INVESTMENT MANAGER CHARACTERISTICS, STRATEGY AND FUND PERFORMANCE

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DEDICATION

This dissertation is dedicated to my late mother, Kerry, and to my father Peter, in recognition of their generous love, support and encouragement throughout my life.
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SYNOPSIS

This dissertation presents five research essays evaluating the performance of managed funds in light of the investment strategy and manager characteristics exhibited by institutional investment companies. An analysis of investment performance with respect to a fund manager’s strategy provides important information in determining whether performance objectives have been achieved. There are a number of different types of investment strategies managed funds may adopt. However, the primary dichotomy is on the basis of whether the portfolio manager implements either an active or index approach. Active managers attempt to outperform the market through the use of price-sensitive information, whereas a passive manager’s objective is to replicate the returns and risk of a target benchmark index. The evaluation of investment manager characteristics is also evaluated. This is motivated on the basis that asset management entities place significant emphasis on both the articulation and differentiation of their investment style relative to competitors, and selling the strengths of their portfolio management skills (in terms of past performance) as well identifying the key individuals comprising their investment team and their unique attributes.

For active equity managers, the methods used in constructing portfolios and implementing the investment strategy include security selection, in terms of ‘top-down’ or ‘bottom-up’ strategies, value-biased, growth-biased or style-neutral strategies, and portfolios exhibiting market capitalisation biases (i.e. preferences to large or small-cap securities). In terms of active bond portfolio management, the most common strategies include duration management and yield curve positioning. Active managers’ strategies are likely to extend beyond stock selection, in particular, where the fund manager adjusts the portfolio’s composition in anticipation of favourably capitalising on future
movements in the market. For index managers, replication of both the returns and risk of the underlying index may be achieved through either full-replication of constituent stocks comprising the index, or through non-replication techniques (stratified sampling and/or optimisation). Each essay provides a unique contribution to the literature with respect to the performance of active and index funds, as well as an analysis of funds that invest specifically in domestic equities, domestic fixed interest, and diversified funds that invest across the broad spectrum of asset classes.

The origins of the performance evaluation literature are ascribed to Cowles’ (1933) pioneering work, and the literature has given increasing attention to the topic. However the most fundamental issue considered in almost all previous studies of managed fund performance is the extent to which actively managed portfolios have earned superior risk-adjusted excess returns for investors. The literature has overwhelmingly documented (with a small number of exceptions) that active funds have been unable to earn superior returns, either before or after expenses (e.g. Jensen (1968), Elton et al. (1993), Malkiel (1995), Gruber (1996)). While the international evidence is supported by the few Australian managed fund studies available, Australian research remains surprisingly scarce. This is perplexing considering the sheer size of the investment industry in Australia (around $A717 billion as at 30 June 2001) and the importance placed on the sector with respect to successive Federal Governments’ retirement income policies. The objectives of this dissertation therefore involve an analysis of managed fund performance with respect to differences in investment strategies (i.e. active and index), as well as providing an analysis of funds invested in equities, bonds and diversified asset classes (or multi-sector portfolios).

The first essay evaluates the market timing and security selection capabilities of Australian pooled superannuation funds. These funds provide institutional investors
with exposure to securities across many different asset classes, including domestic and international equities, domestic and international fixed interest, property and cash. Surprisingly, the specific analysis of multi-sector funds is scarce in the literature and limited to Brinson et al. (1986, 1991), Sinclair (1990), and Blake et al. (1999). This essay also evaluates performance for the three largest asset classes within diversified superannuation funds and their contribution to overall portfolio return. The importance of an accurately specified market portfolio proxy in the measurement of investment performance is demonstrated, where the essay employs performance benchmarks that account for the multi-sector investment decisions of active investment managers in a manner that is consistent with their unique investment strategy. This approach rectifies Sinclair’s (1990) analysis resulting from benchmark misspecification. Consistent with the literature, the empirical results indicate that Australian pooled superannuation funds do not exhibit significantly positive security selection or market timing skill.

Given the evidence in the literature surrounding the inability of active funds to deliver superior returns to investors, lower cost index funds have become increasingly popular as an alternative investment strategy. Despite the significant growth in index funds since 1976, when the first index mutual fund was launched in the U.S., research on their performance is sparse in the U.S. and non-existent in Australia. The second essay provides an original analysis of the Australian index fund market, with specific analysis applicable to institutional Australian equity index funds offered by fund managers. While indexing is theoretically straightforward, in practice there exist potential difficulties in exactly matching the return of the underlying index. Therefore the magnitude of tracking error is likely to be of concern to investors. This essay documents the existence of significant tracking error for Australian index funds, where the magnitude of the difference between index fund returns and index returns averages
between 7.4 and 22.3 basis points per month for funds operating at least five years. However, there is little evidence of bias in tracking error, implying that these funds neither systematically outperform or underperform their benchmark on a before cost basis. Further analysis documents that the magnitude of tracking error is related to fund cash flows, market volatility, transaction costs and index replication strategies used by passive investment managers.

The third essay presents evidence of the performance of U.S. mutual funds, where attention is given to both active and index mutual funds for which the applicable benchmark index is the S&P 500. This essay examines both the magnitude and variation of tracking error over time for S&P 500 index mutual funds. The essay documents seasonality in S&P 500 index mutual fund tracking error, where tracking error is significantly higher in the months of January and May, together with a seasonal trough in the quarters ending March-June-September-December. Statistical evidence indicates tracking error is both positively and significantly correlated with the dividend payments arising from constituent S&P 500 securities. In terms of a performance comparison between actively managed and index funds, active funds on average are found to significantly underperform passive benchmarks. On the other hand, S&P 500 index mutual funds earned higher risk-adjusted excess returns after expenses than large capitalisation-oriented active mutual funds in the period examined. These results suggest the S&P 500 is consistent with capital market efficiency, implying an absence of economic benefit accruing to the average investor utilising actively managed U.S. equity mutual funds.

The fourth essay presented in the dissertation examines the performance of Australian investment management organisations with direct reference to their specific characteristics and strategies employed. Using a unique information source,
performance is evaluated for actively managed institutional balanced funds (or diversified asset class funds), Australian share funds and Australian bond funds. Performance is evaluated with respect to the investment strategy adopted, the experience and qualifications held by investment professionals, and the tenure of the key investment professionals. This essay also evaluates the performance of senior sector heads to determine the skills of individuals driving the investment process, even though these individuals may migrate to competitor organisations. The essay finds evidence that a significant number of active Australian equity managers earned superior risk-adjusted returns in the period, however active managers perform in line with market indices for balanced funds and Australian bond funds.

A number of manager characteristics are also found to predict risk-adjusted excess returns, systematic risk and investment expenses. Of particular note, performance of balanced funds is negatively related to the institution’s age and the loyalty of non-senior investment staff. Performance is also found to be significantly higher for managers that predominantly operate their portfolios using a bottom-up, stock selection approach. Interestingly, the human capital of managers, measured as the years of tertiary education undertaken, does not explain risk-adjusted excess returns. Systematic risk is positively related to an institution’s age and negatively related to both senior manager loyalty and the implementation of bottom-up portfolio management strategies. In terms of management expenses, fees are directly related to the Australian equities benchmark allocation, the years of tertiary education, the number of years service (loyalty) for non-senior investment professionals and the total years experience of senior money managers. This concluding essay also documents that changes in top management have significant performance effects. In the 12-month period after a change in fixed income director or chief investment officer, performance is significantly
lower and significantly higher, respectively. There is no significant difference in performance where changes in top management occur for Australian equities. The years of service (loyalty) provided to asset management firms by equities directors is inversely related to risk-adjusted return.

The fifth and final essay examines the investment performance of active Australian bond funds and the impact of investor fund flows on portfolio returns. This essay represents a significant and original analysis in terms of its contribution to the literature, given the absence of Australian bond fund performance analytics and also the limited attention provided in the U.S. Both security selection and market timing performance is evaluated using both unconditional models and conditional performance evaluation techniques, which account for public information and the time-variation in risk. Overall, the results of this essay are consistent with the U.S. and international mutual fund evidence, where performance is found to be consistent with an efficient market. While actively managed institutional funds perform broadly in line with the index before expenses, the paper documents significant underperformance for actively managed retail bond funds after fees. The study also documents that retail fund flows negatively impact on market timing coefficients when flow is not accounted for in unconditional models.
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CERTIFICATION

This is to certify that to the best of my knowledge, the research reported in this dissertation is my own work and is original, except where duly acknowledged. This dissertation has not been submitted previously, either in entirety or substantially, for a higher degree or qualification at any other University or institute of higher learning.

David Robert Gallagher

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“The essence of performance evaluation is to measure the value of the services (if any) provided by the portfolio management industry. It is to investigate whether a fund manager helps enlarge the investment opportunity set faced by the investing public and, if so, to what extent the manager enlarges it. Put differently, if the manager provides a portfolio that is also achievable by the investing public, he offers no service; it is when the managed fund lies outside of the existing opportunity set faced by the public that the manager offers a genuine service.”