Financial Stability of Indonesian Small and Medium Financing Bank

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Abstract. This research aims to investigate the determinant factors of the financial stability of small and medium financing banks (SMFB) in Indonesia. The sample of this study was 100 SMFBs in Indonesia from all provinces selected using a multistage random sampling approach. The findings of the research suggested that on average the financial stability of SMFBs is relatively good with quite high variation between banks with high and low financial stability. This indicates the possibility that many SMFBs in Indonesia will experience financial difficulties or even go bankrupt. In the context of factors that influence the financial stability of SMFBs in Indonesia, this study found that operating efficiency, capital adequacy ratio, and liquidity have a positive effect on the financial stability of SMFBs. Additionally, this study discovered that non-performing loans negatively impact the financial stability of SMFBs. The findings imply that financial stability of Indonesian SMFB can be maintained based on banks' ability to increase operational efficiency, capital adequacy ratio, liquidity and to reduce its NPL.

Keywords: financial stability, small & medium Bank, operation efficiency.

1 Introduction

The purpose of establishing the Small and Medium Financing Banks (SMFB) in addition to improving the welfare of the owners is to collect funds from the community into term deposits or savings, provide loans to the community, provide financing with a profit-sharing principle based on the provisions stipulated by government regulations. These goals can be achieved when SMFBs have a relatively stable performance. However, in practice, not all SMFBs are able to run well, and many SMFBs have even gone bankrupt. The number of SMFBs in Indonesia before Covid was 1708 SMFBs, but the number of SMFBs decreased from 2020 to 2024, so that the number of SMFBs in May 2024 was 1566. This was due to the revocation of operational permits for several RBs due to financial difficulties and bankruptcy. On the other hand, RBs were able to distribute credit which continued to increase from 2019 to 2024, so that in April 2024 the amount of credit distributed by SMFBs reached 162.75 trillion.

Financial performance instability will have a negative impact on SMFB stakeholders, especially customers or the community using the SMFB. Therefore, management and regulators must be able to carry out early monitoring by detecting the determining factors of SMFB financial stability. Wafula, (2020) stated that bank financial stability

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can be detected using the CAMEL ratio approach, Z score based on profitability, and the financial fragility approach that measures credit risk, liquidity, and foreign debt.

Abrar et al., (2018) stated that the type and scale of the bank determines its financial stability. They further proved that the conventional banks reported the higher financial stability compared to Islamic banks, and that big banks have more financial stability than small banks.

Pham et al., (2021) found that banks often experience difficulties in maintaining their operational activities, reducing losses, and maintaining their liquidity when in various crises that affect banks' financial stability in general including SMFB. Furthermore, Pham et al., (2021), concluded that equity to asset ratio, size of the bank, loan to asset ratio, and diversity of revenue are some of the internal and external elements that affect a bank's financial stability.

Alshubiri, (2017) tested the effect of bank size and profit diversity on bank financial stability in Oman. The results show that only earnings diversity influences the financial stability of the bank. Joudar et al., (2023) concluded that the MENA region's Islamic banks' financial stability is negatively impacted by bank size, governance, and concentration levels, but positively by the capital adequacy ratio and liquidity. Kharabsheh & Gharaibeh, (2022) demonstrated that while return on equity has a negative impact on non-performing loans, the debt ratio has a positive impact on capital adequacy.

Based on the importance of the role and financial stability of SMFB, the bank must be able to maintain its financial stability by considering factors that contribute to this stability. Unfortunately, previous studies have not provided consistent results regarding the factors that affect banks' financial stability. Therefore, this study must be carried out with an emphasis on operational efficiency, capital adequacy ratio, liquidity, profitability, asset quality, and non-performing loans as the main factors that affect the financial stability of Indonesian SMFBs.

2 Literature Review and Hypotheses Development

2.1 Financial Stability Theory

Wafula, (2020) concluded that Agency Theory, Efficiency Structure Theory, Capital Buffer Theory, and Liquidity Shift Theory are fundamental theories that can be used to explain the factors that determine bank financial stability. Jensen & Meckling (1976) stated that agency theory describes the contractual arrangement between the owner (principal) and other managers (agents), which entails the transfer of decision-making authority from the principal to the agent. The manager as an agent will be responsible for managing the company, making investment decisions, financing, and utilizing available resources for the prosperity of shareholders (principals). However, this agency relationship will cause problems when management and shareholders have different interests. These differences in interests will result in decisions taken by management including excessive investment decisions. Wafula, (2020) uses agency theory in developing the relationship between financial stability and profitability. Efficiency Structure Theory (Demsetz, 1973) explains the relationship between market structure

and the implementation of a company's business, where companies with efficient management will have lower costs and higher performance. In other words, this theory concludes that companies including banks that have a high level of operational efficiency will have an impact on the high level of their financial stability.

The capital buffer theory (Calem & Rob, 1999) states that banks move towards the smallest possible capital proportion to have an ability to assist capital and diminish the chance to keep a strategic distance from administrative expenses brought on by failure to achieve basic capital criteria. The capital adequacy ratio is the minimum capital requirement that must be owned by a bank, in order to make sure that the bank is not subject of sanctions and the bank also has a good ability for maintaining financial stability. Thus, it can be concluded that the capital adequacy ratio is a determining factor in the banks' financial stability including small and medium financing banks.

Ibe, (2013) stated that the liquidity shift theory predicts that bank liquidity is maintained when the bank has assets that can be transferred or sold to lenders or other investors in cash. Thus, if a bank has assets to always sell and the Central Bank and the Discount Market are willing to purchase assets at a discount, bank liquidity can be raised. when a bank has a good level of liquidity, the bank's profitability will increase which will ultimately have an impact on increasing the bank's financial stability.

2.2 Financial Stability Concept and Measurement

Morozova & Sahabutdinova, (2013) stated that there are two approaches in defining financial stability, namely the financial stability and instability approaches. Furthermore Morozova & Sahabutdinova, (2013) concluded that financial stability refers to the capacity of the financial system, comprising markets, financial intermediaries, and market infrastructure, to rectify financial imbalances and bounce back from shocks. In other words, in the context of banking, financial stability is the ability of banks to face financial crises.

The ability of banks to maintain financial stability can be viewed from three possibilities, namely crisis, instability, and financial fragility. The measurement mostly used by researchers in measuring financial stability is the Z score based on individual bank performance and is not comprehensive. Gudmundsson et al., (2013) used ROE and ROA as financial stability variables. Abrar et al., (2018) measured the financial stability in Pakistan using the debt to asset ratio, capital adequacy ratio, and the Z score proxies. Meanwhile, Wafula, (2020) measures the financial stability of banks with a more comprehensive approach that combines exchange rate, credit, and liquidity risk into a single financial fragility index. However, this fragility index cannot be applied to all types of banks including Rural Bank.

2.3 Hypothesis Development

According to Efficiency Structure Theory (Demsetz, 1973) conclude that operational efficiency positively impacts on financial stability. Karim et al., (2010) investigated how operational effectiveness affected Malaysian and Singaporean banks' financial stability. The results suggested that operational efficiency positively impacts financial stability. Alber (2016) examined the effect of operational efficiency on the Middle East and North

Africa (MENA) countries' banking industry's financial stability. They found that bank's operational efficiency positively influence on its financial stability. Hafez, (2022) examined the effect of bank operational efficiency on its financial stability. The sample used in his study was 30 banks operating in Egypt. The results of his study concluded that bank efficiency is a core factor affecting financial stability.

H1 : Operational efficiency positively influences Indonesian small and medium financing banks

The capital buffer theory (Calem & Rob, 1999) states that banks move towards a proportion of capital that has the power to reduce the chances of not meeting minimum capital requirements which have an impact on relatively large administrative costs. Therefore, the capital adequacy ratio can maintain banks' financial stability. Joudar et al., (2023) found that the capital adequacy ratio is negatively effect on the Islamic banks' financial stability.

H2 : Capital adequacy ratio positively influences Indonesian small and medium financing banks

Ibe, (2013) stated that the liquidity shift theory predicts that banking liquidity has a significant influence on its profitability which ultimately impacts its financial stability. Moreover, Ibe, (2013) examined the impact of liquidity on profitability for Nigerian listed banks. The findings showed that liquidity positively affects profitability. Joudar et al., (2023) liquidity positively influence on the Islamic banks' financial stability.

H3 : Liquidity positively influences Indonesian small and medium financing banks

Wafula, (2020) suggested that agency theory can be applied in predicting the positive relationship between bank profitability and its financial stability. Mohamed et al., (2023) investigated the effect of profitability on the financial stability for Kenyan listed banks. Their study proved that the bank's profitability has a positive impact on the bank financial stability. Anh, (2023) also found the profitability positively influence on the financial stability for the cases of Vietnamese commercial banks.

H4 : Profitability positively influences Indonesian small and medium financing banks

Kuria et al., (2024) explored the systemic risk theory for evaluating asset quality's effect on financial stability Kenyan Commercial Banks. They found that asset quality positively influences financial stability.

H5 : Asset quality positively influences Indonesian small and medium financing banks

Anh, (2023) examined the effect of credit risk management on 27 Vietnamese commercial banks' financial stability. The findings demonstrate a direct correlation between non-performing loans and financial stability. Koskei, (2020) investigated how non-performing loans affected Kenyan commercial banks' financial stability. His study's findings demonstrated that non-performing loans had a detrimental impact on banks' Z-score, which indicates their level of financial stability. Anh & Phuong, (2021) investigated how credit risk affects Vietnamese commercial banks' ability to remain financially stable. The findings indicated that banks' financial stability was negatively impacted by non-performing loans. My & Quoc, (2022) examined the effect of credit

risk on the financial stability of Vietnamese commercial banks. The findings demonstrated a clear correlation between bank credit risk and bank stability.

H2 : Nonperforming loan negatively influences Indonesian small and medium financing banks

3 Research Methods

3.1 Population and Sample

The population of this study is rural credit banks throughout Indonesia. The sample of this study is 100 rural credit banks selected using a multistage sampling approach observed for 5 years (2019 - 2023). or a total of 500 observations. The data in this study were obtained from the financial services authority website at the banking financial information session, especially rural financing banks.

3.2 Variables Measurement

This study uses Financial Stability as the dependent variable, Operational Efficiency, Capital Adequacy Ratio, Liquidity, Profitability, and Asset Quality as independent variables. Table 1 describes the selected dependent and independent variables, their acronyms, and their measurements.

Table 1. variable operational definition and measurement.

Variables	Acronyms	Operational Definition and Measurement
Financial Stability	FI	The survival of financial institutions is measured by Z score
Operational Efficiency	OE	The ability of banks to convert resources into revenue measured by the ratio of operating expenses to income
Capital Adequacy Ratio	CAR	The quantum of assets that a financial institution must own and plan to hold as measured by the ratio of core capital divided to total deposits
Liqudity	LQ	The ratio of total loans to customer deposits indicates a financial institution's ability to account for commitments at the time of expiry.
Profitability	ROA	The ability of businesses to get a return on investment measured by the ratio of net income to total asset
Asset Quality	AQ	The ability of bank resources (credit) to provide income measured by the ratio of loan loss provision to net income

4 Research Findings and Discussion

4.1 Descriptive statistics

The descriptive statistics of all variables for 100 Indonesian small and medium banks in terms of minimum, maximum, mean, standard deviation (Std. Dev) are reported in table 2. Table 2, shows that the average financial stability is 28.48% with a high level of variation reaching 23.47%. it indicates the financial instability of the sample banks. Meanwhile, the operational efficiency of the sample banks, on average, is 93.25% or included in the category of healthy banks. Furthermore, the average sample bank has a very good capital adequacy ratio, which is above 8% set by the regulator. The liquidity of the sample banks on average is included in the category of healthy banks or below 94%. Profitability is also included in the category of healthy banks with a value above 1.25%. Asset quality also on average exceeds the provisions for the category of healthy banks, which is greater than 81%. Meanwhile, on average, NPL is included in the category of less healthy banks.

Table 2. Statistic Descriptive

Variables	Minimum (%)	Maximum (%)	Mean (%)	Std. Deviation (%)
Financial Stability	-4.34	157.67	28.48	23.47
Operational Efficiency	0.33	1805.26	93.25	84.37
Capital Adequacy Ratio	-50.20	235.04	45.00	27.57
Liquidity	4.00	1990.11	81.62	92.05
Profitability	-208.53	76.86	2.51	12.79
Asset Quality	0.00	636.13	102.45	28.82
Non-Performing Loan	0.00	53.43	8.61	8,.4

4.2 Pearsons Correlation

The results shown in Table 3 explain the absence of a strong relationship between the independent variables of this study. The maximum correlation coefficient is 0.386 which is detected between CAR and profitability. Thus, the results confirm that there is no multicollinearity problem. Meanwhile, the correlation between the independent variables (OE, CAR, LQ, ROA, AQ, NPL) and the dependent variable (FS) shows that OE and NPL are positively correlated with FS, while CAR, LQ, and ROA are positively correlated with FS.

Table 3. Pearson Correlation

Variable	FS	OE	CAR	LQ	ROA	AQ	NPL
Financial Stability	1						
Operational Efficiency	-0.157**	1					
Capital Adequacy Ratio	0.653**	-0.055	1				
Liqudity	0.258**	-0.047	0.297**	1			
Profitability	0.132**	-0.389**	0.072	0.016	1		
Asset Quality	-0.001	-0.151**	0.024	0.004	0.048	1	
Non-Performing Loan	-0.261**	0.105*	-0.128**	-0.066	-0.190**	-0.027	1

4.3 Multiple Regression Results

Multiple regression analysis was conducted to test the research hypothesis, the results of which are presented in Table 4. Based on Table 4, this research model shows statistical significance of the F-test, so that this research model meets the requirements of the goodness of fit model. Furthermore, the results of the hypothesis test show that operational efficiency, capital adequacy ratio, liquidity, non-performing loans have a significant effect on the financial stability of small and medium-sized Indonesian banks. So H1, H2, H3, and H6 are supported. Meanwhile, profitability and asset quality do not affect the financial stability of small and medium-sized Indonesian banks. So H4 and H5 are not supported.

In detail, this study found that the level of operational efficiency will have a positive impact on the financial stability of small and medium banks in Indonesia. The results of this study are in line with Karim et al., (2010), Alber (2016), Hafez, (2022), My & Quoc, (2022), and Mohamed et al., (2023) who found banks operational efficiency positively influence those banks financial stability.

In term of capital adequacy ratio, this study also found the Indonesian small and medium bank financial stability was positively influenced by its capital adequacy ratio. This finding indicates that higher financial stability will be achieved by higher capital adequacy ratio bank. This finding is in line with Calem & Rob, (1999) and Joudar et al., (2023) who concluded that the positive relationship between capital adequacy ratio and banks' financial stability.

This study also revealed that liquidity positively influenced the Indonesian small and medium bank financial stability. This finding indicates that the higher bank liquidity will be followed by its higher financial stability. This finding is in line with Ibe, (2013), Koskei, (2020)

In contrast, this study showed that nonperforming loan negatively influenced the Indonesian small and medium bank financial stability. This finding indicates that the higher bank nonperforming loan will be followed by its lower financial stability. This finding is in line with Anh, (2023), My & Quoc, (2022), and Anh & Phuong, (2021).

Table 4. Regression Results

Variables	Coefficient	t-statistics	Significance	Conclusion
Constant	13.702	3.688	0.000	
Operational Efficiency	-0.028	-2.708	0.007	*H1Supported*
Capital Adequacy Ratio	0.516	16.846	0.000	*H2 Supported*
Liqudity	0.016	1.749	0.081	*H3 Supported*
Profitability	0.032	0.465	0.642	*H4 Not Supported*
Asset Quality	-0.030	-1.053	0.293	*H5 Not Supported*
Non-Performing Loan	-0.485	-4.742	0.000	*H6 Supported*
Adjusted R-Square		0.467		
F-Statistics		67.79		
Significance		0.000		

5 Conclusion

The purpose of this study is to examine the factors that influence the financial stability of small and medium financing banks (SMFB) in Indonesia. The sample of this study was 100 SMFBs in Indonesia from all provinces selected using a multistage random sampling approach. The results of the study indicate that on average the financial stability of SMFBs is relatively good with quite high variation between banks with high and low financial stability. This indicates the possibility that many SMFBs in Indonesia will experience financial difficulties or even go bankrupt. In the context of factors that influence the financial stability of SMFBs in Indonesia, this study found that operating efficiency, capital adequacy ratio, and liquidity have a positive effect on the financial stability of SMFBs. This indicates that the financial stability of SMFBs will increase along with the increase in operating efficiency, capital adequacy ratio, and liquidity of the bank. Meanwhile, this study also found that non-performing loans have a negative effect on the financial stability of SMFBs. This indicates that the financial stability of SMFBs will decrease when the bank's NPL increases. Therefore, in order to maintain the financial stability of SMFB, the bank must be able to increase operational efficiency, capital adequacy ratio, and liquidity, and must be able to reduce its NPL.

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