An EDHEC-Risk Institute Publication

2020

The EDHEC European ETF, Smart Beta and Factor Investing Survey

September 2020

with the support of Amundi ASSET MANAGEMENT | ETF Indexing Smart Beta

EDHEC-RISK Institute

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We thank Amundi ETF, Indexing & Smart Beta for its support for our research.

Foreword

The latest edition of the EDHEC European ETF, Smart Beta and Factor Investing Survey was conducted as part of the "ETF, Indexing and Smart Beta Investment Strategies" research chair at EDHEC-Risk Institute, in partnership with Amundi.

With this survey, we aim to provide insights into investor perceptions of exchange-traded funds (ETFs) and of smart beta and factor investing strategies, building on the analysis of this year's responses and relating them to past results of our annual survey. In 2020, the survey results show a slowdown in the use of smart beta and factor investing strategies, and a growing interest for the integration of an SRI/ESG component into investment.

The data shows an increase in the use of ETFs to invest in SRI/ESG (55% of respondents in 2020, versus 33% in 2019), with a satisfaction rate of 87% (68% in 2019). Achieving broad market exposure still tops the list of reasons for using ETFs, with 77% of respondents using them frequently for this purpose. Cost and quality of replication still remain the two main drivers for selecting ETF providers. 50% of respondents would like to see further developments in SRI/ESG-based ETFs and/or low-carbon ETFs, compared to 38% in 2019.

In terms of sustainable investing, the survey reveals that 65% of respondents incorporate ESG into their investment decisions to allow for a positive impact on society and 58% of them to reduce long-term risk. However, the majority (63%) do not want this to be done at the expense of performance. More respondents (45%) favour a best-in-class (positive screening) approach to SRI/ESG implementation over the thematic approach (30%) and the negative screening approach (25%). The majority of respondents (57%) identify the E (Environmental) as the most important dimension of ESG. The G (Governance) comes second (36%) and the S (Social) ranks last with only 7%.

The survey further reveals that improving performance and managing risk are the two main motivations for using smart beta and factor investing strategies. Despite this strong level of motivation, 70% of respondents invest less than 20% of their total investments in these strategies. However, 48% of respondents plan an increase of more than 10% in terms of assets in their use of smart beta and factor investing products in the near future. When asked about the smart beta solutions they think require further development by providers, respondents cited ESG, fixed income and alternative asset classes. They would also like to see more customised solutions developed. The development of new products corresponding to these demands may lead to even higher take-up of smart beta solutions.

We would like to express our warmest thanks to our partners at Amundi for their ongoing support of our research. Special thanks also to Véronique Le Sourd for her leadership in this research project and Laurent Ringelstein for his contribution in producing the final publication.

We wish you a useful and informative read.

Lionel Martellini
Professor of Finance,
Director of EDHEC-Risk Institute

The Authors

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Lionel Martellini is Professor of Finance at EDHEC Business School and Director of EDHEC-Risk Institute. He has graduate degrees in economics, statistics, and mathematics, as well as a PhD in finance from the University of California at Berkeley. Lionel is a member of the editorial board of the *Journal of Portfolio Management* and the *Journal of Alternative Investments*. An expert in quantitative asset management and derivatives valuation, his work has been widely published in academic and practitioner journals and he has co-authored textbooks on alternative investment strategies and fixed-income securities.

Executive Summary

Executive Summary

The present survey aims to provide insights into investor perceptions of exchange-traded funds (ETFs) and of smart beta and factor investing strategies, building on the analysis of this year's responses and relating them to past results of our annual survey.

Our 2020 survey gathered information from 191 European investment professionals concerning their practices, perceptions and future plans. Our respondents are high-ranking professionals within their organisations (49% belong to executive management and 29% are portfolio managers),[1] with large assets under management (35% of respondents represent firms with assets under management exceeding €10bn).[2] Respondents are distributed across different European countries, with 15% from the United Kingdom, 65% from European Union member states, 16% from Switzerland and 4% from other countries outside the European Union.[3] Below, we provide a summary of our results, emphasising the key conclusions of our survey.

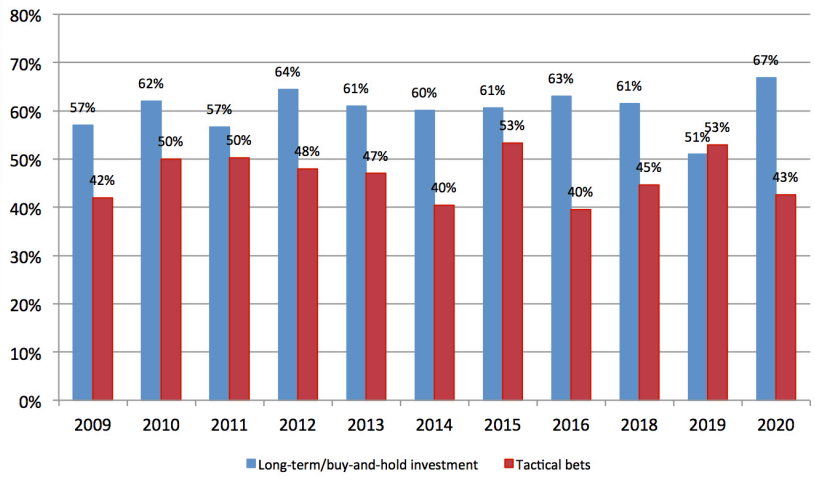
1. How Do Investors Select and Use ETFs?

1.1. The Dominant Purpose of ETF Usage

Long-term buy-and-hold investment overtakes tactical allocations again

While last year the use of ETFs by respondents was fairly balanced between long-term buy-and-hold investment and tactical allocations for the first time over our survey period, this year we again see dominant usage of ETFs for long-term investment, as observed in our successive surveys from 2009, with even the highest percentage of respondents using ETFs for long-term investment (67%), as well as the widest gap between long-term and tactical use since 2009.

Exhibit 1: Use of ETFs for Long-term Investment vs. Tactical Allocation
This exhibit indicates the frequency of respondents' use of ETFs for each of the purposes mentioned. Respondents were asked to rate their usage frequency from 1 to 6. The "frequent" category displayed here includes ratings from 4 to 6. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2009 to 2020.



1 - See Exhibit 3.3 in Section 3 (Methodology and Data).
2 - See Exhibit 3.5 in Section 3 (Methodology and Data).
3 - See Exhibit 3.1 in Section 3 (Methodology and Data).

Room to further increase use for specific sub-segment exposure

Moreover, gaining broad market exposure remains the main focus of ETF usage for 77% of users, compared to 51% of respondents using ETFs to obtain specific sub-segment exposure (see Exhibit 2). This last result is also linked to intense product development, which has led to the introduction of new products for a multitude of sub-segments of the markets (sectors, styles etc.).

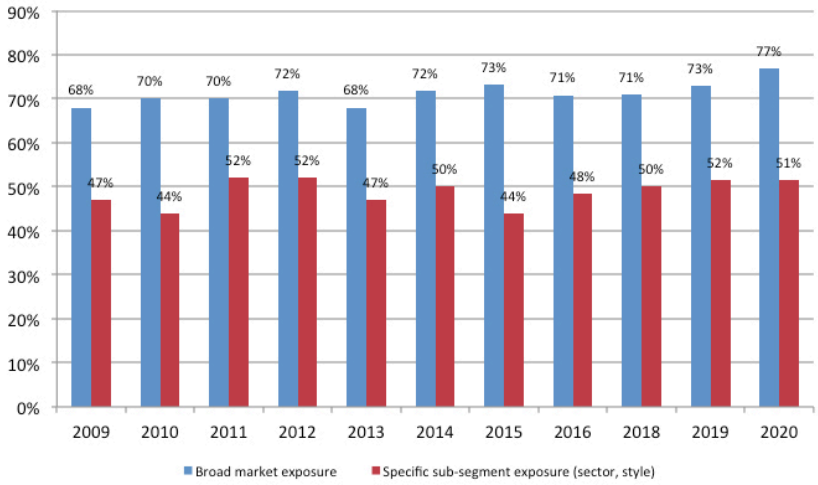


Exhibit 2: Use of ETFs for Broad Market Exposure vs. Specific Sub-segments
This exhibit indicates the frequency of respondents' use of ETFs for each of the purposes mentioned. Respondents were asked to rate their usage frequency from 1 to 6. The "frequent" category displayed here includes ratings from 4 to 6. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2009 to 2020.

Consistent with this desire to use ETFs for passive exposure to broad market indices, only 16% of respondents show any interest in the future development of actively managed equity ETFs.[4]

Significant increase in the use of SRI/ESG ETFs with a high rate of satisfaction

17% of respondents were investing in SRI/ESG in 2011, compared to 49% in 2020. Among them, 55% have used ETFs to invest in SRI/ESG in 2020, with a satisfaction rate of 87%, and ETFs have accounted for 39% of total investment in SRI/ESG in 2020 (see Exhibit 3).

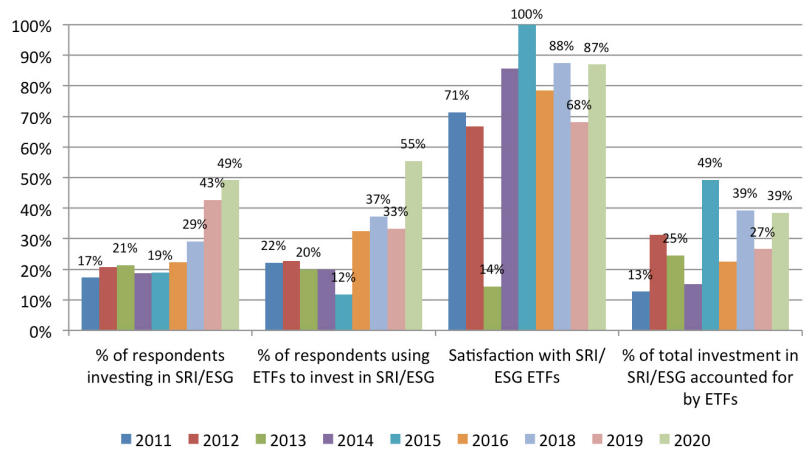


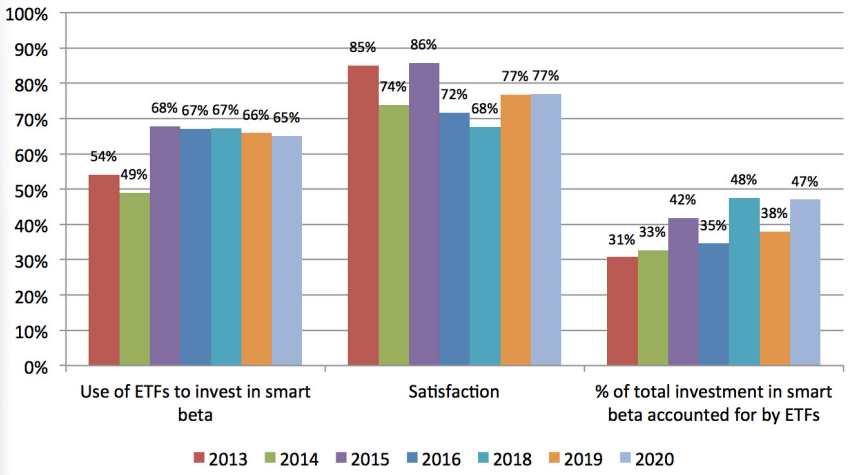
Exhibit 3: SRI/ESG ETFs: Usage and Satisfaction Levels
This exhibit indicates the use of and satisfaction with SRI/ESG ETFs. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2011 to 2020.

4 - See Exhibit 4.8 in Section 4 (Results).

High adoption of ETFs to invest in smart beta and factor investing and a high rate of satisfaction

About two-thirds of respondents (65%) use ETFs or ETF-like products to invest in smart beta and factor investing in 2020, a considerable increase on the 49% reported in 2014, with a high satisfaction rate (77%). 47% of smart beta and factor investing has been made through ETFs in 2020 (see Exhibit 4).

Exhibit 4: Smart Beta ETFs: Usage and Satisfaction Levels
This exhibit indicates the use of and satisfaction with smart beta ETFs. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2013 to 2020.



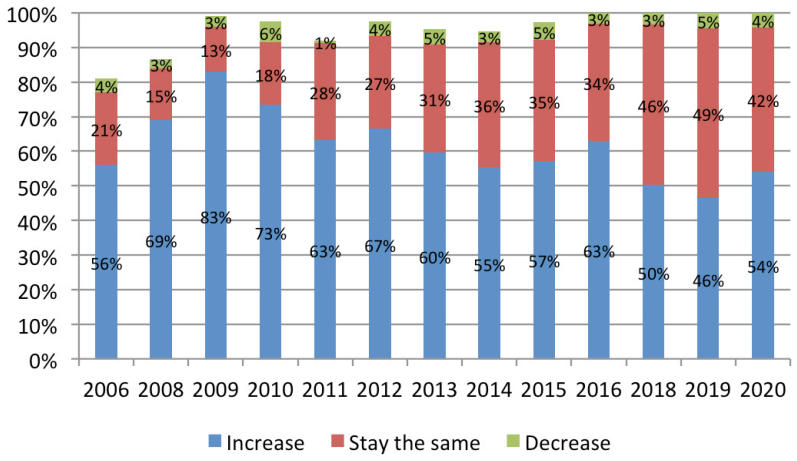
1.2. Future ETF Growth Drivers

The European ETF market has seen tremendous growth in recent years. At the end of December 2019, the assets under management (AUM) within the 1,761 ETFs constituting the European industry stood at $974bn, compared with 273 ETFs amounting to $94bn at the end of December 2006 (ETFGI, 2019). Our survey allows us to assess the drivers of such growth and respondents' intentions to adopt ETFs in the future.

Further increases in ETF usage in the future

From our survey, it appears that a high percentage of investors (54%) still plan to increase their use of ETFs in the future, despite the already high maturity of this market and high current adoption rates (see Exhibit 5).

Exhibit 5: Future Evolution of the Use of ETFs
This exhibit indicates the potential of changes in ETF usage by investors over time. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2006 to 2020.



Lowering costs is the main motivation for increasing the use of ETFs

Lowering investment cost is the primary driver behind investors' future adoption of ETFs (81% of respondents in 2020). In addition, investors are not only planning to increase their ETF allocation to replace active managers (70% of respondents in 2020), but are also seeking to replace other passive investing products through ETFs (44% of respondents in 2020) (see Exhibit 6).

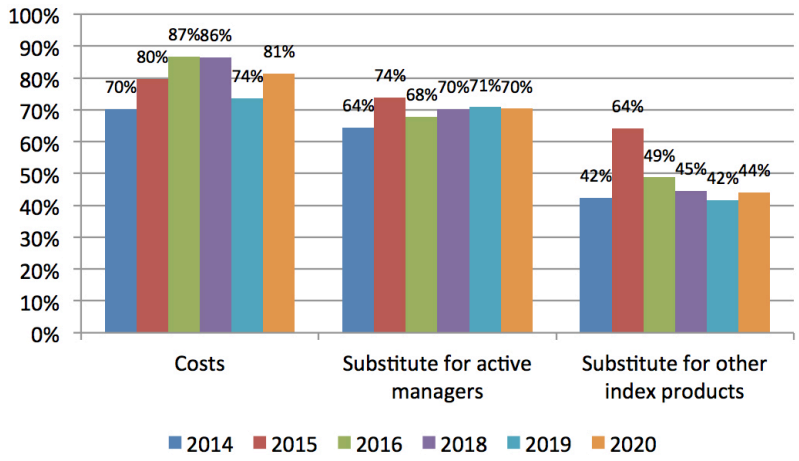


Exhibit 6: Motivations for Increasing the Use of ETFs
This exhibit indicates the reasons given by respondents for planning to increase their use of ETFs. More than one response could be given. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2014 to 2020.

1.3. Cost and quality of replication are the two main drivers for selecting ETF providers

Two criteria dominate investors' preoccupations. The first is costs, cited by the vast majority of respondents (91%). The second is the quality of replication, with 86% of respondents considering this criterion when selecting an ETF provider (see Exhibit 7).

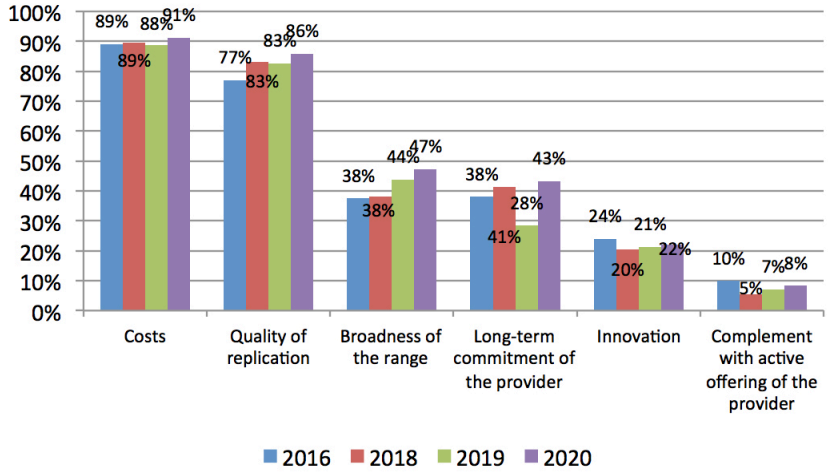


Exhibit 7: What Criteria Do you Consider when Selecting an ETF Provider?
This exhibit indicates the criteria respondents consider when selecting an ETF provider. More than one response could be given. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

2. What are the Key Objectives Driving the Use of Smart Beta and Factor Investing Strategies?

2.1. Motivations and Growth Prospects for Smart Beta and Factor Investing Strategies?

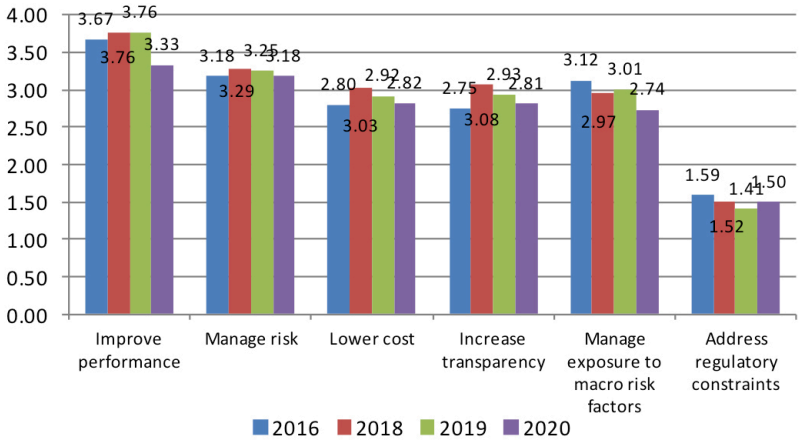
Smart beta and factor investing strategies have continuously been in the spotlight in recent years and investor interest is obvious. Our survey sheds light on the drivers behind this interest and the actual usage of smart beta and factor investing strategies among investors.

Improving performance is the main motivation for using smart beta and factor investing strategies

The most important motivation behind the adoption of smart beta and factor investing strategies is to improve performance. On a scale from 0 (no motivation) to 5 (strong motivation), respondents gave an average score of 3.33 to 'Improve performance'. 'Manage risk', which is in second position among key motivations (score of 3.18), is also an important element of choice when it comes to smart beta and factor investing strategies (see Exhibit 8).

Exhibit 8: Motivations to Use Smart Beta and Factor Investing Strategies in the Portfolio

This exhibit indicates the key motivations to use smart beta and factor investing strategies in the portfolio on a scale from 0 (no motivation) to 5 (strong motivation). More than one response could be given. Non-responses are excluded. The scores are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

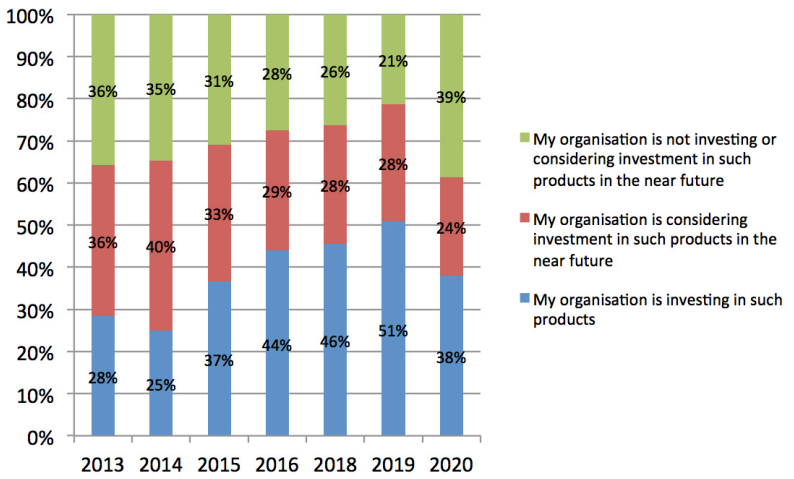


About two-fifths of participants currently invest in smart beta and factor investing strategies, but for a limited share of holdings

38% of respondents currently invest in smart beta and factor investing strategies, while another 24% do not but are considering adopting such strategies in the future (see Exhibit 9).

Exhibit 9: Use of Smart Beta and Factor Investing Solutions

This exhibit indicates the percentage of respondents that reported using smart beta and factor investing solutions. Non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2013 to 2020.



However, despite a high rate of adoption, these investments typically make up only a small fraction of portfolio holdings among those respondents who have made investments in these strategies. More than two-thirds of respondents (70%) invest less than 20% of their total investments in smart beta and factor investing strategies and only 13% invest more than 40% (see Exhibit 10).

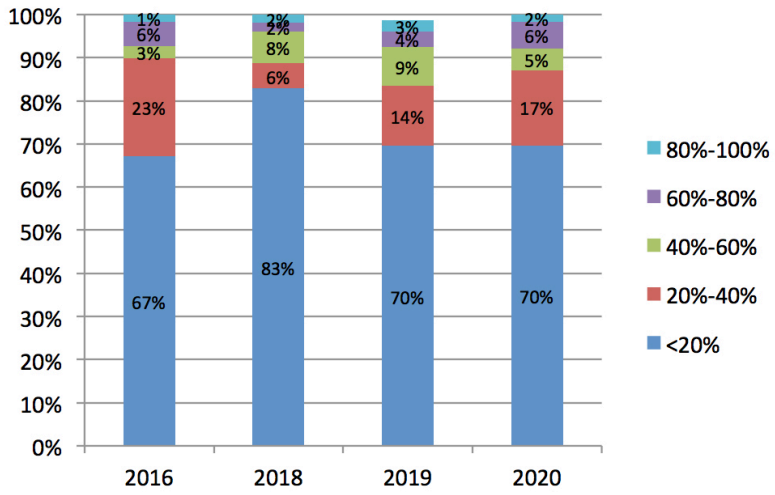


Exhibit 10: Percentage of Total Investment Already Invested in Smart Beta and Factor Investing Solutions

This exhibit indicates the average percentage of total investment already invested in smart beta and factor investing solutions. We only consider respondents that already use smart beta and factor investing strategies. Non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

Significant growth prospects for smart beta and factor investing strategies

The growth trend is well established for smart beta and factor-based investment products, with 48% of respondents indicating a planned increase of more than 10% in their use in terms of assets in the near future, while only 7% indicate a decrease (see Exhibit 11).

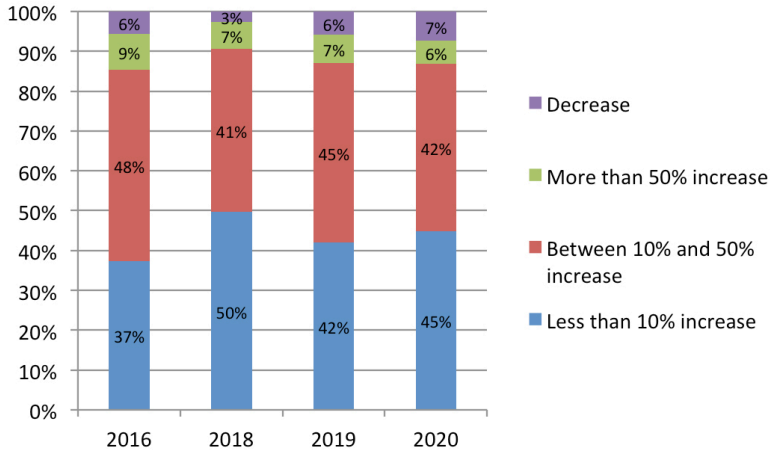


Exhibit 11: Planned Changes in the Use of Smart Beta/Factor-based Investment Products in Terms of Assets in the Near Future

This exhibit indicates whether respondents plan to increase or decrease their use of smart beta/factor-based investment products (in terms of assets) over the next three years. Non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

2.2. Implementation of Smart Beta and Factor Investing Strategies

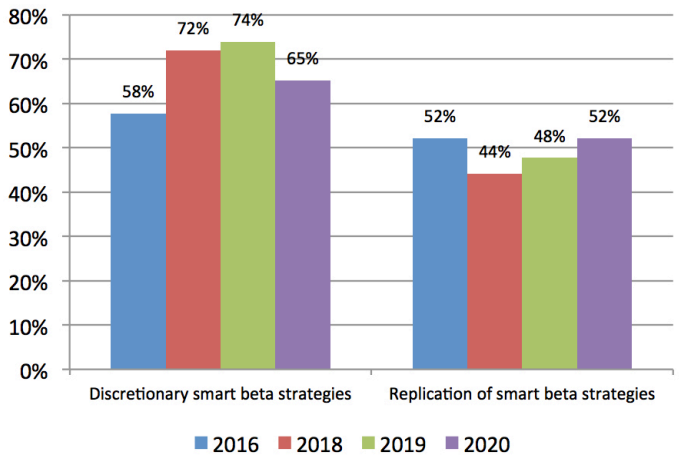
Our survey generates several insights into how investors implement their smart beta and factor investing strategies.

Discretionary strategies are preferred over replication strategies

More respondents are using discretionary smart beta and factor investing strategies (65% in 2020), rather than replicating these strategies (52% in 2020), with a gap that has narrowed between the two, compared to last year (see Exhibit 12).[5]

Exhibit 12: Strategies Used to Invest in Smart Beta and Factor Investing Solutions

This exhibit indicates the categories of smart beta and factor investing strategies in which respondents invest. The percentages are based only on respondents that already use smart beta and factor investing strategies. More than one response could be given. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

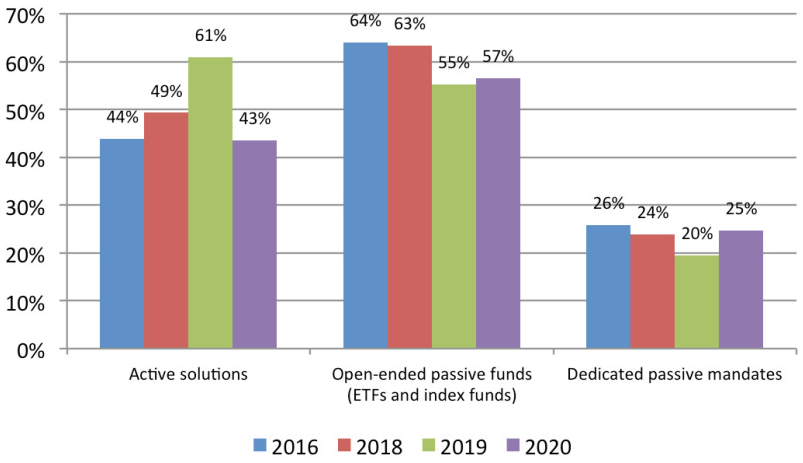


In terms of wrappers, passive funds are preferred over active solutions

In terms of the actual product wrapper used for smart beta and factor investing exposure, respondents currently favour passive funds that replicate smart beta and factor investing indices (57% of respondents), ahead of active solutions, i.e. approaches including a significant amount of discretion (43% of respondents) (see Exhibit 13).

Exhibit 13: Wrappers Used to Invest in Smart Beta and Factor Investing Solutions

This exhibit indicates the categories of wrapper respondents use to invest in smart beta and factor investing strategies. The percentages are based only on respondents that already use smart beta and factor investing strategies. More than one response could be given. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.



5 - A detailed comparison of the advantages of each strategy is presented in Section 4 (Results, Exhibits 4.29 to 4.31).

2.3. Position of Investors in Smart Beta and Factor Investing Strategies for Fixed Income

Use of smart beta and factor investing strategies for fixed income still limited ...

The results of our survey show that 11% of the whole sample of respondents currently use smart beta and factor investing for fixed income (see Exhibit 14, left). However, about two-thirds (68%) of this sub-sample of respondents invest less than 20% of their total investment in smart beta and factor investing for fixed income (see Exhibit 14, right).

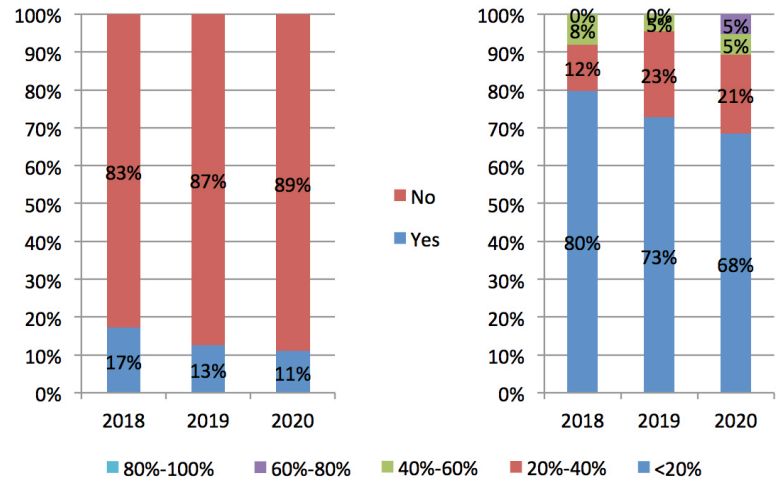


Exhibit 14: Investment in Smart Beta and Factor Investing Strategies for Fixed Income

The exhibit on the left indicates the percentage of respondents that reported investing in smart beta and factor investing strategies for fixed income, while the one on the right indicates the percentage of total investment already invested in smart beta and factor investing solutions for fixed income. For this latter result, non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2018 to 2020.

The reasons given by the additional 89% of respondents for not investing in smart beta and factor investing products for fixed income are detailed in Exhibit 15.

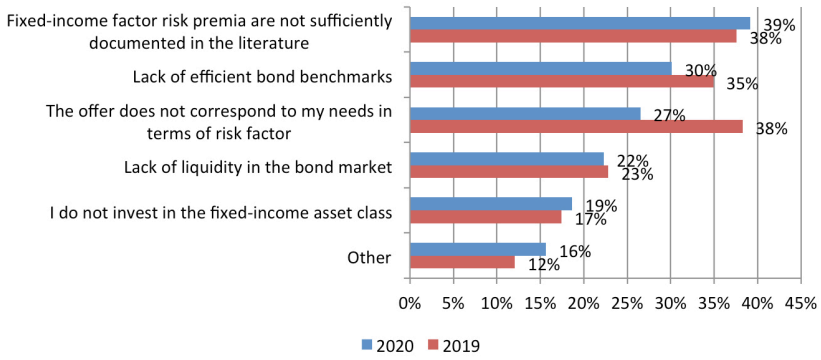


Exhibit 15: Main Reasons for not Using Fixed-Income Smart Beta and Factor Investing Products

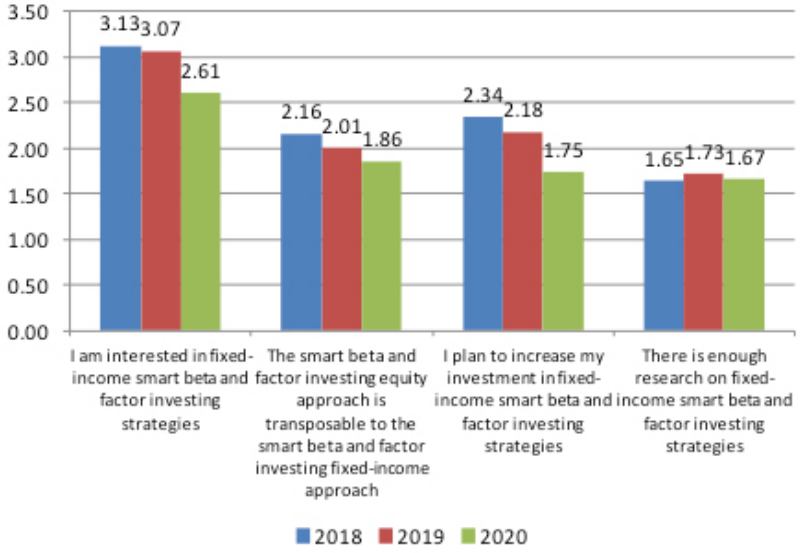
This exhibit indicates the reasons why respondents do not invest in smart beta and factor investing strategies for fixed-income. We also display the 2019 results to show the year-on-year changes.

... though there is significant interest and favourable opinions about them

Those respondents that already invested in smart beta and factor investing for fixed income are quite satisfied, with a score of 2.86 on a scale from 0 (not satisfied at all) to 5 (highly satisfied).

Furthermore, it appears that all respondents, including those who already invest in smart beta and factor investing for fixed income, and those who do not yet invest, show significant interest in smart beta and factor investing for fixed income, with an average score of 2.61 on a scale from 0 (strongly disagree) to 5 (strongly agree). However, the average score for plans to increase investment in smart beta and factor investing for fixed income is only 1.75, indicating a significant gap between levels of interest in this investment and expectations of an increase in it (see Exhibit 16).

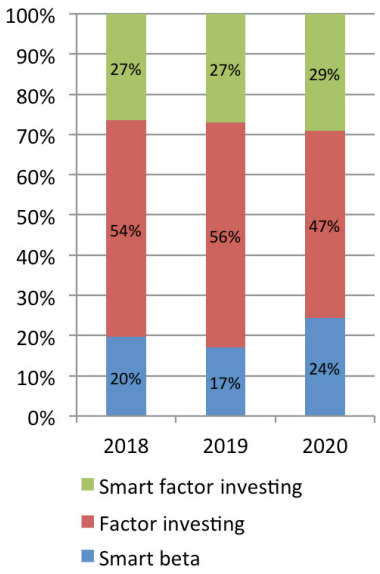
Exhibit 16: Opinion of Respondents about Statements Concerning Smart Beta and Factor Investing for Fixed Income
This exhibit indicates the extent to which respondents agree with each statement on a scale from 0 (strongly disagree) to 5 (strongly agree). More than one response could be given. Non-responses are excluded. The scores are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2018 to 2020.



Implementing fixed-income strategies: a preference for factor investing

56% of respondents indicate that smart beta and factor investing bond solutions are useful in performance-seeking portfolios for harvesting additional risk premia (see Exhibit 4.37 in Section 4, Results). To achieve efficient harvesting, less than half of respondents (47%) think that the best solution is to use factor investing, i.e. selecting bonds according to rewarded attributes (value, momentum, credit, liquidity) (see Exhibit 17).

Exhibit 17: How Should Investors Achieve Efficient Harvesting of Risk Premia in Bond Markets?
This exhibit indicates what respondents feel is the best way to achieve efficient harvesting of risk premia in bond markets. Non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2018 to 2020.



2.4. Investors Find it Difficult to Obtain all the Necessary Information to Evaluate Smart Beta and Factor Investing Strategies

Respondents were asked about the information they consider important when assessing smart beta and factor investing and, at the same time, whether they consider this information to be easily available. The spread between the importance and accessibility of this information is displayed in Exhibit 18. The highest spread is observed for information respondents consider crucial, such as data-mining risk and information about transparency on portfolio holdings over a back-test period. However, for most types of information, we observe a decrease in the gap over time, though there is still room for further improvements.

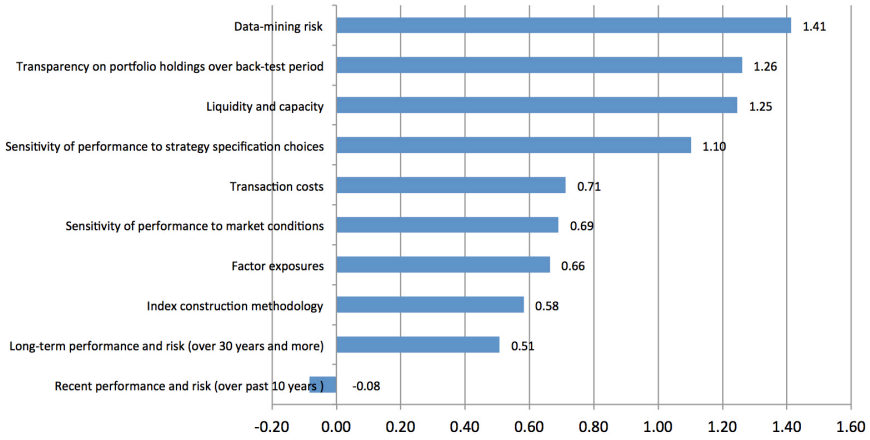
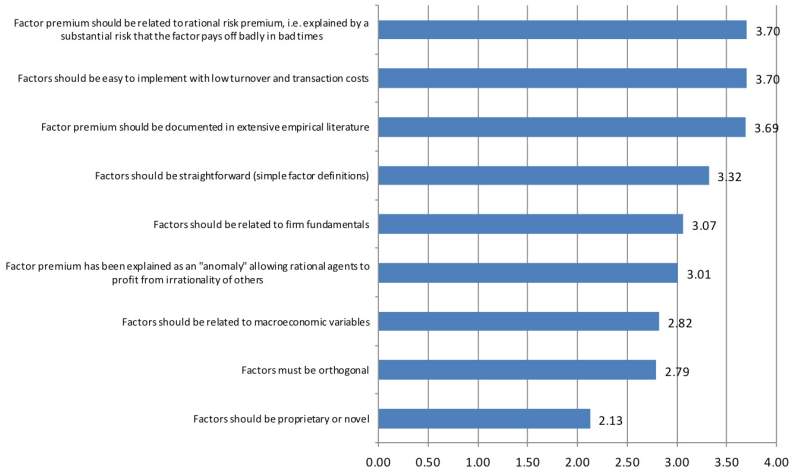


Exhibit 18: Gap between Importance and Accessibility of Information about Smart Beta and Factor Investing Products
This exhibit indicates the gap between the importance and accessibility of information according to investors. This gap was determined based on the difference between a score on a scale from 0 (not important) to 5 (crucial) for importance of information and one on a scale from 0 (difficult to obtain) to 5 (easy to obtain) for its accessibility.

2.5. Existence of Factor Risk Premium, Ease of Implementation and Academic Evidence are the Primary Concerns for Smart Beta and Factor Investing Strategy Factors

From the results of our survey, it appears that respondents are primarily concerned with the existence of a rational risk premium, as well as by the ease of implementation and low turnover and transaction costs with a score of 3.70 for them both, on a scale from 0 (not important) to 5 (absolutely crucial), closely followed by the documentation of the factor premium in extensive empirical literature (score of 3.69) (see Exhibit 19).

Exhibit 19: Requirements for Factors
This exhibit indicates respondents' requirements in order to consider a given set of factors in their investment approach on a scale from 0 (not important) to 5 (absolutely crucial).

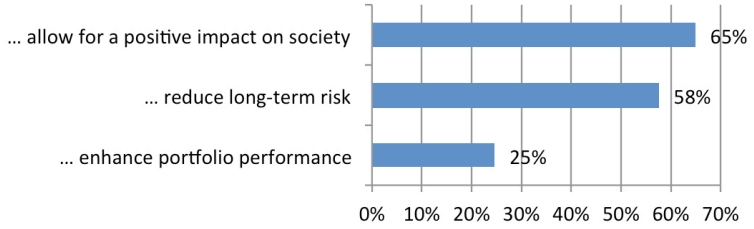


2.6. ESG Considerations within Smart Beta and Factor Investing

Incorporating ESG allows for a positive impact on society and reduces long-term risk

The two main reasons for respondents to incorporate ESG into their investment decisions is to allow for a positive impact on society (65%), as well as to reduce long-term risk (58%). Only a quarter of them (25%) think that incorporating ESG will serve to enhance portfolio performance (See Exhibit 20). Only 37% of respondents say they are willing to accept a lower performance in exchange for a better ESG score.[6]

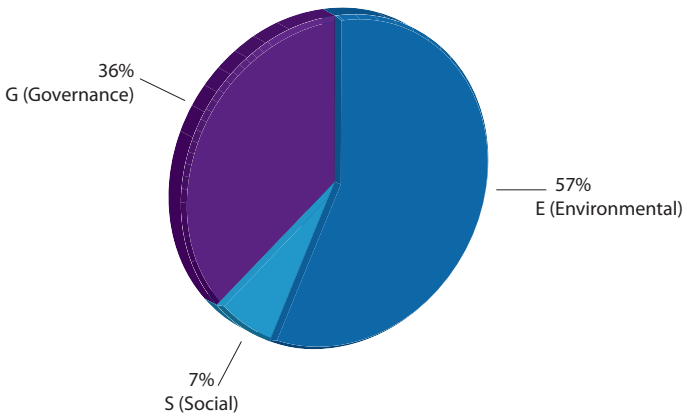
Exhibit 20: Do you Think Incorporating ESG Considerations Is Important in Investment Decisions to ...
This exhibit indicates respondent motivations to incorporate ESG in their investment decisions. More than one response could be given.



The most important dimension of ESG is the Environmental dimension

The majority of respondents (57%) identify the E (Environmental) as the most important dimension of ESG. The G (Governance) comes second (36%) and the S (Social) ranks last with only 7% of respondents considering it to be the most important dimension of ESG (see Exhibit 21).

Exhibit 21: Most Important Dimension of ESG
This exhibit indicates the dimension respondents consider the most important between Environmental, Social and Governance. Non-responses are excluded.



6 - See Exhibit 4.48 in Section 4 (Results).

The perceived best approach to reduce the carbon footprint of a portfolio is positive screening

45% of respondents consider that the best approach to reduce the carbon footprint of a portfolio is positive screening. Portfolio optimisation comes in second position (32% of respondents). Lastly, only 23% of respondents consider negative screening as the best approach (see Exhibit 22).

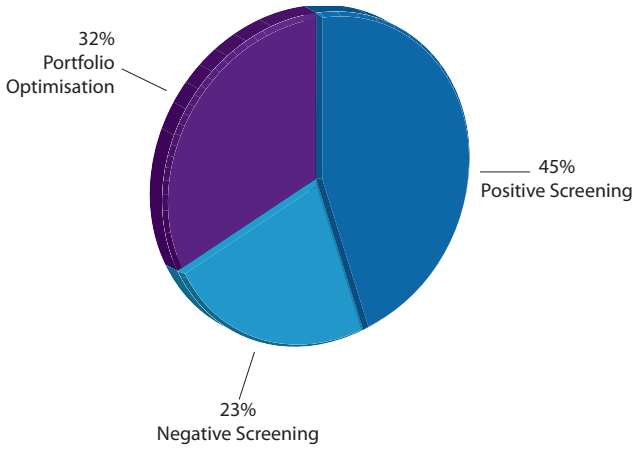


Exhibit 22: Best Approach to Reduce the Carbon Footprint of a Portfolio
This exhibit indicates the approaches respondents consider the best to reduce the carbon footprint of a portfolio. Non-responses are excluded.

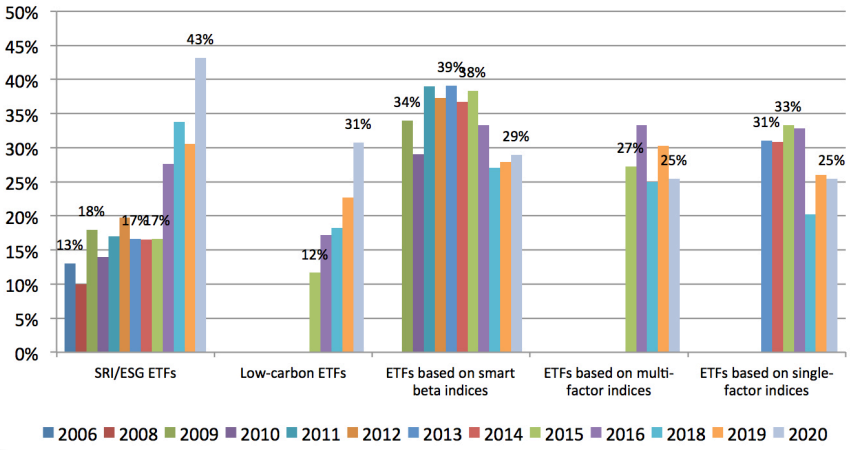
3. Future Developments

3.1. SRI/ESG and Smart Beta Equity/Factor Indices are the Main Expectations for Further Development of ETF Products

Our survey allows us to define the type of market segments where investors would like to see further ETF product development. As shown in Exhibit 23, the top concern for 43% of respondents is currently the further development of SRI/ESG ETFs. In second position, 31% of respondents called for more development of low-carbon ETFs. Additionally, for ETFs related to advanced forms of equity indices – namely those based on smart beta and multi-factor indices – 29% and 25% of respondents called for further developments in these two areas, respectively. If we then aggregate the responses concerning SRI/ESG and low-carbon ETFs, we see that 50% of respondents would like to see further developments in at least one of the two categories, compared to 38% in 2019. In the same way, if we aggregate the responses concerning smart beta indices, single-factor indices and multi-factor indices, we see that 43% of respondents would like to see further developments in at least one category related to smart beta equity or factor indices, compared to 45% in 2019.

Exhibit 23: What Type of ETF Products Would You Like to See Developed Further in the Future?

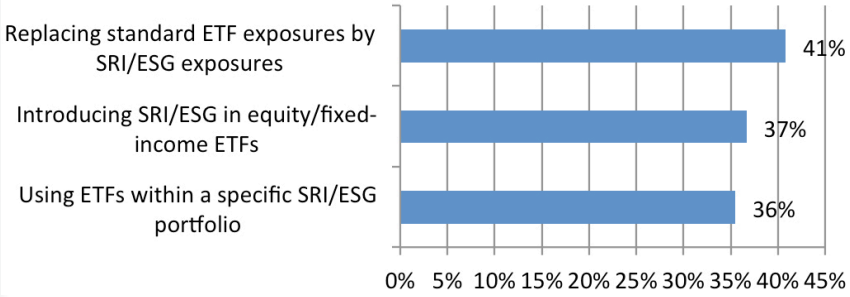
This exhibit indicates the percentage of respondents who would like to see different ETF products further developed in the future. Respondents were able to choose more than one product. We only display the top half of the list. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2006 (where available) to 2020.



When asked how they intend to use ETFs for incorporating SRI/ESG into their portfolio, respondents appear to be fairly well distributed between replacing standard ETF exposures by SRI/ESG exposures (41%), introducing SRI/ESG into equity/fixed-income ETFs (37%) and using ETFs within a specific SRI/ESG portfolio (36%) (see Exhibit 24).

Exhibit 24: Use of ETFs for Incorporating SRI/ESG into the Portfolio

This exhibit indicates how respondents intend to use ETFs for incorporating SRI/ESG into their portfolio. More than one response could be given.



3.2. SRI/ESG, Fixed-Income and Alternative Asset Classes are the Main Expectations for Future Development of Smart Beta and Factor Investing Products

Our survey results also show that respondents would like to see further development of the integration of ESG into smart beta and factor investing with a score of 3.38 on a scale from 0 (not required) to 5 (strong priority). The development of smart beta and factor investing products in the area of fixed income closely follows with a score of 3.24 (see Exhibit 25). It is likely that the development of new products corresponding to this demand may lead to an even higher take-up of smart beta and factor investing solutions.

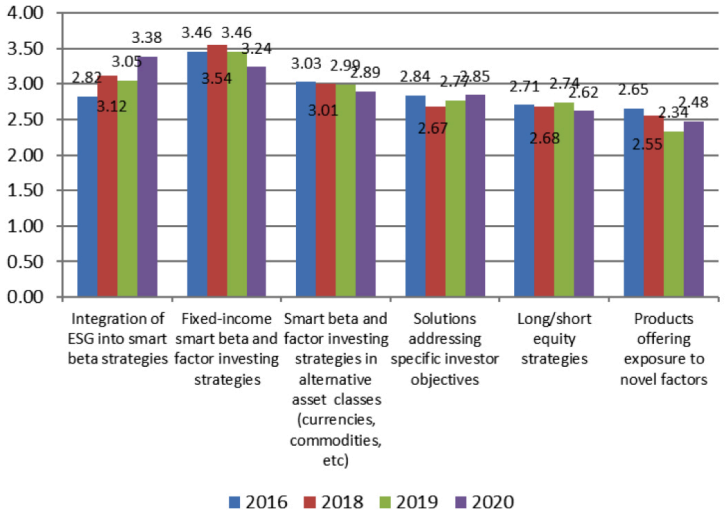


Exhibit 25: Which Type of Solutions Do You Think Require Further Product Development by Providers?
This exhibit indicates the types of solutions that respondents would like to see providers develop further, on a scale from 0 (not required) to 5 (strong priority). More than one response could be given. Non-responses are excluded. The percentages are based on the results of the EDHEC ETF, Smart Beta and Factor Investing surveys from 2016 to 2020.

Passive vehicles are preferred for smart beta equity

Finally, we compare the different vehicles respondents plan to use in the future for smart beta and factor investing for equity and fixed income. It appears that respondents plan to make more frequent use of open-ended passive funds than active solutions to invest in equity products, while they plan to use both active and passive solutions, within the same range, to invest in fixed-income products (see Exhibit 26).

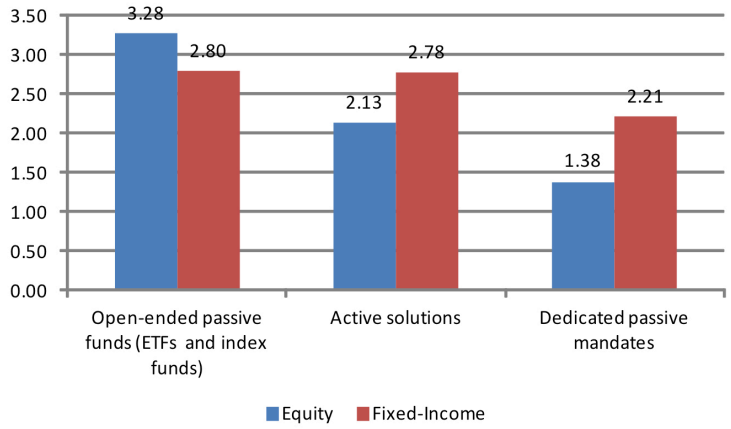


Exhibit 26: Comparisons of the Vehicles Planned for Use in the Future for Equity and Fixed-Income Smart Beta and Factor Investing
This exhibit compares the vehicles respondents plan to use in the future for equity and fixed-income smart beta and factor investing on a scale from 0 (never use) to 5 (use very frequently). More than one response could be given. Non-responses are excluded.

Analysis of the responses to our survey sheds light on several important questions regarding investor perceptions of ETFs. It also provides insights into the perceived benefits and challenges of smart beta and factor investing strategies. We find that take-up remains partial despite more than a decade of discussion in the industry, with the vast majority of adopters investing less than 20% of their portfolio in such approaches. It is therefore important to better understand the challenges investors face when analysing these strategies. Our survey points to the significant shortcomings of current smart beta and factor investing offerings, which may explain why industry participants are slow to adopt them. For example, investors perceive a lack of transparency and difficulty in

accessing information about such strategies, in particular risk categories such as data-mining risks. In the case of fixed-income strategies, investors express doubts over the maturity of research results at this stage.

Respondents also see a need for further development of long/short equity strategies based on factors, strategies that address client-specific risk objectives, and strategies that integrate environmental, social and governance (ESG) considerations. The 2020 edition of the survey shows significant interest among respondents in SRI/ESG, whether in relation to ETFs or smart beta and factor investing. They overwhelmingly answered all questions related to SRI/ESG. While their main motivation to incorporate ESG criteria into their investment is to have a positive impact on society, the majority of them do not want this to be done at the expense of weaker performance. Smart beta researchers and product providers doubtless must work to integrate SRI/ESG concerns into their solutions for smart beta and factor investing strategies.

Introduction

1. Introduction

Almost every year since 2006, EDHEC has conducted a survey on European investors' views and uses of ETFs. Since 2013, we have included a section dedicated to smart beta and factor investing strategies. In the present edition of the survey, we have added a focus on SRI (Socially Responsible Investing)/ESG (Environmental, Social, Governance) investing, both in the context of ETFs and smart beta and factor investing strategies. Conducting a survey allows us to analyse current practices and perceptions among ETF users in Europe, as well as among users of smart beta and factor investing strategies. By comparing our results with those of our regular surveys, we aim to shed light on trends within the ETF market and within the smart beta and factor investing strategy offer.

Since the first European ETF came on the market in 2000, this market has developed significantly. Assets under management (AUM) of ETFs and other exchange-traded index products amounted to $974bn as at the end of December 2019 (ETFGI, 2019). While the first ETFs attempted to replicate the performance of broad equity markets, ETFs now exist for a wide range of asset classes. ETFs can also provide access to ESG exposure, as well as smart beta and factor investing strategies.

The EDHEC European ETF, Smart Beta and Factor Investing Survey 2020 took the form of an online questionnaire addressed to European professionals in the asset management industry. It targeted institutional investors as well as asset management firms and private wealth managers. We received answers from a sample of 191 respondents, 12% of whom do not use ETFs. As the questionnaire had two sections, one dedicated to ETFs and the other dedicated to smart beta and factor investing strategies, all respondents could contribute to at least part of the survey.

This survey proceeds as follows. Section 2 presents the Background to the survey and reviews the main figures concerning the European ETF market and smart beta and factor investing strategies. The methodology used to conduct the survey and some information about survey respondents are provided in Section 3. The results of the survey are detailed in Section 4, which is the core of the present document, and includes an initial sub-section dedicated to ETFs and a second one entirely dedicated to smart beta and factor investing strategies. Below you will find the highlights of the main results presented in Section 4.

ETF Section (see Section 4.1)

Over the years, our surveys have shown a wide adoption of ETFs to invest in the main asset classes. In the present edition, ETFs based on the two asset classes, SRI/ESG and smart beta and factor investing, deserve special attention in terms of current use, satisfaction and future development.

- Use of ETFs (see Sections 4.1.1 and 4.1.5)

- 49% of respondents were investing in SRI/ESG in 2020, versus 17% in 2011.
- 55% of respondents were using ETFs to invest in SRI/ESG in 2020, versus 22% in 2011 and 33% in 2019.
- ETFs accounted for 39% of total investment in SRI / ESG in 2020, versus 13% in 2011.
- 65% of respondents were using ETFs to invest in smart beta and factor investing in 2020, versus 49% in 2014.
- 47% of investment in smart beta and factor investing was made through ETFs in 2020, versus 31% in 2013 and 38% in 2019.

- Satisfaction with ETFs (see Section 4.1.2)

- The level of satisfaction with the use of ETFs has increased for equities, SRI/ESG, real estate, hedge funds and commodities compared to 2019.
- 97% of respondents using ETFs to invest in equities are satisfied with them.
- 87% of respondents using ETFs to invest in SRI/ESG are satisfied with them, versus 68% in 2019.
- 77% of respondents using ETFs to invest in SRI/ESG are satisfied with them.

- Role of ETFs in the Asset Allocation Process (see Section 4.1.3)

- 67% of respondents were using ETFs for long-term buy-and-hold investment, versus 43% for tactical allocation.
- 77% of respondents were using ETFs to achieve broad market exposure, versus 51% for specific sub-segment exposure.
- Cost and quality of replication are the two main drivers for selecting ETF providers (91% and 86% of respondents, respectively).

- Future Development of ETFs (see Section 4.1.4)

- 54% of investors plan to further increase their use of ETFs in the future.
- Lowering costs is the main motivation for increasing the use of ETFs (81% of respondents in 2020).
- 70% of investors are planning to increase their ETF allocation to replace active managers, while 44% are also seeking to replace other passive investment products through ETFs.
- 50% of respondents would like to see further developments in SRI/ESG-based ETFs and/or low-carbon ETFs, versus 38% in 2019.
- 45% of respondents prefer the best-in-class approach (i.e. positive screening) for SRI/ESG, far ahead of the thematic approach (30%) and the negative screening approach (25%).
- 41% of respondents intend to replace standard ETF exposures by SRI/ESG exposures, 37% intend to introduce SRI/ESG into equity/fixed-income ETFs and 36% intend to use ETFs within a specific SRI/ESG portfolio.

- 43% of respondents would like to see additional developments in at least one category related to smart beta equity or factor indices, versus 45% in 2019.

Smart Beta and Factor Investing Strategies (see Section 4.2)

• Use of Smart Beta and Factor Investing Strategies (see Section 4.2.1)

- 38% of participants currently invest in smart beta and factor investing strategies; 24% do not but are considering adopting such strategies in the future.
- 70% of respondents invest less than 20% of their total investments in smart beta and factor investing strategies. Only 13% of respondents invest more than 40% of their total investments in smart beta and factor investing strategies.
- 57% of respondents use passive funds that replicate smart beta and factor investing indices, while 43% use active solutions to invest in smart beta and factor investing.
- 65% of respondents use discretionary strategies to invest in smart beta and factor investing, while 52% use replication strategies.

• Smart Beta and Factor Investing Strategies in Fixed Income (see Section 4.2.2)

- 11% of the whole sample of respondents currently use smart beta and factor investing for fixed income.
- 68% of this sub-sample invest less than 20% of their total investment in smart beta and factor investing for fixed income.
- The additional 89% of respondents said they do not invest in smart beta and factor investing products for fixed income mainly because risk premia are not sufficiently documented in the literature (39%), because there is a lack of efficient bond benchmarks (30%) and because the offer does not correspond to their needs in terms of risk factor (27%).
- Respondents are mitigated in their plans to increase their investment in smart beta and factor investing for fixed income in the future, because they have doubts about the maturity of research results for fixed-income strategies.
- About three-fifths of respondents believe that the three typical factors of the credit risk market, namely carry/level of the yield curve, credit and slope of the yield curve, are the most relevant rewarded factors in fixed-income markets (63%, 60% and 59% respectively).
- 56% of respondents indicate that smart beta and factor investing bond solutions are useful in performance-seeking portfolios for harvesting risk premia.
- 47% of respondents have a preference for factor investing, i.e. selecting bonds according to rewarded attributes (value, momentum, credit, liquidity) to achieve efficient harvesting.

• Smart Beta and Factor Investing Indices (see Section 4.2.3)
- 73% of respondents agree that smart beta and factor investing indices provide significant potential to outperform cap-weighted indices.
- 73% of respondents agree that smart beta and factor investing indices allow the concentration of cap-weighted indices in very few stocks or sectors to be avoided.

• Information about Smart Beta and Factor Investing Strategies (see Section 4.2.4)
- Respondents perceived a lack of transparency and difficulty in accessing information about smart beta and factor investing strategies, especially crucial information such as data-mining risk and information about transparency on portfolio holdings over a back-test period.
- This may explain why these investments make up only a small fraction of their portfolio holdings despite respondents showing significant interest in smart beta and factor investing strategies.

• Importance of Factors as Performance Drivers (see Section 4.2.5)
- Existence of factor risk premium, ease of implementation and academic evidence are the primary concerns when it comes to smart beta and factor investing strategy factors.
- 65% of respondents report incorporating ESG into their investment decisions to allow for a positive impact on society and 58% to reduce long-term risk.
- 63% of respondents do not want the incorporation of ESG to be done at the expense of performance.
- Only 25% of respondents think that incorporating ESG will serve to enhance portfolio performance.
- 57% of respondents identify the E (Environmental) as the most important dimension of ESG, 36% indicate the G (Governance) and only 7% the S (Social).
- 45% of respondents consider that the best approach to reduce the carbon footprint of a portfolio is positive screening, 32% prefer portfolio optimisation, and only 23% consider negative screening as the best approach.

• Future Developments for Smart Beta and Factor Investing Strategies (see Section 4.2.6)
- 48% of respondents plan an increase of more than 10% in terms of assets in their use of smart beta and factor investing products in the near future, while only 7% indicate a decrease.
- Improving performance and managing risk are the two main motivations for using smart beta and factor investing strategies.
- SRI/ESG, fixed-income, and alternative asset classes are the main expectations for future development of smart beta and factor investing products.

- Respondents would also like more customised smart beta and factor investing solutions to be developed.
- Respondents plan to make more frequent use of open-ended passive funds than active solutions to invest in equity products, while they plan to use both active and passive solutions to invest in fixed-income products.

Background

2. Background

2.1. Overview of ETFs

Exchange-traded funds are open-ended investment funds traded on a stock exchange. The first ETFs appeared in the United States in 1989 and they started trading in Europe in 2000. As at the end of December 2019, there were 6,970 ETFs worldwide managing $6,118bn in assets (ETFGI, 2019). The AUM within the 1,761 ETFs that make up the European industry stood at $974bn from 71 providers on 27 exchanges (ETFGI, 2019). According to Morningstar (2019a), the amount invested in ETFs in Europe has doubled over the last five years, and currently accounts for 8.6% of the total AUM in European investment funds, compared with 5.5% five years ago. While the large number of ETFs means that a large variety of indices are tracked – including indices on niche markets and innovative index methodologies in traditional asset universes – there is also a large choice of different ETFs that track the same or very similar indices. For example, in Europe, there are currently 18 ETFs that track the Euro Stoxx 50 index.[7]

The number of ESG ETFs has considerably increased in Europe since 2017. In 2018, these saw growth of 50%, reaching €9.95bn, with the launch of 36 new products, against just 15 in 2017 (Morningstar, 2019a). At the end of 2019, there were more than 100 ESG ETFs (IPE, 2019). There has been a shift over the years in favour of physical rather than synthetic replication. While the respective shares of physical and synthetic replication were 60% and 40% 10 years ago, that of physical replication currently stands at 80% for equity ETFs and 90% for fixed-income ETFs (Morningstar, 2019a).

The European ETF market is mostly institutional. Although there are no exact figures, industry estimates in terms of the percentage of retail AUM are around 20% according to Morningstar (2019a). The European Securities and Markets Authority (ESMA) Securities and Markets Stakeholder Group[8] notes that while ETFs are a "very low-cost alternative" to other Undertakings for Collective Investment in Transferable Securities (UCITS) funds, they are "very rarely, if at all, marketed for European individual investors" due to "differences in remuneration of the distribution channels".

In continental Europe, retail distribution has traditionally been controlled by banks, and to a lesser extent insurance companies, who have used their sales almost exclusively to market their in-house products. In 2015, 56% of the AUM in the European fund industry was controlled by third-party allocation and 44% by captive distribution channels (Giannotti and Maciver, 2016). However, the split is different from one country to another, with a dominance of captive distribution in Austria, France, Italy and Spain, while Sweden, the UK and the Netherlands use more third-

7 - https://www.justetf.com/en/how-to/euro-stoxx-50-etfs.html.
8 - ESMA Policy Orientations on Guidelines for UCITS exchange-traded funds and structured UCITS (2011).

party funds. In the UK, independent financial advisers (IFAs) dominate the retail market. Until the end of 2017, these institutions and intermediaries had no direct incentive to promote ETFs, which by nature do not pay them commissions, unlike comparable unlisted vehicles, UCITS included. However, the introduction of the second Markets in Financial Instruments Directive (MiFID II) in January 2018 considerably restricted this distribution commission policy for independent advisers, which benefits ETFs. MiFID II provides more transparency around ETF trading, which is helpful as many investors still have a relatively poor understanding of the trading and liquidity of ETFs (Morningstar, 2019a). Historically, about 70% of the trades in ETFs in Europe were done on an over-the-counter (OTC) basis (Morningstar, 2019a). Since the introduction of MiFID II in January 2018, investors are required to report more information about their trades. This resulted in the European ETF industry launching an aggregate trading data service incorporating both over-the-counter (OTC) trades and those listed on exchanges such as the London Stock Exchange.[9]

In the context of the large growth of ETFs, a collection of recent papers question the influence of the increase in ETF ownership on the liquidity of ETF component securities. They investigate the US market in particular, where the market share dedicated to ETFs is even higher than in Europe. An interesting and comprehensive review is provided by Ben-David, Franzoni and Moussawi (2017). It should be noted that there is a debate in this literature, as authors have provided evidence of both positive and negative effects of ETF trading on market liquidity and efficiency, and further research may be needed to explain the sometimes divergent views. Israeli, Lee and Sridharan (2016) note that ETFs constitute about 30% of the daily value traded on US exchanges. They evidence an increase in trading costs for these securities, associated with a decrease in liquidity. Similarly, Hamm (2014) reports an increase in illiquidity for securities that are part of ETFs subject to increases in ownership. In contrast, Glosten, Nallareddy and Zou (2016) document an increase in information efficiency for securities that are part of ETFs experiencing higher trading, resulting from increased ownership. Israeli, Lee and Sridharan (2016) justify this difference by the fact that different approaches were used: Glosten, Nallareddy and Zou (2016) consider the current effect of increasing ownership on liquidity, while they test its effect in the future. Hamm (2014) explains this phenomenon by the fact that uninformed investors tend to depart from investment in individual stocks when they have the opportunity to invest in diversified ETFs or index funds – a result evidenced by greater illiquidity for stocks that are part of the more diversified ETFs. This economic consequence of the large development of index trading was already evoked by Wurgler (2011) and Broman (2016).

9 - http://www.funds-europe.com/news/european-etf-industry-launches-aggregate-trading-data-service.

Ben-David, Franzoni and Moussawi (2015) argue that securities with higher ETF ownership exhibit higher volatility and are more likely to depart from the random walk. They notice that during turbulent market periods, arbitrage activity, which is necessary to reduce price discrepancy between ETFs and underlying securities, is limited. Consequently, ETF prices tend to diverge from those of the underlying securities.

However, Madhavan (2016) and Madhavan and Sobczyk (2016) have another point of view and detail how ETFs improve financial market information. According to them, ETFs will reflect new information before underlying securities, as long as arbitrage is frictionless. This is in line with Glosten, Nallareddy and Zou (2016), who argue that stocks incorporate information more quickly as soon as they are part of ETFs, and also with Da and Shive (2016), who observe increasing co-movements in returns of stocks that are included in an index, and finally Wermers and Xue (2015), who report that ETFs enhance price discovery. Agarwal et al. (2016) document a correlation between the liquidity of ETFs and the liquidity of the security components of ETFs.

The growth of ETFs is explained by the fact that investors choose to replace investment in traditional index funds by investment in ETFs. Israeli, Lee and Sridharan (2016) point out that ETFs are increasingly replacing traditional passive investment vehicles, such as index funds, closed-end-funds and index futures, as detailed in recent studies. For example, Madhavan et al. (2014) argue that ETFs are a superior alternative to index futures, because of the mispricing that often occurs around the futures' rolling dates.

As ETFs combine the diversification of index funds and the ease of trading and flexibility of stocks listed on exchanges, they should be analysed from both standpoints. Like traditional index funds, ETFs usually attempt to track or replicate a particular index of equities, debts or other securities. Like mutual funds, they are registered as open-ended funds, continuously offering new fund shares to the public and required to buy back outstanding shares on request and at a price close to their net asset value (NAV). Shares in ETFs can be traded on the market throughout the trading day, using the whole gamut of order types. Although the designs of ETFs and mutual funds are similar, investors can treat ETFs as normal stocks, buying or selling ETF shares through a broker or in a brokerage account, just as they would the shares of any publicly traded company.[10] ETFs give investors access to a wide array of asset classes and investment strategies. Hence they are a type of investment vehicle and not an asset class in themselves.

10 - Sometimes ETFs are wrongly classified as closed-end funds, since both exhibit similar features, such as holding multiple securities and asset classes. Furthermore, both can be traded on exchanges. The most important difference is that ETFs always trade very closely to their NAV, since any deviation can be exploited by arbitrageurs redeeming and then buying new units. Closed-end funds, by contrast, rarely trade at their NAV.

Taxonomy of Sustainable Investing – An Investment Process Perspective[11]

1. Introduction: Challenges in Sustainable Investing

Following the 2015 Paris Agreement, there has been a steady rise in climate awareness in both the public and private sectors. According to the UN Intergovernmental Panel on Climate Change (IPCC), global warming needs to be limited to 1.5 degrees, beyond which climate change will be irreversible, and we only have until 2030 to slash carbon dioxide emissions by 45% from 2010 levels to make any meaningful impact and prevent a much greater climate risk.

In its World Energy Investment Report of 2018, the International Energy Agency (IEA) estimated that global energy investment totalled 1.8 trillion USD in 2017, with more than 750 billion USD going into the electricity sector and about 715 billion USD being spent on oil and gas.[12] *The remainder, some 335 billion USD, was invested in renewables. Not only is the share of renewables the smallest of all energy investments, but it also falls about seven times short of the IPCC's estimated annual average investment needed of 2.4 trillion USD.*[13]

One of the major obstacles in attracting funds into sustainable investing is its lack of standardisation and clear definitions. The confusion and lack of coherence have hindered the rising interest in this field, and without a common framework, institutional investors will find it difficult to compare and promote relevant funds and financial products. Fortunately, recent discussions have paved the way towards formal recognition of common practices and terminology related to sustainable investing, and useful attempts have been made to establish a clear and detailed classification system, or taxonomy, for sustainable activities – see for example the European Parliament's Task Force Report on Sustainable Investment Taxonomy (2016).[14]

We strongly believe that creating a common language for all actors in the financial system will be helpful in promoting the private sector's contribution to long-term sustainable growth. This paper contributes to this objective by providing clarification and a taxonomy from an investment process perspective. Similar to common practice in investment management, it initiates a discussion on the commitment to earning social and environmental returns by drawing on the key distinction between objectives and constraints. Its two main sections then discuss the selection and allocation phases. We hope our paper will provide useful clarification to asset managers and asset owners seeking to promote sustainable investing practices.

11 - This text was established by Fiona Huang and Lionel Martellini, EDHEC-Risk Institute.
12 - https://www.iea.org/newsroom/news/2018/july/global-energy-investment-in-2017-.html.
13 - https://www.ipcc.ch/site/assets/uploads/sites/2/2018/12/SPM-for-cities.pdf.
14 - http://greenchipfinancial.com/wp-content/uploads/2016/09/Sustainable-Investment-Taxonomy-Report.pdf.

2. Mission Determination: Setting Investment Objectives and Constraints

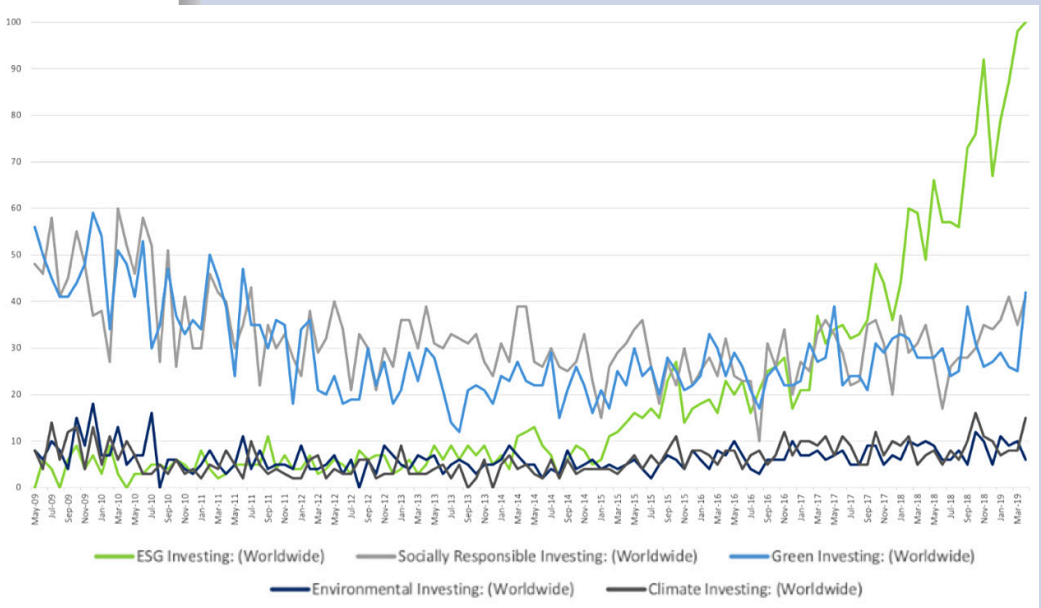
The execution of a sound and meaningful investment process requires investment priorities to be clearly identified before any capital is put to use. When it comes to sustainable investing, properly defining investment priorities means efforts must be made to clarify scope on the one hand, and objectives and constraints on the other.

Scope: Environment Only versus Environment and Society

In terms of scope, a key distinction exists within sustainable investing between investment strategies with environmental objectives only and more generic investment strategies that also include social objectives. As far as the terminology is concerned, the former approach is often labelled Environmental Investing, Climate Investing or Green Investing, while the latter is most often referred to as Socially Responsible Investing (SRI) or Environmental, Social and Governance (ESG) Investing.

Figure 1 below shows a Google Trend analysis of the 5 aforementioned terms.

Figure 1: Google Trend Analysis of Common Terms



Usage levels are mainly based on search terms worldwide and limited to a web search. Furthermore, usage is rated on a scale from 0 to 100, with a value of 100 indicating peak popularity for the term and a value of 0 indicating a lack of data. While usage levels of "environmental investing" and "climate investing" have remained more or less as they were in 2009, usage of "green investing" and "socially responsible investing" actually declined over the same

period. Interestingly, usage of "ESG investing" has grown rapidly over the past decade. Although it is hard to pinpoint the reason for this growth, it could be partly due to the rise in general interest in quantifying ESG factors and academic interest in measuring the impact of these factors on company performance.

3. Selection Phase: Screening Scheme

When it comes to the implementation of SRI strategies, a screening-based process is the most commonly used approach for the introduction of ESG constraints in selecting the investment universe. While some asset managers or asset owners choose to perform ESG-related adjustments after selecting assets based on more traditional criteria, including screening as the primary step in SRI is more efficient than only using these factors in the later step, during the asset allocation phase.

Broadly speaking, ESG screening methodologies can be split into two main categories, namely positive and negative screening. The first, sometimes referred to as the best-in-class approach, chooses the assets from an investment universe with the most positive scores on relevant ESG factors. In contrast, negative screening excludes securities from a defined universe, often based on selected characteristics, such as products sold or links to a specific industry. Although the two methods start from two different perspectives, they generally produce relatively similar outcomes.

Whether from a positive or negative screening perspective, asset managers or asset owners can choose between selecting assets based on a single component or aggregate criteria. Commonly used criteria include quantitative factors, such as carbon emissions, but also qualitative criteria, such as a firm's involvement in a certain industry. Strategies that purposely exclude oil and gas companies in the investment selection phase are a good example of qualitative criteria at work. Aggregate scores, on the other hand, are based on combinations of single factors, either using a customised methodology or some standard methodology implemented by a third party. Such external ESG scores can be used to obtain a proxy for a company's ESG performance through a standardised system and, as such, can prove useful for asset managers or asset owners with a limited understanding of how to design their own selection criteria based on various sustainability factors.

Although not explicitly expressed in Figure 3, there are subcategories of both positive and negative screening processes. These are all combinations of the previously described criteria designs, but are worth special attention given their popularity amongst

asset managers. Ethics-based and value-based exclusion lead to investments determined by aggregate criteria integrated with political, religious or philosophical views. A relatable example could be funds that exclude industries that generate obvious negative externalities in their portfolio, such as gambling, tobacco and alcohol. Another example is funds that exclude companies associated with products or operations involving questionable ethics, such as pornography and animal testing or cruelty.

While some subcategories are based on subjective grounds, there are negative screening strategies based on internationally accepted norms, such as the International Labor Organization standards, UN Global Compact, Universal Declaration of Human Rights and/or other globally recognised norms. This type of screening, known as norm-based screening, provides more objective exclusionary screening criteria, where investments are selected against minimum standards for business practices endorsed by international organisations. At a very basic level, many investment funds use a certain degree of exclusion to prevent financing controversial activities, including the production of weapons or issuers from non-cooperating countries listed by the Financial Action Task Force. But complying with some of these norms not only aligns the fund with the industry's best practices, it also allows it to receive extra funding and services from various organisations. For example, the International Finance Corporation, a member of the World Bank Group, has a strict policy to only cooperate with financial intermediaries that comply with its Exclusion List.

Like negative screening, positive screening also includes subcategories of investment strategies. Perhaps the most recognised of these is the "best-in-class" approach. While this strategy does not necessarily exclude any specific sector, it selects only companies considered ESG leaders in their respective industries. This allows investors to consider the best practice in each industry and could incentivise companies from all sectors to seek alignment with the competition. Even though it can enable investors to better diversify their ESG portfolio, this method requires a good understanding of all industries in order to define their respective best practices. Alternatively, investors could use a similar approach but select companies based on ESG scores provided by third-party rating services. Both methods could be considered "best-in-class".

This wide range of screening methods is used by asset managers, but also by index providers. The S&P 500 ESG Index, for example, uses negative screening to exclude companies related to controversial weapons, those with a low UN Global Compact score, and those in

the bottom 25% of S&P's ESG ratings. The weighting of this index is determined by companies' float-adjusted market capitalisation and GICS industry, similar to many other multi-industry stock indices provided by S&P.[15] In this example, the index used ESG factors only at the selection process, but it chose to use more "traditional" index weighting methods for the allocation phase. However, it is also possible to integrate ESG scores into the weighting scheme itself.

4. Allocation Phase: Weighting Scheme

Although many asset managers or asset owners choose to only implement SRI filters in the primary selection phase, a full SRI process should also include SRI factors in the allocation phase. Fortunately, most SRI strategies can be integrated into traditional portfolio construction models, which they enhance through improved risk and performance estimates based on the use of ESG factors. In the case of an ESG assessment, weighting schemes involving an adjustment based on ESG factors can generally be classified as one of two main valuation methods: either an adjustment to projected cash flows or an adjustment to discount rates.

Discount rate adjustments recognise that the cost of capital should be lower for firms with high ESG scores. Indeed, a number of studies have shown that high ESG scores have a positive effect on the firm's ability to retain a lower cost of debt, due to a perceived lower default risk.[16] Cash flow adjustments, on the other hand, are based on foreseeable or predictable benefits generated by the ESG factors. Firms with high environmental performances, for example, could sell their carbon emission units to firms with greater needs, earning an extra stream of revenue. Similarly, it is generally agreed among academics that good governance will translate into outperformance in the long run. Firms with good practices are likely to avoid the cost of litigation with other stakeholders, which could also be reflected in future cash flow estimates. Both valuation methods reward firms for their ESG performances, but they reserve the flexibility to adjust the discount rate or expected cash flow.

Moving away from fundamental analyses, weighting schemes used by index providers and passive investment strategies based upon such indexes, as alluded to above, can also reflect cross-sectional differences in ESG scores. The STOXX ESG Leaders Index, for example, uses normalised ESG ratings to allocate its stock weightings, in addition to a negative screening selection process similar to that of the S&P 500 ESG Index.[17] The weighting scheme can also combine ESG ratings with more traditional weighting methods. The MSCI ESG Universal Indexes, for example, determine the weight of each

15 - https://us.spindices.com/indices/equity/sp-bse-100-esg-index-inr.
16 - https://www.db.com/cr/en/docs/Sustainable_Investing_2012.pdf.
17 - https://www.stoxx.com/document/Indices/Common/Indexguide/stoxx_esg_guide.pdf.

security based on three factors: ESG Rating Score, ESG Trend Score and Market Capitalisation Weight from the usual MSCI indexes. The ESG Trend Score is determined by whether the most recent change in ESG rating was a downgrade, neutral or an upgrade; securities with upgraded ESG have additional bonus weights in the ESG indexes. Another popular index provider, FTSE, also uses a blended approach in its ESG Index Series. However, instead of using an ESG trend adjustment, it applies an additional industry neutral adjustment to match the industry index weightings with corresponding traditional indexes. In both examples, the weighting scheme combines traditional weighting methods with ESG adjustments, and hence the resulting ESG indexes still resemble their corresponding traditional indexes even after ESG adjustments.

Overall, such weighting adjustments based on ESG factors appear to be purely ad-hoc, and they entirely ignore cross-sectional differences in the risk and return characteristics of the underlying stocks. As a result, it is unclear what assumptions would be required to make them optimal from a risk-return efficiency standpoint. In this context, we believe that further academic research is needed to provide new insights into how optimal weighting schemes could account for firms' differential exposures with respect to ESG factors in addition to traditional risk factors.

5. Conclusion

This insert is an attempt to establish a taxonomy for sustainable investing strategies, while seeking to outline how sustainable investment processes can be related to common investment practices. There has been a significant increase in ESG awareness amongst corporates and investors since the end of the last century, leading to an increase in the number of responsible investment approaches. More policy makers see sustainable investing as an effective way to achieve sustainable development goals, providing more efficient solutions than direct public intervention and fostering innovation. This trend is likely to continue, but governments and industry bodies need to provide suitable regulatory and legal frameworks so as to attract more capital into environmental and social projects.

2.2. Smart Beta and Factor Investing Strategies

For a few years, the standard practice of using a capitalisation-weighting scheme for the construction of indices has been the target of harsh criticism. The growing demand for indices as benchmarks for passive investment vehicles has led to innovations including new weighting schemes and alternative definitions of sub-segments. There are also many recent initiatives for non-cap-weighted ETFs. 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,[20] including equal-weighted ETFs, minimum variance ETFs, characteristics-weighted ETFs, etc.[21] These have been coined "Smart Beta ETFs" as they seek to generate superior risk-adjusted returns compared to standard market capitalisation-based indices. According to ETFGI[22], at the end of February 2020, there were 1,311 smart beta equity ETFs and ETPs globally and 165 providers of such funds, listed on 41 exchanges in 33 countries, amounting to US$787bn. According to Bloomberg[23], the AUM of European smart beta ETFs reached €69bn at the end of 2019 and an additional €33bn was invested in ESG strategies. In 2019, six new smart beta ETFs were launched in Europe, compared to 20 in 2018, and 83 in 2017, a sign that this market is reaching a certain level of maturity, and the share of smart beta ETPs represents 7.2% of the total European ETP market (ETF Stream[24]).

In the area of smart beta and factor investing for fixed income, the market share is currently small with only 3.7% of ETF assets at the end of December 2018 (Morningstar, 2019b). However, Kahn and Lemmon (2015), considering duration and credit factors for fixed income, and market, size, value and momentum factors for equity, evidenced that an even higher proportion of active risk could be explained by smart beta factors for the fixed-income asset class compared to the equity asset class (67% for fixed income versus 35% for equity). Further, for 38% of the fixed-income sample funds, 90% or more of the active risk can be explained by smart beta factors. This is an illustration of the benefits of smart beta strategies for the fixed-income asset class.

We proceed now to the presentation of the survey methodology and data (Section 3). The main results of the survey – European investors' views and use of ETFs and smart beta and factor investing strategies – are presented in Section 4.

20 - For instance, PowerShares adopted a fundamental index methodology and launched PowerShares FTSE RAFI ETFs that have covered 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 launched revenue-weighted ETFs in 2008.

21 - 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 and first volatility-weighted ETFs.

22 - ETFGI Press Releases, 20 March 2020.

23 - Bloomberg. 2020. Europe's Active Managers should Watch for ETF Smart-Beta Growth. 9 March 2020. https://www.bloomberg.com/professional/blog/europes-active-managers-should-watch-for-smart-beta-etf-growth/.

24 - Kenneth Lamont. 2020. "An Analysis of the Smart Beta Landscape in 2019". https://www.etfstream.com/feature/10900_an-analysis-of-the-smart-beta-landscape-in-2019/.

Methodology & Data

3. Methodology & Data

3.1. Methodology

The EDHEC European ETF, Smart Beta and Factor Investing Survey 2020 was completed using an online questionnaire distributed to professionals within the European asset management industry, and subsequent e-mail communication. It targeted professional asset managers who have experience with ETF instruments and smart beta and factor investing strategies, including institutional investors, asset management companies and private wealth managers.

The questionnaire comprised two main parts. In the first, participants were asked about the role ETFs play in their asset allocation decisions, as well as their level of satisfaction with different ETF products. We also invited them to tell us how they imagine their use of ETFs changing over the coming years, to indicate the type of ETF products they would like to see further developed and how they intend to use ETFs for incorporating SRI/ESG into their portfolio. The second part of the questionnaire is dedicated to smart beta and factor investing strategies. Respondents were asked about their current use of smart beta solutions – whether equity or fixed-income – in their portfolio allocation. They were also asked about the difficulties they face, how they integrate ESG considerations into their strategies and about their needs in terms of further development of alternative beta and factor investing strategies.

3.2. Data

191
respondents

88%
invest in ETFs

The e-mail containing a link to the questionnaire was sent out in February 2020. The first response was received on 4 February and the last on 4 April. In total, we received replies from 191 participants, of whom 12% (22) reported that they had never invested in ETFs. However, as a large part of the survey was dedicated to smart beta and factor investing strategies, these participants were invited to skip the ETF section and directed to the second part, since our aim is to include only experienced ETF investors in the ETF section.

Our survey is aimed at European investment professionals. Thus, the 191 survey respondents are based in Europe, many of whom (53%) are from Switzerland, the UK, Germany and Italy. The exact breakdown of the respondents' countries is presented in Exhibit 3.1. We can see from these numbers that our sample gives a fair geographic representation of the European investment market.

53%
from Switzerland, the UK, Germany, Italy

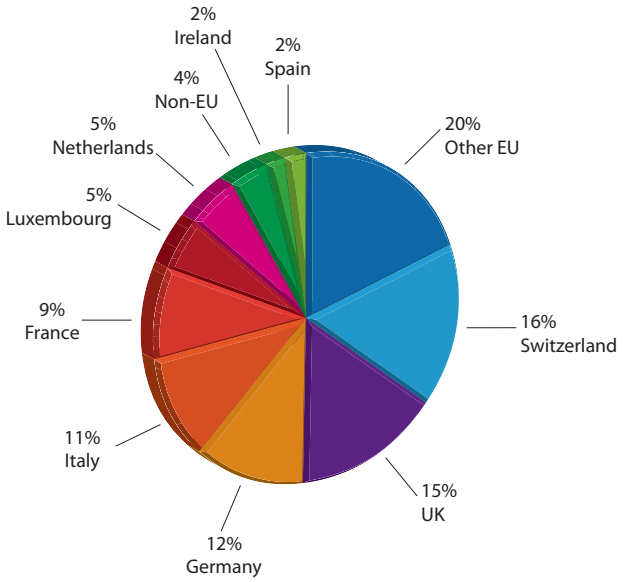


Exhibit 3.1: Country Distribution of Respondents
This exhibit indicates the percentage of respondents that have their activity in each of the listed countries. Percentages are based on the 191 replies to the survey.

75%
of institutional managers

We also asked participants about their institution's principal activity, allowing us to distinguish between professionals in institutional investment management and those in private wealth management. At 75% of the survey participants, institutional managers are the largest professional group represented in this study (the total of Asset owners and Other institutional investors as shown in Exhibit 3.2). About 16% belong to the private wealth management industry. Finally, the remaining 9% is made up of other professionals within the financial services industry, such as investment bankers or industry representatives.

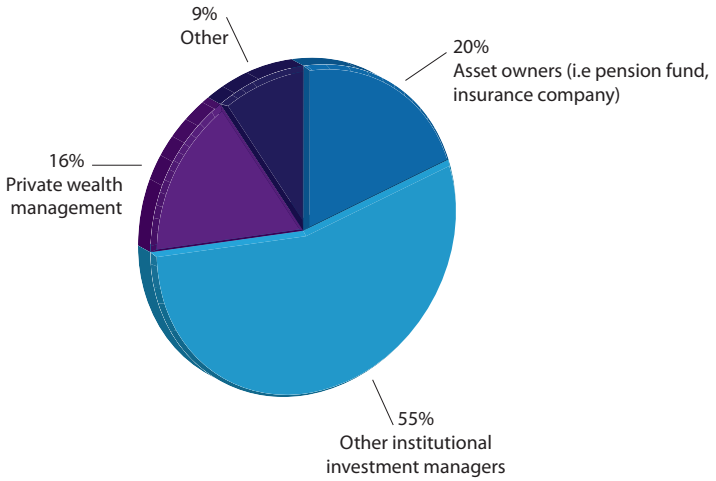
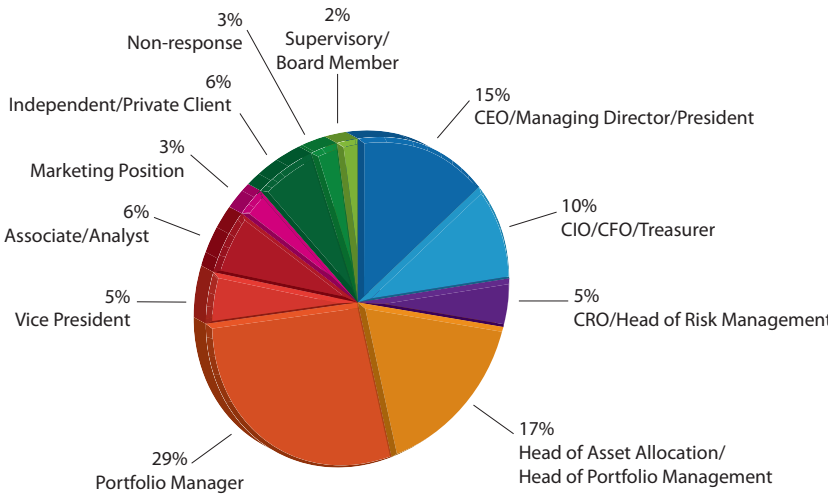


Exhibit 3.2: Main Activity of Respondents' Institutions
This exhibit indicates the distribution of respondents according to their institution's principal activity. Percentages are based on the 191 replies to the survey.

It is important to qualify respondents by their job function. We expected that given the importance for investment organisations of choosing investment instruments such as ETFs or competing index products, those most suitable to respond to our questionnaire would be fairly high-ranked executives or portfolio management specialists. Many of the respondents do indeed occupy senior positions: 17% are board members and CEOs, and 32% are directly responsible for the overall investments of their

company (such as CIOs, CROs or Heads of Portfolio Management). 29% of participants are portfolio or fund managers (see Exhibit 3.3).

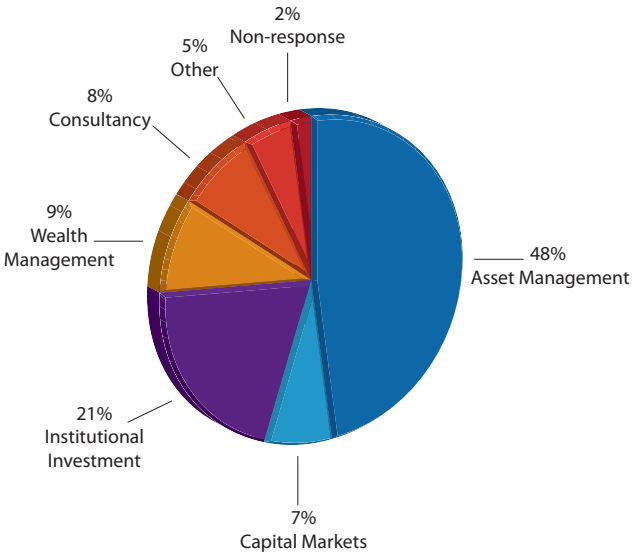
Exhibit 3.3: Functions of Survey Respondents
This exhibit indicates the distribution of respondents based on the positions they hold in the company. Percentages are based on the 191 replies to the survey. Non-responses are reported so that the percentages for all categories add up to 100%.



48%
of asset managers

We also asked respondents about the nature of their activity. From Exhibit 3.4, we can see that about half of them (48%) are asset managers.

Exhibit 3.4: Nature of Survey Respondents' Activities
This exhibit indicates the distribution of respondents based on the nature of their activity in the company. Percentages are based on the 191 replies to the survey. Non-responses are reported so that the percentages for all categories add up to 100%.



78%
of medium-sized and large companies

Finally, Exhibit 3.5 shows the AUM of the companies that employ the survey respondents. More than a third (35%) are large firms with over €10bn in AUM. About two-fifths (43%) are medium-sized companies, with AUM of between €100m and €10bn. We also received responses from small firms: 22% of respondents have AUM of less than €100m. This size breakdown tells us that the European ETF, Smart Beta and Factor Investing Survey 2020 mainly reflects the views of medium-sized to large companies, which account for 78% of respondents.

Taken together, we believe that this regional diversity and balance of different asset management professionals make the survey largely representative of European ETF, smart beta and factor investing strategy investors. Having described the survey sample, we now turn to the analysis of the responses obtained from participants.

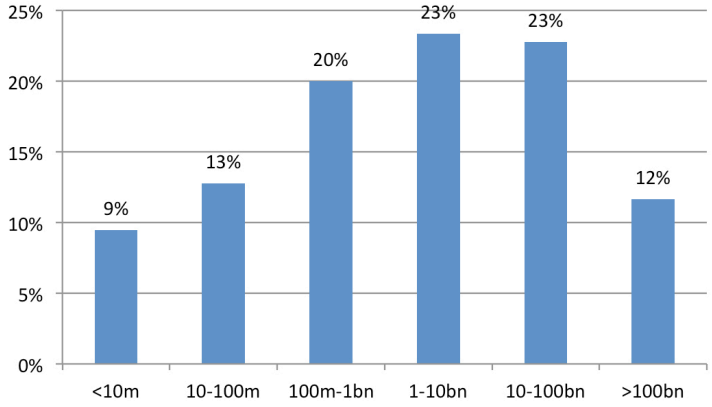


Exhibit 3.5: Assets Under Management (in EUR)
This exhibit indicates the distribution of respondents based on their reported AUM. Percentages are based on the 191 replies to the survey, excluding non-responses.

Results

4. Results

In this section, we present the main survey results and discuss possible explanations for the respondents' answers. Like the background, the results section is divided into two main parts. The first, dedicated to ETFs, takes a close look at the use of and satisfaction with ETFs in practice. Furthermore, we investigate the role ETFs play in asset allocation decisions, including the reasons for investing in ETFs. Survey participants were also invited to express their views on future developments in the ETF market and how they intend to use ETFs for incorporating SRI/ESG into their portfolio. Finally, we compare the results of the ETF section of this year's survey to previous ETF surveys from 2006 to 2019 for further insights into trends over time.

The second part is dedicated to smart beta strategies and factor investing. Respondents were asked about their current use of smart beta solutions in their portfolio allocation and were questioned in more detail about their use of fixed-income smart beta. They were also asked about the difficulties they face, how they integrate ESG considerations into their strategies and about their needs in terms of further development of alternative beta and factor investing strategies. We also compare the results of this smart beta and factor investing section to previous results drawn from our surveys since 2013, which is when questions relating to smart beta and factor investing were first introduced.

4.1. ETFs

In this sub-section, we begin by analysing the use of ETFs in different asset classes, both in terms of the number of investors and the amount of investment; we then look at satisfaction with ETFs as reported by investors. We also look at the investment strategies used in the industry, as well as the criteria considered when selecting an ETF provider, including tracking error and cost. Additionally, survey participants were invited to express their views on future developments in the ETF market and how they intend to use ETFs for incorporating SRI/ESG into their portfolio. Finally, we display the trends in the use of ETFs observed over the past 14 years.

This first sub-section is based on the answers given by 169 respondents who invest in ETFs from within our overall sample of 191. Before turning to ETFs, we did, however, ask the additional 22 respondents the reason(s) why they do not invest in ETFs. Seven of them (32%) indicated that they use instruments other than ETFs for the purposes of passive management, namely non-listed index funds and mandates (six of them) or futures (one of them), eight of them (36%) gave various reasons for not using ETFs, mainly relating to organisational constraints,

25 - Throughout this section, text in italics provides more detail about the results, but these paragraphs can be skipped for a more cursory reading of the study.

but three of them said they were considering using ETFs in the future. Finally, seven (32%) said they did not use ETFs because they did not invest in passive management products and were exclusively active managers (see Exhibit 4.1).

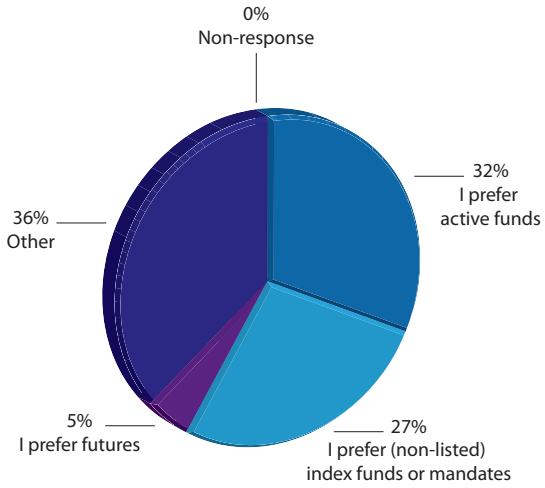


Exhibit 4.1: Motivations for not Investing in ETFs
This exhibit indicates the reasons given by respondents for not investing in ETFs. Percentages are based on the 22 survey respondents that do not invest in ETFs.

Compared to 2019, we have about the same proportion of active managers among those respondents that do not use ETFs, and a higher proportion who use other instruments for passive management (see Exhibit 4.2).

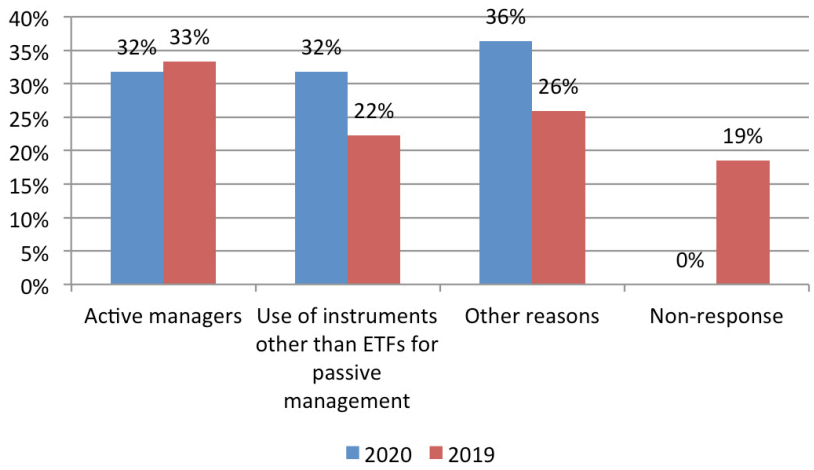


Exhibit 4.2: Comparison of Motivations for not Investing in ETFs
This exhibit compares the reasons given by this year's respondents for not investing in ETFs to those given in 2019. Percentages are based on the 22 survey respondents that do not invest in ETFs.

4.1.1. Use of ETFs in Different Asset Classes

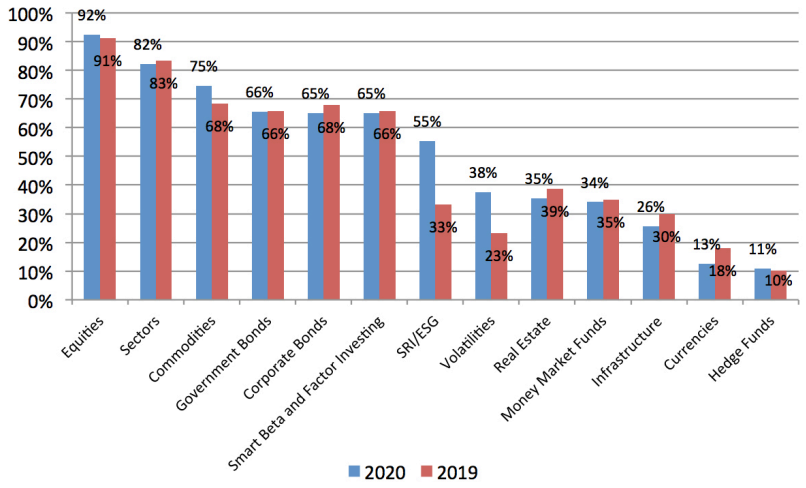
First, we look into the relative importance attached to ETFs and other investment instruments in each asset class. Exhibit 4.3 summarises the use of ETFs or ETF-like products among investors who invest in the relevant asset classes. In most asset classes, the change – up or down – in the percentages of respondents using ETFs, compared to 2019, is quite moderate. The two exceptions are SRI/ESG and volatilities, for which we observe a high increase in the percentage of respondents using ETFs.

55%
of respondents use ETFs to invest in SRI/ESG

65%
of respondents use ETFs to invest in smart beta and factor investing

Exhibit 4.3: Use of ETFs and ETF-like Products

This exhibit indicates the percentage of respondents that reported using ETFs or ETF-like products for asset classes/ investment styles that they have already invested in/used. We also display the 2019 results to show the year-on-year changes. The percentages have been normalised by excluding non-responses.



In more detail, 92% and 82% of respondents have used ETFs or ETF-like products for their equity or sector investments, respectively. 66% and 65% of respondents use ETFs to invest in government and corporate bonds, respectively. Compared to the high use of ETFs in the equity class, the use of ETFs to invest in bonds appears quite low. Meanwhile, 65% use ETFs to invest in smart beta and factor investing, which is about the same range as in 2019, and SRI/ESG ETFs are used by more than half of respondents (55%), which represents a large increase compared with the 33% in 2019. Within alternative asset classes, three-quarters (75%) of investors who invest in commodities employ ETFs. Real estate ETFs and money market funds are used by about a third (35% and 34%, respectively) of investors who hold such assets. Infrastructure ETFs are used by 26% of investors. Currencies (13%) and hedge funds (11%) are the asset classes in which the fewest investors have employed ETFs for their portfolios.

We can see that, although ETFs are used across a wide spectrum of asset classes, they are mainly used in equities and sectors. This is likely to be linked to the popularity of indexing in these asset classes as well as the fact that equity and sector indices are based on highly liquid instruments, which makes it straightforward to create ETFs on such underlying securities. In addition, given that liquidity is one of the major benefits of an ETF, and that this is dependent on the liquidity of the underlying securities, it makes sense that ETFs based on the most liquid underlying securities should be the most popular.

To complement the results displayed in Exhibit 4.3, Exhibit 4.4 shows, for each asset class, the percentages of the amounts invested that are accounted for by ETFs or ETF-like products. It differs from the questions asked in Exhibit 4.3, which shows the rate of ETF usage for those respondents who invest in the respective asset class/investment category.

ETFs account for

39%

of total investment in SRI/ESG

Here, Exhibit 4.4 reflects the intensity of usage for those investors who do use ETFs. With the exception of infrastructure and hedge fund asset classes, we observe an increase in the share invested in ETFs, compared to 2019. It should be noted that there is great volatility, with year-on-year variations in both directions, as shown in Exhibit 4.16, which displays trends since 2008, especially for infrastructure, real estate and hedge fund asset classes. However, it appears that ETFs account for a sizeable share of overall assets across different asset classes.

47%

of investment in smart beta and factor investing is made through ETFs

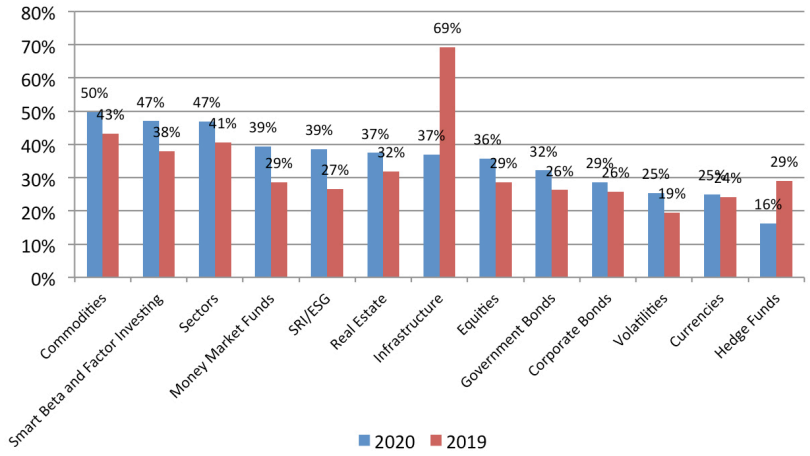


Exhibit 4.4: Percentages of Total Investment Accounted for by ETFs or ETF-like Products

This exhibit indicates the average percentage of total investment accounted for by ETFs or ETF-like products for each asset class. We only consider respondents that do use ETFs for the given asset class. Thus the percentage indicates the volume invested in ETFs compared to all investments in the asset class, for those respondents who do use ETFs. We also display the 2019 results to show the year-on-year changes. The percentages have been normalised by excluding non-responses.

In more detail, for the average respondent to this question, ETFs account for half of the total investment for the commodity asset class and for more than a third of investment for seven other asset classes, including smart beta/factor investing and sector investment (47% for both), money market funds and SRI/ESG investment (39% for both), real estate and infrastructure investment (37% for both), and equity investment (36%). ETFs account for more than a quarter of the total investment for four other asset classes, including government bond investment (32%), corporate bond investment (29%), volatilities and currency investment (25% for both). The lowest share of investment in ETFs is for hedge funds, with 16% invested via ETFs in their universe. Hence the responses to these two questions show that not only are ETFs widely used across most asset classes, but they also make up a significant proportion of investors' portfolios. In the analysis of these results, we have to separate the asset classes for which we have a significant number of respondents using ETFs, namely equities, corporate bonds, government bonds, smart beta and factor investing, commodities, sectors and SRI/ESG, where the number of respondents ranges from 46 to 147, from the asset classes for which respondents using ETFs are less numerous, namely hedge funds, currencies, infrastructure, volatilities, money market funds and real estate, where the number of respondents ranges from 5 to 24. It should be noted that the highest variations from one year to the other are to be found in the latter group, in which the answer of one respondent may have

a more significant impact on the average results than in groups with more numerous respondents. For the asset classes where the number of respondents is higher, there is more stability in the results from one year to the other. It should also be noted that the SRI/ESG asset class changed groups this year and is now one of the asset classes with a significant sample size using ETFs.

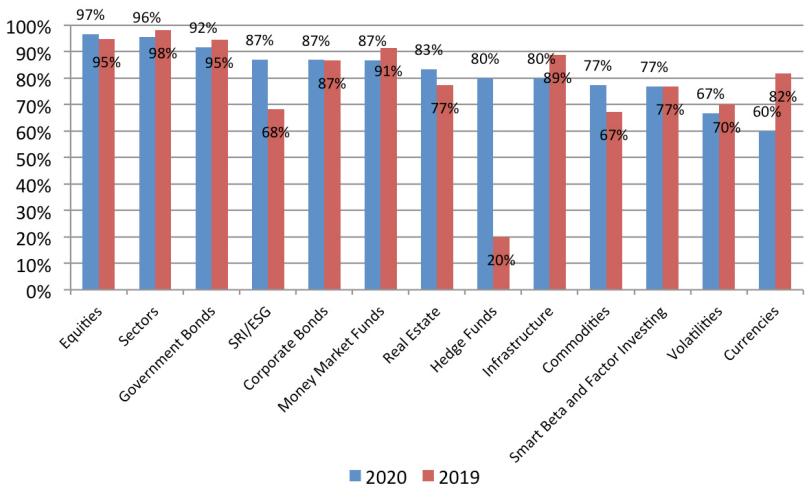
97%
of satisfaction with ETFs in equities

4.1.2. Satisfaction with ETFs

We continue our analysis with a general assessment of satisfaction levels when it comes to ETF products by asset class. Only those respondents who use ETFs in the respective asset class were asked to report their degree of satisfaction. This means that our results can be interpreted as the satisfaction rates of investors who actually have experience in using ETFs. Exhibit 4.5 shows that, across all asset classes, a large majority of users are satisfied with their ETFs. Compared to 2019, we observe an increase in the satisfaction levels for five asset classes out of 13, including equities, SRI/ESG, real estate, hedge funds and commodities. For two other asset classes, corporate bonds and smart beta and factor investing, the 2020 figures are similar to 2019. For four other asset classes, sectors, government bonds, money market funds and volatilities, the satisfaction levels are a little lower compared to 2019. Finally, for infrastructure and currencies, the decrease in satisfaction is more notable. The largest increase in satisfaction is observed for hedge funds and SRI/ESG, though to a lesser extent. However, the increase in satisfaction is more remarkable for the SRI/ESG asset class, as the sample of investors has grown since last year, while the sample of respondents using ETFs to invest in hedge funds is still very small. The largest decrease is observed for currencies, following a large increase in satisfaction between 2018 and 2019.

87%
of satisfaction with ETFs in SRI/ESG

Exhibit 4.5: Satisfaction with ETFs or ETF-like Products
This exhibit indicates the percentage of investors who are satisfied with the ETFs or ETF-like products they have used for each asset class. The percentages have been normalised by excluding non-responses. We also display the 2019 results to show year-on-year changes.



77%
of satisfaction with ETFs in smart beta and factor investing

In more detail, satisfaction is remarkably high (more than 80%) for nine out of 13 asset classes: equities, sectors, government bonds, SRI/ESG, corporate bonds, money market funds, real estate, hedge funds and infrastructure. This is particularly true of equities, sectors and government bonds, with a satisfaction rate in excess of 90%. Commodities and smart beta and factor investing have quite good satisfaction levels (70–80%). Volatilities and currencies have lower satisfaction levels, although these are still in the 60% to 70% bracket.

For asset classes with a narrow sample of respondents using ETFs to invest, such as hedge funds, currencies, infrastructure and volatilities (5, 5, 10 and 12 respondents, respectively in the 2020 survey), it is not surprising to observe quite volatile levels of satisfaction from one year to the other, as the change of opinion of a small number of respondents may be responsible for significant upward or downward variations. For example, as in 2019, five respondents use ETFs to invest in the hedge fund asset class in 2020. Only one of them said he was satisfied with ETFs in 2019, compared to four in 2020. The opinion of just three respondents is therefore responsible for the significant variation in the satisfaction rate in the hedge fund asset class.

We note that the ETFs with the highest and most consistent satisfaction rates over the period covered by our surveys are those based on the most liquid asset classes. We discuss this finding along with other trends in Section 4.1.5.

4.1.3. The Role of ETFs in the Asset Allocation Process

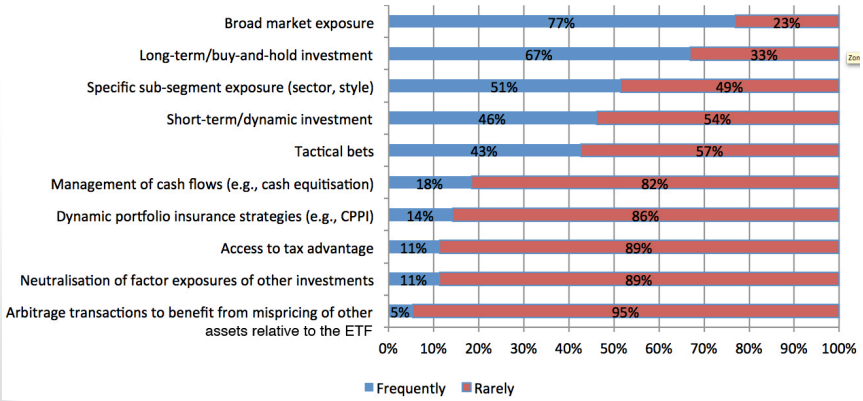
ETFs offer investors attractive benefits like liquidity, cost efficiency and product variety that make them useful in asset allocation. In order to understand the rationales behind investors' use of ETF products, we asked survey participants how often they employ ETFs for different investment purposes on a scale from never (score 0) to always (score 6). Exhibit 4.6 shows the answers by classifying all respondents into two groups: if respondents rated their usage to be 3 or less, we categorise them as rare users, and as frequent users otherwise.

The results show that investment in ETFs is mainly associated with exposure to broad market indices and long-term exposure. While still frequently used for market sub-segment exposure, short-term exposure and tactical bets, this year's findings indicate that other investment purposes are important as well. This is not a surprising result given that the liquidity, low cost and product variety benefits of ETFs should make them viable tools for such purposes.

67%
of respondents use ETFs for long-term buy-and-hold investment,
43%
for tactical allocation

77%
of respondents use ETFs to achieve broad market exposure,
51%
for specific sub-segment exposure

Exhibit 4.6: How Often Do You Use ETFs for the Following Purposes?
This exhibit indicates the frequency of respondents' use of ETFs for each of the purposes listed. Respondents were asked to rate their usage frequency from 1 to 6. The "Frequently" category includes ratings from 4 to 6, while "Rarely" includes ratings from 1 to 3 and non-responses.



In more detail, achieving broad market exposure tops the list, well ahead of other uses, with 77% of respondents frequently using ETFs for this purpose. 67% of respondents use ETFs for buy-and-hold investments. More than half of respondents (51%) use ETFs to obtain specific sub-segment exposure, while 45% and 43% of respondents use them for short-term (dynamic) investments and tactical bets, respectively. ETFs are less frequently used to manage cash flow (18%), for dynamic portfolio insurance strategies (14%), to access tax advantages or neutralise factor exposures related to other investments (11% for both), or to capture arbitrage opportunities (5%).

Selecting an ETF Provider

Respondents were then asked to choose from a list the criteria they consider important when selecting an ETF provider. The results are displayed in Exhibit 4.7. There are two criteria in particular that respondents prioritise when selecting an ETF provider. The first is costs, cited by the vast majority (91%) of respondents. This shows that respondents closely scrutinise costs within ETFs, even though they are already a comparatively low-cost vehicle. The second is the quality of replication, with more than four-fifths of respondents (86%) considering this criterion when selecting an ETF provider. This result is not surprising as these two criteria are related to the main motivations for using ETFs, namely reducing investment costs, while optimally tracking the performance of the underlying index. It should be noted that cost and replication quality are two criteria that are easy to ground on an analytic basis of measurement of results, which may also be product-specific rather than provider-specific, and that such measureable product qualities are at the forefront of investor preoccupations.

Cost
91%
and quality of replication
86%
the two main drivers for selecting ETF providers

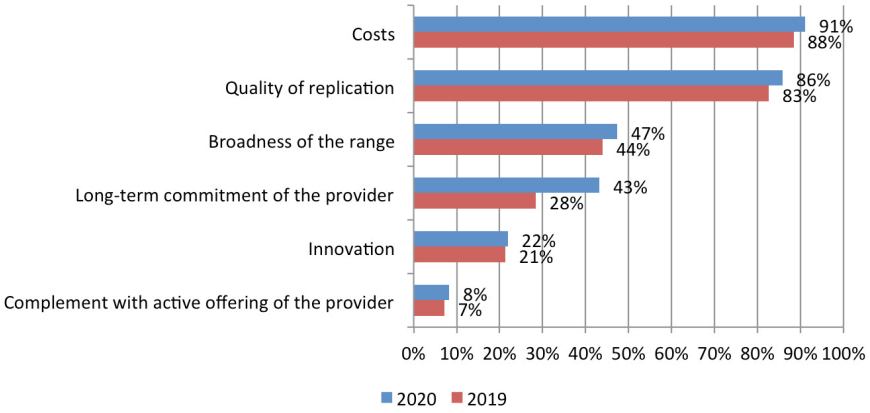


Exhibit 4.7: What Criteria Do You Consider When Selecting an ETF Provider?
This exhibit indicates the criteria respondents look for when selecting an ETF provider. More than one response could be given. We also display the 2019 results to show year-on-year changes.

On the other hand, there are more potentially subjective quality criteria associated with ETF providers that play a lesser role. The broadness of the range and the provider's long-term commitment are also quite important criteria when choosing an ETF provider, for 47% and 43% of respondents, respectively. However, innovation seems less important for respondents, with only 22% of respondents citing it. Finally, 8% of respondents consider it important to select an ETF as a complement alongside the provider's active offering. These results are comparable to those obtained in 2019, except for long-term commitment, which is considered important for significantly more respondents this year (43% in 2020 versus 28% in 2019).

Given that the key decision criteria are more product-specific and are actually "hard" measurable criteria, while "soft" criteria that may be more provider-specific have less importance, competition for offering the best products can be expected to remain strong in the ETF market. This implies that it will be difficult for existing providers to build barriers to entry unless they involve hurdles associated with an ability to offer products with low cost and high replication quality.

4.1.4. Future Development of ETFs

So far, our questions have focused mainly on the current usage of ETFs. A clear advantage of our survey methodology (with access to a sample of investment management professionals) is that we can also analyse plans for the future rather than just observe current results. Thus, in the last set of questions in this section on ETFs, we offer a glimpse into the future by asking survey participants about their views on their use of ETFs going forward. This allows us to gain some perspective on future developments on the demand side of the ETF industry.

Need for further products

First, we try to more clearly define the type of niche markets where investors would like to see further product development. Since 2000, the industry has become more mature and there are now over 1,700 ETFs in the European market (ETFGI, 2019), so it will be very interesting

50%
call for further developments of SRI/ESG-based ETFs and/or low-carbon ETFs

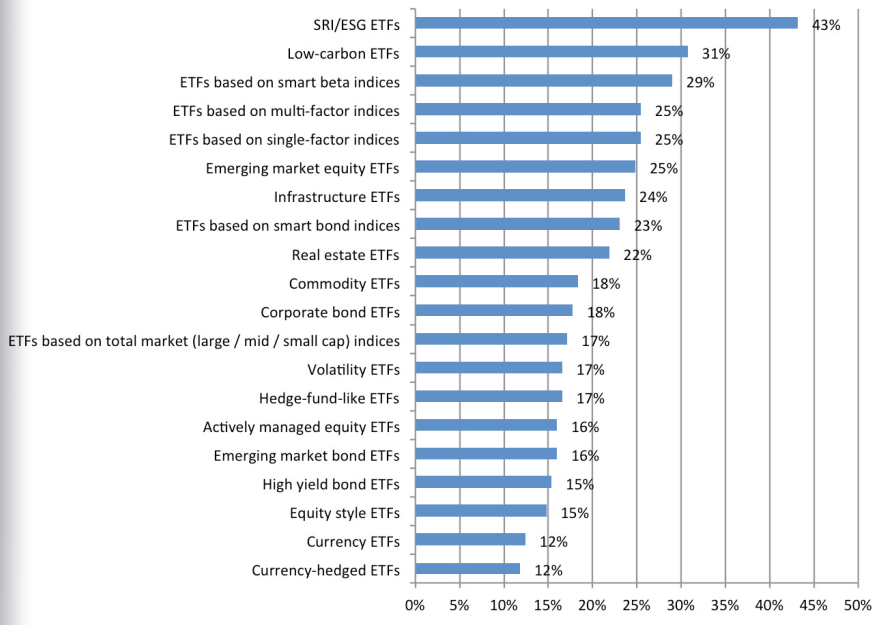
to see where the gaps in the market lie in terms of investor demand. Exhibit 4.8 illustrates the types of ETFs that respondents would like to see further developed in the future. Respondents were given the option of selecting more than one answer.

43%

call for additional developments of ETFs based on smart beta equity and/or factor indices

As shown in Exhibit 4.8, SRI/ESG ETFs (43%) are the top concern among respondents, far ahead of other types of ETFs. Behind these are low-carbon ETFs and those based on smart beta indices (31% and 29% of respondents, respectively), as well as ETFs based on multi-factor indices and on single-factor indices (25% of respondents for both). While there is still strong interest in additional ETF products, both for smart beta and factor (multi and single) indices, it is interesting to note that the two top categories are linked to the theme of climate finance, as 57% of respondents consider the "E" for Environment as the most important dimension of ESG (see Exhibit 4.47, section 4.2.5).

Exhibit 4.8: What Type of ETF Products Would You Like to See Developed Further in the Future?
This exhibit indicates the percentage of respondents who would like to see further development of different ETF products in the future. Respondents were able to choose more than one product.



In addition, emerging market equity ETFs (25%), infrastructure ETFs (24%), ETFs based on smart bond indices (23%) and real ETFs (22%) are also in the top half of the list of respondents' further demands. Actively managed equity ETFs are in 15th position in the list, though their market share is currently very small, with 1% of AUM, according to Morningstar (2019a).

The SRI/ESG category is at the top of the list for the third consecutive year, showing increasing interest among respondents in this investment category. We also note the remarkable year-on-year progression of demand for low-carbon ETFs since we first introduced this category in 2015, considering that it was second last in 2015 and in tenth position in

the list in 2019. Smart beta indices remain in the top three categories of most interest to respondents in terms of product development. Additional results concerning smart beta and factor investing strategies will be developed in Section 4.2 of this document, fully dedicated to smart beta and factor investing strategies.

What type of ETF products would you like to see developed further in the future?	2019	2020	% Increase
SRI/ESG ETFs	30.5%	43.2%	12.7%
Low-carbon ETFs	22.7%	30.8%	8.0%
Infrastructure ETFs	19.4%	23.7%	4.3%
ETFs based on total market indices	13.6%	17.2%	3.5%
Commodity ETFs	14.9%	18.3%	3.4%
Real estate ETFs	20.0%	21.9%	1.9%
ETFs based on smart beta indices	27.9%	29.0%	1.1%

Exhibit 4.9: Largest Increases in Demand for Product Development in 2020
This exhibit shows the types of ETFs for which there were increases in demand for future product development between 2019 and 2020, ranked in decreasing order of percentage increase.

In more detail, compared to last year's results, there has been an increase in the demand for product development in seven out of 20 categories of ETFs, namely SRI/ESG, low-carbon, infrastructure, total market indices, commodity, real estate and smart beta indices, most of which are located in the top half of the list of respondents' demands (see Exhibit 4.9). It is interesting to note that low-carbon ETFs have seen an increase in demand each year since 2015. The decrease in demand for other categories of ETFs may be the result of increased satisfaction with products already developed in these areas in recent years.

Use of SRI/ESG within ETFs

For the first time this year, respondents were asked a little more about their use of SRI/ESG within ETFs. First, they were asked to indicate their preferred approach to SRI/ESG. From Exhibit 4.10, it appears that the best-in-class (i.e. positive screening) approach comes far ahead of the other two, with 45% of respondents preferring it, compared with 30% for the thematic approach and 25% for the negative screening approach.

45%
prefer the best-in-class approach (positive screening)

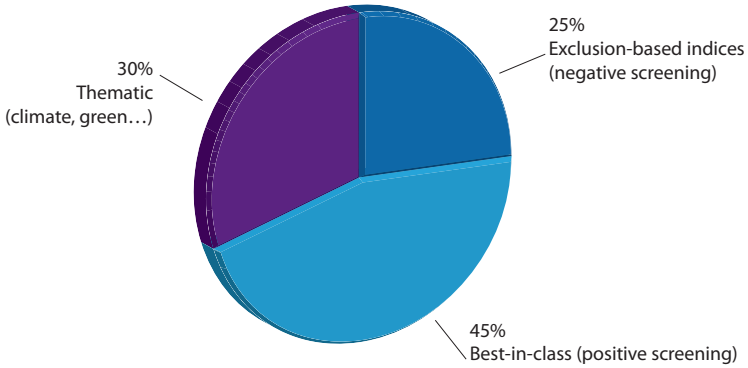


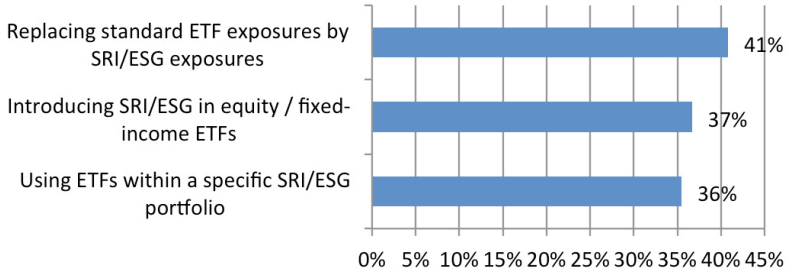
Exhibit 4.10: Preferred Approach to SRI/ESG
This exhibit indicates the distribution of respondents according to their various approaches to SRI/ESG. Non-responses are excluded.

41%

intend to replace standard ETF exposures by SRI/ESG exposures

Respondents were then asked how they intend to use ETFs for incorporating SRI/ESG into their portfolio. Exhibit 4.11 shows that the answers are fairly well distributed between the three propositions, even if "replacing standard ETF exposures by SRI/ESG exposures" comes first with 41% of respondents mentioning it. The two other propositions "introducing SRI/ESG in equity or fixed-income ETFs" and "using ETFs within a specific SRI/ESG portfolio" are not far behind with 37% and 36% of respondents, respectively, considering doing that.

Exhibit 4.11 Use of ETFs for Incorporating SRI/ESG into the Portfolio
This exhibit indicates how respondents intend to use ETFs for incorporating SRI/ESG into their portfolio. More than one response could be given.



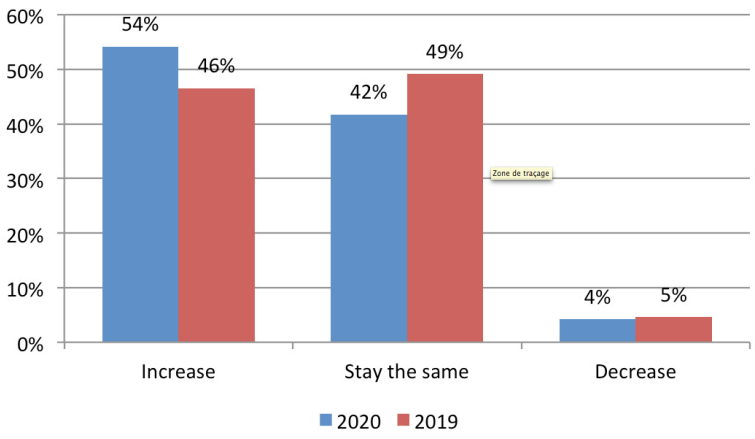
54%

plan an increase in their use of ETFs

Future evolution of the use of ETFs

After establishing priorities for new ETF product development, we then asked respondents to comment on how they planned their future use of ETFs. From Exhibit 4.12 we can see that more than half of respondents (54%, compared to 46% in 2019) report that they expect to increase their use of ETFs. 42% (compared to 49% in 2019) indicated that their use of ETFs would stay the same. Adding the percentages of respondents who answered "Increase" or "Stay the same" gives us a total of 96%, meaning that only 4% of respondents plan to decrease their use of ETFs. The percentage of those who are thinking of reducing their investment in ETFS has remained stable and quite low over the years (further details on this trend over time will be provided in Exhibit 4.19 in Section 4.1.5).

Exhibit 4.12: How Do You Predict Your Future Use of ETFs?
This exhibit indicates respondents' forecasts about their future use of ETFs. We also display the 2019 results to show year-on-year changes. Non-responses are excluded.



Motivations for increasing the use of ETFs

Respondents who said they planned to increase their use of ETFs were also asked about their underlying motivations (the results are displayed in Exhibit 4.13). It appears that increasing the use of ETFs will serve as a substitute for the use of active managers for the vast majority of respondents (70% versus 71% in 2019), while 44% (versus 42% in 2019) plan to substitute them for other index products. These results are comparable to those obtained in 2019. Comparisons with previous years are to be found in Exhibit 4.20 in Section 4.1.5, which displays trends over time.

70%

of the increase planned in ETF allocation is to replace active management

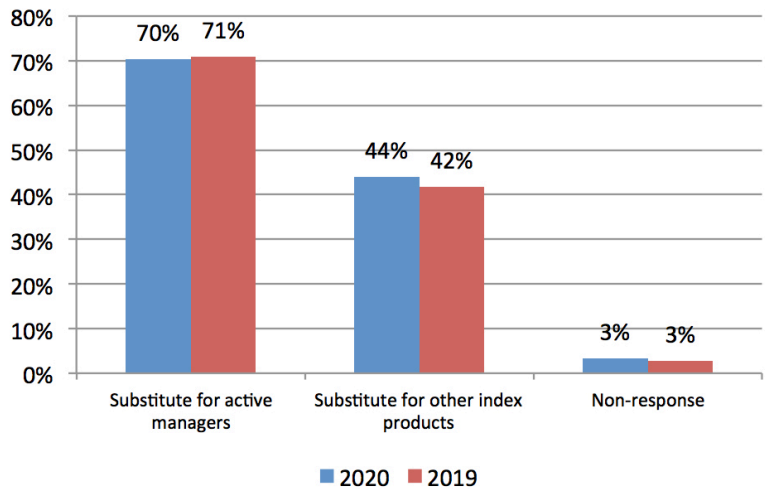


Exhibit 4.13: Increase in the Use of ETFs Will Serve as...
This exhibit indicates the reasons given by respondents for planning to increase their use of ETFs. More than one response could be given. We also display the 2019 results to show year-on-year changes.

These results should be seen alongside the disappointing performance of active management. Investors may see the use of ETFs as more profitable and less costly than the use of active managers. ETFs allow investors to mimic the performance of all types of asset classes, including various smart beta products, while limiting costs. Indeed, investors are now offered a wide range of smart beta ETFs with the promise of achieving performance at lower costs compared to active management (Latham, 2018).[26]

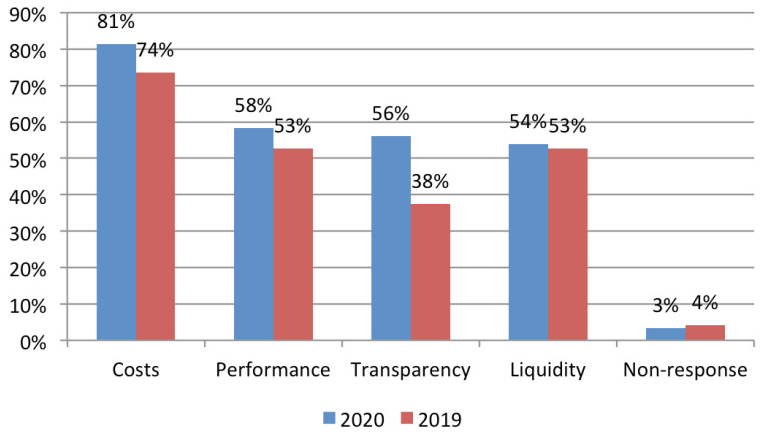
This is all the more likely given that the leading reason (81% versus 74% in 2019) given by survey respondents for increasing ETF usage is cost (see Exhibit 4.14). Investors seem to be well aware of the effects of costs on long-term performance. Next, respondents cited performance, transparency and liquidity (58%, 56% and 56% of respondents, respectively, versus 53%, 38% and 53% in 2019). These results confirm those of last year in terms of the relative importance of the various occurrences, except for transparency for which we observe a significant increase. Comparisons with previous years are to be found in Exhibit 4.21, which displays the trends over time.

81%

are motivated by lowering costs

26 - Mark Latham. 2018. Smart Beta: Active, passive or somewhere in between? Funds Europe (December 17/ January 18): available at http://www.funds-europe.com/dec-2017-jan-2018/smart-beta-active-passive-or-somewhere-in-between.

Exhibit 4.14: Increase in the Use of ETFs will be Motivated by...
This exhibit indicates the motivations given by respondents for planning to increase their use of ETFs. More than one response could be given. We also display the 2019 results to show year-on-year changes.



4.1.5. Trends: Use of and Satisfaction with ETFs over Time

Since the early 2000s, investment in ETFs has increased significantly, as already shown in Section 2.1. Not only is investment in standard ETFs growing, but so too are more advanced products and sophisticated ways of using them. In this section, we compare the results of the ETF section of the 2020 survey with the answers obtained in previous ETF surveys from 2006 to 2019. This comparison will shed some light on how the current state of ETF usage compares to past years and will provide some insight into the evolution of ETF usage so far.

Frequency of ETF usage

When comparing the usage of ETFs and ETF-like products over time, we observe an increase in their adoption over the past 14 years. The usage of ETFs and ETF-like products displayed in Exhibit 4.15 refers to the number of respondents who use ETFs among all those who invest in a particular asset class. In other words, it indicates usage frequency. Since 2006, the increase in the percentage of respondents using ETFs in traditional asset classes has been spectacular. In 2006, the rate of use was under 20% for six out of seven asset classes, and none of the classes reached 50%. At that time, 45% of respondents used ETFs to invest in equities, compared with 92% in 2020. As for government and corporate bonds, the result has risen from 13% and 6% in 2006, to 66% and 65% respectively in 2020. A large increase from 15% of respondents in 2006 to 75% in 2020 was also observed for commodities, while the share of respondents using ETFs to invest in real estate has risen from 6% in 2006 to 35% in 2020. With the exception of real estate, infrastructure and hedge funds, all usage rates are quite high, above 60%. It should be noted that in Exhibit 4.15 we only present the asset classes for which we have data since at least 2009; other asset classes (including volatilities, sectors, SRI/ESG, money market funds, currencies and smart beta and factor investing) were introduced into our survey more recently. We will present at the end of this section a summary of ETF investment trends in the SRI/ESG and smart beta and factor investing classes (see Exhibits 4.22 and 4.24).

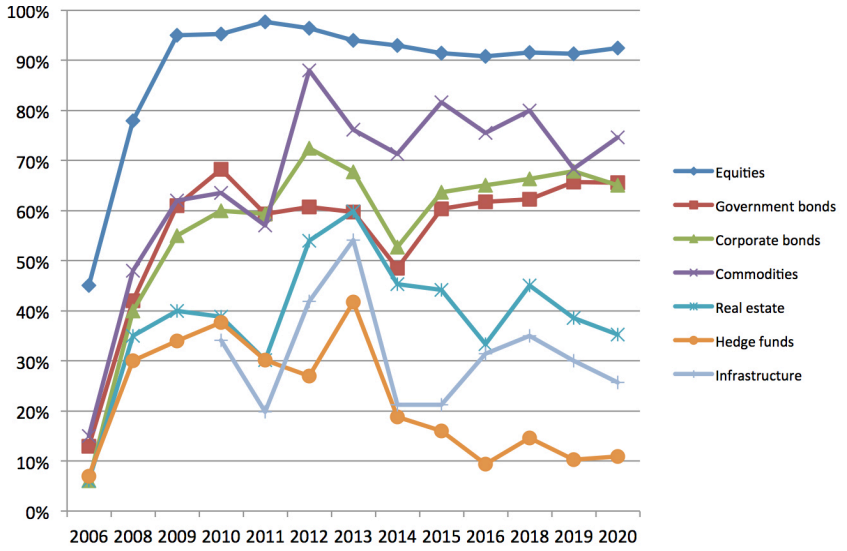


Exhibit 4.15: Use of ETFs or ETF-like Products over Time
This exhibit indicates the use of ETFs or ETF-like products for different asset classes over time. The percentages are based on the results of the EDHEC ETF surveys from 2006 to 2020.

After a slight increase in the use of ETFs for investing in bond asset classes between 2018 and 2019, both for government and corporate bonds, we observe a stabilisation at 66% for government bonds this year, and a slight decrease for corporate bonds compared to 2019, when 68% of respondents used ETFs to invest in corporate bonds, compared with 65% of respondents in 2020. This continuously high level of ETF usage for investing in bond asset classes is likely related to the high level of satisfaction observed over several years, with government bonds enjoying a satisfaction rate ranging from 87% to 95% since 2012, while the figures for corporate bonds have ranged from 83% to 91% since 2011 (see Exhibit 4.17). With 75% of respondents using ETFs, commodities show an increase of seven points compared to 2019. This significant increase follows a significant decrease observed between 2018 and 2019, such that the percentage of ETF users is comparable in 2020 to that observed in 2016. The equity class has shown quite a stable rate (over 90%) of ETF usage for some years. Other asset classes, such as real estate, infrastructure and hedge funds, exhibit larger variations in their usage rates over time compared to other asset classes. This year we observe a decrease in the use of ETFs for real estate and infrastructure and a slight increase for hedge funds, compared to 2019. As in 2019, these variations are quite moderate for these three asset classes, compared to the large variations usually observed. Respectively 35%, 26% and 11% of respondents report using ETFs to invest in real estate, infrastructure and hedge funds in 2020, compared to 39%, 30% and 10% in 2019.

Density of ETF usage

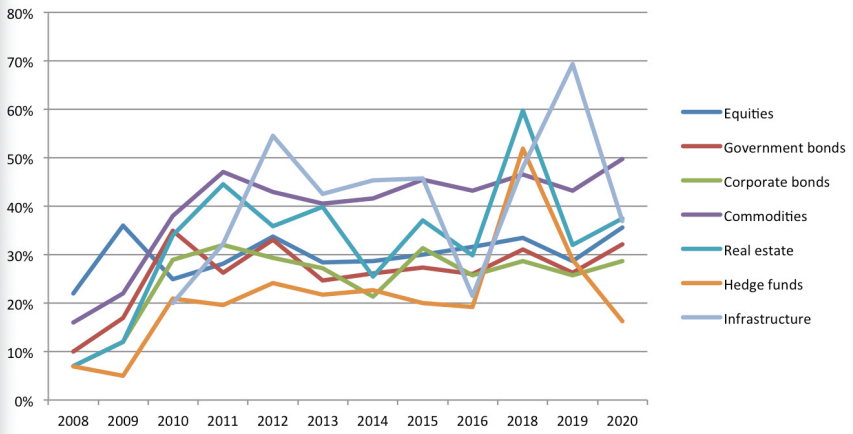
Exhibit 4.16 compares the proportions of our respondents' portfolios invested in ETFs.[27] In Exhibit 4.16, the use of ETFs or ETF-like products refers to the density of usage in each asset class. While the equity asset class is the most widely used for ETF investment, it is currently not the asset class

27 - Since this question was not asked in the EDHEC European ETF Survey 2006, we can only provide a comparison with answers from 2008 to 2019.

with the highest proportion or density of ETF investment. In 2008, 22% of investment in the equity asset class was made using ETFs, compared to 36% in 2020. As for government and corporate bonds, the increase in the proportion of ETF investment is more spectacular, respectively accounting for 10% and 7% of total investment in 2008, compared to 32% and 29% in 2020. The increase in the use of ETFs to invest in commodities and real estate has also been quite significant during this period, with 16% of the former investments being made using ETFs in 2008, compared to 50% in 2020, and 7% of the latter in 2008, compared to 37% in 2020. Although we also see a strong increase in the use of ETFs for the infrastructure class between the beginning of the observation period and 2020, it should be noted that there can be many variations from one year to another, due to a narrow sample of respondents using ETFs for this asset class.

Exhibit 4.16: Percentage of Total Investment Accounted for by ETFs or ETF-like Products

This exhibit indicates the percentage of total investment accounted for by ETFs or ETF-like products for different asset classes over time. The percentages are based on the results of the EDHEC ETF surveys from 2008 to 2020.



In 2020, we observe that all asset classes, except hedge funds and infrastructure, post an increase in their ETF market share, compared to 2019. This increase is moderate and follows a decrease in the same range in 2019 for equities, government bonds, corporate bonds and commodities, making the market share fairly close to that of 2018 for these four asset classes, suggesting that investors have reached a satisfactory level of ETF usage for these asset classes and are not looking to expand beyond this level. As for the real estate asset class, the moderate increase in 2020 follows a significant drop in 2019. The hedge fund and infrastructure asset classes exhibit quite sharp decreases in their ETF market share, compared to 2019. For these last three assets classes, it is usual to observe strong upward or downward variations from one year to another, as is clear from the saw-tooth graph. As mentioned above, the sample of respondents using ETFs for the hedge fund and infrastructure asset classes is particularly small.

Satisfaction with ETFs

Satisfaction with standard ETFs has generally remained at high levels as shown in Exhibit 4.17. Compared to 2019, four out of seven asset classes exhibit increases in satisfaction rates. We observe an increase of 2% in satisfaction with equity ETFs, which reaches 97% although the figure already stood at the highest satisfaction rate among all asset classes last year. The high rate of satisfaction with equity ETFs, which has consistently been in the region of 90% since our first survey in 2006, may be due to the greater consensus for equity indices. Equity indices have the longest history of development and the most innovations, which consequently carries over to equity ETFs. Investors are therefore more familiar with equity indices as well as their drawbacks. Given the large variety of alternative weighting schemes for equity indices, investors have a wide range of products to invest in. Government bonds have encountered a moderate decrease in satisfaction in terms of ETF usage (3%), while the satisfaction for corporate asset bond ETFs has remained at the same level as in 2019.

The commodity and real estate asset classes exhibit an increase (+10% and +7%, respectively) in satisfaction compared to 2019, after a decrease in 2019, while the opposite is found in the infrastructure asset class. Finally, the hedge fund ETF asset class posts a spectacular increase of 60% in satisfaction rates to reach 80%, its maximum value over the period beginning in 2006. This is concomitant with the significant drop in market share for hedge fund ETFs displayed in Exhibit 4.16.

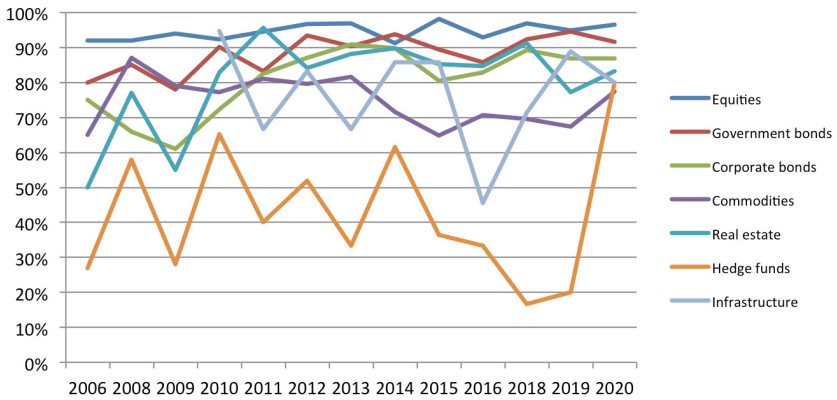


Exhibit 4.17: Satisfaction with ETFs or ETF-like Products over Time
This exhibit indicates the percentages of respondents that are satisfied with ETFs or ETF-like products for different asset classes over time. The percentages are based on the results of the EDHEC ETF surveys from 2006 to 2020.

Since the beginning of our observation period, the satisfaction rates for hedge fund and infrastructure ETFs have been the two most volatile. It seems clear that less liquid and less mature ETF markets experience the most varying levels of satisfaction. The graph for hedge fund ETF satisfaction rates clearly displays a saw-tooth shape, with high figures in 2008, 2010, 2012, 2014 and 2020 (58%, 65%, 52%, 62% and 80% respectively) and lower figures in 2006, 2009, 2011, 2013, 2015, 2016, 2018 and 2019 (27%, 28%, 40%, 33%, 36%, 33%, 17% and 20% respectively).

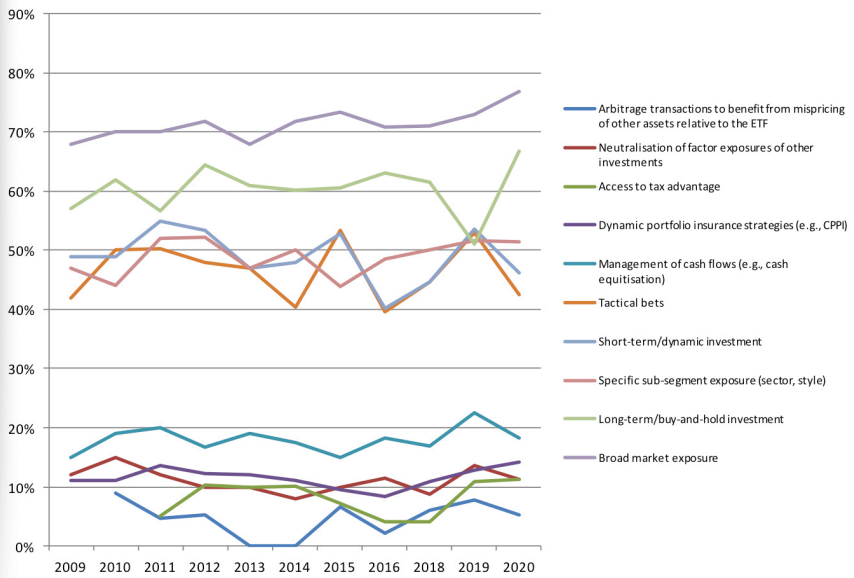
A similar graph emerges for infrastructure ETFs, with high figures in 2010, 2012, 2014, 2015, 2018, 2019 and 2020 (95%, 83%, 86%, 86%, 71%, 89% and 80% respectively) and lower figures in 2011, 2013 and 2016 (67%, 67% and 45% respectively).

This may be due to the suitability of ETFs to more liquid asset classes or the fact that investor expectations are still adjusting with regard to the benefits and drawbacks of ETFs based on those asset classes. For instance, we have observed large variations over the years in the number of ETF users for these two asset classes, as well as in the share of investment dedicated to ETFs. However, it should be noted that the sample of respondents who indicated their level of satisfaction with infrastructure ETFs was very small, with only ten providing responses this year. Similarly, the sample of respondents who answered whether or not they were satisfied with hedge fund ETFs was also quite small, with only five providing responses in 2020. As a result, the impact of a single respondent opinion has a considerable impact on the result.

Use of ETFs for Different Purposes

The main purpose for using ETFs is still to obtain broad market exposure, with close to 70% of respondents reporting the use of ETFs for this purpose since 2009, a figure that reached 77% this year (see Exhibit 4.18).

Exhibit 4.18: Frequent Use of ETFs for the Following Purposes over Time
This exhibit indicates the percentages of respondents who frequently use ETFs for each of the purposes listed over time. Respondents were asked to rate usage frequency from 1 to 6. The "Frequently" category includes ratings from 4 to 6. The percentages are based on the results of the EDHEC ETF surveys from 2009 to 2020.[28]



Future use of ETFs

Finally, we also look at investors' expected use of ETFs over time. The results are shown in Exhibit 4.19. They suggest that despite the past growth and increasing maturity of the ETF market, investors are still looking to increase (or at least maintain) their use of ETFs. By adding the percentages of respondents who answered "Increase" or "Stay the same",

28 - The question was not asked in the survey before 2009.

we see that the total has stayed above 90% since 2009. The percentage of respondents planning to increase their use of ETFs, a figure that hovered around 60% from 2013 to 2016, and was lower than 50% in 2019, with a transfer towards the percentage of respondents who answered that their use of ETFs would stay the same, again rose this year to 54%. Only around 4% of respondents planned to reduce their use of ETFs. Given that this survey only covers respondents who are already ETF investors, the large increase in expected usage is even more remarkable.

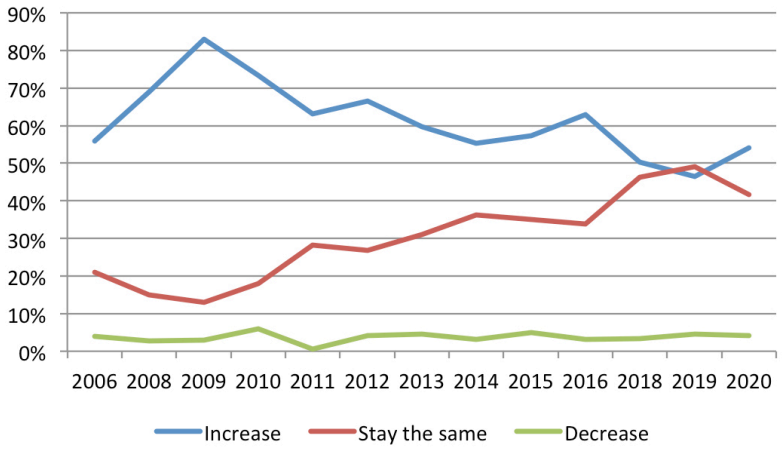


Exhibit 4.19: How Do You Plan the Evolution of Your Use of ETFs?
This exhibit indicates the future potential for investors to change their use of ETFs over time. The percentages are based on the results of the EDHEC ETF surveys from 2006 to 2020.

Since 2014, we have been asking respondents who report a planned increase in their use of ETFs about their underlying motivations. The results are displayed in Exhibit 4.20. Since then, the vast majority of respondents, starting at around two-thirds in 2014 and reaching three-quarters by 2015, have indicated that increasing the use of ETFs would serve as a substitute for the use of active managers. As explained in Section 4.1.4, this result should be seen alongside the disappointing performance of active management. Investors may see the use of ETFs as more profitable and less costly than the use of active managers. The fact that an average of almost half of respondents over this six-year period have substituted ETFs in favour of other index products is also a major reason for the increase in ETF usage.

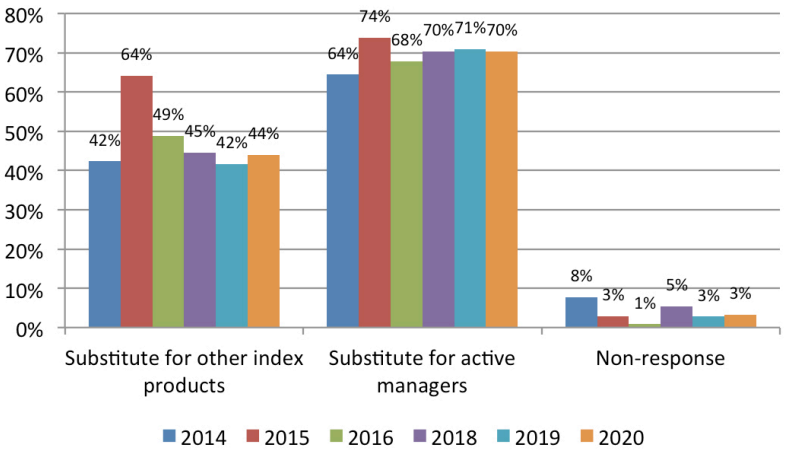
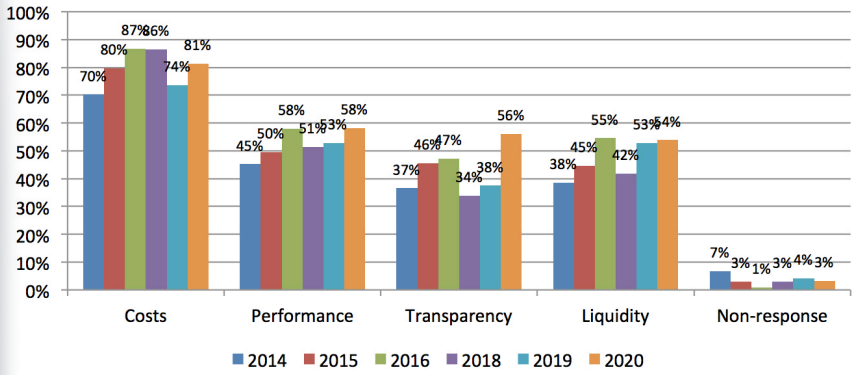


Exhibit 4.20: Increase in the Use of ETFs Will Serve as...
This exhibit indicates the reasons given by respondents for planning to increase their use of ETFs. More than one response could be given. The percentages are based on the results of the EDHEC ETF surveys from 2014 to 2020.

The hypothesis of reducing costs with an increase in the use of ETFs is confirmed, with survey respondents reporting that this replacement is above all motivated by costs, with a percentage ranging from 70% to 87% over the six-year period (see Exhibit 4.21). The second, third and fourth motivations given by respondents are performance, transparency and liquidity, which are in the same range (58%, 56% and 54%, respectively, in 2020). It should be noted that we observe an increase in the percentage of respondents mentioning each criterion between 2014 and 2020.

Exhibit 4.21: Increase in the Use of ETFs Will Be Motivated by...
This exhibit indicates the motivations given by respondents for planning to increase their use of ETFs. More than one response could be given. The percentages are based on the results of the EDHEC ETF surveys from 2014 to 2020.



SRI/ESG ETFs

49%
of respondents invest in SRI/ESG in 2020, versus
17%
in 2011

Since 2011, our survey has questioned investors about their use of SRI/ESG within their investment. From Exhibit 4.22, it appears that the proportion of respondents who include a share of SRI/ESG in their investment has increased significantly in recent years. Whereas they represented only 17% in 2011, this figure reached 43% in 2019 and is now almost one in two (49% in 2020). Among those who invest in SRI/ESG, the share who use ETFs to do so has also increased considerably, from about two-fifths (22%) in 2011 to more than half (55%) in 2020. Satisfaction with ETFs on SRI/ESG has also generally been high (87% in 2020). It should be noted that the proportion of respondents using SRI/ESG ETFs among all ETF users was very low until 2015, with moderately usage until then (see Exhibit 4.23). The evolution of satisfaction rates therefore relates to a very small number of respondents up to this date.

Exhibit 4.22: SRI/ESG ETFs: Usage and Satisfaction Levels
This exhibit indicates the use of and satisfaction with SRI/ESG ETFs. The percentages are based on the results of the EDHEC ETF surveys from 2011 to 2020.

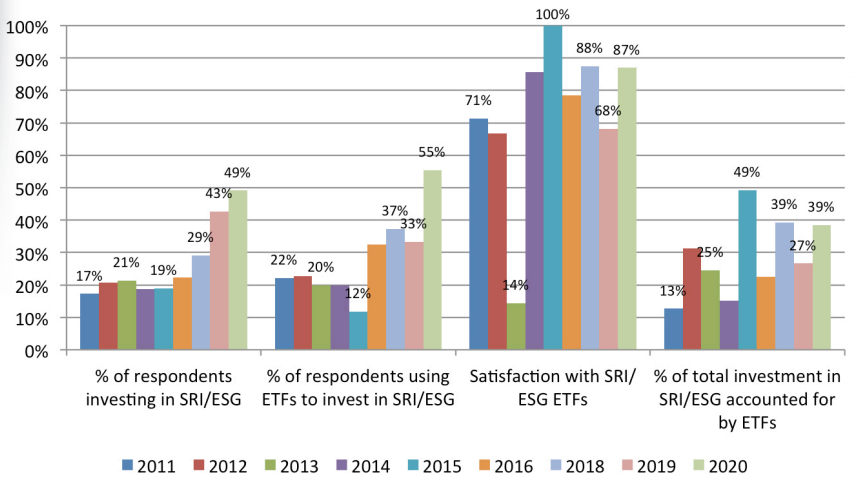


Exhibit 4.23 shows that in 2020 more than a quarter (27%) of survey respondents using ETFs in general were using them on SRI/ESG, compared to 4% in 2011.[29] It is interesting to note that the percentage of respondents calling for the development of ETFs based on SRI/ESG exactly follows the development of the use of ETFs based on SRI/ESG. We can see that the level of additional demand, which was between 15% and 20% from 2011 to 2015, begins to increase rapidly from 2016, reaching 43% in 2020.

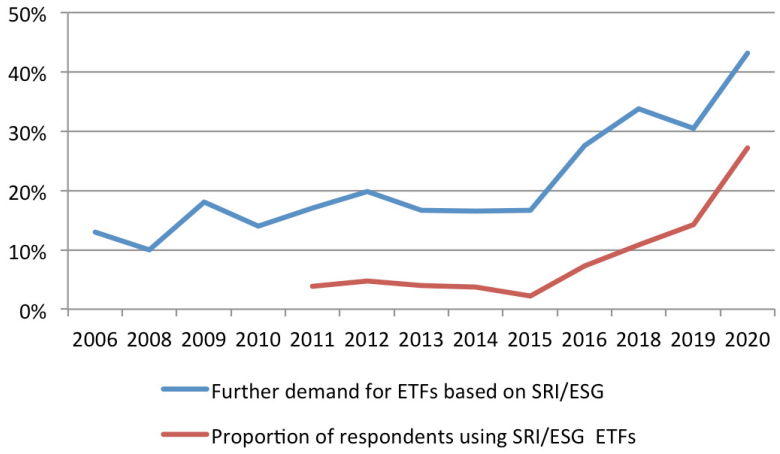


Exhibit 4.23: SRI/ESG ETFs: Further Demand
This exhibit indicates the percentage of respondents calling for the development of more ETFs based on SRI/ESG, compared to the proportion of respondents using SRI/ESG ETFs. The percentages are based on the results of the EDHEC ETF surveys from 2006 to 2020.

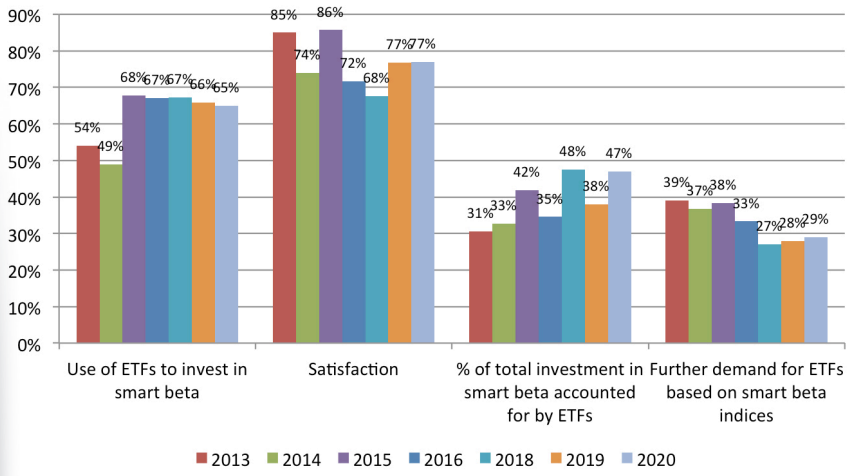
Smart Beta and Factor Investing ETFs

In this first section of the survey, we collected initial results about investor perceptions of smart beta and factor investing strategies, through their use of smart beta ETFs, showing an increase in interest, as well as high satisfaction rates with ETFs in this asset class (see Exhibit 4.24. About two-thirds of respondents (65%) used ETFs or ETF-like products to invest in smart beta and factor investing in 2020, a considerable increase on the 49% reported in 2014. Since 2013, satisfaction rates with smart beta and factor investing ETFs have been quite high, with 77% of respondents satisfied in 2020, a stable result compared to 2019. Less than one-third (31%) of smart beta investing was made through ETFs in 2013, compared to 47% in 2020. While in 2013, 39% of respondents reported further demand for ETFs based on smart beta indices, this figure is just 29% in 2020, comparable to the 28% observed in 2019, which shows a relative stabilisation in such demand. The large use of ETFs based on smart beta and factor investing indices, as well as the desire for additional developments, fully justify dedicating a large share of our survey to smart beta and factor investing strategies, the results of which will be presented in the following sub-section.

29 - This question was not asked in the survey before 2011.

Exhibit 4.24: Smart Beta ETFs: Usage and Satisfaction Levels

This exhibit indicates the use of and satisfaction with smart beta ETFs. The percentages are based on the results of the EDHEC ETF surveys from 2013 to 2020.



4.2. Smart Beta and Factor Investing Strategies

The data collected in the first sub-section of the survey results reveal that respondents have an interest in ETFs that track smart beta and factor investing indices. In this second sub-section, we invited survey participants to give their opinion on smart beta and factor investing strategies beyond their use through ETFs. Smart beta and factor investing products offer exposure to a variety of alternatively weighted indices. There is evidence in the literature (cf. Amenc, Goltz, Lodh and Martellini, 2012, among others) 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 makes sense that investors can benefit from exploiting such diversification-based strategies.

While questions about smart beta and factor investing products were first introduced in our 2013 survey, this group of questions has been considerably developed since 2016 to reflect the increasing appeal of these strategies as a way to improve passive investment. In 2018, we introduced questions concerning smart beta and factor investing for fixed income, a section which was further developed last year with additional questions. This year, we introduced a focus on the incorporation of ESG into smart beta and factor investing strategies, as this subject has become a major concern for investors.

In this section, we begin by analysing the use of smart beta and factor investing strategies in terms of the number of investors and the amount of investment, as well as the strategies used to invest in smart beta and factor investing solutions. A sub-section is specifically dedicated to smart beta and factor investing for fixed-income strategies. Respondents were then invited to share their opinions on smart beta and factor investing

indices and on the information they require before investing in smart beta and factor investing strategies. They were also asked to express their views on the changes they envisage in their use of these strategies going forward. Finally, we look at the trends in the use of these strategies observed over the last seven years.

4.2.1. Use of Smart Beta and Factor Investing Strategies

Respondents were first asked about their use of smart beta and factor investing strategies. From Exhibit 4.25, we can see that 38% of respondents use such solutions, and that 24% of them are considering investing in such solutions in the near future. These results show that about three-fifths of investors still have significant interest in such solutions. Compared to last year, we see a significant decrease in the share of respondents that use smart beta and factor investing solutions, and a more moderate drop in the percentage of investors considering investment in such solutions in the near future. Thus, while only about one-fifth of investors were not investing or considering investment in such products in the near future in 2019, they now represent about two-fifths. A country-by-country analysis showed that this drop in smart beta and factor investing usage had occurred in a similar way across all European countries, except in Italy where the percentage of users remained roughly the same.

38%
invest in smart beta and factor investing strategies;

24%
are considering doing so in the future

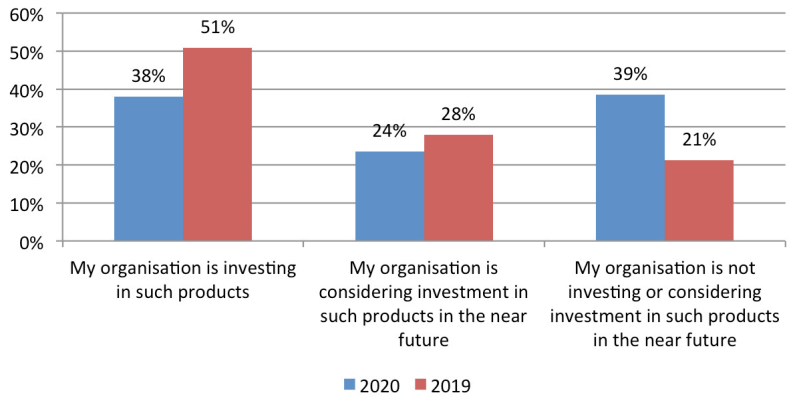


Exhibit 4.25: Use of Smart Beta and Factor Investing Solutions
This exhibit indicates the percentages of respondents that reported using smart beta and factor investing solutions. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

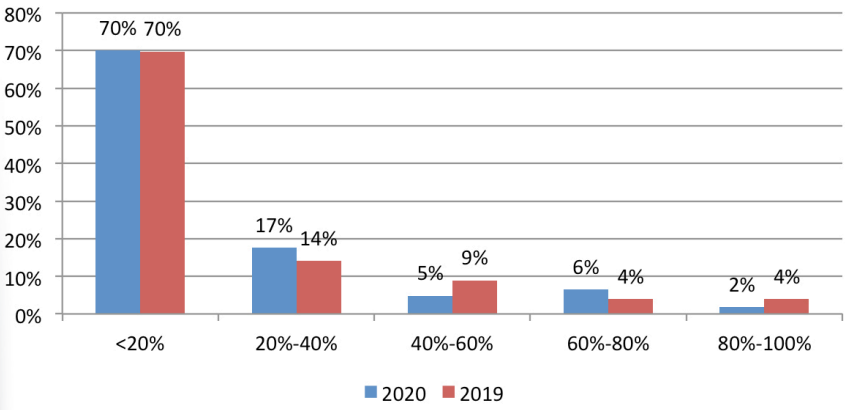
Those who already invest in smart beta and factor investing strategies were asked the percentage of total investment such strategies represent. The results are displayed in Exhibit 4.26. More than two-thirds of respondents (70%) invest less than 20% of their total investments in these strategies, a result similar to that obtained in 2019. We can see that investment in smart beta and factor investing strategies still applies to a restricted share of investment for the vast majority of respondents. Among the 30% of respondents that invest more than 20% in these strategies, 17% invest between 20% and 40%, 5% invest between 40% and 60%, while only 8% of respondents invest more than 60% of their total investments in smart beta and factor investing strategies; this last result is similar to that obtained in 2019.

70%
of respondents invest less than

20%
of their total investments

Exhibit 4.26: Percentage of Total Investment Already Invested in Smart Beta and Factor Investing Solutions

This exhibit indicates the average percentage of total investment already invested in smart beta and factor investing solutions. We only consider respondents that already use such strategies. We also display the 2019 results to show year-on-year changes. Non-responses are excluded.

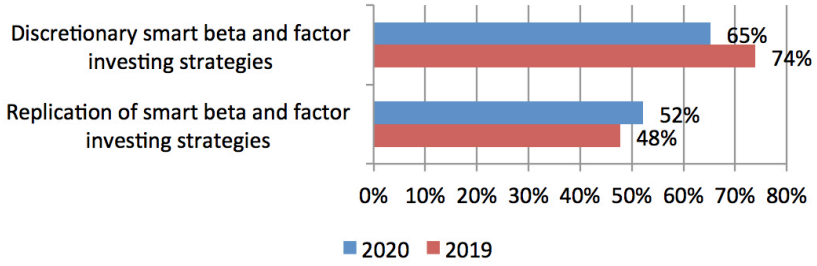


65%
use discretionary strategies,
52%
use replication strategies

Respondents already investing in smart beta and factor investing strategies were also asked to detail the category of these strategies they use. The results are displayed in Exhibit 4.27. We can see that more respondents use discretionary smart beta and factor investing strategies than resort to the replication of such strategies (65% versus 52%). Only 17% of respondents use both categories. Compared to 2019, the difference between the percentages of use of the two categories has narrowed considerably.

Exhibit 4.27: Strategies Used to Invest in Smart Beta and Factor Investing Solutions

This exhibit indicates the categories of smart beta and factor investing strategies used by respondents. The percentages are based only on respondents that already use smart beta and factor investing strategies. More than one response could be given. We also display the 2019 results to show year-on-year changes. Non-responses are excluded.



Respondents already investing in smart beta and factor investing strategies were finally asked to explicitly state the wrapper they use to invest in these strategies. The results are displayed in Exhibit 4.28, which shows that the majority of respondents (57%) use open-ended passive funds (ETFs and index funds) as a wrapper, ahead of the 43% who use active solutions, while only one-quarter (25%) use dedicated passive mandates. We note that while the vast majority of respondents (78%) use only one category of wrapper (open-ended passive funds for 41% of respondents, active solutions for 25%, and dedicated passive mandates for 13%), some of them use two or three. 3% of respondents use both categories of passive wrappers. Some respondents use active solutions and only one category of passive wrapper – 10% use open-ended passive funds and 6% use dedicated passive mandates. Finally, 3% of respondents report using the three categories of wrappers. Compared to 2019, there has been a decline in the use of active wrappers, in favour of passive wrappers.

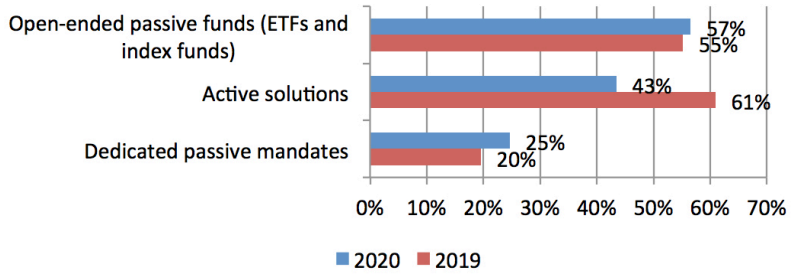


Exhibit 4.28: Wrapper Used to Invest in Smart Beta and Factor Investing Solutions
This exhibit indicates the categories of wrapper respondents use to invest in smart beta and factor investing strategies. The percentages are based only on respondents that already invest in these strategies. More than one response could be given. We also display the 2019 results to show year-on-year changes. Non-responses are excluded.

The remaining questions of the smart beta and factor investing section of the survey were put to all respondents whether or not they were already investing in such strategies. Respondents were asked to rate the advantages of discretionary smart beta and factor investing strategies and of replication strategies. The results for the former are displayed in Exhibit 4.29 and for the latter in Exhibit 4.30. Exhibit 4.31 compares the favourable scores for both strategies. We can see from Exhibits 4.29 and 4.30 that the majority of respondents have a favourable opinion of all the characteristics of both strategies, as all of them are considered to be favourable by more than 50% of respondents. The percentage of respondents with a favourable opinion of the various characteristics of the discretionary strategies indicates moderate increases for three of them compared to 2019 (costs, broadness of the available solutions, and mitigating possible provider-investor conflicts of interest), while the other characteristics see a decrease, in most cases moderate, except for the possibility to create alignment with investor beliefs. Comparable results are found with regard to the characteristics of replication strategies. We also observe a moderate increase in the percentage of respondents with a favourable opinion for three of them compared to 2019 (costs, availability of information for assessing strategies, and mitigating possible provider-investor conflicts of interest), while the other characteristics remain at the same level or see a slight decrease.

57%
use passive funds,
43%
use active solutions

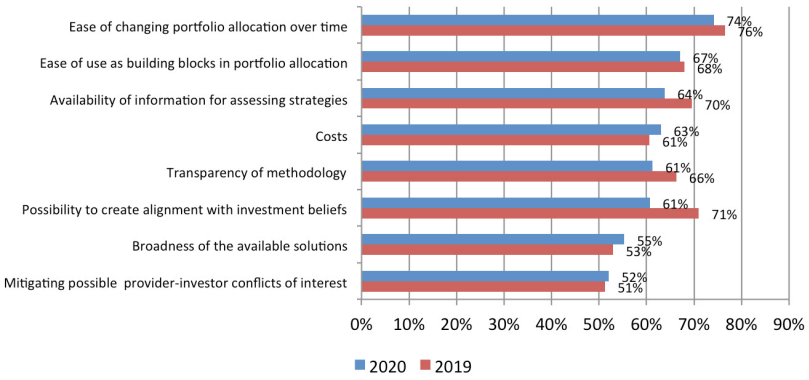
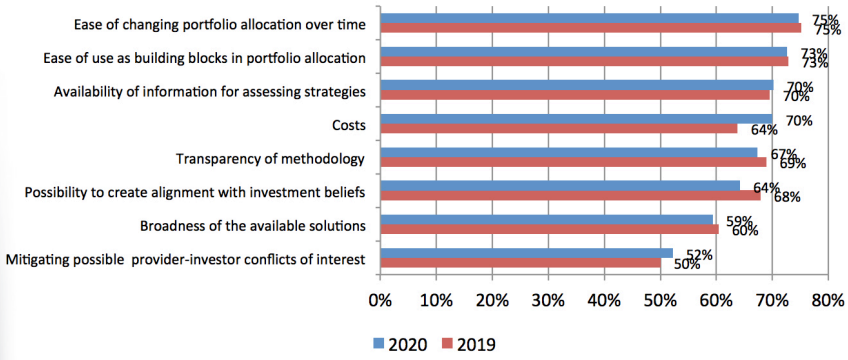


Exhibit 4.29: Perceived Advantages of Discretionary Smart Beta and Factor Investing Strategies
This exhibit indicates how respondents rate the advantages of discretionary smart beta and factor investing strategies. Respondents were asked to rate the various advantages from 0 (not favourable) to 5 (highly favourable). The "favourable" category includes ratings from 3 to 5 while "not favourable" indicates ratings from 0 to 2, such that the aggregate percentages of "favourable" and "not favourable" add up to100%. Non-responses are excluded. This exhibit only displays the favourable scores, together with the 2019 results to show year-on-year changes.

Exhibit 4.30: Perceived Advantages of Replication of Smart Beta and Factor Investing Strategies

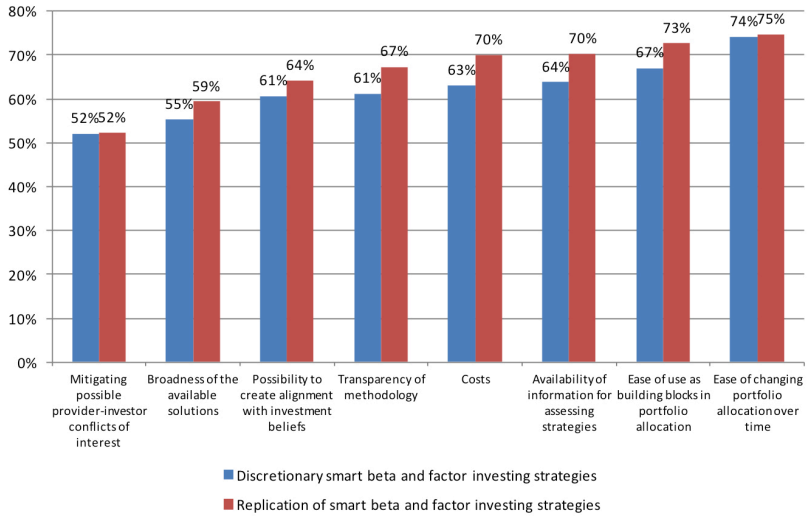
This exhibit indicates how respondents rate the advantages of the replication of smart beta and factor investing strategies. Respondents were asked to rate the various advantages from 0 (not favourable) to 5 (highly favourable). The "favourable" category includes ratings from 3 to 5 while "not favourable" indicates ratings from 0 to 2, such that the aggregate percentages of "favourable" and "not favourable" scores add up to100%. Non-responses are excluded. This exhibit only displays the favourable scores, together with the 2019 results to show year-on-year changes.



The comparison between the scores for the characteristics in the two categories is also interesting. We observe that the different characteristics are classified in the same order both for discretionary and replication strategies, with the lowest satisfaction score for mitigating possible provider-investor conflicts of interest (52% for both categories) and the highest score for ease of changing portfolio allocation over time (74% for discretionary; 75% for replication). Moreover, across all characteristics, replication strategies come out on top. Exhibit 4.31 provides more detail.

Exhibit 4.31: Comparative Advantages of Discretionary and Replication Smart Beta and Factor Investing Strategies

This exhibit compares the favourable scores obtained for each advantage of discretionary and replication smart beta and factor investing strategies. Non-responses are excluded.



4.2.2. Smart Beta and Factor Investing Strategies in Fixed Income

This sub-section presents a special focus on fixed-income smart beta and factor investing strategies introduced in our survey 2018, and developed since then. Exhibit 4.32 shows that only 11% of the total sample of respondents already use smart beta and factor investing strategies for fixed income, a result in the same range, albeit a bit lower, as the one obtained last year. If we only consider the sub-sample of those respondents that reported already investing in smart beta and factor investing solutions (see Exhibit 4.25), we find that 23% use smart beta and factor investing strategies for fixed income. This result is not surprising as such strategies top the list when respondents are asked about the products they would like to see further developed (see Exhibit 4.57 in Section 4.2.6).

11%

use smart beta and factor investing for fixed income

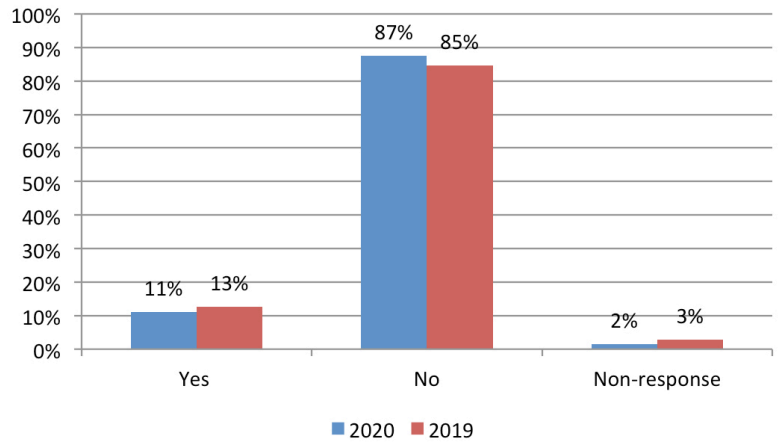


Exhibit 4.32: Do You Already Invest in Smart Beta and Factor Investing Strategies for Fixed Income?
This exhibit indicates the percentage of respondents that reported investing in smart beta and factor investing strategies for fixed income. Percentages are based on 191 replies. We also display the 2019 results to show year-on-year changes.

As the number of respondents already using smart beta and factor investing for fixed income is very restricted, we felt it would be interesting to ask the other respondents why they do not invest in such products. They were presented with a list of reasons. From Exhibit 4.33, we can see that 39% consider that fixed-income factor risk premia are not sufficiently documented in the literature. Less than a third (30%) of respondents also cited a lack of efficient bond benchmarks, and 27% said the offer does not correspond to their needs in terms of risk factor, a considerably lower proportion than in 2019, when this criterion was at the top of the list and mentioned by 38% of respondents. At the bottom of the list, the lack of liquidity in the bond market was cited by 22% of respondents, while only 19% do not invest in the fixed-income asset class.

Respondents were also invited to specify their other motivations, if any. The main additional motivations related to a lack of knowledge and information, including academic information, concerning these products, and the insufficient quality of the available products. Some respondents prefer using other strategies or products to invest in the fixed-income asset class, including in-house factor investing strategies. Lastly, some of them said they are not convinced by smart beta and factor investing strategies.

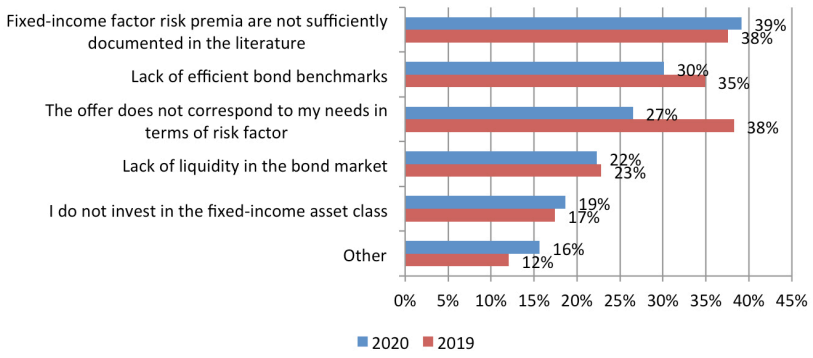
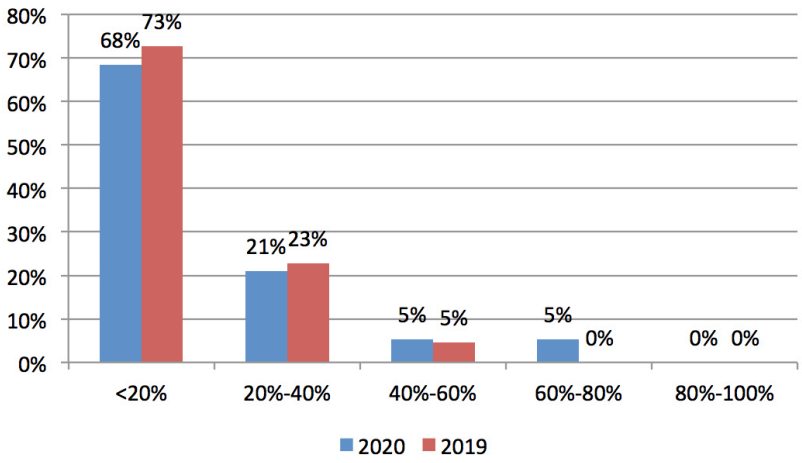


Exhibit 4.33: Which of the Following Are the Main Reasons for not Using Fixed-Income Smart Beta and Factor Investing Products?
This exhibit indicates the reasons why respondents do not invest in smart beta and factor investing strategies for fixed-income. Percentages are based on 191 replies to the survey. We also display the 2019 results to show year-on-year changes.

68%
of respondents invest less than
20%
of their total investments

Those respondents who already invest in smart beta and factor investing strategies for fixed income were asked the percentage of total investment these strategies represent. The results are displayed in Exhibit 4.34. For about two-thirds of respondents (68%), the figure is less than 20%. This result is comparable to that obtained for investment in smart beta and factor investing solutions in general (see Exhibit 4.26). Among the respondents that invest more than 20% in these strategies, the figures lie between 20% and 40% for 21% of them, while 5% invest between 40% and 60%, and another 5% invest between 60% and 80%. If we compare these results to those obtained in 2019, we note an increase in the share dedicated to smart beta and factor investing solutions for fixed income: 32% of respondents in 2020, versus 27% in 2019, dedicate more than 20% of their total investment to these strategies, with 10% of respondents investing more than 40% in 2020, compared to 5% in 2019. These results point to the opportunities for further development of these investment strategies in the near future.

Exhibit 4.34: Percentage of Total Investment Already Invested in Fixed-Income Smart Beta and Factor Investing Solutions
This exhibit indicates the average percentage of total investment already invested in smart beta and factor investing solutions for fixed income. We only consider respondents that already use such strategies for fixed income. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.



These respondents were also asked about their rate of satisfaction with smart beta and factor investing solutions for fixed income. On a scale from 0 (not satisfied at all) to 5 (highly satisfied), the average satisfaction rate was 2.86, quite a good score for those already using smart beta and factor investing solutions for fixed income.

In order to obtain more information about the needs and requirements of respondents when it comes to smart beta and factor investing for fixed income, respondents were asked to give their opinion about a list of assertions. The results are displayed in Exhibit 4.35, which shows that respondents have a relative interest in smart beta and factor investing for fixed income with a score of 2.61, on a scale from 0 (strongly disagree) to 5 (strongly agree). However, there is a significant gap between the interest in this investment and forecasts of an increase in it: when asked about their plans to increase their investment in smart beta and factor investing for fixed income, the average score is only 1.75. The following

findings go some way towards explaining this disparity: first, the average score of agreement with the statement that the smart beta and factor investing equity approach is transposable to fixed income is only 1.86; second, respondents consider that there is not enough research in the area of smart beta and factor investing for fixed income (average score of 1.67). Compared to 2019, we especially note a decline in interest in smart beta and factor investing for fixed income, as well as a decline in plans to increase investment in these products.

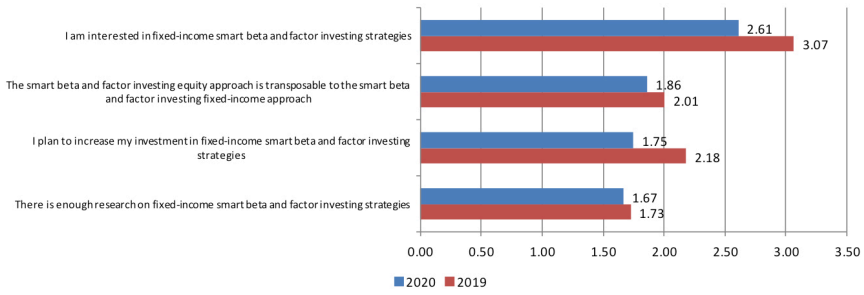


Exhibit 4.35: Respondent Opinions about Statements Concerning Smart Beta and Factor Investing for Fixed Income.
This exhibit indicates the extent to which respondents agree with each statement on a scale from 0 (strongly disagree) to 5 (strongly agree). More than one response could be given. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

Respondents were further asked to indicate the rewarded factors they find most relevant in fixed-income markets. The results are displayed in Exhibit 4.36, where we see that about three-fifths of respondents considered that the three typical factors of the credit risk market, namely credit, carry/level of the yield curve and slope of the yield curve, are the most relevant (63%, 60% and 59% respectively). The liquidity factor comes in fourth position, with 50% of respondents finding it relevant. Finally, at the bottom of the list, we find three factors that are more specifically related to the equity market, namely momentum, value and low risk, with only 24%, 22% and 15% of respondents respectively finding them relevant in fixed-income markets, which is consistent with respondents saying that smart beta and factor investing for equity is not transposable to fixed income (see Exhibit 4.35). We also note that while the results remained fairly similar to those of 2019 for the typical factors of the credit risk market, there is a sharp decline this year in the percentage of respondents finding equity market factors relevant, especially when it comes to momentum, with 24% of respondents finding it relevant in 2020, compared to 35% in 2019.

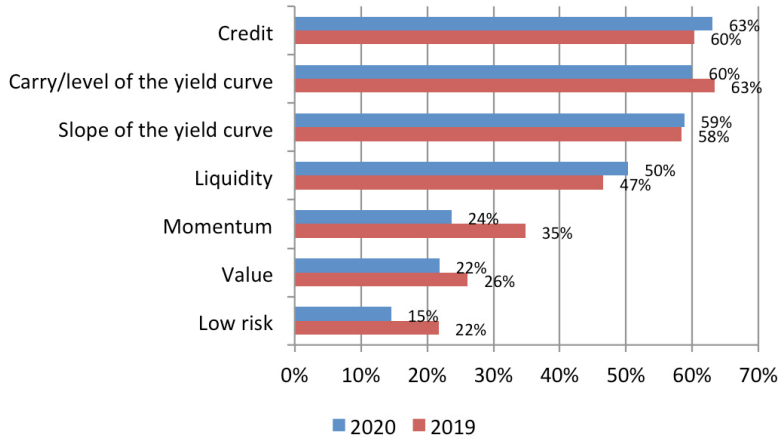


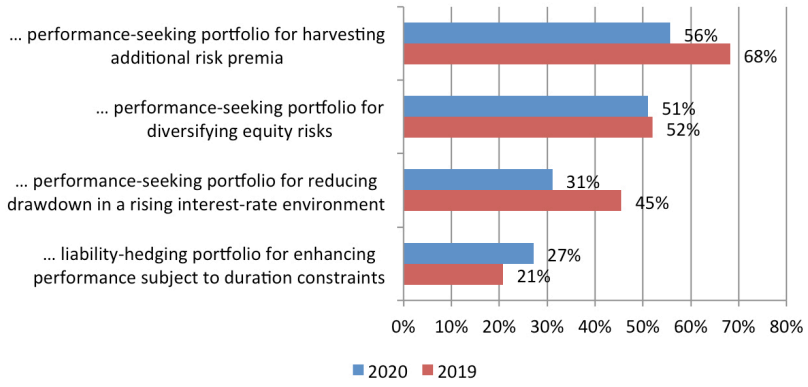
Exhibit 4.36: Respondent Opinions about Rewarded Factors in Fixed-Income Markets
This exhibit indicates for each rewarded factor the percentage of respondents that find it relevant in fixed-income markets. More than one response could be given. Percentages are based on 191 replies to the survey. We also display the 2019 results to show year-on-year changes.

56%

think that smart beta and factor investing bond solutions are useful in performance-seeking portfolios for harvesting risk premia

In addition, respondents were invited to evaluate the different purposes for which they consider smart beta and factor investing bond solutions to be useful. The results are displayed in Exhibit 4.37, which shows that more than half of respondents consider smart beta and factor investing bond solutions to be especially useful in performance-seeking portfolios, first for harvesting risk premia, second for diversifying equity risks (56% and 51%, respectively). Performance-seeking portfolios for reducing drawdown in a rising interest-rate environment and liability-hedging portfolios for enhancing performance subject to duration constraints come far behind with only 31% and 27% of respondents, respectively, considering smart beta and factor investing bond solutions useful for these purposes. Compared to 2019, there is a significant drop in the percentage of respondents who find smart beta and factor investing bond solutions useful for harvesting risk premia and reducing drawdown.

Exhibit 4.37: Do You Think that Smart Beta and Factor Investing Bond Solutions Are Useful in ...?
This exhibit indicates for which purposes respondents consider smart beta and factor investing bond solutions to be useful. More than one response could be given. Percentages are based on 191 replies to the survey. We also display the 2019 results to show year-on-year changes.



47%

prefer factor investing to achieve efficient harvesting

Respondents were then asked specifically about how to achieve efficient harvesting of risk premia in bond markets. They were presented with three propositions. The first was the application of smart weighting schemes (minimum variance, risk parity, etc.) to a broad universe (in short, smart beta). The second was the selection of bonds according to rewarded attributes such as value, momentum, credit, liquidity, etc. (in short, factor investing). The third was the application of smart weighting schemes to factor-tilted selections of bonds (in short, smart factor investing). The results are displayed in Exhibit 4.38, where we see that 47% of respondents think that the best solution is factor investing. 29% think it is smart factor investing, and 24% think it is smart beta. Compared to 2019, the percentage of respondents choosing factor investing has decreased in favour of smart beta and smart factor investing, although factor investing remains the first choice.

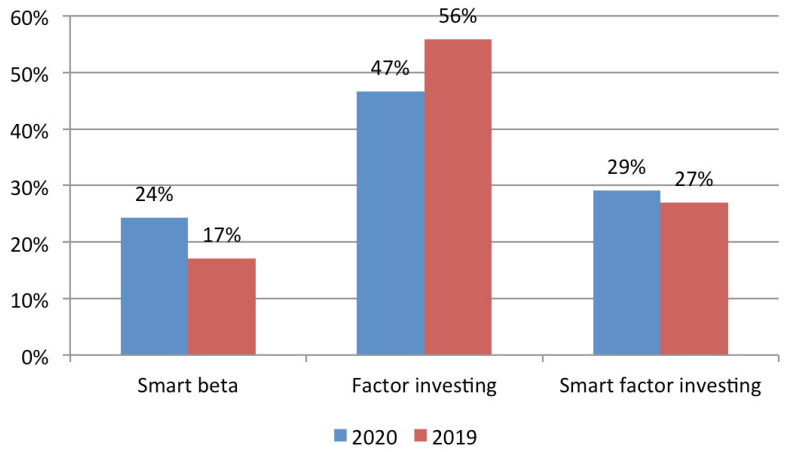


Exhibit 4.38: How Should Investors Achieve Efficient Harvesting of Risk Premia in Bond Markets?
This exhibit indicates respondent opinions on how to achieve efficient harvesting of risk premia in bond markets. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

Respondents plan to use both active and passive solutions to invest in fixed-income products

Finally, to conclude the section on smart beta and factor investing for fixed income, respondents were asked about the vehicles they plan to use in the future to invest in these products. The results are displayed in Exhibit 4.39, which reveals that about the same proportion of respondents plan to use open-ended passive funds and active solutions, with a score of 2.80 and 2.78, respectively, on a scale from 0 (never use) to 5 (use very frequently), while fewer respondents plan to use dedicated passive mandates (2.21). Compared to 2019, there is a decline in plans to use active solutions.

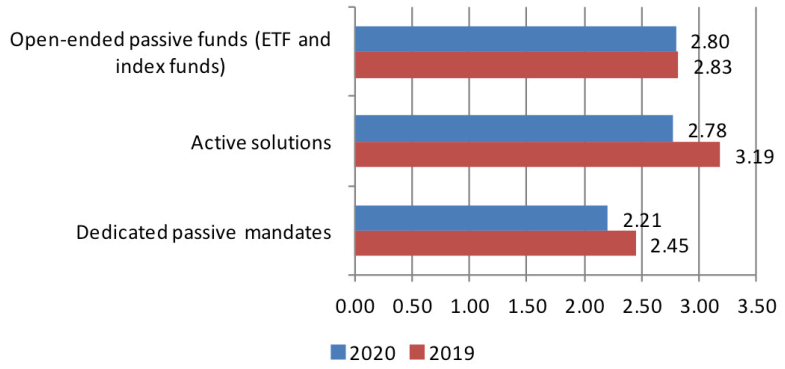


Exhibit 4.39: Which Vehicles Do You Plan to Use in the Future for Fixed-Income Smart Beta and Factor Investing?
This exhibit indicates the vehicles respondents plan to use in the future for fixed-income smart beta and factor investing on a scale from 0 (never use) to 5 (use very frequently). Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

4.2.3. Smart Beta and Factor Investing Indices

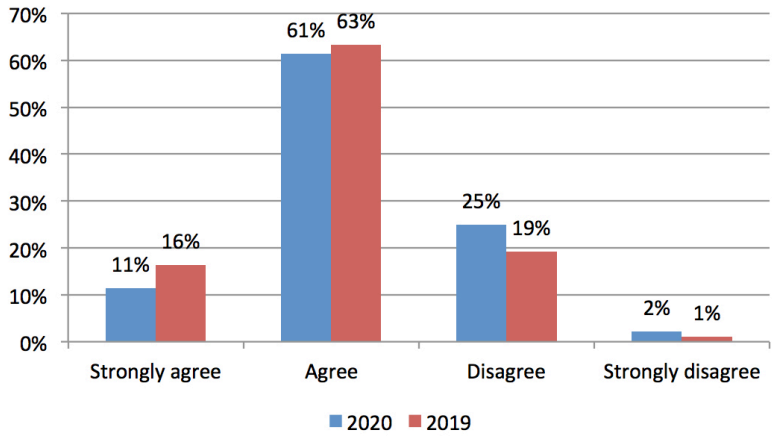
Investors were then asked about their agreement with different propositions concerning smart beta and factor investing indices. These were developed to overcome the shortcomings of cap-weighted indices, which included their poor risk-adjusted performance (Haugen and Baker, 1991; Grinold, 1992; Schwartz, 2000; Cochrane, 2005; Arnott, Hsu and Moore, 2005; Amenc, Goltz and Le Sourd, 2006; Goltz and Le Sourd, 2011, among others). Respondents were therefore first asked if, in their view, smart beta and factor investing indices provided significant potential to outperform cap-weighted indices in the long term.

73%

agree that smart beta and factor investing indices provide significant potential to outperform cap-weighted indices

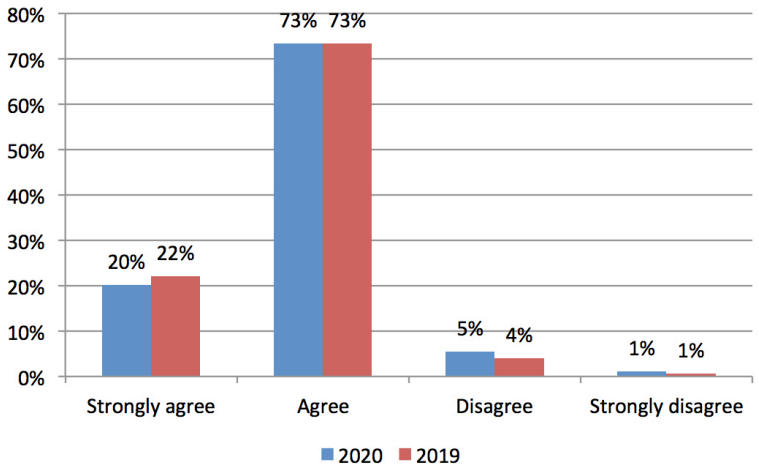
From Exhibit 4.40, we can see that the vast majority of respondents agree that smart beta and factor investing indices provide significant potential to outperform cap-weighted indices in the long term, as almost three-quarters of them (73%) indicate they agree or strongly agree with this view, 11% of whom strongly agree. Compared to 2019, there is a small decrease, especially among those who strongly agree with the proposition, but overall we are at the same level as in 2018. It thus appears that a large and stable group of investors are still convinced of the superiority of smart beta and factor investing indices in terms of performance over the long term.

Exhibit 4.40: Do You Think Smart Beta and Factor Investing Indices Provide Significant Potential to Outperform Cap-Weighted Indices in the Long Term?
This exhibit indicates the percentages of agreement with this statement. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.



Respondents were then asked if they thought smart beta and factor investing indices allowed factor risk premia such as value and small-cap to be captured. Exhibit 4.41 shows that the vast majority of respondents (93%) believe this to be the case, a percentage still in the same range as in 2019, with a very slight decrease in the percentage of respondents who strongly agree (20% in 2020 versus 22% in 2019).

Exhibit 4.41: Do You Think Smart Beta and Factor Investing Indices Allow Factor Risk Premia Such as Value and Small-Cap to Be Captured?
This exhibit indicates the percentages of agreement with this statement. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.



73%

agree that smart beta and factor investing indices allow the concentration of cap-weighted indices in very few stocks or sectors to be avoided

Another important shortcoming of cap-weighted indices documented in the literature is their over-concentration (see Tabner, 2007; Malevergne, Santa Clara and Sornette, 2009). We therefore asked respondents if they

thought smart beta and factor investing indices allowed the concentration of cap-weighted indices in very few stocks or sectors to be avoided. Exhibit 4.42 again shows that a large share of respondents, about three-quarters (73%), agree or strongly agree, which is quite comparable to the 2019 results.

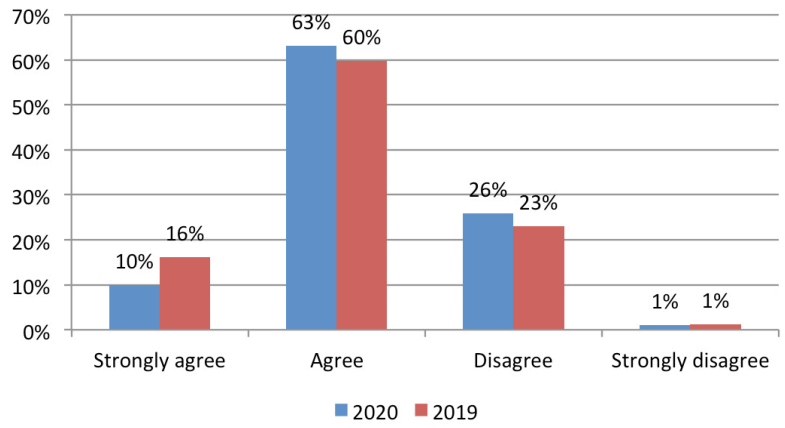


Exhibit 4.42: Do You Think Smart Beta and Factor Investing Indices Allow the Concentration of Cap-Weighted Indices in Very Few Stocks or Sectors to Be Avoided?
This exhibit indicates the percentages of agreement with this statement. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

In conclusion, respondents show great interest in products based on smart beta and factor investing indices as they see them as providing potential improvement in their investment, and this interest remains at comparably high levels to those of 2019.

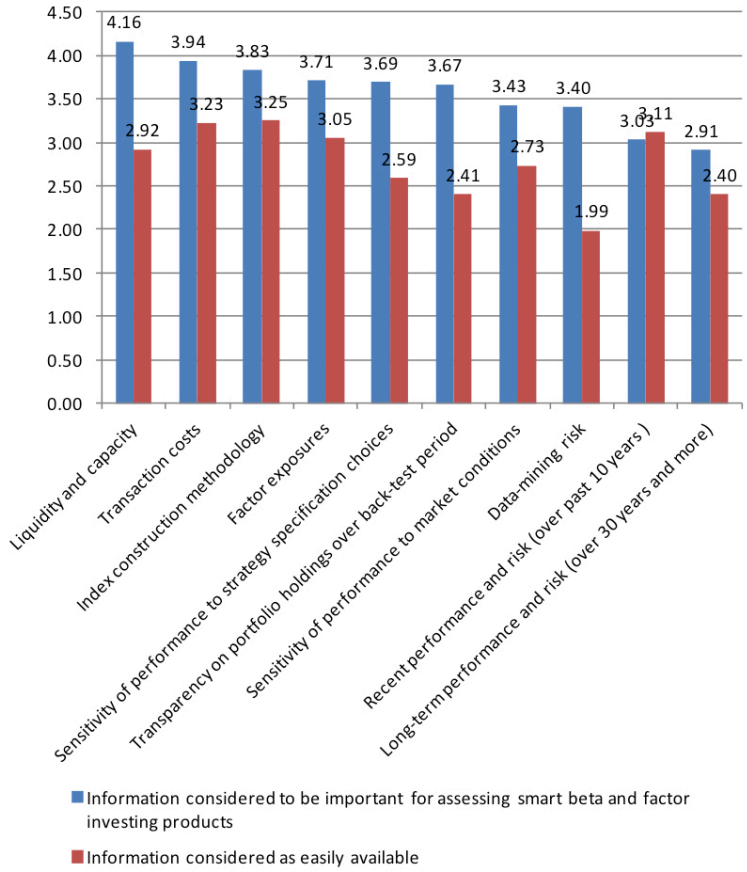
4.2.4. Information about Smart Beta and Factor Investing Strategies

Respondents say it is difficult to access information about smart beta and factor investing strategies

We then asked respondents about the information they consider important when assessing smart beta and factor investing. At the same time, they were asked whether they considered this information easily available (see Exhibit 4.43). It is interesting to see the spread between the importance and accessibility of this information. The highest spread is observed for information respondents consider crucial. For example, data-mining risk and information about transparency on portfolio holdings over a back-test period are two crucial pieces of information for respondents, with respective scores of 3.40 and 3.67. Data-mining risk is also the information that appears to be the most difficult to obtain for respondents, with a score of 1.99, while information about transparency on portfolio holdings over a back-test period is the third most difficult to obtain, with a score of 2.41. Even relatively basic information such as the index construction methodology is not judged to be easily available (score of 3.25) relative to its importance (score of 3.83). On the contrary, information about recent performance and risk over the past ten years is among the least important for respondents with a score of 3.03, but is also one of the most easily available, with the third highest score (3.11) across the board in terms of availability. The gap between information importance and its accessibility as seen by investors is displayed in Exhibit 4.44.

Exhibit 4.43: Information about Beta Products

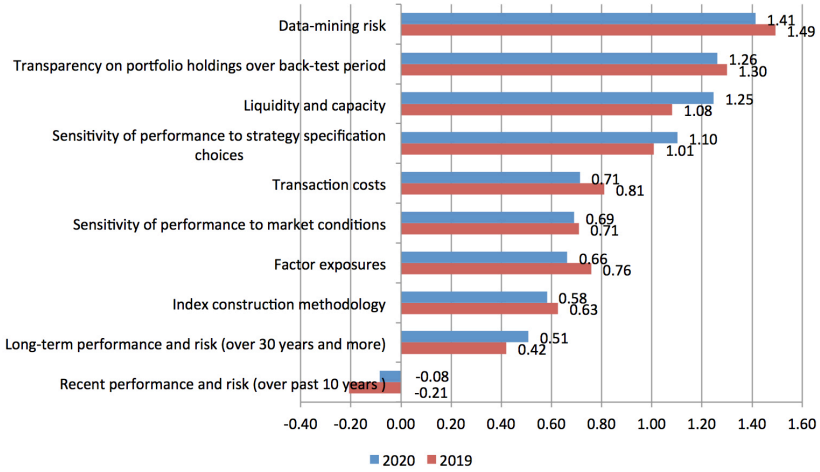
This exhibit indicates the information respondents consider important for assessing smart beta and factor investing products on a scale from 0 (not important) to 5 (crucial) and which information they consider to be easily available on a scale from 0 (difficult to obtain) to 5 (easy to obtain).



It is interesting to note that, compared to 2019, the gap between information importance and its accessibility has evolved slightly up or down depending of the piece of information. The best improvements perceived by respondents between the importance of information and its accessibility are for transaction costs and factor exposures. The highest increases in this gap, compared to 2019, are observed for liquidity and capacity, as well as for sensitivity of performance to strategy specification choices and long-term performance and risk.

Exhibit 4.44: Gap between Information Importance and its Accessibility

This exhibit indicates the gap between information importance and its accessibility according to investors. We also display the 2019 results to show year-on-year changes.



The fact that information regarded as important is not considered to be easily available clearly calls into question the information provision practices of smart beta and factor investing providers. In fact, the only area in which there is a significantly reduced gap between the importance and ease of accessibility scores is for recent performance numbers. Information about performance and risk is judged to be moderately easily available and moderately important. All other areas show more pronounced gaps between these two metrics. Moreover, there is on average a gap of 0.81 between importance of information items and their ease of accessibility, similar to the one observed in 2019 (0.80). However, the means of the respective scores of importance of information items and their ease of accessibility (3.58 and 2.77 respectively) are slightly lower than those reported by respondents in 2019 (3.65 and 2.85 respectively). Overall, these results suggest that there is still room for further improvement, as investors continue to believe that information considered important for assessing smart beta and factor investing strategies is not made available to them with sufficient ease.

4.2.5. The Importance of Factors as Performance Drivers

The last group of questions in this section of the survey relates to the factors inherent in equity strategies and how these factors explain their performance. This year, we also questioned respondents about the integration of ESG considerations into their investment decisions within smart beta and factor investing strategies.

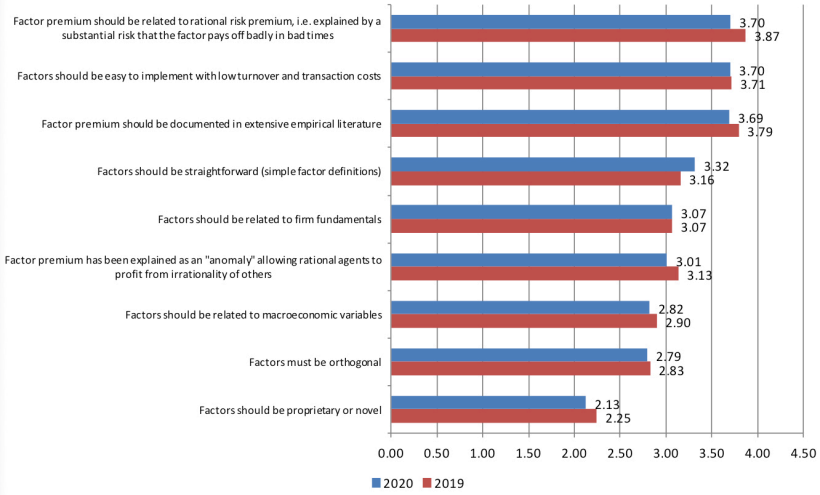
Respondents were more specifically asked about their requirements when considering the selection of a given set of factors in their investment approach. They were presented with a list of factor characteristics and asked to rate them from 0 (if the assertion was not important) to 5 (if it was absolutely crucial). The results are displayed in Exhibit 4.45, which shows that with the exception of "factors should be proprietary or novel", all the other proposed characteristics receive quite high scores, ranging from 2.79 to 3.70. However, respondents are primarily concerned with the existence of a rational risk premium, as well as by the ease of implementation and low turnover and transaction costs, with a score of 3.70 for both, closely followed by the existence of extensive empirical literature documenting factor premium (3.69). The least important requirement for them is that factors should be proprietary or novel, with a score of 2.13.

The existence of a rational explanation for factor risk premia is of principal importance to investors; this is probably because such an explanation suggests that the premium will be persistent. Indeed, if the literature interprets factor premia as compensation for risk, the existence of such premia could also be explained by investors making systematic errors due

to behavioural biases such as over- or under-reactions to news about 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 contention. In fact, even if the average investor makes systematic errors due to behavioural biases, it is still possible that some rational investors who are not subject to such biases might 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.

We can see that the priorities in their requirements are consistent from one year to the other, with the same order of requirements given.

Exhibit 4.45: Requirements for Factors
This exhibit indicates respondent requirements when considering a given set of factors in their investment approach on a scale from 0 (not important) to 5 (absolutely crucial). We also display the 2019 results to show year-on-year changes.



65%
incorporate ESG into their investment decisions to allow for a positive impact on society

Only
25%
think that incorporating ESG will serve to enhance portfolio performance

Respondents were then asked about their positions with regards to ESG (Environmental, Social and Governance) criteria. First, they were asked about the reasons they find it important to incorporate ESG into investment decisions. The results are displayed in Exhibit 4.46 It appears that the two main reasons for respondents to incorporate ESG is to allow for a positive impact on society (65%) and to reduce long-term risk (58%). Only a quarter of them (25%) think that incorporating ESG will serve to enhance portfolio performance.

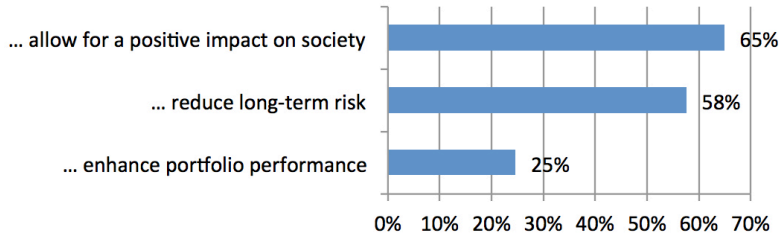


Exhibit 4.46: Do You Think Incorporating ESG Considerations Is Important in Investment Decisions to ...
This exhibit indicates respondent motivations to incorporate ESG in their investment decisions. More than one response could be given.

Respondents were also asked to indicate the dimension they consider most important out of Environmental, Social and Governance. Not surprisingly, the vast majority of them (57%) indicate the E (Environmental) as the most important dimension of ESG. This has to do with strong concerns about climate change. The G (Governance) comes second with more than a third of respondents (36%) considering it as the most important dimension. Finally, the S (Social) ranks last with only 7% of respondents considering it to be the most important dimension of the ESG (see Exhibit 4.47).

57%
indicate the E (Environmental) as the most important dimension of ESG

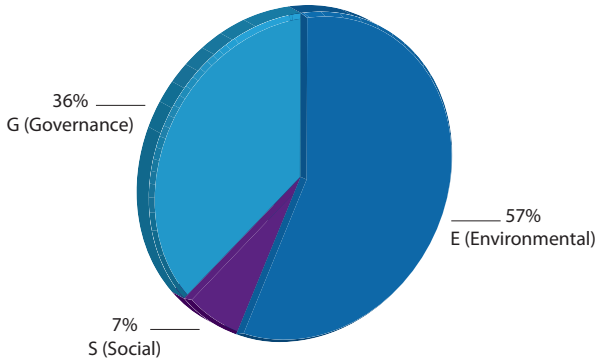


Exhibit 4.47: Most Important Dimension of ESG
This exhibit indicates the dimension respondents consider the most important out of Environmental, Social and Governance. Non-responses are excluded.

From Exhibit 4.48 we can see that close to two-thirds of respondents (63%) are not ready to accept a drop in performance in exchange for a better ESG score, which can be linked to the results of Exhibit 4.46 showing that only 25% of them think that incorporating ESG serves to enhance portfolio performance.

63%
of respondents do not want the incorporation of ESG to be done at the expense of performance

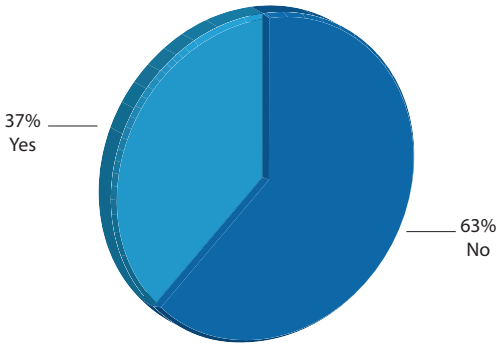
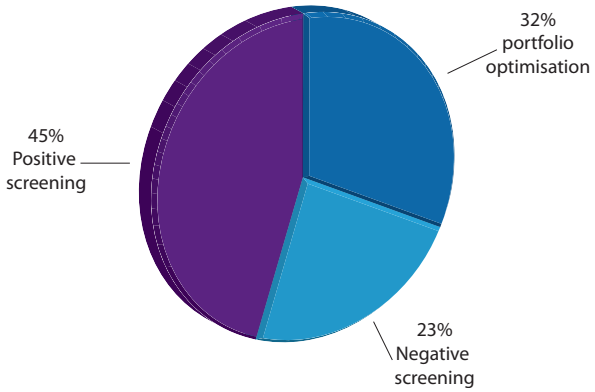


Exhibit 4.48: Acceptance of a Lower Performance in Exchange for a Better ESG Score
This exhibit indicates the percentage of respondents willing to accept a lower performance in exchange for a better ESG score. Non-responses are excluded.

Respondents were also asked about the approach they consider to be the best in reducing a portfolio's carbon footprint. 45% of them consider the best approach is positive screening. Portfolio optimisation comes in second position (32% of respondents). Lastly, only 23% of respondents consider negative screening as the best approach (see Exhibit 4.49).

Exhibit 4.49: Best Approach to Reduce a Portfolio's Carbon Footprint
This exhibit indicates the approaches respondents consider the best to reduce a portfolio's carbon footprint. Non-responses are excluded.

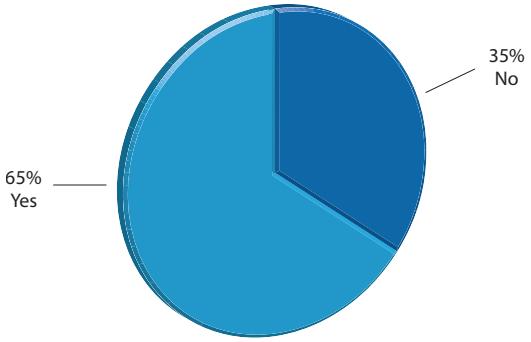


45%

consider that the best approach to reduce the carbon footprint of a portfolio is positive screening

Finally, about two-thirds of respondents (65%) consider that sector or neutrality constraints are appropriate when using an ESG filter (see Exhibit 4.50).

Exhibit 4.50: Sector or Neutrality Constraints with an ESG Filter
This exhibit indicates the percentage of respondents who think that sector or neutrality constraints are appropriate when using an ESG filter. Non-responses are excluded.



The high level of interest among respondents in ESG is remarkable. It was not mandatory to answer these five questions and yet at least 95% of respondents did so.

To conclude this sub-section about factors, respondents were asked about the ways they use smart beta/factor-based exposures. They were invited to rate a list of propositions from 0 (if they do not use smart beta/factor-based exposures in this way) to 5 (if such use of smart beta/factor-based exposures was highly frequent). The results are displayed in Exhibit 4.51, where we see that the most frequent use respondents have for smart beta/factor-based exposures is a strategic use to harvest long-term premia, with a score of 2.99. Other uses are less frequent, such as tactical use based on macroeconomic regimes (1.92), dynamic use based on variations in factor risk (1.83), and tactical use based on short-term return expectations for factors (1.74).

Compared to 2019, we observe a decrease in all scores, more pronounced for dynamic use based on variations in factor risk and strategic use to harvest long-term premia.

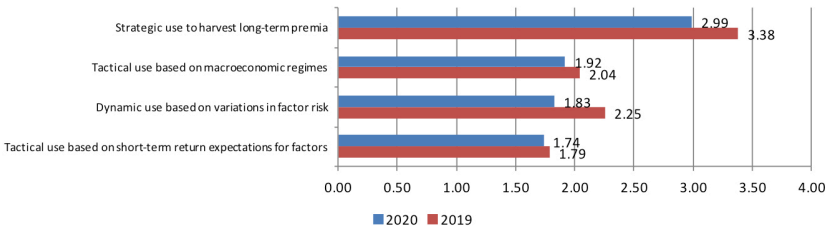


Exhibit 4.51: Use of Smart Beta/Factor-Based Exposures
This exhibit indicates the use respondents make of smart beta/factor-based exposures on a scale from 0 (no use) to 5 (highly frequent use). We also display the 2019 results to show year-on-year changes.

4.2.6. Future Developments for Smart Beta and Factor Investing Strategies

Finally, the last group of questions in the smart beta and factor investing survey sections were dedicated to future perspectives and additional requirements for smart beta and factor investing strategies. First, respondents were asked whether or not they planned to increase their investment in smart beta or factor-based products in the near future. The results are displayed in Exhibit 4.52, which shows that the vast majority of respondents (93%) plan to increase their investment in smart beta and factor investing products over the next three years, a slightly lower percentage than the 94% of 2019, while only 7% of them plan to decrease it. Compared to 2019, a slightly lower number of respondents are considering a substantial increase of between 10% and 50% (42% of respondents, versus 45% in 2019), compared to plans of a moderate increase of less than 10% (45% of respondents, versus 42% in 2019). Only 6% of respondents are thinking of increasing their investment in smart beta and factor investing strategies by more than 50%, compared to 7% in 2019.

48%
plan an increase of more than
10%
in their use of smart beta and factor investing, only
7%
plan a decrease

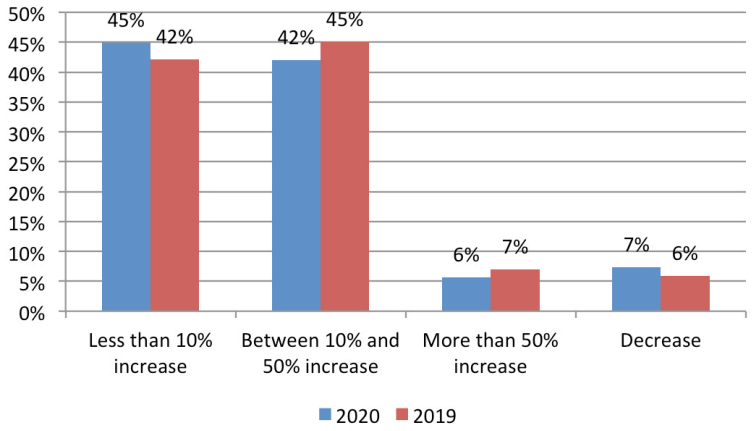


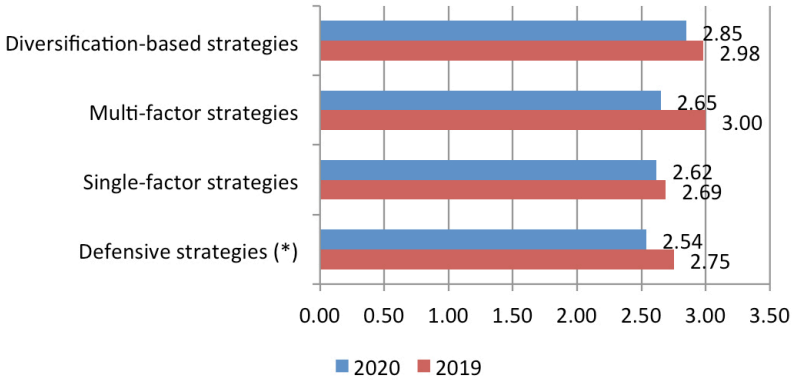
Exhibit 4.52: Planned Changes in Use of Smart Beta/Factor-Based Investment Products in Terms of Assets in the Near Future
This exhibit indicates whether respondents plan to increase or decrease their use of smart beta/factor-based investment products (in terms of assets) over the next 3 years. We also display the 2019 results to show year-on-year changes. Non-responses are excluded.

These results indicate that investment in smart beta and factor investing will increase in the coming years for each investor, which is not surprising as the current share of investment dedicated to smart beta and factor investing strategies is relatively restricted for a majority of respondents (70%), as shown in Exhibit 4.26.

Respondents were then asked to detail the strategies they plan to use in the future. They were presented with a list of strategies and invited to rate them from 0 (if they did not plan to use them in the future) to 5 (if they planned to use them very frequently). The results, displayed in Exhibit 4.53, show that the average scores obtained for the four strategies are still within a very narrow spread, from 2.54 for defensive strategies to 2.85 for diversification-based strategies, as in 2019, albeit a bit lower than those observed last year, with the lowest decrease for multi-factor strategies. The two other strategies, namely multi-factor and single-factor strategies, obtained a score of 2.65 and 2.62, respectively. It therefore appears that respondents are aiming to diversify their new investment in smart beta and factor investing strategies across the different categories.

Exhibit 4.53: Strategies to Be Used in the Future to Invest in Smart Beta and Factor Investing

This exhibit indicates the categories of strategies respondents plan to use in the future to invest in smart beta and factor investing on a scale from 0 (do not plan to use) to 5 (plan to use very frequently). More than one response could be given. We also display the 2019 results to show year-on-year changes. Non-responses are excluded. (*) e.g. Minimum or low-volatility strategies



Respondents plan to make more frequent use of open-ended passive funds than active solutions to invest in equity products

As respondents already investing in smart beta and factor investing strategies were asked to detail the wrapper they use to invest (see Exhibit 4.28), all respondents were asked about the wrapper they planned to use in the future to invest in these strategies. The results are displayed in Exhibit 4.54. Not surprisingly, the two wrappers already used by a majority (57% and 43% respectively) of respondents, namely open-ended passive funds (ETFs and index funds) and active solutions, are also the wrappers they plan to use most frequently in the future, with scores of 3.28 and 2.13 respectively. Compared to 2019, we note a large decrease in the score of planned future use of active solutions, which should be seen in light of the results displayed in Exhibit 4.28, where it appears that the current use of active solution is also declining. The third category of wrapper, dedicated passive mandates, is at the bottom of the list, with a score of 1.38 for future usage, consistent with the lowest share of 25% of respondents using them, among those who already invest in smart beta and factor investing products.

Respondents were then asked about their key motivations for using smart beta and factor investing strategies in their portfolio. They were presented with a list of motivations and invited to rate them from 0

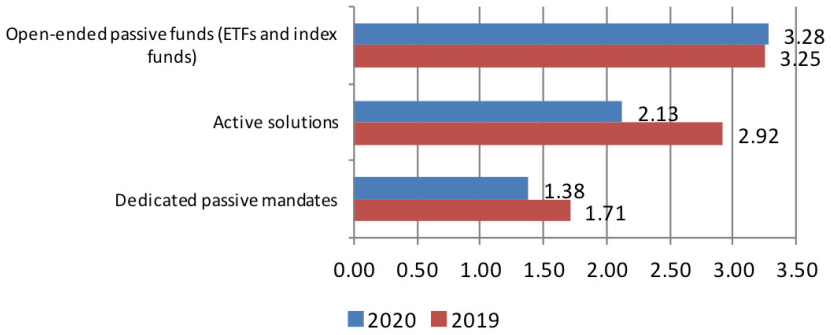


Exhibit 4.54: Wrapper to Be Used in the Future to Invest in Smart Beta and Factor Investing Solutions
This exhibit indicates the categories of wrapper respondents plan to use in the future to invest in smart beta and factor investing strategies on a scale from 0 (do not plan to use) to 5 (plan to use very frequently). We also display the 2019 results to show year-on-year changes. More than one response could be given. Non-responses are excluded.

(no motivation) to 5 (strong motivation). The results are displayed in Exhibit 4.55. Improving performance was the primary motivation cited by respondents for investing in smart beta and factor investing strategies, with a score of 3.33. Managing risk follows with a score of 3.18. Lower costs, increased transparency and managing exposure to macro risk factors followed closely with scores in the same range (2.82, 2.81 and 2.74 respectively). Finally, far behind the others, the least pressing motivation for investors is addressing regulatory constraints, with a score of 1.50. While the first two motivations for using smart beta and factor investing strategies remain the same as in 2019, as well as the last one, small changes in the order can be seen for the other three. Managing exposure to macro risk factors moved up from third position to fifth, with a slight decrease in the score (2.74 versus 3.01 in 2019), yielding the third place to lower costs.

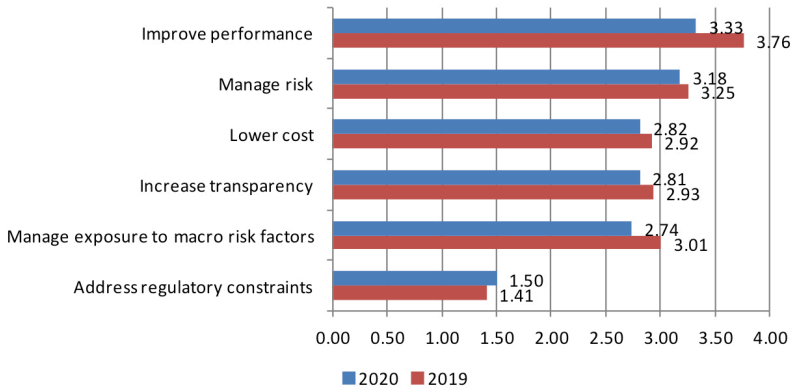
Improving performance and managing risk are the two main motivations for using smart beta and factor investing strategies

It is not surprising that among the motivations for investing in smart beta and factor investing strategies, improving performance obtains the highest score. Smart beta and factor investing indices appear to be an alternative to investment in cap-weighted indices, which provide poor performance. Early papers by Haugen and Baker (1991) and Grinold (1992) provide empirical evidence that market-cap-weighted indices provide an inefficient risk/return trade-off. From a theoretical standpoint, the poor risk-adjusted performance of such indices should come as no surprise, as market-cap-weighting schemes are risk/return efficient only at the cost of heroic assumptions. An extensive body of literature has shown that the theoretical prediction of an efficient market portfolio breaks down when some of the highly unrealistic assumptions of the CAPM do not bear out. Smart beta and factor investing strategies, whose goal is to improve index efficiency, are therefore promising in terms of performance (see Amenc et al., 2010). For similar reasons, respondents perceive the management of risk as better addressed with smart beta and factor investing strategies.

The answers to this question are consistent with those provided in Section 4.2.3, where about 73% of respondents agreed that smart beta

and factor investing indices provide significant potential to outperform cap-weighted indices in the long term and 93% agreed that such indices allowed factor risk premia such as value and small cap to be captured (see Exhibits 4.40 and 4.41).

Exhibit 4.55: Key Motivations for Using Smart Beta and Factor Investing Strategies in a Portfolio
This exhibit indicates the key motivations for using smart beta and factor investing strategies in a portfolio on a scale from 0 (no motivation) to 5 (strong motivation). We also display the 2019 results to show year-on-year changes. More than one response could be given. Non-responses are excluded.



Respondents were also free to give additional motivations for using smart beta and factor investing strategies in the portfolio. Ten respondents (about 5% of the sample) made contributions. The main arguments they gave were for diversification purposes, to include ESG, climate change concerns and low-carbon investment, and to obtain a better/risk return trade-off.

Respondents were also asked about the major hurdles that prevent them from increasing their use of smart beta and factor investing strategies. They were asked to rate a list of hurdles from 0 (no hurdle) to 5 (significant hurdle). The results are displayed in Exhibit 4.56. The major hurdle appears to be the methodological issues associated with strategies, with quite a high score of 3.15. The dominance of cap-weighted benchmarks and the lack of transparency followed closely with scores of 2.92 and 2.79 respectively. The dominance of cap-weighted indices is a problem that has been denounced for years (see e.g. Arnott et al., 2010b). These indices are still considered as the reference benchmark and it may be difficult to change this thinking. Finally, respondents rank high costs and governance issues at the bottom of the list of hurdles, with scores of 2.28 and 2.18 respectively. We note that none of the hurdles obtained a low score. These scores are all a little higher than in 2019, with the exception of high costs, which remained almost similar to that of 2019.

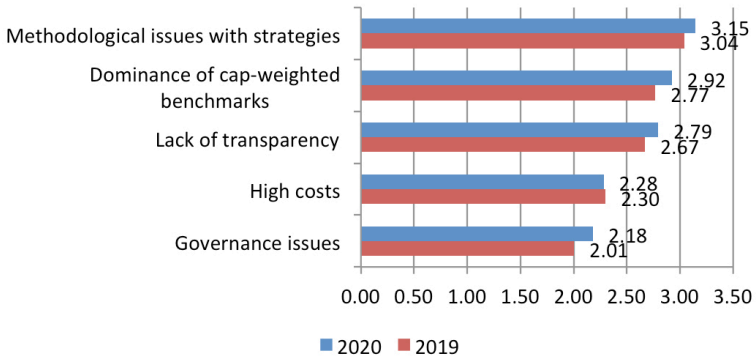


Exhibit 4.56: Major Hurdles to Increase Your Use of Smart Beta and Factor Investing Strategies in Portfolios
This exhibit indicates the major hurdles to increase the use of smart beta and factor investing strategies in a portfolio on a scale from 0 (no hurdle) to 5 (significant hurdle). More than one response could be given. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.

Respondents were also free to detail additional hurdles that prevent them from increasing their investment in smart beta and factor investing strategies. 19 respondents (about 10% of the sample) made contributions. The main arguments they gave were related to the difficulty of communicating and explaining the relatively new concepts to managers, board members, or clients, as well as a lack of clear and comprehensive information from providers. Others highlighted the lack of innovative products in asset classes such as fixed income, or a lack of liquidity. Finally, some respondents mentioned a lack of consensus in the academic literature and a limited added value for long-term investment.

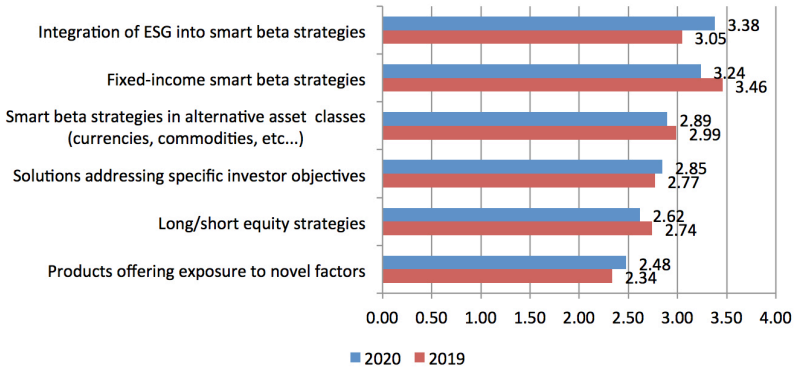
SRI/ESG, fixed-income and alternative asset classes are the main expectations for future development of smart beta and factor investing products

Finally, respondents were asked about the solutions they think require further product development from providers. They were asked to rate a list of solutions from 0 (not required) to 5 (strong priority). The results are displayed in Exhibit 4.57, where we can see that all the propositions obtained quite a high score, ranging from 2.48 to 3.38. Among those, respondents identified the integration of ESG in smart beta and factor investing as a priority, with a score of 3.38. The development of fixed-income smart beta and factor investing strategies closely follow with scores of 3.24. This result is to be compared to those detailed in Section 4.2.2, which show a still limited share devoted to fixed-income products. The following two proposals, namely strategies in alternative asset classes (currencies, commodities, etc.), and solutions addressing specific investor objectives obtained scores in comparable ranges (2.89 and 2.85 respectively). Finally, at the bottom of the list, long/short equity strategies and "products offering exposure to novel factors" obtained scores of 2.62 and 2.48, respectively.

Respondents also call for the development of more customised smart beta and factor investing solutions

Compared to 2019, the most significant increase for further product development was for the integration of ESG into smart beta and factor investing strategies, which was in second place in 2019 and is now at the top of the list. However, it is likely that the development of new products corresponding to specific investor objectives may lead to an even wider adoption of smart beta and factor investing solutions.

Exhibit 4.57: Which Type of Solutions Do You Think Require Further Product Development from Providers?
This exhibit indicates the types of solutions for which respondents would like to see further product developments from providers on a scale from 0 (not required) to 5 (strong priority). More than one response could be given. Non-responses are excluded. We also display the 2019 results to show year-on-year changes.



4.2.7. Trends: Use of and Satisfaction with Smart Beta and Factor Investing Strategies over Time

As a large share of the questions presented in the smart beta and factor investing section were progressively introduced in recent years, the comparison of results will mainly focus on the perception respondents have of smart beta and factor investing indices, for which we now have a history of several years.

After having observed an increase every year since 2013 in the number of respondents who used smart beta and factor investing products or who planned to do so in the near future, we observe a trend reversal, since the respondents not investing or considering investment in such products in the near future are slightly more numerous in 2020 (39%) than in 2013 (36%) (see Exhibit 4.58).

Exhibit 4.58: Use of Smart Beta and Factor Investing Solutions
This exhibit indicates the percentages of respondents that reported using smart beta and factor investing solutions. Non-responses are excluded. The percentages for 2013 to 2019 are based on the results of the EDHEC ETF surveys from 2013 to 2019.

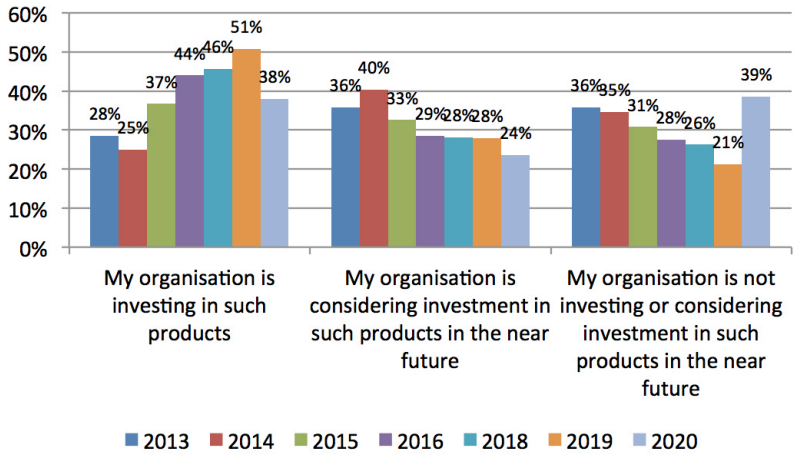


Exhibit 4.59 summarises the opinions of respondents invited to comment on the distinctive characteristics of smart beta and factor investing indices compared to the cap-weighted indices over seven years. We can see that as early as 2013, the vast majority of respondents (at least three-quarters) were already convinced of the advantages smart beta and factor investing indices provide in terms of performance gains, index

deconcentration and risk reduction, compared to cap-weighted indices. We therefore do not observe a dramatic increase over the seven years in the proportion of respondents who have a favourable opinion of smart beta and factor investing index characteristics, since very high proportions of respondents had already identified their advantages when they were first included in the survey. This favourable opinion was confirmed in the following years, with small variations from year to year, even slightly progressing with regard to the opinion that smart beta and factor investing indices allow factor risk premia such as value and small cap to be captured (86% of respondents agreed in 2013, versus 93% in 2020).

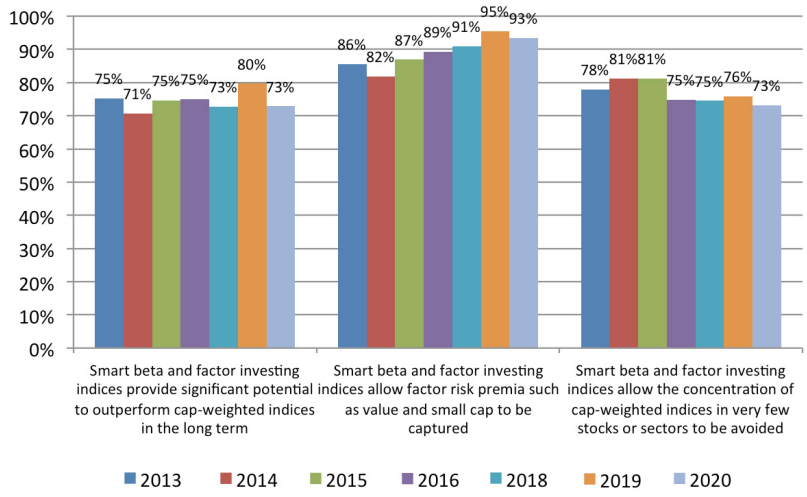


Exhibit 4.59: Agreement of Respondents with Statements about Smart Beta and Factor Investing Indices
This exhibit indicates the percentage of respondents that agree or strongly agree with the statement about smart beta and factor investing indices. Non-responses are excluded. The percentages for 2013 to 2019 are based on the results of the EDHEC ETF surveys from 2013 to 2019.

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With more than €130bn* in assets under management, Amundi ETF, Indexing and Smart Beta is one of Amundi's strategic business areas and is a key growth driver for the group. Amundi ETF, Indexing and Smart Beta provides investors with robust, innovative, sustainable and cost-efficient solutions, leveraging Amundi Group's scale and resources. The platform also offers investors fully customised solutions to meet specific investor needs such as ESG, low carbon, specific exclusions or risk constraints. With over 30 years of benchmark construction and replication expertise, Amundi is a trusted name in ETF and index management among the world's largest institutions. The team is also recognised for its ability to develop smart beta and factor investing solutions, with a track record extending more than ten years.

*All figures and data are provided by Amundi at end June 2020

About EDHEC-Risk Institute

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Academic Roots & Practitioner Reach

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