
ERI Scientific Beta affirms the superiority of the top-down approach to multi-factor investing in a new paper in the Journal of Portfolio Management

In new research just published in a special issue of the Journal of Portfolio Management on factor investing, ERI Scientific Beta has validated the superiority of the top-down approach to multi-factor investing over a bottom-up approach.

The ERI Scientific Beta paper, entitled “Accounting for Cross-Factor Interactions in Multifactor Portfolios without Sacrificing Diversification and Risk Control,” compares different approaches for constructing multi-factor equity portfolios: “bottom-up” score-weighting approaches that target high factor intensity and “top-down” approaches that also consider diversification objectives.

The risks and shortcomings of the bottom-up approach are shown to be inefficiency, instability and the inability to control factor exposure and non-factor risks:

- Focusing solely on increasing factor intensity leads to inefficiency in capturing factor premia, as exposure to unrewarded risks more than offsets the benefits of increased factor scores.
- High factor scores in “bottom-up” approaches also come with high instability in factor exposure and high turnover.
- Concentrating portfolios in multi-factor champions can also lead to significant geographical or sector biases.

The authors introduce a new approach that considers cross-factor interactions in "top-down" portfolios through an adjustment at the stock selection level. This approach leads to higher levels of diversification and produces higher returns per unit of factor intensity. The authors report that it dominates “bottom-up” approaches in terms of relative performance, while considerably reducing extreme relative losses and turnover. In addition, this approach preserves the well-known benefits of the top-down approach in terms of explicit and transparent control of exposures to risk factors.

A copy of the article is accessible by clicking on the link below:

Accounting for Cross-Factor Interactions in Multifactor Portfolios without Sacrificing Diversification and Risk Control

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About ERI Scientific Beta

ERI Scientific Beta aims to be the first provider of a smart beta indices platform to help investors understand and invest in advanced beta equity strategies. It has three principles:

- **Choice**: A multitude of strategies are available allowing users to build their own benchmark, choosing the risks to which they wish, or do not wish, to be exposed. This approach, which makes investors responsible for their own risk choices, referred to as Smart Beta 2.0, is the core component of the index offerings proposed by ERI Scientific Beta.

- **Transparency**: The rules for all of the Scientific Beta series are replicable and transparent. The track records of the Scientific Beta indices can be checked and justified through unrestricted access to historical compositions.

- **Clarity**: Exhaustive explanations of construction methodologies are provided, as well as detailed performance and risk analytics.

Established by EDHEC-Risk Institute, one of the very top academic institutions in the field of fundamental and applied research for the investment industry, ERI Scientific Beta shares the same concern for scientific rigour and veracity, which it applies to all the services that it offers investors and asset managers.

The ERI Scientific Beta offering covers three major services:

- **Scientific Beta Indices**
  Scientific Beta Indices are smart beta indices that aim to be the reference for the investment and analysis of alternative beta strategies. Scientific Beta Indices reflect the state-of-the-art in the construction of different alternative beta strategies and allow for a flexible choice among a wide range of options at each stage of their construction process. This choice enables users of the platform to construct their own benchmark, thus controlling the risks of investing in this new type of beta (Smart Beta 2.0).

  Within the framework of Smart Beta 2.0 offerings, ERI Scientific Beta provides access to smart factor indices, which give exposure to risk factors that are well rewarded over the long term while at the same time diversifying away unrewarded specific risks. By combining these smart factor indices, one can design very high performance passive investment solutions.

- **Scientific Beta Analytics**
  Scientific Beta Analytics are detailed analytics and exhaustive information on its smart beta indices to allow investors to evaluate the advanced beta strategies in terms of risk and performance. The analytics capabilities include risk and performance assessments, factor and sector attribution, and relative risk assessment. Scientific Beta Analytics also allow the liquidity, turnover and diversification quality of the indices offered to be analysed. In the same way, analytics provide an evaluation of the probability of out-of-sample outperformance of the various strategies present on the platform.

  We believe that it is important for investors to be able to conduct their own analyses, select their preferred time period and choose among a wide range of analytics in order to produce their own picture of strategy performance and risk.

- **Scientific Beta Fully-Customised Benchmarks and Smart Beta Solutions** is a service proposed by ERI Scientific Beta, and its partners, in the context of an advisory relationship for the construction and implementation of benchmarks specially designed to
meet the specific objectives and constraints of investors and asset managers. This service notably offers the possibility of determining specific combinations of factors, considering optimal combinations of smart beta strategies, defining a stock universe specific to the investor, and taking account of specific risk constraints during the benchmark construction process.

With a concern to provide worldwide client servicing, ERI Scientific Beta is present in Boston, London, Nice, Singapore and Tokyo. As of December 31, 2016, the Scientific Beta indices corresponded to USD 12.3bn in assets under replication.

ERI Scientific Beta has a dedicated team of 45 people who cover not only client support from Nice, Singapore and Boston, but also the development, production and promotion of its index offering. ERI Scientific Beta signed the United Nations-supported Principles for Responsible Investment (PRI) on September 27, 2016.