

A Comprehensive Study to Out-of Sample Equity Premium Prediction

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Feb 26, 2015

Abstract

This paper approaches an old question in a comprehensive way from the econometricians point of view: are stock returns predictable? Based on numerous financial and macroeconomic variables, we focus on a successful and robust analysis of out-of sample equity premium using several modern econometric estimations at three different data frequencies. These methods include a class of generalized CochraneOrcutt autoregressive (GCO-AR) estimations and least absolute deviation (LAD)-related estimations as well as combination forecasts with various combination weights. Series considered in Goyal and Welch (2008) and other studies are reevaluated. In fact, all empirical results support the usefulness of our modern estimation methods, indicating that many predictive regressions estimated by these methods outperform the historical average returns in terms of the out-of-sample gains. More importantly, when using the dataset considered in Rapach et al. (2010), the LAD-related estimations of regressions of equity premiums deliver statistically and economically significant out-of-sample gains in comparison to the historical average equity premium forecasts. Although Rapach et al. (2010) and Campbell and Thompson (2008) suggested the need of combining forecast frameworks and restricting on the signs of coefficients and return forecast, respectively, these practices are not necessary in LAD-related estimation.

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