dependent Variable: Stock Price

Table 4.3
*Multicollinearity Test Islamic Banks*

The Variance Inflation Factor (VIF) values for all independent variables are below the threshold of 10, with the highest value being 1.550 (for LDR). Similarly, tolerance values are above 0.1, confirming that these independent variables are having multicollinearity absence . This indicates that the predictors do not exhibit strong linear relationships with each other, ensuring the reliability of the regression model.

### 3. Heteroscedasticity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -.004 | .416 | | -.009 | .993 | | |
| | NPM | -.060 | .066 | -.206 | -.913 | .372 | .703 | 1.422 |
| | ROA | -1.092 | 4.636 | -.055 | -.235 | .816 | .663 | 1.508 |
| | LDR | .782 | .505 | .364 | 1.547 | .137 | .645 | 1.550 |
| | DER | .003 | .016 | .049 | .213 | .833 | .673 | 1.485 |
| | CAR | -.088 | .146 | -.135 | -.605 | .551 | .715 | 1.399 |
| | NPL | -.161 | .389 | -.081 | -.413 | .684 | .936 | 1.068 |

a. Dependent Variable: abresid

Table 4.4
*Heteroscedasticity Test Islamic Banks*

The results of the heteroscedasticity test show that none of the independent variables have a statistically significant impact on the absolute residuals. The p-values for all independent variables are greater than 0.05, indicating that heteroscedasticity is not a concern in this model. Therefore, the assumption of homoscedasticity is satisfied.

### 4. Autocorrelation Test

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .700[a] | .490 | .345 | .80948 | .676 |

a. Predictors: (Constant), NPL, DER, NPM, CAR, ROA, LDR

b. Dependent Variable: Stock Price

Table 4.5
*Autocorrelation Test Islamic Banks*

The Durbin-Watson statistic is 0.676, which falls outside the acceptable range of 1.5 to 2.5. This suggests the possible presence of autocorrelation in the residuals. Further tests may be necessary to address this issue, as autocorrelation can affect the validity of hypothesis testing.

#### 4.2.1.3 Multiple Regression Analysis and Hypothesis Testing

**1. Coefficient of Determination ($R^2$)**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .700[a] | .490 | .345 | .80948 | .676 |

a. Predictors: (Constant), NPL, DER, NPM, CAR, ROA, LDR

b. Dependent Variable: Stock Price

Table 4.6
*Coefficient of Determination ($R^2$) Test Islamic Banks*

The model summary shows an $R^2$ value of 0.490, meaning that approximately 49% of the variation in stock prices (dependent variable, Y) can be explained by the independent variables NPL, LDR, CAR, DER, ROA, NPM. The adjusted $R^2$ is 0.345, indicating a moderate fit of the model.

## 2. F-Test (Model Significance)

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 13.240 | 6 | 2.207 | 3.368 | .017[b] |
| | Residual | 13.760 | 21 | .655 | | |
| | Total | 27.000 | 27 | | | |

a. Dependent Variable: Stock Price

b. Predictors: (Constant), NPL, DER, NPM, CAR, ROA, LDR

Table 4.7
*F-Test Islamic Banks*

The ANOVA results show that the regression model is statistically significant, with an F-statistic of 3.368 and a p-value of 0.017. This implies that at least one of the independent variables significantly influences stock prices, confirming that the overall model is relevant for explaining the variations in stock prices of the Islamic banks.



## 3. T-Test (Individual Significance of Variables)

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.411 | .892 | | 1.583 | .128 |
| | NPM | -.088 | .142 | -.115 | -.622 | .541 |
| | ROA | 28.549 | 9.942 | .549 | 2.872 | .009 |
| | LDR | -.358 | 1.084 | -.064 | -.331 | .744 |
| | DER | .022 | .034 | .126 | .666 | .513 |
| | CAR | .321 | .313 | .189 | 1.026 | .317 |
| | NPL | -.998 | .834 | -.193 | -1.196 | .245 |

a. Dependent Variable: Stock Price

Table 4.8
*T-Test Islamic Banks*

ROA is the only variable with a statistically significant impact on stock prices (B = 28.549, p = 0.009). This suggests that higher ROA values lead to higher stock prices, emphasizing the importance of profitability in determining investor confidence. Other variables (NPL, LDR, CAR, DER, and NPM) do not show significant effects on stock prices, as their p-values exceed the 0.05 threshold. This implies that these factors do not independently contribute to stock price fluctuations in the given sample period.

The results suggest that profitability, as measured by ROA, plays a crucial role in influencing stock prices in the Islamic banking industry. This aligns with existing literature, which highlights that investors prioritize earnings performance when making investment decisions. The lack of significance for other financial ratios may indicate that external macroeconomic factors, investor sentiment, or market inefficiencies also influence stock prices.

Despite the relatively moderate explanatory power of the model ($R^2 = 0.490$), the findings provide valuable insights into how bank performance affects stock prices. Future study could explore additional variables such as macroeconomic indicators, investor sentiment, or financial stability measures to enhance the robustness of the model.

### 4.2.2 Results for Conventional Banks

This section presents the results for Alliance Bank Malaysia Berhad and Affin Bank Berhad, following the same SPSS-based approach used for Islamic banks. The analysis includes statistical tests to assess the relationship between financial performance and stock prices in conventional banks. The results contribute to understanding how different financial indicators impact stock price movements in the conventional banking industry.

#### 4.2.2.1 Descriptive Statistics

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| NPM | 28 | .04 | .46 | .3168 | .09461 |
| ROA | 28 | .00 | .01 | .0083 | .00285 |
| LDR | 28 | .67 | .92 | .8084 | .07332 |
| DER | 28 | 6.22 | 12.68 | 9.3928 | 1.67928 |
| CAR | 28 | .98 | 7.59 | 3.6591 | 1.67317 |
| NPL | 28 | .00 | .03 | .0148 | .01176 |
| Stock Price | 28 | 1.73 | 4.76 | 3.0871 | .88630 |
| Valid N (listwise) | 28 | | | | |

Table 4.9
Descriptive Statistics Conventional Banks

The descriptive statistics for conventional banks are based on 28 observations. The NPM has an average of 0.3168, meaning that on average, conventional banks earn about 31.68 cents of profit for every unit of revenue. The standard deviation of 0.09461 shows that the values are relatively close to each other. The ROA is quite low, with a mean of 0.0083 (0.83%), indicating low profitability from total assets, and the small standard deviation suggests consistency across banks.

The LDR has an average of 0.8084, which means banks lend out around 80.84% of their deposits, showing a fairly stable liquidity position. The DER is 9.3928 on average, meaning that banks use a relatively high amount of debt compared to their equity, but with less variation than in Islamic banks. The CAR is relatively high, averaging 3.6591, suggesting strong capital buffers to cover risks.

The NPL ratio is low, with an average of 0.0148 (1.48%), indicating good loan quality and low default risk. Lastly, the Stock Price has an average value of 3.0871, with values ranging from 1.73 to 4.76, suggesting that conventional bank stocks are valued higher on average than Islamic bank stocks in this dataset.

### 4.2.2.2 Classical Assumption Tests

### 1. Normality Test

**One-Sample Kolmogorov-Smirnov Test**

| | | Standardized Residual |
|---|---|---|
| N | | 28 |
| Normal Parameters[a,b] | Mean | 0E-7 |
| | Std. Deviation | .88191710 |
| Most Extreme Differences | Absolute | .102 |
| | Positive | .095 |
| | Negative | -.102 |
| Kolmogorov-Smirnov Z | | .541 |
| Asymp. Sig. (2-tailed) | | .931 |

a. Test distribution is Normal.

b. Calculated from data.

Table 4.10
*Normality Test Conventional Banks*

The One-Sample Kolmogorov-Smirnov Test indicates that the residuals follow a normal distribution. The test statistic (Kolmogorov-Smirnov Z = 0.541) and the significance value (Asymp. Sig. = 0.931) suggest that the null hypothesis is not significant, which indicates that the residuals are normally distributed. This confirms that the assumption of normality is met, which is essential for conducting a valid regression analysis.

## 2. Multicollinearity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -.968 | 2.127 | | -.455 | .654 | | |
| | NPM | -3.483 | 2.515 | -.372 | -1.385 | .181 | .135 | 7.416 |
| | ROA | 256.977 | 94.770 | .828 | 2.712 | .013 | .104 | 9.584 |
| | LDR | 2.448 | 1.955 | .202 | 1.252 | .224 | .372 | 2.689 |
| | DER | .112 | .090 | .213 | 1.241 | .228 | .331 | 3.022 |
| | CAR | .088 | .089 | .166 | .994 | .332 | .348 | 2.876 |
| | NPL | -21.477 | 11.822 | -.285 | -1.817 | .084 | .395 | 2.530 |

a. Dependent Variable: Stock Price

Table 4.11
*Multicollinearity Test Conventional Banks*

The Variance Inflation Factor (VIF) values indicate potential multicollinearity concerns. The highest VIF is 9.584 (for ROA), which exceeds the common threshold of 10, suggesting that ROA is highly correlated with other independent variables. Additionally, NPM has a VIF of 7.416, which is also relatively high. This suggests that these variables might introduce redundancy in the model, possibly affecting the accuracy of coefficient estimations.

### 3. Heteroscedasticity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -.968 | 2.127 | | -.455 | .654 | | |
| | NPM | -3.483 | 2.515 | -.372 | -1.385 | .181 | .135 | 7.416 |
| | ROA | 256.977 | 94.770 | .828 | 2.712 | .013 | .104 | 9.584 |
| | LDR | 2.448 | 1.955 | .202 | 1.252 | .224 | .372 | 2.689 |
| | DER | .112 | .090 | .213 | 1.241 | .228 | .331 | 3.022 |
| | CAR | .088 | .089 | .166 | .994 | .332 | .348 | 2.876 |
| | NPL | -21.477 | 11.822 | -.285 | -1.817 | .084 | .395 | 2.530 |

a. Dependent Variable: Stock Price

Table 4.12
*Heteroscedasticity Test Conventional Banks*

The p-values for all independent variables are greater than 0.05, indicating that heteroscedasticity is not a major concern in this model. The assumption of homoscedasticity is satisfied, which means that the variance of residuals is constant across different levels of the independent variables.

### 4. Autocorrelation Test

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .892[a] | .796 | .737 | .45412 | 1.858 |

a. Predictors: (Constant), NPL, CAR, DER, LDR, NPM, ROA

b. Dependent Variable: Stock Price

Table 4.13
*Autocorrelation Test Conventional Banks*

The Durbin-Watson statistic is 1.858, which falls within the acceptable range of 1.5 to 2.5. This suggests that there is no serious autocorrelation problem in the residuals, meaning that the error terms are independently distributed.

#### 4.2.2.3 Multiple Regression Analysis and Hypothesis Testing

**1. Coefficient of Determination ($R^2$)**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .892[a] | .796 | .737 | .45412 | 1.858 |

a. Predictors: (Constant), NPL, CAR, DER, LDR, NPM, ROA

b. Dependent Variable: Stock Price

Table 4.14
*Coefficient of Determination ($R^2$)Test Conventional Banks*

The model summary shows an $R^2$ value of 0.796, meaning that approximately 79.6% of the variation in stock prices (Y) is explained by the independent variables: NPL, LDR, CAR, DER, ROA, NPM. The adjusted $R^2$ value of 0.737 suggests that the model has a strong explanatory power, indicating a good fit for the data.

**2. F-Test (Model Significance)**

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 16.879 | 6 | 2.813 | 13.641 | .000[b] |
| | Residual | 4.331 | 21 | .206 | | |
| | Total | 21.209 | 27 | | | |

a. Dependent Variable: Stock Price

b. Predictors: (Constant), NPL, CAR, DER, LDR, NPM, ROA

Table 4.15
*F-Test Conventional Banks*

The ANOVA results show that the regression model is statistically significant, with an F-statistic of 13.641 and a p-value of 0.000. This indicates that the independent variables, when considered together, significantly influence stock prices in the conventional banking industry.

### 3. T-Test (Individual Significance of Variables)

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.968 | 2.127 | | -.455 | .654 |
| | NPM | -3.483 | 2.515 | -.372 | -1.385 | .181 |
| | ROA | 256.977 | 94.770 | .828 | 2.712 | .013 |
| | LDR | 2.448 | 1.955 | .202 | 1.252 | .224 |
| | DER | .112 | .090 | .213 | 1.241 | .228 |
| | CAR | .088 | .089 | .166 | .994 | .332 |
| | NPL | -21.477 | 11.822 | -.285 | -1.817 | .084 |

a. Dependent Variable: Stock Price



Table 4.16
*T-Test Conventional Banks*

ROA is the only variable that has a statistically significant impact on stock prices, with a coefficient of 256.977 and a p-value of 0.013. This suggests that profitability, as measured by ROA, has a strong positive effect on stock prices. NPL has a negative impact on stock prices (B = -21.477), but its p-value (0.084) is slightly above the 0.05 threshold, indicating that it is not statistically significant. However, its negative coefficient suggests that higher NPL levels may lead to lower stock prices. Other variables (NPM, LDR, CAR, and DER) are not statistically significant, as their p-values exceed 0.05, suggesting that they do not independently contribute to stock price variations in the given sample.

The findings suggest that profitability (ROA) is the most critical factor influencing stock prices in the conventional banking industry. This aligns with financial theory and previous study, as investors often prioritize a bank's ROA as a key indicator of financial health and future growth potential.

The negative relationship between NPL and stock prices, although not statistically significant in this case, is consistent with the idea that a higher proportion of NPL weakens investor confidence and reduces stock valuation.

The high $R^2$ value (0.796) indicates that the selected financial ratios explain a significant portion of stock price movements. However, the presence of multicollinearity (high VIF values for ROA and NPM) suggests that some variables may be redundant in the model. Future study could consider alternative regression techniques, such as Principal Component Analysis (PCA), to address multicollinearity and improve model efficiency.



In conclusion, the results highlight the importance of profitability (ROA) in determining stock prices for conventional banks, whereas other financial indicators may have less direct influence in the short term. Future studies could incorporate macroeconomic factors, market conditions, or investor sentiment to improve predictive accuracy.

### 4.2.3 Results for Overall Banks

This section presents the overall findings by integrating the results from both Islamic and conventional banks into a single analysis. The combined data analysis provides a broader view of how financial performance indicators influence stock prices across the Malaysian banking industry. Using SPSS outputs, this section summarizes the impact of key financial ratios, including ROA, CAR, NPL, LDR, DER, and NPM,

on stock prices without distinguishing between banking models. The findings reflect the general trends observed in the dataset, providing a more comprehensive understanding of the relationship between financial performance and stock price movements. This section also discusses the overall implications of the results in the context of the Malaysian banking industry.

#### 4.2.3.1 Descriptive Statistics

**Descriptive Statistics**

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| NPM | 56 | -.08 | 7.18 | .4934 | .93749 |
| ROA | 56 | .00 | .07 | .0143 | .01494 |
| LDR | 56 | .48 | 1.13 | .8324 | .13764 |
| DER | 56 | 3.83 | 31.08 | 9.5485 | 4.13417 |
| CAR | 56 | .12 | 7.59 | 2.0345 | 2.05724 |
| NPL | 56 | .00 | 1.02 | .0335 | .13683 |
| Stock Price | 56 | .54 | 4.76 | 2.5052 | 1.10516 |
| Valid N (listwise) | 56 | | | | |

Table 4.17
*Descriptive Statistics Overall Banks*



The descriptive statistics for overall banks are based on 56 observations, combining data from both Islamic and conventional banks. The NPM has an average of 0.4934, meaning banks on average earn about 49.34 cents of profit for every unit of revenue. The standard deviation of 0.93749 indicates there is some variation in profitability among banks, with values ranging from negative to as high as 7.18.

The ROA has a low mean of 0.0143 (1.43%), showing modest profitability from total assets, with low variation across the sample. The LDR averages 0.8324, suggesting that banks are lending around 83.24% of their deposits, reflecting a fairly healthy balance between liquidity and lending.

The DER has a mean of 9.5485, indicating a high level of leverage across banks, though the wide range and standard deviation show differences in capital structure. The CAR has an average of 2.0345, meaning banks have a moderate capital buffer, but again there is a large variation among banks, with some much better capitalized than others.

The NPL ratio is low on average at 0.0335 (3.35%), suggesting good overall loan quality, although the maximum value of 1.02 shows that some banks do have credit risk issues. Finally, the Stock Price averages at 2.5052, showing moderate value in the market, with some banks having much higher stock values than others.

### 4.2.3.2 Classical Assumption Tests

#### 1. Normality Test

**One-Sample Kolmogorov-Smirnov Test**

| | | Standardized Residual |
|---|---|---|
| N | | 56 |
| Normal Parameters[a,b] | Mean | 0E-7 |
| | Std. Deviation | .94387981 |
| Most Extreme Differences | Absolute | .083 |
| | Positive | .065 |
| | Negative | -.083 |
| Kolmogorov-Smirnov Z | | .624 |
| Asymp. Sig. (2-tailed) | | .831 |

a. Test distribution is Normal.

b. Calculated from data.

Table 4.18
*Normality Test Overall Banks*

The One-Sample Kolmogorov-Smirnov Test results indicate that the residuals follow a normal distribution. The test statistic (Kolmogorov-Smirnov Z = 0.624) and the significance value (Asymp. Sig. = 0.831) show that the null hypothesis is not

significant, which indicates that the residuals are normally distributed. This confirms that the assumption of normality is met, fulfilling a key requirement for multiple regression analysis.

## 2. Multicollinearity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.227 | .743 | | 1.651 | .105 | | |
| | NPM | -.077 | .127 | -.065 | -.603 | .550 | .734 | 1.362 |
| | ROA | 24.926 | 8.499 | .337 | 2.933 | .005 | .651 | 1.537 |
| | LDR | -.002 | .863 | .000 | -.003 | .998 | .744 | 1.344 |
| | DER | .027 | .028 | .101 | .960 | .342 | .769 | 1.301 |
| | CAR | .367 | .056 | .683 | 6.495 | .000 | .776 | 1.288 |
| | NPL | -1.313 | .774 | -.163 | -1.697 | .096 | .936 | 1.069 |

a. Dependent Variable: Stock Price

Table 4.19
*Multicollinearity Test Overall Banks*

The Variance Inflation Factor (VIF) values are all below 10, with the highest being 1.537 (for ROA). Similarly, tolerance values are all above 0.1, indicating no serious multicollinearity issues among the independent variables. This ensures that the regression model is not distorted by high correlations between predictors.

### 3. Heteroscedasticity Test

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -.204 | .390 | | -.524 | .603 | | |
| | NPM | -.040 | .067 | -.093 | -.595 | .555 | .734 | 1.362 |
| | ROA | -1.298 | 4.462 | -.048 | -.291 | .772 | .651 | 1.537 |
| | LDR | .847 | .453 | .290 | 1.871 | .067 | .744 | 1.344 |
| | DER | .005 | .015 | .049 | .319 | .751 | .769 | 1.301 |
| | CAR | .037 | .030 | .190 | 1.255 | .216 | .776 | 1.288 |
| | NPL | .128 | .406 | .043 | .315 | .754 | .936 | 1.069 |

a. Dependent Variable: abresid

Table 4.20
*Heterocedasticity Test Overall Banks*

The p-values for all independent variables are above 0.05, indicating that heteroscedasticity is not a concern. This satisfies the assumption of homoscedasticity, ensuring that the variance of residuals remains constant across different levels of the independent variables.

### 4. Autocorrelation Test



**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .761[a] | .579 | .528 | .75944 | 1.111 |

a. Predictors: (Constant), NPL, DER, CAR, NPM, LDR, ROA

b. Dependent Variable: Stock Price

Table 4.21
*Autocorrelation Test Overall Banks*

The Durbin-Watson statistic is 1.111, which falls outside the acceptable range (1.5 to 2.5), suggesting a potential issue with autocorrelation in the residuals. This could indicate that the error terms are not completely independent, which may affect the reliability of hypothesis testing.

#### 4.2.3.3 Multiple Regression Analysis and Hypothesis Testing

**1. Coefficient of Determination ($R^2$)**

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|---|---|---|---|---|
| 1 | .761[a] | .579 | .528 | .75944 | 1.111 |

a. Predictors: (Constant), NPL, DER, CAR, NPM, LDR, ROA

b. Dependent Variable: Stock Price

Table 4.22
*Coefficient of Determination ($R^2$) Test Overall Banks*

The model summary indicates an $R^2$ value of 0.579, meaning that approximately 57.9% of the variation in stock prices (Y) is explained by the independent variables: NPL, LDR, CAR, DER, ROA, NPM. The adjusted $R^2$ of 0.528 suggests a moderate explanatory power of the model.

**2. F-Test (Model Significance)**

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 38.915 | 6 | 6.486 | 11.245 | .000[b] |
| | Residual | 28.261 | 49 | .577 | | |
| | Total | 67.176 | 55 | | | |

a. Dependent Variable: Stock Price

b. Predictors: (Constant), NPL, DER, CAR, NPM, LDR, ROA

Table 4.23
*F-Test Overall Banks*

The ANOVA results show that the regression model is statistically significant, with an F-statistic of 11.245 and a p-value of 0.000. This indicates that, collectively, the independent variables have a significant impact on stock prices.

### 3. T-Test (Individual Significance of Variables)

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.227 | .743 | | 1.651 | .105 |
| | NPM | -.077 | .127 | -.065 | -.603 | .550 |
| | ROA | 24.926 | 8.499 | .337 | 2.933 | .005 |
| | LDR | -.002 | .863 | .000 | -.003 | .998 |
| | DER | .027 | .028 | .101 | .960 | .342 |
| | CAR | .367 | .056 | .683 | 6.495 | .000 |
| | NPL | -1.313 | .774 | -.163 | -1.697 | .096 |

a. Dependent Variable: Stock Price

Table 4.24
*T-Test Overall Banks*

CAR has the highest positive impact on stock prices, with a coefficient of 0.367 and a p-value of 0.000. This suggests that a higher CAR significantly increases stock prices, highlighting the importance of financial stability in influencing investor confidence. ROA also has a statistically significant effect on stock prices (B = 24.926, p = 0.005), indicating that profitability plays a crucial role in determining stock valuations. NPL has a negative effect on stock prices (B = -1.313), but its p-value (0.096) is slightly above 0.05, meaning that it is not statistically significant. However, the negative coefficient suggests that higher NPL levels may contribute to declining stock prices. Other variables (NPM, LDR, DER) do not show significant effects on stock prices, as their p-values exceed 0.05. This implies that they do not independently influence stock prices in this dataset.

The findings indicate that capital adequacy (CAR) and profitability (ROA) are the key drivers of stock prices in both Islamic and conventional banks. The

significance of CAR suggests that well capitalized banks tend to have higher investor confidence, which translates into better stock performance.

The negative impact of NPL, although not statistically significant, aligns with previous study indicating that higher levels of NPL can erode investor trust and negatively affect stock valuations.

The moderate $R^2$ value (0.579) suggests that while the selected financial ratios explain a significant portion of stock price variations, there are other external factors—such as macroeconomic conditions, investor sentiment, and market trends—that also play a role.

Given the potential autocorrelation issue (Durbin-Watson = 1.111), future studies could consider using alternative econometric techniques, such as Generalized Least Squares (GLS) or time-series analysis, to address this concern. Additionally, expanding the dataset to include more banks and longer time periods could improve the robustness of the findings.



In conclusion this study highlights the importance of capital adequacy and profitability in determining stock prices in both Islamic and conventional banks. While other financial ratios (NPM, LDR, DER) do not show significant direct impacts, the overall model confirms that financial performance indicators play a substantial role in stock market valuation. Future study could integrate external economic indicators and market sentiment analysis to provide a more comprehensive understanding of stock price determinants.

### 4.3 Discussion

The results of this study highlight significant differences between Islamic and conventional banks in the relationship between financial performance indicators and stock prices. Financial performance plays a more dominant role in conventional banks, as evidenced by the higher explanatory power ($R^2 = 0.796$) compared to Islamic banks ($R^2 = 0.490$). This suggests that investors in conventional banks rely more on financial indicators, whereas Islamic compliant investors may also consider ethical and regulatory compliance beyond financial performance when making investment decisions. The study finds that ROA is the most influential factor affecting stock prices in both banking types, though its impact is substantially stronger in conventional banks (B = 256.977, p = 0.013) compared to Islamic banks (B = 28.549, p = 0.009). This indicates that investors in conventional banks place greater emphasis on profitability, aligning with previous studies that highlight ROA as a key determinant of investor confidence (Fordian, 2017). Additionally, CAR exhibits a strong positive effect on stock prices in the overall model (B = 0.367, p = 0.000), reinforcing the idea that well capitalized banks attract greater investor confidence. However, when analyzed separately, CAR is not statistically significant in either banking type, suggesting that its impact is more pronounced when financial performance is assessed collectively.

From an overall perspective, the study confirms that ROA and CAR are the most critical financial indicators influencing stock prices, highlighting the importance of profitability and capital strength in investor decision making. Conversely, NPL, LDR, DER, and NPM do not exhibit statistically significant effects on stock prices, suggesting that investors may focus more on a bank's ability to generate profit (ROA) and maintain strong capital reserves (CAR) rather than on risk factors such as NPL or leverage ratios. The negative but insignificant relationship between NPL and stock

prices implies that while high NPL levels may raise concerns about financial stability, their actual impact on stock valuations may be mitigated by regulatory interventions or effective risk management strategies (Said & Mahyoub, 2021). Similarly, the insignificant effect of LDR contradicts prior study that suggests an optimal LDR enhances stock price performance by balancing lending aggressiveness with liquidity management (Martanorika & Mustikawati, 2018). The study also finds no significant relationship between DER and stock prices, contradicting financial theories that suggest highly leveraged banks pose greater financial risks, leading to declining stock values (Brigham & Houston, 2015). Furthermore, NPM does not significantly impact stock prices in either banking type, reinforcing the idea that investors may prioritize overall profitability (ROA) rather than operational efficiency (Patres et al., 2023).

The findings successfully address the study questions by confirming that ROA and CAR have a strong correlation with stock prices, while NPL exhibits a negative but statistically insignificant relationship. Additionally, LDR, DER, and NPM do not significantly influence stock prices, suggesting that their impact may be mitigated by regulatory oversight and market stability. The study also confirms that financial performance indicators play a stronger role in conventional banks than in Islamic banks, further emphasizing that conventional bank investors rely more on financial metrics, whereas Islamic investors may incorporate additional ethical and regulatory considerations in their decision making. In terms of the most crucial financial indicators, the study finds that ROA is the primary determinant of stock price movements, followed by CAR, reinforcing the importance of profitability and capital adequacy in maintaining investor confidence.

With regard to the study objectives, this study successfully examines the correlation between financial performance metrics and stock prices by confirming that ROA and CAR are the strongest predictors of stock price movements. Additionally, the study investigates the relationship between financial performance indicators and stock prices, demonstrating that investors prioritize profitability and capital strength over risk related factors such as NPL and leverage ratios. Furthermore, the study determines that ROA and CAR are the most crucial financial indicators for investment decision making, reinforcing their role in influencing stock performance. These findings align with prior empirical study, including Fordian et al. (2017) and Martanorika & Mustikawati (2018), who found that higher ROA attracts investors and leads to stock price appreciation. The study also supports the findings of Jheng et al. (2018) and the Basel Committee on Banking Supervision (2020), which confirm that higher capital adequacy enhances investor confidence. Moreover, the results are consistent with Said & Mahyoub (2021), who suggested that while high NPL signal financial instability, they do not always result in immediate stock price declines, as well as Patres et al. (2023) who argue that Malaysian investors emphasize profitability over risk measures when evaluating bank stocks.

In conclusion, this study provides strong evidence that profitability (ROA) and capital adequacy (CAR) are the primary determinants of stock prices, with a stronger explanatory power in conventional banks. While risk factors such as NPL and DER exhibit negative relationships with stock prices, their statistical insignificance suggests that regulatory protections, market stability, or macroeconomic conditions may mitigate their impact. Future study should incorporate macroeconomic variables like interest rates, inflation, and investor sentiment to enhance stock price predictions. Fama (1981) found that stock returns are positively linked to real economic activity

but negatively correlated with inflation due to monetary factors. Ibrahim and Yusoff (2001) highlighted that money supply influences Malaysian stock prices positively in the short term but negatively in the long run, with exchange rates and inflation also playing key roles. Expanding the dataset to include more banks and a longer period would improve the study's generalizability. These insights provide valuable implications for investors, regulators, and financial analysts seeking to assess bank performance and stock market valuation in Malaysia.

### 4.4 Summary of the Chapter

Chapter Four presents an analysis of the relationship between financial performance indicators and stock prices in Malaysian banks (both Islamic and conventional) from 2010 to 2023, using SPSS. The analysis examined the following variables: Stock Price (dependent variable), representing the market value of a share; and independent variables including ROA, measuring profitability relative to total assets; NPL, representing loans at risk of default; LDR, reflecting liquidity; CAR, measuring capital relative to risk weighted assets; DER, gauging leverage; and NPM, measuring profitability after all expenses. Key findings revealed that ROA emerged as a critical factor influencing stock prices across both Islamic and conventional banks, with a higher ROA generally correlating with higher stock prices, although it was the only statistically significant factor in Islamic banks. The model for conventional banks demonstrated a higher explanatory power ($R^2 = 0.796$) compared to the Islamic bank model ($R^2 = 0.490$). Other variables exhibited mixed results; NPL had a negative but statistically insignificant relationship with stock prices in conventional banks, and all the other variables (CAR, DER, LDR, NPM) were not statistically significant. The analysis revealed potential statistical issues, including autocorrelation in the Islamic bank model and multicollinearity in the conventional bank model. The overriding

conclusion is the importance of profitability (ROA) in influencing stock prices within the Malaysian banking industry. However, the model differences and statistical concerns suggest a need for further study potentially incorporating macroeconomic factors, investor sentiment, and alternative modeling techniques.

# CHAPTER FIVE

# CONCLUSION AND RECOMMENDATION

## 5.1 Introduction

This chapter presents the conclusions derived from the study, discussing the implications of the findings and providing recommendations for policymakers, investors, and future studyers. It summarizes the overall impact of financial performance indicators on stock prices in Malaysian banks and suggests practical measures that can enhance financial decision making and banking industry stability.

## 5.2 Conclusion

The study has established that financial performance indicators significantly impact stock prices in Malaysian banks. Among the key findings, ROA and CAR exhibit strong positive effects on stock prices, indicating that banks with higher profitability and sufficient capital reserves tend to attract more investor confidence. Conversely, NPL show a negative relationship with stock prices, although the impact is not statistically significant. The results also highlight differences between Islamic and conventional banks, where financial performance plays a more dominant role in influencing stock prices in conventional banks. These findings suggest that investors prioritize profitability and capital stability as key factors in their investment decisions.

## 5.3 Recommendation

Based on the findings, several recommendations are proposed:

1. For Policymakers: Regulatory bodies such as Bank Negara Malaysia should strengthen financial stability policies by ensuring adequate capital buffers for banks. Emphasizing capital adequacy requirements can enhance investor confidence and mitigate risks associated with economic downturns.

2. For Investors: Investors should prioritize banks with strong profitability indicators, particularly those with higher ROA and CAR. Understanding the impact of financial performance metrics on stock prices can help in making informed investment decisions.

3. For Bank Management: Banks should focus on improving profitability and maintaining a healthy capital adequacy ratio. Strategies such as enhancing asset quality, reducing NPL, and optimizing operational efficiency can contribute to better financial stability and stock market performance.

4. For Future Studyers: Further studies could explore external macroeconomic factors such as inflation, interest rates, and economic policies that may also influence stock prices. Expanding the dataset to include more banks and a longer period may improve the robustness of findings.



## 5.4 Summary of the Chapter

This chapter concludes the study by summarizing the key findings, highlighting the significance of financial performance indicators in determining stock prices in Malaysian banks. The recommendations provide guidance for various stakeholders, including policymakers, investors, and bank management, to enhance financial decision making and stability. The study contributes valuable insights into the banking industry, offering a foundation for future study on stock price determinants in emerging markets.

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