

EDHEC-Risk Institute suggests a new dynamic approach for measuring the market exposures of stock portfolios

Multi-factor models are standard tools for analysing the performance and the risk of equity portfolios. In addition to analysing the impact of common *factors*, equity portfolio managers are also interested in analysing the role of stock-specific attributes in explaining differences in risk and performance across assets and portfolios.

In a new publication entitled “*Multi-Dimensional Risk and Performance Analysis for Equity Portfolios*”, EDHEC-Risk Institute explores a novel approach to address the challenge raised by the standard investment practice of treating attributes as factors, with respect to how to perform a consistent risk and performance analysis for equity portfolios across multiple dimensions that incorporate micro attributes. This research was conducted with the support of CACEIS as part of EDHEC-Risk Institute’s research chair on “New Frontiers in Risk Assessment and Performance Reporting”.

EDHEC-Risk Institute’s study suggests a new dynamic meaningful approach, which consists in treating attributes of stocks as instrumental variables to estimate betas with respect to risk factors for explaining notably the cross-section of expected returns. In one example of implementation, the authors maintain a limited number of risk factors by considering a one-factor model, and they estimate a conditional beta that depends on the same three characteristics that define the Fama-French and Carhart factors.

In so doing, the authors introduce an alternative estimator for the conditional beta, which they name “fundamental beta” (as opposed to historical beta) because it is defined as a function of the stock’s characteristics, and they provide evidence of the usefulness of these fundamental betas for (i) parsimoniously embedding the sector dimension in multi-factor portfolio risk and performance analysis, (ii) building equity portfolios with controlled target factor exposure, and also (iii) explaining the cross-section of expected returns, by showing that a conditional CAPM based on this “fundamental” beta can capture the size, value and momentum effects as well as the Carhart model, but without the help of additional factors.

In this study supported by CACEIS, EDHEC-Risk Institute introduces an approach that can be used by asset managers to implement portfolios more consistent with their active views on factor returns, or lack thereof, said Lionel Martellini, co-author and Director of EDHEC-Risk Institute.

“Understanding risk in all its forms is key to achieving the highest risk-adjusted returns – an essential component in today’s competitive asset management environment. Through our sponsorship of the EDHEC-Risk research chair, we hoped to uncover practical advances in risk management techniques for the benefit of our clients, and welcome the outcome of this work”, said Cécile Falcon, Global Head of Business Line – Front Office Solutions at CACEIS.

A copy of “*Multi-Dimensional Risk and Performance Analysis for Equity Portfolios*” can be downloaded via the following link:

[EDHEC-Risk Publication Multi-Dimensional Risk and Performance Analysis for Equity Portfolios](#)

About CACEIS

CACEIS is the asset servicing banking group of Crédit Agricole dedicated to institutional and corporate clients. Through offices across Europe, North America and Asia, CACEIS offers a broad range of services covering execution, clearing, depositary and custody, fund administration, middle office outsourcing, forex, securities lending, fund distribution support and issuer services. With assets under custody of €2.3 trillion and assets under administration of €1.5 trillion, CACEIS is a European leader in asset servicing and one of the major players worldwide (figures as of 31 December 2015).

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About EDHEC-Risk Institute

Since 2001, EDHEC Business School has been pursuing an ambitious policy in terms of practically relevant academic research. This policy, known as "Research for Business", aims to make EDHEC an academic institution of reference for the industry in a small number of areas in which the school has reached critical mass in terms of expertise and research results. Among these areas, asset and risk management have occupied privileged positions, leading to the creation in 2001 of EDHEC-Risk Institute, which has developed an ambitious portfolio of research and educational initiatives in the domain of investment solutions for institutional and individual investors.

This institute now boasts a team of close to 50 permanent professors, engineers and support staff, as well as 38 research associates from the financial industry and affiliate professors. EDHEC-Risk Institute is located at campuses in Singapore, which was established at the invitation of the Monetary Authority of Singapore (MAS); the City of London in the United Kingdom; Nice and Paris in France. The philosophy of the institute is to validate its work by publication in prestigious academic journals, but also to make it available to professionals and to participate in industry debate through its position papers, published studies and global conferences.

To ensure the distribution of its research to the industry, EDHEC-Risk also provides professionals with access to its website, www.edhec-risk.com, which is entirely devoted to international risk and asset management research. The website, which has more than 70,000 regular visitors, is aimed at professionals who wish to benefit from EDHEC-Risk's analysis and expertise in the area of applied portfolio management research. Its quarterly newsletter is distributed to more than 200,000 readers.

EDHEC-Risk Institute also has highly significant executive education activities for professionals. In partnership with CFA Institute, it has developed advanced seminars based on its research which are available to CFA charterholders and have been taking place since 2008 in New York, Singapore and London.

In 2012, EDHEC-Risk Institute signed two strategic partnership agreements, with the Operations Research and Financial Engineering department of Princeton University to set up a joint research programme in the area of asset-liability management for institutions and individuals, and with Yale School of Management to set up joint certified executive training courses in North America and Europe in the area of risk and investment management.

As part of its policy of transferring know-how to the industry, EDHEC-Risk Institute has set up ERI Scientific Beta. ERI Scientific Beta is an original initiative which aims to favour the adoption of the latest advances in smart beta design and implementation by the whole investment industry. Its academic origin provides the foundation for its strategy: offer, in the best economic conditions possible, the smart beta solutions that are most proven scientifically with full transparency of both the methods and the associated risks.

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Press Contact

Claude Michaux
Deputy Group Communications Director
Tel.: +352 4767 2792
claude.michaux@caceis.com

Maud Gauchon
Tél. : +33 493 187 887
maud.gauchon@edhec-risk.com