

Predictable Fluctuations in the Cross-Section and Time-Series of Asset Prices

by Keunbae Ahn

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under the supervision of Dr. Gerhard Hambusch

University of Technology Sydney
Faculty of Business

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Certificate of Original Authorship

I, Keunbae Ahn, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Finance Discipline Group at the University of Technology Sydney. This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution. This research is supported by the Australian Government Research Training Program.

Signature: Production Note:
 Signature removed prior to publication.

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Abstract

The purpose of this thesis is to examine predictable fluctuations in asset returns based on rational and irrational human behaviour in financial markets. The results presented in this thesis can inform retail and professional investors, as well as economic policy design, e.g., related to the better understanding and management of the effect of investor behaviour on capital markets. In this regard, this thesis intends to help achieving improved outcomes in capital markets to provide benefits for societies.

The first research project investigates household debt as a potential asset pricing factor. This research reveals that an increase in the level of household leverage places a strong and lasting negative effect on household consumption. The well-known consumption capital asset pricing model is modified to account for this negative association, and we show that leverage has a negative risk price using Fama-French test assets. Our results illustrate that the negative risk premium persists at the individual stock level. Further, we use traditional asset pricing factors and confirm that our leverage factor captures a risk premium, which is not explained by other known factors.

The second research project studies the effect of investor sentiment on international stock markets. To measure sentiment, we build composite sentiment indexes targeting global and regional markets. Our time-series results show that stocks are overpriced (underpriced) when investors are optimistic (pessimistic), whereas stock prices become more volatile and more correlated when investors are pessimistic. Our cross-sectional results indicate that most of our time-series results, except for sentiment-based underpricing, become more pronounced for securities with more exposure to sentiment or to market returns. This suggests that sentiment traders contribute to mispricing that affects the mean, variance and correlation of asset returns.

Our findings have important implications for understanding and managing the risk-return trade-off in capital markets.

The third research project focuses on how market participants respond to market-wide and firm-specific information. This research builds proxies for the respective information arrivals pertaining to the market or to specific firms. Our results suggest that investors underreact to market-wide information and overreact to firm-specific information such that these behavioural biases provide predictable variations in stock returns as well as in return variances over the short-term. Furthermore, this evidence is independent of arbitrage activities in the market. Our results have practical implications for investors who aim to time the market using historical data.