Final Report for the AFAANZ 2018-2019 Research Grant

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(2) Project Title: Measuring Mispricing in the Australian Equity Market

(3) Updated Project Summary

Fifty years after the birth of modern finance theory, academics and practitioners are still striving to better understand cross-sectional differences in stock returns. Returns are found to be associated with many firm characteristics, giving rise to a large number of stock market anomalies. The current project seeks to buck the trend of the increasingly-complex study asset-pricing models. We construct a single composite mispricing metric that integrates the information from multiple characteristics that have been shown to be related to cross-sectional returns. It is plausible that a composite metric may capture common components of characteristic-return relations and therefore provide a stronger predictive signal than any of its component anomalies. To broaden the scope of the project, we augment the proposal with incorporating the analysis of daily factors, using spanning regressions and bootstrap testing. The mispricing composite metric will be built on a range of characteristics that have been shown to be associated with cross-sectional differences in returns. Prior Australian literature provides strong evidence on anomalies surrounding firm size, book-to-market, asset growth, net operating assets, accruals, momentum and gross profitability.

On a monthly basis, each stock is assigned a percentile rank for each of these components. The highest percentile rank corresponds to the value of the characteristic giving rise to the highest expected return. For example, stocks with high momentum, BM and profitability are assigned high ranks, as are stocks with low firm size, accruals, asset growth and NOA. Accordingly, if seven components are incorporated, each stock will have seven ranks assigned each month. Stambaugh and Yuan (2017) advocate a similar approach to factor construction based on a composite index capturing the degree of mispricing of US stocks. The composite metric can be formed in numerous ways, but as a starting point we take a simple average of the ranks assigned to a given stock. Therefore, a stock with a low (high) composite measure is expected to generate low (high) future returns. This composite metric has been constructed monthly for each stock over the period 1990-2018 using SIRCA SPPR and Aspect Huntley data. With the updated data, we are able to expand the sample period till the end of 2018.

From an asset-pricing perspective, we construct an asset-pricing factor from the composite metric. The merit of this composite factor will be assessed in the time-honoured empirical asset-pricing tradition. Specifically, we will estimate and compare the risk-adjusted alphas on test assets under traditional models (e.g., Fama and French 3-factor and 5-factor) and our parsimonious model containing the composite factor.

(4) Funds granted: $5,000 (AUD)

(5) Detailed Report on Expenditure of Funds against Budget Items: We proposed to obtain $6329.4 and was granted $5000. We proposed to hire research assistant for 140 hours if we were granted the full amount. With $5000, we hired research assistants for 95 hours to obtain and clean daily and monthly return data of the Australian equity market. It has costed $4974.29, with $25.71 remaining.

(6) Outcomes: working paper of 'Measuring Mispricing in Australia'

(7) Future intentions
   a. Conference submission: submit the working paper to AFAANZ annual conference 2020
   b. Journal submissions: submit the working paper to Accounting and Finance in 2020
   c. Grant applications: N/A
   d. Projects: measuring mispricing in industry portfolios

(8) Summary of Outcomes and Benefits: We appreciate the grant, which enables us to hire three research assistants to process data for us. We are now working on both the draft and analysing data of the project.