

# ***Monday Effect in ESG vs. Non-ESG Markets: A Behavioral Finance Perspective***

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**Abstract.** The Monday effect is one of the common calendar effects in finance, which means that the average yield on Monday is significantly lower than that of other trading days, and sometimes even shows negative returns. The Monday effect is a challenge to the efficient market hypothesis (EMH), indicating predictable anomalies in the market. ESG (Environmental, Social, Governance) investing focuses on the performance of enterprises in environmental protection, social responsibility and corporate governance. Recently, with global climate change, social equity issues, and stricter regulations, ESG has gradually become a mainstream consideration in the capital market. Most of the existing research focuses on financial behavior analysis of traditional investment markets, and rarely combines ESG investing with the Monday effect, so this study aims to fill this research gap. This study uses qualitative research methods to compare ESG financial exchanges and non-ESG financial exchanges, and refers to academic literature, industry reports and policy documents to compare the performance of the Monday effect in ESG and non-ESG investment markets. The results show that the Monday effect is weaker in the ESG investment market, as ESG investors tend to focus more on long-term sustainability than economic interests, so they are not affected by short-term market sentiment or weekend news. This study expands new perspectives for research in the field of behavioral finance, and also brings some new investment insights to investors, clarifying the importance of ESG investing, which can not only meet sustainable development, but is also less affected by short-term market sentiment abnormalities.

**Keywords:** Monday Effect, ESG Investment Market, Characteristics of ESG Investors

## **1. Introduction**

According to the efficient market hypothesis (EMH), financial markets are generally considered efficient and asset prices in the financial markets can fully and promptly reflect all available information [1]. However, numerous factual studies have shown that this hypothesis is controversial, showing that the market is not always fully valid. The market sometimes has phenomena such as overreaction, bubble effect, momentum effect, value effect, and human irrationality and psychological bias that. These anomalies can lead to market deviations from effectiveness. The most persistent of these is the Monday effect, also known as the calendar effect. It describes the empirical pattern that stocks tend to return less on Monday compared to other trading days and are often

negative. The Monday effect reveals the irrational side of investor behavior and market institutions in traditional markets, challenging the assumption that "the market is completely valid", and at the same time, it also has practical guiding significance in investment strategy, risk management and policy formulation. The existence of the Monday effect has a significant impact on both traditional and behavioral finance. If the market is fully valid, then the Monday effect should not exist. However, research has repeatedly shown that investor sentiment, trading behavior, and psychological biases can affect stock prices [2].

At the same time, environmental, social and governance (ESG) investing has become a major trend in global capital markets. ESG investors differ from traditional investors by emphasizing long-term development and showing less sensitivity to short-term fluctuations. [3] Since investor behavior is central to shaping the Monday effect, this raises a natural question: do ESG investors, given their distinctive behavioral traits, exhibit weaker Monday effects compared to non-ESG investors? Yet few studies have directly addressed this issue.

This article aims to compare the performance of the Monday effect in ESG and non-ESG investment markets, as well as explore whether sustainable investing weakens market anomalies that occur in traditional markets. The findings provide insight into whether sustainable investing reduces behavioral biases, thereby combining classic behavioral financial anomalies with sustainability.

## 2. Literature review

### 2.1. The classic discovery and persistence of the Monday effect

The Monday effect is one of the earliest and most enduring calendar anomalies. In the U.S. stock market, stock prices tend to rise on Fridays and fall on Mondays, which contradicts the efficient market hypothesis. In some emerging markets, such as China's A-share market, the Monday effect was also observed in the early days. After a more systematic analysis later, it was shown that the average return on Monday was negative, while the return on other days did not find this anomaly [4]. Subsequently, the Monday effect was found to be more significant in small-cap stocks in a 1984 study by Keim and Stambaugh, which strengthened the stability of this anomaly and suggested that the Monday effect may be related to the microstructure of the market or differences in investment groups [5].

These early studies together identified the exception to the hypothesis that the Monday effect is an efficient market. The consistency of market structure and time differences begs the critical question of whether differences in investor behavior can explain this. If the Monday effect is related to investor behavior, it is reasonable to suspect that markets with different investor structures, such as ESG investors, may exhibit different effects.

### 2.2. The Monday effect under a behavioral finance perspective

When the efficient market hypothesis cannot explain the Monday effect, it can be explained from the perspective of behavioral finance. A core notion is that the Monday effect reflects predictable biases in investor behavior. Analyzing trading data shows that individual investors have a high proportion of active sellers on Mondays, while institutional investors are more inclined to trade later in the week. This result suggests that the behavior of individual investors may drive the Monday effect, where the return on Monday is negative [6].

In addition to investor behavior, investor sentiment is also a key factor in triggering the Monday effect. In 2006, Baker and Wurgler constructed an investor sentiment index, which showed that

investor sentiment is a significant factor affecting stock returns. This study can be extended to the Monday effect, where people are generally depressed and stressed on Monday, leading to pessimistic expectations, leading to more cautious trading, and even selling stocks [7]. This sentiment is transmitted to the market level and leads to a systematic decline. In addition to this, investors are exposed to news, economic events on weekends, and if this news are negative, it will cause investors to worry, and these emotions will be released when the market opens on Monday, resulting in increased selling pressure and a decline in stock prices [8]. ESG investors are often considered more long-term, they focus more on long-term returns than short-term gains and losses, so they are less affected by mood swings, so the Monday effect of the ESG market may be weaker or non-existent.

### 2.3. The impact of market structure and system on the Monday effect

First, as mentioned above, the proportion of institutional investors and retail investors will affect the Monday effect. Retail investors are more inclined to trade on Mondays, while institutional investors are more likely to close trades later in the week, so retail investors' selling behavior on Mondays will depress Monday's returns, thereby strengthening the Monday effect [6]. Secondly, the information disclosure system will also have an impact on the Monday effect. Many companies disclose negative information after Friday's close to reduce immediate impact. However, this negative information was digested over the weekend and released intensively at the opening of the market on Monday, exacerbating the Monday effect. Therefore, the information disclosure system of enterprises will affect the Monday effect [9]. In addition, the opening and closing bidding and liquidity arrangements also affect the Monday effect. If the opening price mechanism is well-designed, transparent, and liquidity, then the Monday effect can be reduced, but if there is insufficient liquidity and the price deviates, then the Monday effect will be exacerbated. Similarly, if Friday's closing price is unreasonable and illiquid, these deviations will be agreed to be corrected on Monday, exacerbating the Monday effect, and vice versa, the Monday effect will weaken [10].

For the ESG investment market, a number of studies and industry data show that ESG investment pays more attention to long-term effectiveness, does not focus on a certain day's price game, but pays more attention to medium and long-term fundamentals. That is, ESG investors will not immediately make any immediate changes at the opening of the market on Monday because of the weekend's information, so the Monday effect is weakened.

### 2.4. ESG investing and ESG investor characteristics

ESG funds and indices have grown rapidly in recent years and are often advertised as tools for long-term and socially responsible investments. Therefore, ESG investing aims to balance financial returns with social responsibility and sustainability. But in 2015, after a comprehensive data analysis of more than 2,000 studies by Friede, Busch, and Bassen, it was concluded that ESG performance is often positively correlated with financial returns. This finding challenges the notion that ESG investing, or sustainability-focused investing, needs to balance financial interests.

In addition, more importantly, ESG investors are generally considered to be more focused on long-term interests and sustainable development, and are less prone to short-term speculation. This means that ESG investors are motivated not only by financial returns but also by non-financial preferences, such as ethical satisfaction or sustainability considerations [11]. As a result, ESG-focused markets may be less affected by sentiment-driven anomalies such as the Monday effect. Their actions may reduce the "short-term sentiment-driven effect" in traditional markets, weakening the Monday effect.

## 2.5. Research gap: a combination of ESG investing and behavioral finance anomalies

While both the Monday effect and ESG investing have been widely studied, little research combines the two. The Monday effect is a well-documented market anomaly, typically explained by investor sentiment and trading patterns, while ESG investing emphasizes long-term orientation and may shape distinct investor behavior. This gap raises the question of whether ESG investments exhibit the Monday effect in the same way as traditional investments.

Although ESG and financial performance have been extensively studied, there is little research on whether ESG investments also exhibit market anomalies such as the Monday effect. Therefore, this paper investigates the Monday effect in ESG and non-ESG investments, if ESG investors do focus more on the long term, then one would expect the Monday effect of ESG assets to be weaker or non-existent compared to traditional investments.

## 3. Methodology

### 3.1. Research approach

Based on the previous literature review section, this study employed a qualitative research approach to explore whether the Monday effect between ESG and non-ESG investments is different. While earlier studies examined the strength of effects based on statistics on stock returns, this study emphasized investor behavior and emotions as explanatory factors, drawing on the perspective of behavioral finance. Given the particularities of ESG investors, such as long-termism and focus on sustainable development, Quantitative research methods may ignore aspects of investors' behavior, such as their emotional orientation and long-termist orientation. Therefore, this study chose to use a qualitative research approach to answer why ESG investors may be less affected by the Monday effect.

### 3.2. Research strategy

The study employed a strategy of contrasting case studies. Two types of exchange-traded funds (ETFs) were selected for comparison: ESG-focused ETFs (e.g., iShares ESG Aware MSCI USA ETF, iShares Global Clean Energy ETF) and non-ESG-benchmarked ETFs (e.g., SPDR S&P 500 ETF, Invesco QQQ Trust). The reason why ETFs are chosen as comparison objects is because ETFs are relatively representative and have a wide coverage, which can better reflect the general trend of the market and are universal. Moreover, ETFs have high liquidity and continuous trading characteristics, which can well capture daily changes and Monday effects. At the same time, ETFs are also a very suitable object for comparison. By comparing the two types of funds, this allows the study to explore the behavioral drivers behind the Monday effect, analyzing whether the Monday effect performs differently in ESG and traditional markets.

### 3.3. Data sources

The data sources for this study mainly rely on secondary sources, including Academic research, ESG Research, Industry Reports, Media Coverage and Expert Opinions and Policy documents. Academic research sources include classic studies on the Monday effect, such as Cross's classic study on the Monday effect, Lakonishok & Maberly's 1990 and Baker & Wurgler's 2006 behavioral financial explanation of the Monday effect. ESG research explains the characteristics of long-termism in ESG investors, such as the findings of Friede et al. in 2015 and Statman & Glushkov in

2009. Industry reports are white papers on asset managers and investment firms' comments on ESG trends, investor sentiment, and trading behavior. Media coverage and expert opinions include financial news outlets' commentary on ESG adoption, retail investor behavior, and calendar anomalies. The policy document includes publications from organizations such as the United Nations Principles for Responsible Investment (PRI), which describe the philosophy and goals of ESG investing.

### 3.4. Data collection

The main methods of data collection are literature and document analysis, systematic review of academic, industry, and media sources. Selection criteria include directly related to the Monday effect, ESG investment or investor sentiment; The source is credible, such as a journal, financial institution, or recognized industry report; It helps to understand the differences in investor behavior between ESG and non-ESG markets. As for the selection of data, the first data selected should be relevant to this research topic, and it needs to be directly related to the Monday effect, ESG investors or investor orientation. Secondly, the selected data needs to be authoritative and credible, such as journals, financial institutions or recognized industry reports. At the same time, the selected data needs to help explain the differences and help investors understand the differences between ESG and non-ESG markets.

### 3.5. Data analysis

This study employs a thematic analysis approach to first identify recurring concepts in the collected documents, such as investor sentiment, long-term attention, weekend information effect, etc. All useful information points are then categorized, such as type A information explains the drivers of Monday effect behavior, and type B information describes the characteristics of ESG investors. Finally, the distinctive characteristics of ESG investors are compared to whether they are less sensitive to the Monday effect. These analyses build on the elaboration of the above literature, but expand the discussion to the ESG investment context, where investor composition and motivation may weaken the anomaly of the Monday effect.

### 3.6. Research questions & hypotheses

This study will focus on the following questions:

Because it has been shown that investors' irrational mood swings and trading habits may be an important cause of the Monday effect, we can discuss it from a financial perspective. So, RQ1: How do investor behavior and sentiment explain the "Monday effect"? After understanding the explanation of the Monday effect by investor sentiment, this study will further distinguish between different types of investors, mainly focusing on ESG investors and traditional investors, who have attracted much attention in recent years. So, RQ2: What is the difference between ESG investors and traditional investors in terms of investment cycle and sentiment drive? On this basis, this study will continue to explore the impact of ESG investing week on market anomalies. So, RQ3: Will ESG investing weaken or eliminate the "Monday effect" common in traditional markets?

Based on the existing literature and behavioral finance theory, this paper proposes the following hypotheses:

H1: The "Monday effect" is more likely to occur in non-ESG markets due to short-term sentiment and retail investors behavior.

H2: The Monday effect is weaker or absent in ESG markets because ESG investors are long-term oriented and less sentiment driven.

### 3.7. Validity and limitations

The methods of qualitative research provide insights into the possible differences between ESG investment and non-ESG investment markets, complement the results of quantitative research surveys in the previous literature review section, and better capture the connotation of behavioral finance, but the analysis results may lack the universality of large sample surveys, and may have biases in the subjective interpretation of the investigator. To mitigate this limitation, the study cites multiple data sources from academia, industry, and the media to enhance the reliability and credibility of the conclusions.

## 4. Results

### 4.1. Monday effect in traditional markets

After gathering and analyzing information from the available literature, the Monday effect remains one of the most persistent calendar effect anomalies in financial markets. As can be seen from the classic study of Cross and French, Monday has been a state of negative returns, and further research by Lakonishok and Maberly shows that individual investors sell stocks heavily on Mondays, which exacerbates the Monday effect. Recently, in Yan's analysis report in 2016, it can be seen that price liquidity at the opening and closing of the market will also affect the strength of the Monday effect, because the part of the price deviation will be adjusted uniformly at the opening of the market on Monday. Taken together, these findings show that the Monday effect is evident in traditional markets, especially those with a large proportion of retail investors.

### 4.2. Characteristics and market performance of ESG investors

In the analysis of ESG-related literature, the unique image characteristics of ESG investors can be found. ESG investors often focus more on long-term investments, including ethical standards and sustainability considerations in addition to financial returns. Recently, in the 2015 analysis of ESG investment performance by Friede, Busch, Bassen et al., it can be seen that ESG investment projects are as good or better than traditional investments in terms of financial returns, which shows that ESG investors are less sensitive to short-term market trends. This suggests that the behavioral performance behind the Monday effect, especially sentiment-driven sell-offs and overreactions to weekend news, is unlikely to occur in ESG-focused markets.

### 4.3. Comparative insights between ESG investment and non-ESG investment

By comparing ESG-focused ETFs, such as the iShares ESG Aware MSCI USA ETF, with traditional benchmarks (e.g., the SPDR S&P 500 ETF), this study identifies the differences between ESG and non-ESG investment markets in line with theoretical expectations. Secondary reports and industry analysis suggest that ESG funds exhibit lower short-term volatility and less pronounced Sunday return patterns. While the data is explanatory rather than statistical, these findings support the hypothesis that ESG markets are less susceptible to the Monday effect.

#### 4.4. Thematic findings

Through the thematic analysis of academia and industry, three conclusions can be drawn: first, for traditional markets, the Monday effect persists, and the impact of retail investors' emotions and weekend information is an inevitable factor. Secondly, for the ESG market, its investors are more focused on the long term, so they react less to short-term market trends, resulting in a weaker anomaly such as the Monday effect. Finally, ESG markets can improve market efficiency by reducing predictable behavioral biases.

### 5. Discussion

#### 5.1. Re-analyze the Monday effect in light of ESG investing

The Monday effect in traditional markets is commonly attributed to sentiment-driven trading and the weekend accumulation of information, which lead retail investors to sell disproportionately on Mondays. Prior studies further suggest that the dominance of institutional investors mitigates this anomaly, as they are less influenced by short-term noise. In a similar vein, ESG investors, who emphasize long-term value creation and sustainability goals rather than short-term speculation, contribute to weakening the Monday effect. By altering the investor composition of the market, ESG investing reduces the role of emotional trading, thereby diminishing the persistence of this calendar anomaly.

#### 5.2. Implications for behavioral finance

This study extends behavioral finance by showing that anomalies like the Monday effect depend on investor composition. The traditional explanation of the Monday effect highlights biases in retail investor trading. By studying the ESG market, it can be seen that anomalies like the Monday effect are not universal but depend on the characteristics of investors. Markets dominated by investors with long-term orientation and non-financial motives may be less prone to predictable anomalies. This view is consistent with Kamara's 1997 finding that institutional dominance weakens the Monday effect, and this study extends the argument to ESG investors, a unique group with behavioral characteristics similar to long-term institutions.

#### 5.3. Practical impact

For investors, investing in ESG-focused funds can reduce the risk of emotions-driven anomalies. This makes practical sense for portfolio managers and retail investors who want to minimize behavioral risk in their investment strategy. For policymakers and asset managers, this result reinforces the idea that ESG investing can not only align with sustainability goals, but also improve market efficiency by reducing anomalies, providing them with new ways to grow.

#### 5.4. Limitations and future research

This qualitative study provides insights into the potential differences in the Monday effect between ESG and non-ESG markets, but its limitation lies in the reliance on secondary data meaning that conclusions are interpretive rather than statistically analyzed. Future research could employ quantitative methods, such as regression analysis of ESG vs. non-ESG ETF returns, to provide

empirical validation. Additionally, cross-country comparisons may be more valuable, as ESG adoption varies widely across different markets.

## 6. Conclusion

This study investigates whether the Monday effect performs differently in ESG-focused markets compared to traditional markets. This study identifies several key findings through qualitative analysis of academic literature, industry reports, and market evaluations: First, the Monday effect is persistent in traditional markets, especially in markets dominated by retail investors. Second, because the unique characteristics of ESG investors make them less affected by short-term market influences and emotional anomalies, the Monday effect in the ESG market is weak.

These findings contribute to the behavioral finance literature by emphasizing that the Monday effect is not universal but rather depends on the composition and characteristics of the investor group. For practitioners, the outcome means that ESG investing may offer a dual benefit: alignment with sustainability goals and potential mitigation of predictable market anomalies. However, the study is limited by its qualitative methods and reliance on secondary data, which limits the generalizability of statistics. Future research could empirically test the Monday effect of ESG and non-ESG assets using quantitative methods and explore disparities across countries.

In conclusion, the study supports the hypothesis that ESG investing is less prone to the Monday effect, reflecting the behavioral differences of ESG investors and their long-term, value-driven characteristics.

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