Institutional investors and information acquisition:

Implications for asset prices and informational efficiency

The research of Dr Adrian Buss (INSEAD) and Matthijs Breugem (Collegio Carlo Alberto) explores 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. The team have developed a theoretical framework which illustrates, among others, that 'benchmarking' distorts the informational efficiency of stock prices. Their work has important implications for the ability of financial markets to incorporate and provide information in the presence of institutional investors and passive investment management.

Today, roughly two-thirds of all U.S. stocks are held by institutional investors, such as banks, pension funds, mutual funds, insurance companies and hedge funds. Consequently, institutional investors are major players in financial markets and have a substantial impact on asset prices and financial-market efficiency. The performance of these institutional investors is usually evaluated relative to a benchmark (stock-market index) – a practice that has the potential to substantially alter the investment strategies of fund managers and, in turn, affect financial-market equilibrium. Understanding such effects is the objective of the work by Adrian Buss, Assistant Professor of Finance at INSEAD, and Matthijs Breugem, Collegio Carlo Alberto.

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In a study recently published in *The Review of Financial Studies*, Breugem & Buss (2019) have developed a theoretical framework that seeks to explain how the rise of benchmarked institutional investors affects financial markets. Their model extends previous theories by explicitly accounting for both information and portfolio choice in the presence of institutional investors who are concerned about their performance relative to a benchmark. Notably, their findings suggest that benchmarking can cause considerable distortions in the value of private information and, hence, informational efficiency.

INSTITUTIONAL INVESTORS

Over the last decades, the importance of institutional investors has grown steadily. For example, the fraction of U.S. equity owned by institutional investors has risen from about 7% in 1950 to 67% in 2010 (Stambaugh, 2014). Similarly, institutional investors nowadays account for a majority of the transactions and trading volume (Griffin, Harris & Topaloglu, 2003).

Like other investors, institutional investors try to manage their funds in order to maximise the absolute value of these investments. However, their performance relative to a benchmark (or, their peers) is also of great importance. That is, there exists considerable academic evidence that funds that beat their benchmark attract more new capital in the future. Also, many institutional investors get paid more by their clients when they deliver a return that is higher than that of the benchmark. For example, recently, Japan's Government Pension Investment Fund, the world's largest retirement fund, has introduced a system whereby it pays all active managers a fee based on their relative return. The idea of such performance-fees is to align the incentives of fund managers with those of their investors. In particular, a fund manager will only receive a high fee if his/her investment return is higher than the one investors could achieve by simply buying the benchmark.

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PRIVATE INFORMATION AND INFORMATIONAL EFFICIENCY

Investors in financial markets consistently try to uncover information that other investors do not possess. For that purpose, they study financial statements, gather information about consumers' taste, hire outside financial advisers, or subscribe to proprietary databases. Such private information is particularly valuable because – if not available to other investors – it allows an investor to generate trading profits; by buying stocks that he/she has positive information about and selling stocks with negative information.

However, whenever investors trade stocks based on private information, part of this information will be incorporated into the price. For example, if an investor has access to information that indicates a good performance of a firm in the future, he/she would buy shares of the respective firm to benefit from this information. This, in turn, will lead to an increase in the firm's stock price which would then, partially, reveal the investor's positive information to the other investors. As a result, by studying stock-price fluctuations in financial markets, investors can learn about the private information of other investors.

Overall, this process implies that stock prices (imperfectly) reflect the information that the various investors in financial markets possess. The degree to which financial markets incorporate and reflect private information is denoted informational efficiency (Fama, 1970) and is of foremost importance for an economy because it determines the efficient allocation of capital.

Research by Buss and Breugem demonstrates how the growth of assets under management by benchmarked institutional investors affects informational efficiency and asset prices.

RESEARCH OBJECTIVE

The main objective of the work by Breugem & Buss 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.

RESEARCH DESIGN

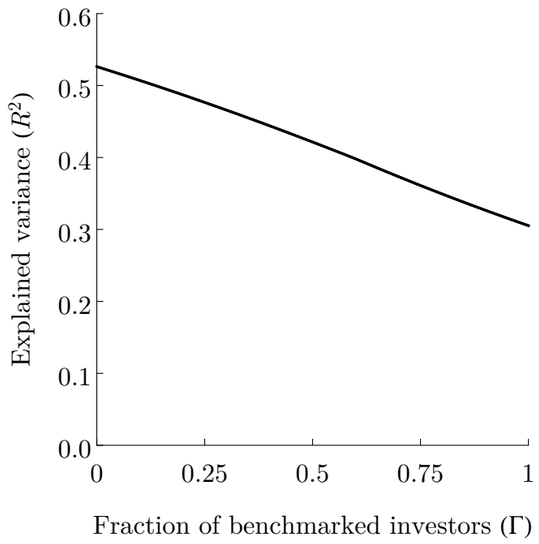
The research team has developed a theoretical framework to address these research questions. The model differs from previous studies on the effects of institutional investors on financial markets (Cuoco & Kaniel, 2011; Basak & Pavlova, 2013; and Buffa, Vayanos and Woolley, 2018) in that it allows institutional investors who are concerned about their relative performance 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.

In the model there exist two types of investors. While one group of investors is concerned about its performance relative to the benchmark ("benchmarked investors"), the other one is not. To understand how the growth in assets

under management of institutional investors that took place in the past years affects financial markets, the authors analyse how financial-market equilibrium changes as the proportion of benchmarked investors in the economy rises.

MAIN FINDINGS

The research team documents that benchmarking has two distinct effects on the efficiency of financial markets. First, institutional investors with relative performance concerns acquire less private information. That is, to minimise the risk of underperforming their benchmark, benchmarked investors overweight the stocks that are part of the benchmark in their portfolio. In that regard, they diverge from traditional share picking methods that are used by non-benchmarked funds. Intuitively, by partially replicating the benchmark, their performance becomes more similar to the benchmark and, hence, the risk of under-performance declines. However, note that such "hedging trades" are not based on information, as they simply require the purchase of the stocks in the benchmark. Hence, a part of benchmarked investors' portfolios will not benefit from private information and, as a result, these investors will reduce their acquisition of private information. Second, benchmarked funds are less aggressive in using their private information. For example, in the case of positive information about a firm, a benchmarked institutional investor will acquire less shares of the respective firm than a comparable investor without relative performance concerns. Consequently, the firm's stock price reacts less and, hence, less of the benchmarked investors' information will be reflected in the price.



Price Informativeness. The figure depicts stock-price informativeness, measured by the fraction of the variance of the payoff that is explained by the stock price, as a function of the fraction of benchmarked institutional investors. The graph is based on the framework described in Section 3.1 of Breugem & Buss (2019).

[Their model] allows to draw unique conclusions regarding the impact of institutional investors on financial markets.

Both effects imply a reduction in the informational efficiency of financial markets. However, the underlying economic mechanisms are quite distinct. The first mechanism implies that there is less private information available in financial markets due to the decline in the information-production activities of benchmarked investors. Hence, prices can only reflect this lower amount of information. In contrast, the second mechanism implies that less of the available information is incorporated into prices because benchmarked investors are less aggressive in their trading. Ultimately, less information is known about the stocks in the index. This prediction is consistent with the empirical evidence that an increase in ETF ownership is associated with less-informative security prices (Israeli, Lee and Sridharan, 2017).

The reduction in the informational efficiency of financial markets has important implications for asset prices and fund managers' returns. For example, the prices of stocks in the benchmark should fluctuate more than those not part of the benchmark. Intuitively, because less information is reflected in their price, the arrival of any piece of news leads to a stronger reaction in the stock price and, hence, more pronounced fluctuations. Another important prediction of the model is that investors which are not (or less) concerned about their performance relative to an index should outperform (more) benchmarked investors. 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.

SUMMARY

The research by Buss and Breugem demonstrates that the growth of assets under management by benchmarked institutional funds can have a substantial impact on financial markets. Benchmarking reduces informational efficiency because benchmarked investors acquire less information and trade less aggressively on their available information. As a result, the returns of stocks in the benchmark become more volatile. Moreover, fund managers whose performance is not tied to a benchmark outperform benchmarked investors; increasingly so as the fraction of benchmarked investors in the economy rises. These results are of significance not only to investment professionals, corporate decision makers and regulators but also to retail investors.

Behind the Research

Dr Adrian Buss

E: adrian.buss@insead.edu **T:** +33 1 60 72 44 84
W: www.insead.edu/faculty-research/faculty/adrian-buss

Research Objectives

The research of Adrian Buss investigates the impact of financial frictions and institutional investors on asset prices and financial-market efficiency.

Detail

Dr Adrian Buss
INSEAD, Boulevard de Constance
77305 Fontainebleau
France

Bio

Adrian Buss is an Assistant Professor of Finance at INSEAD. He holds a PhD in Finance from Goethe University Frankfurt and Masters in Mathematics and Business Informatics from the University of Mannheim. His research has been published in leading academic journals (Journal of Finance, Review of Financial Studies, Journal of Monetary Economics).

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Collaborators

• Matthijs Breugem from Collegio Carlo Alberto

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Personal Response

Does your research suggest that benchmarking should be regulated?

"No. Benchmarking plays an essential role in financial markets. It aligns the incentives of retail investors with those of their fund managers. Hence, in general, it should lead to better portfolio returns for retail investors. However, our research highlights a novel tension between benchmarking as a tool to align incentives and its adverse effects on informational efficiency and benchmarked investors' portfolio returns. Also, our research suggests that non-benchmarked fund managers outperform their benchmarked peers, so that there might be a natural limit to the size of benchmarked (passive) funds."