More for Less
Part of EDHEC Business School, a not-for-profit organisation, EDHEC-Risk Institute set up ERI Scientific Beta in December 2012 as part of its policy of transferring know-how to the industry. 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.
for Smart Beta Investing
More Analytics, More Risk Control, Less Expensive

ERI Scientific Beta benefits from EDHEC-Risk Institute’s considerable experience in index production:

2003
- Launch of the **EDHEC-Risk Alternative Indices**.
  - Used by more than 7,500 professionals worldwide to measure hedge fund performance.

2009
- EDHEC launches the **FTSE EDHEC-Risk Efficient Indices**, in cooperation with FTSE.
  - Constructed using a methodology developed by EDHEC-Risk Institute.
  - The FTSE-EDHEC Risk Efficient Index series has an average annualised outperformance, whatever the region, for the first six years of **live track record** (November 23, 2009 to December 31, 2015) of +2.41%.

2012
- EDHEC-Risk Institute establishes ERI Scientific Beta in December 2012.
  - ERI Scientific Beta develops a new approach to investing in alternative equity beta called **Smart Beta 2.0** which enables investors to measure and choose the risks to which they wish to be exposed.
  - ERI Scientific Beta designs 582 smart factor indices with a choice of factor exposure and weighting scheme.

2013
- Launch in April 2013 of [www.scientificbeta.com](http://www.scientificbeta.com), the most complete and transparent platform for investing in smart beta, providing investors with access to 582 smart factor indices but also to 148 multi smart factor indices which were designed in 2013. Over 2,500 asset owners and asset managers are using ERI Scientific Beta’s smart beta indices either to invest in, or to benchmark, active smart beta strategies. The Scientific Beta platform currently has over 17,000 users.

2014
- Launch by Morgan Stanley and Amundi of two UCITS ETFs replicating ERI Scientific Beta’s Multi-Beta Multi-Strategy indices. Both ETFs are listed in the United Kingdom on the London Stock Exchange, while the ETF launched by Amundi is additionally listed in France on Euronext Paris, in Germany on Xetra and in Italy on Borsa Italiana.

2015
  - In March 2015, launch of two new smart factor indices – High Profitability and Low Investment.

2016
  - The ERI Scientific Beta offering includes 944 smart factor indices and 276 multi smart factor indices.
  - Introduction of a risk allocation offering - Scientific Beta EDHEC-Risk Smart Beta Solution Benchmarks, which are new benchmarks that represent absolute and relative risk allocation between smart factor indices.
The Scientific Beta Indices platform provides investors and asset managers with access to indices that are representative of the Smart Beta 2.0 approach promoted by EDHEC-Risk Institute, enabling them to choose the risks to which their smart beta indices should, or should not be, exposed.

The focus of traditional smart beta offerings, termed “Smart Beta 1.0”, is on outperforming cap-weighted indices over the long-term but little information is provided on:

- The risk of outperformance not being robust
- The market conditions that lead to underperformance over the short/medium term
- The sources of outperformance
- Risk exposure

The first generation of commercial offerings of smart beta strategies are pre-packaged risk solution bundles that do not distinguish the stock selection methodology from the weighting methodology. This limitation prevents the potential of smart beta from being truly exploited. Smart Beta 2.0 should allow investors to choose the rewarded risk factors to which they wish to be exposed and to reduce the sources of unrewarded risks (specific risks or unrewarded factors) through diversification or hedging.

The Smart Beta 2.0 approach notably makes it possible to avail of smart factor indices that are representative both of an exposure to risk factors selected by an investor, and also of a smart weighting scheme guaranteeing good diversification. Through its smart factor indices flagship offering, ERI Scientific Beta aims to both offer exposure to risk factors providing improved returns in relation to the cap-weighted reference index over the long-term and to ensure that the specific risks of the indices are well-diversified. In that sense, the Scientific Beta smart factor offering is very different to simple factor offerings that ignore diversification of the specific risks and often lead an investor to invest in concentrated benchmarks that are exposed to undesired and unrewarded risks.
The Scientific Beta smart factor indices are characterised by pronounced and stable exposures to rewarded risk factors selected by investors, and by good diversification, and hence a significant reduction in specific and unrewarded risks.

The Scientific Beta platform allows investors to choose between 16 factor exposures (large cap, mid cap; high liquidity, mid liquidity, high volatility, low volatility, value, growth, high momentum, low momentum, high dividend yield, low dividend yield, low investment, high investment, low profitability and high profitability) for 16 regions (USA, Eurozone, UK, Developed Europe ex-UK, Japan, Developed Asia ex-Japan, Developed ex-UK, Developed ex-USA, Developed, Extended Developed Europe, Extended USA, Global, Emerging, Emerging America, Emerging EMEA, and Emerging Asia) with 6 choices of smart weighting scheme (Maximum Deconcentration, Maximum Decorrelation, Efficient Minimum Volatility, Efficient Maximum Sharpe Ratio, Diversified Risk Weighted and Diversified Multi-Strategy) and 2 potential relative-risk-control options - country neutral and sector neutral.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Objective</th>
<th>Unconstrained Closed-Form Solution</th>
<th>Required Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Deconcentration</td>
<td>To minimise portfolio concentration</td>
<td>( w^* = \frac{1}{N} )</td>
<td>No risk or return parameter required</td>
</tr>
<tr>
<td>Efficient Maximum Sharpe ratio</td>
<td>To maximise portfolio's Sharpe ratio</td>
<td>( w^* = \frac{\sum^{-1}\mu}{\sum^{-1}\mu} )</td>
<td>Correlation matrix of stock returns, stock volatilities and expected returns</td>
</tr>
<tr>
<td>Efficient Minimum Volatility</td>
<td>To minimise the overall portfolio volatility</td>
<td>( w^* = \frac{\sum^{-1}\mu}{\sum^{-1}\mu} )</td>
<td>Correlation matrix of stock returns, stock volatilities</td>
</tr>
<tr>
<td>Maximum Decorrelation</td>
<td>To minimise portfolio volatility under the assumption of identical volatility across stocks</td>
<td>( w^* = \frac{\Omega^{-1}\mu}{\Omega^{-1}\mu} )</td>
<td>Correlation matrix of stock returns</td>
</tr>
<tr>
<td>Diversified Risk Weighted</td>
<td>To equalise the risk contributions of individual stocks to the total risk of the index, assuming uniform correlations across stocks</td>
<td>( w^* = \frac{\text{diag}(\sigma^{-1})}{\text{diag}(\sigma^{-1})} )</td>
<td>Stock volatilities</td>
</tr>
</tbody>
</table>

The table indicates, for each of Scientific Beta weighting schemes, the strategy objective, the closed-form solution, and the parameters required to be estimated. \( N \) is the number of stocks, \( \mu \) is the (Nx1) vector of expected return, \( \mathbf{1} \) is the (Nx1) vector of ones, \( \sigma \) is the (Nx1) vector of volatilities, \( \Omega \) is the (NxN) correlation matrix of stock returns and \( \Sigma \) is the (NxN) covariance matrix of stock returns.
Factor Tilt Construction Choices on the Scientific Betaa Platform
The Scientific Beta platform allows users to choose flexibly among a wide range of options for each of the key steps in the benchmark construction process, rather than relying on a pre-packaged bundle of choices proposed by commercial indices.

The different characteristics (regional universe, stock selection, weighting, and risk control schemes) can be selected among the 3,817 smart beta indices currently available on the platform.

Furthermore, users can design appropriate benchmarks for analysing the benefits and risks of alternative equity index strategies. Currently, the choices available cover the developed universe. Investors may also select stocks that will enable them to exercise initial control over the risks that they prefer to favour or to avoid. The options available in relation to weighting schemes are those of diversification strategies.
Multi-Strategy Indices

For investors who do not have a preference for any particular weighting scheme, ERI Scientific Beta has defined multi-strategy indices that can diversify the risk of diversification, i.e. the risk inherent in the diversification model used (strategy or operational-specific risks). For a given factor exposure, this index is diversified by equally weighting each of the five diversification weighting schemes.

ERI Scientific Beta is currently offering 944 multi-strategy factor indices, corresponding to a choice of factor exposures popular with investors, and to smart diversification of the indices representing these factor choices. On average, compared to traditional factor indices, these Scientific Beta Diversified Multi-Strategy factor indices improve the Sharpe ratio by 35% over the long term\(^1\).

Among these smart factor indices, ERI Scientific beta has identified 464 Diversified Multi-Strategy indices representing both exposures to risk factors that are well-rewarded over the long term (Low Vol, Mid Cap, Value, High Momentum, High Dividend Yield, Mid Liquidity, Low Investment and High Profitability) and strong diversification of the specific or non-rewarded risks. Ultimately, the performance of these factor indices allows investors to avail of extremely well-performing building blocks for their smart beta allocation with an average long-term outperformance of 3.38% in relation to the broad cap-weighted index\(^2\).

The choice of indices proposed by Scientific Beta also allows for the implementation of conditional or tactical allocation strategies, which can use other exposures to risk factors with attractive conditional or short-term performance.

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1 - Average of the differences in Sharpe ratio observed between December 31, 1975 and December 31, 2015 (40 years) for all long-term track record multi-strategy factor indices and their cap-weighted factor equivalent calculated on a universe of the 500 largest capitalisation US stocks. All the details on the calculations and the indices are available on the www.scientificbeta.com website.

2 - Average excess return (over the broad CW index) across these eight factor-tilted Diversified Multi-Strategy indices observed between December 31, 1975 and December 31, 2015 (40 years) calculated on a universe of the 500 largest capitalisation US stocks. All the details on the calculations and the indices are available on the www.scientificbeta.com website.
Multi-Beta Indices

The choice of smart factor indices allows for implementation of multi-smart-beta risk allocation strategies. These smart beta allocation strategies can be designed with objectives expressed in absolute or relative terms with respect to cap-weighted indices. These strategies benefit not only from the performance of Scientific Beta’s smart factor indices but also from the allocation to decorrelated sources of risks.

As of March 2016, ERI Scientific Beta are offering 276 multi-beta indices that are representative of robust methods of diversifying between smart factor indices: equal-weighting and equal risk contribution, together with a series of multi factor quality indices.

The equal-weighting allocation is part of a robust diversification perspective in absolute terms. The equal risk contribution approach selected by ERI Scientific Beta is a relative risk allocation. It aims to equalise the contribution of each index to the tracking error risk.

Among these multi-beta indices, 48 multi-beta multi-strategy indices offer a high-performance solution to allocation between smart betas as part of a smart factor diversification approach: 16 multi-beta multi-strategy equal-weight (EW) indices, 16 multi-beta multi-strategy equal risk contribution (ERC) indices, and 16 multi-beta multi-strategy quality indices. The multi-beta multi-strategy EW (ERC) indices are an equal-weighted (equal risk contribution) combination of the four multi-strategy smart factor indices – Mid Cap, High Momentum, Low Volatility and Value. The multi-beta multi-strategy quality indices are an equal-weighted combination of the two multi-strategy smart factor indices - Low Investment and High Profitability.

### Risk and Performance of Scientific Beta Multi-Strategy Factor Indices

<table>
<thead>
<tr>
<th>US Long-Term Track Records (Dec 1975- Dec 2015)</th>
<th>Scientific Beta USA Long-Term Diversified Multi-Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann. Rel. Returns</td>
<td></td>
</tr>
<tr>
<td>Tracking Error</td>
<td></td>
</tr>
<tr>
<td>Information Ratio</td>
<td></td>
</tr>
<tr>
<td>Outperformance Probability (3Y)</td>
<td></td>
</tr>
<tr>
<td>Outperformance Probability (5Y)</td>
<td></td>
</tr>
<tr>
<td>95% Tracking Error</td>
<td></td>
</tr>
<tr>
<td>Max. Rel. DrawDown</td>
<td></td>
</tr>
<tr>
<td>Mid-Cap</td>
<td>3.98%</td>
</tr>
<tr>
<td>Momentum</td>
<td>3.16%</td>
</tr>
<tr>
<td>Low Volatility</td>
<td>2.71%</td>
</tr>
<tr>
<td>Value</td>
<td>4.01%</td>
</tr>
<tr>
<td>Low Investment</td>
<td>3.57%</td>
</tr>
<tr>
<td>High Profitability</td>
<td>2.85%</td>
</tr>
<tr>
<td>Mid Liquidity</td>
<td>3.69%</td>
</tr>
<tr>
<td>High Dividend Yield</td>
<td>3.04%</td>
</tr>
</tbody>
</table>

Analysis period = December 31, 1975 to December 31, 2015 (40 years). Stock Universe = 500 largest market cap US stocks. All statistics are annualised. The cap-weighted reference index is based on the 500 largest market cap US stocks.

### Risk and Performance of Multi-Beta Multi-Strategy Indices

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ann. Excess Returns</td>
<td>3.53%</td>
<td>3.38%</td>
<td>3.24%</td>
</tr>
<tr>
<td>Tracking Error</td>
<td>4.92%</td>
<td>4.60%</td>
<td>4.43%</td>
</tr>
<tr>
<td>Information Ratio</td>
<td>0.72</td>
<td>0.73</td>
<td>0.73</td>
</tr>
<tr>
<td>Max. Rel. Drawdown</td>
<td>33.65%</td>
<td>28.74%</td>
<td>31.38%</td>
</tr>
<tr>
<td>Outperformance Probability (3Y)</td>
<td>79.61%</td>
<td>79.92%</td>
<td>81.68%</td>
</tr>
<tr>
<td>Outperformance Probability (5Y)</td>
<td>90.21%</td>
<td>90.37%</td>
<td>88.84%</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>0.65</td>
<td>0.64</td>
<td>0.63</td>
</tr>
<tr>
<td>Sharpe Ratio (CW)</td>
<td>0.38</td>
<td>0.38</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Analysis period = December 31, 1975 to December 31, 2015 (40 years). Stock Universe = 500 largest market cap US stocks. All statistics are annualised. The cap-weighted reference index is based on the 500 largest market cap US stocks.
In order to facilitate investment in smart beta strategies, Scientific Beta provides daily transparency. This daily transparency is available for all the Scientific Beta indices. The data can be readily downloaded but can also be made available through a secure FTP service. ERI Scientific Beta’s Replication module offers the following features:

- FTP access
- Constituent weights (daily, quarterly)
- End of day equity stock prices, spot rates
- Corporate actions (daily, announcements)
- Rebalancing preview information (quarterly)
- SEDOL identifiers
- TRBC (sector classification)

In addition to providing daily valuation and current weight files with SEDOL codes, this module enables investors and asset managers to anticipate the processing of announced corporate actions and quarterly rebalancing by providing a preview of corporate actions, and quarterly review files with SEDOL identifiers. This includes the actual impact of corporate actions (price adjustment factor, shares adjustment factor) allowing index users to check these results against the announcement.

**Turnover and Capacity**

Alternative beta strategies may exhibit a higher level of turnover compared to their cap-weighted counterparts as they also involve some rebalancing of constituent weights. In order to guarantee reasonable execution costs for the smart beta strategies, all of the Scientific Beta indices are subject to two types of implementation rules: on the one hand, turnover control which aims to limit the annual one-way turnover to 30%, and on the other, additional weight adjustments to limit the liquidity issues that may arise when rebalancing a Scientific Beta index and trading its constituents. The principle used to make such adjustments is to impose a threshold for the weight of a stock and for the weight change at rebalancing, relative to the market-cap-weight of the stock in its universe.
Furthermore, since the investability of alternative equity indices is a key focus, ERI Scientific Beta proposes turnover and capacity analytics on its platform.

Firstly, turnover varies greatly from one index to another, depending on the inputs entering the weighting mechanism, hence the importance of measuring and reporting the turnover of all Scientific Beta indices through the turnover analytics available on the platform. These analytics allow the ex-post verification of the 30% turnover objective that was defined ex-ante.

Secondly, the capacity of a fund or an index is an important criterion with regards to its investability. The capacity is strongly linked to the liquidity of the constituents: the more liquid they are, the higher the capacity. Therefore, ERI Scientific Beta measures and reports a proxy for the capacity of all available indices.

The definition of capacity depends on a set of arbitrary assumptions including the conditions under which the fund will have to deviate from its strategy in order to avoid illiquidity issues. These conditions are often expressed as a proportion of current float and/or trading volume.

ERI Scientific Beta has chosen to estimate the capacity of an index by the weighted average market capitalisation of its constituents, which has the advantage of providing a clear and systematic comparison with the cap-weighted index that is considered to be a reference in investment capacity.

To summarise, the Scientific Beta indices were designed not only with the goal of representing the state-of-the-art in academic research but also for genuine investability by practitioners.

- **Low turnover:** A budget constraint of a maximum 30% annual one-way turnover is implemented in the construction methodology of all Scientific Beta indices
- **Constraints:** Implementation of weight and trading constraints relative to cap-weighted to manage the impact of the capacity effect and facilitate the implementation of smart beta strategies
- **Liquidity:** The possibility for investors who so wish to reduce the application of the smart beta weighting scheme to the most liquid stocks in the reference universe (highly liquid indices)
A wide variety of equity strategies exists. These are systematic beta strategies but they differ from standard market cap-weighting in their construction method. New types of advanced beta indices and funds are launched with increased frequency, with providers reporting the outperformance of their approaches over standard indices. However, this information does not allow strategies to be compared on an unbiased and similar basis as they are often promoted by competing index providers.

Scientific Beta, as a multi-strategy platform, allows investors to avail of a coherent and unbiased vision of the performances and risks of the main smart beta strategies and of their implementation through indices.

The Smart Beta 2.0 approach promoted by ERI Scientific Beta, enables investors to have at their disposal a wide choice of indices according to the universe of stocks selected and to the risks to which they wish, or do not wish, to be exposed. This wealth of choice has led to the availability as of March 2016 of some 3,817 indices. Advanced Analytics enable you to analyse the performance and risks of this wide range of indices.

These analytics are composed not only of summary but also of advanced analyses. The functionalities enable the performance and risks to be measured in both absolute and relative terms and also allow the user to qualify the risk-adjusted performance, to know the geographic, style and sector exposures, and to understand the source of the performance (performance attribution).

One of the advantages of investing in Smart Beta 2.0 is to be able to have access to indices that are exposed to very differentiated risk premium variations. Advanced Analytics allow you to easily measure and compare such conditional performances, whether taking into account market returns or market volatility.

In short, Advanced Analytics available on the scientificbeta.com platform help guide investors in the choice of an appropriate investment strategy through:

- Absolute/relative risk and performances metrics
- Extreme risk statistics
- Fundamental attributes of the index
- Measurement of exposure to risk factors and their contribution to performance
- Analysis of sector and geographical risks
- Quality of index diversification
- Probability evaluation of out-of-sample index outperformance
- Turnover and liquidity statistics
- Scrutiny of selected indices according to risk appetite, risk-adjusted performance, and performance as a function of market conditions

Extreme Relative Return (5%) and Extreme Tracking Error (95%) measure the maximum amount of relative loss and tracking error volatility that the strategy can suffer at a 95% confidence level, based on the distribution of rolling window relative returns and tracking errors.
Scientific Beta Fully Customised Benchmarks
Service and Scientific Beta EDHEC-Risk Smart Beta Solution Benchmarks
Scientific Beta Fully Customised Benchmarks is a service proposed by ERI Scientific Beta, and its partners, within 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.

In 2016, ERI Scientific Beta established an offering based on EDHEC-Risk Institute’s applied research expertise in the field of risk management. This offering, referred to as “Scientific Beta EDHEC-Risk Smart Beta Solution Benchmarks”, enables tailored solutions for multi smart beta allocation to be defined for institutional investors and asset managers, allowing specific objectives with regard to relative or absolute risks in an asset management only or an asset-liability management dimension to be taken into account.

For further information about these services, please contact our Client Services department on +33 493 187 851 from 9.00am to 6.00pm CET or at clientservices@scientificbeta.com.
ERI Scientific Beta consists of a team of 45 staff dedicated entirely to the design and production of the indices and related services.

With a concern to provide worldwide client servicing, ERI Scientific Beta has a presence in Boston, London, Nice, Singapore and Tokyo.

The Research & Development Centre is located in Nice, France and is managed by Dr. Felix Goltz, Director of Research & Product Development at ERI Scientific Beta.

Both the external validation of the research and the research relationship with EDHEC-Risk Institute are managed by Professor Lionel Martellini, Senior Scientific Advisor with ERI Scientific Beta, and Director of EDHEC-Risk Institute.

The headquarters are located in Singapore where the co-ordination of the Client Services and Scientific Beta Fully-Customised Benchmarks activities takes place. Professor Noël Amenc is the CEO of ERI Scientific Beta.

The ERI Scientific Beta Client Services department provides a centralised and high-quality customer-focused service to both existing and new clients, where quality is measured in terms of addressing the query to a person who is qualified to answer the question and being able to do so in a timely manner. The Client Services team handles a wide range of questions from use of the website to technical and conceptual questions concerning ERI Scientific Beta indices.

The Client Services team works closely with the Operations team to ensure that clients that replicate ERI Scientific Beta indices are informed of all changes and information that affect index constituents, by email, in a consistent and timely fashion.

For the administration of its IT infrastructure, ERI Scientific Beta uses cloud computing services.
LIVE IS BETTER

Since November 23, 2009, EDHEC-Risk Institute has been designing equity smart beta indices. With live annualised outperformance of 2.41%¹ for more than six years, these Smart Beta 1.0 indices based on the Efficient Maximum Sharpe Ratio methodology have shown that a good diversification method can lead to significant and robust outperformance over cap-weighted indices.

Since 2012, with the Smart Beta 2.0 framework, EDHEC-Risk Institute has created Scientific Beta Smart Factor Indices that are even better diversified and therefore more successful.

The Scientific Beta Smart Factor Indices for the rewarded long-term risk premia of Mid-Cap, Value, Momentum and Low Volatility have all produced positive annualised performance for all regions since they went live on December 21, 2012, with average annualised outperformance over the cap-weighted benchmark of 2.90%.²

The Scientific Beta multi-smart-factor indices, which allocate to these four Smart Factor Indices, have a live track record that is even better than that of our Smart Beta 1.0 offering, with an annualised outperformance of 4.00% compared to their cap-weighted benchmark.³

We believe that the academic consensus and concern for robustness that underlie the design of our smart beta indices are always demonstrated, not only in our long-term track records, but also in our live performances.

¹ - The average annualised outperformance of the FTSE EDHEC-Risk Efficient Index series (all regions) is 2.41% compared to its cap-weighted benchmark, computed using daily total returns from November 23, 2009 (live date) to December 31, 2015. The regions in question are the USA, UK, Eurozone, Japan, Developed Asia-Pacific ex Japan and Developed World. The benchmark used is a cap-weighted portfolio of all stocks in the respective Scientific Beta universes.

² - Analysis is based on daily total returns from December 21, 2012 to December 31, 2015 for the USA, Eurozone, UK, Developed Europe ex UK, Japan, Developed Asia Pacific ex Japan, Developed ex UK, Developed ex US and Developed regions. The live date of the four Smart Factor Indices – Mid-Cap, Value, Momentum and Low Volatility – is December 21, 2012 for all regions. The benchmark used is a cap-weighted portfolio of all stocks in the respective Scientific Beta universes. The average outperformance for each factor across all regions is as follows: Mid-Cap (2.62%), Value (1.15%), Momentum (4.31%) and Low Volatility (3.50%), leading to an average across all four factors of 2.90%. All statistics are annualised. Source: scientificbeta.com.

³ - The average live outperformance across all Scientific Beta developed regions of Scientific Beta Multi-Beta Multi-Strategy (Equal Weight and Relative Equal Risk Contribution) indices is 4.00% and 3.77% respectively, while that of the Efficient Maximum Sharpe Ratio strategy in the same period is 2.85%. This live analysis is based on daily total returns in the period from December 21, 2012 (live date) to December 31, 2015, for the following developed world regions – USA, Eurozone, UK, Developed Europe ex UK, Japan, Developed Asia Pacific ex Japan, Developed ex UK, Developed ex USA and Developed. The benchmark used is a cap-weighted portfolio of all stocks in the respective Scientific Beta universes.

For more information, please visit www.scientificbeta.com or contact Mélanie Ruiz on +33 493 187 851 or by e-mail at melanie.ruiz@scientificbeta.com

Information containing any historical information, data or analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction. Past performance does not guarantee future results.