

# Heterogeneity among Institutional Investors: Portfolio Choices, Trading Behavior, and Stock Returns

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Executive summary  
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Given the large and increasing role played by institutional investors in financial markets, a growing number of empirical studies have recently examined the portfolio characteristics of institutions and the impact of their trading behavior on asset prices. These studies typically focus on an *aggregate* sample of institutional investors, thus treating institutional investors as a homogeneous group of managers and drawing inferences on their *average* preferences, trading behavior, and performance.

An analysis of the level and changes of the aggregate institutional portfolio cannot capture the complexity of the trading activity occurring among different institutions, and its consequences on stock returns. The set of institutional investors is vastly heterogeneous, and is likely to include institutions that differ with respect to their incentives, investment horizon, investment objectives, and trading constraints. Such differences may translate into a great degree of variation in trading behavior and price impact of trades across different institutional types.

In this paper I examine the quarterly holdings of all institutions filing SEC form 13-F between 1980 and 2006, a total of 4855 institutional managers.<sup>1</sup> I classify manually these managers into the following eleven institutional types: 1) Banks and Trusts, 2) Insurance companies, 3) Mutual Fund Families, 4) Investment Advisors, 5) Hedge Funds, 6) Pension funds, 7) Internally managed pension funds in private companies, 8) Foundations and charities, 9) Private Equity, 10) Venture Capital, 11) Endowments.

I then analyze differences across these types of institutions with respect to their preferences for stock characteristics, their trading behavior, and the impact of their trades on stock returns. I find significant heterogeneity across institutional types.

All tests involving institutional trading and the link between trading and returns are conducted using three alternative measures of trading constructed within each institutional type:

- Changes in the ownership of a given stock as fraction of shares outstanding
- Changes in the number of managers holding a given stock in a given quarter
- Number of institutions buying a given stock as a proportion of institutions trading the stock (a measure of herding).

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<sup>1</sup> This is the sample of institutions typically used in the literature and provided by Thomson Financials. However, the information on institutional types is inaccurate and plagued by misclassification errors.

I list below the main results of the study:

- 1) Different types of institutions have different preferences for stock characteristics – For example, hedge funds prefer small stocks, venture capital funds hold volatile stocks, and foundations hold the least volatile stocks
- 2) Different types of institutions exhibit different trading behavior – For example, institutions are on average momentum traders. However, hedge funds buy recent winners and sell medium-term winners, while pension funds sell recent winners and buy medium-term winners.
- 3) Trading by different institutions has different effects on future returns – For example, an increase in share ownership by hedge funds implies positive returns in the next quarter, but an increase in ownership by pension funds implies return reversals in the next two years
- 4) The price impact of trades by different institutional types shows striking differences between the first and second sample period – For example, during 1980-1993 trades by mutual funds are associated with positive returns over the next year, but during 1994-2006 their trades predict long run return reversals.
- 5) The results are not driven by systematic differences in investment styles followed by different institutional types.

Overall, the results in this study suggest that the aggregate sample of institutional investors typically studied in the literature is far from homogenous. The findings on the link between institutional trading and returns contribute to our understanding of the price impact of institutional trading. The herding literature generally finds a positive association between institutional trading and returns at short horizons, and a negative association at longer horizons. This study finds that the link between trading and returns is more complex and varies considerably across types of institutional investors.

The findings in this paper may also be of interest for asset management purposes. The patterns of return predictability associated with trades by different institutional types could potentially be exploited in medium and long-term trading strategies.