

**ERASMUS UNIVERSITY ROTTERDAM**

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***Did sustainability become an important criterion  
in investors' analysis of financial investments?  
An event study***

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*The views stated in this thesis are those of the author and not necessarily those of the supervisor, second assessor, Erasmus School of Economics or Erasmus University Rotterdam.*

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## 1. INTRODUCTION

Environmental associations and non-governmental organisations (NGOs) are actively warning governments and private actors that the environment is deteriorating rapidly due to human activities. As a consequence the climate is rapidly changing resulting in extreme weather episodes, in an increase in temperatures and a rise of sea levels to mention only a few. These institutions are calling for a shift in our current system to a more efficient and respectful way of living by promoting sustainable development initiatives. In finance, a consequent number of investors are progressively including sustainability criteria in their investment selection process. Currently the main representation of sustainable finance is a large framework for responsible investing, called the United Nations Principle of Responsible Investment (UNPRI). PRI is backed up by the United Nations and the agreement is signed by more than 2 000 institutional investors and asset owners, such as Blackrock and the Government Pension Fund of Norway, representing approximately 90 trillion US dollars assets under management (UNPRI, 2019). This entity is devoted to guiding capital owners towards sustainable as well as profitable investment opportunities and defines “responsible investment as a strategy and practice to incorporate environmental, social and governance (ESG) factors in investment decisions and active ownership” (UNPRI, n.d., p.1). ESG criteria represent a set of standards set for a company’s operations that investors use in order to screen investment opportunities. Environmental criteria evaluate the extent to which a firm respects the environment and its components. Social criteria relate to the handling and respect of employees, suppliers, and customers rights. The governance aspect examines a company’s direction and its internal organisation.

Nowadays more and more people are taking a stance for a more sustainable future, but economic and governmental systems are not easily adaptable. Indeed, efforts from key individuals around the world are used in a worldwide effort to shift institutions' opinion on sustainability, either at government or large companies' level. Awareness is obviously rising in many sectors and, in the financial sector itself, various solutions are progressively implemented to improve the situation and steer things in the right direction. An example of the rising awareness of investors on environmental issues is the progressive surge in impact investing solutions. These products aim to generate financial gains in addition to social and environmental beneficial outcomes. However the primary goal of investing activities is to generate returns and speculate on goods or services future value. Therefore, one of the investors' main concerns when deciding to apply ESG considerations to their investments is to estimate to what extent it could affect the performance of their portfolios. Some believe that it is essential to take ESG considerations into account before making decisions because they think that it will play a major role in the long-term hedging of risk. Others barely consider ESG criteria because of benchmarks' lack of accuracy and subjective characteristics of current typologies (see Appendix A). Most academic

researches on the topic tend to find evidence of the advantage of considering sustainability factors for risk and exposure minimising purposes (Kumar and al., 2016). The current issues that investors are facing are the increase in new legislations emanating from societal changes such as the fight against global warming, the nations' progressive ecological transition, but also the acceptance of gender equality, as well as the fight against corruption and inequalities. This broad scope of multilateral changes can affect portfolio's performances and needs to be considered by investment bodies. A global survey of mainstream investment organisations finds that sustainable criteria are mainly used to answer clients' demands and a bit for performance reasons when building portfolios (Amel-Zadeh and Serafeim, 2018). It is therefore essential for investors to find the right balance between their performance strategies and a sustainable investing mindset.

At present it is not easy for an investor to form an objective view on the advantages or disadvantages of having a sustainable approach to their investments because some industry peers criticize it vividly whereas some others insist on the crucial importance of such an approach (Appendix A). The complexity of the situation stems from the divergence between some investor opinions and published research on the topic.

A large study (Friede et al., 2015) provides an extensive overview of 2200 academic studies on the relation between ESG and financial performance. This paper concludes to a positive relationship between financial performance and sustainability. Ninety per cent of all studies indicate a positive or at least a non-negative relationship. The outcome of this meta-analysis joins the current academic consensus that there is a performance hedge linked to the addition of Socially Responsible Investments (SRI) to a portfolio, both for yields and risk reduction. Furthermore, even when no evidence of a particular hedge can be found, most studies show at least similar performances between portfolios including SRI and those not including them.

On the other hand, a study by Cheung (2009) analyses the effect of new inclusions and exclusions of stocks from an ESG index: the Dow Jones Sustainability World Index. In order to measure the real impact of such decisions, this paper studies the effect on stock return, risk, and liquidity. The results show that, at the announcement date, there is no significant evidence of an impact on both stock return and risk. Nonetheless it finds evidence of movement on the day of actual change albeit only a temporary one. Since there is no movement at the announcement date, it means that it is not necessarily an information that matters for investors in the short- to midterm. It is not considered a positive signal. Movements in stock prices happening on the actual date of change are most probably due to active trading from the market for speculative reasons, especially since it is only temporary and lasts only for a very short period of time. Even though the previous paper shows an advantage of

including sustainable factors, Cheung's (2009) work cannot find any evidence that investors actually react to such announcements.

These two articles illustrate a historic divergence on the topic of ESG in finance between literature and investors' mindsets. These papers are a bit outdated now and they might not reflect how investors are taking sustainable issues into account nowadays. The whole society and all economic actors are now more and more aware of sustainability issues and the finance sector needs to consider the current interest in the importance of climate change and the environment. Some investors feel ready for it and some still distrust most concepts of ESG labels and also sustainable financial products offered by banking institutions, because of unclear inclusion and exclusion policies (see Appendix A).

With regards to this global change which sees sustainability topics reaching all sectors of the economy and announcements on sustainable development published almost every day, this paper will focus on researching if ESG in finance can play a role in investors' interest in an investment opportunity by measuring the influence of market announcements on stock prices. It will also try to reflect on the fact that, having embraced the whole subject of sustainability, financial institutions might in turn influence company policies towards a more sustainable approach in order for these companies to become more attractive to investors.

***In the last decade, did the inclusion of sustainable factors in the analysis of investment opportunities become a strategic approach that impacts investor's sentiment and interest?***

The importance of sustainability in financial matters, leads to an increase in progressive legislation. Some countries are starting to get involved by investing in renewable energies and large-scale projects to try and reach the COP21 goals. For example, in October 2019, in Geneva, a large conference was held, as described on the website of the event, "to foster new conversations and collaborations aimed at accelerating the finance industry's contribution to the achievement of the UN's 17 Sustainable Development Goals". This event brought together individuals with decisional power, working in large financial institutions or influential businesses, with representatives of the United Nations and politicians. These events are representative of the current effort to bring together public and private interests and potentially change investment bodies' mindsets towards sustainability. This, we believe, shows that investors, regardless of whether they think ESG considerations should be part of their investment process, recognize that sustainable investing is a growing trend that they need to be aware of and consider. This effort, in the past few years, made ESG and sustainable finance recurrent themes in academic research. Nonetheless, most articles focus on the potential yield of these new strategies in comparison with more classic approaches. Papers do not quantify the propensity of investors who are actually interested in adding a sustainable factor in their investing strategies; they simply tend to

find evidence of a trend towards sustainable investments without ever quantifying it (Johnson and Greening, 1999., Graves and Waddock, 1994). To palliate this gap in the literature this paper will try to quantify investors' interest by proposing an alternative study based on more recent data. The focus of its analysis will be on the last decade, to determine if yield expectations of investors on sustainable and more specifically ESG investment strategies have changed.

This research paper starts by presenting a summary of the literature on the topic of ESG in finance and suggests why it adds value to our understanding of sustainability in finance. The second part describes extensively the methodology of event studies, the method used in the analyses. Then follows a thorough presentation of the data selection. Finally, the results of both analyses are presented and discussed before conclusions of the main findings of my work are drawn.

## **2. LITERATURE REVIEW**

This review of existing literature uses the Efficient Market Hypothesis (EMH) as the main definition of efficiency. Firstly, we illustrate the increasing importance of sustainability in Finance through academic literature. In the second part, we discuss how the EMH theory helps to delve deeper into stock pricing and explain how this paper uses event studies to measure investors' propensity to invest in sustainable opportunities.

The literature has shown on different occasions the existence of advantages in including corporate sustainable practices for firms. An Indian study (Mishra and Suar, 2010) examines if the degree of corporate social responsibility (CSR) in Indian firms affects their financial and non-financial performances. Generally CSR measures the quality of a firm relationship with its principal shareholders, namely employees, customers, investors, suppliers but also communities and the environment. The results of this Indian study show a positive relationship between CSR and financial as well as non-financial performance metrics. Another paper focusing on ESG dimensions of sustainable development showed that a link seems to exist between the degree of sustainability and profitability of firms (Chang and Kuo, 2008). Both these papers' findings merge with the conclusions of a large meta-study run by Clark, Feiner and Viehs (2015). It concludes that 88 percent of the studies used in their analysis show that solid ESG practices result in better firm operational performance. As the landscape is evolving rapidly, there is also an understanding that strategies must remain nimble and that best practices will evolve. The performance hedge, discussed in these publications, is a reason to believe that robust sustainable practices of firms will improve cash flows in the future and therefore spark investor's interest.

These new academic results show a surge in sustainable investment. In April 2019, “The Global Sustainable Investment Alliance (GSIA) released its 2018 sustainable investment review. The report finds that sustainable investing assets in Europe, the US, Japan, Canada, and Australia and New Zealand were USD 30.7 trillion at the beginning of 2018, a 34 percent increase since 2016.” In finance the use of ESG criteria have gained some importance in active financial analysis. It is probably at this point the main metric for professionals to measure the sustainable impact of an investment opportunity because it is backed by the UN as well as most large financial institutions. Nonetheless, there is a large gap between the current academic findings on the topic and the actual utilization of these criteria by professionals, as seen previously. Potentially, this discrepancy exists because of a current difficulty to properly define a metric system and specific criteria in order to make it applicable to everyone, everywhere. Consequently, a number of studies try to properly define the ESG criteria on the one hand and on the other hand a typology to accurately assess the degree of sustainability each investment has. For example, Dyllick and Muff (2016) developed a methodology for investors to measure the extent to which a firm’s activities are sustainable or not. The goal of constructing such tools is to try and set standards for the industry and create a universal benchmark (Rhodes, 2010). They argue that a properly defined and easily applicable ESG framework could be a solution to convince more actors to invest in impactful solutions. It currently seems that this effort to improve the definition of sustainable investing solutions is progressively working. So it could be interesting to analyse recent data and see if that surge in interest could actually be measured and quantified from an investor’s point of view.

The exponential increase in assets invested towards sustainable projects is an indicator that value can be created by such investments (Laufer, 2003). This potential advantage for investors is progressively becoming clear but the question is whether they actually act upon it or not. If the market values such investing approaches as beneficial for portfolio yields, then we should observe some effect on stock prices based on the theory of market efficiency (Fama et al., 1969). According to this theory the price of a security on the stock market is based on the expected value of future cash flows expected from a firm’s current assets. The price is also considered to mirror all available information about the firm’s current and future profits. Basically, any new piece of information coming from unexpected events on the market that is believed to affect the current and future earnings prospects, will lead to a change in stock price. This theoretical conceptualization gives stock prices an accrued importance since they are believed to be a reliable indicator of firms’ intrinsic value. Therefore the magnitude of change of the price, compared to the pre-event price, reflects the market’s actual estimate of the economic value of that event (Brown & Warner, 1985).

The term “*efficient market*” was introduced for the first time by Fama (1970) when he defined the three degrees of information efficiency, namely the weak form, the semi-strong form and the strong form. Fama believes that once efficiency is reached stocks are traded at their fairest value. Fama’s weak form of market efficiency assumes that an actual stock price reflects all historic rates of returns and prices of this stock. The semi-strong form accounts for all information available in past prices but also for all publicly available information: major announcements, ratios as well as political and economic news. Lastly the strong form of market efficiency assumes that all public and private information are included in stock prices. Therefore market efficiency strongly relies on the quality and availability of information.

However, past literature shows that no one has yet tried to measure the propensity of investors actually investing in ESG opportunities for performance or risk reduction reasons except Capelle-Blancard and Petit (2019). They measured the impact of news relating to sustainability on stock prices. They estimate the extent of the stock market reaction to 33 000 different ESG related news, both positive and negative, over a period of eight years. Interestingly, this paper observes that a negative ESG event leads on average to a 0.1% drop in stock’s market value whereas positive news does not have any substantial effect. These results are debatable because investors might not consider “news” valuable pieces of information since they can be biased. Therefore these results might underestimate the reality, but they show that market actors are reacting to new market information on sustainability, at least to negative news. Perhaps information such as announcements of ESG funds inception, for example, constitute a better signal for external investors. Oppositely to Capelle-Blancard and Petit results, this paper expects the effect of positive news to influence investors’ sentiment since an accrued interest in sustainable investments has been observed in the last decade as previously shown.

This reflection on the definition of market efficiency and especially on how information efficiency can determine the value of stock prices and therefore influence key makers’ decisions raises the question on how markets and investors could react to ESG considerations and announcement as part of their investment process. This question has led to my first hypothesis:

***H1: Announcements to include sustainable factors in funds’ strategies are valued positively by investors.***

Finding evidence to support this hypothesis or to invalidate it, will show if including sustainable factors in investing strategies is positively valued by investors or not.

Nonetheless other factors could influence investors. Some market actors and fund issuers because of their market power and deep-rooted influence, could sway investors’ opinion on sustainability more



easily. The starting point of my reflection is a newsletter published on the 14<sup>th</sup> of January 2020 by Larry Fink the current CEO of the financial company BlackRock (BR). He shared a pretty unconventional letter focusing mainly on the sustainability aspect of finance and how BR's future strategy will prioritise this aspect that is currently overlooked by the industry. Fink discussed the importance to actively consider climate risks and sustainability in all investments. Fink (2020) pledged to "strengthen [their] commitment to sustainability and transparency in [their] investment stewardship activities" and claimed that "the impact of sustainability on investment returns [increases]". This letter is quite a distinct effort from BlackRock's CEO to shift people's interest towards sustainable solutions and investments. In the analysis this letter is considered a market event in order to determine if such a move from a company like BR could have an impact on other key players and investors and shift their interest towards sustainability topics and ESG finance.

Since the beginning of the century BlackRock has been surfing the wave of a new trend: passive investing through exchange-traded funds (ETFs). This novel way of investing gained importance throughout the years and allowed the wealth manager to become the biggest asset management firm in the world. BR and two other entities, namely Vanguard and State Street, are leaders in the ETFs industry and they are estimated to be, altogether, the largest shareholders of almost 75% of the US market capitalization. Together they currently manage 14 trillion US dollars and hold a quarter of the votes casted at the S&P 500 firms. BR alone had roughly 7.43 trillion US dollars of assets under management (AUM) in 2019. These numbers help estimate the potential influence a firm like BlackRock can have through its investment decisions on sustainability, since its CEO pledged in 2020 to add sustainable factors in each investment decision.

Most institutional investors such as BlackRock are called blockholders because of the exponentially large amount or value of stock they possess. By owning large amounts of stocks, blockholders have significant control rights relative to their substantial ownership percentage. This control is often considered an effective mechanism to improve corporate performance (Ingley and van der Walt, 2004). In the last few decades, studies observe that investors are progressively becoming involved in corporate governance. They are concerned about the internal governance and the relationship with other constituency groups of the companies included in their portfolio (Mallin *et al.*, 2005, Appel *et al.*, 2016). The influence that blockholders have on firms' management boards often leads their investment decisions to be considered by other market actors as a signal. For example, the simple withdrawal of a blockholder from a certain position can be a reflection of their portfolio governance and constitute a signal for market actors. Several effects are being observed: first, large investors trades have a significant impact on relevant stock prices; second, blockholders selling shares can be seen as frightful news on the market and trigger more sales by other investors which will in turn lead

to a further depreciation of the stock price; lastly, if institutional investors sell shares of a company, its ownership diagram changes from long-term investors to more opportunistic ones and this has secondary effects on the company (Parrino *et al.*, 2003., Gillan and Starks, 2003).

Following the release of Larry Fink's yearly letter, it seems likely that BlackRock will adapt its current portfolio and sell ownership rights in companies that do not take ESG or sustainability into consideration and that they will on the contrary invest in firms that are currently taking these factors into account. Reflecting on previous academic work on the influence of institutional investors on company's management and markets in general, this paper is of the opinion that there should be an effect on stock prices after the announcement made in BR's 2020 letter to CEOs. This hypothetical reaction effect could be used as a tool to quantify investors' actual interest in sustainable investments. This realization leads to my second hypothesis:

***H2: A change in the investing culture of large institutions can have a positive federating influence on market actors' sentiment towards sustainability.***

BlackRock current market power gives an idea of how important such an announcement can be seen by other investors when coming from such a major company. Indeed all publicly shared analysis or opinion by Blackrock's high management in the press must have an impact on stock markets. Combined with the fact that BlackRock is the largest asset manager in the world, such a letter is likely to have an impact on investors' future expectations on ESG finance and sustainability.

### **3. RESEARCH METHODOLOGY: AN EVENT STUDY**

In the previous section of this paper the literature on market efficiency and stock pricing is discussed. It shows that markets tend to include publicly available information as well as past performances in the pricing process of equities. Based on this assumption one can study how an event changes a firm's prospective value by measuring its impact on the firm's stock price using an event study.

Basically, an event study quantifies the impact of an event using abnormal returns. Abnormal returns are the difference between the actual returns of the stocks and the expected returns if the event had not occurred. If a statistical correlation exists between abnormal returns and a specific event, it can lead to the conclusion that this specific occurrence affects financial performance or investors' sentiment (Binder, 1998).

The models in this study rely on three basic assumptions (McWilliams and Siegel, 1997):

1. Markets are efficient.
2. The event was unanticipated.
3. There are no confounding effects.

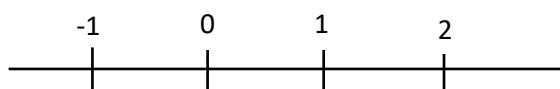
Therefore this paper will follow the basic steps of an event study (Brown and Warner, 1985) methodology. In each case we will start by determining the exact event of interest we want to focus on. In this paper, announcements of specific fund openings as well as the 2020 letter to CEOs published by BlackRock will be our events of interest.

For an event study it is important to properly define an estimation window, as well as an event window. The estimation window is the timeframe used to estimate the “normal return” whereas the event window is the time frame around the event, during which the actual returns are measured. This is the most complex part because the estimation window needs to be long enough to improve estimation accuracy but not too long either, in order to avoid parameter shifts over time.

The estimation period in this paper will be 250 days before the studied event occurs. This specific window respects the methodology of Mackinlay (1997) as well as Sorokina, Booth and Thornton (2013). This estimation window is long enough to be almost as long as an accounting year and therefore it makes our estimation more accurate since it includes different business cycles. There is no need to include all of them because using an entire year could increase the probability of having unnecessary shifts in the estimations due to external events. To make sure the estimation window used is not arbitrary the estimation of our results will use a period of 150 days and 50 days before the event, to see if any discrepancies occur.

The event window, the period around the event date, will be in both analyses a fixed event window because, in the first case, multiple announcements of the same type are studied and, in the second case, only one event is studied.

*Figure 1: Event day window used for the first analysis*



The event window (see Figure 1) is defined by the day of announcement itself, a day prior to the event and two days after the event. Using a day prior in the estimation allows to account for potential information that might have leaked before the official announcement and it provides a baseline pricing of the stock (Krivin et al. 2003). Including two days after the actual event accounts for a certain number of things. First of all, the announcement could be made at the end of a trading day so changes in stock price would only occur the next day. Also it could take time for the information to be fully integrated in the price and abnormal returns could occur with a certain lapse of time. However, the estimation window cannot be too long, so 2 days is a fair proxy. A longer window could dissolve the abnormal movement of prices especially in the case of funds announcements. Indeed it is an event that may not have a strong effect (see Appendix A).

In the second analysis, since only one single event is studied, the event window can be a bit longer. In order to properly grasp the change in stock price, an event window that includes 5 days prior and 5 days after the event is used. However, since the length of the event window remains arbitrary, different length specifications have been experimented in both cases in order to see if any discrepancies appear in the results and in order to potentially adapt the event window.

The event studies made in this paper will follow the same methodology. First, the expected returns are measured using the Market Model (MM) approach (Fama, 1969). This model uses the return of a market index to build a regression estimating the return of our stock of interest. It is calculated using the MM formula:

$$R_{it} = \alpha_i + \beta_i \times Rm_t + \varepsilon_{it}$$

Afterwards, the abnormal returns are calculated, over the event window, by subtracting the expected return from the actual return:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i \times Rm_t)$$

The hypothesis of efficient markets states that the difference in returns, namely abnormal returns, should be a random variable with its mean equal to 0. To know if abnormal returns are actually due to an unexpected event, a significance test is run to test the hypothesis that the cross-sectional mean during the event window is different from 0.

$$T - test = \frac{AR}{SE}$$

$$SE = \frac{\sigma}{\sqrt{N}}$$

*With*

$\sigma$  = standard deviation

N = amount of observations

Since several changes in stock prices are being measured in both analyses, Cumulative Abnormal Returns (CAR) will also be used. They are measured by summing the abnormal returns of multiple events together:

$$CAR(t1, t2) = \sum_{t=t1}^{t2} AR_{it}$$

Once the CAR is obtained it allows for conclusions to be made based on empirical evidence.

#### **4. Data and sample selection**

The underlying goal of one of the analyses is to determine if there is a difference in effect on stock prices of fund issuers between the inception of ESG funds and NON-ESG funds. The other analysis will measure the effect of Blackrock's yearly announcement on specifically well ranked firms in terms of sustainability and incorporation of ESG criteria. The historical stock and index prices used for the event studies are extracted from the websites Yahoo Finance and Bloomberg. Although many other resources were available these were the easiest to access and use.

##### ***H1: Announcements to include sustainable factors are valued positively by investors.***

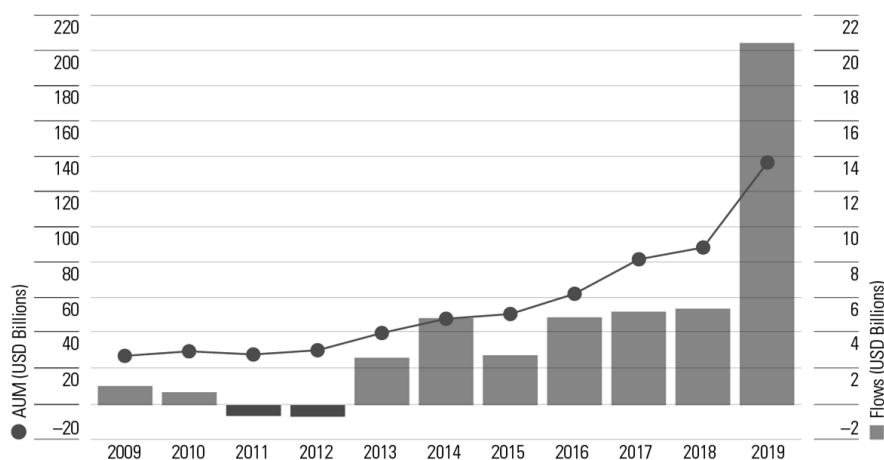
To test this first hypothesis, since the interest lies in the effect of ESG criteria on investors' sentiment, there was a need to select two samples to conduct the study: one sample with funds including sustainable criteria and another one that does not include them.

In order to make the selection of ESG funds only funds labelled by the French SRI label were used. This ethic stamp assures that investment funds and asset managers have sustainable strategies that respect well defined conditions. In order to receive this certification, a fund needs to apply and undertake various administrative processes. Certification bodies go through each application and decide upon the eligibility of a candidate based on the nature and composition of its portfolio. This label is all the more qualitative because it is officially endorsed by the French Ministry of Finance which currently aims to increase the visibility of SRI products among investors in both France and Europe. There are currently 503 funds under this label which represents 78 different asset managers and 201 billion of assets under management. Nonetheless, the French SRI label defines ESG criteria in its own way, so it might include (or exclude) funds that are actually excluded (included) in a different label. As mentioned previously in this paper, ESG criteria are an ill-defined concept that has not been

universally clarified. This is why it was not possible to use funds from various labels since they all have distinct exclusion and inclusion policies. So, all ESG funds used in this analysis are part of the SRI label.

The first step is to select the ESG funds since they come from a restricted population. The selection process is based on one condition: the fund’s inception date has to be after 2010. Using recent data to measure the effect of ESG allows for novel and perhaps more explicit results since sustainable investments have gained in importance over the last decade (see Figure 2).

Figure 2: Sustainable Funds Estimated Annual Flows



Note. Reprinted from “Sustainable Fund Flows in 2019 Smash Previous Records”, by Hale, J., (2020, January 20). Retrieved from <https://www.morningstar.com/articles/961765/sustainable-fund-flows-in-2019-smash-previous-records>

In addition to the temporal condition, funds will be separated into two different sub-samples based on asset classes. One sample will include Fixed Income specific funds while another will include funds investing in Equity. This selection process allows this paper to test the potential effect of ESG on two different asset classes which both react to markets and information differently. Also, discrepancies between asset classes could create a degree of bias in the results. Therefore, separating the data in two sub-samples, each focusing on one asset class is a way to decrease any potential bias and consequently to improve the significance of the model.

In order to limit the impact of such bias, a first step was to focus on geographic location. The fixed income funds have a geographic focus towards Europe and the equity funds have a global focus. The reason for such a distinction is that fixed income, as an asset class, is more sensible to local variations.

The second step was to find NON-ESG funds and build samples. This step was fairly easy because there are way more NON-ESG funds available. Once again, so as to reduce a maximum of potential bias in the results, the NON-ESG and ESG funds were evenly matched, as much as possible, based on the fund

issuer (banks or asset managers). Using similar issuers allows to account for internal strategies and investing approaches used by firms. Moreover, the management is the same in each company and may impact decisions of fund managers. Also the client base is the same and since the demand comes primarily from the clientele it is important to include this factor in our sample selection process.

One last aspect is the geographic region bias as discussed previously. To properly control for this factor in the Equity funds analysis, different indices are used when measuring abnormal returns: the KBW Bank Index for the funds opening in the United States and the Stoxx Europe 600 banks for funds opening in Europe. On the one hand, the KBW index is a proxy of the finance industry which uses 24 selected US banking stocks, and it was developed by the investment bank Keefe, Bruyette and Woods. On the other hand, the Stoxx Europe 600 index is also a proxy of the banking sector, however it uses 40 selected European banking stocks. Therefore, in this analysis, the expected stock prices are measured according to geographic region and hence are more accurate and avoid unnecessary bias.

The main purpose of going through all these steps is to reduce as much as possible the effect of external factors on the results of the analysis. Theoretically, the only difference between the chosen samples is the inclusion or not of ESG criteria in investing strategies (see Appendix B).

***H2: A change in the investing culture of large institutions can have a positive federating influence on market actors' sentiment towards sustainability.***

The letter from BlackRock's CEO aiming to shift people's interest towards sustainable solutions and investments has been previously introduced as a starting point to reflect on how large institutions can possibly have an impact on investor's views on sustainability. If a company like BlackRock takes a stance on sustainability, one can imagine that their position might have an impact on other investors and companies in general and influence their actions.

The effect of the BlackRock CEO's letter was measured on a sample of 25 selected firms based on their general approach towards ESG and sustainability by Ethisphere Institute, a for-profit company. They defined and measured ethical standards and made a list of firms who excel in terms of corporate ethics. In order to build the sample of firms, this paper selects all American firms of the 2020 most ethical company list made by Ethisphere and chooses only the ones that are ranked by MSCI (Morgan Stanley Capital International) as ESG leaders in their industry (Appendix C). MSCI is an investment research firm that provides investment data and analytics services to investors such as famous benchmark indices. In 2019, they have made their ESG ranking available for free online, so it could be used in this paper.

## 5. RESULTS AND DISCUSSION

Several event studies are used to answer the first hypothesis of this paper:

**H1: Announcements to include sustainable factors are valued positively by investors.**

It is tested by looking at the effect of fund opening announcements on the stock price of the announcing entity. In order to avoid bias in results as much as possible, funds have been separated in two groups: one with funds only investing in Equity and another with funds only investing in Fixed Income.

*Table 1: Result table for equity ESG funds, with estimation window -250*

Event Day	ARR	T-statistic	CARR	% of positive ARs
-1	-0.004	-0.21	0.00	50.00
0	0.002	0.25	0.00	75.00
1	0.002	-0.15	0.00	37.50
2	-0.008	-0.13	-0.01	75.00

*Table 2: Result table for equity NON-ESG funds, with estimation -250*

Event Day	ARR	T-statistic	CARR	% of positive ARs
-1	0.024	0.09	0.024	75.00
0	-0.011	0.25	0.013	75.00
1	-0.012	0.01	0.001	50.00
2	-0.003	-0.13	-0.003	62.50

Both Table 1 and Table 2 show that the average abnormal returns are all insignificant in the time frame [-1:2] considered around the announcements for ESG and NON-ESG equity funds. Moreover the cumulative abnormal returns are also insignificant in both cases. These findings do not show a significant evidence of a different effect of the announcement of ESG and NON-ESG funds on stock prices. This paper finds similar results for the funds investing only in fixed income (see Appendix D).

Therefore, from this event study it is not possible to conclude on the first hypothesis. No evidence is found that announcements to include sustainable factors are valued positively or even valued at all by investors. After analysing these results, it seems likely that fund announcements do not have any immediate effect on the stock price of the fund issuers.

To confirm these findings, both the main estimation window and the event window are estimated differently to see if significant results can be found. Perhaps the main estimation window of 250 days before the announcement is too long and includes different shocks that led to a bias estimation in the



regression of stock prices. So two other estimation windows have been used, one of 150 days and another one of only 50 days. The event window is also shortened, and two different ranges are tested, [-1:1] and [0:1]. Indeed the effect due to the announcement appears to be marginal and was perhaps diluted when too many days were included in the calculations of the CAR.

*Table 3: Result table for equity ESG and NON-ESG funds, using different estimation windows*

Event Day	ARR	T-statistic	CARR	% of positive ARs
ESG Equity (-150)				
-1	-0.004	-0.27	0.00	30.00
0	0.001	0.21	0.00	50.00
1	0.002	-0.10	0.00	30.00
2	-0.008	-0.15	-0.01	60.00
ESG Equity (-50)				
-1	-0.004	-0.21	0.00	30.00
0	0.002	0.25	0.00	60.00
1	0.002	-0.15	0.00	30.00
2	-0.008	-0.13	-0.01	70.00
NON-ESG Equity (-150)				
-1	0.148	9.07	0.148	75.00
0	0.006	0.33	0.153	75.00
1	-0.011	-0.63	0.142	50.00
2	-0.016	-0.93	0.125	62.50
NON-ESG Equity (-50)				
-1	0.121	7.74	0.121	75.00
0	0.006	0.37	0.127	75.00
1	-0.010	-0.59	0.116	50.00
2	-0.015	-0.89	0.101	62.50

*Table 4: Result table for equity ESG funds, with different event windows*

Event Day	ARR	T-statistic	CARR	% of positive ARs
Event Window [-1:1]				
-1	-0.004	-0.21	0.00	50.00
0	0.002	0.25	0.00	75.00
1	0.002	-0.15	0.00	37.50
Event Window [-1:0]				
-1	-0.004	-0.21	0.00	50.00
0	0.002	0.25	0.00	75.00

*Table 5: Result table for equity NON-ESG funds, with different event windows*

Event Day	ARR	T-statistic	CARR	% of positive ARs
Event Window [-1:1]				
-1	0.024	0.09	0.024	75.00
0	-0.011	0.25	0.013	75.00
1	-0.012	0.01	0.001	50.00
Event Window [-1:0]				
-1	0.024	0.09	0.024	75.00
0	-0.011	0.25	0.013	75.00

Tables 3, 4 and 5 show that all robustness checks confirm the first results. The announcement of an ESG fund does not significantly impact the stock price of its issuer, exactly the same way as a NON-ESG fund.

However several factors could limit the reliability of our findings. First of all, it is possible that fund openings are not an information that influences the market in general. A fund has a very long-life span, and it goes through multiple steps before actually starting to produce financial returns. Fund managers will try for one or two years to convince investors of their strategy and gather as much capital as possible. Funds tend to keep capital for a long time and results are generally measured over the long term. Therefore, the announcement is only a first step in a long process, and this could be the reason why it does not impact investors' expectations at the announcement date. Another limiting factor could be that the expected returns of stock prices were measured with different indices based on the

geographic focus of funds and thus a bias could still exist. Indeed, it could be possible that ESG and sustainability matter more in the US than in Europe or vice versa. If an announcement of a sustainable strategy had hypothetically more impact in the US, especially if that effect is significant but very small, measuring it with the effect in Europe could dilute the reaction from investors and lead to biased results. A better alternative would be to have samples that are organised by asset classes and geographic locations. We create a sub-sample of our sample of equity funds, that only contains the funds investing in Europe and ran our analysis in order to control for a potential limitation to our model. The effect is in that case insignificant. See tables 6 and 7.

*Table 6: Result table for equity Europe focused ESG funds*

Event Day	ARR	T-statistic	CARR
-1	0.00	0.04	0.00
0	0.00	0.29	0.00
1	-0.01	-0.44	-0.00
2	-0.00	-0.24	-0.01

*Table 7: Result table for equity Europe focused NON-ESG funds*

Event Day	ARR	T-statistic	CARR
-1	0.25	0.87	0.25
0	-0.00	-0.01	0.24
1	-0.02	0.01	0.22
2	-0.03	-0.26	0.19

The second hypothesis that is tested in this analysis is:

***H2: A change in the investing culture of large institutions can have a positive federating influence on market actors' sentiment towards sustainability.***

This event study tries to measure the effect of BlackRock's 2020 newsletter on stock prices of firms defined by benchmarks as leaders for sustainable development. These firms are considered some of the best-in-class when investors decide to build a portfolio focusing on ESG and sustainability.

Please see Appendix C for a list of the companies selected as well as their Morgan Stanley Capital International (MSCI) sustainability rating.

Table 8: Result table of BlackRock's newsletter effect, with an estimation window of 250 days

Event Day	ARR	T-statistic	CARR	% of positive ARs
-5	-0.002	-0.21	-0.002	36.00
-4	0.000	0.06	-0.001	52.00
-3	-0.002	-0.21	-0.004	48.00
-2	0.000	0.03	-0.004	52.00
-1	-0.001	-0.15	-0.005	40.00
0	0.004	0.34	-0.001	68.00
1	-0.003	-0.15	-0.004	48.00
2	0.002	0.18	-0.002	60.00
3	0.000	0.04	-0.002	60.00
4	0.001	0.13	-0.001	60.00
5	0.003	0.24	0.001	56.00

Table 5 shows that there are no significant abnormal returns on the stock price of all the 25 selected firms around the date when Blackrock's newsletter was published. Similarly to our previous analyses, the cumulative abnormal returns are not significant either. These results do not show any significant evidence that a change in the investing culture of large institutions can have a positive federating influence on market actors' sentiment towards sustainability.

Nonetheless, on average, there were more positive abnormal returns after the day the official announcement was made in the newsletter than before that day. Indeed the average of the percentage of positive abnormal returns during the days  $\{-5: -1\}$  is only 45.6 percent but it is equal to 56.8 percent during the days  $\{1:5\}$ . This does not give any statistical evidence that the announcement had a considerable effect, but it might give an indication on the direction of the effect.

To test the reliability of these results, some robustness checks were run. The estimation window as well as the event window itself were changed to see if there were any significant results by changing some of the model parameters. The summary tables of these tests can be found in tables 6 and 7. The estimation window is defined by -150 and -50 days instead of -250 days and several event windows are used  $[-2:2]$ ,  $[0:3]$  and  $[0:1]$ .

*Table 9: Result table of BlackRock newsletter effect, using different estimation windows*

Event Day	ARR	T-statistic	CARR	% of positive ARs
Estimation Window (-150)				
-5	-0.001	-0.10	-0.001	40.00
-4	0.000	-0.05	-0.001	52.00
-3	-0.002	-0.17	-0.003	56.00
-2	0.000	0.06	-0.003	56.00
-1	-0.001	-0.12	-0.004	36.00
0	0.004	0.35	0.000	68.00
1	-0.003	-0.14	-0.003	48.00
2	0.002	0.18	-0.001	60.00
3	0.000	-0.01	-0.002	56.00
4	0.002	0.20	0.000	60.00
5	0.003	0.26	0.003	56.00
Estimation Window (-50)				
-5	-0.001	-0.18	-0.001	36.00
-4	0.000	-0.08	-0.001	56.00
-3	-0.002	-0.19	-0.004	44.00
-2	0.000	0.10	-0.004	52.00
-1	-0.001	-0.14	-0.004	36.00
0	0.004	0.45	-0.001	72.00
1	-0.003	-0.22	-0.004	52.00
2	0.002	0.20	-0.002	64.00
3	-0.001	0.01	-0.003	56.00
4	0.002	0.30	-0.001	60.00
5	0.003	0.25	0.002	60.00

Table 10: Result table of BlackRock newsletter effect, using different event windows

Event Day	ARR	T-statistic	CARR	% of positive ARs
Event Window [-2:2]				
-2	0.000	0.03	-0.004	52.00
-1	-0.001	-0.15	-0.005	40.00
0	0.004	0.34	-0.001	68.00
1	-0.003	-0.15	-0.004	48.00
2	0.002	0.18	-0.002	60.00
Event Window [0:3]				
0	0.004	0.34	-0.001	68.00
1	-0.003	-0.15	-0.004	48.00
2	0.002	0.18	-0.002	60.00
3	0.000	0.04	-0.002	60.00
Event Window [0:1]				
0	0.004	0.34	-0.001	68.00
1	-0.003	-0.15	-0.004	48.00

Even after running these robustness checks no differences were found between the new estimates and the main analysis. It seems that Blackrock's newsletter had no significant effect on the tested firms stock prices. Not finding evidence of an effect might mean that investors still do not value ESG factors and sustainable development up to this day.

Once again, several factors could impact our results and create statistical biases. First of all, the sample of firms used in the analysis was selected based on two famous benchmarks. However, indices and benchmarks are often criticized by professionals in the banking industry because of the lack of proper definition of sustainable criteria. Some indices include certain positions, and some others exclude these same positions even if both portfolios are defined as sustainable. So perhaps, this paper did not have enough information to properly select the firms that could be impacted by such an announcement.

Furthermore, such an announcement might have an opposite effect than the one tested in this event study. It is possible that it negatively impacted firms that do not have a good sustainability ranking instead. Indeed stock prices of sustainable firms probably already account for the degree of effort they

put into including ESG criteria in their strategies. However, non-sustainable firms' stock price can be highly valued because of the company's ability to generate value but be affected as soon as large investment bodies do not include them in their portfolios and their value could shift as a result.

## 6. CONCLUSION

This paper undertakes two event study analyses to find some quantitative result that could help answer the following research question:

***During the last decade, did the inclusion of sustainable factors in the analysis of investment opportunities become a strategic approach that impacts investors' sentiment and interest?***

Two hypotheses emerged from this question, hypotheses whose answers could help to determine if investors' sentiment towards sustainable investments increased over the last decade or not. The first analysis looks at the effect of fund issuers' announcements to include sustainable factors in their strategy on their stock price. The results are not significant and no evidence of a difference between the announcement of an ESG and a NON-ESG fund are found for two different asset classes, namely equity and fixed income. This analysis does not find any evidence of an effect.

Therefore, the inclusion of sustainable factors in the analysis of investment opportunities does not seem like an approach that impacts investors' sentiment.

As a second analysis, this study examines the effect of BlackRock's 2020 CEO's newsletter on the stock prices of twenty-five firms, all of those firms being considered leaders in terms of sustainability. Again, the results are not significant and no statistical evidence of an effect of this specific announcement on sustainable firms was found.

Not finding conclusive results of an effect means that a change in the investing culture of large institutions does not yet have a federating influence on market actors' sentiment towards sustainability. Following these findings it seems likely that the inclusion of sustainable factors in the analysis of investment opportunities does not impact investor's valuation.

The conclusion of this research paper has to be considered as an addition to previous literature and a base of information for future papers on the topic. Having no conclusive results could mean that sustainability has yet to impact investors' sentiment or simply that the events studied in this paper are not significant enough to show a link between sustainability and investor's sentiment

Since several types of fund inception announcements were tested and since it appears that none of them had any effect on stock markets, it is possible that funds' announcements are not relevant in

terms of market information. This is an unexpected result based on this study's findings and, even if it does not answer the main research question, it could still be relevant for future academic work. In future works, individuals could try to measure the propensity of investors' interest in sustainability by using other market events.

This paper also tested the effects of a newsletter from an influential institution, praising sustainability, on sustainable firms' stock prices and found no evidence of a reaction from the market. Future research could use a similar approach but try to quantify a potential negative effect on unsustainable firms instead of a positive one on more sustainable companies. Identifying such an effect could be another way to measure an investor's intrinsic interest in sustainable investments or, in this case, disinterest in unsustainable investments.

Nevertheless, not finding any relevant results from our analysis suggests that, to this day, investors do not value sustainability a lot. Even though previous literature shows considerable advantages of including sustainable factors in investment strategies, current market reactions are still non-existent. Future research on this topic should definitely put the emphasis on analysing the potential advantage of sustainable strategies in order to convince more investors to make a positive change and create wealth differently.

This paper is of the opinion that investing sustainably is necessary to reduce the impact of our ways of life on climate change. A sustainable approach in all sectors of the economy, finance included, as well as at a personal level, is necessary for future generations to thrive in an adequate environment. This paper invites academics in economics and also in other fields, to increase the number of papers on topics such as sustainable finance and impact investing. Consequently, professionals and investors could have a more in depth understanding of the underlying forces of this aspect of the industry and act accordingly in order to implement solutions that are necessary to protect our environment and that of the future generations.



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## **APPENDIX A:**

In this report we try to condense the main conclusions we could draw from all answers we collected from a survey we made to professional investors during the course of 6 months. This survey tries to better understand the current stance of investors towards sustainable investments and more precisely ESG criteria. Opinions are varied but two main trends stand out.

Firstly, there are some investors who do not believe in performance advantages in including ESG criteria. Generally they think that it is just a marketing tool used by banks and institutions to sell more products and give clients a “good conscience”. Their arguments tend to be based on that fact that ESG criteria are still subjective. Indeed between two portfolios constructed with different ESG exclusion and inclusion methodologies you may find discrepancies where a firm is excluded from one of the portfolios but included in the other. Moreover investors not considering ESG as an important criterion in their decision process tend to give arguments from early academic articles on the topic that have, for a large part, been discredited by recent literature published both by scholars and financial analysts from major institutions. However some investors may be convinced by the added value of including ESG in their strategy, but their clients do not wish to include this aspect, or some investors may simply not have enough resources to undertake a proper opportunity analysis of ESG. Nonetheless a large share of investors that are not yet convinced of ESG benefits were still interested in the results of my research in order to have a better insight of the actual potential. This we believe shows that investors, regardless of whether they think ESG considerations should be part of their investment process, recognize that sustainable investing is a growing trend which they need to be aware of and understand.

A majority of people who responded to my survey recognised the edge that ESG criteria can give to their investments. Some already added it to their methodologies, others are still thinking on how to implement it. Most believe that it is valuable to have insight on the sustainable impact of each of their investments in order to have a better long-term vision. ESG is mostly applied to Equity and Fixed Income products but also a growing consideration for some other asset classes (Real estate as an example). However, in almost every case it is not the main determining factor yields always tend to have priority over Socially Responsible Investing (SRI) strategies. Investors add ESG criteria to their selection process because of two main reasons. The first is one is because there is an increasing demand from their clients for sustainable investments and a large expected growth over time. The second is that a large number of recent academic research proved that there is a performance edge linked to the addition of SRI criteria in terms of yields and risk reduction and if not there is no evidence that it makes it worse, on the contrary it shows similar effect levels.

Moreover when decisions are made in respect to ESG all three factors (Environment, Social, Governance) are considered by investors. Although, it seems like the importance of a factor depends on the geographic location and activity sector. Since we are only calling European investors, we interact with individuals who often already include both governance and social aspects in their strategies, as developed economies have regulations and policies in place to incentivize businesses to respect basic social rights as well as governance rules around accounting, reporting, quotas, security norms. However the environmental factor is often mentioned by investors as something that they are interested in progressively including in their own strategies or products, but a lack of policies and regulations make it difficult for investors to properly assess the environmental impact of their investments.

Furthermore screening methodologies of investors are, most of the time, a combination of their own investigating approach and a third-party analysis. On the one hand it seems like large funds or institutions tend to have their own team developing a screening methodology to increase the sustainable impact of their investments. Usually these “home-made” methods are introduced by investors as a value-added to their services to convince potential new clients. And on the other hand, smaller entities seem more prone to use databases and analysis made by third party screening agencies (e.g. ISS ESG) that they combine with their own individual approach. A lot of the analyses are made by looking at historical returns in order to develop expectation models to predict the consequences of new policies and regulations or economic changes. However labels are also a valuable indication for most investors about the quality of an opportunity, but it is rarely a determining factor. If they consider a label to be renowned, they consider it in order to define an appropriate screening methodology, but they might have to undertake a more thorough and complex assessment for an uncertified opportunity. When investors are asked which certifications are the most accurate and trustworthy, they mostly answer that both French labels (ISR, GREENFIN) as well as the UNPRI signatories and the MSCI ESG ratings are the indicators they prefer looking at. Nonetheless most labels are considered to be subjective because they can be interpreted differently and may not apply to every investors’ convictions. They are, once again, based on exclusion and inclusion methodologies of certain industries or companies. Therefore a labelled fund may include a position in a business that another fund labelled by a different entity might not be able to include in its own portfolio.

One of my last questions was about regulations and asking if it was necessary, in their opinion, to make sustainable criteria a legal requirement. Almost all those surveyed said that investors should be able to make their own decision as long as it did not put the system in jeopardy and increase risk on others. Also, because ESG criteria are so subjective and that there is not yet a common set of exclusion rules it would be impossible to impose and regulate them. However a large share of investors does

believe that it will become a recurrent request from clients the next generations of investors will be more conscious about sustainability and maybe more inclined to have a positive impact. Others also think that it will at some point in the long term have larger return potentials. Nonetheless a significant share of the investors we discussed with are not yet convinced of ESG potential performance enhancing abilities.

In conclusion to my survey felt that ESG in finance is mainly considered when clients or investors wish to have an impact by investing in sustainable projects and/or companies by mostly including Social and Governance factors. Otherwise ESG is considered when an entity is building a long-term investment.

## APPENDIX B

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### FIXED INCOME (Europe)

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#### ESG

BNP PARIBAS SUSTAINABLE BOND EURO  
ALLIANZ EURO OBLIG COURT TERME ISR  
AVIVA INVESTORS EURO CREDIT BONDS ISR  
MIROVA EURO GREEN&SUSTAINABLE BOND FUND  
ROBEKO EURO SUSTAINABLE CREDITS DH €  
KEMPEN (LUX) EURO SUSTAINABLE CREDIT  
BNP PARIBAS EURO MULTI-FACTOR CORPORATE BOND  
MIROVA EURO GREEN AND SUSTAINABLE CORPORATE BOND FUND

**Total: 8**

#### Non-ESG

BNP PARIBAS EUROPEAN HY 2022  
ALLIANZ ADVANCED FIXED INCOME EURO  
AVIVA SHORT DURATION GLOBAL HIGH YIELD BOND FUND  
SCHRODER GAIA CAT BOND USD  
ROBEKO CORPORATE HYBRID BONDS  
KEMPEN EURO GOVERNMENT FUND  
BNP PARIBAS FLEXI I ABS EUROPE  
NN (L) EURO COVERED BOND  
AXA COURT TERME (EUR)  
NN (L) EURO CREDIT

**Total: 10**

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### EQUITY (Global)

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#### ESG

NN GLOBAL EQUITY IMPACT OPPORTUNITIES  
AVIVA GRANDES MARQUES ISR  
AXA WF FRAMLINGTON CLEAN ECONOMY  
MIROVA GLOBAL SUSTAINABLE EQUITY FUND  
DNCA INVEST BEYOND GLOBAL LEADERS  
JANUS HENDERSON GLOBAL SUSTAINABLE EQUITY FUND  
SCHRODER ISF GLOBAL SUSTAINABLE GROWTH  
SCHRODER ISF QEP GLOBAL ESG  
ROBEKO QI EMERGING MARKETS SUSTAINABLE EQUITIES  
BNP PARIBAS EASY MSCI EUROPE SR UCITS ETF

**Total : 10**

#### Non-ESG

NN EUROPE EQUITY FUND  
AVIVA GLOBAL EQUITY ENDURANCE FUND  
AXA ROSENBERG SMALL CAP ALPHA FUND  
LOOMIS SAYLES GLOBAL GROWTH FUND  
ALLIANZ BEST STYLES GLOBAL EQUITY  
BNP PARIBAS GLOBAL EQUITY  
SCHRODER ISF QEP GLOBAL VALUE PLUS  
NN GLOBAL FUND  
ROBEKO QI GLOBAL DEVELOPED ACTIVE EQUITIES  
BNP PARIBAS DISRUPTIVE TECHNOLOGY

**Total: 10**

## APPENDIX C

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Company Names	MSCI rating
3M	AAA
Allianz	AAA
BestBuy	AAA
Cummins Inc.	AAA
Ecolab	AAA
Henry Schein	AAA
Johnson Controls	AAA
Kellogg	AAA
Microsoft	AAA
NextEra Energy	AAA
Salesforce.com	AAA
AES	AA
CBPE	AA
Colgate	AA
Edwards	AA
Hasbro	AA
Hewlett	AA
Honeywell	AA
HP	AA
IBM	AA
Kimberly-Clark	AA
Owens Corning	AA
Pepsico	AA
V.F.	AA
Xcel Energy	AA

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**APPENDIX D**

Event Day	ARR	T-statistic	CARR	% of positive ARs
ESG Fixed Income (-250)				
-1	-0.01	-0.27	-0.01	50.00
0	0.00	-0.08	-0.01	50.00
1	0.00	-0.15	-0.01	50.00
2	-0.02	-0.87	-0.03	25.00
ESG Fixed Income (-150)				
-1	-0.01	-0.64	-0.01	50.00
0	0.00	-0.22	-0.02	50.00
1	0.00	-0.16	-0.02	50.00
2	-0.02	-1.15	-0.04	25.00
ESG Fixed Income (-50)				
-1	-0.01	-0.59	-0.01	50.00
0	0.00	-0.21	-0.02	50.00
1	0.00	-0.14	-0.02	50.00
2	-0.02	-1.21	-0.04	25.00
NON-ESG Fixed Income (-250)				
-1	0.01	0.31	0.01	87.50
0	0.00	0.16	0.01	87.50
1	0.01	0.03	0.02	25.00
2	0.00	0.00	0.02	62.50
NON-ESG Fixed Income (-150)				
-1	0.011	0.38	0.01	75.00
0	0.002	0.11	0.01	75.00
1	0.006	0.11	0.02	50.00
2	0.001	-0.03	0.02	62.50
NON-ESG Fixed Income (-50)				
-1	0.010	0.39	0.01	75.00
0	0.001	0.08	0.01	75.00
1	0.005	0.03	0.02	50.00
2	0.002	0.08	0.02	62.50