

The Increasing Incorporation of ESG Performance into Stock Valuations

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Introduction to ESG

“Doing well while doing good” has been a longstanding goal of various sustainability trends in business and finance (Hamilton & Statman, 1993). However, none have been arguably as far reaching as ESG. ESG represents the three sustainability risks faced by companies and seemingly ignored by conventional financial metrics. These are environmental, social and governance risks. The 2010s saw the emergence of different forms of ESG investing, which argued that firms more capable of managing these risks are also able to outperform their non-ESG peers. Moreover, as these risks remain unaccounted for in traditional finance, investors can achieve superior performance by accounting for them.

Despite this initial intrigue, ESG investing seemingly saw a quiet decline in the early-to-mid 2020s. For instance, the number of passed ESG shareholder proposals has gone down substantially from 21% in 2021 to 1.4% in 2024 (Makortoff, 2025). There are different possibilities for explaining this change in sentiment. The present study will investigate the

perspective of how the incorporation of ESG performance may have evolved over time. By using an 18-year ESG sample between 2007 and 2024, the analysis will search for trends and potential breaking points. Taking this long-term perspective should particularly help illuminate the current role of ESG in equity pricing.

What Does the Literature Say?

Current academic literature remains limited on the specific question of ESG incorporation into equity pricing over time. For example, Kumar (2023) presents a literature review of studies that applied the Fama-French model to ESG research. Among other things, the results point to an ESG effect that went from significantly negative to largely insignificant following the Paris Agreement of 2015. However, literature reviews are inherently an imperfect means of detecting a changing effect as studies will differ in their exact methodology and data. Wider ESG literature presents more indirect evidence as insight is very much dependent on the specific research question. For instance, Cao et al. (2023) finds that the ESG performance has facilitated a slower reaction to pricing signals, where the effect has strengthened over time.

Most direct signals may be derived from non-academic literature that tracks investment trends. In this case, the results are more pronounced. For instance, Dolsak and Prakash (2024), highlight “the rise and fall of ESG” to be the result of a shift in global focus away from sustainability and a perceived “culture war” surrounding the concept of ESG in particular. In a context more closely related to ESG in equity pricing, the Deutsche Bank CEO highlights the decreasing sustainability sentiment and associated fund flows (Lee, 2022). In doing so, he emphasizes the need to shift the orientation of sustainable

finance towards long-term projects. Nevertheless, this type of literature does not always present robust quantitative results to support its results. In fact, it can be relatively speculative at times. It also rarely focuses on the specific question of ESG as a distinct market factor.

Methodology

The classical tool for analyzing the incorporation of a financial factor into market pricing is Fama-French regression. Here, ESG literature provides several alternative approaches. For the sake of clarity and interpretation, the present study will choose industry-based ESG beta analysis. Industry-based ESG beta analysis consists of a series of regressions with daily industry returns as the evaluated portfolio. The model includes an ESG factor on top of the typical Fama-French 5 factors. The coefficient of this ESG factor is subsequently evaluated for its direction and significance at the 5% level.

The present study will make use of this variety of Fama-French analysis for two interconnected reasons. Firstly, the literature review by Kumar (2023) suggests that the detection of effects within industries greatly improves the ability of Fama-French to detect the ESG effect. This may relate to the different evolutions of ESG standards and adoption in different industries. Secondly, it provides more detailed information as compared to approaches that would estimate a market-wide ESG alpha, for example. The higher granularity of multiple industry specific regressions within each time window also presents an intuitive interpretation of ESG pricing over time.

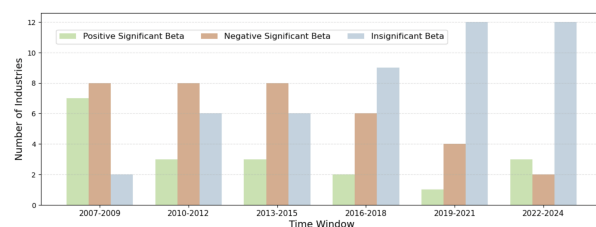
Data

MSCI ratings were used in the construction of the ESG factor. MSCI ratings in particular were selected due to their higher relative financial relevance as indicated in past literature (Martiny et al., 2024). The ESG factor will be constructed using a value weighted portfolio going long in the highest ranked 20% of firms by ESG score, shorting the lowest performing 20%. This Good-Minus-Bad portfolio will serve as the ESG factor for the analysis. The stock data for this factor was retrieved from CRSP.

The Fama-French website was used for the remainder of the variables in the regressions. This includes the daily industry returns and the factor returns.

Results and Discussion

Figure 1: ESG Betas between 2007 and 2024



Source: CRSP

The graph above summarizes the evolution in the ESG beta within individual industries. There are two key perspectives that one could take in reviewing these results.

First, there is the more general question of ESG materiality for investment strategies. In other words, does ESG performance explain additional

variation in stock returns beyond the conventional factors? Here, the graph would suggest a consistent pattern of decreasing relevance over the 18 years of the sample.

Second, there is the specific question of ESG as a means to outperform the market, which would be indicated by a significant positive ESG beta. In this case, the results point to a decreasing potential of ESG as a source of excess equity value, where a positive beta becomes possible in fewer industries over time. More importantly, it appears that ESG is more likely to act as a source of lower returns than higher returns. Interestingly enough, the most recent time appears to be the one exception to this rule.

It is also noteworthy that the graph appears to generally be following a long-term trend with minimal short-term disruptions. Most notably, literature emphasizes the significance of the Paris Agreement of 2015 (Bua et al., 2024). Yet, this breaking point only marginally stands out in the graph in and of itself. Instead, it could be said that the results reaffirm the fact that the entire period from approximately 2015 to 2020 represents the most substantial incorporation of ESG into the stock market. The long-term pattern also reaffirms that this is more consistent with gradually increasing incorporation of ESG into stock markets rather than short-term speculation linked to major events.

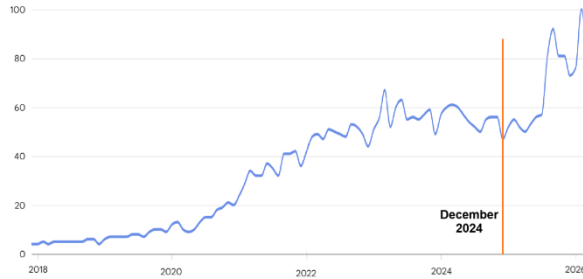
The results are largely consistent with the classical case of a financial factor. Initially, it is not accounted for by the market leading to abnormal returns. However, when the market at large becomes aware of the factor, these abnormal results begin to disappear. As such, the ESG trend could be described as having reached its central objective of helping incorporate sustainability concerns into equity pricing.

Limitations

To begin, some caution is necessary in interpreting the results of a quantitative analysis such as this one. In this context, the results show a clear long-term pattern. However, there are still some individual industries, where ESG would appear to be a significant influence on stock performance. This reinforces the case for ESG incorporation into wider market valuations. It is also a curious question whether this effect corresponds to the specific influence of MSCI ratings or if it corresponds to the impact of true ESG performance. In the former case, it is possible that this effect would be more speculative in nature.

In a similar vein, the results do not mean that ESG or other forms of sustainable finance are not inherently valuable today. Even at face value, it simply reflects the ability of the market to effectively price current ESG performance as measured by ESG metrics into its evaluation of the firm. It is still possible that sustainability is able to serve as a distinct value driver in investments. However, making use of this value driver today would require going beyond ESG metrics to identify specific sources of value creation for the specific company. Among other things, this will require acknowledging ESG as an increasingly long-term source of value.

Figure 2: Google Trends for ESG between January 2018 and March 2026



Source: Google Trends

Finally, Google Trends suggests that interest in ESG followed somewhat of a concave pattern between 2016 and 2024, and it also experienced a sizeable jump in interest following December 2024. The present study does not have data for this period, which could potentially reveal some further relevant trends. In the end, ESG is an ever-evolving topic, and the correct understanding of its impact requires analysis that accounts for potential differences in its impact over time as indicated by the main results.

Conclusion

In summary, the findings suggest that ESG performance has been increasingly incorporated into the U.S. stock market over the past two decades. As a result, ESG scores may have reached a peak of sorts in their ability to easily pick winners in the market. Consequently, sustainable finance as a whole may need to shift further towards long-term value creation and a more detail-oriented process of ESG integration into investment strategies.

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