

**GOVERNANCE, PERFORMANCE, MACROECONOMICS  
AND FINANCIAL STABILITY: COMPARATIVE STUDY ON  
INDONESIA AND MALAYSIA LISTED BANKS**

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**Abstract:**

*This research investigates the impact of governance mechanisms, bank performance and macroeconomic variables on the financial stability of Indonesia and Malaysia listed banks. The sample consists of 39 Indonesia and 16 Malaysia banks in 2019 until 2023. Results suggest that governance mechanisms and performance indicators have more influence on stability than macroeconomic conditions. Board independence has significantly improved stability which emphasizes against the role effective external monitoring plays in emerging markets. By contrast, the board size is not significant while audit committee size has a negative impact on stability reflecting inefficiency in large committees. In the bank performance, operational efficiency consistently strengthens the bank's stability. Surprisingly, this study also indicates that capital adequacy ratio negatively correlate with stability. This indicates that increased capital reserves may occasionally indicate hidden weaknesses in-stead of simply reflecting strength. Notably, factors like liquidity, inflation, and exchange rates show no statistically significant effect on stability, suggesting that banking institutions have adjusted to macroeconomic fluctuations and reduced their possible effects. Moreover, this study also found that board independence has a stronger stabilizing effect in Malaysia, while capital adequacy and liquidity are more critical for enhancing stability in Indonesia, and profitability supports stability only in Malaysia but is associated with higher risk-taking in Indonesia.*

**Key words:** *financial stability, CG, efficiency, profitability, liquidity*

## **1. Introduction**

Bank management can use a variety of strategies, such as corporate governance, to preserve and improve bank stability (Nguyen et al., 2022). Corporate governance has become increasingly critical as a means to safeguarding the financial stability and the welfare of stakeholders. Agency theory suggests that governance characteristics like board independence, ideal board representation, and an active audit committee play a significant role in reducing agency issues between shareholders and managers, minimizing managers' opportunistic behavior, and ensuring they can be disciplined (Jensen & Meckling, 1976; Adams & Mehran, 2012). Resource dependency theory also supports the argument that an independent and well-represented board contributes valuable knowledge, external networks, and surveillance, which enhances decision-making and supervision of finances (Pfeffer & Salancik, 1978). An independent board also improves the bank's ability to watch over management, whereas bigger boards and audit committees offer various views and control during the fiscal consolidation process, as long as they do not become unwieldy (Saifullah et al., 2023; Abbott et al., 2004). Nevertheless, the literature presented inconsistent results. For instance, as regards board size on bank financial stability, Nguyen (2024), Vuong et al. (2024), Diab et al. (2023), Nguyen et al. (2022), and Marie et al. (2021) indicated a positive impact, whereas Kuria et al. (2024), Mukundwa & Akims (2024), Li et al. (2020), and Trinh et al. (2020) confirmed negative effect. With respect to an independent board on bank financial stability, Nguyen (2024) and Diab et al. (2023) reported a positive relationship, while Nguyen et al. (2022), Marie et al. (2021) and Trinh et al. (2020) established a negative. Diab et al. (2023) confirmed a positive committee size-financial stability relationship whereas Marie et al. (2021), Li et al. (2020), and Trinh et al. (2020) affirmed that committee size does not impact financial stability.

Beyond governance, the performance of the bank significantly impacts its financial soundness. The CAMEL (Capital adequacy, Asset quality, Management competence, Earnings, and Liquidity) model is most popular in evaluating bank performance (Othman et al., 2024; Qureshi & Siddiqui, 2023; Dang, 2011). This study explores operational efficiency, capital adequacy ratio (CAR), liquidity, profitability, and asset quality as CAMEL proxy that influence banks financial stability. Moreover, agency theory (Jensen & Meckling, 1976), efficient management will lead effectively allocating resources, as reflected in the cost-income ratio, determines how well management can control expenses. Capital essentially serves as a financial buffer for banks, safeguarding them against potential losses, while liquidity reflects their capacity to promptly fulfill withdrawal requests and other immediate obligations. Both factors play a significant role in maintaining overall stability (Wafula, 2020; Ibe, 2013). Additionally, profitability demonstrates the bank's ability to generate income from its resources. Non-performing loans, meanwhile, pose a considerable risk by undermining asset quality, thereby highlighting the importance of prudent asset management. However, there were inconsistent empirical findings on the effects of efficiency, CARs, profitability and liquidity asset quality variables in bank financial stability. Moreover, Kuria et al. (2024), Vuong et al. (2024), Alexakis et al. (2022), and Lassoued, (2018) found the operational efficiency negatively influence bank financial

stability. Meanwhile, Ghosh et al. (2024), Hafez, (2022) and My & Quoc, (2022) showed the positive effect of bank efficiency on its financial stability. In the context of CAR's impact on bank financial stability, Vuong et al. (2024), Joudar et al., (2023), Kharabsheh & Gharaibeh (2022), Lassoued (2018) highlighted the positive impact and Mohamed et al., (2023) did not find CAR-bank financial stability relationship. The results of the research on the impact of profitability on bank financial stability are also divided into positively (Mohamed et al., 2023; Al Salamat & Al-Kharouf, 2021; Anh & Phuong, 2021; Marie et al., 2021) and negatively (Khan & Amin, 2023; My & Quoc, 2022). Furthermore, for liquidity, previous researchers found a positive impact (Nguyen, 2024; Gwachha, 2023; Joudar et al., (2023); Nguyen et al., 2022) and a negative impact (Yitayaw et al., 2023; Kharabsheh & Gharaibeh, 2022). Ghosh et al. (2024), Anh, (2023) found that asset quality positively influence bank financial stability. While, Anjom & Faruq, (2023), Khan & Amin, 2023), Anh & Phuong, 2021, Kharabsheh & Gharaibeh, (2022) showed a negatively effect of asset quality on bank financial stability.

Financial stability is also influenced by the external environment, most notably macroeconomic conditions. Inflation and exchange rate volatility are two most important external factors affecting banking transactions, credit risk management and investor return in the bank. Meanwhile, other macroeconomic factors such as interest rate and GDP are often indirectly captured through bank performance indicators or monetary policy transmission mechanisms and may add limited explanatory power. Furthermore, high inflation can distort lending and deposit activity, erode the real value of assets, raise interest rate volatility (thus impairing borrowers' ability to repay their loans), and heighten default risk. However, impact the foreign currency positions of banks and their cost structures as well as capital flows (specifically for open countries such as Indonesia and Malaysia which are deeply entrenched in global trade). Based on the currency pass-through theory and open economy macro models, exchange rate instability may increase financial fragility in an environment where insufficient hedging tools force less monitoring from regulators (Wanzala et al., 2024); El-Khadrawi, 2023). Empirical evidences revealed that inflation can give a positive (Al Salamat & Al-Kharouf, 2021; Koskei, 2020) and negative (Hamidjaya & Danarsari, 2026; Ghosh et al. 2024; Kostka & Palečková, 2024; Maudy et al., 2024; Ullah et al., 2024; Shala et al., 2022) impact to bank financial stability.

Financial stability is strongly influenced by the external macroeconomic environment, with inflation and exchange-rate volatility representing two of the most direct and transmission-intensive channels affecting banking stability. Inflation can distort lending and deposit behavior, erode the real value of financial assets, increase interest-rate volatility, and weaken borrowers' repayment capacity, thereby elevating credit and default risk. Exchange-rate movements, in turn, affect banks' foreign currency exposure, cost structures, and capital flows, particularly in open economies such as Indonesia and Malaysia that are deeply integrated into global trade. Drawing on currency pass-through theory and open-economy macroeconomic models, exchange-rate instability may heighten financial fragility in environments where hedging instruments are limited and regulatory monitoring is less effective (El-Khadrawi, 2023; Wanzala et al., 2024). Although empirical evidence on inflation remains mixed—showing both positive (Al Salamat & Al-Kharouf, 2021; Koskei, 2020) and negative effects on bank financial stability (Ghosh et al., 2024;

Maudy et al., 2024; Shala et al., 2022; Ullah et al., 2024)—the focus on inflation and exchange rates allows for a parsimonious yet theoretically grounded assessment of macroeconomic influences, as other macroeconomic variables are often indirectly captured through bank performance indicators or monetary policy transmission mechanisms and may add limited explanatory power.

The literature offers conflicting evidence on whether these influences matter for financial stability, depending in part upon the institutional environment. In this respect, Indonesia and Malaysia provide a particularly suitable comparative context. Both countries are major emerging economies in Southeast Asia, rely heavily on commercial banks to support economic activity, and are exposed to similar regional and global shocks. However, they differ substantially in terms of regulatory enforcement, governance quality, and banking sector structure. Malaysia's banking system is generally characterized by stronger supervisory frameworks, more consistent governance practices, and more mature financial markets. In contrast, Indonesia's banking sector is more fragmented, with greater variation in governance implementation, uneven regulatory enforcement, and persistent market informality. These institutional contrasts allow this study to isolate how governance and risk-related factors influence financial stability under different regulatory environments. Meanwhile, prior studies report conflicting theoretical on how governance mechanisms, CAMEL-based bank performance, and macroeconomic conditions affect banking financial stability, as agency theory, resource-dependence theory, and macro-financial perspectives often predict divergent outcomes across institutional contexts. To reconcile these inconsistencies, this study adopts an integrated governance–performance–macroeconomic framework as an umbrella theory, synthesizing competing explanations to capture the multidimensional and context-dependent nature of bank stability (Laeven & Valencia, 2018; Berger, et al., 2016).

The objective of this study is to examine the effects of internal governance mechanisms (board independence, board size, and audit committee), bank performance factors (operational efficiency, capital adequacy ratio, liquidity, profitability, and asset quality), and macroeconomic factors (inflation and exchange rates) on the financial stability of listed commercial banks in Indonesia and Malaysia. By adopting a comparative empirical approach, this study contributes to the business and economics literature by providing institution-sensitive evidence on bank stability determinants and offering practical insights for regulators and policymakers seeking to enhance financial resilience amid increasing global uncertainty.

## **2. Literature review**

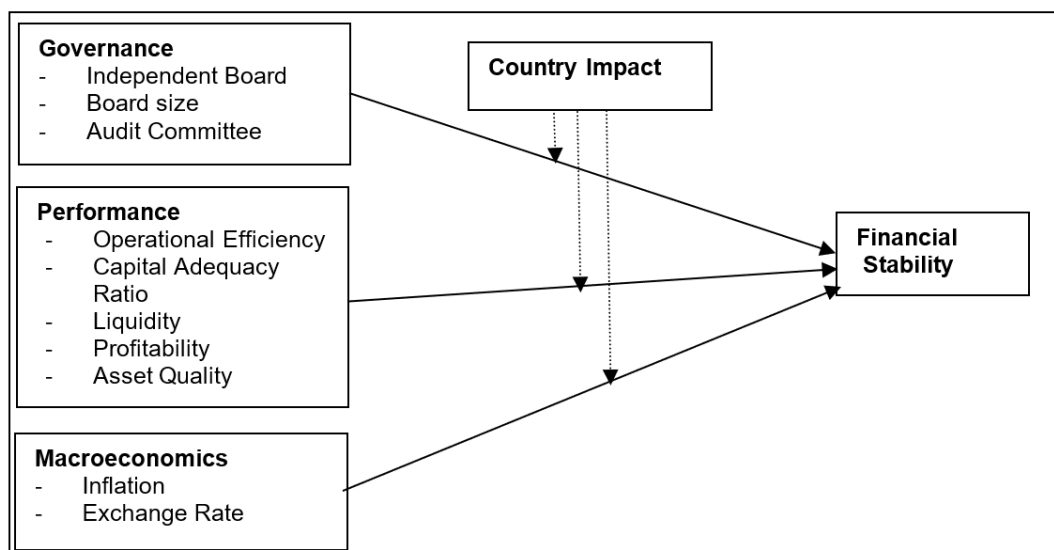
### ***Integrated Framework of Banks Financial Stability***

This study proposes an integrated framework (see figure 1) that examines how governance mechanisms, bank performance, and macroeconomic conditions interact with country context to influence bank financial stability. The governance mechanism was derived from the Agency Theory (Jensen & Meckling, 1976), and the Resource Dependence Theory (Pfeffer & Salancik, 1978). The Agency Theory explains the role of governance in resolving the problem of conflicting interests. The Resource Dependence

Theory provides a theoretical background for the role of strategic resources in improving governance effectiveness. Governance mechanism (board size, independent board, audit committee size)-financial stability framework was supported by some previous researches (Abbott et al., 2004; Adams & Mehran, 2012; Lassoued, 2018; Marie et al., 2021; Nguyen et al., 2022; Mukundwa, 2024).

The performance factors was derived from the Efficiency Structure Theory (Demsetz, 1973), and the Resource-Based View (Barney,1991). On the one hand, the role of operational efficiency, capital adequacy, liquidity, profitability, and asset quality in improving bank resilience becomes evident from various empirical findings (Berger & Mester, 1997; Altunbas et al., 2007; Berger & Bouwman, 2013; Pham et al., 2021; Hafez, 2022). Further, the Capital Buffer Theory of Calem & Rob (1999) and the liquidity model of Diamond & Dybvig (1983) emphasize the role of capital and liquidity buffers in improving bank stability.

Macroeconomic conditions such as inflation and exchange rate volatility also play an important role in bank stability. Empirical findings support that macroeconomic conditions do play an important role in bank stability, as evident from Louzis et al. (2012), Phan et al. (2019), Maudy et al. (2024), and Vuong et al. (2024). These relationships are also subject to various institutional influences, as emphasized by Institutional Theory developed by Scott (2001).



**Figure 1. Theoretical framework**

### **Governance and Financial Stability**

Corporate governance mechanism that involves board directors and its committee developed to account for potential agency issues arising from the division of ownership and management (Marie et al., 2021; Jensen & Meckling, 1976). Moreover, the effective governance mechanism with appropriate board size, independent director composition, and audit committee size impact to bank performance, stability, and market value

This monitoring function is especially important for the banking sector that functions in a situation characterized by high complexity, substantial information

asymmetry and increased systemic risk (Adams & Mehran, 2012). It views also refer to agency theory statements' where separation of ownership from control can cause conflicts among them that impact to financial performance and stability. So, the presence of an independent board may act as a control mechanism that oversees managerial action and ensures that choices are consistent with shareholder (Jensen & Meckling, 1976). In addition, independent directors are expected to maintain objectivity and act in the best interests of shareholders, rather than aligning with executive management (Fama & Jensen, 1983).

Li et al. (2020) found that board independence significantly improves financial stability among commercial banks in Ghana. Similarly, Lassoued (2018) showed that independent board members positively affect the financial stability of Malaysian Islamic banks. Nguyen et al.(2022) also reported that board independence enhances financial resilience in Vietnamese commercial banks, while Diab et al. (2023) observed a positive influence of independent boards on bank stability across 106 conventional banks in MENA countries. In a more recent study, Nguyen (2024) reaffirmed that board independence positively influences the financial stability of Vietnamese banks.

So, the following hypothesis is proposed:

*H1: Independent board members positively influence the financial stability of banks*

Resource dependence theory (Pfeffer & Salancik, 1978) has taken the view that larger boards may improve a bank's financial resilience by providing greater insights, broader competencies and better access to key external resources. A larger board also is inclined to have a more diverse set of professional backgrounds, combined with regulatory experience and financial acumen, which may contribute to ameliorate thinking toward risk-taking behavior, regulatory compliance, and financial discipline in general affecting the state of financial stability in banking. Similarly, agency theory (Jensen & Meckling, 1976) suggest that moderately larger board may enhance this monitoring function, especially when banks face complex operational and regulatory environments, by distributing oversight responsibilities and reducing the likelihood of managerial entrenchment.

Nguyen et al. (2022) found stronger bank stability levels in the case of Vietnamese commercial banks with larger boards. Marie et al. (2021) reported that board size has a significant positively impact on financial stability in Egyptian banks. Diab et al. (2023) shows a similar positive effect in 106 conventional banks in MENA region/vicinity. Additionally, Nguyen (2024) confirmed that the positive board size- financial stability relationship for Vietnamese banks. Yensu et al. (2021) also propose that board size could improve bank financial stability in Ghanaian banks.

So, the following hypothesis is proposed:

*H2: Board size positively influences the financial stability of banks.*

The audit committee is the key to stronger governance, especially in banking where good reporting and risk oversight are essential for financial stability. The thinking is that larger audit committees offer a stronger board-wide oversight function because, collectively, they unite varied expertise and perspectives to assess sophisticated financial matters more robustly. to raise oversight regarding the preventability of fraud on financial

statements in their design of the internal controls (Fama & Jensen, 1983). Further, given the capacity of audit committees on the board, resource dependence theory indicates that a large audit committee size may also have access to more expertise and knowledge necessary to assist the committee in executing its risk governance oversight responsibilities (Pfeffer & Salancik, 1978).

Diab et al. (2023) found that audit committee size positively influences the financial stability of conventional banks in the MENA region. (Nyumutsu, 2019) reported that audit committee size has a positive and significant relation with Z-score in his panel study of listed banks in Ghana from 2006 to 2016. Meanwhile, in the context of Indonesia there was also evidence that larger audit committees are associated with better firm performance and financial stability (Chou & Buchdadi, 2017). So, the following hypothesis is proposed:

*H3: Audit committee size positively influences the financial stability of banks*

### **Bank Performance and Financial Stability**

Bank performance, which can be measured using various approaches including the CAMEL framework in this study is proxied by Capital Adequacy Ratio (CAR), asset quality, operational efficiency, profitability, and liquidity plays a dominant role in maintaining its financial stability. According to the Efficiency Structure Theory (Demsetz, 1973) suggests that firms with widespread efficient administration are more lucrative in light of the fact that they have lower expenses. In particular, Saeed and Kent (2009) suggested that this theory has been dichotomized into two views; X efficiency and scale productivity speculations. The X-efficiency hypothesis posits that more efficient firms have lower costs, higher profits and larger market shares (Athanasoglou et al., 2006). Moreover, Resource-Based Theory (Barney, 1991), operational efficiency is a valuable, rare, and inimitable capability that provides banks with a competitive advantage. Efficient banks are more likely to withstand external stressors, manage risk effectively, and avoid insolvency—core components of financial stability.

Most of the existing empirical literature supports a positive association between bank financial efficiency and stability. Studies such as Hafez, (2022) and My & Quoc, (2022) provide strong support for the positive role of efficiency in stabilizing banking institutions. Hafez, (2022), studied 30 Egyptian banks and found that efficiency has a positive impact on the ability of banks to control risks and their ability to achieve stable financial results. My & Quoc, (2022) reported a positive impact of bank efficiency on financial soundness in Vietnam. Maudy et al. (2024) demonstrated that efficiency positively affects bank financial stability across 133 listed banks in ASEAN-5 countries.

So, the following hypothesis is proposed:

*H4: Operational efficiency positively influences the financial stability of banks*

While, the risk absorption theory and the buffer theory of capital (Calem & Rob, 1999), capital functions as a protective cushion against unexpected losses. Banks with higher CAR are less vulnerable to credit shocks, liquidity stress, or market volatility. Adequate capitalization not only boosts investor and depositor confidence but also enables banks to support lending during downturns—mitigating procyclicality and enhancing stability in the financial system.

Lassoued, (2018), studying Malaysian Islamic banks, and Joudar et al., (2023), using data from 31 banks across 12 MENA countries, found that CAR positively affects financial stability. While, Pham et al. (2021) confirmed a positive CAR-stability nexus in 31 Vietnamese banks. Ghosh et al. (2024) analyzed banks from 110 countries and concluded that CAR has a significant positive impact on financial stability. These findings are further reinforced by Huu Vu and Thanh Ngo (2023), who demonstrated that capital positively affects the financial stability of 27 Vietnamese commercial banks.

So, the following hypothesis is proposed:

*H5: Capital Adequacy Ratio positively influences the financial stability of banks.*

Liquidity, in essence, represents a bank's ability to satisfy short-term obligations without resorting to significant losses or distressed asset sales. Maintaining robust liquidity buffers is vital—they enable banks to absorb unexpected funding shocks, manage sudden withdrawals, and continue lending even under turbulent conditions. When liquidity falls short, though, banks may be forced to liquidate assets hastily, potentially triggering depositor panic and escalating into broader systemic crises (Diamond & Dybvig, 1983).

Keynes' Liquidity Preference Theory, basically highlights the crucial role of holding liquid assets—banks need to keep enough cash or near-cash on hand to handle unexpected shocks. When banks have strong liquidity positions, they're a lot less likely to get tripped up by refinancing risk or broader economic turmoil. They can keep their operations running smoothly, even when markets go haywire.(Keynes, 1936). On the other hand, the Financial Fragility Hypothesis points out that banks without enough liquidity are way more vulnerable to bank runs and failures. If people think a bank can't pay them back on demand, panic spreads fast. So, when banks build up their liquidity buffers, it's not just for show—it actually helps stabilize the whole banking system.

Gwachha (2023) demonstrates that increased liquidity significantly enhances the stability of Nepalese commercial banks. While, Pham et al. (2021) report that higher liquidity levels positively influence the financial stability of 31 Vietnamese banks. Similarly, Joudar et al., (2023) provide evidence that liquidity serves as a key determinant of bank stability across a sample of 31 banks from 12 MENA countries. Furthermore, Nguyen et al. (2022) confirm the positive impact of liquidity on the stability of 25 Vietnamese commercial banks.

So, the following hypothesis is proposed:

*H6: Liquidity positively influences the financial stability of banks.*

The Buffer Theory of Capital (Calem & Rob, 1999) and the Moral Hazard Hypothesis (Jensen & Meckling, 1976) conclude that highly profitable banks tend to maintain stronger capital buffers, making them less prone to reckless risk-taking. This financial discipline, in turn, strengthens their ability to withstand periods of financial distress. Moreover, profitability serves as a crucial buffer for banks, enhancing their ability to absorb shocks such as credit defaults and market fluctuations. When a bank consistently generates profits, it not only bolsters its internal capital reserves but also reassures regulators, investors, and depositors about its stability. In essence, strong earnings reduce a bank's exposure to systemic risks and support ongoing regulatory

compliance, making it far more resilient in the face of economic uncertainty (Ghosh et al., 2024; Lassoued, 2018).

Mohamed et al. (2023) demonstrate that profitability plays a pivotal role in enhancing the financial stability of 40 commercial banks in Kenya. Nguyen and Le (2022) also report a strong positive relationship between return on assets (ROA) and bank stability across 79 listed banks in the ASEAN-5 region. Consistent findings appear in Jordan, where. Al Salamat & Al-Kharouf (2021), note that higher ROA correlates with improved stability among 13 commercial banks. Similarly, Anh & Phuong (2021) highlight the same dynamic within Vietnamese banks, linking increased ROA with greater financial resilience.

Additional evidence from Marie et al. (2021) and Diab et al. (2023), supports this association, showing that ROA significantly strengthens the stability of banks in Egypt and the broader MENA region. On a global scale, Ghosh et al.(2024) confirm that ROA, along with return on equity (ROE) and net interest margin (NIM), positively influences bank stability across a sample of 110 countries. Further, research by Nguyen et al. (2022) and Nguyen (2024) reinforces the positive impact of ROA on the financial stability of Vietnamese banks.

So, the following hypothesis is proposed:

*H7: Profitability positively influences the financial stability of banks.*

Credit Risk Theory conclude that the quality of a bank's assets plays a big role in determining its risk of default and, by extension, its overall financial soundness (Louzis et al., 2012). Furthermore, asset quality, often measured by the ratio of non-performing loans (NPLs) to total loans, stands as a central pillar of a bank's financial health (Ghosh et al.,2024).

Vuonget al. (2024) after analyzing 157 banks across eight ASEAN countries, found that a rise in NPLs significantly undermined financial stability. Similar findings emerged in Kenya (Koskei, 2020), Jordan (Kharabsheh & Gharaibeh, 2022), Nepal (Gwachha, 2023), and Czech (Kostka & Palečková, 2024). It means that higher NPL ratios were associated with decreased bank stability.

So, the following hypothesis is proposed:

*H8: Asset quality positively influences the financial stability of banks.*

### ***Macroeconomics Factors and Financial Stability***

Macroeconomic stability is fundamentally intertwined with the resilience of the banking sector, and inflation, in particular, exerts considerable influence over banking operations, credit quality, and financial stability. Drawing upon Fisher's Theory and similar economic frameworks, one can argue that predictable and moderate inflation enables banks to price loans with greater accuracy. In contrast, inflation volatility disrupts interest margins and amplifies credit risk. When inflation is high, borrowers' purchasing power diminishes, leading to a rise in default rates. This, in turn, undermines bank profitability, necessitates increased loan loss provisions, and elevates the risk of systemic instability within the financial system. (Ghosh et al.,2024). Moreover, inflation undermines the real value of bank capital and earnings, while also chipping away at the purchasing power of

depositors. As a result, individuals may withdraw their funds, leading to potential liquidity issues for banks. In response to these pressures, banks often shift toward short-term, speculative lending strategies to safeguard their profit margins. Unfortunately, this approach tends to heighten risk exposure and ultimately threatens the stability of the financial system over time. (Ullah et al., 2024; Maudy et al., 2024).

Ullah et al. (2024) investigated 22 countries and found clear evidence that inflation significantly weakens bank financial stability. Similarly, Shala et al. (2022) identified a negative relationship between inflation and the financial stability of 17 Central and Eastern European banks. Ghosh et al.(2024) echoed these findings, observing adverse effects of inflation on financial stability across a broad sample of 110 countries. Meanwhile, In the ASEAN context, both Maudy et al. (2024) and Nguyen (2024) confirmed that inflation undermines financial stability among listed banks. In addition, Khan and Amin (2023) analyzed 157 banks in eight ASEAN countries and concluded that inflation leads to heightened credit risk, capital erosion, and increased interest rate volatility, all of which threaten the resilience of banks.

So, the following hypothesis is proposed:

*H9: Inflation rate negatively influences the financial stability of banks.*

The exchange rate is a critical determinant of financial stability for banks, especially in economies with significant participation in international trade and capital markets. In the context of emerging markets, exchange rate volatility introduces substantial risks, as banking institutions in these regions tend to be more susceptible to fluctuations in currency values. Rapid changes in exchange rates can place considerable stress on banks' balance sheets, underscoring the importance of effective risk management in these environments.

Foreign exchange exposure theory suggests that fluctuations in exchange rates can have direct and indirect impacts on banks' balance sheets(Eichengreen & Hausmann, 1999). When banks hold assets or liabilities denominated in foreign currency, a sharp depreciation of the domestic currency can reduce asset values, make foreign debt repayments more expensive, and undermine borrowers' ability to repay. This tends to lead to declining asset quality and a rise in non-performing loans, both of which pose risks to financial stability (Eichengreen & Hausmann, 1999). The financial fragility hypothesis (Allen & Gale, 2000) further argues that macroeconomic shocks, such as currency depreciation, can quickly ripple through highly leveraged banks, eroding their capital buffers and raising broader concerns about solvency. These vulnerabilities are especially pronounced in banks with significant currency mismatches, inadequate hedging, or limited access to foreign currency liquidity..

Shala et al. (2022) clearly demonstrated that fluctuations in exchange rates significantly undermined the stability of banks across 17 Central and Eastern European countries. Similarly, Ullah et al. (2024) found that currency instability weakened the resilience of banking sectors in 22 developing nations. Furthermore, Ghosh et al.(2024), analyzing data from 110 countries, underscored how exchange rate instability consistently eroded banking system stability. In Southeast Asia, Nguyen (2024) and Maudy et al.

(2024) reported that currency volatility put clear downward pressure on banks in Vietnam and the broader ASEAN-5 region.

So, the following hypothesis is proposed:

*H10: Exchange rate volatility has a negative effect on bank financial stability*

### **Country Moderating Role on Determinant Factors of Financial Stability**

The moderating effect of country context is critical to the understanding of the impact of governance, performance, and macroeconomic factors on the financial stability of banks in Indonesia and Malaysia. Based on Institutional Theory, differences in the enforcement of regulations, governance development, and supervision quality create a context in which the effectiveness of corporate governance structures is shaped. In Malaysia, the relatively strong regulatory environment and governance enforcement allow the use of independent boards and audit committees as effective monitoring and advisory structures that can mitigate excessive risk-taking and improve financial stability (Scott, 1995). Consequently, the stabilizing role of governance quality on bank financial stability is stronger and more robust in Malaysia than in Indonesia.

From the macroeconomic and banking performance point of view, the country-specific financial system structures and macroeconomic vulnerability to external shocks further condition the results of financial stability. Theories of Financial Structure and Development and Open Economy Macroeconomic Theory suggest that the greater financial market development, greater diversification of funding sources, and more stable exchange rate management in Malaysia improve banks' macroeconomic shock resilience and liquidity management capabilities (Levine, 2002). In contrast, Indonesian banks are exposed to a larger but more diverse financial environment with greater vulnerability to capital flow instability and exchange rate volatility, making financial stability more sensitive to inflation and exchange rate depreciation shocks. As such, the relationships between CAMEL-based performance measures, macroeconomic variables, and financial stability in banks are expected to be of different magnitudes and signs for the two countries. Some previous studies highlighted the importance of the country moderating role in banking stability determinants, such as Liu et al., (2024), Ullah et al. (2024), Vuong et al. (2024); Athari, et al (2023), Oyetade & Muzindutsi (2023).

So, the following hypothesis is proposed:

*H11: The country moderates the corporate governance-bank stability relationship.*

*H12: The country moderates the bank performance-bank stability relationship.*

*H13: The country moderates the macroeconomic factors-bank stability relationship*

### **3. Methodology**

#### **Population and Sample**

The population of this study is all banks that listed in Indonesian Stock Exchange (IDX) or Bursa Malaysia (BM). The sample of this study is 39 banks listed in IDX and 16 listed in BM selected using purposive method approach observed for 5 years (2019 - 2023). or a total of 276 observations. The data in this study was obtained from the website

of the financial services authority in the banking financial information session, especially banking finance banks, each bank website, and central bureau statistics.

**Table 1. variables definition and measurement**

| Variables              | abbreviation | Operational Definitions and Measurements   |
|------------------------|--------------|--|
| Financial Stability    | FS           | The survival of financial institutions is measured by the Z score that equal to equity to total assets (ETA) plus return on asset ROA) divide standard deviation of ROA      |
| Independent board      | IB           | The percentage of independent member in board of director  |
| Board size             | BS           | The number of board member   |
| Audit committee        | AC           | The number of audit committee member   |
| Operational Efficiency | OE           | The ability of banks to convert resources into revenue measured by Total Operating Cost Divide Total Revenue   |
| Capital Adequacy Ratio | CAR          | The quantum of assets that a financial institution must own and plan to hold as measured by regulatory capital relative to risk-weighted assets.                             |
| Liquidity              | LQ           | Capacity of a financial institution to account for commitments at the time of expiry. Measured by comparing total loans to deposits  |
| Profitability          | PRO          | The ability of businesses to get a return on investment measuring by Net Income Divide Total assets  |
| Asset Quality          | AQ           | The ability of bank resources (credit) to provide income. This is an easy way for borrowers to meet their legally binding commitments. It measures using non performing loan |
| Inflation rate         | IR           | The overall country inflation rate   |
| Exchange rate          | ER           | The average changing in the country's currency exchange rate against the US dollar   |
| Country                | IND          | The dummy variable with the value 1 for Indonesia and value 0 for Malaysia   |

**Variable, Measurement and Model**

The definition and measurement of all variables in this study are presented in table 1. This study employs three regression specifications. The first model estimates the direct effects of governance variables, bank performance indicators, and macroeconomic factors on financial stability without considering cross-country differences. The second model introduces a country dummy variable to distinguish between Indonesian and Malaysian banks. The third model incorporates interaction terms between the country dummy and independent variables to test whether the effects of governance, bank performance, and macroeconomic factors on financial stability differ across the two institutional contexts. Those regression models as follow:

$$FS_{it} = \beta_0 + \beta_1 IB_{it} + \beta_2 BS_{it} + \beta_3 ACS_{it} + \beta_4 EO_{it} + \beta_5 CAR_{it} + \beta_6 LQ_{it} + \beta_7 PRO_{it} + \beta_8 AQ_{it} + \beta_9 IR_{it} + \beta_{10} ER_{it} + \varepsilon_{it} \quad (1)$$

$$FS_{it} = \beta_0 + \beta_1 IB_{it} + \beta_2 BS_{it} + \beta_3 ACS_{it} + \beta_4 EO_{it} + \beta_5 CAR_{it} + \beta_6 LQ_{it} + \beta_7 PRO_{it} + \beta_8 AQ_{it} + \beta_9 IR_{it} + \beta_{10} ER_{it} + \beta_{11} IND_{it} + \varepsilon_{it} \quad (2)$$

$$FS_{it} = \beta_0 + \beta_1 IB_{it} + \beta_2 BS_{it} + \beta_3 ACS_{it} + \beta_4 EO_{it} + \beta_5 CAR_{it} + \beta_6 LQ_{it} + \beta_7 PRO_{it} + \beta_8 AQ_{it} + \beta_9 IR_{it} + \beta_{10} ER_{it} + \beta_{11} IND_{it} + \beta_{12} IB^*IND_{it} + \beta_{13} BS^*IND_{it} + \beta_{14} ACS^*IND_{it} + \beta_{15} EO^*IND_{it} + \beta_{16} CAR^*IND_{it} + \beta_{17} LQ^*IND_{it} + \beta_{18} PRO^*IND_{it} + \beta_{19} AQ^*IND_{it} + \beta_{20} IR^*IND_{it} + \beta_{21} ER^*IND_{it} + \varepsilon_{it} \quad (3)$$

Note:

|        |   |
|--------|---|
| FS it  | : Financial stability of Bank i in the period t                   |
| IB it  | : Proportion of independent of bank in the period t               |
| BS it  | : Number of board member of bank in the period t                  |
| AC it  | : Number of audit committee member of bank in the period t        |
| OE it  | : Operational efficiency of bank in the period t                  |
| CAR it | : Capital adequacy ratio of bank i in the period t                |
| LQ it  | : Liquidity of bank i in period t                                 |
| PRO it | : Bank i profitability in the period t                            |
| AQ it  | : Asset quality of Bank i in the period t                         |
| IR it  | : Country inflation rate in the period t                          |
| ER it  | : Country exchange rate against US Dollar in the period           |
| IDN it | : Country dummy variable which 1 for Indonesia and 0 for Malaysia |

#### 4. Results/findings

##### **Descriptive Variables**

Descriptive statistics of all variables for 276 observations of banks-years in terms of minimum, maximum, mean, standard deviation (Std. Dev) is reported in table 2. Table 2, shows that the average financial stability is 3.56 with a high level of variation reaching 3.88. The higher variation of financial stability is expected due to structural heterogeneity between large and small banks in both countries. According to the data, the average board of directors consists of approximately six members, with a standard deviation of 2.79, indicating some variability across institutions. The proportion of independent directors' averages 55% (standard deviation: 16%), reflecting a moderate level of board independence. Audit committees generally comprise about four members, with a standard deviation of 1.28. Operationally, the sample banks demonstrated an average efficiency of 82%, classifying them as healthy institutions by prevailing standards. Furthermore, the average capital adequacy ratio for these banks exceeds the regulatory minimum of 8%, highlighting strong capital positions across the sample. The average sample bank's liquidity is in the category of healthy banks or below 90%. Profitability is also included in the category of healthy banks with a value above 1%. Meanwhile, on average, non-performing loans are included in the category of healthy banks.

**Table 2. Descriptive Variables.**

| Variables                    | Min   | Max   | Mean | SD   |
|------------------------------|-------|-------|------|------|
| Financial stability (FS)     | -2.61 | 15.57 | 3.56 | 3.88 |
| Bank Size (BS)               | 2.00  | 15.00 | 6.23 | 2.79 |
| Independent Board (IB)       | 0.00  | 1.00  | 0.55 | 0.16 |
| Audit Committee Size (ACS)   | 1.00  | 8.00  | 3.94 | 1.28 |
| Operational Efficiency (OE)  | 0.02  | 2.88  | 0.82 | 0.37 |
| Capital adequate ratio (CAR) | 0.03  | 1.70  | 0.28 | 0.19 |
| Liquidity (LQ)               | -0.08 | 5.16  | 0.90 | 0.41 |
| Profitability (PRO)          | -0.16 | 0.14  | 0.01 | 0.03 |
| Non performing Loan (AQ)     | -0.01 | 0.12  | 0.02 | 0.02 |
| Inflation (IR)               | -0.01 | 0.06  | 0.02 | 0.01 |
| Foreign Exchange (ER)        | 0.97  | 1.14  | 1.02 | 0.03 |

In addition, this study conducted a comparative analysis of descriptive statistics between observations of banks listed on the Indonesian stock exchange and the Malaysian stock exchange are reported in table 3. Table 3, shows financial stability (FS) is significantly greater in Malaysia compared to Indonesia indicating a more stable banking sector, in Malaysia throughout the study period. Meanwhile, in the context of corporate governance, Malaysian banks tend to be bigger board size (BS) on average and demonstrate more robust governance frameworks indicated by elevated shares of independent boards (IB) and bigger audit committee sizes (ACS) with all these differences being statistically significant at the 1% level. Furthermore, banks listed on Bursa Malaysia have a better operational efficiency (OE) and higher asset quality (AQ) than banks listed on the Indonesian stock exchange. However, banks listed on the Indonesian stock exchange have a better capital adequacy ratio (CAR) compared to banks listed on the Bursa Malaysia suggesting a stronger focus on capitalization of Indonesia banks. Liquidity (LQ) remains largely comparable between the two nations suggesting alike liquidity statuses. Profitability (PRO) registers higher in Malaysia though this difference is less pronounced in both size and statistical strength. Whereas macroeconomic metrics also vary where Indonesia has greater inflation (IR) while Malaysia records a higher exchange rate (ER) with both distinctions being statistically meaningful.

**Table 3. Comparative Descriptive Statistics.**

| Variables | Malaysia | Indonesia | t     | p-value |
|-----------|----------|-----------|-------|---------|
| FS        | 6.30     | 2.47      | 7.10  | 0.00*** |
| BS        | 8.70     | 5.24      | 6.23  | 0.00*** |
| IB        | 0.63     | 0.52      | 5.76  | 0.00*** |
| ACS       | 4.25     | 3.81      | 3.94  | 0.00*** |
| OE        | 0.56     | 0.93      | -8.25 | 0.00*** |
| CAR       | 0.18     | 0.32      | -8.58 | 0.00*** |
| LQ        | 0.94     | 0.89      | 1.21  | 0.22    |
| PRO       | 0.130    | 0.006     | 2.45  | 0.02**  |
| AQ        | 0.017    | 0.027     | -5.13 | 0.00*** |

|   |       |       |       |         |
|---|-------|-------|-------|---------|
| IR  | 0.018 | 0.027 | -4.44 | 0.00*** |
| ER  | 1.04  | 1.02  | 4.37  | 0.00*** |
| Note: *** indicates 1% significant level, ** indicates 5% significant level |       |       |       |         |

### ***Finding of Hypothesis Testing***

This study conducted three multiple regression models. Model 1 is used to test the direct impact of governance mechanisms, bank performance, and macroeconomic variables on bank financial stability, Model 2 is used to test country-specific effects (Indonesia compared to Malaysia), and Model 3 is used to test the moderating role of country on the relationship between governance, bank performance, macroeconomic variables, and financial stability. The results of all models that presented in table 4 demonstrate that F-tests are statistically significant at 1% level, so this indicates that models of this study statistically fit to predict banks financial stability with Adj R<sup>2</sup> 41.7%, 44.1%, and 55.7% for model 1, model 2, and model 3 respectively.

The results of Model 1 indicate mixed results regarding the impact of governance mechanisms, bank performance, and macroeconomics factors on bank financial stability. Moreover, for governance mechanisms, Independent Board (IB) has a positive and marginal significant impact on bank financial stability ( $\beta = 2.16$ ,  $p = 0.07$ ), indicating that H1 is supported at a 10% significance level. Board Size (BS) has an insignificant impact on financial stability ( $\beta = 0.10$ ,  $p = 0.25$ ), indicating that H2 is not supported. Audit Committee Size (ACS) has a negative and significant impact on financial stability ( $\beta = -0.38$ ,  $p = 0.03$ ), therefore H3 is not supported.

In the context of bank performance, the results showed tha Operating Efficiency (OE) has a negative and significant impact on financial stability ( $\beta = -3.32$ ,  $p = 0.00$ ), indicating that H4 is supported. This implies that operating inefficiencies negatively impact financial stability. Capital Adequacy Ratio (CAR) has a negative and significant impact on financial stability ( $\beta = -2.10$ ,  $p = 0.05$ ), indicating that H5 is not supported. Liquidity (LQ) does not significantly influence financial stability, as its beta is 0.51 and its probability is 0.26. Therefore, H6 is not supported. Profitability (PRO) has a positive and significant effect on financial stability, as its beta is 23.10 and its probability is 0.03. So, H7 is supported. Asset quality (AQ) has a strong negative and significant effect on financial stability, as its beta is -45.65 and its probability is 0.00. Therefore, H8 is supported. This shows the importance of bank performance and factors related to bank risks in financial stability.

In the case of macroeconomic factors in Model 1, it is clear that these variables have limited influence on bank financial stability. For example, inflation (IR), which is not significant in the model, has a beta of -21.58 and a probability of 0.20. This shows that H9 is not supported. Exchange rate (ER), which is not significant in the model, has a beta of 8.55 and a probability of 0.18. This shows that H10 is not supported. Country-specific factors in Model 2 show that the country dummy (IND) has a negative and significant effect, as its beta is -2.04 and its probability is 0.00. This shows that banks in Indonesia are significantly less financially stable than those in Malaysia.

**Table 4. Hypothesis Testing Results.**

| Variables             | Model 1  |       |         | Model 2  |       |         | Model 3  |       |         |
|-----------------------|----------|-------|---------|----------|-------|---------|----------|-------|---------|
|                       | $\beta$  | t     | Sig     | $\beta$  | t     | Sig     | $\beta$  | t     | Sig     |
| Constant              | -1.24    | -0.19 | 0.85    | 7.21     | 1.06  | 0.29    | -5.32    | -0.49 | 0.63    |
| BS                    | 0.10     | 1.15  | 0.25    | -0.01    | -0.13 | 0.89    | 0.16     | 0.98  | 0.33    |
| IB                    | 2.16     | 1.80  | 0.07*   | 1.32     | 1.09  | 0.28    | 2.59     | 0.90  | 0.37    |
| ACS                   | -0.38    | -2,24 | 0.03**  | -0.29    | -1.78 | 0.08*   | 0.42     | 1.46  | 0.15    |
| OE                    | -3.32    | -3,66 | 0.00*** | -2.63    | -2.89 | 0.00**  | -6.24    | -2.98 | 0.00*** |
| CAR                   | -2.10    | -1.97 | 0.05**  | -1.75    | -1.67 | 0.10*   | -25.46   | -2.44 | 0.02**  |
| LQ                    | 0.51     | 1.14  | 0.26    | 0.28     | 0.63  | 0.53    | -2.83    | -1.88 | 0.06*   |
| PRO                   | 23.10    | 2.26  | 0.03**  | 28.31    | 2.80  | 0.00*** | 28.26    | 7.01  | 0.00*** |
| AQ                    | -45.65   | -4.37 | 0.00*** | -40.77   | -3.9  | 0.00*** | -89.43   | -2.50 | 0.01*** |
| IR                    | -21.58   | -1.28 | 0.20    | 1.41     | 0.08  | 0.94    | -43.04   | -1.79 | 0.07*   |
| ER                    | 8.55     | 1.36  | 0.18    | 1.37     | 0.21  | 0.83    | 15.65    | 1.63  | 0.11    |
| IND                   |          |       |         | -2.04    | -3.55 | 0.00**  | 11.47    | 0.86  | 0.39    |
| BS x IND              |          |       |         |          |       |         | -0.15    | -0.74 | 0.46    |
| IB x IND              |          |       |         |          |       |         | -0.17    | -1.61 | 0.10*   |
| ACS x IND             |          |       |         |          |       |         | -0.57    | -1.62 | 0.11    |
| OE x IND              |          |       |         |          |       |         | 4.47     | 1.93  | 0.06*   |
| CAR x IND             |          |       |         |          |       |         | 24.08    | 2.30  | 0.02**  |
| LQ x IND              |          |       |         |          |       |         | 3.43     | 2.19  | 0.03**  |
| PRO x IND             |          |       |         |          |       |         | -249.10  | -6.04 | 0.00*** |
| AQ x IND              |          |       |         |          |       |         | 52.02    | 1.40  | 0.16    |
| IR x IND              |          |       |         |          |       |         | 37.60    | 1.08  | 0.28    |
| ER x IND              |          |       |         |          |       |         | -17.73   | -1.46 | 0.15    |
| Adj R <sup>2</sup>    | 0.417    |       |         | 0.441    |       |         | 0.557    |       |         |
| R <sup>2</sup> Change | 0.438    |       |         | 0.026    |       |         | 0.127    |       |         |
| F                     | 20.659   |       |         | 20.749   |       |         | 17.453   |       |         |
| Sig.                  | 0.000*** |       |         | 0.000*** |       |         | 0.000*** |       |         |

Note: \*\*\* indicates 1% significant level, \*\* indicates 5% significant level, \* indicates 10% significant level

The interaction results for Model 3 show the cross-country differences in the determinants of bank financial stability. The interaction between independent board and country (IB × IND) is marginally significant, supporting H11. This implies that the independent board is more effective in Malaysia than Indonesia. The interaction between bank performance and country is significant for operating efficiency (OE × IND:  $\beta = 4.47$ ,  $p = 0.06$ ), capital adequacy ratio (CAR × IND:  $\beta = 24.08$ ,  $p = 0.02$ ), liquidity (LQ × IND:  $\beta = 3.43$ ,  $p = 0.03$ ), and profitability (PRO × IND:  $\beta = -249.10$ ,  $p = 0.00$ ), supporting H12. In contrast, asset quality interaction is not significant (AQ × IND:  $\beta = 52.02$ ,  $p = 0.16$ ). In addition, the interaction variables for inflation (IR × IND:  $\beta = 37.60$ ,  $p = 0.28$ ) and exchange rate (ER × IND:  $\beta = -17.73$ ,  $p = 0.15$ ) are not significant, suggesting that H13 is not supported. This implies that the macroeconomic variables have a similar effect on bank financial stability in both countries.

## **5. Discussions**

The findings indicate that board independence improves bank financial stability. This finding supported Fama & Jensen, (1983) who state that independent directors strengthen monitoring and protect shareholder interests. Moreover, the result of this study is similar to some previous studies, such as, Li et al. (2020), Lassoued (2018), Nguyen et al. (2022) and Diab et al. (2023) who found the positive relationship between independent board and bank financial stability. This study's finding also indicates board independence strengthens stability in weaker governance environments.

Meanwhile, board size does not significantly affect bank financial stability, suggesting that increasing the number of directors does not necessarily improve monitoring effectiveness. This finding consistent with Lassoued (2018) and Alexakis et al. (2022) who conclude that board size has no significant effect on financial stability. However, this finding is different from recent studies such as Marie et al., (2021), Nguyen, (2024) who report a positive board size-bank stability relationship and Mukundwa & Akims, (2024) and Trinh et al., (2020) who found board size negatively impact bank stability. This finding aligns with prior research highlighting the complex and sometimes non-linear effects of board size on corporate outcome including bank financial stability (Nguyen & Le, 2022; Marie et al., 2021). Furthermore, larger boards may enhance oversight and provide broader expertise, they may also face coordination challenges and slower decision-making (Yermack, 1996).

Unexpectedly, the negative effect of audit committee size suggests that increasing the number of audit committee members does not automatically enhance oversight. Larger committees may create coordination problems and reduce accountability, as suggested by Jensen (1993).. This finding is consistent with Trinh et al. (2020) and Marie et al. (2021) who also reported that audit committee size has no significant impact on financial stability. However, this study is not consistent with Diab et al. (2023) identified a positive linkage between audit committee size and financial stability banks. The results indicate that expanding audit committee size does not necessarily improve oversight or risk management. The findings suggest that larger committees may instead create coordination problems and reduce accountability Jensen (1993).

Similarly, operating efficiency significantly improves bank financial stability. It means that when a bank has higher proportion operational cost to operating income (inefficiency), its financial stability will decrease. The findings support the efficiency-stability hypothesis, showing inefficiencies weaken profitability and capital buffers, thereby reducing financial stability. In addition, less efficient banks face higher vulnerability to shocks due to limited risk-absorbing margins and greater reliance on risky strategies (Altunbas et al., 2007). This result consistent with Ghosh et al. (2024), Diab et al. (2023) and Khan & Amin (2023) who found that lower efficiency is associated with higher financial instability.

Surprisingly, this research demonstrated that the Capital Adequacy Ratio is negatively and significantly related to bank financial stability for all models. The results indicates that the banks with larger CAR ratios are potentially less efficient in the use of capital, possibly indicating banks' assets are not doing sufficiently well or the banks are being overly conservative in lending that are lowering profitability. This finding is not

consistent with buffer theory which suggests that banks with higher capital adequacy ratios are less vulnerable to sudden shocks, and therefore more stable. In addition, the finding is different from the literature supporting the positive effect of CAR on bank financial stability (e.g. Maulana et al., 2025; Lassoued, 2018; Joudar et al., 2023; Pham et al., 2021; Ghosh et al. 2024; Huu Vu & Thanh Ngo, 2023). Furthermore, liquidity has no significant effect on bank financial stability for all models consistent with Mohamed et al. (2023), Yitayaw et al. (2023), and Lassoued (2018). These findings indicate that liquidity does not always be followed by better financial development especially in emerging markets in which the other structural things may prevail. However, this finding is different from some previous studies which reporting liquidity positively impact on bank financial stability (e.g. Gwachha, 2023; Pham et al., 2021; Joudar et al., 2023; and Nguyen et al., 2022).

This research demonstrates that profitability measured by return on assets (ROA) positively and significantly affects bank financial stability. These findings in line with the buffer theory which state that profitability in banks allows them to stocks larger capital buffers and earnings reserves which can absorb losses in times of financial difficulties. These findings are in line with some prior empirical findings (e.g. Al Salamat & Al-Kharouf, 2021; Anh & Phuong, 2021; Mohamed et al., 2023; Ghosh et al., 2024; Nguyen & Le, 2022; Diab et al., 2023; and Lassoued, 2018).

The findings unambiguously reveal that asset quality, represented by NPLs, has negative and statistically significant impact on bank financial stability across all models. These results are consistent with the financial fragility theory that states a declining asset quality increases insolvency risk by reducing revenues and depleting capital cushions. Elevated non-performing loan ratios cut a bank's income from performing assets, swell provisioning expenses, and convey inadequate risk assessment or lax underwriting discipline. The combination of these elements raises financial stress, which further dampens stakeholder confidence, tightens liquidity, and raises systemic risk. These empirical results confirm some pervious studies findings such as Diansari et al. (2025), Maulana et al. (2025), Vuong et al. (2024), Ghosh et al. (2024), Gwachha (2023), Anh & Phuong, (2021), My & Quoc, (2022), Kharabsheh & Gharaibeh (2022), Kuria et al. (2024), and Khan & Amin (2023).

Meanwhile, in the contexts of macroeconomics factors, this study found that the inflation rate has no a significant impact on bank financial stability. This finding supports the literature reporting that inflation has any impact on bank financial stability such as Riani & Indra (2026), Kuria et al. (2024), Mohamed et al. (2023), Nguyen et al. (2022), and Lassoued (2018). These findings imply that with careful monetary policies and strong inflation-targeting frameworks adopted by Bank Indonesia and Bank Negara Malaysia may have limited inflation shocks and their effects on the financial system. Additionally, banks' ability to pass inflation-related costs onto borrowers, particularly through variable interest rates, may have further reduced any direct destabilizing effects.

Similarly, the exchange rate has no a significant impact on bank financial stability in any of the models tested. This indicates that exchange rate fluctuations do not consistently or measurably influence the financial stability of banks in Indonesia and Malaysia during the observed period. These findings are supported by some studies which also found insignificant effects of exchange rates on financial stability (e.g. Yensu et al.,

2021;Khan & Amin, 2023; Anggraeni and Sudarmawan, 2026). These suggest that the maturity of financial markets, hedging practices, and monetary policy frameworks may insulate banks from the direct effects of exchange rate volatility.

In addition, for country dummy variable indicate that Indonesian banks are significantly less financially stable than Malaysian banks. This cross-country difference reflects structural and institutional disparities and is consistent with prior evidence emphasizing the role of institutional quality and regulatory effectiveness in banking stability (La Porta et al., 1998; Klapper & Love, 2004; Diab et al., 2023).

The country-governance mechanisms interaction analysis further reveals that board independence is more effective in enhancing financial stability in Malaysia. Meanwhile, the interaction country with board and audit size are statistically insignificant impact to bank stability. This result reflects Malaysia's relatively stronger institutional environment and more stringent enforcement of corporate governance practices.

In term of bank performance-country interaction, the results show some clear differences between what drives bank stability in Indonesia and Malaysia. In Indonesia, capital adequacy and liquidity make banks much more stable. It really shows how important strict regulations and solid financial buffers are, especially in a country still shaped by the volatility and caution that followed the Asian Financial Crisis (Berger & Bouwman, 2013). Malaysia's a bit different. There, profitability actually makes banks more stable, but in Indonesia, more profit seems to do the opposite. It looks like higher earnings in Indonesia come from banks taking bigger risks, which can hurt their stability over time (Buch & DeLong, 2008). One more thing stands out: operational efficiency doesn't matter as much in Indonesia. Banks there seem to make up for being less efficient by leaning on regulations, diversified income, or institutional safety nets. That lines up with what we see in other countries with a mix of banking setups (Berger & Mester, 1997).

Finally, the absence of significant interaction effects for inflation and exchange rate variables indicates that macroeconomic conditions affect banks in both countries in broadly similar ways. This finding may reflect comparable monetary policy frameworks, banking sector structures, and shared exposure to regional economic cycles, as suggested in the macro-financial literature.

## **6. Conclusions**

The purpose of this study is to examine the influence of governance mechanisms, bank performance, and macroeconomic indicators on the stability of public listed banks in Indonesia and Malaysia. This study selected 39 Indonesian listed banks and 16 Malaysian listed banks as a sample during the periods from 2019 to 2023 (276 observations). The study applies pooled, country-controlled, and interaction regression models to capture both the direct and cross-country moderating effects.

The results revealed that in the context of governance mechanism, the board independence is to be an important factor in determining bank stability, being statistically significant in baseline model confirming that independent directors strengthen monitoring, reduce agency conflicts, and increase bank resilience, especially in environments where the governance structure may not be so strong. This result supports the agency theory and

prior empirical evidence. However, board size and audit committee size do not have a positive impact on stability. Board size has no significant effect in any of the models, which is consistent with mixed evidence from previous work that larger boards might bring more expertise but may also have coordination problems. Likewise, audit committee size is negatively related to persistence in the pooled sample but nonsignificant in the individual country models, again indicating that larger committees could destroy accountability more than enhance oversight.

The results indicate that governance mechanisms matter in a selective yet context-based manner in determining bank financial stability. Board independence has a positive and significant effect on enhancing financial stability in the baseline model, confirming that independent directors strengthen monitoring, reduce agency conflicts, and increase bank resilience, especially in environments where the governance structure may not be so strong. This result supports the agency theory and prior empirical evidence. However, the insignificance of board independence in the country-control and interaction models indicates that the effectiveness of board independence depends more on institutional enforcement rather than just on formal composition. Contrarily, board size does not significantly impinge on financial stability in any of the models, reinforcing the notion that bigger boards may create coordination problems that offset their greater availability of diverse expertise. For example, audit committee size does not positively contribute to stability but is negatively associated with stability in the pooled sample, indicating that increasing the size of audit committees may diffuse accountability and decrease oversight effectiveness rather than enhance risk management.

Meanwhile, bank performance indicators offer more consistent findings. Operating efficiency appears to be inversely related to financial stability in all models, consistent with the efficiency–stability nexus thesis that inefficiency erodes liquidity, surplus buffers and absorbency against shocks. Profit is a strong determinant of the income statement effect, which is consistent with buffer theory as profitable banks have more capacity to accumulate reserves and bear losses. Asset quality, proxied by non-performing loans, greatly erodes stability and supports the fragility view that declining asset quality amplifies insolvency risks and diminishes market confidence. Somewhat surprisingly, capital adequacy is negatively related to stability in the pooled and Malaysian samples, possibly suggesting suboptimal allocation of capital or excessively cautious lending strategies leading to reduced profitability. Liquidity, however, is insignificant in each of the models indicating that high liquidity does not lead to superior financial strength for the banking sector in growing banking markets.

On the macroeconomic level, inflation and exchange rate do not affect bank stability in Indonesia and Malaysia. These findings indicate that sound monetary policy regimes, inflation targeting regime, and bank hedging may have shielded banks from external volatility during the period of analysis. In sum, by virtually comparing the results for bank stability of external macroeconomic factors and internal governance/operational conditions seems to exert a more notable effect on bank stability.

The interaction analysis shows that board independence plays a stronger stabilizing role in Malaysia, consistent with its more robust institutional framework and stricter enforcement of corporate governance, while board size and audit committee size

do not exhibit differential effects across countries. Clear contrasts also emerge in bank performance factors, where capital adequacy and liquidity are crucial for enhancing stability in Indonesia, underscoring the importance of prudential regulation in a system shaped by post-Asian Financial Crisis caution, whereas profitability contributes positively to stability in Malaysia but appears to be associated with greater risk-taking and instability in Indonesia. Lastly, the lack of significant country-specific effects for inflation and exchange rates suggests that macroeconomic conditions influence bank stability in both countries in broadly similar ways, likely due to comparable monetary policy regimes and shared exposure to regional economic cycles.

In sum, this study adds to the burgeoning literature by demonstrating that governance effectiveness is contingent on context, where board independence is important in Indonesia but less so in Malaysia. It also underscores the fact that banks' strength depends more on their effectiveness, profit levels and asset quality than capital ratios or liquidity. For policy makers and regulators, the findings indicate that bolstering board independence and efficiency of operations as a leverage can contribute to bank sector stability. For the bank management, such evidence stresses the significance of risk management efficiency, soundness in asset quality monitoring and moderate use of capital and liquidity. Next, the present approach can be built upon in future research by investigating dynamic interactions of governance, cross country heterogeneity, and regulatory reform policies and their impact on stability outcomes.

The present study is not without limitations that are worth mentioning. First, only banks from Indonesia and Malaysia listed on stock exchanges are studied; this may affect the generalizability of results to other emerging or developed countries. In other institutional configurations, legal settings and cultural contexts the governance-stability dynamic may well give a different picture. Second, secondary data from financial reports and databases is used in the analysis. While it may be accurate its application to offer a conclusive interpretation relating governance of money laundering cannot capture qualitative dimensions like board dynamics, director expertise or internal culture of risk. Third, the empirical models rely on static panel data estimations that may not appropriately capture dynamic interrelations or endogeneity problems among governance mechanisms, bank performance and stability. Last, the study period might cover certain specific macroeconomic times and that may have an influence on the results limiting their ability to be generalized in various economies phases.

Several extensions to this work are possible in the future. Cross-country comparative research including a wider range of emerging and developed markets may offer greater understanding on how institutional environments mediate the relationship between governance and stability. The use of dynamic models (by using system GMM or structural equation model) could control for endogeneity issues and better illustrate causal pathways. Future research may also include qualitative measures, including surveys and interviews with board of directors' members, regulators, and risk managers to measure governance effectiveness beyond the numbers. Moreover, the study of regulatory reforms, digital banking transformation, environmental, social and governance (ESG) practices, or fintech disruption could also enhance knowledge about how emerging forces impact bank financial soundness. Finally, some financial and economic information during crisis period

or post-crisis period could be interesting to see whether corporate governance along with bank performance factors have an impact on the resilience of banks in a different way in the stress condition.

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