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Scientific Beta defends the role of the Size factor in multi-factor portfolios

Research shows that omitting the Size factor would be costly for investors

New research from Scientific Beta, the smart beta index provider, has shown that the Size factor improves model fit, delivers a significant positive premium in the presence of other factors, and contributes positively to the performance of multi-factor portfolios.

The Size effect is well established in the finance literature: stocks with smaller market capitalisation outperform large stocks over the long term. However, a common recommendation in the asset management industry is to remove Size from the factor menu, given its relatively weak post-publication performance.

Scientific Beta's analysis differs from recent studies by smart beta providers in assessing the relevance of the Size factor. Rather than asking which factor has the best stand-alone performance, we ask what the marginal impact of the Size factor is when including it in the menu along with other factors. In Scientific Beta's research, three different tests of the Size factor are considered:

1. Impact on model fit of asset pricing models. Exclusion of the Size factor from a multi-factor asset-pricing model leads to a 22% increase in the proportion of unexplained returns of portfolios sorted by characteristics. This suggests that excluding Size seriously deteriorates model fit.
2. Assessment of whether the Size premium remains intact when accounting for implicit exposures to other factors. We find that the Size premium is economically and statistically significant over the long-term US history when accounting for the presence of other commonly used equity factors.
3. Evaluation of the Size factor's impact on optimal multi-factor portfolio performance. Size offers diversification benefits due to its low correlation with other factors. Due to diversification effects, the Size factor would keep a role in the optimal multi-factor portfolio even if the Size premium were lower than what has been observed historically.

In short, omitting the Size factor has substantial cost to investors, which often exceeds that of omitting other popular factors.

The Scientific Beta white paper can be accessed through the link below:

Does the Size Factor Still Have Its Place in Multi-Factor Portfolios? Scientific Beta White Paper, July 2019

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About Scientific Beta

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.

Established by EDHEC-Risk Institute, one of the top academic institutions in the field of fundamental and applied research for the investment industry, 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 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, 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.

- **Scientific Beta Fully-Customised Benchmarks and Smart Beta Solutions** is a service proposed by 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, Scientific Beta is present in Boston, London, Nice, Singapore and Tokyo. As of December 31, 2018, the Scientific Beta indices corresponded to USD 43bn in assets under replication. Scientific Beta has a dedicated team of 52 people who cover not only client support from Nice, Singapore and Boston, but also the development, production and promotion of its index offering. Scientific Beta signed the United Nations-supported Principles for Responsible Investment (PRI) on September 27, 2016. On November 27, 2018, Scientific Beta was presented with the Risk Award for Indexing Firm of the Year 2019 by the prestigious professional publication Risk Magazine.

Risk Awards 2019 Winner | Scientific Beta Indexing firm of the year