ABSTRACT

This study aims to model risk mapping for the probability of default in Indonesia's construction sector to strengthen the stability of the country's financial system. The research analyzes the influence of macroeconomic and microeconomic conditions on the probability of default within the sector, using panel data comprising financial data from 72 banks and construction sector financing. Business cycle, financial cycle, and macroeconomic data are also utilized. The sample includes banks consistently reporting quarterly financial statements from 2017 to 2019. The endogenous variable is Probability of Default, while exogenous variables include Financial Stability, Loan to Deposit Ratio, Operational Expense to Operational Income, Return on Assets, Net Interest Margin, Capital Adequacy Ratio, Non-Performing Loan/Non-Performing Financing, sectoral bank lending, SBI interest rate, inflation, stock index, output levels, Industrial Production Index, exchange rate, and money supply. Using the Merton Model to estimate sectoral default probabilities, the Generalized Method of Moments (GMM) approaches testing hypotheses regarding variables impacting sectoral credit defaults. Model results indicate that prior-year default probabilities, LDR, and interest rates positively impact current default probabilities, while previous-year financial stability shows a negative effect. Additional robust analysis reveals that government banks exhibit different behavior, with ROA positively associated with default probability, likely due to higher credit disbursements. Stress testing through panel structural vector autoregressive (P-SVAR) analysis indicates prolonged equilibrium reversion following internal shocks, whereas external shocks show quicker stabilization. These findings highlight the sector's sensitivity to internal dynamics, underscoring the importance of risk management in sustaining financial stability amidst shocks.

Keywords: *Default Probability, Stress Testing, Financial System Stability, Generalized Method of Moments, Panel Data*