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Program Pascasarjana Manajemen dan Bisnis  
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## ABSTRACT

*GIRI PRASETYO. The Analysis of the Exchange Rate Risk of Net Open Position for PT Bank Hago by Value at Risk Method (VaR Method). Under the direction of Marimin and Rita Nurmalina.*

*The rapid and complex development of the banking sector urges an implementation of risk management not only for the credit risk but also for the market risk because of the volatility of interest rate and exchange rate that create the risk as a whole.*

*Risk management could be effective if there is an effort to measure the risk in order to determine total of reserved capital to cover the risk and to be the base of strategic planning on foreign exchange activity done by the bank. This topic was chosen since there was a need of the bank for a specific measurement method that could measure potential loss comprehensively specifically it is able to measure the sensitivity of potential loss of products or activity to the affected factors. The method is the Value at Risk that is used by most of bankers in measuring potential loss and capital charge that should be reserved.*

*In this research, we did risk measurement on exchange rate of bank net open position. Net open position is bank open position of foreign exchange rate at specific date that could raise potential loss because of exchange rate volatility on the exchange rate transaction. The total of potential loss is affected by how big is the volatility of exchange rate and the total of bank net open position.*

*From the four methods of volatility measurement that is used in this research, only the result of percentile method that has a valid measurement value based on the process of back testing. The volatility of each measured currency is 1.85% for AUD, 1.71% for EUR, 1.41% for HKD, 1.55% for JPY, 1.18% for SGD, and 1.31% for USD. By those data of volatility, we could account for potential loss of single exchange rate (undiversified VaR) at specific date, May 4 2004 as follow: AUD (Rp9.21 millions), EUR (Rp20.33 millions), HKD (Rp2.20 millions), JPY (Rp9.78 millions), SGD (Rp7.70 millions), and USD (Rp109.76 millions).*

*Since there is a correlation among the change of exchange rates, we have to measure potential loss entirely (VaRp) from the net open position owned by the bank by account for correlated coefficient as the weight.*

*The result of measurement of VaRp on May 4, 2004 of the total of net open position is amounted to Rp11,614 millions with the potential loss of Rp136.48 millions. This potential loss is lower than the sum of potential loss of each currency that is amounted to Rp158.98 millions. Hence, correlation of exchange rate changes among foreign currency could be used as a base in decision taking of foreign exchange portfolio diversification.*

*The calculation for capital reserve in order to cover potential risk is done by using two methods that are standard method and VaR method with the result of capital charge amounted to Rp906 million and Rp 1,463 millions respectively.*

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*To simplify in monitoring risk exposure, it is created a Traffic Light Monitor (TLM) that is useful to see the current position of risk exposure with risk appetite limit decided by management. In this case, actions that should be taken by management for each position could be done faster.*

*The result of stress testing shows that bank capital is still ready in facing extreme condition that might be happened. In the condition of stress tested, the amount of capital that should be reserved is amounted to Rp2,875.57 millions for potential loss amounted to rp259.81 millions. The number of that capital reserve is twice of total capital that should be reserved in normal condition.*

*The measurement of foreign exchange rate is not only useful for banking sector but also for other industry including agribusiness sector. In agribusiness that employ foreign exchange, imbalance position between receivables and liabilities will expose foreign exchange risk that is potential loss if there is fluctuation of foreign exchange. The value of VaR could be used as a reference in managing foreign exchange asset and liabilities that is in maturity arrangement as well as in maturity payment arrangement of agribusiness product that will be sold in foreign currency. The number of potential loss could be reflected in measured VaR.*

*Based on this research, we propose that the measurement of potential loss is done by small working unit. For instance in banking sector, it could be done by the trading floor in treasury working unit. The result of measurement could be used as a daily transaction limit so foreign exchange could be managed better.*

*To identify capital requirement in the most extreme condition like what was already experienced in 1998, we propose to do stress testing based on the scenario of foreign exchange volatility that was happened in 1998. We believe we will have a picture of capital requirement deeply.*

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