Abstract

This thesis analyzes the use of realized moments in asset pricing. The analysis is done using dataset containing log-returns for 29 of the most traded stocks and covering 10 years of data. The dataset is split into training set covering 7 years and test set covering 3 years of data. For each of the stocks a separate time series model is estimated. In evaluation of the quality of the models, metrics such as RMSE, MAD, accuracy in forecasting the sign of future returns, and returns achievable by executing trades based on the recommendations from the model are used. Even though the inclusion of realized moments does not provide significant improvements in terms of RMSE, it is found that realized skewness and kurtosis significantly contribute to explaining the returns of individual stocks as they lead to consistent improvements in identifying future positive, as well as negative, returns. Moreover, the recommendations from the models using realized moments can help us achieve significantly higher returns from trading stocks. Inclusion of the interaction terms for variance and returns, skewness and returns, and kurtosis and variance, provides additional improvement of forecasting accuracy, as well as improvements in returns achievable by executing transactions based on recommendations from the model.