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Investor Perceptions about Smart Beta ETFs

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Executive Summary

Executive Summary

EDHEC-Risk Institute conducted its 9th survey of European investment professionals about the usage and perceptions of ETFs at the end of 2015. The aim of this study was to analyse the usage of exchange-traded funds (ETFs) in investment management and to give a detailed account of the current perceptions and practices of European investors in ETFs. Responses were provided by 219 European investment decision-makers, 180 of which were ETF users. The survey respondents were from 25 different countries, with 41% of them being from the UK and Switzerland. A vast majority of survey respondents were Institutional managers (76%) and more than half of the respondents (51%) were asset managers.

For the third year running, in view of the considerable development in new forms of indices, as well as the increasing attention smart beta ETFs have received in the media in the recent years, part of the survey was dedicated to investment professionals' practices and use of products tracking smart beta indices and on the importance of risk factors in alternative equity beta strategies. The present document is a focus on investor perceptions about smart beta ETFs, as reported by the survey.

Though smart beta ETFs represent only a fraction of overall ETF assets, there has been tremendous growth recently in terms of both assets under management and new products, as illustrated by global figures provided by ETFGI. While estimates on the assets in smart beta ETFs vary across authors and obviously depend on what is classified as smart beta, some estimates put the current assets under management at several hundred billion dollars. For example, Basar (2015) finds that towards the end of 2015, there were globally 764 smart beta equity ETFs/ETPs, representing approximately $400bn of assets, from 106 providers in 27 countries.

From our survey, it appears that investment professionals have a growing interest in smart beta ETFs, but also have strong quality requirements concerning the underlying indices, most notably in terms of transparency. Our research concerning investor perceptions about smart beta ETFs allow us to draw the following conclusions:

1. ETFs are used frequently and make up an increasing proportion of portfolio holdings in the smart beta asset classes;
2. Satisfaction rates for smart beta ETFs appears to be stable at high levels for three years;
3. However, despite growing interest and high satisfaction with smart beta, the results of the survey show that investors allocate most resources to the appraisal of active managers, fewer resources to the evaluation of cap-weighted indices, and even fewer to the assessment of smart beta
4. Investors show a keen interest in smart beta ETFs based on agreement with research results on the benefits of smart beta. In addition, investors require full transparency on methodology and risk analytics for smart beta indices;
5. Investors have strong requirements for equity factors, including both a risk-based economic rationale and extensive empirical evidence;
6. However, there is an important gap between investors' information requirements for smart beta and accessibility of information from providers.

Overall it thus appears that smart beta ETFs are highly sought after by investors. However, at the same time, investors face challenges in terms of their ability to evaluate these products. In particular, our results suggest that investors employ

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limited resources for smart beta evaluation and they do not believe that information considered important for assessing smart beta strategies is made available to them by providers with sufficient ease, especially when it comes to data-mining risks and holdings-based information needed for risk assessment.

In the end, the mismatch between investors' great expectations in smart beta, and the lack of resources to carry out comprehensive and due diligence analysis on smart beta products, is a thorny issue. The asymmetry of information between smart beta investors and smart beta providers may lead to many misconceptions, all the more that smart beta providers may be unscrupulous. On the particular subject of smart beta misconceptions, one may refer to Amenc et al. (2016b).

Executive Summary

Introduction

Introduction

Exchange-traded funds (ETFs) are perhaps one of the greatest financial innovations of recent years. Unlike conventional index funds, ETF units trade on stock exchanges at market-determined prices, thereby combining the advantages of mutual funds and common stocks. Most of them represent passive instruments designed to track the performance of a financial index as closely as possible. Recently, the standard practice of using a capitalisation-weighting scheme for the construction of indices has been the target of harsh criticism. Nowadays, growing demand for indices as investment vehicles has led to innovations including new weighting schemes and alternative definitions of sub-segments. There are many recent initiatives for non-cap-weighted ETFs as well. Since the first fundamental factor weighted ETF launched in May 2000 (Fuhr and Kelly, 2011), there have been quite a number of ETFs introduced to track non-market-cap-weighted indices,[1] including equal-weighted ETFs, minimum variance ETFs, characteristics-weighted ETFs, etc.[2] These have been coined "Smart Beta ETFs" as they seek to generate superior risk-adjusted returns compared to standard market-capitalisation-based indices.

'Smart beta' is used broadly in the industry as a catch-all phrase for new indexation approaches that deviate from broad cap-weighted market indices. The early generation of smart beta approaches (Smart Beta 1.0) aimed either at improving portfolio diversification relative to heavily concentrated cap-weighted indices (examples of such approaches are equal-weighting or equal-risk contribution, to name but two) or at capturing additional factor premia available in equity markets (such as value indices or fundamentally-weighted indices, which aim to capture the value premium). A potential shortcoming of focusing only on either improving diversification or capturing factor exposures is that the outcome, though improving upon broad cap-weighted indices, may be far from optimal. In fact, diversification-based weighting schemes will necessarily result in implicit exposure to certain factors, thus carrying the risk of unintended consequences for investors who may not be aware of the implicit factor exposures.

Factor-tilted strategies, which do not consider a diversification-based objective, on the other hand, may result in highly concentrated portfolios to achieve their factor tilts. More recently, investors have started to combine both factor tilts and diversification-based weighting schemes to produce well-diversified portfolios with well-defined factor tilts, using a flexible approach referred to as Smart Beta 2.0. This approach, in particular, allows the design of factor-tilted indices (by using a stock selection based on factor-related characteristics of stocks) which are also well diversified (through the use of a diversification-based weighting scheme among the stocks with the desired factor exposures). Such an approach is also referred to as 'smart factor investing' as it combines both the smart weighting scheme and the explicit factor tilt (see Amenc et al., 2014a). More recently, investors are increasingly turning their attention to allocation decisions across such factor investing strategies to generate additional value-added (see Amenc et al., 2014b).

Alternative equity beta investing has received increasing attention in the industry recently. Though products in this segment currently represent only a fraction of overall assets, there has been tremendous growth recently in terms of

1 - For instance, PowerShares adopted a fundamentally weighted index methodology and launched PowerShares FTSE RAFI ETFs that cover both the US and global markets since 2005. Wisdom Tree introduced a series of ETFs weighted by different fundamental factors, such as dividends and earnings since 2006. RevenueShares launches some revenue-weighted ETFs in 2008.
2 - Rydex introduced the first equal-weighted ETF in 2003. It tracks the S&P Equal Weight Index. iShares and Ossiam also launched equal-weighted ETFs in 2011. In May 2011, PowerShares launched the first beta weighted and the first volatility weighted ETFs.

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both assets under management and new product development. From January to October 2015, 148 new smart beta equity ETFs were launched by 48 providers across 33 index providers in 17 countries (ETF Strategy, November 2015)[3]. At the same time, WisdomTree Investments has the largest net inflows into smart beta ETF with $20.0bn, followed by BlackRock's iShares with $13.4bn. Vanguard is third with $6.4bn of net inflows into smart beta ETFs (Markets Media, November 2015)[4]. In terms of indexes tracked, over the first ten months of 2015, WisdomTree Indexes gathered the largest net ETF inflows with $20.0bn, followed by MSCI with $9.4bn and CRSP with $7.3bn net inflows (ETF Strategy, November 2015).

ETFGI reported record inflows of $53.7 billion into smart beta equity ETFs from January to October 2015 (ETF.com, December 2015[5]). According to Deborah Fuhr[6] from ETFGI, at the end of October 2015, there were globally 764 smart beta equity ETFs/ETPs, representing $399.3bn of assets, from 106 providers in 27 countries. At the same time, market cap equity ETFs/ETPs were gathering $1.79 trillion (Markets Media, November 2015). ETFs based on smart beta equity indices are the category of ETFs currently exhibiting the highest growth, with compounded annual growth of 39.3% over the latest five years, compared to 18.6% for ETFs based on cap-weighting indices (Markets Media, November 2015).

Over the last years several surveys have been produced about factor investing and the use of smart beta by investors. Among them, the BlackRock survey, conducted in January 2016, especially investigates the use of factors and factor-based investing but does not consider smart beta ETFs. The Ernst & Young 2015 survey dedicates only a restricted section to smart beta. Another survey, issued in 2015 by Market Strategies International, in collaboration with Invesco PowerShares, describes the growing trend of smart beta ETFs and the motivations for institutional investors to use smart beta ETFs, but does not questioned weaknesses of current products and investors' wishes concerning possible improvements. In what concerns Northern Trust, their smart beta survey was issued in 2013, at the very beginning of smart beta investing and therefore is only a description of this investment at this time and of its future evolution.

Among existing surveys related to smart beta, perhaps the most extensive one is the FTSE Russell survey issued in 2016, which covers not only Europe, but also North America and Asia. This survey mainly describes the market shares of smart beta, their growing perspectives, as well as the main motivations for investors to implement smart beta strategies.

The EDHEC Survey is not only one more survey on smart beta subject. Rather, compared with the related surveys produced by other organizations, our survey focuses more on conceptual issues, and puts more emphasis on questions about the quality of the existing products, as well as on their weaknesses, such as the lack of transparency or the risk of data-mining, as perceived by investors.

This document proceeds as follows. In the next section, we describe the methodology used to take the survey and some information about survey respondents. In section 3, we present in details investors' use of smart beta ETFs, as well as the rate of satisfaction. Section 4 reports motivations for investment in smart beta ETFs, while section 5 is dedicated to

3 - See Maher (2015).
4 - See Basar (2015).
5 - See Akhtar (2015).
6 - See Basar (2015).

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respondents' requirements for factors and smart beta products. Finally, we conclude on the keys elements evidenced in this survey.

2. Methodology and Data

2. Methodology and Data

EDHEC-Risk Institute has conducted its 9th survey[7] of European investment professionals about the usage and perceptions of ETFs at the end of 2015. The aim of this study was to analyse the usage of ETFs in investment management and to give a detailed account of the current perceptions and practices of European investors in ETFs. The survey allows us to obtain responses from 219 investment decision-makers, among which 180 use ETFs. A large share occupy high ranking positions: 17% were board members and CEOs, 32% were directly responsible for the overall investment of their company (CIOs, CROs, heads of asset allocation or heads of portfolio management), and about another quarter of the survey participants (26%) were portfolio or fund managers. 76% of respondents' main activity was institutional investment and about 19% of respondents belong to the private wealth management (see Exhibit 1). Respondents were from 25 European countries (see Exhibit 2), with 41% of them located in the UK and Switzerland, the other 59% being distributed between 23 European countries. Respondents were mainly from medium to large-sized companies (78% of them) and they together had assets under management of at least €3.1 trillion of AUM (see Exhibit 3).

7 - See Amenc et al. (2016a).

Exhibit 1: Main Activity of Respondents' Institution
This exhibit indicates the distribution of respondents according to their institution's principal activity. Percentages are based on the 219 replies to the survey.

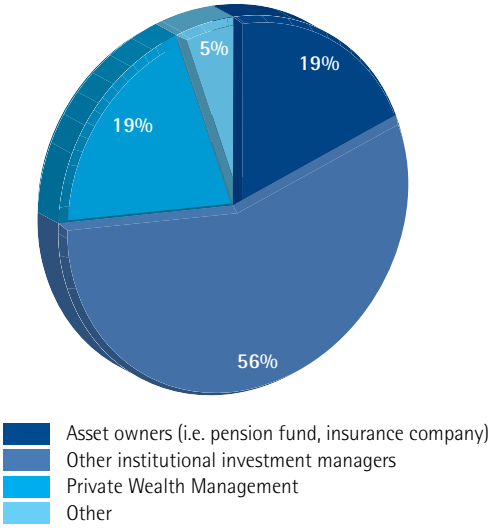
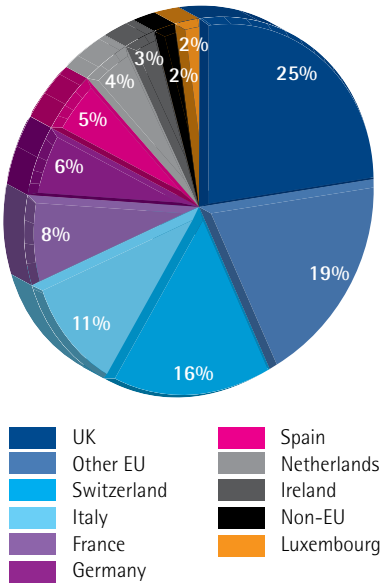
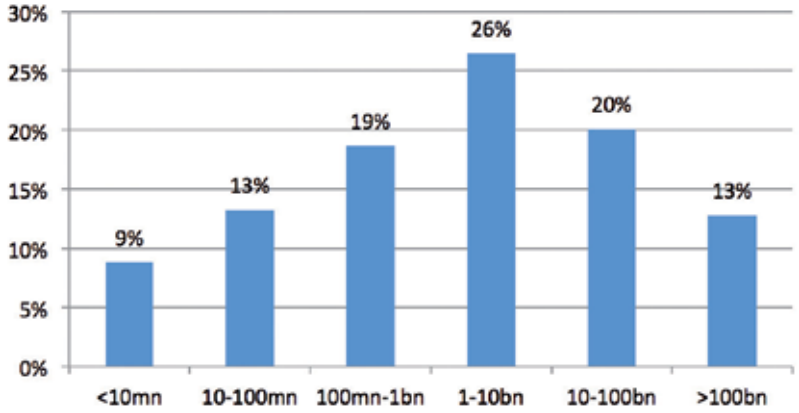


Exhibit 2: Country Distribution of Respondents
This exhibit indicates the percentage of respondents that have their activity in each of the mentioned countries. Percentages are based on the 219 replies to the survey.



2. Methodology and Data

Exhibit 3: Assets under Management (in EUR)
This exhibit indicates the distribution of respondents based on the AUM which they reported. Percentages are based on the 219 replies to the survey, excluding non responses.



2. Methodology and Data

3. Investors' Use of Smart Beta ETFs

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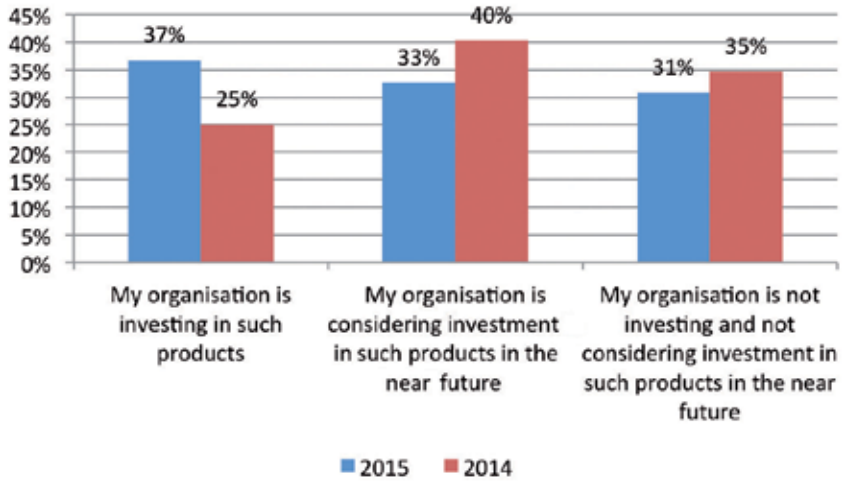
For the third year running, in view of the considerable development in new forms of indices, as well as the increasing attention smart beta ETFs have received in the media in the recent years, part of the survey was dedicated to investment professionals' practices and use of products tracking smart beta indices and on the importance of risk factors in alternative equity beta strategies.

From the results of the survey, it appears that investors show high interest in smart beta ETFs and have strong requirements for them. If we consider the whole sample of respondents, we can see that more than a third of respondents (37%) already use products that track smart beta indices, and that another third (33%) are considering investing in such products in the near future (See Exhibit 4). These results show that investors already have large interest in such products. Compared to last year, we see a large increase in the share of respondents that already use products that track smart beta indices. Consequently, we observe a decrease in the percentage of respondents that consider investment in such products in the near future. However, the cumulative percentage of those that already invest or that are considering investing in smart beta in the near future is still higher in 2015 than in 2014, which gives room for further development of smart beta ETF investment in the near future.

However, despite this growing interest for smart beta products, investors allocate fewer resources to the assessment of smart beta when compared to the appraisal of active managers or the evaluation of cap-weighted indices (see Exhibit 5). The average percentage of time personally spent by respondents is consistent with the percentage of full-time staff involved in investment strategy evaluation. While respondents spent comparable amounts of their time evaluating passive management and active managers (21% and 23%, respectively), they only spent 15% of their time evaluating smart beta and systematic factor investments. Differences are even greater when it comes to the percentage of full-time staff involved in evaluating the different forms of investment. While a quarter of full-time staff is dedicated to the evaluation of active managers, only 17% of full-time staff is employed for the evaluation of cap-weighted indices

Exhibit 4: Use of Products that Track Smart Beta Indices
This exhibit indicates the percentages of respondents that reported using products that track smart beta indices. Non-responses are excluded.

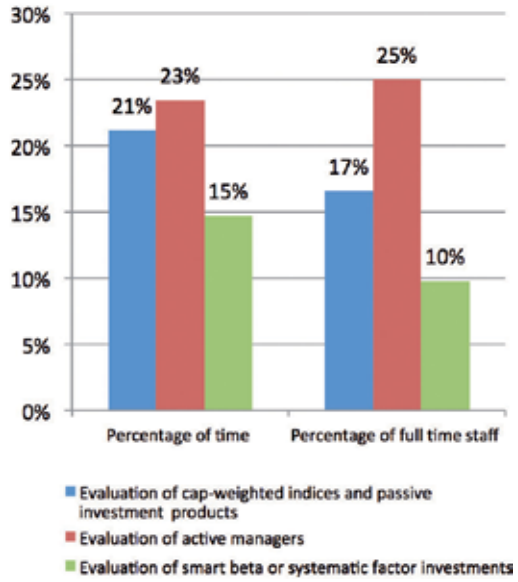


3. Investors' Use of Smart Beta ETFs

and passive investment products, and only 10% for the evaluation of smart beta or systematic factor investments. It is striking that the highest resource allocation is given to the evaluation of active managers. Moreover, a striking gap exists between the resources allocated to smart beta evaluation and the resources allocated to evaluating either traditional active management or traditional passive management products. Resources allocated to smart beta product evaluation clearly lag behind. With the increasing popularity of smart beta products, more resources should be devoted to evaluating the various offers. However, our results suggest that investors do not necessarily have the adequate resources for smart beta, which is a more recent phenomenon and which constitutes a new category in between traditional passive and active management.

If we consider now only those respondents that invest in smart beta, it is interesting to note the increase in the use of ETFs for smart beta investing, as well as the high satisfaction rate with ETFs within this asset class (see Exhibit 6). More than two-third of respondents (68%) use ETFs or ETF-like products to invest in smart beta in 2015, a considerable increase compared to 49% in 2014. These results have to be put in perspective with the percentages obtained for other asset classes, which results are available in Amenc et al (2016a). If this percentage is much lower than the one obtained for equities (91%), sectors (86%) and commodities (82%), for the first time this year it is higher than the one obtained for corporate bonds (64%) and government bonds (60%). Thus, by 2015, ETFs or ETF-like products accounted for 42% of total investment in smart beta, compared to 33% in 2014. Here again, this percentage can be compared with the one obtained for other asset classes or investment categories. It appears that smart beta is among the categories of investment for which the share of ETFs is the highest. Only investment in SRI (49%), infrastructure

Exhibit 5: Resources employed for the criteria of evaluation of investment strategies and products within your organisation
This exhibit indicates the average percentage of time personally spent by respondents on evaluating passive investment, active managers and smart beta or systematic factor investments, respectively, as well as the percentage of full-time staff involved in the evaluation of passive investment, active managers and smart beta or systematic factor investments, respectively.



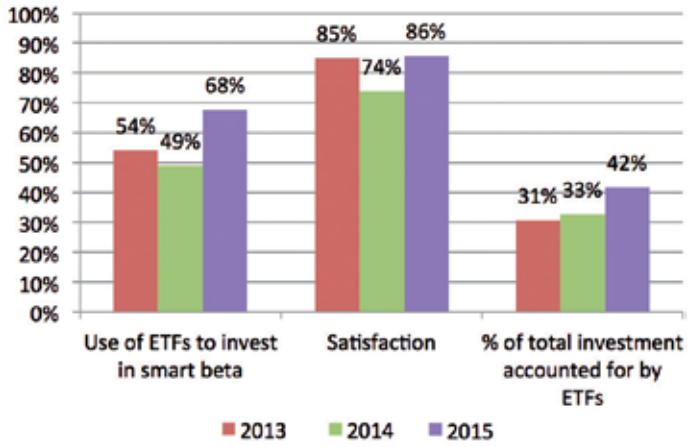
3. Investors' Use of Smart Beta ETFs

(46%) and commodities (45%) is made with a higher percentage of ETFs. The satisfaction rate indicated by respondents for smart beta ETFs also reached the high score of 86% in 2015, compared to 74% in 2014, which represents a quite large share of respondents, lower than the 98% of satisfaction rate obtained for the equity asset class, but quite comparable with the satisfaction rate obtained for traditional asset classes such as government bonds (89%)[8].

Moreover, when asked about their list of top priorities for future product development in the ETF space, smart beta dominates the list of top items mentioned by investors with 38% of respondents wishing for further development of ETFs based on smart beta indices. If we compare this result with the ones obtained the previous years, we see that the level of demand remains about the same since 2013. This result is interesting as there has been a considerable amount of product launches in the area of smart beta ETFs (see the introduction of this article). The fact that investors still see room for further product development despite the numerous product launches may be explained by the fact that product launches have focused on relatively few popular strategies representing a small number of risk premia such as the value premium and defensive equity strategies. Indeed, the first generation of smart beta benchmarks were embedded solutions which did not distinguish the stock picking methodology from the weighting methodology. As such, they obliged the investor to be exposed to particular systematic risks which represented the very source of their performance (see Amenc, Goltz and Martellini, 2015). Given the increasing discussion on harnessing multiple factor premia from equity investing, including factors such as momentum, size, and quality, among others, it is perhaps not surprising that investors see room for further product development. Indeed, with 33% of respondents also wishing for future product development, ETFs based on factor indices are also among the most widely requested categories. In addition, the arrival of the Smart beta 2.0 offers yet increased investor interest for this type of product. The Smart beta 2.0 approach enables investors to explicitly choose exposure to systematic risk factors, as well as to choose the weighting scheme of the smart beta benchmark (see Amenc, Goltz and Martellini, 2015).

8 - The detailed results for the various asset classes are available in Amenc et al. (2016a).

Exhibit 6: Smart Beta ETFs: Use and satisfaction
This exhibit indicates the use of and satisfaction with smart beta ETFs from 2013 to 2015.



3. Investors' Use of Smart Beta ETFs

In addition, when asked about the area in which they predict the greatest future increase in the use of ETFs, 34% of respondents answer they would like to increase use of ETFs for optimal portfolio construction, an increment of 1% from last year (see Amenc et al., 2016a). An implication of this planned increase in using ETFs in optimal portfolio construction is that respondents see ETFs not only as purely passive tools to cover broad market segments but they also want to exploit diversification benefits from optimally constructed portfolios that combine various ETFs. This may be driven by the emergence of Smart Beta products that offer exposure to a variety of alternatively weighted indices (see Amenc et al., 2014c). Indeed, there is recent evidence that combining optimal portfolios constructed under different assumptions results in a higher probability of outperformance (compared to the cap-weighted index) over market cycles than any one alternatively constructed weighting scheme. Hence it would make sense that investors in ETFs would benefit from exploiting such diversification-based strategies. For instance, Amenc et al. (2012) show that a global minimum variance strategy does well in adverse market conditions, while Maximum Sharpe Ratio (MSR) portfolios provide greater access to the upside of equity markets. As the relative performance of these two diversification approaches depends on market conditions, they show that a combination of both approaches leads to a smoother conditional performance and higher probability of outperformance of the cap-weighted index. From this section it appears that ETFs are used frequently and make up an increasing proportion of portfolio holdings in the smart beta asset class. Satisfaction rates for smart beta ETFs appear to be stable at high levels for three years. However, despite growing interest and high satisfaction with smart beta, the results of the survey show that investors allocate most resources to the appraisal of active managers, fewer resources to the evaluation of cap-weighted indices, and even fewer to the assessment of smart beta.

In the end, the mismatch between investors' great expectations in smart beta, and the lack of resources to carry out comprehensive and due diligence analysis on smart beta products, is a thorny issue. The asymmetry of information between smart beta investors and smart beta providers may lead to many misconceptions, all the more that smart beta providers may be unscrupulous. On the particular subject of smart beta misconceptions, one may refer to Amenc et al. (2016b).

3. Investors' Use of Smart Beta ETFs

4. Motivations for Investment in Smart Beta ETFs

4. Motivations for Investment in Smart Beta ETFs

This large use of ETFs based on smart beta indices, as well as the wishes for additional development, may be explained by the favourable perception that respondents have of smart beta indices as tools for improving their investment process, as shown by their answers to further questions. As displayed in Exhibit 7, three-quarters of respondents (75%) think that smart beta indices provide significant potential to outperform cap-weighted indices in the long term, and more than four out of five respondents (81%) think that they avoid cap-weighted indices that are concentrated in very few stocks or sectors.

About the same proportion of respondents (79%) thinks that diversification across several weighting methodologies allows risk to be reduced and adds value, while 87% of respondents agree that smart beta indices allow factor risk premia, such as value and small-cap, to be captured. Thus, capturing factor premia is the prime motivation for investment in smart beta ETFs for a vast majority of respondents.

Interestingly, when asked about transparency, a vast majority of respondents (94%) agree that smart beta indices require full transparency on methodology and risk

Exhibit 7: Agreement of respondents with statements about smart beta indices
This exhibit indicates the percentage of respondents that agree or strongly agree with the statement about smart beta indices. Non-responses are excluded.

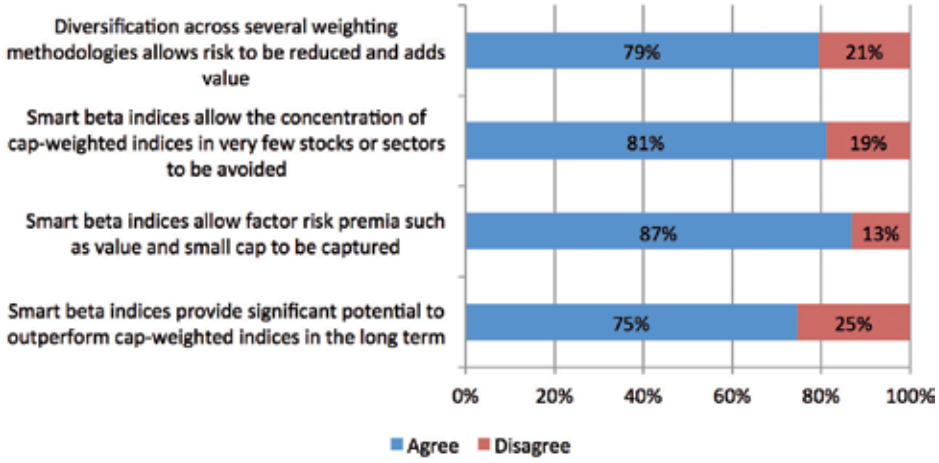
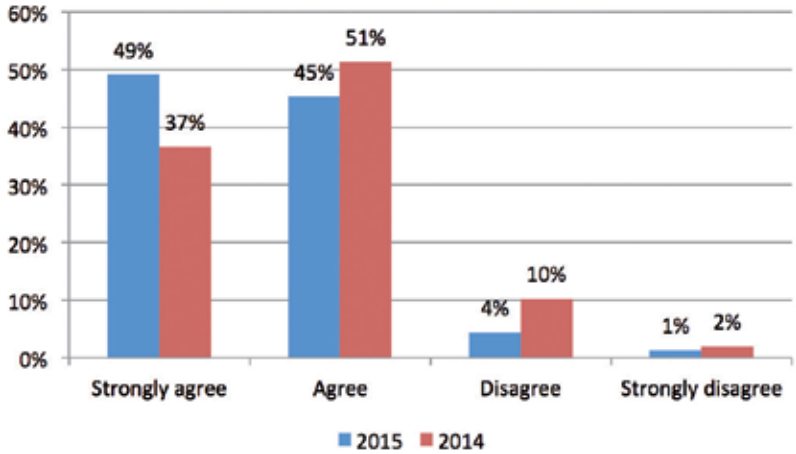


Exhibit 8: Do you think smart beta indices require full transparency on methodology and risk analytics?
This exhibit indicates the percentages of agreement with this statement compared with 2014 results. Non-responses are excluded.



4. Motivations for Investment in Smart Beta ETFs

analytics (see Exhibit 8), a percentage even higher than the 88% obtained in 2014. Furthermore, almost half of them (49%) strongly agree with this statement, which represents a considerable increase on last year, where already more than one-third of respondents (37%) strongly agreed with the assertion.

These results confirm earlier research on the need for transparency of index investors in general. In particular, in a survey conducted among European investors concerning their perception of index transparency, Amenc and Ducoulombier (2014) found strong conviction among respondents that the transparency currently offered by index providers is, in general, inadequate. Moreover, their results show that the rise of strategy indices makes transparency even more important and that opacity undermines the credibility of reported track records, in particular for new forms of indices. When reviewing existing indices and their disclosure practices, Amenc and Ducoulombier (2014) find that a number of providers failed to disclose the full calculation methodology that would allow for replication of their strategy indices (e.g. formulae or procedures were not properly described or specified, proprietary or third party models were used but not provided). They also find that for smart beta indices used by UCITS, only three out of five index firms provided a full history of their index closing levels. In the EDHEC-Risk Alternative Equity Beta Investing survey, Amenc et al. (2015a) find similar strong evidence on severe shortcomings of alternative equity beta strategies in terms of the transparency they offer investors. In fact, "limited information on risks" and "limited access to data" appear to be some of the biggest hurdles in terms of alternative equity beta adoption by investors. Moreover, when asked about the importance of different assessment criteria when evaluating advanced beta offerings, respondents saw transparency as one of the key criteria.

Transparency is not only the best protection against the risks arising from conflicts of interests, but it is also instrumental in improving the informational efficiency of the indexing industry. In view of the increased diversification and sophistication of the rapidly growing indexing industry, achieving informational efficiency should be a key priority. While transparency is important for market indices, i.e. indices that aim to represent a given market or segment, it is all the more so for smart beta indices. Indeed, while these new forms of indices can provide investors with improved risk-reward profiles or other benefits, they bring distinct risks of their own. Unfortunately, these indices' low level of transparency, which is routinely justified by the use of proprietary models, makes the evaluation of risks difficult.

The results reported in this section underline that investors show a keen interest in smart beta ETFs based on agreement with research results on the benefits of smart beta. In addition investors require full transparency on methodology and risk analytics for smart beta indices. The next section will explore investor requirements in more detail.

4. Motivations for Investment in Smart Beta ETFs

5. Requirements for Factors and Smart Beta Products

5. Requirements for Factors and Smart Beta Products

As seen on Exhibit 7, capturing factor premia is the prime motivation for respondents for investing in smart beta ETFs. Thus, it is important to investigate how investors perceive the main equity risk factors described in the literature as rewarded factors. For the second year, investors were asked about their appreciation of the different factors inherent in equity strategies and how these factors were explaining the performance of these strategies. The factors proposed were those for which the existence of a premium had long been documented in the literature or for which products are commonly used. It may be useful to recall the key ideas behind some of these factors. For example, the value and size factors capture the tendency of stocks with high book-to-market ratios or small capitalisation to display higher returns than the market average. The low volatility and momentum factors capture the tendency of stocks with low price fluctuations or high past returns to outperform over an intermediate time frame. The profitability factor tilts towards stocks with high profits relative to capital employed, e.g. return on assets or return on equity. The investment factor describes the empirical regularity that low investment firms, i.e. firms which grow their total assets conservatively rather than expand aggressively, tend to outperform the market average.

It appears from the results that none of the eight factors proposed to respondents obtained a poor score (see Exhibit 9). On a scale from 0 (no confidence that the factor will be rewarded) to 5 (high confidence that the factor will be rewarded), the average scores, before accounting for transaction costs and other implementation hurdles, range from 2.90 (investment factor) to 3.31 (value factor). While the value factor is considered by respondents as the most likely to be rewarded, low volatility, small cap, dividend yield, profitability and momentum also obtain quite comparable high scores.

If we exclude the investment factor, we also note that only a very little share of respondents declare being unfamiliar with the factors proposed, as their percentage is lower or equal to 5% for all of them – the dividend yield and small cap factors being the ones respondents are most familiar with and the liquidity and profitability factors the ones respondents are least familiar with. These percentages of unfamiliarity are also slightly lower than the percentages obtained last year, which shows that the knowledge of these risk factors is still improving. The investment factor was added to the list of factors for the first time this year. With about one-fifth of respondents declaring themselves to be unfamiliar with it, the investment factor is somewhat adrift of the other factors. Unsurprisingly, it is also the one which obtains the lowest rate of confidence of it being rewarded. However, after accounting for transaction costs and other implementation hurdles, the confidence level that this factor will be rewarded becomes slightly higher than those of the momentum and liquidity factors. In addition, the investment factor is also the one for which we obtain the lowest response rate in terms of the confidence level, with only 55% of respondents providing answers, compared with about 80% of respondents giving their opinion for all the other factors. This is coherent with a higher number of respondents being unfamiliar with the investment factor, compared to other factors.

Looking at the difference between the level of confidence that the factor will be rewarded and the same metric after accounting for transaction costs and

5. Requirements for Factors and Smart Beta Products

other implementation hurdles (see the third column of Exhibit 9) may shed some light on how investors perceive the ease of implementation and the costs of the strategies based on the various factors. The highest difference between the two scores is observed for the momentum and liquidity factors (0.47 and 0.46, respectively).

The momentum strategy has been documented in the literature as being subject to data-mining, high turnover, causing trading costs that limit the profitability of the strategy, as well as being subject to the risk of reversion effect, which may be difficult to predict and manage (see Bender et al., 2013). In addition, the literature suggests that the short side of the strategy is more profitable than the long side (Hong, Lim, and Stein, 2000), rendering this strategy less suitable for long-only investors. Concerning the liquidity factor, the least liquid stocks are those that provide the highest premium, but also the ones it is more difficult to invest in, which can make the strategy less easy to implement.

However, respondents have some requirements to consider the selection of a given set of factors in their investment approach (see Exhibit 10). Respondents are first of all concerned by the existence of a rational risk premium with a score of 3.73, closely followed by the existence of extensive empirical literature documenting these premia, as well as by ease of implementation and low turnover and transaction costs, both with a score of 3.63. The least important requirement for them is for factors to be related to macroeconomic variables, with a score of 2.68. Indeed, all requirements received quite high scores.

From the results it appears that the existence of a rational explanation for factor risk premia is of main importance for investors. This is probably related to the fact that a rational explanation suggests that the premium will be persistent. Indeed, if the literature interprets the factor premia as compensation for risk, its existence could also be explained by investors making systematic errors due to behavioural "biases" such as over- or under-reactions to news on a stock. However, whether such behavioural biases can persistently affect asset prices in the presence of some smart investors who do not suffer from these biases is a point of

Exhibit 9: Rewarded factors
Which equity risk factors do you think will be rewarded positively over the next ten years, after accounting for transaction costs and other implementation hurdles? The level of confidence was rated from 0 (no confidence) to 5 (high confidence).

Factors	Confidence level that factor will be rewarded	Confidence level that factor will be rewarded after accounting for transaction costs and other implementation hurdles	Spread between the two levels of confidence	Not familiar with this factor
Value	3.31	3.00	0.31	3.33%
Low Volatility	3.24	2.83	0.41	3.89%
Small Cap	3.19	2.93	0.26	2.78%
Dividend Yield	3.17	2.92	0.26	2.22%
Profitability	3.13	2.86	0.28	5.00%
Momentum	3.13	2.66	0.47	3.33%
Liquidity	3.01	2.54	0.46	5.00%
Investment	2.90	2.71	0.19	19.44%

5. Requirements for Factors and Smart Beta Products

contention. In fact, even if the average investor makes systematic errors due to behavioural biases, it could still be possible that some rational investors who are not subject to such biases exploit any small opportunity resulting from the irrationality of the average investor. The trading activity of such smart investors may then make the return opportunities disappear. Therefore, behavioural explanations of persistent factor premia often introduce so-called "limits to arbitrage", which prevent smart investors from fully exploiting the opportunities arising from the irrational behaviour of other investors. The most commonly mentioned limits to arbitrage are short-sale constraints and funding-liquidity constraints. The main economic explanations for the value, momentum, low volatility and small cap factors are detailed in Amenc et al. (2016c), and those of high profitability and investment feature in Amenc et al. (2016d).

Finally, we asked respondents about the information they consider important to assess smart beta. From our results it appears that investors are demanding exhaustive information about smart beta products. We can see that all items proposed received a high score in terms of importance. On a scale from 0 to 5, the lowest score observed is around 3, and a large share of propositions receive a score of around 4 (see Exhibit 11). At the top of the list of information considered to be crucial by investors, we find all information concerning construction, composition, strategy, and exposure to factors of smart beta products, while at the bottom of the list is information regarding historical performance. This low score devoted to historical performance may seem strange considering that smart beta is often considered as a substitute for active management, to which the subject of live track records is rather crucial.

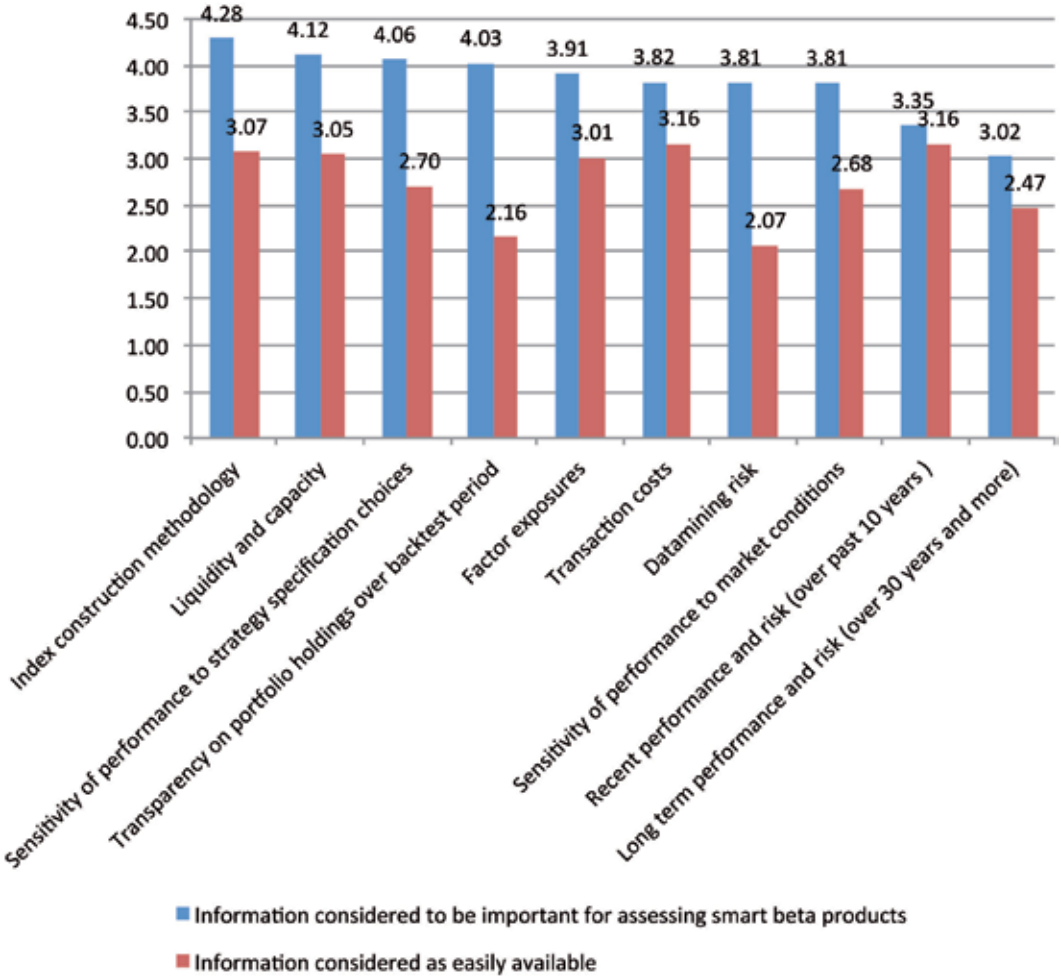
At the same time, respondents were asked whether they considered this information easily available. It is thus interesting to see the spread between the importance of and the accessibility to this information. It appears that the highest spread is observed for information respondents considered as crucial. For example, information about transparency on portfolio holdings over a back-test period and data mining risk are two crucial pieces of information for respondents, with a score of 4.03 and 3.81, respectively. It is also the information that appears to be the most difficult to obtain for respondents, with a score of 2.16 and 2.07, respectively. Even relatively basic information such as the index construction methodology is not judged to be easily available (score of 3.07) relative to its importance (score of 4.28). On the contrary, information about recent performance and risk over the past ten years is among the

Exhibit 10: Requirements about factors
Which requirements do you have in order to consider a given set of factors in your investment approach from 0 (not important) to 5 (absolutely crucial)?

Requirements	Score
Factor premium should be related to a rational risk premium, i.e. explained by a substantial risk that the factor pays off badly in bad times	3.73
Factor premium should be documented in extensive empirical literature	3.63
Factors should be easy to implement with low turnover and transaction costs	3.63
Factors should be related to firm fundamentals	3.03
Factor premium has been explained as an "anomaly" allowing rational agents to profit from irrationality of others	3.02
Factors should be related to macroeconomic variables	2.68

5. Requirements for Factors and Smart Beta Products

Exhibit 11: Information about beta products
What information do you consider important for assessing smart beta products on a scale from 0 (not important) to 5 (crucial) and what information do you consider to be easily available on a scale from 0 (difficult to obtain) to 5 (easy to obtain).

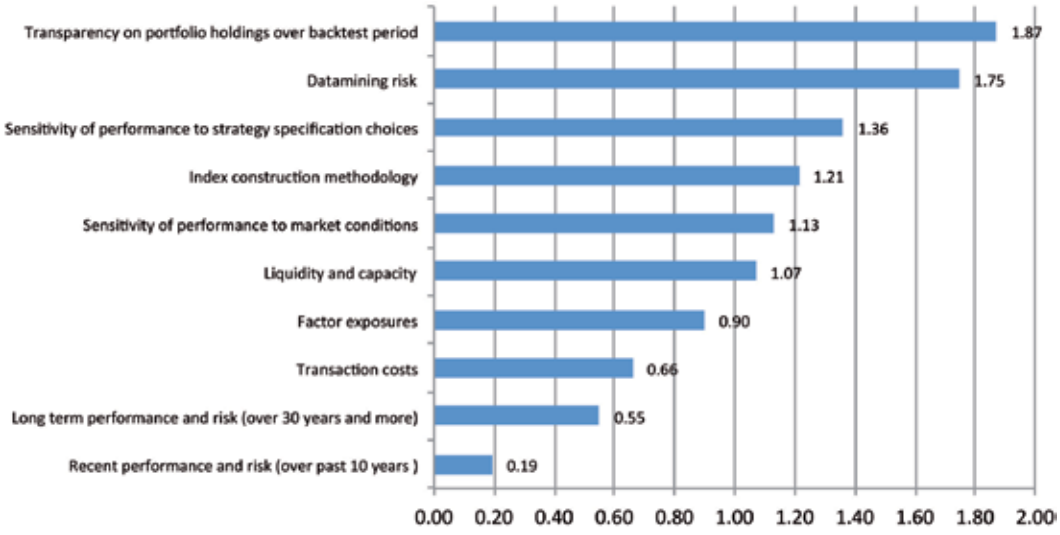


least important for respondents with a score of 3.35, but it is also the most easily available, exhibiting the highest score (3.16) across the board in terms of availability. The gap between information importance and its accessibility as seen by investors is displayed in Exhibit 12.

The fact that information that is regarded as important is not considered to be easily available clearly calls into question the information provision practices of smart beta providers. In fact, the only area in which no pronounced gap exists between the importance and the ease of accessibility scores is for performance numbers. Performance and risk information is judged to be moderately easily available and moderately important. All other areas show pronounced gaps between these two metrics. The two items that are judged to be the least easily available are holdings over the back-test period and data-mining risks. Interestingly, both these items rank much higher on the importance score for investors than, for example, past performance. Moreover, there is a pronounced gap of 1.07 between importance of information items and their ease of accessibility, as shown by the means of their respective

5. Requirements for Factors and Smart Beta Products

Exhibit 12: Gap between information importance and its accessibility according to investors



scores (3.82 and 2.75, respectively). Overall, these results suggest that investors do not believe that information considered important for assessing smart beta strategies is made available to them with sufficient ease.

From this section of the survey, we learn that investors have strong requirements for equity factors, including both a risk-based economic rationale and extensive empirical evidence. However, there is an important gap between investors' information requirements for smart beta and accessibility of information from providers.

6. Conclusion

Conclusion

In conclusion, the results of the survey show a great interest from investors in products based on smart beta indices. With more than a third of them already investing in smart beta products and an additional third of them considering investing in them in the future, more than two-thirds of respondents have concerns with smart beta products. The global rate of satisfaction of those respondents who are already using smart beta ETFs is quite high, with 86% of them declaring themselves satisfied. In addition, with three-quarters of them thinking smart beta indices provide significant potential to outperform cap-weighted indices in the long term, respondents have a favourable perception of smart beta indices as tools for improving their investment process. More specifically, we have seen that 81% of them think that smart beta indices avoid concentration in very few stocks or sectors and that 79% of them think that diversification across several weighting methodologies allows a reduction of risk and add value. Moreover, capturing factor premia appears to be the prime motivation for investing in smart beta ETFs for a vast majority of respondents (87%).

If the early generation of smart beta approaches aimed either at improving portfolio diversification relative to heavily concentrated cap-weighted indices or at capturing additional factor premia available in equity markets, investors are now increasingly turning their attention to the more recent approaches named smart factor investing that combine both factor tilts and diversification-based weighting schemes. For those ETFs that track the most complex indices, and that are sold primarily for their outperformance, transparency appears to be a key concept. Not surprisingly, survey respondents appear to have major concerns about the quality of these products, as 94% of them think that smart beta indices require full transparency on methodology and risk analytics, which are guarantees for robustness of these strategies.

Our results also suggest that investors do not believe that information considered important for assessing smart beta strategies is made available to them with sufficient ease, especially when it comes to data-mining risks and holdings-based information needed for risk assessment. There is an important gap between information required by investors on smart beta strategies and information offered by providers.

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About EDHEC-Risk Institute

About EDHEC-Risk Institute

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- Asset allocation and derivative instruments
- ALM and asset allocation solutions

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- Regulation and Institutional Investment, *in partnership with AXA Investment Managers*
- Asset-Liability Management and Institutional Investment Management, *in partnership with BNP Paribas Investment Partners*
- New Frontiers in Risk Assessment and Performance Reporting, *in partnership with CACEIS*
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- Investment and Governance Characteristics of Infrastructure Debt Investments, *in partnership with Natixis*
- Advanced Modelling for Alternative Investments, *in partnership with Société Générale Prime Services (Newedge)*
- Advanced Investment Solutions for Liability Hedging for Inflation Risk, *in partnership with Ontario Teachers' Pension Plan*
- Active Allocation to Smart Factor Indices, *in partnership with Rothschild & Cie*
- Solvency II, *in partnership with Russell Investments*
- Structured Equity Investment Strategies for Long-Term Asian Investors, *in partnership with Société Générale Corporate & Investment Banking*

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EDHEC-Risk Institute: Key Figures, 2014-2015

Number of permanent staff	48
Number of research associates & affiliate professors	36
Overall budget	€6,500,000
External financing	€7,025,695
Nbr of conference delegates	1,087
Nbr of participants at research seminars and executive education seminars	1,465

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The Institute's activities have also given rise to executive education and research service offshoots. EDHEC-Risk's executive education programmes help investment professionals to upgrade their skills with advanced risk and asset management training across traditional and alternative classes. 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.

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

As part of its policy of transferring know-how to the industry, in 2013 EDHEC-Risk Institute also set up ERI Scientific Beta. 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 in both the methods and the associated risks.

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