



Liquidity, Financial Health and Financial Performance in Village Credit Union

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ABSTRACT

This research aimed to measure the effect of liquidity and financial health to financial performance in microfinance institutions. Financial performance is the main indicator of financial sustainability in profit-oriented entity. Data of 94 village credit unions locally known as lembaga perkreditan desa (LPD) in Bali - Indonesia, over period of 2021 to 2023 was analysed using multiple linear regression. The result found that liquidity and financial health both have a positive impact on financial performance. Lower risk factor as the result of high liquidity and higher category of financial health shows improvement in financial performance. This finding contradicts values that higher loan distribution would lead to higher returns. This research has summarised key risk level in local microfinance institutions using financial health category measurement, just as CAMELS rating are used in commercial banks.

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1. INTRODUCTION

Financial performance is the main financial sustainability factor of profit-oriented entity. Generally, state of the economic growth and economic condition of a nation can be assessed by how well the banking sector are performing (Adam, 2014). It is because the banking and finance industry are the pillar and main indicator of economic performance. The value of asset under management and variety of financial services offered reflects how advanced the economic is within the nation (Molyneux et. al, 2006). In micro scale, microfinance could also reflect how well the regional economic are performing, especially in developing and less developed nation. Lembaga perkreditan desa (LPD) is a village credit union which exist in almost every traditional village in Bali – Indonesia. LPD was created in to support local villages economy by providing financing for villagers working capital or household consumption. LPD in turn, distribute its profit for social, religious, and cultural activities of the traditional village. Since its introduction in 1985, LPD grown significantly in supporting Bali's local economy, with 1,439 operating LPD in 2023 (LP-LPD 2023). The significant growth in the last four decades has been supported by significant growth of tourism industry in the island.

As financial entity, LPD is facing the exact same challenge as the bigger institutions; economic growth, fierce competition amongst financial services industry, and systematic fluctuation in state of the economy. LPD have a very limited operational reach of only within its respective village. This limitation causes LPD to depends on its local village economy, thus LPD with higher asset value growth tends to be located where tourism and trade growth are high. Conversely, LPD with lower growth tends to be located in villages with high reliance on agricultural activities. Bali's local government which regulates LPD uses capital adequacy, asset quality, management, earnings, and liquidity (CAMEL) to analyses performance and financial stability of LPD, just as in the banking industry. Financial performance is driven by operational factor internally and externally. Internal factor including management efficiency which contribute to revenue and cost, and external factor including economic environment which determine the flow of funding and credit distribution. Overall, the main factor of financial performance is profitability (Demirgüneş, 2016).

Research on factors contributing a financial performance has been peaked with many focused on internal factors (Demirgüneş, 2016). In the banking industry, financial performance is closely affected by CAMELS (with sensitivity). Financial services industry is managed tightly with regulation in order to maintain economic stability and consumer confidence (Salim dan Bilal, 2016). Basel Accord which has been applied globally, is used in Indonesia by the Indonesian financial service authority (OJK) for the national banking industry. For LPD, Bali Government issued a decree based on OJK regulation and uses CAMEL to analyze financial health category on LPD. Bali Government created local authority (LP-LPD) as a supervision and training provider for LPD much like the function of OJK nationally.

Financial performance of a bank determined by how efficient it can manage interest revenue and expense, thus making liquidity management also inherently crucial (Arifin, 2012). Beside financial performance, liquidity is reflection of risk management application within the

entity, which either shows conservatism or aggressivity towards growth (Daryanto et. al, 2018). Risk management and profitability are the main consideration of liquidity management approach in the banking industry, with direct impact to financial performance (Rudhani dan Balaj, 2019). Research by Rudhani and Balaj (2019), Murithii and Waweru (2017), Waswa et. al (2018), and Akenga (2015) found that liquidity have a negative impact on financial performance due to increase in risk-related cost. In contrast, research by Demirgüneş (2016) and Maaka (2013) found that liquidity have a positive impact on financial performance in relation to capital distribution efficiency. Based on varying findings in previous research in the banking industry, this research aimed to attest the impact of liquidity to financial performance in microfinance industry, with the addition of attesting the impact of CAMEL analysis which is proxied by financial health rating.

Liquidity has an inherent risk which determine bank's growth strategy (Arifin, 2012). Liquidity risk arises from maturity of asset and liability, as well as interest rate factor (Berger dan Bouwman, 2009). In banking, liquidity management define efficiency in managing asset distribution to generate revenue (Diamond dan Rajan, 2001). Higher loan to deposit composition defines lower liquidity which makes bank more prone to risk of fluctuating interest rate and other systematic and unsystematic factors. Lower liquidity however, also defines efficiency of the bank in distributing third party funds into loan to generate revenue. Research by Demirgüneş (2016) and Maaka (2013) found that liquidity have positive impact on financial performance. The first hypothesis of this research is H1: liquidity has positive impact to financial performance.

Globally, the banking industry has adopted the capital adequacy, asset quality, management, earnings, liquidity dan sensitivity (CAMELS) method to measure financial health, feasibility, and performance (Rostiami, 2015). The measurement standard reflects risk factors that could happen and could be avoided, and is considered very effective for the entire stakeholders to use (Ahsan, 2016). In application for this research, the supervising authority of LPD has used CAMEL to measure the financial health of LPD. Research by Aspal and Dhawan (2016), Bashatweh and Ahmed (2020), Ahsan (2016), and Magoma et. al (2022) found that CAMELS analysis component has positive impact to financial performance of banks. The second hypothesis of this research is H2: financial health rating has positive impact to financial performance.

2. METHODS

This research uses multiple linear regression to attest the effect of independent variable to the dependent variable. Panel data is used over three years' observation, from 2021 to 2023. Liquidity is proxied by loan to deposit ratio (LDR), financial health rating uses scoring issued by LPD supervision authority, and financial performance is proxied by return on asset (ROA). Stratified random sampling of 94 LPD was determined using 10 percent Slovin method, out of 1,439 LPD in Bali, to represent all 9 regencies.

3. RESULTS AND DISCUSSION

Table 1. Data Description

	N	Minimum	Maximum	Mean	Std. Deviation
X1 (Liquidity-LDR)	282	0.09	1.33	0.6180	0.19762
X2 (Fin. health rating)	282	1.00	4.00	3.3956	0.82532
Y (Fin. performance (ROA))	282	0.00	0.50	0.0376	0.05731
Valid N (listwise)	282				

A total 282 observations over 3 years' period is gathered, loan to deposit ratio has a mean of 0.6180 and standard deviation of 0.19762. Financial health rating has a mean of 3.3956 and standard deviation of 0.82532 and return on asset has a mean of 0.05731 and standard deviation of 0.05731.

Figure 1 & 2. Histogram and Normal P-P plot

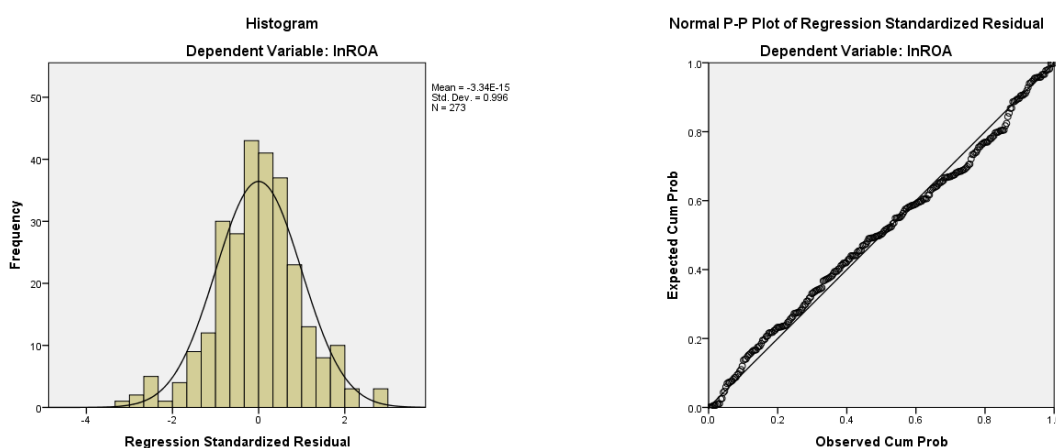


Table 2. One sample Kolmogorov-Smirnov

Residual	P-value
Model 1	0.073

Based on histogram above, the model has normal distribution of residual. As shown above, the curve is normal based on normal P-P plot gathered from the data which lies around the diagonal line, also supported by Kolmogorov-Smirnov test result above the α (0.05). There is no strong correlation within the model and no multicollinearity as it is shown in Table 3 below. The residual is seeming to be randomly scattered as shown in Figure 3 below, thus showing sign of no heteroskedasticities. Overall, the entire model has met the classical regression assumption.

Table 3. Multicollinearity Test VIF

Variable	Tolerance	VIF
X1 (Liquidity-LDR)	0.959	1.042
X2 (Fin. health rating)	0.959	1.042

Figure 3. Heteroskedasticities Scatterplot

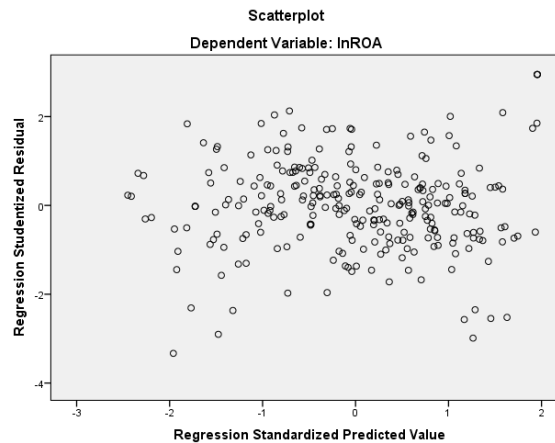


Table 4. Multiple Linear Regression Summary

Variable	B	t count	P-value t	Value
Constant	-6.355			
X1 (Liquidity-LDR)	1.570	7.039	0.000	Significant
X2 (Fin. health rating)	0.508	9.510	0.000	Significant
α	= 0.050			
Coefficient of determination (R^2)	= 0.304			
F-count	= 58.881			
F-table ($F_{2,270,0.05}$)	= 3.029			
P-value F	= 0.000			
t-table ($t_{270,0.05}$)	= 1.969			

The regression model is as follow: $\ln ROA = -6.355 + 1.570 X1 + 0.508 X2 + e_i$

As shown in Table 4 above, partial regression shows constant value of -6.355, indicating before the independent variable impact, there are already decline to the value of financial performance. Liquidity has a positive and significant impact to financial performance, with an increase to the value of 1 in liquidity would increase financial performance by 1.570. Financial health rating has a positive and significant impact to financial performance, with an increase to the value of 1 in financial health rating would increase financial performance by 0.508. Simultaneous regression shows both liquidity and financial health rating together has a positive and significant impact to financial performance. The value of coefficient determination is 30.4 percent, shows the strength of liquidity and financial health rating impact on financial performance, while the remaining affected by other variables not included in the model.

4. CONCLUSION

This research has found that partially and simultaneously, liquidity has a positive and significant impact on financial performance to confirm finding by Demirgüneş (2016) and Maaka (2013) that the positive impact of liquidity caused by increased efficiency in capital distribution through loan. Similarly, financial health rating has found to have positive and significant impact to financial performance partially and simultaneously. This result is to confirm findings by Aspal and Dhawan (2016), Bashatweh and Ahmed (2020), Ahsan (2016), and Magoma et. al (2022). Liquidity and financial health condition in financial service industry are main indicators of financial and operating sustainability in addition of crucial sign to generate returns. This research concluded that lower risk factor provided by higher liquidity and good financial health rating would contribute to better returns.

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