

FOUR EMPIRICAL ESSAYS ON ASSET PRICING MODELS

Edward R. Lawrence, Ph.D.

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Adviser: Gordon V. Karels

In Essay I, we empirically test and compare the performance of the traditional CAPM, the three-moment CAPM, the Fama-French three factor model and the Campbell and Cochrane habit utility model, using the Fama-French 25 portfolios data. The Habit Utility model fails the crucial Jagannathan and Hansen bound test. Based on the time series tests and the Fama MacBeth tests the Fama French three-factor model outperforms the other models. In the cross sectional test the three-moment CAPM has a higher R^2 than CAPM but in the time series regression, their performance is comparable.

In Essay II we test the robustness of the Fama-French three-factor model in bear and bull market conditions. We find that the model performs equally well in both bear and bull periods but *weakens significantly* when more recent data are added to the model. The finding that the parameters of the FF three-factor model are generally not influenced by the market conditions may make the FF three-factor model useful because prediction of future market conditions may not be required to estimate the risk premium.

Essay III identifies the specific time period of the structural change in the FF three-factor model by using cumulative sum of squares of recursive residuals method and the log likelihood ratio technique. A regime change is observed in the year 2000. The regime change in the FF three-factor model in the post-1999 period indicates that, to get predictions, one should use the post-1999 period data to compute the parameters of the FF three-factor model.

In essay IV we construct six FF portfolios for Canadian stocks and test them for the regime change over a period from 1993 to 2003. Similar to the findings of US stock market we find evidence of regime change for the Canadian stock market in the year 2000. We also find a sharp decrease in the R^2 of the FF three-factor model before and after 1999 period (the R^2 drops from .81 to .61).