

THE ROLE OF CAMEL RATIOS AS AN EARLY WARNING SYSTEM FOR FINANCIAL DISTRESS THROUGH A BENCHMARKING APPROACH: A PERFORMANCE ANALYSIS OF BANK BTN COMPARED TO STATE-OWNED BANKS IN INDONESIA

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Abstract

This study aims to analyze the role of the CAMEL ratio as an early warning system in detecting potential financial distress at Bank Tabungan Negara through a benchmarking approach with other state-owned banks in Indonesia. The study employed a quantitative approach using descriptive and comparative methods. Secondary data were obtained from annual reports and financial statements of state-owned banks during the 2015–2024 period. The research samples consisted of Bank Tabungan Negara, Bank Rakyat Indonesia, Bank Mandiri, and Bank Negara Indonesia. The analysis used CAMEL ratios, namely Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Operating Expenses to Operating Income (BOPO), Return on Assets (ROA), and Loan to Deposit Ratio (LDR). The results show that all state-owned banks are generally categorized as healthy because they maintain CAR above the minimum regulatory standard and NPL below the maximum threshold. However, Bank Tabungan Negara demonstrated relatively weaker performance compared to other state-owned banks, particularly in terms of asset quality, profitability, and liquidity. BTN recorded the highest NPL ratio of 3.43%, the lowest ROA of 0.78%, and the highest LDR of 102.20%, indicating higher credit risk, lower profitability, and greater liquidity pressure. The study also found that the CAMEL ratio is effective as an early warning system in detecting potential financial distress. The most dominant indicators signaling financial distress were NPL, ROA, and LDR. In addition, Bank Rakyat Indonesia showed the most stable financial performance among state-owned banks during the research period.

Keywords: CAMEL, Early Warning System, Financial Distress, Benchmarking, Bank Soundness.

INTRODUCTION

The banking sector plays a strategic role in maintaining financial system stability and supporting economic growth. As financial intermediaries, banks are required to maintain sound financial conditions in order to preserve public trust. According to Altman (1968), financial ratios can be used to analyze a company's financial condition and predict the potential for bankruptcy or financial distress. In the banking context, early detection of declining financial soundness is essential because bank failure may have systemic impacts on the economy. The banking industry has faced various challenges, including global economic uncertainty, credit risk, inflation, and the post-COVID-19 pandemic effects. These conditions may put pressure on bank profitability, asset quality, and liquidity. Financial distress refers to a decline in a company's financial capability, indicated by weakening profitability, increasing default risk, and disruptions to operational stability (Piatt & Piatt, 2002). Therefore, an early warning system is needed to detect early signs of declining bank soundness. One method that can be used is the CAMEL ratio, which consists of Capital, Asset Quality, Management, Earnings, and Liquidity. The CAMEL approach assesses capital adequacy, asset quality, management efficiency, profitability, and bank liquidity. Roman and Şargu (2013) explain that CAMEL provides a comprehensive overview of banking soundness and stability. Furthermore, Berger and DeYoung (1997) state that financial ratios can provide early signals of potential failure through gradual changes in financial conditions. Indicators such as an increase in Non-Performing Loans (NPL), a decline in Return on Assets (ROA), a high Operating Expenses to Operating Income ratio (BOPO), and a weakening Capital Adequacy Ratio (CAR) may serve as early signs of financial distress. Berger and DeYoung (1997) emphasize that increasing problem loans and low operational efficiency are closely related to declining

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bank financial performance. Therefore, regular monitoring of CAMEL ratios is important as an early warning system. Bank Tabungan Negara (BTN), as a state-owned bank focusing on housing finance through mortgage loans, faces credit risks that require careful attention. Its high concentration of financing in the property sector makes financial ratio monitoring particularly important, especially regarding NPL, ROA, BOPO, and CAR. To obtain a more objective assessment, this study applies a benchmarking approach by comparing Bank BTN's performance with other state-owned banks, namely Bank Rakyat Indonesia (BRI), Bank Mandiri, and Bank Negara Indonesia (BNI). Roman and Şargu (2013) state that interbank comparison using the CAMEL approach can help evaluate banking stability and efficiency more comprehensively. Based on the above explanation, this study is important for analyzing the role of CAMEL ratios as an early warning system for financial distress using a benchmarking approach at Bank BTN. This study is expected to provide insights into Bank BTN's financial soundness, the effectiveness of CAMEL in detecting potential financial distress, and Bank BTN's performance position compared to other state-owned banks in Indonesia.

LITERATURE

Signaling Theory

Signaling Theory explains that companies provide information to external parties as signals regarding their financial condition, performance, and future prospects. This theory was introduced by Spence (1973), who stated that parties with more information, such as management, send signals to parties with less information, such as investors, creditors, regulators, and the public. In the banking sector, financial statements and financial ratios serve as important signals of bank soundness and stability. Ratios such as CAR, NPL, ROA, BOPO, and LDR can indicate whether a bank is in a healthy or risky condition. Strong profitability and low non-performing loans represent positive signals, while declining profitability or increasing problem loans may indicate potential financial distress. This theory is relevant to the present study because CAMEL ratios are used as an early signal to detect potential deterioration in the financial health of Bank Tabungan Negara. Changes in CAMEL indicators can help investors, regulators, and management make timely decisions before the bank's financial condition worsens.

Financial distress

Financial distress refers to a condition in which a company experiences financial difficulties, leading to a decline in its ability to meet operational and financial obligations. This condition generally occurs before bankruptcy or liquidation. Piatt and Piatt (2002) define financial distress as a stage of financial decline prior to bankruptcy, marked by the company's inability to fulfill its financial obligations. Altman (1968) further explains that financial distress can be predicted using financial ratio analysis, as financial deterioration usually occurs gradually before corporate failure. In the banking sector, financial distress is a critical issue because banks play a strategic role in maintaining financial system stability. Bank failure may not only affect the institution itself but also reduce public confidence in the national banking system. In this study, financial distress is used as the main variable analyzed through the CAMEL ratio approach to determine whether these ratios can provide early signals of declining financial soundness at Bank BTN.

Early Warning System

An early warning system is used to detect initial signs of financial problems before they develop into more serious conditions. In the banking sector, this system is important because it helps banks and regulators take preventive actions to minimize potential losses. Beaver (1966) stated that financial ratios can predict corporate failure, as changes in financial conditions are reflected in the decline of certain financial indicators. Therefore, financial ratio analysis can serve as an early warning system for financial distress. In this study, CAMEL ratios are used to identify potential financial distress at Bank BTN by examining changes in the bank's financial ratios over time.

CAMEL Method

The CAMEL method is an approach used to assess bank soundness based on five main components: Capital, Asset Quality, Management, Earnings, and Liquidity. According to Roman and Şargu (2013), CAMEL provides a comprehensive overview of a bank's financial soundness and stability, making it widely used in banking supervision. The CAMEL method is important because it helps evaluate bank performance, identify financial weaknesses, detect potential risks, and serve as an early warning system for financial distress.

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METHOD

This study employs a quantitative approach with a descriptive-comparative design. The quantitative approach is used because the analysis focuses on numerical financial data, particularly CAMEL ratios, consisting of Capital, Asset Quality, Management, Earnings, and Liquidity. The descriptive design is applied to describe the financial soundness of Bank Tabungan Negara (BTN), while the comparative design is used to benchmark BTN's performance against other state-owned banks. The object of this study is Indonesian state-owned banks, with Bank BTN as the main object and Bank Rakyat Indonesia (BRI), Bank Mandiri, and Bank Negara Indonesia (BNI) as comparative banks. These banks were selected because they share similar characteristics as state-owned institutions and play an important role in the national banking system. This study uses secondary data obtained from annual reports and published financial statements available on the official websites of each bank and the Financial Services Authority (OJK). Data were collected through documentation and literature review. The sample was determined using purposive sampling, with the criteria of state-owned banks that publish complete annual reports and financial statements, provide financial data related to CAMEL components, and consistently operate during the research period.

Data Analysis Technique

The data were analyzed using CAMEL ratios, an early warning system approach, benchmarking, and descriptive analysis. The CAMEL ratios used in this study include CAR, NPL, BOPO, ROA, and LDR to assess the financial soundness of Bank BTN. The calculated ratios were then compared with the bank soundness standards set by Bank Indonesia. The early warning system analysis was used to detect potential financial distress through changes in CAMEL ratios, such as declining CAR and ROA, increasing NPL and BOPO, and unstable LDR. Furthermore, benchmarking was conducted by comparing Bank BTN's performance with BRI, Bank Mandiri, and BNI. The results were described descriptively to illustrate Bank BTN's financial soundness and stability compared to other state-owned banks.

RESULTS AND DISCUSSION

Results of CAMEL Analysis

Based on the CAMEL ratio analysis, Bank Tabungan Negara (BTN) remains in the healthy category. However, it shows several financial pressures compared to other state-owned banks. BTN has the highest NPL and LDR, the lowest ROA, and a relatively lower CAR. These conditions indicate that BTN faces higher credit risk, liquidity pressure, and weaker profitability than the comparison banks. The most dominant ratios indicating early signs of financial distress are NPL, ROA, and LDR.

Results of Early Warning System Analysis

The results of the early warning system analysis show that CAMEL ratios are able to provide early signals of potential financial distress at BTN. An increase in NPL indicates a decline in credit quality, a low ROA reflects weak profit-generating ability, and a high LDR indicates liquidity pressure. Therefore, CAMEL can be used as an early detection tool to help management, investors, and regulators anticipate financial risks.

Results of Benchmarking Analysis

The benchmarking results show that BTN's financial performance is relatively weaker than that of BRI, Bank Mandiri, and BNI, particularly in terms of asset quality, profitability, and liquidity. BTN recorded the highest NPL at 3.43%, the lowest ROA at 0.78%, and the highest LDR at 102.20%. Meanwhile, BRI showed the most stable performance, with the highest CAR, low NPL, low BOPO, the highest ROA, and relatively stable LDR.

Results of Descriptive Analysis

Descriptively, state-owned banks are generally still classified as healthy, as their CAR remains above the minimum standard, NPL is below the maximum threshold, and BOPO indicates a fairly efficient level. However, BTN shows several weaknesses compared to other state-owned banks, particularly its high NPL, low ROA, and high LDR. This indicates that although BTN remains healthy, there are signs of financial pressure that need to be monitored regularly.

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CONCLUSION

Based on the findings of this study regarding the role of CAMEL ratios as an early warning system for financial distress using a benchmarking approach at Bank BTN, it can be concluded that Bank BTN's financial soundness is generally still classified as healthy. However, compared to other state-owned banks, BTN shows several weaknesses in terms of asset quality, profitability, and liquidity. CAMEL ratios are proven to be useful as an early detection tool for potential financial distress. The most dominant indicators providing early warning signals are NPL, ROA, and LDR. A high NPL indicates increasing credit risk, a low ROA reflects weak profitability, while a high LDR indicates liquidity pressure. The benchmarking results show that BTN's performance remains below that of several other state-owned banks, particularly BRI and Bank Mandiri. Meanwhile, BRI demonstrates the most stable financial performance, supported by a high CAR, low NPL, low BOPO, high ROA, and relatively stable LDR. Therefore, CAMEL ratios can be used not only to assess bank soundness but also as an early warning system for management, investors, and regulators.

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