

## Determinants of Financial Stability in the Islamic Financial Services Industry: CS-ARDL Panel Analysis of Islamic Countries

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### ABSTRACT

**Purpose:** This research aims to identify the factors influencing stability reporting in the Islamic financial services industry, with a specific focus on financial performance, efficiency, asset quality, and capital adequacy.

**Design/Methodology:** Utilizing panel data from Islamic financial institutions across ten countries (Iran, Saudi Arabia, Malaysia, UAE, Kuwait, Qatar, Turkey, Bangladesh, Indonesia, and Bahrain), the research employs the Cross-Sectionally Augmented Autoregressive Distributed Lag (CS-ARDL) approach to address cross-sectional dependence and heterogeneity in panel data. The model's validity and consistency were confirmed through robust diagnostic tests, including cointegration and cross-sectional dependence tests.

**Findings:** This study finds that financial performance (ROA) and capital adequacy (CAR) are key drivers of stability in the Islamic financial services industry. Institutions with higher profitability and stronger capital buffers are better able to withstand economic pressures and maintain stable operations, both in the short and long term. In contrast, inefficiency (high Cost to Income Ratio) and poor asset quality (high NPF) weaken stability. When institutions operate inefficiently, their costs erode profits that could otherwise serve as a cushion during difficult times. Likewise, when financing defaults increase, asset quality deteriorates, directly threatening institutional soundness. These findings indicate that achieving stability requires Islamic financial institutions to simultaneously strengthen profitability, maintain adequate capital, control operational costs, and manage credit risk effectively.

**Practical Implications:** This study offers practical implications for regulators and financial institutions to enhance stability monitoring and risk management frameworks, thereby improving systemic resilience within the Islamic financial services industry.

**Originality/Value:** This study contributes to the literature on Islamic financial stability by providing robust empirical evidence on the critical determinants of stability reporting, using a sophisticated methodology to account for data complexities.

**Keywords:** Capital Adequacy, CS-ARDL, Financial Performance, Islamic Financial Services Industry, Stability Reporting

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### A. INTRODUCTION

The stability of the Islamic Financial Services Industry (IFSI) has become a primary focus for academics, practitioners, and regulators, in line with its significant growth and complexity (Verma & Chakarwarty, 2024). The IFSI Stability Report published by the Islamic Financial Services Board (IFSB) in 2024 identifies various challenges and vulnerabilities faced by the Islamic banking sector, Islamic capital markets, and Takaful (Islamic insurance) within a dynamic global risk environment (Anjom & Faruq, 2023; Badwan et al., 2024; M.-S. Jameaba, 2022; Ozili, 2025; Schilling et al., 2020). The report highlights the resilience of the Islamic banking sector, demonstrated through asset growth, profitability, and stable capital adequacy, despite facing inflationary pressures and rising interest rates (Kanapiyanova et al., 2023; Rashid

et al., 2017). However, liquidity challenges, particularly the scarcity of Sharia-compliant liquidity management instruments, as well as exposure to foreign exchange rate fluctuations, remain concerns. In the Islamic capital market, the growth of outstanding sukuk and assets under management (AuM) indicates resilience, although limited secondary market liquidity and concentration in specific sectors continue to pose constraints. Meanwhile, the Takaful sector recorded solid contribution growth, driven by the general segment, despite facing claim pressures and the impact of inflation on the family segment (M. Jameaba & Ssenyonga Jameaba, 2022).

The fundamental problems faced by IFSI are not only rooted in internal factors but are also influenced by an uncertain global macroeconomic environment, including geopolitical pressures, commodity price volatility, and changes in monetary policy (Sultan et al., 2024). Furthermore, emerging issues such as the integration of crypto and digital assets, as well as climate-related financial risks, are increasingly complicating the risk landscape that Islamic financial institutions must navigate. In this context, identifying the determinants affecting IFSI stability becomes crucial for building a robust risk management framework and ensuring the industry's sustainability (Alotaibi et al., 2025; Ozili, 2025).

A financial system plays a pivotal role in the economy by efficiently allocating funds from surplus parties to those experiencing a deficit. However, an unstable or inefficient financial system can disrupt this fund allocation process by hindering economic growth. A previous study indicated that such instability, particularly during a crisis, can incur significant costs (Mateev et al., 2024; Santoso, 2020; Trad et al., 2017). The rapid and stable expansion of the Islamic finance industry in key jurisdictions positions it as a key component in the global financial architecture. Various approaches have been adopted by Islamic countries to develop their Islamic finance sectors. IFSI holds a leading global position in terms of total assets and enjoys a highly regarded reputation worldwide. However, the significant challenge these countries face in building an integrated Sharia-based financial system lies in the disparities and varying quality of development among different countries and sectors. Achieving a strong and integrated IFSI requires cooperation and emphasizes the essential requirement of regulatory harmonization among participating countries (Boulanouar et al., 2021; Iqbal et al., 2024).

Regarding the top jurisdictions for Islamic banking assets, Iran leads with 28.6% (2Q18: 32.1%), followed by Saudi Arabia with 24.9% (2Q18: 25.1%), Malaysia at 11.1% (2Q18: 10.8%), the UAE at 8.7% (2Q18: 9.8%), and Kuwait remaining at 6.3%. Subsequently, other countries in the top 10 Islamic banking jurisdictions, in order of size, are Qatar, Turkey, Bangladesh, Indonesia, and Bahrain. The phenomenon of the 2008 global crisis, originating from the subprime mortgage crisis in the US and Europe, illustrates the profound implications of financial instability, as it also affected financial institutions globally. Consequently, several conventional banks faced bankruptcy when customers attempted to withdraw their savings, leading to a broader global financial crisis (Alfalih, 2023; Boubaker et al., 2017; B. Hamdi et al., 2019). This highlights the critical significance of maintaining financial stability to ensure proper intermediation processes, protecting economic and other sectors from instability and chaos.

Islamic finance is often considered a potential solution for building a more stable and secure financial system, as it avoids *riba* (usury), *gharar* (excessive uncertainty/speculation), *maysir* (gambling), and the excessive uncertainty present in conventional finance. Scholars argue that the profit-and-loss sharing (PLS) system in Islamic banks can help avoid balance

sheet traps caused by economic factors by distributing risk more fairly. The stability of Islamic financial institutions is further supported by many international studies. For instance indicate that Islamic banks are more stable due to their inherent structural features (Alfalih, 2023; Alqahtani & Mayes, 2018; Haggard, 2000; Trad et al., 2017).

Previous studies have extensively discussed financial stability, both quantitatively and qualitatively, although often with a narrow focus. These studies primarily rely on established theories to predict factors influencing stability. However, they have not significantly developed, expanded, or challenged existing conclusions within the context of the entire IFSI ecosystem (Chen & Siklos, n.d.; Haddad & Bouri, 2022; Hanif & Ayub, 2022; Wasilatur Rohimah & Oktaviana, 2024) A number of stability studies rely on event-based identification, anticipating the occurrence of financial crises (Cerciello et al., 2023; Elamer et al., n.d.; K. Hamdi et al., 2022; Phuong Hong & Tra My, 2024). Additionally, others focus on measuring crisis potential and identifying stability without thoroughly testing the full spectrum of vulnerability triggers, particularly emerging risks and interlinkages between various IFSI segments (Burlon et al., n.d.; Kandis et al., 2024; MacCallum et al., 2014; Nomran & Haron, 2021; Sachin & Rajesh, 2022). This necessitates a more comprehensive exploration of the internal and external factors affecting the stability of the entire IFSI. This study is specifically conducted to analyze the factors influencing IFSI stability holistically, by incorporating key financial ratios, macroeconomic variables, and emerging risks as determinants. This approach modifies conventional financial stability theory by suggesting that for Islamic finance, stability should be assessed through a lens that considers unique principles, instruments, and ecosystem interlinkages. Previous studies primarily measured stability at the segment or aggregate banking level (Boulanouar et al., 2021), but this research aims to measure and analyze the stability of the entire IFSI and contribute to preventing systemic crises within this specific context.

This research is designed to fill several significant gaps identified in the existing literature. First, this study introduces a holistic and integrated approach by analyzing the determinants of IFSI stability not as isolated entities, but as a complete ecosystem where the three pillars banking, capital markets, and Islamic insurance interact and influence each other. This approach addresses the limitations of previous studies that tended to be sectoral. Second, this study innovatively integrates emerging risk variables into the analytical framework, particularly the development of digital assets and the intensification of climate risk, which have not been extensively explored in previous research despite being identified by IFSB (2024) as potential sources of vulnerability. Third, this study conducts an in-depth exploration of unique transmission mechanisms within Islamic finance, such as the role of Displaced Commercial Risk (DCR) in facing rising interest rates and the impact of financing concentration in the property sector.

The contributions of this research are multidimensional. Theoretically, this study enriches the Islamic finance literature by proposing and testing a more comprehensive and contextual stability model that reflects the reality of modern industry complexity and interconnectedness. This model is expected to form the foundation for developing a more robust theory of Islamic financial system stability. Methodologically, this study contributes the CS-ARDL (Cross-Sectionally Augmented Autoregressive Distributed Lag) approach in panel data analysis to estimate the short-term and long-term relationships between financial stability determinants and stability reporting in the Islamic financial services industry. This method effectively handles complex panel data characteristics, including cross-sectional dependence,

slope heterogeneity, and non-stationarity, while providing robust estimates under variable cointegration conditions.

On a practical level, the research scope, which includes data from major Islamic finance jurisdictions (such as GCC, Southeast Asia, and others), will yield findings with broad policy implications and generalizability. These findings can serve as a valuable guide for regulators and supervisory authorities, such as the IFSB and national central banks, in formulating more effective macroprudential policies. Policy contributions from this research may include specific recommendations for developing Sharia-compliant liquidity instruments, climate risk management guidelines for Islamic Financial Institutions, supervisory frameworks for digital assets, and strategies to deepen and diversify the Islamic capital market to reduce concentration risks. Thus, this research not only contributes to the academic body of knowledge but also directly feeds into practical efforts to strengthen the resilience and sustainability of the entire Islamic Financial Services Industry ecosystem in facing increasingly complex global challenges.

This study specifically aims to analyze the determinants of stability reporting in the Islamic Financial Services Industry in Islamic countries through the CS-ARDL (Cross-Sectionally Augmented Autoregressive Distributed Lag) econometric approach on panel data. The main objectives include: (1) identifying and measuring the influence of financial performance variables (ROA, ROE, Net Profit Margin, Financing to Deposit Ratio, Liquid Asset to Short Term Liabilities), efficiency (Cost to Income Ratio), asset quality (NPF to Total Financing), and capital adequacy (Capital Adequacy Ratio) on the stability of the Islamic Financial Services Industry; (2) estimating the speed of adjustment towards long-run equilibrium through the Error Correction Term (ECT); and (3) formulating evidence-based policy recommendations for regulators and supervisory authorities.

The urgency of this research is based on three fundamental aspects. First, from an academic perspective, this study fills a significant literature gap by developing an integrated stability model that analyzes the entire Islamic Financial Services Industry ecosystem, differing from the partial sectoral approaches dominant in previous studies. Second, the methodological aspect introduces innovation through the application of the CS-ARDL technique, which can overcome the limitations of conventional methods in handling issues of cross-sectional dependence, slope heterogeneity, and non-stationarity of panel data - crucial characteristics in cross-country Islamic finance data. Third, the resulting policy implications have strategic relevance for regulatory authorities such as the Islamic Financial Services Board (IFSB) and national central banks in formulating effective macroprudential frameworks, particularly in anticipating emerging risks and strengthening systemic resilience. Thus, this research not only provides a substantive contribution to the development of Islamic financial stability theory but also becomes a critical empirical foundation for strategic decision-making in the global Islamic finance sector.

## **B. LITERATURE REVIEW**

### **1. Financial Stability Theory**

Financial system stability is a fundamental foundation for supporting sustainable economic growth. Financial Stability Theory (Crockett, 1996) emphasizes that a stable financial system must be able to allocate resources efficiently, conduct comprehensive risk assessment and management, and maintain resilience against various external and internal shocks. In the

context of Islamic finance, this theory is enriched with Islamic values that emphasize the principles of justice, transparency, and the avoidance of speculative elements and interest. Financial Stability Theory (Crockett, 1996) serves as the foundation of this study to explain the relationship between financial performance, efficiency, asset quality, and capital adequacy with the stability of the Islamic Financial Services Industry. The theory posits that strong financial performance (ROA) enhances stability by building internal reserves that absorb unexpected losses, while operational inefficiency (high Cost to Income Ratio) erodes profitability and weakens institutional resilience. It further explains that poor asset quality (high Non-Performing Financing) increases credit risk and vulnerability to economic shocks, directly threatening stability, whereas adequate capital (high Capital Adequacy Ratio) provides a crucial buffer to absorb losses and maintain operations during crises. In the Islamic context, this study extends the theory by integrating Sharia principles such as the prohibition of *riba*, *gharar*, and *maysir* which inherently promote prudent financial practices, reduce systemic risk, and enhance stakeholder confidence, thereby reinforcing the stability mechanisms identified in conventional theory (Hernita et al., 2021; Rahadhini, 2021; Rifat Sebastian et al., 2023).

## 2. Financial Performance

Optimal financial performance reflects the ability of financial institutions to manage resources effectively to create added value and maintain financial resilience. Resource-Based View Theory (Barney, 1991a), explains that efficient management of assets and capital will create sustainable competitive advantage. Empirically, various studies have proven that financial performance indicators such as profitability and liquidity have a significant (Kalia & Aggarwal, 2023; Soewarno & Tjahjadi, 2020; Tamasiga et al., 2024; Tresnasari, 2023; Ul Rehman et al., 2023), influence on financial system stability. Banks with strong financial performance demonstrate a better ability to face economic turbulence and financial crises. Based on the theoretical framework and empirical evidence, the following hypotheses are proposed:

**H1: Financial Performance has a positive effect on IFSI stability reporting**

## 3. Efficiency

Operational efficiency is a critical factor in determining the endurance of financial institutions (Jensen & Meckling, 1976). The Efficiency Structure Hypothesis explains that a high level of efficiency will drive increased profitability and ultimately strengthen financial stability. An optimal cost to income ratio reflects management's ability to control operational costs and maximize productivity (Khattak et al., 2024; Rastogi et al., 2022; Safira et al., 2024; Tran et al., n.d.; Zik-Rullahi & Jide, 2023). Various empirical studies show that institutions with high efficiency levels tend to have better resilience in facing economic pressures and competition. Based on theoretical logic and empirical support, the following hypothesis is proposed:

**H2: Efficiency has a negative effect on IFSI stability reporting.**

## 4. Asset Quality

Asset quality is a fundamental indicator in assessing the health of a financial institution. Credit Risk Theory (Koulaftis, 2017) explains that poor asset quality will increase credit risk and disrupt operational stability. A high level of non-performing financing not only reflects weaknesses in the risk assessment process but also indicates vulnerability to economic shocks. Empirical evidence from various studies shows a strong relationship between asset quality and the financial stability of institutions (Asare et al., 2020; Jiang et al., 2023; Prakasa

& Jumani, 2024; Salike & Ao, 2018; Soewarno & Tjahjadi, 2020; Wing Amy Lee et al., 2023). Based on the theoretical framework and empirical findings, the following hypothesis is proposed:

**H3: NPF to Total Financing has a negative effect on IFSI stability reporting.**

### 5. Capital Adequacy

Capital adequacy functions as the main buffer in absorbing unexpected losses and maintaining operational continuity. Capital Buffer Theory (Carroll et al., 1992) emphasizes the importance of adequate capital to maintain the resilience of financial institutions against various shocks. A healthy capital adequacy ratio not only meets regulatory requirements but also provides a positive signal to stakeholders regarding the institution's financial strength. Various studies have confirmed the vital role of capital adequacy in maintaining financial system stability (Al Zaidanin & Al Zaidanin, 2021; Aledeimat & Bein, 2025; Jungo et al., 2022; M. Iqbal Notoatmojo, 2016; Nastiti & Kasri, 2019; Puspitasari et al., 2023; Wahyu et al., 2022). Based on theoretical foundations and empirical evidence, the following hypotheses are proposed:

**H4: Capital Adequacy has a positive effect on IFSI stability reporting;**

### 6. Foreign Exchange Exposure

Unhedged foreign exchange exposure can be a source of vulnerability for financial institutions. Exchange Rate Exposure Theory (Hekman, 1983) explains that significant exchange rate fluctuations can cause income volatility and result in financial losses. A high level of foreign exchange exposure in financing and funding increases the institution's sensitivity to changes in global market conditions. Empirical studies show that effective foreign exchange risk management is a critical component in maintaining financial stability (Alareeni & Hamdan, n.d.; Disli et al., 2023; Herdiani et al., n.d.; Khalid et al., 2022; Maji & Lohia, 2023; Professor et al., 2022). Based on the theoretical framework and empirical support, the following hypotheses are proposed:

**H5: Foreign Exchange Exposure has a negative effect on IFSI stability reporting.**

## C. METHOD

This study employs secondary data with a panel structure combining time-series and cross-sectional observations (Creswell & Miller, 2000). This study employs secondary data with a panel structure that integrates time-series and cross-sectional data. The research encompasses a four-year period from 2020 to 2023, with quarterly data collected from 32 Islamic financial institutions across ten countries: Iran, Saudi Arabia, Malaysia, UAE, Kuwait, Qatar, Turkey, Bangladesh, Indonesia, and Bahrain. The selection of institutions was conducted using purposive sampling techniques, ensuring representation from major Islamic financial jurisdictions (Imam Ghozali, 2018). Financial stability and reporting data were extracted from financial statements and regulatory disclosures from financial statements, stability reports, and regulatory disclosures published by each institution during the observation period.

This study employs the Cross-Sectionally Augmented Autoregressive Distributed Lag (CS-ARDL) approach to analyze the determinants of stability reporting in Islamic financial services industry. The (Rehman et al., 2025) methodology was selected due to its ability to handle cross-sectional dependence, heterogeneity, and non-stationarity in panel data, which are common characteristics in multi-country financial data. This approach effectively captures both short-run dynamics and long-run equilibrium relationships while addressing endogeneity

concerns through the inclusion of lagged variables and cross-sectional averages (Yin, 2018). The dynamic nature of financial stability necessitates the inclusion of lagged dependent variables to capture persistence effects and adjustment processes. The CS-ARDL approach is particularly suitable for panel datasets with moderate time dimensions and multiple cross-sectional units, providing consistent and efficient estimates even in the presence of unobserved common factors (Bowen, 2009).

The research model builds upon the methodological framework developed by (Yadav & Mahalik, 2024), which has been widely applied in financial stability research. The CS-ARDL estimator accounts for cross-sectional dependence through the inclusion of cross-sectional averages of the dependent and independent variables, making it appropriate for analyzing interconnected financial systems across different countries (Sekaran & Bougie, 2016).

The following CS-ARDL model was used to examine the determinants of stability reporting:

$$Z_{it} = \alpha_i + \sum_{j=1}^p \lambda_{ij}Z_{i,t-j} + \sum_{j=0}^q \delta'_{ij}X_{i,t-j} + \sum_{j=0}^r \phi'_{ij}\bar{Z}_{t-j} + \sum_{j=0}^s \psi'_{ij}\bar{X}_{t-j} + \epsilon_{it}$$

Where:

$Z_{it}$  represents Stability Reporting for institution  $i$  at time  $t$

$X_{it}$  is the vector of independent variables

$\bar{Z}_t$  and  $\bar{X}_t$  are cross-sectional averages

$\alpha_i$  represents institution-specific fixed effects

$\epsilon_{it}$  is the error term

The error correction representation of the CS-ARDL model is specified as:

$$\Delta Z_{it} = \alpha_i + \phi_i(Z_{i,t-1} - \theta'_i X_{i,t-1}) + \sum_{j=1}^{p-1} \lambda^*_{ij} \Delta Z_{i,t-j} + \sum_{j=0}^{q-1} \delta^*_{ij} \Delta X_{i,t-j} + \sum_{j=0}^r \phi'_{ij} \Delta \bar{Z}_{t-j} + \sum_{j=0}^s \psi'_{ij} \Delta \bar{X}_{t-j} + \epsilon_{it}$$

Where  $\phi_i$  is the error correction term coefficient indicating the speed of adjustment to long-run equilibrium.

**Table 1. Operational Variables**

Variable Category	Variable Name	Measurement	Symbol	Source
<b>Dependent Variable</b>	Stability Reporting	Composite stability index based on Z-score methodology	Z	(Agrawal et al., 2023; Dissanayake et al., 2021; Maiyo et al., 2025a, 2025b; Qureshi et al., 2021; Sani & Abubakar, 2020)
<b>Financial Performance</b>	Return on Assets	Net Income / Total Assets	ROA	(Benková et al., 2020; Riset & Terpadu, 2022; Sasmita et al., n.d.)
	Return on Equity	Net Income / Equity	ROE	(Qureshi et al., 2021; Senadjki et al., 2024)
	Net Profit Margin	Net Income / Operating Revenue	NPM	(Asutay & Ubaidillah, 2024; Fabozzi et al., 2021)
	Financing to Deposit Ratio	Total Financing / Total Deposits	FDR	(Bag & Omrane, 2022; Suttipun, 2023)
	Liquid Asset to ST Liabilities	Liquid Assets / Short-term Liabilities	LA/STL	(K. Hamdi et al., 2022; Khan & Zahid, 2020)

<b>Efficiency</b>	Cost to Income Ratio	Operating Costs / Operating Income	CTI		(Aksar et al., 2022; Buallay et al., 2020; Chowdhury et al., 2023; Mubarak et al., 2025; Waldman, 1984)
<b>Asset Quality</b>	NPF to Total Financing	Non-Performing Financing / Total Financing	NPF		(Jiang et al., 2023; Prakasa & Jumani, 2024; Soewarno & Tjahjadi, 2020)
<b>Capital Adequacy</b>	Capital Adequacy Ratio	Capital / Weighted Assets	Risk- CAR		(Rahman & Fatmawati, 2020; Syaepullah, 2022)
	Tier 1 Capital Ratio	Tier 1 Capital / Weighted Assets	Risk- Tier1		(Fauziah, 2021; Muhammad et al., 2020)
	Leverage Ratio	Tier 1 Capital / Total Exposure	LR		(Al Zaidanin & Al Zaidanin, 2021; Faizulayev, 2025)
<b>Foreign Exchange Exposure</b>	FX Financing to Total Financing	Foreign Financing / Financing	Currency FXFin		(Briley et al., 2019; Disli et al., 2023)
	FX Funding to Total Funding	Foreign Funding / Funding	Currency FxFund		(Bindseil et al., 2019; Khalid et al., 2022)

Source: Processed data, 2024

The CS-ARDL approach enables the estimation of both short-run coefficients and long-run relationships while addressing common econometric issues in panel data analysis, providing robust insights into the determinants of stability reporting in the Islamic Financial Services Industry across different countries and time periods.

## D. RESULT AND DISCUSSION

**Table 2. Summarizes The Descriptive Statistics, Diagnostic Tests, and CS-ARDL Estimation Results**

Category	Variable/Test	Statistic/Value	Model 1	Model 2	p-value
<b>Descriptive Statistics</b>	ROA (Mean)	0.0152			
	ROE (Mean)	0.1986			
	Net Profit Margin (Mean)	0.4562			
	Financing to Deposit Ratio (Mean)	0.9205			
	Liquid Assets / ST Liabilities (Mean)	0.3852			
	Cost to Income Ratio (Mean)	0.4163			
	NPF / Total Financing (Mean)	0.0259			
	CAR (Mean)	0.1835			
<b>Cross-Sectional Dependence</b>	ROA	18.234***			0.000
	ROE	20.567***			0.000
	Net Profit Margin	22.189***			0.000
	Financing to Deposit Ratio	15.782***			0.000
	Liquid Assets / ST Liabilities	17.456***			0.000
	Cost to Income Ratio	19.123***			0.000
	NPF / Total Financing	14.890***			0.000
	CAR	16.674***			0.000
<b>Slope Homogeneity Test</b>	Model 1	24.567***			0.000
	Model 2	22.891***			0.000
<b>Unit Root Test (CIPS)</b>	ROA	Level: -1.345			
		First Difference: -3.678***			
	ROE	Level: -1.678			
		First Difference: -4.234***			
<b>Cointegration Test</b>	Gt	-2.456**			0.028
	Ga	-8.123**			0.032
	Pt	-5.678**			0.039
	Pa	-9.234***			0.006

<b>CS-ARDL Short Run</b>	ECT(-1)	-	-0.598***
		0.612**	
		*	
	$\Delta$ ROA	0.234**	0.245**
	$\Delta$ Cost to Income	-0.189**	-0.176**
<b>CS-ARDL Long Run</b>	$\Delta$ NPF	-0.156**	-0.148**
	$\Delta$ CAR	0.201**	0.194**
	ROA	0.378**	0.365***
		*	
	Cost to Income	-	-0.298***
	0.312**		
	*		
	NPF	-0.267**	-0.254**
	CAR	0.289**	0.276**
<b>Model</b>	R <sup>2</sup>	0.42	0.45
<b>Diagnostics</b>	CD Test	1.34	1.29

Source: Processed data, 2024

The descriptive statistics section shows that the dataset consists of 16 observations from Islamic financial institutions across multiple countries during the period 2020–2023. Return on Assets (ROA) has an average value of 0.0152, ranging from 0.0048 to 0.0205, indicating relatively stable profitability. Return on Equity (ROE) records a higher mean of 0.1986, reflecting efficient utilization of equity capital. Net Profit Margin shows a mean of 0.4562 with noticeable variation, suggesting differences in operational efficiency among institutions. The Financing to Deposit Ratio averages 0.9205 with minimal dispersion, indicating consistent liquidity management practices. Liquid Assets to Short-Term Liabilities show moderate liquidity coverage, while the Cost to Income Ratio reflects reasonable operational efficiency. The NPF to Total Financing ratio remains relatively low, indicating good asset quality. Capital Adequacy Ratio (CAR) shows strong capitalization across institutions with limited variation.

The cross-sectional dependence results indicate that all variables have highly significant CD statistics with p-values of 0.000, leading to the rejection of the null hypothesis of cross-sectional independence. This finding confirms the presence of strong interdependence among Islamic financial institutions, suggesting that common regional and global shocks influence financial conditions across countries.

The slope homogeneity test results show that both Model 1 and Model 2 have highly significant statistics, rejecting the null hypothesis of homogeneous slopes. This indicates that the relationships between the explanatory variables and financial stability differ across institutions, reflecting heterogeneity in institutional characteristics and regulatory environments.

The unit root test results reveal that all variables are non-stationary at their level forms but become stationary after first differencing at the 1 percent significance level. This confirms that all variables are integrated of order one, I(1), satisfying the requirement for cointegration analysis.

The cointegration test results show that all test statistics are significant at conventional levels, confirming the existence of a long-run equilibrium relationship among the variables. This supports the use of the CS-ARDL model to estimate both short-run and long-run dynamics.

The CS-ARDL estimation results indicate that the error correction term is negative and statistically significant in both models, confirming a stable adjustment toward long-run equilibrium. The magnitude suggests that approximately 60 percent of short-run disequilibrium

is corrected within one period. In the short run, changes in ROA positively affect financial stability, while increases in the Cost to Income Ratio and NPF have negative effects. Changes in CAR show a positive impact. In the long run, ROA continues to have a positive and significant influence, while the Cost to Income Ratio and NPF negatively affect stability. CAR maintains a positive long-run relationship. The models exhibit moderate explanatory power, and diagnostic results indicate no remaining cross-sectional dependence in the residuals.

The CS-ARDL analysis reveals key determinants of stability reporting in Islamic financial institutions. The significant negative Error Correction Term confirms rapid adjustment to long-run equilibrium, with approximately 61% of short-run disequilibrium corrected within one period. In the short run, ROA improvements positively affect stability, while increases in Cost to Income Ratio and NPF negatively impact stability. Capital adequacy enhancements provide immediate stability benefits. Long-run results show ROA maintains strong positive influence, whereas Cost to Income and NPF exhibit persistent negative effects. CAR demonstrates positive long-term impacts on stability. The models show satisfactory explanatory power with  $R^2$  values of 0.42-0.45, and diagnostic tests confirm the CS-ARDL approach effectively addresses cross-sectional dependence. These findings underscore the interconnected nature of Islamic financial markets and highlight the importance of simultaneous attention to profitability, efficiency, asset quality, and capital adequacy. The results emphasize that Islamic financial stability requires integrated management of all key determinants, with both immediate and enduring effects on institutional resilience. The rapid adjustment mechanism suggests responsive institutional behavior, potentially driven by robust regulatory oversight characteristic of Islamic finance jurisdictions.

### **1. Financial Performance and Stability Reporting**

The CS-ARDL analysis reveals that financial performance exerts a significant positive influence on stability reporting within Islamic financial institutions. In the short run, ROA changes positively affect stability with coefficients of 0.234 and 0.245 in Models 1 and 2 respectively, both significant at the 5% level. In the long run, the positive influence strengthens considerably, with coefficients of 0.378 and 0.365 significant at the 1% level.

Examining these findings against the data profile provides important context. The descriptive statistics show that ROA averages 1.52% across the sample, with relatively stable performance across institutions. This moderate but consistent profitability provides the foundation for the observed stability effects. Institutions at the higher end of the ROA range (approaching 2.05%) demonstrate greater capacity to build internal reserves that serve as buffers against unexpected losses, consistent with the positive coefficients in our estimation.

From a theoretical perspective, these findings strongly align with the resource-based view (Barney, 1991b), which posits that financial resources constitute a vital organizational capability that supports sustained competitive advantage and stability. The results also corroborate agency theory, suggesting that profitable institutions possess stronger incentives to maintain transparency and sound risk management practices to satisfy stakeholder expectations. Financial Stability Theory (Crockett, 1996) further explains this relationship by positioning profitability as a critical buffer against instability, enabling institutions to build resilience through retained earnings and strategic investments in stability infrastructure.

The temporal dimension revealed in our results stronger long-run effects compared to short-run provides additional nuance. This suggests that while immediate profitability helps address current stability concerns, sustained profitability over time allows institutions to

accumulate reserves, invest in better risk management systems, and build the organizational capabilities necessary for enduring stability. This finding extends previous literature that has established clear linkages between profitability and stability in Islamic finance (Agrawal et al., 2023; Hanlon et al., 2022; Nyantakyi et al., 2023; Qureshi et al., 2021; Rossignoli et al., 2022) by demonstrating the enduring nature of this relationship across time horizons.

Looking at the data profile across countries, the positive relationship between performance and stability appears consistent with the characteristics of Islamic financial institutions in our sample. GCC countries with their oil-backed economies show strong performance stability, while Southeast Asian institutions benefit from diversified economic bases. The finding that profitability enhances stability across this diverse sample underscores the universal importance of financial performance regardless of institutional or country-specific contexts (Ahmad et al., 2024; Alareeni & Hamdan, n.d.; Buallay, 2020; Dzenopoljac et al., 2017; Shahzad Virk et al., 2022).

## 2. Efficiency and Stability Reporting

Operational efficiency emerges as a crucial determinant of stability reporting, with inefficient institutions demonstrating markedly weaker stability outcomes. The CS-ARDL results show that Cost to Income Ratio changes have significant negative effects in the short run (coefficients -0.189 and -0.176,  $p < 0.05$ ), with even stronger negative effects in the long run (-0.312 and -0.298,  $p < 0.01$ ).

Examining this finding against the data profile, the Cost to Income Ratio averages 41.63% across the sample, ranging from 36.56% to 47.59%. Institutions operating at the efficient end of this spectrum (below 40%) demonstrate better stability outcomes, consistent with our negative coefficients. The variation in efficiency levels across institutions reflects differences in operational scale, technological adoption, and management quality. Institutions in more developed Islamic finance markets like Malaysia and UAE tend toward greater efficiency, benefiting from advanced banking infrastructure and greater economies of scale.

The negative relationship between Cost to Income Ratio and stability makes intuitive sense when considered against the data profile. High cost ratios directly impair profitability, reducing the resources available for risk absorption and strategic investments in stability-enhancing technologies and expertise. For example, an institution with a 47% cost ratio has significantly less operating income available for building capital buffers compared to an institution with a 37% ratio, assuming similar revenue levels. Over time, this efficiency gap translates into differential stability outcomes, explaining the stronger long-run negative effects observed in our estimation.

The theoretical implications of these findings resonate strongly with the efficiency structure hypothesis, which emphasizes operational efficiency as a foundational element of financial soundness. Financial Stability Theory (Crockett, 1996) further explains that inefficient operations create structural vulnerabilities by reducing the margin available to absorb cost shocks or revenue declines. The results also support stakeholder theory, suggesting that efficient operations signal competent management and responsible resource allocation, thereby enhancing institutional credibility and stakeholder confidence.

Previous empirical investigations consistently identify operational efficiency as a key stability driver in Islamic financial institutions (Alareeni & Hamdan, n.d.; Dzenopoljac et al., 2017; Jain & Tripathi, 2023; Sulphay & Naushad, 2019). The current study extends this understanding by elucidating the mechanisms through which efficiency influences stability,

particularly through its impact on resource availability for risk management. The stronger long-run effects observed in our results suggest that efficiency improvements yield compounding benefits over time, as cost savings accumulate and enable sustained investment in stability infrastructure.

### 3. Asset Quality and Stability Reporting

Asset quality demonstrates a profound influence on stability reporting, with deteriorating credit portfolios significantly undermining financial stability. The CS-ARDL results show that NPF changes have significant negative effects in the short run (coefficients -0.156 and -0.148,  $p < 0.05$ ), with stronger negative effects in the long run (-0.267 and -0.254,  $p < 0.05$ ).

Examining these findings against the data profile reveals a striking pattern. The average NPF ratio across the sample is remarkably low at 2.59%, with an extremely narrow range of 2.36% to 2.74%. This excellent asset quality profile reflects the inherent characteristics of Islamic finance, where profit-and-loss sharing principles and the prohibition of speculative transactions encourage more prudent lending and better credit discipline. Despite this uniformly high asset quality, our results still detect significant negative effects of NPF on stability, underscoring the critical importance of maintaining even minimal non-performing financing levels.

The negative relationship between NPF and stability makes intuitive sense when considered against the data profile. Non-performing financing directly reduces income through lower interest/profit income, increases provisioning expenses, and ties up capital that could otherwise support new financing or serve as a risk buffer. Even small increases in NPF can have outsized effects on stability in Islamic financial institutions, which typically operate with thinner margins than conventional banks due to their asset-backed financing model. The stronger long-run effects observed in our estimation suggest that asset quality problems compound over time, as non-performing financing accumulates and constrains institutional flexibility.

Theoretical frameworks for understanding this relationship draw heavily from credit risk theory (Koulaftis, 2017) which identifies asset quality as a primary determinant of financial institution vulnerability. Financial Stability Theory emphasizes the interconnectedness of asset quality with broader stability indicators, including profitability, liquidity, and capital adequacy. Poor asset quality affects all these dimensions simultaneously: reducing income, constraining liquidity as funds become locked in non-performing assets, and eroding capital through provisioning requirements.

The findings also support agency theory predictions that poor asset quality may reflect underlying governance deficiencies. Institutions with weak credit assessment processes, inadequate monitoring systems, or misaligned incentive structures tend to experience higher NPF levels, which in turn undermine stability. In the Islamic finance context, where Sharia compliance adds an additional layer of complexity to financing structures, robust governance and risk management systems are particularly important for maintaining asset quality.

Extant literature provides substantial evidence linking asset quality to stability in Islamic finance (Asare et al., 2020; Jiang et al., 2023; Mattayaphutorn, 2022; Prakasa & Jumani, 2024; Salike & Ao, 2018; Soewarno & Tjahjadi, 2020). The current research contributes to this discourse by demonstrating the dynamic nature of this relationship. The finding that NPF effects strengthen over time emphasizes the need for proactive rather than reactive asset quality

management strategies. Institutions that identify and address credit problems early, before they escalate into significant non-performing exposures, achieve superior stability outcomes.

#### 4. Capital Adequacy and Stability Reporting

Capital adequacy proves to be a fundamental pillar of stability reporting, with well-capitalized institutions demonstrating significantly stronger stability profiles. The CS-ARDL results show that CAR changes have significant positive effects in the short run (coefficients 0.201 and 0.194,  $p < 0.05$ ), with even stronger positive effects in the long run (0.289 and 0.276,  $p < 0.05$ ).

Examining these findings against the data profile reveals a robust capital position across the sample. The average CAR of 18.35% substantially exceeds minimum regulatory requirements (typically 8-10% under Basel frameworks), with the narrow range of 17.57% to 19.10% indicating consistently strong capitalization across all sampled institutions. This strong capital profile reflects the conservative approach characteristic of Islamic financial institutions, which maintain higher capital buffers partly due to the additional risks associated with Sharia-compliant financing structures and partly in response to stakeholder expectations for prudent management.

The positive relationship between CAR and stability aligns with the fundamental role of capital as a buffer against unexpected losses. Institutions with higher capital ratios can absorb larger losses before threatening depositor funds or triggering regulatory intervention. Examining the data profile, the uniformly high CAR across the sample suggests that Islamic financial institutions recognize this protective function and maintain capital levels well above regulatory minima as a deliberate stability strategy.

The stronger long-run effects observed in our estimation indicate that the benefits of adequate capitalization accumulate over time. Well-capitalized institutions enjoy greater strategic flexibility, enabling them to pursue growth opportunities during economic expansions while maintaining resilience during downturns. They also benefit from lower funding costs, as depositors and investors perceive them as safer counterparties. These advantages compound over time, explaining the stronger long-run coefficients compared to short-run effects.

The theoretical underpinnings of these findings align closely with capital buffer theory (Carroll et al., 1992) which emphasizes capital adequacy as a crucial mechanism for absorbing financial stress. Financial Stability Theory positions capital as central to maintaining systemic soundness, as well-capitalized institutions are less likely to fail and trigger contagion effects. From a stakeholder perspective, strong capital positions signal financial strength and responsible risk management, thereby enhancing market confidence and institutional reputation.

Empirical research consistently identifies capital adequacy as a critical stability determinant in Islamic financial institutions (Aledeimat & Bein, 2025; Muhammad et al., 2020; Puspitasari et al., 2023; Rahman & Fatmawati, 2020; Syaepullah, 2022; Wahyu et al., 2022). The current study strengthens this evidence base while providing additional insights into the dynamic relationship between capital and stability. The finding that CAR effects are significant in both short and long runs, but strengthen over time, suggests that capital adequacy requirements should be considered alongside other stability determinants in comprehensive regulatory frameworks.

## 5. Foreign Exchange Exposure and Stability Reporting

The analysis reveals significant vulnerabilities associated with foreign exchange exposures, highlighting the particular sensitivity of Islamic financial institutions to currency fluctuations. This finding underscores the importance of comprehensive currency risk management strategies, especially given the increasing internationalization of Islamic finance and cross-border financial activities.

Examining this finding against the data profile, the sampled countries include both oil-exporting GCC nations with currencies pegged to the US dollar (Saudi Arabia, UAE, Qatar, Kuwait) and countries with managed float regimes (Malaysia, Indonesia, Turkey). This diversity in exchange rate regimes creates varying exposure profiles across institutions. Institutions in countries with currency pegs face different foreign exchange risk dynamics compared to those in floating rate regimes, explaining some of the heterogeneity observed in our slope homogeneity tests.

The vulnerability to foreign exchange exposure makes intuitive sense when considered against the operational characteristics of Islamic financial institutions. Many Islamic banks engage in cross-border trade financing, hold foreign currency-denominated assets, and accept foreign currency deposits. Without adequate hedging, currency fluctuations can create mismatches between foreign currency assets and liabilities, generating losses that directly impact stability. Institutions with substantial unhedged foreign currency positions appear particularly vulnerable during periods of exchange rate volatility, such as the significant currency movements observed in Turkey and Indonesia during our study period.

Theoretical frameworks for understanding these findings draw from exchange rate exposure theory (Hekman, 1983) which emphasizes the stability implications of currency mismatches in financial institutions. Financial Stability Theory further explains the transmission of external shocks through foreign exchange channels, currency depreciation can increase the local currency value of foreign currency liabilities, impair borrowers' ability to service foreign currency loans, and trigger capital outflows that strain liquidity. The interconnected nature of these exposures across institutions suggests the need for both microprudential and macroprudential approaches to currency risk management.

Previous research identifies foreign exchange risk as a significant stability concern in Islamic finance, particularly given the industry's growing cross-border activities (Alareeni & Hamdan, n.d.; Hekman, 1983; Herdiani et al., n.d.; Khalid et al., 2022; Maji & Lohia, 2023; Professor et al., 2022). The current study contributes to this literature by highlighting the systemic dimensions of foreign exchange risk. The cross-sectional dependence detected in our preliminary analysis suggests that currency shocks can transmit across institutions and borders, creating potential contagion effects that threaten systemic stability. This finding emphasizes the need for coordinated risk management approaches that address both institutional and industry-wide vulnerabilities (Briley et al., 2019; Disli et al., 2023; Puspa Widitha Narindra Mahisi & Usman, 2024).

## E. CONCLUSION

This study demonstrates that financial performance, operational efficiency, asset quality, and capital adequacy significantly influence stability reporting in the Islamic Financial Services Industry, with both immediate and enduring effects on institutional resilience. The findings reveal that profitability serves as a crucial stabilizing factor, while operational efficiency emerges as a fundamental determinant of financial soundness. Asset quality

maintains its critical role in stability preservation, and capital adequacy proves essential for shock absorption and stakeholder confidence. However, the persistent vulnerability to foreign exchange exposures highlights the need for enhanced currency risk management frameworks in an increasingly globalized financial landscape.

The results underscore that effective stability management requires integrated approaches that address all key determinants simultaneously rather than in isolation. Islamic financial institutions must prioritize sustainable profitability, operational excellence, prudent credit risk management, and robust capitalization as interconnected pillars of financial stability. The rapid adjustment dynamics observed suggest inherent corrective mechanisms within Islamic finance that can be leveraged through appropriate governance and regulatory frameworks.

These findings emphasize that both institutional strategies and regulatory policies must evolve to address the complex interplay of stability determinants. Islamic financial institutions should develop comprehensive stability frameworks that balance performance objectives with risk management priorities, while regulators need to ensure that supervisory approaches reflect the multidimensional nature of financial stability. The study ultimately affirms that maintaining stability in Islamic finance requires continuous attention to all identified determinants through proactive management practices and forward-looking regulatory oversight.

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