

Stress Testing Framework Based on Market Risk Models: Analyses on Foreign Exchange and Stock Markets in Thailand

Abstract

This study follows Alexander and Sheedy (2008) of estimating stress test based on market risk model to investigate Thai financial market, i.e., SET50 index, and long and short positions in USD/THB currency pair. There are 4 risk models in this study which are unconditional normal, conditional normal, conditional Student's t , and conditional empirical risk models. For SET50 index and long and short positions in USD/THB, both backtesting and stress test results support the use of conditional risk models for estimating risk. While the conditional Student's t risk model can estimate appropriate stress losses for all data when compare with the worst historical loss over 3-day and 10-day, the VaR-based regulatory capital estimated from the model could be problematic when considering applying this model with these financial data.