ABSTRACT

Analysis of Integrating and Aggregating Corporate Risks Using Enterprise Risk Management Framework – a Case Study at PT PPA (Persero)

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This research is aimed at analyzing risks integration and aggregation in PT PPA (Persero) using Enterprise Risk Management (ERM) framework. With this framework, risks integration and aggregation start with a process of risks identification associated with achievement of corporate objective. The identified risks are then assessed aggregately to expose their impact and probability to the achievement of the objective. Once the impact and probability are known, it becomes easier for PPA management to respond and set up control activities with regard to their risk appetite. Risks integration is analyzed using fishbone diagram, whilst risk aggregation (limited to market risks) is assessed quantitatively using Cash flow at Risk (CFaR) method. The method is chosen since the objective of PPA is measured in terms of net cash flow. The metric specification for the CFaR is 95% confidence level, year 2006 time horizon, and PPA pro forma statement of cash flows as a model. A Monte Carlo simulation generated by computer is employed to calculate the CFaR from distribution of the results. The simulation samples and valuates scenarios in 10,000 iterations to assure its stability of the result. Sample of each scenario uses the value of risk factors randomly according to their probability distribution function and associated correlation matrix. The risks are assumed to be normally distributed. The related means and standard deviations are drawn from the market rate historical data for the last two years. The result of CFaR calculation shows that the impact and probability of the aggregate market risks PPA faces are below the moderate risk appetite, which is Rp1 trillion of impact and 27.9% of probability.