

Institutional Investors and Information Acquisition: Implications for Asset Prices and Informational Efficiency

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The importance of institutional investors in financial markets has increased considerably over the last decades. That is, institutional investors nowadays own a majority of companies' stocks and account for most of the transactions and trading volume in financial markets. For example, while institutional investors, such as endowment funds, commercial or investment banks, mutual funds, hedge funds, pension funds or insurance companies, owned about 7% of U.S. equity in 1950, this share has increased to about 80% in 2018.

Notably, the trading decisions and incentives of institutional investors are considerably different from those of "simple" households. That is, the performance of institutional investors is usually evaluated relative to *benchmark* portfolio (a stock-market index). Benchmarking arises from the empirical observation that financial institutions who beat their benchmark attract more capital from clients in the future which increases future management fees and, hence, profits. In addition, benchmarking can arise from explicit performance fees. That is, to align the incentives of fund managers and their clients, asset-management contracts often specify that managers get paid higher fees if they outperform their benchmark. For example, Japan's Government Pension Investment Fund, the world's largest retirement fund, recently introduced a system whereby it pays all active managers a fee based on their return relative to a benchmark.

Our objective in this paper is to understand how the growth of assets-under-management by institutional investors with relative performance concerns influences the efficiency of financial markets, asset prices and investors' portfolio returns. Specifically, we study the joint portfolio and information choice problem of institutional investors who are concerned about their performance relative to a benchmark. For that purpose, we develop an equilibrium model of joint portfolio and information choice that explicitly accounts for the incentives of institutional investors. The two key features of the model are (i) that all institutional investors endogenously decide on the precision of their private information, and (ii) that a fraction of institutional investors ("benchmarking investors") are concerned about their performance relative to a benchmark. The model differs from previous theories on the effects of institutional investors (Cuoco and Kaniel, 2011; Basak and Pavlova, 2013; and Buffa, Vayanos and Woolley, 2019) in that it allows institutional investors not only to choose their optimal portfolio but also to determine how much time and capital they want to invest into the acquisition of private information. This novel modelling framework enables unique conclusions to be drawn regarding the impact of benchmarking on informational efficiency and asset prices.

We document two distinct economic mechanisms through which benchmarking affects the information content of financial markets. First, benchmarking reduces the number of shares in investors' portfolios that are sensitive to information. That is, in the presence of benchmarking concerns, institutional investors align their portfolio closer to the benchmark. Intuitively, to minimize the risk of underperforming the benchmark, an investor overweightes the stocks that are part of the benchmark in their portfolio. This implies, however, that any acquired private information can only be applied to a smaller part of their portfolio because these "hedging trades" are information-insensitive. This, in turn, reduces the value (benefits) of private information such that these institutional investors subject to relative performance concerns will reduce their acquisition of private information.

Second, benchmarking limits investors' willingness to speculate; in particular, benchmarked institutional investors trade less aggressively based on their available private information. Most importantly, this adversely affects information aggregation. That is, institutional investors whose performance is evaluated relative to a benchmark trade fewer shares for a given piece of information so that – with each trade – less of the available private information gets incorporated into prices. This limits the ability of financial markets to aggregate investors' private information and, hence, the informativeness of stock prices declines.

Both effects imply a reduction in informational efficiency as the assets-under-management of benchmarked institutional investors increase. However, the underlying economic mechanisms are quite distinct. In particular, the first mechanism implies that less information is produced and, hence available in the economy. In contrast, the second effect implies that less of the available information gets incorporated into prices. Ultimately, price informativeness for both stocks inside and outside the benchmark declines, that is, investors can infer less about fundamentals from stock prices; a prediction that is consistent with empirical evidence on the impact of Exchange Traded Funds (ETFs) on stock-price informativeness (Israeli, Lee, and Sridharan, 2017).

The reduction in informational efficiency has a direct impact on asset prices and the fund managers' performance. For instance, because stock prices track fundamentals less closely, stock-price fluctuations are more pronounced, that is, stock-return volatility increases. Also, because institutional investors who are more concerned about their benchmark acquire less information, they earn lower average portfolio returns than their less-benchmarked (i.e., more active) peers. Intuitively, less-benchmarked funds who gather more private information are better placed to make correct investment decisions, which in turn means that they outperform their benchmarked rivals.

In summary, our work demonstrates that the growth in assets-under-management by benchmarked financial institutions might reduce informational efficiency. As such, it highlights a novel tension between benchmarking as a tool to align the incentives between fund managers and their clients and its adverse effects on individual managers' portfolio returns and informational efficiency.

Short Bio:



Adrian Buss is an Associate Professor of Finance at INSEAD, where he teaches in the MBA and EMBA programme. Adrian graduated from the University of Mannheim, holding Diplomas (M.Sc. equivalent) in Mathematics and Business Information Systems as well as a Ph.D. in Finance from Goethe University Frankfurt. His current research investigates the effects of financial frictions and institutional investors on equity prices, prices of risk as well as information aggregation. His research has been published in leading academic journals, like the *Journal of Finance*, the *Review of Financial Studies* and the *Journal of Monetary Economics*.