CELEBRATING **THREE YEARS** OF PARTNERSHIP

Amundi
ASSET MANAGEMENT
ETF INDEXING SMART BETA

Scientific Beta
An EDHEC-Risk Institute Venture

In 2017, ERI Scientific Beta and Amundi ETF, Indexing & Smart Beta are celebrating the third year of their partnership, which provides investors with multi-smart multi-factor passive solutions.

Through the partnership, investors can benefit from Scientific Beta's platform, which aims to help them understand and invest in a wide choice of smart beta indices, as well as Amundi's state-of-the-art indexing capabilities.

Both leading players are strongly committed to providing transparency and education that meet the needs of new investors in the field of smart beta.

JOINT INTERVIEW

Fannie Wurtz, Managing Director of Amundi ETF, Indexing and Smart Beta and Noël Amenc, CEO of ERI Scientific Beta, discuss the main trends and challenges they face as solution and index providers in the very dynamic field of smart beta and factor investing.


Fannie Wurtz, Managing Director of Amundi ETF, Indexing and Smart Beta


Noël Amenc, CEO of ERI Scientific Beta

What are the main challenges you face and observe in the smart beta/ factor investing area?

Fannie Wurtz: With an extensive product offering in this area, the main challenge for investors remains how to select the best product that meets their investment requirements and how to capture the right factor exposure while benefitting from good quality of replication. **We worked closely with ERI Scientific Beta to come up with the most innovative, proven and cost-efficient solutions to address these concerns, leveraging on our indexing capabilities and ERI Scientific Beta's smart beta index construction expertise.**

Noël Amenc: The challenge that we have sought to meet is to have smart factor indices that perform well thanks to their core diversification and relevant factor exposure. **We aim to ensure that the factor exposure target is respected through risk-controlled top-down allocation between indices.**

What are the main achievements that you have delivered over the past three years?

FW: Amundi has become a reference in smart beta investing, managing over €12 billion AUM in both passive and active solutions; we provide our clients across the world with a complete and complementary offering helping them to achieve their long-term allocation objectives through our robust, innovative and transparent solutions.

NA: Assets under management replicating Scientific Beta indices have already reached €16bn. Scientific Beta's clients are not only major international institutional investors, but also tier 1 asset managers and investment banks.

What are your views on the current trends in the industry and in investors' use of smart beta?

FW: EDHEC-Risk Institute's latest survey has confirmed what we have seen in recent years in the market. Investors are showing a growing appetite for smart beta solutions through active or ETF vehicles but they also want to be flexible and fit within their structural requirements; hence the need for more customised solutions. **Multi factor allocation is the main trend we have noticed, with a strong interest in dynamic allocation to help investors managing risks, including market regime shifts.**

NA: Many asset managers and index providers are now speaking about factor rotation, which relates to the subject of dynamic allocation. Our view is that investors should avail of the real advantages of dynamic risk management supported by more than 50 years of academic research but should avoid taking the risk of forecasting future factor returns; by wanting to put alpha back into smart beta investors will lose the response to the main motivation for investing in smart beta: the difficulty in forecasting the future.

How are clients' needs evolving?

FW: Our clients who invest in smart beta and factor investing products have specific investment requirements such as reducing their overall portfolio risk, improving diversification or enhancing their risk-adjusted returns. Clients want more development in this area, and they are looking for more customised solutions such as applying a smart beta strategy to their equity portfolio or combining a smart beta equity portfolio with an ESG filter. Regarding other asset classes, they are also looking for fixed-income smart beta solutions.

NA: We increasingly believe that if investors wish to distance themselves from the market average as represented by cap-weighted indices, then this distance needs to be managed. This is the objective of risk management in smart beta and it requires three key investment principles: The first is that investors should choose how far they wish to distance themselves from cap-weighted indices. The second element is that smart beta not only involves betas but also risk premia. If investors decide to distance themselves from cap-weighting by exposing themselves to different risk factors, it is because **they are, above all, interested in the premia associated with these factors**. The final element is that the risk premia are also conditional or cyclical. This means **that risk management needs to take into account the dynamics of betas and the premia that are associated with them.**

After three years of partnership, what do you believe are the main perspectives as an asset manager/ index provider?

FW: We see two main challenges in this growing market when it comes to managing smart beta solutions:

- Implementation: beyond the question of where Smart Beta could slot into a portfolio, the challenge for asset managers is to provide solid index replication capabilities, which are frequently seen as more volatile, less liquid, etc. In addition to our 10-year knowledge of Smart Beta strategies, being part of Amundi enables us to benefit from the group's pricing power to lower transaction costs.
- Transparency: Amundi is fully committed to providing investors with all necessary information on product structuring and above all on the index methodology and management process to facilitate selection and reporting.

NA: Market exposure is a first-order issue for investors today. A large share of performance conditionality relates to the CAPM betas of smart beta offerings, which are often defensive and unstable. When market beta is stabilised it creates smooth outperformance and allows market conditionality to be controlled. The beauty of passive investment is that the first-order issue receives the most attention, because there is no focus on stock picking."

PARTNERSHIP MILESTONES

• ***February 17, 2014***, Amundi and ERI Scientific Beta announce their strategic partnership.

• ***June 12, 2014***, Amundi lists the first Multi Smart Beta ETF on Euronext Paris providing investors with exposure to the Scientific Beta Developed Multi-Beta Multi-Strategy ERC index.

• ***July 2014***, Release of the research publication *Risk Allocation, Factor Investing and Smart Beta: Reconciling Innovations in Equity Portfolio Construction*, produced as part of the "Amundi ETF, Indexing and Smart Beta Investment Strategies" research chair at EDHEC-Risk Institute.

• ERI Scientific Beta wins of 'Best Index Provider Website' award for 2014 from ETF.com

• ***February 2015***, Amundi ETF wins the "Agefi Equity Innovation" Award for the AMUNDI ETF GLOBAL EQUITY MULTI SMART ALLOCATION SCIENTIFIC BETA UCITS ETF

• ***April 2015***, Study entitled *Investor Interest in and Requirements for Smart Beta ETFs* released as part of the "Amundi ETF, Indexing and Smart Beta Investment Strategies" research chair at EDHEC-Risk Institute.

• ***June 23, 2015***, Amundi expands its index range with the launch of the Amundi Index Equity Global Multi Smart Allocation Scientific Beta index fund.

• ***January 28, 2016***, Amundi extends its ETF range with an innovative Multi Smart Beta ETF offering exposure to European equities. The ETF tracks the Scientific Beta Extended Developed Europe Multi-Beta Multi-Strategy ERC index.

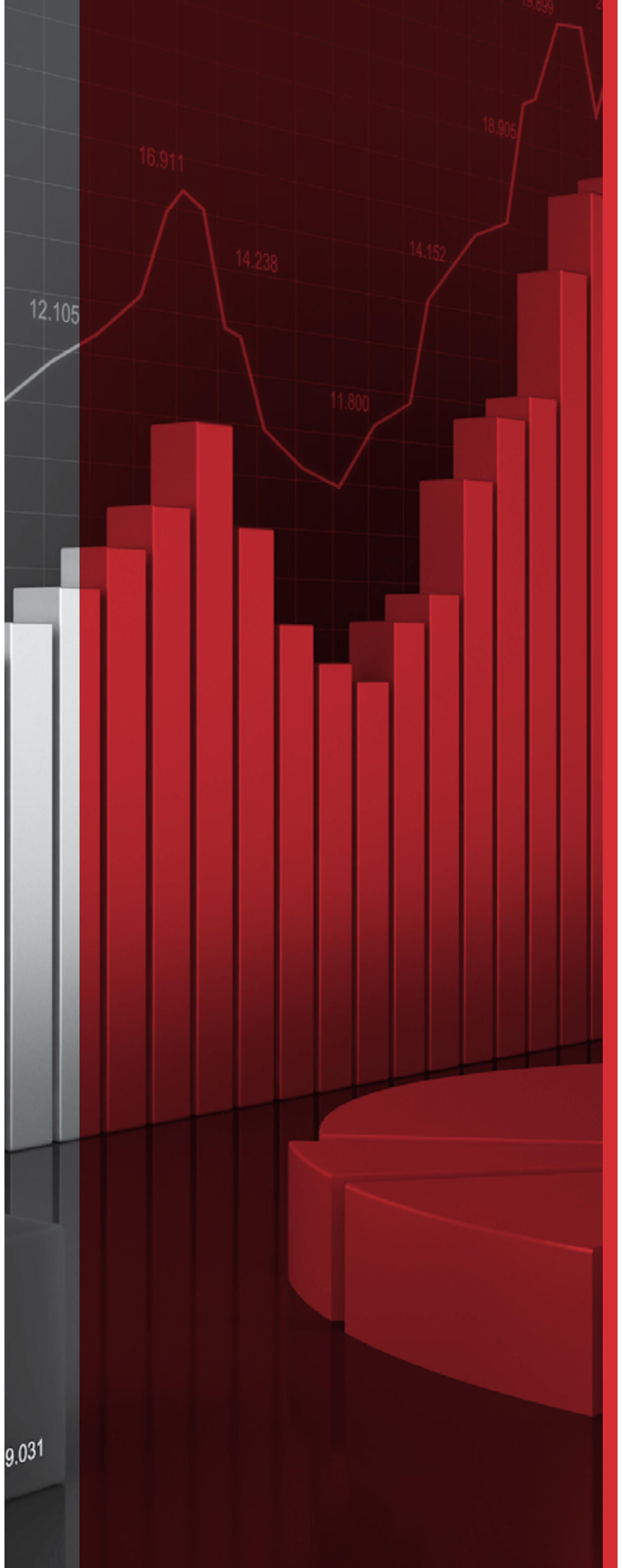
• ***August 2016***, Study entitled *Investor Perceptions about Smart Beta ETFs* released as part of the "Amundi ETF, Indexing and Smart Beta Investment Strategies" research chair at EDHEC-Risk Institute.

• ***March 16, 2017***, Research publication *Smart Beta Replication Costs* released as part of the "Amundi ETF, Indexing and Smart Beta Investment Strategies" research chair at EDHEC-Risk Institute.

• ***April 25, 2017***, Amundi launches a new Multi Smart Beta ETF offering investors exposure to US equities. The ETF tracks the Scientific Beta US Multi-Beta Multi-Strategy ERC index.

• ***June 2017***, Amundi and ERI Scientific Beta celebrate the anniversary of their 3-year partnership.

• ***October 2017***, Amundi receives Financial News Smart Beta Manager of the year award



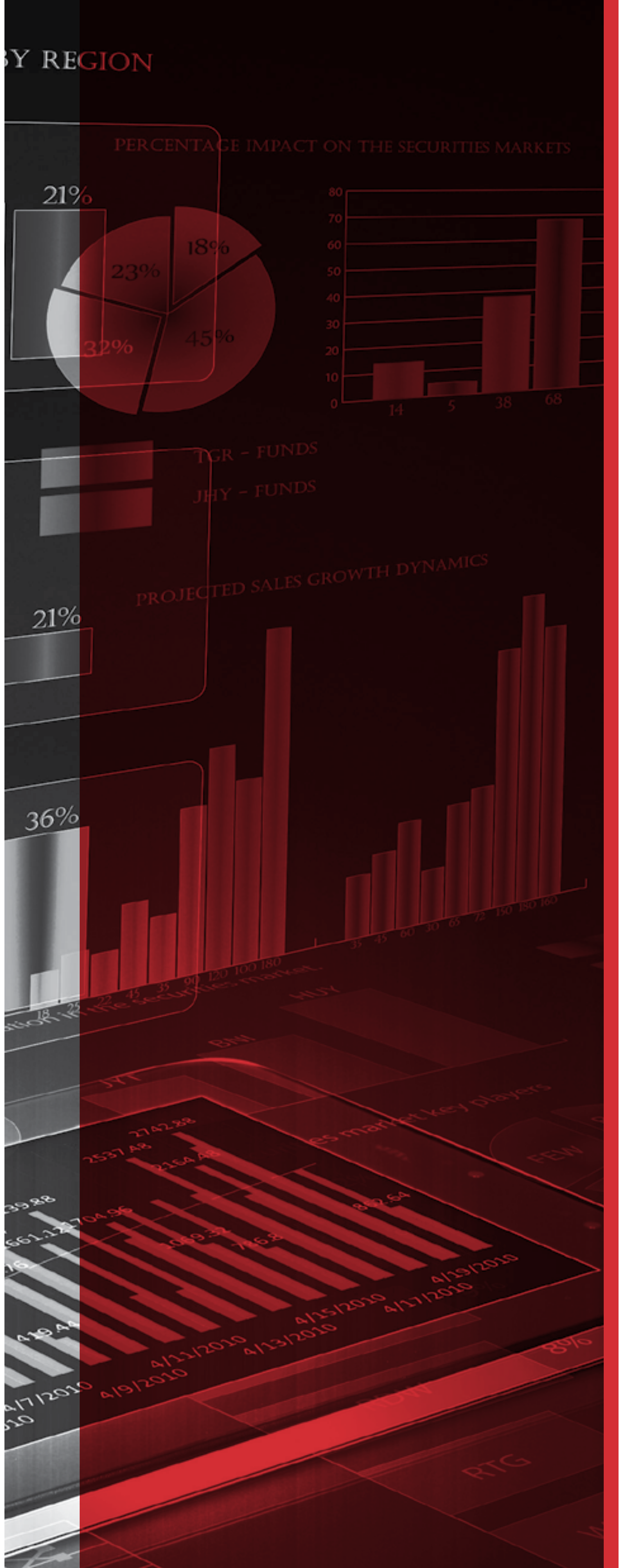
THE RATIONALE BEHIND MULTI FACTOR ALLOCATION

Investors can expect benefits from relying on indices that tilt towards well-documented factors, which carry sizeable and repeatable return benefits over long investment horizons. The risk premia from well-documented factors backed by sound economic rationales are robust and likely to persist over the long term.

There is also strong intuition suggesting that multi-factor allocations will tend to result in improved risk-adjusted performance. Even though the factors towards which the factor indices are tilted are all rewarded over the long term, there is extensive evidence that they may each encounter prolonged periods of underperformance. More generally, the rewards for exposure to these factors have been shown to vary over time. If this time variation in returns is not completely in sync for different factors, **allocating across factors allows investors to diversify the sources of their outperformance and smooth their performance across market conditions (as different factors work at different times)**.
In particular, exposure to various factors whose premia behave differently over time and across market conditions provides for smoother outperformance. In addition, natural crossing benefits are found to reduce the turnover of multi-factor mandates below that of the average single-factor mandates. Investors may thus be well-advised to further explore the potential of multi-factor allocations in a variety of investment contexts. **To assist institutional investors and intermediaries in this endeavour, ERI Scientific Beta has combined robust smart factor indices that tilt towards widely-accepted factors into multi-beta multi-strategy indices that benefit from two levels of diversification**:

- Diversification of idiosyncratic risk at the stock level through the application of a smart weighting scheme (smart factor index) and at the weighting scheme level through the combination of five diversification strategies in the diversified multi-strategy scheme;

- Diversification across systematic sources of returns (i.e. factor premia) to produce smoother outperformance (multi-beta).



THE CHALLENGES OF MULTI-SMART BETA INVESTING

It is often said that smart beta strategies will entail higher replication costs than cap-weighted market indices. While this is obviously true, the crux of the question is not whether transaction costs are higher but whether, after accounting for such costs, there are any benefits in terms of net returns. A reasonable expectation from an investor's perspective is that providers should disclose the level of transaction costs generated by their strategies to allow for information on net returns. However, providers typically fail to make explicit adjustments for transaction costs and satisfy themselves with reporting gross returns, leaving it to other market participants to figure out what the transaction costs consist of.

The recent paper entitled "Smart Beta Replication Costs" released as a part of the "Amundi ETF, Indexing and Smart Beta Investment Strategies" research chair, set out to apply methods for explicit cost measurement, and drew conclusions on smart beta strategies. In terms of replication cost estimates that result from applying our methodology, we obtain several interesting findings.

- **Transaction costs can effectively significantly impact the implementation of Smart Beta strategies and their performance benefits.** Additionally, those implementation challenges crucially depend on the underlying universe.
- The good news is that practical implementation rules can ease liquidity and cost issues. Then, once implemented, **the performance benefits of smart beta largely cover transaction costs.**
- **The average annualised transaction costs over a 42-year period are between 0.13% to 0.18%, while gross returns relative to the cap-weighted index range from 2.38% to 3.93%.**

"With in-depth knowledge of benchmark construction from over 30 years of expertise, Amundi is a trusted name in replicating Smart Beta indices and addressing their inherent challenges."

Laurent Trottier, Global Head of ETF, Indexing & Smart Beta Management, Amundi

THE CHALLENGES OF MULTI-SMART BETA INVESTING

"Over the past year and a half we have been exploring smart beta strategies and we particularly appreciated ERI Scientific Beta's rigorous approach.

Coupled with Amundi's aggressive ETF pricing it should continue producing interesting instruments to be used on the market."


Giacomo Chiorino, Head of Market Analysis, Banca Patrimoni Sella & C.

"We are basically a passive investor in equities, and had been investing only in passive ETFs replicating cap-weighted indices. We began to look at factor investing a couple of years ago and decided that it would be useful to diversify the equity portfolio, both for the potential alpha and also to mitigate downside risk. We started by looking at the academic research and the main papers that had been written over the past 20 to 25 years and came to the conclusion that what was being proposed by Amundi with Scientific Beta was exactly what we were looking for.

We do not want to time the factors; we believe in the long-term reward of the main factors, namely size, momentum, value, low volatility and quality, so we realised that the best approach would be a diversified ETF, and the work done by Amundi and Scientific Beta was therefore attractive to us."


Thierry Brevet, General Manager, The West of England Ship Owners Mutual Insurance Association

THE ROLE OF RISK FACTORS **IN THE INVESTMENT PROCESS**

Lionel Martellini, Director, EDHEC Risk Institute; Professor of Finance, EDHEC Business School

Factor investing recommends that allocation decisions be expressed in terms of risk factors, as opposed to standard asset class decompositions. While the relevance of factor investing is now widely accepted amongst sophisticated institutional investors, an ambiguity remains, however, with respect to the exact role that risk factors are expected to play in the investment process.

The main objective of new research that is being conducted by EDHEC-Risk Institute is to contribute to the widespread acceptance of factor investing by providing useful pedagogical clarification with respect to the benefits of factor investing in an institutional context. In particular, we aim to provide a meaningful and comprehensive factor allocation framework that can be used by institutional investors to coherently formalise the whole investment process across and within asset classes.

This analysis highlights that an important distinction exists between two main types of benefits that can be expected from factor investing.

• Adopting a focus on the allocation perspective, we argue that **factor investing allows for better structuring of the investment process, both from an asset-only perspective and from an asset-liability management perspective**.

• Shifting to a focus on the benchmarking perspective, we argue that **factor investing allows for more efficient harvesting of risk premia compared to traditional approaches focusing for example on sector decompositions**. We finally extend the analysis to alternative risk premia, which can be found both as long/short portfolios in the equity universe or as cross-asset portfolios such as value or momentum everywhere factors.

WHAT'S NEXT FOR INVESTORS?

As observed by Amundi, investors' main motivations for adopting smart beta strategies are to improve performance and manage risk. They also use these strategies to manage exposure to macro risk factors, benefit from a cost-efficient and transparent solution and, to a less extent, address regulatory constraints.

Investors plan to increase their investment in smart beta products over the next three years and require further developments mainly on the fixed-income side. They would also like to see more customised solutions addressing their specific needs, such as adding an ESG filter to a smart beta strategy.

It is also important to note that investors express specific needs when it comes to Smart Beta and Factor Investing, as shown in the following table:

	2016	2015
Information on liquidity and capacity	#1	#2
Index construction methodology	#2	#1
Information on transaction costs	#3	#6
Sensitivity of performance to strategy specification choices	#4	#3
Factor exposures	#5	#5

At Amundi, we strongly believe that the best way to deliver consistent performance over the long term is by managing risks. We provide investors with added-value services to analyse their portfolios and identify factor or risk biases that may negatively affect their performance through a robust process. Furthermore, we share with ERI Scientific Beta the requirement for exhaustive and transparent information on construction techniques, performance and the risks embedded in the smart beta area.

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Information reputed exact as of September 2017

Amundi ETF, Indexing & Smart Beta designates the ETF, Indexing & Smart Beta business line of Amundi Asset Management.

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