New Frontiers in Risk Allocation and Factor Investing

The Princeton Club, New York, 22 April 2015
Context of the Masterclass

> Recent research has highlighted that risk and allocation decisions could be best expressed in terms of rewarded risk factors, as opposed to standard asset class decompositions, which can be somewhat arbitrary and might lead to highly concentrated risk exposures hidden within a seemingly well-diversified portfolio. More generally, given that security and asset class returns can be explained by their exposure to pervasive systematic risk factors, looking through the asset class decomposition level to focus on the underlying factor decomposition level appears to be a perfectly legitimate approach for harvesting risk premia.

> Two main benefits can be expected from shifting to a representation expressed in terms of risk factors, as opposed to asset classes. On the one hand, allocating to risk factors may provide a cheaper, as well as more liquid and transparent, access to underlying sources of returns in markets where the reliability and scalability of value added by active investment vehicles has been put in question. On the other hand, allocating to risk factors should provide a better risk management mechanism, in that it allows investors to achieve an ex-ante control of the factor exposure of their portfolios, as opposed to merely relying on ex-post measures of such exposures.

> While working at the level of underlying risk factors that impact or explain the returns on all asset classes is an intuitively meaningful approach, the practical implications of this paradigm shift for the organization of the asset allocation process still remain largely unexplored. In particular, very little is known about what underlying factors should be considered within the factor-mix, or about how much should optimally be allocated to replicating portfolios associated to such factors.

Objectives

> This masterclass has two main objectives. The first objective is to identify factors and associated factor replicating portfolios that can be traded to harvest the corresponding premia. The second objective is to introduce a formal framework for efficiently allocating to these rewarded sources of risk.

> The first part of the seminar focuses on risk allocation and factor investing by measuring and managing diversification, and the second part of the seminar focuses on risk allocation and factor investing for equity and multi-asset portfolios.
Agenda

**Morning Session: Risk Allocation and Factor Investing – A New Investment Paradigm or a New Marketing Fad?**

I. Measuring Diversification
   - Weight-based versus risk-based measures of diversification
   - Measuring the number of independent bets in policy portfolios
   - Turning correlated asset returns into uncorrelated factor returns
   - Pros and cons of principal component analysis and minimal linear torsion

II. Managing Diversification
   - Existence and unicity of factor risk parity portfolios
   - Contrasting risk parity portfolio with factor risk parity portfolios
   - Scientific diversification with diversified risk contributions
   - Out-of-sample performance of risk allocation portfolios

**Afternoon Session: Risk Allocation and Factor Investing for Equity and Multi-Asset Portfolios**

I. Risk Allocation and Factor Investing for Equity Portfolios
   - Alpha versus beta versus smart beta
   - Smart indices, factor indices and smart factor indices
   - Strategic risk allocation with smart factor indices
   - Factor rotation strategies with smart factor indices

II. Risk Allocation and Factor Investing for Multi-Asset Portfolios
   - From unconditional to conditional multi-asset risk parity strategies
   - Asset pricing factors within and across asset classes
   - Factor indices as additional building blocks for multi-asset portfolios
   - Factor indices as substitute building blocks for multi-asset portfolios

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**Masterclass Instructor**

Lionel Martellini

Lionel Martellini is Professor of Finance at EDHEC Business School and Scientific Director of EDHEC-Risk Institute.

Lionel has consulted on risk management, alternative investment strategies, and performance benchmarks for various institutional investors, investment banks, and asset management firms, both in Europe and in the United States. His research has been published in leading academic journals, including *Management Science*, the *Journal of Financial and Quantitative Analysis* and the *Review of Financial Studies*, and leading practitioner journals, including the *Financial Analysts Journal*, the *Journal of Derivatives*, the *Journal of Fixed Income*, the *Journal of Alternative Investments*, the *Journal of Investment Management*, and the *Journal of Portfolio Management*. He sits on the editorial board of the *Journal of Portfolio Management* and the *Journal of Alternative Investments*.

Lionel has co-authored and co-edited reference texts on fixed-income management and alternative investment such as the much-praised *Fixed-Income Securities: Valuation, Risk Management and Portfolio Strategies* (Wiley Finance) and is regularly invited to deliver presentations at leading academic and industry conferences. He holds graduate degrees in business administration, economics, statistics and mathematics, as well as a PhD in finance from the Haas School of Business at UC Berkeley.
Schedule
A typical programme day lasts from 8:30 am to 6:00 pm and is usually divided into lectures and application cases. The two class sessions in each half day period are separated by 30 minute refreshment breaks. Lunch is included.

Venue
The Princeton Club of New York
15 West 43rd Street
New York, NY 10036
Tel.: +1.212.596.1200
www.princetonclub.com

Fees, Billing & Cancellation policy
Fees
Standard rate: USD900/EUR700
Fees include instruction, documentation, refreshments at breaks, and lunch.
Accommodation is not included.

Billing and payment
The fee is billed upon registration and must be settled before the seminar begins. Payment can be made by credit card or wire transfer. Invoicing will be in Euros.

Transfer or cancellation
Transfer of registration to a colleague, upon written notice, is allowed and free of charge. Transfer of registration fees to another EDHEC-Risk Institute programme must be requested in writing and is subject to the following charges: 45 to 30 days’ notice: 15% of the tuition fee; 29 to 11 days’ notice: 30% of the tuition fee; 10 days’ notice or less: 50% of the tuition fee.

Cancellations of confirmed seats must be received in writing and are subject to the following charges: 45 to 30 days’ notice: 25% of the tuition fee; 29 to 11 days’ notice: 50% of the tuition fee; 10 days’ notice or less: 100% of the tuition fee.

Further Information and Registration
For further information, contact Maud Gauchon at: maud.gauchon@edhec-risk.com or on: +33 493 187 887
To register, visit: www.regonline.co.uk/erimasterclass2015NY
Since 2001, EDHEC has been pursuing an ambitious policy in terms of international 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 a major research facility: EDHEC-Risk Institute. This institute now boasts a team of over 95 permanent professors, engineers and support staff, as well as 48 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, and Nice, France. In addition, it has a research team located in the United States.

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 conferences. Each year, EDHEC-Risk organize a conference in London for professionals in order to present the results of its research, attracting more than 800 professional delegates.

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 65,000 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 monthly newsletter is distributed to more than 1,500,000 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. EDHEC-Risk Institute has an original PhD in Finance programme which, in addition to its highly selective residential track for young talents worldwide, has an executive track for high level professionals who already have masters degrees from prestigious universities and significant industry experience. These professionals are looking to go beyond their usual activities in order to develop research on the concepts that are relevant to their occupation. Complementing the core faculty, this unique PhD in Finance programme has highly prestigious affiliate faculty from universities such as Princeton, Wharton, Oxford, Chicago and CalTech.

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 risk and investment management, and with Yale School of Management to set up joint certified executive training courses in North America and Europe in the area of investment management.

More information: www.edhec-risk.com

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