

# A Bayesian Model Averaging Approach for Portfolio Selection

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## Abstract

We propose a Bayesian model averaging (BMA) approach for portfolio selection. In our BMA approach, we can incorporate uncertainty of model specification as well as uncertainty of parameters into the traditional mean-variance approach. Since the mean vector and the covariance matrix of the future asset returns are given in a closed-form expression for our BMA approach, the portfolio selection problem can be solved as a standard quadratic programming problem. As an application, we apply the BMA approach to the Japanese stock indices and compare its performance with the traditional approaches.

**Key Words:** Bayesian model averaging, mean-variance approach, multifactor model, portfolio selection, predictive distribution.