



VALUE AT RISK (VaR) AS METHOD AND MEASUREMENT OF CREDIT RISK ANALYSIS (CASE STUDY AT BANK NAGARI IN BANDUNG OFFICE)

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Bank Nagari Bandung Office as one of the Branch Offices of *PT. Bank Pembangunan Daerah Sumatera Barat*, in the past 5 years, has distributed credit with a positive trend and position of the outstanding which always grows every year with annual growth 6,55%. The outstanding credit position as of December 2018 is Rp 154,889,764,824, while the Non Performing Loan (NPL) ratio is at the position of 8.62%. According to PBI No. 15/2/PBI/2013 explains that banks that have a ratio of non-performing loans above 5% will be monitored intensively because they are considered to have potential difficulties and endanger the continuity of their business. Although NPL of Bank Nagari Bandung Office is above 5%, the PBI's provisions regarding the NPL limit apply to consolidation, where NPL position of *PT. Bank Pembangunan Daerah Sumatera Barat* is at 1.51% in 2018. However, this is put attention for the Bank Nagari Bandung Office to improve credit performance and monitor credit risk analysis.

This study aims to provide an alternative method to *PT. Bank Pembangunan Daerah Sumatera Barat*, specifically Bank Nagari Bandung Office in measuring credit risk to determine the calculation of minimum capital requirements for credit risk. This credit risk measurement will calculate expected loss, unexpected loss and economic capital. This study uses the Credit Metrics method with a Value at Risk (VaR) approach using confidence level 99% and Monte Carlo Simulation to assist in analyzing the possibility of losses that exceed the VaR value.

Based on the analysis, the monthly expected loss at the Bank Nagari Bandung Office for the period January 2017-December 2018 ranging from Rp 3,078,766,540 to Rp 4,093,313,348, unexpected loss of Rp 23,703,413,675 to with Rp 36,071,532,045 with an average value of risk certainty of 50.3%, as well as the economic capital required by the bank in covering the risk of loss at a maximum of Rp. 19,716,728,075 to Rp 32,964,043,357.

Capital owned by *PT. Bank Pembangunan Daerah Sumatera Barat* per December 2018 position is Rp 2.53 Trillion with a CAR of 20.36%. Because of capital and CAR are calculated on a consolidated basis, it is necessary to calculate the capital requirements of each branch office to anticipate the credit risk that occurs.

Keywords: Credit Risk, Value at Risk, Expected Loss, Unexpected Loss, Economic Capital, Monte Carlo Simulation