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Islamic and Conventional Banks Stability in Indonesia

Shabeer Khan[1], Nur Amalia Aziza[2], Allah Ditta Nawaz[3*]
[1]College of Business, Al Yamamah University, Riyadh, Saudi Arabia
[2]Sakarya University, Sakarya, Turkey
[3]Sukkur IBA University, Sukkur, Pakistan
E-mail: [1]sh_khan@yu.edu.sa, [2]nur.aziza@ogr.sakarya.edu.tr, [3]allahditta.phdmgt16@iba-suk.edu.pk
[*)]Corresponding Author

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Abstract

Research Originality: The stability of banking institutions is crucial for the overall financial health of a country. The originality of this paper lies in its innovative use of quantile regression analysis to provide a nuanced understanding of the factors influencing bank stability, particularly in the Indonesian context.

Research Objectives: This research identifies factors influencing bank stability in Islamic and conventional banks in Indonesia.

Research Methods: Utilizing quantile regression analysis to measure the impact of various factors at different quantiles, addressing the existing mixed findings in the literature. This study utilizes 15 years of data, encompassing 61 observations for Islamic banks and 779 observations for conventional banks in Indonesia.

Empirical Results: The study identifies impaired loans as the primary determinant of bank stability in Indonesia, with a notably greater impact on conventional banks compared to Islamic banks. Notably, the upper quantile of Islamic banks indicates a decline or a lesser impact on bank stability. The paper additionally concludes that the stability of Islamic banks in Indonesia is comparatively lower than conventional banks.

Implications: By offering insights into the different levels of factors affecting bank stability, the study contributes to the existing literature, sheds light on unique dynamics, and highlights potential recommendations for enhancing bank stability, especially in the context of non-performing loans.

Keywords:
bank stability; Islamic banks; conventional banks

How to Cite:

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INTRODUCTION

The stability of banking institutions is a critical aspect of a country's financial systems, influencing economic growth and development. The vulnerability of the banking industry to crises, such as the 2008 global financial crisis (Bourkhis & Nabi, 2013), underscores the importance of ensuring the stability of banks. The aftermath of the global financial crisis paved the way for the emergence of Islamic banks in response to the need for alternative financial institutions with social objectives that direct funds towards the real economy rather than the financial sector, as conventional banks do (Ghoniyah & Hartono, 2020). Therefore, sustaining stability is a daunting task, particularly for Islamic banks as a new entrant into the global market and the unique structure of their financial instruments, which has become a concern for decision-makers (Al-Kayed & Aliani, 2020; Šeho et al., 2023).

There are several cases related to the unstable banking industry. From 1973-1975, the occurrence of chaos in the banking sector was characterized by recession-driven loan defaults (Estes, 2014). Then, the 2007-2008 subprime mortgage crisis resulted in a liquidity shortage across various markets, subsequently prompting US banks to engage in further risk-taking activities (Hussein, 2010). In a recent case in 2023, Silicon Vallsey Bank, the second largest bank that was financing the startup, collapsed due to inflation; hence, investors panicked that the startup financed by the bank might be unable to pay back the finance and then the depositor bailout in the sale of its asset, so all banks involved in the financing will have to put money into a fund to help pay for it.

Furthermore, the Indonesian banking sector has faced various challenges, including the Asian financial crisis and the global financial crisis, which have tested the resilience and stability of both Islamic and conventional banks. One of the key challenges facing Indonesian banks is the need to strike a balance between profitability and risk management. As highlighted in studies by Kasri & Azzahra (2020), the loan-to-deposit ratio proxy has been a key indicator of stability for banks in Indonesia. In addition, according to a study by Fakhri et al. (2020), Islamic banking is vulnerable to external factors such as inflation when COVID-19 hits. In 2021, the development of Islamic banks fell by 7%. As the landscape of the financial industry continues to evolve, it is essential for Indonesian banks to adapt and respond to these dynamic changes to ensure their sustained success and stability.

Recent studies indicate that Islamic banks may have shown varying levels of resilience compared to conventional banks during crises. For instance, Alqahtani & Mayes (2018) found that Islamic banks suffered a significantly higher level of instability than conventional banks in the long term, while Othman et al. (2023) argued that Islamic banks offering equity financing tend to be more stable during crises. This highlights the importance of bank equity capital in ensuring stability and resilience, as emphasized by Tsai & Chen (2015) and Thakor (2014). Despite the challenges related to equity, recent research by Goetz et al. (2021) has shown that financial institutions with greater equity capital tend to exhibit enhanced resilience and stability in economic downturns. Since

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the issue of instability in banks matters due to banks carrying the risk, which can have a significant impact on the financial system as intermediaries and Islamic banks play an increasingly significant role in the financial industry, this study underscores the crucial role of equity in determining the stability of both Islamic and conventional banks.

The stability of the bank is influenced by several factors. The factors influencing stability are either macroeconomic or specific factors. Kabir et al. (2015) conducted a study on bank stability and found that macroeconomic factors, such as inflation, are significant determinants. Baselga-Pascual et al. (2015) additionally discovered a number of determinants of bank stability in Europe, such as equity, non-deposit funding, return on assets, bank size, industry level, GDP growth, inflation, and interest rates. Several prior empirical studies have been conducted related to stability, such as those examining advanced and emerging economies (Ali & Puah, 2019; Lepetit et al., 2013; Sanya & Wolfe, 2011), customer deposits from households (Huang & Ratnovski, 2011), common equity (Maulana & Rusmita, 2019), which are factors that impact the stability of banks. In the studies of Ali & Puah (2019) and Cihak & Hesse (2010), banks have shown the impact of factors such as bank size on bank stability. Then, the studies conducted by Ijaz et al. (2020), Khaled et al. (2021), and Nwafor & Nwafor (2023) have all affirmed the significant impact of non-performing loans on bank stability.

However, diversification's effect on bank stability varies across studies. The study by Shim (2019) investigated bank stability, that is influenced by loans and diversification. A study conducted by Sheila & Abdul (2021) shows that Islamic and conventional depends on diversification. On the contrary, Azmi et al. (2019) conducted in several developing countries, such as Malaysia, Bangladesh, Brunei, Kuwait, Lebanon, Pakistan, Qatar, Saudi Arabia, Tunisia, and the UAE, including Indonesia, and found that diversification has no effect on bank stability. In line with the recent study by Khattak et al. (2021), which explored the Islamic and conventional bank stability in Indonesia, it was found that diversification has no impact on both banks. According to a study on bank stability conducted by Šeho et al. (2023), there is a noticeable distinction between Islamic and conventional banking in terms of loan and financing diversification in the GCC region. The study found that Islamic banks exhibited only moderate deterioration in stability when the level of diversification was moderate, while conventional banking demonstrated enhanced stability at a low level of diversification.

Since there are differences in research results based on regions and types of banking, it is essential to investigate the issue further. Although the assets of Islamic banks in Indonesia increase on an annual basis, there are still few studies in the literature regarding bank stability in Indonesia. In addition, there are different results about bank stability, primarily in Indonesia, and in the past few years, Indonesian banks have declined in equity; this study focuses on Indonesian Islamic and conventional banks. Previous studies have predominantly examined select factors and specific types of banks, such as conventional or Islamic dual banking. However, gaining a comprehensive understanding of the various factors that impact bank stability, whether macroeconomic or specific,

is imperative for policymakers, regulators, and industry stakeholders to safeguard the resilience of the banking sector. While many prior studies have utilized the Z-score as a metric for assessing bank stability, this study deviates by focusing on total equity as a crucial indicator of a bank's stability.

This study aims to explore the factors influencing bank stability, specifically in Islamic and conventional banks in Indonesia. By analyzing the effects of factors such as gross loans, non-performing loans, non-interest income, liquidity assets, common equity, customer deposits, bank size, and inflation, this research intends to enhance the understanding of bank stability in Indonesia. To the best of our understanding, a Quantile Regression Model (QRM) has not been employed in while examining bank stability specifically in Indonesian context. Therefore, by applying panel Quantile Regression (QRM) and conducting a comprehensive analysis of determinants across different quantiles, this study aims to provide new insights into the stability of Islamic and conventional banks in Indonesia from 2005 to 2020.

METHODS

The data utilized in this study were obtained from multiple sources. Bank-specific data for the period of 2005-2020 was obtained from the FitchConnect database, which offers comprehensive insights into the financial statements of banks worldwide. In order to achieve the objectives of our research, we applied three filters to the dataset, resulting in our final selection of Indonesian banks. Our analysis included 840 data, with 61 from Islamic banks and 779 from conventional banks with a minimum of 15 years' data. Given the significant changes in the Islamic banking industry in 2021, this study utilizes data from 2005 to 2020 to establish a reliable and consistent dataset for the Quantile Regression analysis.

Our study utilizes the Quantile Regression Model (QRM), which demands non linearity and a large amount of data, prompting us to focus exclusively on utilizing 15 years of data. Given that, as stated by Khan et al. (2022), the mainstream ordinary least squares model only estimates based on the mean value. However, our objective is to explore how different quantiles impact bank stability considering the mixed findings in previous research that different levels of economic and bank size might be impacted differently. Therefore, it is necessary to assess the impact across various quantiles.

There are several advantages to utilizing QRM. Incorporating insights from Khattak et al. (2021), who highlight the benefits of quantile regression in understanding variable impacts and reducing multicolinearity issues, we seek to contribute significantly to the literature on bank stability in Islamic and conventional sectors. By comparing methodologies, we aim to deepen our understanding of the relationship between variables and equity levels in both types of banks, shedding light on potential high and low equity scenarios. Moreover, the advantage of QRM lies in its freedom from distributional assumptions, eliminating the need to assume the normality of residuals, as emphasized by (Davino et al., 2014). The model used in this study is as follows:

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$$TE_{it} = \alpha + \beta_1 GL_{it} + \beta_2 NII_{it} + \beta_3 LNL_{it} + \beta_4 IL_{it} + \beta_5 LA_{it} + \beta_6 LTA_{it} + \beta_7 LTCD_{it} + \beta_8 LCE_{it} + \beta_9 INF_{it} + \varepsilon_{i,t} \quad (1)$$

where

TE : ratio of total equity divided to total asset
GL : gross loans
NII : non interest income
LNL : log of net loans
IL : impaired loans
LA : liquid assets
LTA : log of total assets
LTCD : log ot total customer deposits
LCE : log of common equity
INF : inflation

The present research endeavors to examine the factors that influence the stability of Islamic and conventional banks in Indonesia, utilizing the Equity proxy as a measure. The study takes into account both bank-specific and macroeconomic variables that may have an effect. Bank-specific variables such as Loan and Diversification encompass Gross Loan (GL), Non-Interest Operating Income (NII), and Net Loans (LNL). According to Shim (2019), bank stability is affected by loans and diversification. Conversely, Šeho et al. (2023) discovered a negative correlation between loan and financing diversity and Islamic bank stability. Impaired Loan (IL) has a significant impact on bank stability, as indicated by Ijaz et al. (2020), Khaled et al. (2021), and Nwafor & Nwafor (2023). Liquid Assets (LA) has a significant relationship to stability (Kurtoglu & Durusu-Ciftci, 2024). Total Assets (LTA) as a bank size measure has a significant effect on bank stability, as highlighted by Ali & Puah (2019) and Cihak & Hesse (2010). Customer Deposit (LTCD) also has a significant impact on stability (Huang & Ratnovski, 2011). Common Equity (LCE) affects stability (Maulana & Rusmita, 2019). In addition, the macroeconomic variable of inflation (INF) is utilized because a study by Kabir et al. (2015) found that it has a significant impact on stability.

RESULT AND DISCUSSION

We first provide summary data to clarify differences among subgroups of stability determinants. Table 1 presents descriptive statistics for every variable in this study. The panels A, B, and C summarize the statistics for the full sample, Islamic banks, and conventional banks, respectively. The selective statistic consists of total observations (Obs.), Mean value, Standard Deviation (Std. dev.), Minimum (Min.), and Maximum (Max.) In the table, Equity represents bank stability. GL denotes gross loans and NII denotes non-interest income to measure loan and financing diversification. IL denotes impaired loans, LA refer to liquid assets. LTA represents bank size through the log of total assets.

LNL denotes the log of net loans; LTCD refers to total customer deposit, LCE denotes to common equity, and INF denotes inflation.

In summary, panel A encompasses summary statistics for all 1,310 observations across the full sample, with 99 observations categorized under panel B as Islamic banks and 1,211 observations classified as conventional banks in panel C. The table shows that Islamic banks in the sample are smaller and better capitalized, but more concentrated in their distribution of financial characteristics compared to conventional banks. The mean value for conventional banks is higher than Islamic banks for equity, which means Islamic banks are less stable than conventional banks. However, when look at to the gross loan mean value of Islamic banks higher than conventional banks the reason might be influenced by various banks and years that indicated the minimum value of conventional banks lower than Islamic banks in each variable. In addition, when look at to the full sample, it can be concluded that impaired loans is the main drivers of bank stability, followed by non-interest income, liquid assets, size, customer deposits, net loans, inflation, common equity, and gross loans.

Table 1. Summary Statistics

Variable	Equity	GL	NII	IL	LA	LTA	LNL	LTCD	LCE	INF
Panel A: Full Sample										
Obs.	1,310	1,171	1,310	954	1,310	1,310	1,306	1,276	1,304	1,310
Mean	16.048	0.202	59.34	61.21	20.72	6.975	6.4578	6.574	4.933	5.654
Std. dev.	12.670	0.698	175.6	178.6	12.59	1.635	1.7151	1.878	1.524	2.537
Min	-27.49	-0.990	-9.557	0	0.4	1.328	-1.063	-9.539	-0.940	3.031
Max	100	14.288	1678.7	2700.1	84.34	11.48	10.988	11.153	9.501	13.11
Panel B: Islamic										
Obs.	99	89	99	65	99	99	99	99	99	99
Mean	13.5007	0.3831	19.870	50.377	17.282	6.56737	6.1288	6.167	4.443	4.935
Std. dev.	7.77477	1.4761	31.918	85.353	7.9175	1.18845	1.2956	1.535	0.987	1.738
Min	6.22	-0.304	-1.832	0.4426	0.87	3.20471	1.1252	0.782	2.467	3.031
Max	56.53	12.363	144.99	554.37	44.63	8.9969	8.5691	8.880	6.451	13.11
Panel C: Conventional										
Obs.	1,211	1,082	1,211	889	1,211	1,211	1,207	1,177	1,205	1,211
Mean	16.2562	0.1867	62.568	62.001	21.006	7.00822	6.4848	6.609	4.972	5.713
Std. dev.	12.9699	0.5888	182.07	183.576	12.862	1.66204	1.7427	1.901	1.553	2.584
Min	-27.49	-0.9900	-9.545	0	0.4	1.32751	-1.0629	-9.539	-0.939	3.031
Max	100	14.288	1678.7	2700.08	84.34	11.4785	10.988	11.153	9.501	13.11

Next, we present a correlation matrix. The correlations facilitate the selection of an explanatory set that illustrates the linear relationships between the key variables analyzed,

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as detailed in Table 2. As can be seen from Table 3, multicollinearity is not expected to be an issue. Table 2 displays the correlation matrix, which represents the correlation between dependent and independent variables. From the table, the most significant factor in bank stability is gross loans, followed by liquid assets. The negative values in non-interest income (r=-0.068), common equity (r=-0.0882), inflation (r=-0.1133), impaired loans (r=-0.1166), size (r=-0.4124), net loans (r=-0.4275), and customer deposit (r=-0.4894) indicate a weak correlation with bank stability, and larger banks have lower equity ratios. Highly inter-correlated, such bank size (LTA), net loan (LNL), and customer deposit (LTCD), which capture similar information on a bank scale. Inflation doesn't correlate much with the banking stability factors, except for a positive relationship with liquidity assets (LA). In terms of modelling, the high multicollinearity between some variables like NII, IL and the size metrics means they provide redundant information and don't all need to be included together.

This section comprises three tables for the full sample, Islamic banks, and conventional banks, presenting regression results on bank stability across four models: Ordinary Least Squares regression (OLS), Q25 for Quantile regression at the 25th percentile, Q50 for Quantile regression at 50th percentile, and Q75 for quantile regression at the 75th percentile. Each table presents a review of the influence of various independent factors such as GL, NII, IL, LA, LTA, LNL, LTCD, LCE, and inflation on the stability of Indonesia, utilizing annual data from 2015 to 2020. Additionally, to address autocorrelation, the variables have been regressed using logarithmic transformations.

Table 2. Correlation Matrix

	Equity	GL	NII	IL	LA	LTA	LNL	LTCD	LCE	INF
Equity	1									
GL	0.103	1								
NII	-0.068	-0.0294	1							
IL	-0.1166	-0.0447	0.7787	1						
LA	0.0145	0.0616	-0.0528	-0.0757	1					
LTA	-0.4124	-0.0859	0.5426	0.5779	-0.1623	1				
LNL	-0.4275	-0.0712	0.5187	0.5556	-0.2649	0.9808	1			
LTCD	-0.4894	-0.0649	0.4918	0.5368	-0.2046	0.9121	0.9438	1		
LCE	-0.0882	-0.0587	0.5437	0.5576	-0.2204	0.9114	0.8996	0.809	1	
INF	-0.1133	0.0719	-0.062	-0.0072	0.3259	-0.1282	-0.142	-0.091	-0.1951	1

As shown in Table 3 for the full sample, the adjusted R^2 value for the model is 70.7%. This finding implies that the independent variables employed in this study possess the capability to explain 70.7% of the variation observed in the dependent variable, which is stability banks. The impaired loan variable consistently exhibits a positive and significant impact in all models, contributing to enhanced stability

across different performance levels with a relatively consistent effect size. On the other hand, liquid assets (LA) show a minor negative effect, with significance observed for median stability at Q50, suggesting a potential mild decrease in stability in certain scenarios. Generally, the inclusion of diversification variables such as non-interest income, impaired loans, and liquid assets has a notable impact on stability or equity. Conversely, variables like total assets, net loans, customer deposits, and common equity do not show significance.

Table 3. The Baseline Quantile Results of Full sample, Islamic Banks and Conventional Banks

	(1)	(2)	(3)	(4)
	OLS	**Q25**	**Q50**	**Q75**
GL	0.7313**	0.1793***	0.1200	0.1880
	[0.299]	[0.063]	[0.153]	[0.528]
NII	0.0028	0.0003	-0.0008	0.0001
	[0.002]	[0.000]	[0.001]	[0.003]
IL	0.0042**	0.0011***	0.0030***	0.0056*
	[0.002]	[0.000]	[0.001]	[0.003]
LA	0.0163	-0.0053	-0.0390***	-0.0459
	[0.020]	[0.004]	[0.010]	[0.035]
LTA	-7.8883***	-11.5758***	-9.0674***	-1.9949
	[0.776]	[0.163]	[0.396]	[1.368]
LNL	-1.9149**	-0.8834***	-3.6085***	-6.3427***
	[0.902]	[0.190]	[0.460]	[1.590]
LTCD	-1.9083***	-0.2300***	-0.4353**	-4.7309***
	[0.333]	[0.070]	[0.170]	[0.588]
LCE	10.1431***	12.6429***	12.7886***	12.0615***
	[0.303]	[0.064]	[0.155]	[0.534]
INF	-0.1786**	0.0143	0.0073	-0.0093
	[0.070]	[0.015]	[0.036]	[0.124]
Constant	45.4498***	38.7664***	41.0761***	43.4533***
	[1.151]	[0.242]	[0.588]	[2.030]
Observations	840	840	840	840
R^2	0.710			
Adjusted R^2	0.707			
Pseudo R^2		0.667	0.613	0.572

standard error are in parantheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the quantile regression analysis, the influential determinants vary from minor to major effects across the 25th to 75th percentiles. Inflation is deemed insignificant at the 75th percentile due to its p-value exceeding 0.05, a trend also observed in the ordinary least squares method. However, at the 25th and 50th percentiles, inflation exhibits a

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positive and significant relationship with stability. In order to conduct a thorough analysis of the differences in stability between conventional and Islamic banks, we present the outcomes of the Quantile Regression Model, which examines the sample of Islamic banks displayed in Table 4 and 5 for conventional banks.

As shown in Table 4 for the Islamic banks sample, the adjusted R^2 value for the OLS model is 95.9%. This indicates that the model is a strong fit for the data and that the independent variables have a substantial influence on the dependent variable. On the other hand, the Pseudo-R^2 values for the quantile regression indicate a good fit across the distribution, with the best fit at the 75th percentile (0.831) and decreasing at lower levels. The impaired loan (IL) variable shows a positive and significant impact, particularly at the lower level of Q25, indicating improved stability among lower-performing banks. The bank size, represented by LTA, exhibits a strong negative relationship with stability, suggesting that higher asset risk diminishes stability. Net Loan (LNL) and Common Equity show positive relationships, implying that increased lending and capital may enhance stability in specific banking contexts.

Table 4. The Baseline Quantile Result of Islamic Banks Sample

	(1)	(2)	(3)	(4)
	OLS	**Q25i**	**Q50i**	**Q75i**
GL	-0.0968	0.0248	0.0236	-0.1890
	[0.106]	[0.081]	[0.126]	[0.170]
NII	-0.0055	-0.0084	0.0069	0.0117
	[0.009]	[0.007]	[0.010]	[0.014]
IL	0.0043*	0.0048**	0.0034	-0.0001
	[0.002]	[0.002]	[0.003]	[0.004]
LA	0.0199	0.0013	0.0129	0.0318
	[0.025]	[0.019]	[0.029]	[0.040]
LTA	-20.1567***	-19.0383***	-20.0823***	-22.7881***
	[2.270]	[1.741]	[2.697]	[3.652]
LNL	3.6404**	4.0768***	4.4123**	4.2488
	[1.813]	[1.390]	[2.153]	[2.915]
LTCD	-0.0469	-0.5523	0.5325	1.0404
	[0.735]	[0.563]	[0.873]	[1.181]
LCE	17.4791***	16.0560***	15.6150***	18.4552***
	[0.610]	[0.468]	[0.725]	[0.982]
Inflation	0.1537	0.0614	0.0449	0.1950
	[0.106]	[0.081]	[0.126]	[0.170]
Constant	44.4825***	44.0364***	44.1000***	47.0265***
	[1.982]	[1.520]	[2.355]	[3.188]
Observations	61	61	61	61
R^2	0.965			
Adjusted R^2	0.959			
Pseudo R^2		0.798	0.806	0.831

Table 5 displays the OLS model with an R2 of 0.709, suggesting that approximately 70.9% of the variability in the dependent variable is explained by the model. The adjusted R^2 is closely aligned at 0.706, indicating a good fit. In contrast to the Islamic bank sample, the Pseudo-R^2 values for the quantile regressions demonstrate a good fit, with the best fit observed at the 25th percentile (0.663) and a slight decrease at higher percentiles. The impaired loan variable consistently shows a positive and significant impact, except for the highest stability at Q75. Gross loans are not significant at most quantiles, suggesting that their effect may not be consistent across the distribution of the dependent variable. Liquid assets exhibit a negative and significant impact only at Q50. Total Assets are negatively and significantly associated in OLS, Q25, and Q50, indicating that an increase in total assets is generally associated with a decrease in the dependent variable, which is equity.

Table 5. The Baseline Quantile Result of Conventional Bank Sample

	(1)	(2)	(3)	(4)
	OLS	**Q25c**	**Q50c**	**Q75c**
GL	1.7646***	0.0619	0.4254	0.2275
	[0.484]	[0.108]	[0.278]	[0.837]
NII	0.0029	0.0005	-0.0006	0.0003
	[0.002]	[0.000]	[0.001]	[0.003]
IL	0.0044**	0.0009**	0.0028***	0.0052*
	[0.002]	[0.000]	[0.001]	[0.003]
LA	0.0026	-0.0075	-0.0427***	-0.0494
	[0.021]	[0.005]	[0.012]	[0.036]
LTA	-7.5123***	-11.4785***	-8.6742***	-1.5659
	[0.810]	[0.181]	[0.465]	[1.402]
LNL	-2.2554**	-1.0233***	-4.0523***	-6.8226***
	[0.946]	[0.211]	[0.543]	[1.637]
LTCD	-1.8328***	-0.1742**	-0.4086**	-4.6821***
	[0.347]	[0.077]	[0.199]	[0.600]
LCE	9.9362***	12.6068***	12.8058***	12.0247***
	[0.314]	[0.070]	[0.180]	[0.543]
INF	-0.1984***	0.0037	-0.0045	-0.0377
	[0.074]	[0.016]	[0.042]	[0.127]
Constant	45.8547***	38.9437***	41.0920***	43.7146***
	[1.208]	[0.269]	[0.693]	[2.090]
Observations	779	779	779	779
R^2	0.709			
Adjusted R^2	0.706			
Pseudo R^2		0.663	0.606	0.565

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The tables highlight the importance of considering different models and quantiles to fully understand the determinants of bank stability. Our study revealed no obvious difference between Islamic and conventional banking systems in terms of the factors that impact bank stability, namely non-interest income, impaired loans, and liquid assets. Sanya & Wolfe (2011) state that non-interest income and diversification have an influence on bank stability. In addition, Thakor (2014) argued that financial institutions with a large amount of equity capital tend to provide greater loans, generate greater liquidity, and demonstrate greater resilience during economic downturns. This findings, along with the research conducted by Ijaz et al. (2020), Khaled et al. (2021), and Nwafor & Nwafor (2023), highlight the impact of non-performing loans (NPL) on the occurence of banking crises. They suggest that if not maintained properly, it might lead to a deterioration in banks' profitability and ultimately threaten stability due to their negative impact on the real economy. As found in the study of Kurtoglu & Durusu-Ciftci (2024), NPL is one of the factors with the highest causality with economic growth because of the significance of managing NPLs effectively to maintain the stability and health of the banking system (Desogus & Venturi, 2023).

Other factors, such as gross loans, size, net loans, customer deposits, and common equity are not significant determinants of bank stability. This study rejects the customer deposit variable stated by Qatawneh & Alqatawneh (2018) as important for banks. Likewise, Cihak and Hesse (2010) stated that size is one of the factors that affect bank stability. Additionally, this study differs from Chand et al. (2021) that conclude larger banks tend to be more stable, as it specifically examines the small island economies of Fiji. However, the consistent negative results for bank size in both quantile models strengthen the robustness of the dependent variable, which is equity. This is in line with Sidhu et al. (2022), indicating that larger banks may have a lower their dependent variable, such as Net Interest Margin, which can affect bank stability.

The differences can only be seen on the inflation variable, which in the full sample and Islamic bank, inflation in quantiles 25 and 50 had a positively significant effect, but in conventional regression results in quantile 50, the results were negative. It can be inferred that Islamic banks are more sensitive to the influence of inflation as an external factor than conventional banks, which are affected at a specific level. The liquid assets of conventional banks show a negative effect on each quantile and decline, but are positive and significant in OLS. Contradict with Islamic bank liquidity, which shows increasing from quantile 25 to 75. Noninterest for Islamic banks is increasing from negative at quantile 25 to positive at higher levels. As opposed to conventional banks, they tend to fluctuate, which in quantile 50 has a negative effect, then increases again in quantile 75, but the strong effect located in quantile 25 and OLS noninterest income has a negative effect. When looking at the entire sample at quantile 50, noninterest has a negative effect, and liquidity assets at each quantile which is influenced by the large number of conventional banks. Impaired loans for Islamic banking are dropping down at a higher level, contrary to conventional banks, which are experiencing an increase at a higher level. This shows that impaired loans have a very important role for Islamic and

conventional banks. As Messai & Jouini (2013) said, impaired loans become the main driver in the cause of bank stability, which will affect bank crises because banks have the risk of loan problems before bankruptcy. As for Islamic banks, not only impaired loans are important but also liquid assets are important, according to Fakhri & Darmawan (2020). This is supported by Diamond & Kashyap (2016) and Lu & Wang (2023), who note that banks need to hold more liquid assets and manage off-balance sheet items can effectively reduce banks systematic risk since bank hold depositors' liquidity needs.

In the context of macroeconomics, particularly in Islamic banking, the OLS analysis reveals a positive but not significant relationship with inflation, whereas in conventional banking, the relationship is negative and significant at the 1% level. Islamic banks exhibit consistent yet insignificant positive results across quantiles 25, 50, and 75, while conventional banks show varying results with insignificantly negative impacts across the same quantiles. This inconsistency in quantile regression models indicates that the effect of inflation on bank stability may vary depending on the distribution of stability. This study also contradicts the findings of Iqbal et al. (2024), who reported a negative impact on the stability of Islamic banks in Asia, as well as Setyawati et al. (2022), who identified a similar negative impact on the stability of an Islamic bank in Indonesia. Furthermore, this study also contradicts the findings of Lestari et al. (2023), who reported a significant positive impact of inflation on bank stability in ASEAN countries. In contrast, our study, based on a full sample, reveals a negative relationship between inflation and bank stability. This implies that, in our analysis, higher levels of inflation in full sample are associated with a decrease in the stability of banks.

CONCLUSION

The present research delves into the factors that influence the stability of banks in Indonesia, specifically in terms of equity, for both Islamic and conventional banks. The result shows impaired loans have become the main driver of bank stability, both Islamic and conventional, in Indonesia due to the bear risk, especially in loans and financing. Impaired loans are more significant to conventional banking than Islamic banks because the higher quantile of Islamic banks shows a decline or less significance to bank stability. The estimation of noninterest income as a diversification measurement is stronger in conventional banks than in Islamic banks in Indonesia. Surprisingly, this study found that Islamic banks also consider liquid assets to maintain their stability. Liquidity assets positively impact Islamic banks, and their impact is increased at higher quantiles. Indirectly, it can be concluded that Islamic banks still earn less than conventional. The analysis using QRM indicates that the impact of various determinants on bank stability is not uniform across the distribution.

Generally, the findings suggest noninterest income as diversification, impaired loan, and liquidity assets are the main factors in determining banks' stability. This study suggests that both Islamic and conventional banks in Indonesia, to increase their stability, need to pay attention to impaired loans; Islamic banks also must raise awareness of diversification,

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and conventional banks must also pay attention to their liquidity assets. Regulators could consider quantile-based regulation, where banks are assessed and regulated based on their position in the stability distribution. This approach can help in identifying banks that are more vulnerable and implementing targeted interventions. The variation in the impact of determinants across quantiles underscores the importance of robust risk management practices that are adaptable to the bank's specific stability level. Banks should be encouraged to develop risk management strategies that address the unique risks faced by banks at different stability levels. This study has essential contributions to academia, especially in bank stability literature, since this topic has a gap in the literature and noncomprehensive.

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