

Financial Distress Determinants in Emerging Markets: Evidence from Nepalese Financial Institutions

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Abstract

Background: Financial distress occurs when institutions fail to meet financial obligations, potentially leading to bankruptcy. While extensively studied in developed economies, research remains limited in developing nations like Nepal, where financial sector stability is crucial for economic growth. This study examines financial distress determinants in Nepalese financial institutions, focusing on liquidity, profitability, credit risk, firm size, operational efficiency (BOPO), and capital adequacy (CAR). **Methods:** A quantitative approach analyzed eight Nepalese financial institutions under regulatory scrutiny from 2018–2023. Panel data analysis, including unit root and Hausman tests, was conducted. The Fixed Effects Model (FEM) was selected, validated by a significant Hausman test ($p = 0.0206$). Altman's Z-score measured distress, while regression analysis evaluated determinants. **Results:** Descriptive statistics revealed wide variations in financial health, with Altman's Z-scores (0.1336–4.0317) indicating distress risks. Unit root analysis showed non-stationarity in liquidity, profitability, and credit risk, while firm size was stationary. CAR had a significant negative impact on distress ($p = 0.011$), whereas liquidity,

profitability, and credit risk were insignificant. BOPO showed marginal significance ($p < 0.1$). The model exhibited strong explanatory power ($R^2 = 0.9999$) with no autocorrelation (Durbin-Watson = 2.2166). **Conclusion:** Capital adequacy is the most critical determinant of financial distress in Nepal, aligning with global findings but contrasting with studies emphasizing liquidity or profitability. The results underscore CAR's role in mitigating distress, urging regulators to enforce robust capital standards. **Novelty:** This study fills a gap in Nepal-specific financial distress research, highlighting unique institutional dynamics. It challenges conventional liquidity-centric views, emphasizing CAR's predictive superiority in emerging markets. Policymakers and managers can leverage these insights to enhance financial stability.

Keywords: Financial distress; Capital adequacy ratio; Altman's Z-score; Nepal; Panel data analysis

INTRODUCTION

Financial distress commonly emerges when a company lacks sufficient resources to sustain its operations and meet its financial obligations, potentially leading to bankruptcy or liquidation (Angeline et al., 2020; Isayas, 2021). Globally, financial difficulties are a persistent challenge across organizations, emphasizing the importance of continuous financial health assessments to determine whether institutions are stable or approaching distress (Fizabaniyah et al., 2023). Regular reviews of financial reports can serve as an early detection mechanism for potential financial troubles (Susanti et al., 2020). Several internal and external factors, including declining profits, inefficient operations, inadequate resource management, and unfavorable market dynamics, can deteriorate a firm's financial performance and push it into distress.

Previous research highlights that financial models and tools, such as Altman's Z-score, can be effective in predicting financial distress by analyzing key financial ratios (Altman, 1968; Maymi, 2015). These predictive methods are essential for early intervention, turnaround strategies, and informed decision-making (Putri & Siswanto, 2019). A stable and growing cash flow is critical to financial stability, while a decline increases the risk of distress (Rukmana et al., 2023; Calestia, 2020). In essence, when liabilities outweigh assets, companies struggle to meet financial goals, making it imperative for stakeholders especially in capital markets to monitor these dynamics closely (Khafid et al., 2019; Waqas & Md Rus, 2018).

Despite extensive studies in developed economies, research on financial distress in developing countries like Nepal remains limited. This gap becomes more pronounced considering the vital role of Nepal's financial sector in supporting economic development, financial inclusion, and investment mobilization (Adelakun, 2010). However, like in other nations, Nepal's financial institutions including commercial banks, development banks, and finance companies are not immune to operational inefficiencies, liquidity risks, and market vulnerabilities, making a thorough examination of financial distress both timely and necessary (Ozili et al., 2023).

The significance of this study lies in its aim to assess the financial distress position of Nepalese financial institutions and analyze the key determinants that contribute to such distress. In doing so, it seeks to fill the existing research gap by focusing on the Nepalese context, where institutional-specific and macroeconomic challenges intersect uniquely. While factors such as profitability, firm size, liquidity, capital adequacy, and credit risk have been linked to distress globally (Muigai & Muriithi, 2017; Isayas, 2021), their relevance and impact within Nepalese financial institutions require context-specific investigation.

Additionally, operational metrics like the BOPO ratio which evaluates how effectively institutions manage operational costs relative to income offer valuable insights into internal efficiency and distress vulnerability (Nufus et al., 2018; Suidarma et al., 2022). A high BOPO ratio often signals inefficiency and potential losses, making it a critical indicator in distress assessment. Furthermore, firm size, a determinant of resource capacity and strategic agility, has been repeatedly identified as influencing organizational resilience and performance under stress (Bhattacharyya & Saxena, 2009; Ater et al., 2017).

Ultimately, this research will contribute to a more nuanced understanding of financial distress in Nepal's financial sector by identifying its underlying causes and offering data-driven insights that can inform policy interventions, institutional reforms, and strategic management practices.

Literature Review

Liquidity Ratio (LR)

Previous research offers mixed insights regarding the impact of liquidity on financial distress. Studies by Elloumi and Gueyié (2001), Turetsky and McEwen (2001), Nahar Abdullah (2006), and Thim et al. (2011) argue that greater liquidity reduces the likelihood of financial distress, suggesting that sufficient liquid assets enable organizations to meet short-

term obligations effectively. Conversely, Pranowo et al. (2010), Tesfamariam (2014), Gathecha (2016), and Kristanti et al. (2016) report a positive association, implying that excessive liquidity might be a sign of underutilized assets, thereby increasing financial distress. Meanwhile, Baimwera and Muriuki (2014) and Dirman (2020) assert that liquidity has no significant influence on financial distress.

HA1: Liquidity has a significant positive impact on financial distress.

Profitability

Susilo and Suwaidi (2022) found that profitability has a negative influence on financial distress, indicating that more profitable companies are less likely to face financial issues. However, Mesrawati et al. (2022) suggest that high profitability alone does not guarantee financial stability if internal management is ineffective. Supporting this view, Fredrick (2018) and Tesfamariam (2014) observe that profitability may positively influence financial distress under poor management. In contrast, Thim et al. (2011), Campbell et al. (2011), and Baimwera and Muriuki (2014) support the traditional perspective that profitability reduces the risk of financial distress.

HA2: Profitability has a significant negative impact on financial distress.

Credit Risk

The relationship between credit risk and financial distress also shows varying results. Several researchers, including Ismawati and Istria (2015), Osama and Saleh (2018), and Buchdadi et al. (2020), conclude that credit risk significantly increases the likelihood of financial distress. However, Shidiq and Wibowo (2017) find an inverse relationship, suggesting that better management of credit risk can reduce distress.

HA3: Credit risk has a significant positive impact on financial distress.

Firm Size

Findings regarding firm size are mixed. LeClere (2005), Tinoco and Wilson (2013), Dirman (2020), and Wangsih et al. (2021) conclude that larger firms are generally less prone to financial distress, indicating a negative relationship. However, Tinoco and Wilson (2013) also note cases where firm size correlates positively with distress. Kristanti et al. (2016) argue that firm size may not be a determining factor at all.

HA4: Firm size significantly moderates the relationship with financial distress.

BOPO (Operating Efficiency Ratio)

BOPO measures operational efficiency by comparing a bank's operating expenses to its operating income. According to Oswari (2020), higher BOPO reflects greater inefficiency. Asyikin et al. (2018) report a significant positive link between BOPO and financial distress. Almilia and Herdiningtyas (2005) also found that higher BOPO increases distress. However, Nufus (2018) indicates a non-significant negative effect, while Riyadi (2003) suggests that lower BOPO is associated with stronger managerial performance, thereby reducing financial distress risk.

HA5: BOPO has a significant impact on financial distress.

Capital Adequacy Ratio (CAR)

CAR is a key regulatory measure of a bank's capital relative to its risk-weighted assets (Kepramareni et al., 2022). Ismawati and Istria (2015), Osama and Saleh (2018), and Buchdadi et al. (2020) find that CAR has a significant positive impact on financial distress, indicating that more capital may reflect riskier conditions. In contrast, Shidiq and Wibowo (2017) report a significant negative relationship, suggesting that higher CAR offers a cushion against distress. Other studies such as Noviany (2020) and Peterson (2019) found the relationship to be statistically insignificant.

HA6: Capital Adequacy Ratio has a significant impact on financial distress.

METHODS

This study employed a quantitative research approach, utilizing descriptive and causal-comparative research designs. The target population includes all financial institutions in Nepal, totaling 112 institutions. However, a purposive sample of eight financial institutions was selected for in-depth analysis. These institutions are:

- Global IME Bank Limited
- Prabhu Bank Limited
- Himalayan Bank
- Muktinath Bikas Bank
- Garima Bikash Bank Limited

- Narayani Development Bank Limited
- Goodwill Finance Limited
- Reliance Finance Limited

These particular institutions were chosen due to their recent inclusion in enforcement actions issued by the Nepal Rastra Bank (NRB) during the second quarter of the fiscal year 2080/81, signaling possible signs of financial distress. As shown in Table 3.1, these cases were used as the sample for evaluating the key determinants of financial distress among financial institutions flagged as potentially vulnerable. The study focused on secondary data, specifically examining financial performance over a five-year period from 2018/19 to 2022/23 (2075/76 to 2079/80). Due to data availability constraints, only institutions with consistent and accessible annual reports for this time frame were included, which led to the exclusion of several other BFIs. Consistent with prior research by Ekadjaja et al. (2021), Gunawan and Putra (2021), and Yusuf et al. (2018), this study adopted purposive sampling also known as judgmental or selective sampling where the sample is intentionally chosen based on characteristics relevant to the research objectives. The primary data source comprised annual reports of the selected financial institutions.

RESULTS

Descriptive Statistics

This section presents and examines the descriptive statistics for both dependent and independent variables across the sampled banks and financial institutions. Table 1 summarizes the mean, standard deviation, minimum, and maximum values, offering a snapshot of the data's distribution and underlying patterns within the sample.

Table 1: Specification of Sample and Sample Period

| Factors | Minimum (Min.) | Maximum (Max.) | Mean | Std. Deviation |
|----------------|-----------------------|-----------------------|-------------|-----------------------|
| LR | 0.4083 | 2.9081 | 1.2356 | 0.4506 |
| P | -11.0000 | 2.3591 | 0.3454 | 2.9204 |
| CR | 0.0700 | 77.1103 | 6.9360 | 16.8112 |
| FS | 18.3255 | 27.0000 | 24.8128 | 1.6933 |

| | | | | |
|---------------------------|------------------|-----------|--------------|----------|
| BOPO | 31.3237 | 2056.4600 | 123.531 0 | 325.2695 |
| CAR | 0.1116 | 58.4800 | 14.8319 | 9.6162 |
| Altman's Score | Z- 0.1336 | 4.0317 | 0.3250 | 0.6305 |

Table 1 presents the minimum, maximum, mean, and standard deviation (SD) values for various financial indicators observed across the eight banks and financial institutions analyzed in this study.

Liquidity Ratio is a key measure of a bank's short-term financial health, reflecting its ability to meet immediate obligations using liquid assets such as cash and equivalents. Higher liquidity ratios suggest greater capability in handling unexpected cash outflows or sudden withdrawals by depositors. In contrast, lower ratios may signal difficulty in fulfilling short-term liabilities. In this dataset, liquidity ratios range from 0.482679 to 2.90813, indicating substantial variation in liquidity strength among the institutions.

Return on Assets (ROA) is a critical indicator of profitability, demonstrating how efficiently a bank uses its assets to generate earnings. A positive ROA reflects effective asset utilization and profit generation, whereas a negative ROA indicates financial loss. The ROA values in the dataset span from -11 to 2.35911, highlighting considerable disparities in profitability, with some institutions experiencing losses and others maintaining healthy returns.

Credit Risk Ratio measures the extent of credit risk a bank assumes through its lending activities and credit exposure. A high credit risk ratio suggests a significant portion of capital is at risk of default, whereas an extremely low ratio could imply underutilization of credit opportunities. The observed range, from 0.07 to 77.11031, reflects a broad spectrum of risk appetites and lending practices among the banks.

Firm Size Ratio, often referred to as the leverage ratio, represents the proportion of a bank's capital structure financed through debt. A higher ratio indicates greater reliance on debt, potentially increasing financial risk. The mean firm size ratio among the banks is 24.81275, with a standard deviation of 1.693323, suggesting moderate leverage with some variability in financial structures.

Operating Cost to Operating Income Ratio (BOPO Ratio) assesses a bank's operational efficiency by comparing its operating costs to its income. A lower ratio indicates better cost management and operational performance. BOPO ratios in the sample range

from 31.32368 to 2056.46, indicating wide variations in cost-efficiency, with some banks exhibiting effective expense control, while others face inefficiencies.

Capital Adequacy Ratio (CAR), as per regulatory guidelines (Kimathi & Mungai), measures a bank's financial strength by comparing its capital to risk-weighted assets. A higher CAR reflects better capacity to absorb losses and withstand market volatility. The average CAR among the banks is 14.83, indicating generally sufficient capitalization, though variations suggest differing approaches to risk management and regulatory compliance. Regulatory authorities mandate minimum CAR levels to maintain financial system stability.

Altman's Z-Score, developed by Edward Altman, is a widely used tool for predicting financial distress or bankruptcy risk. In this study, the Z-Scores for the banks range from 0.1336 to 4.0317, showing varying degrees of financial health. An average Z-Score of 0.3250 with a standard deviation of 0.6305 indicates significant discrepancies in financial resilience. Scores above 2.99 denote a strong financial position, scores between 1.81 and 2.99 suggest moderate risk, and scores below 1.81 reflect potential financial distress. The lowest score of 0.1336 points to critical vulnerability in certain banks, while the highest score of 4.0317 illustrates exceptional financial strength. On average, the banks fall into a zone between distress and moderate risk, necessitating strategic financial oversight to prevent future instability.

Overall, the variability in these financial indicators such as liquidity, profitability, credit risk, leverage, efficiency, capital adequacy, and financial distress illustrates the diverse financial health and risk profiles of the analyzed banks. These insights are crucial for stakeholders, including investors, regulators, and policymakers, who rely on such metrics to assess performance, ensure regulatory compliance, and formulate risk mitigation strategies. A nuanced understanding of these financial dynamics supports informed decision-making to strengthen the resilience of the banking sector amidst economic fluctuations.

Unit Root Analysis

Unit root analysis is a statistical method used to assess whether a time series variable is stationary or exhibits non-stationarity. In this study, which explores the determinants of financial distress in commercial banks, unit root analysis is essential for evaluating the stationarity of the variables incorporated in the conceptual framework.

Table 2: Unit Root Analysis

| Variable | Levin, Lin & Chu t^* (95% Confidence Interval) | Prob.** |
|------------------|--|---------|
| LR | -2.7301 | 0.2875 |
| ROA | -2.7087 | 0.2959 |
| CR | -2.6651 | 0.3129 |
| FS | -2.6874 | 0.03925 |
| BOPO | -2.7588 | 0.2762 |
| CAR | -3.3429 | 0.08024 |
| Altman's Z-score | -2.7735 | 0.2705 |

Table 2 presents the outcomes of the Levin, Lin & Chu (LLC) test, applied to evaluate the stationarity of various financial variables. This test helps determine whether a time series variable is stationary meaning it does not follow a persistent trend or random walk or contains a unit root. Stationary variables tend to revert to a long-term average over time, making them more predictable for analysis.

For the Liquidity Ratio, the LLC test statistic is -2.7301 with a p-value of 0.2875. Since this p-value exceeds the standard significance level of 0.05, we fail to reject the null hypothesis of a unit root, suggesting that the Liquidity Ratio is non-stationary. This implies that commercial banks' short-term liquidity positions may fluctuate over time, potentially leading to instability in meeting immediate financial obligations.

The Return on Assets (ROA) shows a test statistic of -2.7087 and a p-value of 0.2959, again indicating non-stationarity. This suggests that bank profitability is not stable over time, which could affect their long-term performance and financial resilience.

For Credit Risk, the LLC test statistic is -2.6651 with a p-value of 0.3129. This non-significant result also supports the presence of a unit root, meaning that credit risk levels in banks may vary unpredictably, complicating credit risk management.

The Firm Size variable yields a test statistic of -2.6874 and a p-value of 0.03925. As the p-value falls below 0.05, we reject the null hypothesis and conclude that Firm Size is stationary. This suggests that the scale of operations in these banks remains relatively consistent over time, possibly indicating steady growth or controlled expansion.

The BOPO ratio (Operating Cost to Operating Income) has a test statistic of -2.7588 and a p-value of 0.2762, pointing to non-stationarity. This implies fluctuations in operational efficiency over time, which could influence overall profitability.

For the Capital Adequacy Ratio, the test statistic is -3.3429 with a p-value of 0.08024. Although the p-value is slightly above the 0.05 threshold, it hints at marginal stationarity. This suggests that capital adequacy may be relatively stable, which is vital for absorbing losses and safeguarding depositor interests.

The Altman's Z-Score shows a test statistic of -2.7735 and a p-value of 0.2705, indicating non-stationarity. This means that the overall financial health and bankruptcy risk of commercial banks may vary significantly over time, limiting the predictability of financial distress.

In summary, the results in Table 2 shed light on the time series properties of key financial variables influencing commercial banks. Stationary variables like Firm Size reflect relative stability, while non-stationary variables such as Liquidity Ratio, ROA, and Credit Risk reveal potential volatility. Recognizing these patterns is essential for understanding the underlying drivers of financial distress and for developing effective risk management strategies in the banking sector.

Hausman Test

The selection between fixed effects and random effects models is determined through a statistical procedure called the Hausman test. This test evaluates the null hypothesis that supports the random effects estimator. If the p-value is below 0.05, indicating statistical significance, the fixed effects model is preferred. Conversely, if the p-value exceeds 0.05, suggesting the result is not statistically significant, the random effects model is deemed more appropriate (Gujarati, 2004). Named after James Durbin, De-Min Wu, and Jerry A. Hausman, the Hausman test is an econometric hypothesis test designed to assess the suitability of a statistical model for a given dataset. In the context of panel data analysis, the Hausman test is particularly useful for distinguishing between fixed and random effects models. The Hausman test's hypothesis is:

H_0 = Random effect (RE) is appropriate

H_A = Fixed effect (FE) is appropriate Table

Table 3: Hausman Test

| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
|----------------------|-------------------|--------------|--------|
| Cross-section random | 6.033889 | 6 | 0.0206 |

The results of the Hausman Test, as shown in Table 4.10, serve as a crucial guide in determining the appropriate statistical model between the Random Effects Model (REM) and the Fixed Effects Model (FEM). The test statistic, calculated at 6.033889, along with its corresponding p-value of 0.0206, indicates a statistically significant difference between the two models. Since the p-value is below the conventional significance level of 0.05, we reject the null hypothesis, which assumes both REM and FEM estimators are consistent and the REM is efficient.

This outcome highlights the importance of model selection in ensuring the validity and precision of our analysis. The Fixed Effects Model is therefore preferred, as it better captures unobserved heterogeneity by accounting for entity-specific characteristics. Adopting FEM based on the Hausman Test results strengthens the analytical rigor of the study and improves the reliability of the conclusions drawn from the dataset.

Swamy and Arora Estimator of Component Variances

Table 4: Swamy and Arora Estimator of Component Variances

| | |
|--------------------|-----------|
| R-squared | 0.9999 |
| Adjusted R-squared | 0.9998 |
| F-statistic | 207687.08 |
| Prob(F-statistic) | 0 |

Table 4 presents additional statistical details regarding the panel analysis. The R-squared value is 0.9999, indicating that the independent variables in the model explain approximately 99.9% of the variation in the dependent variable. The adjusted R-squared value is exceptionally high at 0.9998, accounting for both the number of independent variables and the sample size, providing a more reliable estimate of the model's explanatory power. This indicates that nearly all of the variability in the dependent variable is explained by the model. Furthermore, the F-statistic is remarkably high at 207,687.08, underscoring the overall significance of the regression model. The associated probability for this F-statistic is

an extraordinarily low 0.000000, suggesting an extremely high likelihood that the model is statistically significant. This implies that the independent variables have a considerable impact on the dependent variable.

Table 5: Coefficients Table

| Variables | Estimate | Std.Error | t-value | Pr(> t) |
|-----------|-----------|-----------|---------|-----------|
| LR | -0.037522 | 0.152068 | -0.2467 | 0.80704 |
| ROA | -0.088983 | 0.16689 | -0.5332 | 0.59844 |
| CR | -0.294458 | 0.200043 | -1.472 | 0.15303 |
| FS | -0.257293 | 0.212952 | -1.2082 | 0.23784 |
| BOPO | -0.29765 | 0.165819 | -1.795 | 0.08428 |
| CAR | -0.403789 | 0.148236 | -2.724 | 0.01137 * |

* at 5% level of significant

The regression analysis results presented in Table 5 examine the impact of various financial variables on the Altman Z Score, a tool used to predict financial distress in Nepalese financial institutions. Each coefficient in the table represents the expected change in the Altman Z Score for a one-unit increase in the corresponding variable.

An increase of one unit in the liquidity ratio results in a decrease of -0.037522 in the Altman Z Score. However, this relationship is not statistically significant ($p > 0.05$), suggesting that liquidity does not significantly influence financial distress in Nepalese financial institutions. A one-unit increase in Return on Assets (ROA) leads to a drop of 0.088983 in the Altman Z Score, but since the result is not statistically significant ($p > 0.05$), ROA does not appear to be a significant predictor of financial distress. Similarly, a one-unit increase in credit risk causes no change in the Altman Z Score (-0.294458), with the relationship not being statistically significant ($p > 0.05$). An increase in firm size results in a decrease of -0.257293 in the Altman Z Score, but this effect is also not statistically significant ($p > 0.05$), suggesting that firm size does not have a substantial impact on financial distress. The Altman Z Score decreases by 0.29765 for every one-unit increase in the BOPO ratio. This result is only marginally significant ($p < 0.1$), indicating that BOPO may have a weak influence on financial distress. Conversely, for every one-unit increase in Capital Adequacy Ratio (CAR), the Altman Z Score decreases by 0.403789, with a statistically significant p-value of 0.01137 ($p < 0.05$), indicating a strong negative correlation between CAR and financial distress. This suggests that higher CAR values significantly reduce the likelihood of financial distress.

This analysis represents the estimated Altman Z Score when all variables are zero, assuming no other variables are included in the model. The panel analysis uses the Swamy and Arora estimator to estimate variance components, with a total of 48 balanced panel observations. The results show that the liquidity ratio has a coefficient of -0.037522, indicating a negative relationship with the Altman Z Score. However, the t-value of -0.2467 and p-value of 0.80704 suggest that this relationship is not statistically significant. Similarly, ROA has a coefficient of -0.088983, but the t-value of -0.5332 and p-value of 0.59844 confirm the lack of statistical significance. Credit risk shows a coefficient of -0.294458, but with a t-value of -1.472 and a p-value of 0.15303, the relationship is not statistically significant. Firm size has a coefficient of -0.257293, with a t-value of -1.2082 and a p-value of 0.23784, indicating no statistical significance. For BOPO, the coefficient of -0.29765 suggests a negative association, with a t-value of -1.795 and a p-value of 0.08428, indicating borderline significance. Finally, the Capital Adequacy Ratio (CAR) has a coefficient of -0.403789, with a statistically significant t-value of -2.724 and p-value of 0.01137.

In summary, the Capital Adequacy Ratio (CAR) is the only variable with a statistically significant effect, demonstrating that higher CAR values significantly reduce the likelihood of financial distress in Nepalese financial institutions. The BOPO ratio has a subtle yet nearly significant negative effect, while the liquidity ratio, ROA, credit risk, and firm size do not significantly influence the Altman Z Score in this model.

Model Adequacy

This section presents the model adequacy of the research the research is determined if it is good result in fit of the research. A Durbin test I s performed for this study model.

Table 6: Model Adequacy

| | |
|--------------------|--------|
| Durbin-Watson stat | 2.2166 |
|--------------------|--------|

Table 6 shows that the Durbin-Watson statistic, which assesses autocorrelation in the residuals, is 2.2166. This value falls within the range of 1.5 to 2.5, suggesting that there is no significant autocorrelation present. Therefore, it can be concluded that autocorrelation is not a major issue in this analysis.

DISCUSSION

The current research findings, when compared with existing literature, reveal both converging and diverging viewpoints regarding financial distress predictors across different financial contexts. Kosikoh's (2014) study of Kenyan savings cooperatives found minimal influence of liquidity and leverage on financial distress likelihood, contrasting sharply with our study's identification of capital adequacy ratio (Kimathi & Mungai) as a crucial determinant. Similarly, Laila's (2017) conclusion about comparable distress prediction in Islamic and conventional banks doesn't directly relate to our focus on specific distress determinants.

Kimathi and Mungai's (2018) Kenyan bank study demonstrated that non-performing loans negatively affected profitability while leverage showed positive effects - findings that partially differ from our results regarding liquidity and leverage impacts. However, Whitaker's (1999) observation about bankruptcy causes aligns with our financial distress framework. Wilevy and Kurniasih's (2021) emphasis on institutional governance and capital adequacy supports our CAR findings, though Anggraini's (2014) liquidity moderation results remain tangential to our core analysis.

Several studies corroborate our key findings: Handriani et al. (2021) on governance factors, Wesa and Otinga (2018) on optimal liquidity management, and Isayas (2021) on profitability effects all reinforce our conclusions about financial distress determinants. While Lubawa and Louangrath's (2016) multiple borrowing findings don't directly connect to our study, they contribute to the broader distress prediction literature.

The collective evidence, despite some inconsistencies, strongly supports the importance of liquidity, reserves, profitability, and solvency in financial distress prediction. These insights significantly advance financial distress understanding and offer practical guidance for commercial bank risk management strategies. The findings particularly highlight capital adequacy's critical role while acknowledging context-dependent variations in other financial indicators' predictive power.

CONCLUSION

The study reveals that while certain financial indicators, such as the Capital Adequacy Ratio, exhibit a significant impact on financial distress, others, including liquidity, profitability, and

credit risk, do not show strong or significant relationships. This suggests that Nepalese banks may be more vulnerable to factors like operational inefficiency and capital adequacy than to traditional indicators of financial health such as liquidity or profitability. The results underline the importance of maintaining robust capital buffers and managing operational costs effectively to mitigate financial distress. Future research could explore additional macroeconomic or institutional factors that might influence the financial stability of banks in Nepal.

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