



THE UNIVERSITY OF
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Department of Statistics
MASTER'S THESIS PRESENTATION

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Comparison of Value at Risk Estimation Methods

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ABSTRACT

Value at Risk (VaR) is a popular risk measurement tool to quantify the risks being exposed. This paper discusses three estimation approaches including Variance-Covariance method, Quantile Regression method and Monte Carlo Simulation. By comparing the performance of S&P 500 VaR for a given holding period, we find the Quantile Regression approach performs better than the other two with the most accurate estimations among the three. While Variance-Covariance methods tend to give conservative estimation of VaR, Monte Carlo Simulation is the worst when running a small amount of random trials.

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