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ORIGINAL ARTICLE

# What attracts sustainable fund flows? Prospectus versus ratings*

**Kevin Birk**[1] · **Stefan Jacob**[1] · **Marco Wilkens**[1]

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**Abstract**
Many studies indicate that sustainability ratings attract high fund flows, reinforcing the dominant role of rating agencies for the fund industry. However, these studies neglect prospectus information, which is very likely to influence investors' decisions. By analyzing 23,606 equity mutual funds and ETFs, we find that self-declared sustainability statements in fund prospectus are the main driver of retail and institutional fund flows. Additionally, sustainability references in the fund name and the fund's employed sustainability investment approach significantly affect flows. External sustainability ratings on the other hand appear to be less relevant for fund flows than previous studies suggest.

**Keywords** Sustainable finance · ESG · Investment funds · Fund flows · Sustainability information · Retail and institutional investors

**JEL Classification** G11 · G23 · G41 · G59 · Q01

## Introduction

In recent years, the integration of sustainability considerations into investment decisions has surged in the financial industry, reflecting a growing emphasis on environmental, social, and governance (ESG) factors. This shift has led to an increasing number of investors opting for sustainable investment funds (Morningstar 2023). Despite ongoing efforts in sustainable finance research (Hornuf and Yüksel 2024), it is not fully understood what sustainability information affects investors when identifying and selecting sustainable investments.

Prior research has focused primarily on investor preferences for sustainable investments, relying exclusively on external sustainability ratings for investment funds (Hartzmark and Sussman 2019; Reboredo and Otero 2021; Becker et al. 2022; Ceccarelli et al. 2024). These studies conclude that investors prefer funds with favorable sustainability ratings. While this contributes valuable insights, these studies face several limitations. Critiques of rating methodologies (Chatterji et al. 2016; Berg et al. 2020, 2022) as well as uncertainties surrounding investor awareness and prioritization of these ratings (compare Li and Polychronopoulis 2020; Ramos et al. 2023) cast doubts on the reliability of such ratings. This criticism is highly relevant, as the prevailing state of research is causing a strong focus on sustainability ratings in the public sustainable finance debate. For example, there are discussions about the need to revise or even regulate ratings (Charlin et al. 2022; Larcker et al. 2022; European Commission 2023), as they are assumed to have a major influence on the decision-making of fund investors.

We argue that other forms of sustainability information have a greater impact on investors than ratings. Sustainability information provided in fund prospectuses represent a significant yet underexplored source of information in literature. The prospectus, mandated to outline a fund's investment strategy and therefore sustainability consideration, is generally available to all investors. It also provides additional details about the sustainability approach of a fund, indicating which funds use exclusions, ESG criteria or thematic approaches. Our study therefore takes a novel approach by explaining fund flows with sustainability information derived from fund prospectuses. Using a comprehensive dataset from Morningstar Direct spanning October 2018 to October 2022, we analyze 23,606 equity mutual and exchange-traded funds, allowing for a detailed examination

✉ Kevin Birk
kevin.birk@wiwi.uni-augsburg.de

[1] Chair of Finance and Banking, University of Augsburg, Universitaetsstr. 16, 86159 Augsburg, Germany

of sustainability information from both, fund prospectuses and external sustainability ratings.

First, our study revisits existing research on fund investors' sustainability preferences, using external ratings to explain fund flows. Consistent with previous literature, we find a positive correlation between fund flows and sustainability ratings. However, when explaining fund flows using sustainability information from fund prospectuses, we find a significantly stronger positive impact on flows. This finding indicates that investors allocate significantly more capital to sustainable funds compared to what previous studies relying solely on external ratings suggest. Simultaneously, we document that the importance of external ratings for fund investors has been overestimated in prior research.

Second, we examine the combined effect of fund prospectus information and external ratings on fund flows. We find that Sustainable Prospectus funds with better external sustainability ratings attract significantly higher inflows. In contrast, external ratings by themselves do not have an impact on fund flows unless accompanied by sustainability information in the fund prospectus. Accordingly, fund flows of conventional funds are not affected by external ratings. This suggests that investors may view external ratings as a confirmation of a fund's sustainability orientation.

Thirdly, we investigate whether funds whose sustainable orientation is already apparent from their name receive more flows. Our findings indicate that a sustainability reference in the name enhances fund flows significantly when accompanied by detailed sustainability information in the prospectus. In isolation, a sustainability reference in the name appears to have minimal impact on inflows. However, in contrast to institutional investors, we observe retail investors to be more inclined to invest in funds that merely indicate sustainability in their name without providing further details on their sustainability in the prospectus. We conclude that retail investors seeking sustainable investments may be tempted by purely cosmetic effects (compare Cooper et al. 2005).

Last, our study pioneers the analysis of flows across distinct sustainability investment approaches outlined in the fund prospectus. Investors exhibit different preferences for various sustainable investment approaches. Retail investors tend to favor funds focused on thematic investment approaches, such as climate action, whereas institutional investors predominantly show a preference for funds that integrate ESG factors alongside exclusion criteria. Sustainable funds applying only an exclusion approach hardly receive more inflows than conventional funds.

Overall, the consideration of prospectus information improves the understanding of investor behavior in the context of sustainability. By using a comprehensive approach that incorporates both sustainability information from prospectuses and external ratings, we provide a more holistic assessment of which fund characteristics attract sustainable oriented investors. Our findings challenge the prevailing view of the primacy of external sustainability ratings and highlight the need to reassess their importance in the light of other information criteria. In conclusion, our study advances the discourse on sustainable investment decision-making by unveiling the previously unexplored influence of prospectus information. This has implications for researchers, policymakers, asset managers, and investors, prompting a reexamination of current practices and a renewed focus on transparency and credibility in sustainability claims.

## Related Literature and Contribution

The question of whether investors prefer sustainable investments and the criteria they use to select them has been a longstanding focus of academic research in finance. Sustainability preferences among investors have primarily been assessed through fund flows, often relying on sustainability ratings (e.g., Hartzmark and Sussman 2019; Reboredo and Otero 2021; Becker et al. 2022; Ceccarelli et al. 2024; Aragon and Chen 2023). The underlying assumption is that sustainable investors perceive information from sustainability ratings and incorporate them into their investment decisions. For instance, Hartzmark and Sussman (2019) find that investors are sensitive to the Globe Rating and document massive capital (re)allocations by investors towards funds with superior ratings. Similarly, Becker et al. (2022) demonstrate that a superior Globe Rating correlates with increased net inflows among US and EU mutual funds. Ceccarelli et al. (2024) note higher inflows for funds with a Low Carbon Designation (LCD), indicating investor preference for climate-conscious investments. Reboredo and Otero (2021) argue that investors want to mitigate climate risks and therefore use the Carbon Risk Score to select corresponding funds. All these studies suggest that external sustainability ratings are of high relevance for investors in selecting sustainable funds.

This current state of research has brought external sustainability ratings into the forefront of discussions in both academia and practice, with urgent calls for revision and regulation of rating providers (see Charlin et al. 2022; Larcker et al. 2022; European Commission 2023). The discussion has been intensified by increasing criticism of the ratings. Critiques include significant discrepancies between ratings from different agencies (Chatterji et al. 2016; Billio et al. 2021; Berg et al. 2022) as well as concerns regarding the comparability and objectivity of these ratings (Escrig-Olmedo et al. 2014, 2019). On the one hand, it is assumed that the presence of multiple and often conflicting signals can lead to confusion or skepticism among investors (Ramos et al. 2023). On the other hand, there are doubts whether investors perceive external

ratings at all, as they are often not widely or freely available (Li and Polychronopoulis, 2020). Despite the criticisms of external ratings, they do influence fund flows as outlined above and demonstrated in a study by Aragon and Chen (2023). Certificates confirming the sustainability of an investment can reduce information costs and address barriers for certain investor groups (Gutsche and Zwergel 2020). Thereby external ratings can guide fund selection of investors exhibiting preferences for sustainable investments (Gutsche and Ziegler 2019). The findings of Ceccarelli et al. (2022) suggest that investors prefer financial institutions whose sustainability has been verified by external rating providers. In our study, we question the currently assumed high relevance of external sustainability ratings for fund investors. To do so, we introduce additional sustainability information into our empirical analyses, which likely influence investors but have been overlooked by previous studies.

The most important source of information affecting fund investors in their fund selection might be the fund prospectus. It is typically mandated by regulations to present the investment strategy of a fund, often including sustainability aspects, in a comprehensive and simple language and must be easily accessible to investors (e.g. European Commission 2010). Andrikogiannopoulou et al. (2022) find that investors respond to sustainability content in the fund prospectus. Therefore, we orient ourselves on a concept introduced by Bollen (2007), who extracts information from fund investment policies, to identify sustainable funds. Using sustainability information provided by funds in their prospectus, we find that sustainability information in the prospectus have a very strong influence on fund flows and thus on investor decisions. This influence is significantly stronger than that of external sustainability ratings, which appear virtually immaterial in our results.

Another fund characteristic potentially affecting investor behavior and flows is the fund name. Cooper et al. (2005) argue that investors are irrationally influenced by fund names and find that funds change names to attract higher flows by capitalizing on investment trends. This may also apply to the current sustainability trend, as El Ghoul and Karoui (2021) show that funds receive more inflows after changing their names to sustainability-related appellations. Our findings support these results and suggest that investors are strongly tempted by the name when selecting sustainable funds.

Moreover, preferences for sustainable investments may vary between investor types as it has been documented that retail and institutional investors differ in their sensitivity to external sustainability ratings and information (Ammann et al. 2019). We therefore differentiate between these investor types in our analyses and demonstrate that sustainability information affects them differently in some cases.

## Data and identification of sustainable funds

The equity fund data used in this empirical study was obtained from Morningstar Direct, a financial data platform widely utilized in both academic research and industry. The study period spans from October 2018 to October 2022, resulting in a total of 48 monthly observations. For a comprehensive analysis, our sample includes funds with all possible investment strategies (i.e., no regions, countries or styles are excluded). As newly launched funds experience abnormal flows, we exclude the first three month of fund data after the inception. We also exclude funds with insufficient data availability for net flows, returns, or assets under management (AUM). The final dataset comprises a total of 23,606 equity mutual funds and equity exchange-traded funds (ETFs) as of October 2022.

For these funds, various basic variables were collected at share class level, allowing for a differentiation between retail and institutional share classes. The collected data include age, AUM, net flows, net returns, and fees. Net flows represent the monthly net inflows or outflows of capital into or out of the share class. The aggregation of the fund level net returns and fees was performed by value weighted share class sizes. The dataset includes a total of 113,863 share classes, with 85,318 being retail classes and 17,142 being institutional classes. We make this distinction only for mutual funds, as ETF investor specific share classes are not common.

At fund level, we gathered the Morningstar Star Rating, which compares the historical performance of funds with similar investment objectives, taking into account costs and risks. Furthermore, we collected sustainability metrics commonly used in the literature (e.g., Hartzmark and Sussman 2019; Ammann et al. 2019; Ceccarelli et al. 2024). One such metric is the Globe Rating from Morningstar, which utilizes the Sustainalytics ESG risk score to assign sustainability ratings to funds. The Globe Rating ranges from one to five, with five globes indicating high and one globe indicating low sustainability. We define funds with a Globe Rating of four or five Globes as Sustainable Globe Rated. Another sustainability attribute we use is the LCD, which identifies funds with low or negligible carbon risk and limited exposure to fossil fuels. This label aims to assist investors in identifying funds that align with low-carbon investment objectives. Funds that are LCD labeled are defined as Sustainable Carbon Rated funds. These two ratings serve as proxies for funds that have a favorable external sustainability rating in the following analyses.

Morningstar Direct offers the so-called Sustainable Investment Attributes, which are binary data points. These attributes capture whether a fund explicitly states in its prospectus that it considers sustainability aspects in its

investment process. We use this data to classify a fund as Sustainable Prospectus fund if its prospectus, offering documents, or regulatory filings indicate a focus on sustainability, impact, or consideration of environmental, social, and governance (ESG) factors. Funds with no sustainability information in their prospectus are considered conventional. The Sustainable Investment Attributes provide a detailed breakdown of the sustainability approach implemented by the fund. Therefore, we can further categorize the Sustainable Prospectus funds: (1) Exclusion Only funds, which solely utilize exclusions as part of their sustainability investment strategy; (2) ESG Integration Only funds, which primarily rely on ESG criteria, such as ESG scores, for investment identification and portfolio weighting; (3) ESG Integration and Exclusion funds, which combine ESG criteria with clear exclusion criteria in their investment process; and (4) Thematic funds, which align their investments with specific sustainability goals or themes, such as climate action.

In October 2022, the final data set of 23,606 funds has total AUM of USD 22.1 trillion. Out of these, 16,034 are conventional funds with assets under management (AUM) totaling USD 18.8 trillion, and 7572 are Sustainable Prospectus funds, totaling USD 3.3 trillion AUM. Among the latter, 3833 are Exclusion Only funds, amounting to USD 1.9 trillion AUM, while 573 are ESG Integration Only funds, totaling 0.1 trillion USD AUM. Additionally, there are 2526 ESG Integration and Exclusion funds, with 1.1 trillion USD AUM, whereas the remaining 640 are Thematic funds, amounting to 0.2 trillion USD AUM.

Table 1 provides a descriptive overview of the dataset. Panel A shows that the Sustainable Prospectus funds in the sample are 8.21 years old and therefore younger than conventional funds. Among the Sustainable Prospectus funds, the Exclusion Only funds are the oldest, while the thematic funds are the youngest. These observations align with expectations, as sustainable finance strategies have evolved from basic exclusionary approaches to more sophisticated approaches that aim to contribute to broader sustainability goals (Schoenmaker 2017). On average, conventional funds have nearly 2.5 times more AUM than Sustainable Prospectus funds.

Notably, significant differences emerge when examining net flows. Except for the Exclusion Only funds, all Sustainable Prospectus funds experience consistently high and positive monthly net inflows, averaging USD 1.6 million, while conventional funds exhibit average net outflows of USD 0.33 million.

Turning to the sustainability criteria used for this study, a coherent picture emerges. The average Globe Rating is higher for the Sustainable Prospectus funds compared to the conventional funds. This leads to a higher proportion of the Sustainable Prospectus funds being Sustainable Globe Rated, compared to the conventional funds. The table also shows notable disparities in the proportion of Sustainable Carbon Rated funds. Out of conventional funds, 25 percent are Sustainable Carbon Rated, compared to 40 percent among Sustainable Prospectus funds.

Panel B to D show the descriptive statistics for the retail mutual fund, institutional mutual fund, and ETF samples, respectively. Sustainable Prospectus ETFs are noticeably younger than mutual funds, with an average age of just over four years. In addition, a large part of the flows went into ETFs, where the Sustainable Prospectus funds are in the lead as well.

The following empirical analysis focuses on explaining these differences in fund flows using various types of sustainability information, to enhance the understanding of sustainable investment practices as well as investor preferences and behavior.

## Empirical analysis

The empirical analysis consists of four parts, investigating the drivers of flows into (sustainable) funds in recent years. First, in Table 2, we explain fund flows using existing sustainability estimators (i.e., external ratings) commonly employed in empirical research and augment them with sustainability information provided in the fund's prospectus. The objective is to reassess existing research on sustainable fund flows as well as to determine the relevance of sustainability information in the prospectus and to compare it to that of external ratings. Second, in Table 3, we examine the interaction between external ratings and sustainable fund prospectus data to improve the understanding of the relevance of external ratings for investors. The purpose of this analysis is to investigate whether external sustainability ratings may be considered by investors as an external verification for funds that promote sustainability in their prospectus. Third, in Table 4, we study the effect of a sustainable fund name on the flows of Sustainable Prospectus funds, examining whether sustainability cues in the name attract additional investor attention resulting in higher flows. Finally, in Table 5 we conduct a detailed analysis of fund flows related to different sustainability investment approaches, as we are interested in whether investors prefer certain sustainability approaches.

**Table 1** Descriptive statistics of fund characteristics

| | Conventional (1) | Sustainable prospectus (2) | Exclusions Only (3) | ESG Integration Only (4) | ESG Integration and exclusions (5) | Thematic (6) | Total (7) |
|---|---|---|---|---|---|---|---|
| *Panel A—full sample* | | | | | | | |
| Number of funds | 16,034 | 7572 | 3833 | 573 | 2526 | 640 | 23,606 |
| Age | 10.41 | 8.21 | 9.95 | 7.13 | 6.68 | 5.88 | 9.93 |
| AUM (million) | 1247 | 506 | 596 | 259 | 527 | 359 | 1083 |
| Net flow (thousand) | − 334 | 1632 | − 813 | 2255 | 4339 | 4450 | 104 |
| Monthly return in % | 0.28 | 0.30 | 0.23 | 0.26 | 0.33 | 0.63 | 0.27 |
| Fee in % | 1.07 | 0.98 | 1.04 | 1.07 | 0.79 | 1.11 | 1.05 |
| Star-rating | 3.12 | 3.27 | 3.23 | 3.15 | 3.42 | 3.2 | 3.15 |
| Globes | 2.57 | 3.14 | 2.8 | 3.15 | 3.62 | 3.23 | 2.7 |
| % Sustainable globe rated | 0.26 | 0.46 | 0.32 | 0.53 | 0.63 | 0.54 | 0.30 |
| % Sustainable carbon rated | 0.25 | 0.40 | 0.35 | 0.38 | 0.52 | 0.31 | 0.29 |
| *Panel B—institutional mutual funds* | | | | | | | |
| Number of funds | 4083 | 2509 | 1526 | 118 | 716 | 149 | 6592 |
| Age | 11.22 | 8.11 | 8.82 | 6.84 | 7.71 | 6.11 | 10.42 |
| AUM (million) | 1106 | 326 | 338 | 192 | 389 | 202 | 906 |
| Net Flow (thousand) | − 1668 | 8 | − 1538 | 1363 | 1936 | 2603 | − 1234 |
| Monthly return in % | 0.42 | 0.34 | 0.28 | 0.30 | 0.39 | 0.66 | 0.39 |
| Fee in % | 0.81 | 0.71 | 0.71 | 0.75 | 0.64 | 0.81 | 0.78 |
| Star-rating | 3.25 | 3.36 | 3.29 | 3.32 | 3.55 | 3.22 | 3.28 |
| Globes | 2.84 | 3.27 | 2.99 | 3.38 | 3.72 | 3.61 | 2.95 |
| % Sustainable globe rated | 0.28 | 0.46 | 0.34 | 0.54 | 0.64 | 0.63 | 0.33 |
| % Sustainable carbon rated | 0.31 | 0.46 | 0.39 | 0.46 | 0.61 | 0.38 | 0.35 |
| *Panel C—retail mutual funds* | | | | | | | |
| Number of funds | 12,205 | 6432 | 3434 | 486 | 1994 | 518 | 18,637 |
| Age | 10.95 | 8.66 | 10.09 | 7.58 | 7.43 | 6.12 | 10.42 |
| AUM (million) | 685 | 399 | 476 | 218 | 383 | 306 | 619 |
| Net Flow (thousand) | − 797 | 598 | − 616 | 1298 | 1664 | 3056 | − 473 |
| Monthly return in % | 0.26 | 0.27 | 0.20 | 0.22 | 0.30 | 0.58 | 0.25 |
| Fee in % | 1.29 | 1.16 | 1.2 | 1.23 | 1.01 | 1.28 | 1.26 |
| Star-rating | 3.11 | 3.25 | 3.22 | 3.11 | 3.4 | 3.19 | 3.14 |
| Globes | 2.53 | 3.1 | 2.81 | 3.11 | 3.57 | 3.26 | 2.66 |
| % Sustainable globe rated | 0.26 | 0.45 | 0.33 | 0.52 | 0.61 | 0.55 | 0.30 |
| % Sustainable carbon rated | 0.26 | 0.41 | 0.36 | 0.38 | 0.54 | 0.33 | 0.29 |
| *Panel D—ETFs* | | | | | | | |
| Number of funds | 3178 | 829 | 228 | 49 | 448 | 104 | 4007 |
| Age | 7.63 | 4.24 | 7.4 | 2.99 | 3 | 4.53 | 7.11 |
| AUM (million) | 1831 | 478 | 506 | 243 | 552 | 335 | 1623 |
| Net Flow (thousand) | 7735 | 10937 | 3186 | 6993 | 15,978 | 8156 | 8231 |
| Monthly return in % | 0.35 | 0.45 | 0.31 | 0.41 | 0.38 | 0.92 | 0.37 |
| Fee in % | 0.39 | 0.31 | 0.35 | 0.37 | 0.24 | 0.48 | 0.38 |
| Star-rating | 3.14 | 3.41 | 3.3 | 3.41 | 3.53 | 3.37 | 3.17 |
| Globes | 2.76 | 3.54 | 2.8 | 3.73 | 3.93 | 3.14 | 2.88 |
| % Sustainable globe rated | 0.26 | 0.59 | 0.30 | 0.64 | 0.73 | 0.49 | 0.31 |
| % Sustainable carbon rated | 0.23 | 0.37 | 0.25 | 0.39 | 0.44 | 0.25 | 0.25 |

This table shows descriptive statistics on fund characteristics of our sample from 10/2018 through 10/2022. Panel A shows all funds, Panel B institutional aggregated share classes, Panel C retail aggregated share classes, and Panel D ETF. Column (1)–(7) reflect the sustainability levels identified from the fund prospectus. The Number of funds and ETFs is as of October 2022. The age of the funds is given in years. Assets under Management (AUM) is reported in millions of dollars, Net Flow represent the net inflows or outflows of capital into or out of the funds and is reported in thousands of dollars. Monthly returns and annual fees are given in percent. Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception

**Table 2** Determinants of fund flows: prospectus sustainability vs. sustainability ratings

| Fund net flow (million) | Full sample | | | Retail Mutual fund share classes | | | Institutional Mutual fund share classes | | | ETFs | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Sustainable prospectus | | 2.625*** | 2.447*** | | 1.503*** | 1.428*** | | 1.864*** | 1.718*** | | 5.292*** | 4.968*** |
| | | (0.196) | (0.196) | | (0.124) | (0.125) | | (0.250) | (0.254) | | (1.405) | (1.347) |
| Sustainable globe rated | 0.990*** | | 0.634*** | 0.479*** | | 0.267** | 0.921*** | | 0.692*** | 1.150 | | 0.436 |
| | (0.173) | | (0.171) | (0.108) | | (0.106) | (0.242) | | (0.244) | (1.070) | | (1.036) |
| Sustainable carbon rated | 0.425** | | 0.216 | 0.218* | | 0.094 | 0.138 | | 0.025 | 1.634 | | 1.189 |
| | (0.190) | | (0.190) | (0.117) | | (0.117) | (0.282) | | (0.281) | (1.151) | | (1.140) |
| Return $t-1$ | 35.276*** | 35.152*** | 35.250*** | 13.608*** | 13.567*** | 13.612*** | 27.804*** | 27.791*** | 27.869*** | 139.012*** | 138.407*** | 138.532*** |
| | (1.272) | (1.272) | (1.272) | (0.685) | (0.684) | (0.685) | (2.081) | (2.081) | (2.080) | (9.763) | (9.718) | (9.720) |
| Return $t-2$ | 23.281*** | 23.164*** | 23.259*** | 10.624*** | 10.587*** | 10.631*** | 22.367*** | 22.362*** | 22.442*** | 60.760*** | 60.288*** | 60.383*** |
| | (1.078) | (1.077) | (1.078) | (0.584) | (0.583) | (0.584) | (1.823) | (1.824) | (1.823) | (8.138) | (8.108) | (8.108) |
| Return $t-3$ | 20.987*** | 20.856*** | 20.895*** | 9.058*** | 8.995*** | 9.014*** | 25.267*** | 25.331*** | 25.357*** | 39.131*** | 38.744*** | 38.744*** |
| | (1.089) | (1.088) | (1.088) | (0.560) | (0.560) | (0.560) | (1.775) | (1.775) | (1.775) | (7.518) | (7.474) | (7.481) |
| Volatility | −35.757*** | −36.888*** | −35.493*** | −0.275*** | −0.279*** | −−0.273*** | −0.533*** | −0.556*** | −0.536*** | 0.616*** | 0.560*** | 0.582*** |
| | (3.966) | (3.971) | (3.953) | (0.025) | (0.025) | (0.025) | (0.073) | (0.074) | (0.073) | (0.205) | (0.204) | (0.204) |
| Fund fee | 58.019*** | 67.019*** | 68.302*** | 29.333*** | 35.516*** | 35.882*** | 41.188 | 58.526** | 58.715** | −2024.369*** | −1978.300*** | −1975.308*** |
| | (12.789) | (12.789) | (12.806) | (8.606) | (8.634) | (8.639) | (25.758) | (25.665) | (25.674) | (254.351) | (255.349) | (255.091) |
| Log fund size | −0.415*** | −0.436*** | −0.443*** | −0.522*** | −0.539*** | −0.541*** | −0.927*** | −0.909*** | −0.908*** | 6.557*** | 6.559*** | 6.551*** |
| | (0.064) | (0.064) | (0.064) | (0.036) | (0.037) | (0.037) | (0.068) | (0.068) | (0.068) | (0.438) | (0.438) | (0.438) |
| Five star rating | 6.956*** | 7.115*** | 7.043*** | 3.263*** | 3.349*** | 3.315*** | 7.235*** | 7.326*** | 7.254*** | 9.432*** | 9.700*** | 9.586*** |
| | (0.347) | (0.347) | (0.346) | (0.198) | (0.197) | (0.197) | (0.479) | (0.483) | (0.477) | (2.309) | (2.333) | (2.305) |
| Fund age | −0.147*** | −0.135*** | −0.136*** | −0.086*** | −0.079*** | −0.080*** | −0.087*** | −0.077*** | −0.077*** | −0.315** | −0.261** | −0.260** |
| | (0.009) | (0.009) | (0.009) | (0.006) | (0.006) | (0.006) | (0.013) | (0.013) | (0.013) | (0.129) | (0.129) | (0.129) |
| Index fund dummy | 4.876*** | 5.063*** | 5.105*** | 2.239*** | 2.285*** | 2.307*** | 1.511*** | 1.513*** | 1.574*** | −5.046*** | −5.328*** | −5.214*** |
| | (0.261) | (0.263) | (0.262) | (0.220) | (0.221) | (0.220) | (0.489) | (0.481) | (0.484) | (1.614) | (1.606) | (1.618) |
| Constant | 2.335*** | 2.067*** | 1.795*** | 2.683*** | 2.469*** | 2.350*** | 4.672*** | 4.364*** | 4.049*** | −16.091*** | −16.168*** | −16.752*** |
| | (0.374) | (0.364) | (0.370) | (0.215) | (0.211) | (0.214) | (0.540) | (0.531) | (0.542) | (2.634) | (2.563) | (2.647) |
| Observations | 594,021 | 594,021 | 594,021 | 490,682 | 490,682 | 490,682 | 209,203 | 209,203 | 209,203 | 79,793 | 79,793 | 79,793 |
| R-squared | 0.031 | 0.032 | 0.032 | 0.040 | 0.042 | 0.042 | 0.029 | 0.030 | 0.030 | 0.070 | 0.070 | 0.070 |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 10/2022 on fund characteristics with Morningstar Sustainability Globe Rating and Low Carbon Designation of the fund lagged by one month (Column (1)) and dummy variable indicating weather a fund has a Sustainable Prospectus (Column (2)). The same analysis is conducted for Retail Mutual Funds (Columns (3)–(4)), Institutional Mutual Funds (Columns (5)–(6)) and ETFs (Columns (7)–(8)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

In all regression analyses monthly USD fund net flows[1] are explained by different sustainability information (i.e., external ratings and/or fund prospectus), controlling for past return, risk, fees, fund size, age, the fund type, and the Morningstar Performance Rating (cf., Del Guercio and Tkac 2008). As we are interested in cross-sectional differences in flows between (sustainable and conventional) funds, we use time fixed-effects. Additionally, we control for fund category fixed-effects, which are known to affect flows, especially among index funds (Christoffersen and Xu 2017).

## Reassessing fund flow research with sustainable prospectus information

We examine the effect of external sustainability ratings, as is common in previous studies (e.g., Hartzmark and Sussman 2019; Reboredo and Otero 2021; Becker et al. 2022; Ceccarelli et al. 2024; Aragon and Chen 2023). To do so, we use two dummy variables, the first indicating whether the fund is Sustainability Globe Rated and the second whether the fund is Sustainability Carbon Rated. In the next regression model, we replaced the external ratings with our Sustainable Prospectus dummy variable. The third regression uses external ratings as well as the Sustainable Prospectus variable. Of primary interest is the magnitude of the effect that sustainability information in the prospectus has on the flows. Furthermore, we compare this effect with that of external ratings and check whether their relevance changes after we control for prospectus information.

Table 2, Column (1), presents the results of the regression model largely based on the main Ceccarelli et al. (2024) model.[2] Sustainable Globe Rated funds exhibit significantly higher monthly flows (USD 0.990 million) compared to funds with inferior ratings. The coefficient for Sustainable Carbon Rated funds is less significant with an average effect on flows of USD 0.425 million.

In Column (2), we introduce the dummy variable indicating whether a fund is a Sustainable Prospectus fund. The coefficient is significantly positive, suggesting that funds indicating a sustainable investment strategy in their prospectus receive on average USD 2.625 million higher monthly flows than conventional funds.

Column (3) presents the combination of Sustainable Prospectus and the external rating variables. The coefficient for Sustainable Globe Rated, though statistically significant, is with USD 0.634 million nearly 40% smaller than in Column (1). We find that being Sustainable Carbon Rated does not affect the flows of a fund after controlling for prospectus information. The coefficient for the Sustainable Prospectus dummy remains statistically significantly high at USD 2.447 million and changes only slightly compared to column (2). Therefore, the coefficient for Sustainable Prospectus is notably higher than those for the sustainability ratings.

The same analyses are performed in Columns (4), (5) and (6) for the subset of aggregated retail share classes of mutual funds. In Column (6), the Sustainable Prospectus coefficient is statistically and economically significant, indicating that retail investors have, on average, invested USD 1.428 million more per month in Sustainable Prospectus funds than in conventional funds. The coefficient for Sustainable Globe Rated is 0.267, which is even more than 40 percent smaller than in Column (4) with an average of USD 0.479 million. Comparable patterns emerge for the institutional aggregated share classes of mutual funds in Columns (7), (8) and (9), although the decline of the Sustainable Globe Rated coefficient funds is a bit smaller.

Columns (10) to (12) scrutinize ETF flows. In Column (10) we find that Sustainable Globe Rated as well as Sustainable Carbon Rated funds do not attract significantly higher flows. Column (12) reveals that Sustainable Prospectus ETFs exhibit an average higher monthly flow of USD 4.968 million compared to conventional ETFs. The coefficients of the external ratings remain insignificant.

These findings demonstrate that a fund disclosing a sustainability approach in the prospectus significantly attracts higher flows across all fund products, irrespective of whether they are ETFs or mutual funds offered to retail or institutional investors. In contrast, the effect of external sustainability ratings on flows is less conclusive and diminishes once we account for the intentional sustainability strategy of the fund. It seems that previous research has overestimated the relevance of external sustainability ratings, while also underestimating the preference investors have for sustainable funds, because they omitted prospectus information.

Döttling and Kim (2024) suggest that the demand for sustainable funds among investors may be sensitive to income shocks or crises, leading to variations over time. Examining our data, we observe that funds with a Sustainable Prospectus consistently received inflows, whereas conventional funds experienced strong outflows from October 2018 to October 2020, followed by inflows thereafter. To account for potential shifts in preferences, we conduct analyses for two

[1] We decide to analyze dollar flows instead of relative flows, where the dollar flows are adjusted by the prior periods' funds' AUM (compare Sirri and Tufano 1998). The reason is that relative flows may be distorted, as Sustainable Prospectus funds, on average, tend to be smaller in size compared to conventional funds, while experiencing higher dollar flows (see Table 1). To control for the size effects of funds, we include fund size as a control variable in our analysis. Additionally, as a robustness check, we conducted all analyses using relative flows and obtained comparable results. These results are shown in the Appendix in Tables 8, 9, 10 and 11.

[2] We use similar control variables to explain net fund flows. But, instead of conducting an OLS difference–in–differences analysis we perform a time fixed effects regression.

separate observation periods, as detailed in Appendix A.1. We find no significant differences compared to the results shown in Table 2. This aligns with the findings of Pástor and Vorsatz (2020), who also do not report any changes in preference for sustainable funds over time.

## The role of external ratings

Given previous studies indicating that investors may use external sustainability ratings to validate financial products that claim to be sustainable, we hypothesize that favorable ratings for sustainable funds lead to higher inflows. This would suggest that external ratings are perceived as a confirmation of sustainability by investors. To test this hypothesis, we extend the model from Table 2, Column (3), by incorporating interaction terms. Specifically, we use interaction terms between the dummy variable for Sustainable Prospectus funds and the dummy variables for a Sustainable Globe Rated and a Sustainable Carbon Rated fund.

Analyzing the full sample regression in Table 3, Column (1), we find that sustainability information provided in the prospectus alone has a significantly positive effect on average fund flows, amounting to USD 1.606 million. A superior Globe Rating does not affect the flows of a conventional fund. However, for a Sustainable Prospectus fund, a superior Globe Rating leads to an expected increase of the monthly flows of USD 1.631 million. On the other hand, Sustainable Carbon Rated funds do not experience significantly higher flows, regardless of whether they are conventional or sustainable according to their prospectus. For retail share classes of mutual funds (Column (2)), the overall results are comparable. Additionally, we find that Sustainable Prospectus funds receive significantly higher flows when they are also Sustainable Carbon Rated.

Column (3) presents the results for the institutional share classes of funds, indicating that funds with a superior Globe Rating receive USD 0.638 million higher flows, but only at a significance level of 5 percent. Sustainable Prospectus funds, on average, receive USD 1.693 million higher flows per month compared to conventional funds, significant at the 1 percent level. An additional superior Globe Rating does not further affect the flows. The coefficients with the Sustainable Carbon Rated funds are also insignificant.

In Column (4), we observe that Sustainable Prospectus ETFs receive on average USD 9.316 million higher monthly flows than conventional ETFs, but only if they also exhibit a superior Globe Rating. The presence of sustainability information in the prospectus or a superior sustainability rating alone does not significantly influence the flows of ETFs.

These results indicate that external ratings on their own have mostly no material influence on investor decisions. We get comparable results when explaining relative fund flows (see Appendix, Table 9). External ratings primarily exert a significant influence on fund flows when applied to funds explicitly promoting a sustainability orientation. Sustainability information given in the fund prospectus significantly affects investors, regardless of external ratings, and results in higher inflows. An additional superior sustainability rating leads to even higher inflows. The latter applies particularly to Sustainable Prospectus ETFs, which only attract higher flows if they also have a superior external sustainability rating. We interpret these observations as follows: Investors seem to choose sustainable investments on the basis of sustainability information available in fund prospectuses and may use ratings to verify the proclaimed sustainability. Therefore, to attract inflows, providers of sustainable funds should communicate sustainability in their prospectuses and at the same time ensure that their portfolios align with established external sustainability ratings. In future academic research, it should be considered that external sustainability ratings have limited relevance for conventional funds, but rather for funds that actively assert their sustainability.

## Sustainable fund names

Following our results showing that sustainability information in the fund prospectus leads to significantly higher flows, we examine whether and how the name as a source of information affects investors (compare Cooper et al. 2005; El Ghoul and Karoui 2021). We hypothesize that sustainable funds with a sustainability reference in their name attract higher flows due to their ease of discovery and identification by investors, or simply because investors are easily attracted by "cosmetic effects" like the fund name (compare Cooper et al. 2005).

We analyze the fund names of funds using a keyword search with 25 keywords and abbreviations (compare van der Beck 2021).[3] We create the dummy variable Sustainable Name, indicating whether a fund has a sustainability reference in its name. We identify 2934 Sustainable Name funds. Of these, 2673 funds also include sustainability information in their prospectus. The remaining 261 funds are not sustainable according to the prospectus and could therefore possibly be greenwashing funds, where the name suggests sustainability that may not actually be implemented in the investment strategy.

In the analysis shown in Table 4, we examine the impact of the sustainability information provided in the prospectus and in the name on the fund flows. Column (1) reveals that

[3] We use the following 25 keywords and abbreviations comparable to van der Beck (2021), where upper and lower case is ignored: carbon, clean, climate, clmt, co2, conscious, csr, earth, env, esg, ethical, fair, gender, gndr, gov, green, impact, renew, resp, screen, soc, solar, sri, sust and thematic.

**Table 3** Interactions of prospectus sustainability information and sustainability ratings

| Fund net flow (million) | Full Sample | Retail Mutual Fund Share Classes | Institutional Mutual Fund Share Classes | ETFs |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Sustainable prospectus | 1.606*** | 0.857*** | 1.693*** | 1.232 |
| | (0.219) | (0.144) | (0.300) | (1.498) |
| Sustainable globe rated | 0.186 | 0.008 | 0.638** | −1.205 |
| | (0.202) | (0.127) | (0.305) | (1.153) |
| Sustainable prospectus x sustainable globe rated | 1.631*** | 0.882*** | 0.197 | 9.316*** |
| | (0.368) | (0.226) | (0.474) | (2.282) |
| Sustainable carbon rated | 0.084 | −0.061 | 0.061 | 1.400 |
| | (0.227) | (0.141) | (0.342) | (1.280) |
| Sustainable prospectus x sustainable carbon rated | 0.375 | 0.484** | −0.130 | −2.280 |
| | (0.380) | (0.231) | (0.485) | (2.604) |
| Return $t-1$ | 35.264*** | 13.624*** | 27.866*** | 138.670*** |
| | (1.272) | (0.685) | (2.080) | (9.734) |
| Return $t-2$ | 23.276*** | 10.645*** | 22.441*** | 60.372*** |
| | (1.077) | (0.584) | (1.822) | (8.118) |
| Return $t-3$ | 20.911*** | 9.023*** | 25.355*** | 38.769*** |
| | (1.088) | (0.560) | (1.774) | (7.489) |
| Volatility | −35.880*** | −0.276*** | −0.536*** | 0.568*** |
| | (3.960) | (0.025) | (0.072) | (0.204) |
| Fund fee | 66.273*** | 34.635*** | 58.778** | −1994.197*** |
| | (12.809) | (8.609) | (25.661) | (254.815) |
| Log fund size | −0.442*** | −0.542*** | −0.908*** | 6.517*** |
| | (0.064) | (0.037) | (0.068) | (0.437) |
| Five star rating | 7.043*** | 3.315*** | 7.253*** | 9.689*** |
| | (0.345) | (0.197) | (0.477) | (2.303) |
| Fund age | −0.135*** | −0.079*** | −0.077*** | −0.245* |
| | (0.009) | (0.006) | (0.013) | (0.128) |
| Index fund dummy | 5.078*** | 2.289*** | 1.573*** | −5.186*** |
| | (0.262) | (0.219) | (0.484) | (1.617) |
| Constant | 1.983*** | 2.494*** | 4.051*** | −16.191*** |
| | (0.376) | (0.218) | (0.544) | (2.666) |
| Observations | 594,021 | 490,682 | 209,203 | 79,793 |
| R-squared | 0.032 | 0.042 | 0.030 | 0.071 |
| Time FE | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 10/2022 on fund characteristics with interactions of the Sustainable Prospectus dummy and the Morningstar Sustainability Globe Rating and Low Carbon Designation. The analysis is conducted for the Full Sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

the coefficient for the Sustainable Name dummy is significant, indicating that funds with sustainability terms in their names attract, on average, USD 2.204 million more in flows than funds without such terms. Similarly, the Sustainable Prospectus dummy also demonstrate a significant positive effect on flows. In Column (2) we introduce an interaction term between the Sustainable Name dummy and the Sustainable Prospectus dummy. The interaction term's coefficient

**Table 4** Sustainable fund name analysis

| Fund net flow (million) | Full sample | | Retail mutual fund share classes | | Institutional mutual fund share classes | | ETFs | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Sustainable prospectus | 1.820*** | 1.362*** | 1.172*** | 1.093*** | 1.235*** | 1.055*** | 2.362** | −2.830*** |
| | (0.183) | (0.194) | (0.123) | (0.132) | (0.244) | (0.257) | (1.154) | (1.052) |
| Sustainable name | 2.204*** | −0.230 | 1.020*** | 0.542*** | 1.755*** | 0.575 | 4.748*** | −4.281*** |
| | (0.284) | (0.296) | (0.180) | (0.187) | (0.359) | (0.426) | (1.438) | (1.636) |
| Sustainable prospectus × sustainable name | | 3.589*** | | 0.694** | | 1.617*** | | 17.020*** |
| | | (0.461) | | (0.296) | | (0.595) | | (2.414) |
| Sustainable globe rated | 0.527*** | 0.491*** | 0.220** | 0.214** | 0.602** | 0.589** | 0.126 | −0.337 |
| | (0.171) | (0.170) | (0.106) | (0.106) | (0.246) | (0.247) | (1.034) | (1.033) |
| Sustainable carbon rated | 0.174 | 0.174 | 0.070 | 0.071 | −0.021 | −0.036 | 1.126 | 0.811 |
| | (0.189) | (0.189) | (0.117) | (0.117) | (0.280) | (0.280) | (1.139) | (1.131) |
| Return $t-1$ | 35.177*** | 35.104*** | 13.583*** | 13.570*** | 27.804*** | 27.756*** | 138.443*** | 138.352*** |
| | (1.271) | (1.270) | (0.684) | (0.684) | (2.080) | (2.080) | (9.704) | (9.678) |
| Return $t-2$ | 23.186*** | 23.115*** | 10.604*** | 10.593*** | 22.360*** | 22.309*** | 60.189*** | 60.051*** |
| | (1.077) | (1.076) | (0.583) | (0.583) | (1.823) | (1.823) | (8.099) | (8.082) |
| Return $t-3$ | 20.828*** | 20.760*** | 8.991*** | 8.981*** | 25.262*** | 25.212*** | 38.560*** | 38.427*** |
| | (1.088) | (1.087) | (0.560) | (0.560) | (1.775) | (1.775) | (7.474) | (7.460) |
| Volatility | −35.093*** | −35.069*** | −0.271*** | −0.271*** | −0.532*** | −0.535*** | 0.577*** | 0.555*** |
| | (3.945) | (3.943) | (0.024) | (0.024) | (0.072) | (0.072) | (0.204) | (0.203) |
| Fund fee | 73.983*** | 74.990*** | 37.775*** | 38.132*** | 66.036** | 64.563** | −1944.744*** | −1985.879*** |
| | (12.848) | (12.855) | (8.642) | (8.640) | (25.724) | (25.714) | (255.371) | (254.495) |
| Log fund size | −0.429*** | −0.425*** | −0.536*** | −0.534*** | −0.902*** | −0.904*** | 6.565*** | 6.469*** |
| | (0.064) | (0.064) | (0.037) | (0.037) | (0.068) | (0.068) | (0.438) | (0.435) |
| Five star rating | 7.032*** | 7.019*** | 3.309*** | 3.303*** | 7.240*** | 7.239*** | 9.555*** | 9.680*** |
| | (0.345) | (0.345) | (0.197) | (0.197) | (0.477) | (0.477) | (2.306) | (2.298) |
| Fund age | −0.131*** | −0.131*** | −0.078*** | −0.078*** | −0.075*** | −0.075*** | −0.236* | −0.223* |
| | (0.009) | (0.009) | (0.006) | (0.006) | (0.013) | (0.013) | (0.129) | (0.128) |
| Index fund dummy | 5.070*** | 5.047*** | 2.309*** | 2.306*** | 1.529*** | 1.505*** | −5.180*** | −5.025*** |
| | (0.261) | (0.261) | (0.220) | (0.220) | (0.480) | (0.478) | (1.623) | (1.620) |
| Constant | 1.578*** | 1.636*** | 2.262*** | 2.266*** | 3.915*** | 4.001*** | −17.226*** | −16.163*** |
| | (0.372) | (0.371) | (0.214) | (0.214) | (0.542) | (0.541) | (2.666) | (2.638) |
| Observations | 594,021 | 594,021 | 490,682 | 490,682 | 209,203 | 209,203 | 79,793 | 79,793 |
| R-squared | 0.033 | 0.033 | 0.043 | 0.043 | 0.030 | 0.030 | 0.070 | 0.071 |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 10/2022 on sustainability information from the fund prospectus and sustainability hints in the name of the fund. We used a string analysis to analyze the fund names for sustainability cues and the dummy variable Sustainable Name indicates if a name of a fund entails a sustainability reference. The analysis is conducted for the full sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, ***denote significance on the 10%, 5%, and 1% level, respectively

is statistically significant and indicates that funds with sustainability references in both the name and the prospectus attract 3.589 million higher flows than conventional funds. Notably, while the Sustainable Prospectus variable remains significantly positive, the Sustainable Name alone does not significantly influence fund flows. This disparity suggests that investors may prioritize detailed sustainable practices outlined in the prospectus over mere naming conventions. It appears that investors tend to select sustainable funds based on prospectus information, either alone or in conjunction with the fund name, rather than the name alone.

**Table 5** Sustainable investment approaches

| *Panel A—Regression analysis* | Full sample | Retail mutual fund share classes | Institutional mutual fund share classes | ETFs |
|---|---|---|---|---|
| Fund net flow (million) | (1) | (2) | (3) | (4) |
| Exclusions only | 0.587*** | 0.597*** | 0.599** | −2.799** |
| | (0.194) | (0.133) | (0.244) | (1.166) |
| ESG integration only | 3.117*** | 1.896*** | 2.027*** | 1.332 |
| | (0.404) | (0.294) | (0.537) | (2.459) |
| ESG integration and exclusions | 5.086*** | 2.353*** | 3.837*** | 11.486*** |
| | (0.395) | (0.231) | (0.530) | (2.317) |
| Thematic | 4.969*** | 3.714*** | 3.292*** | 7.211** |
| | (0.616) | (0.486) | (0.836) | (3.038) |
| Sustainable globe rated | 0.350** | 0.133 | 0.483* | −0.422 |
| | (0.171) | (0.106) | (0.249) | (1.034) |
| Sustainable carbon rated | 0.129 | 0.070 | −0.093 | 0.695 |
| | (0.189) | (0.116) | (0.280) | (1.131) |
| Return $t-1$ | 35.144*** | 13.542*** | 27.788*** | 138.787*** |
| | (1.270) | (0.684) | (2.078) | (9.669) |
| Return $t-2$ | 23.148*** | 10.561*** | 22.332*** | 60.466*** |
| | (1.076) | (0.583) | (1.821) | (8.090) |
| Return $t-3$ | 20.762*** | 8.933*** | 25.210*** | 38.779*** |
| | (1.087) | (0.559) | (1.773) | (7.468) |
| Volatility | −35.163*** | −0.269*** | −0.541*** | 0.550*** |
| | (3.949) | (0.025) | (0.072) | (0.204) |
| Fund fee | 69.803*** | 36.162*** | 59.257** | −1931.766*** |
| | (12.743) | (8.577) | (25.598) | (256.054) |
| Log fund size | −0.425*** | −0.532*** | −0.909*** | 6.469*** |
| | (0.064) | (0.037) | (0.068) | (0.435) |
| Five star rating | 7.010*** | 3.298*** | 7.196*** | 9.776*** |
| | (0.344) | (0.196) | (0.475) | (2.302) |
| Fund age | −0.131*** | −0.078*** | −0.076*** | −0.203 |
| | (0.009) | (0.006) | (0.013) | (0.128) |
| Index fund dummy | 5.017*** | 2.298*** | 1.452*** | −5.071*** |
| | (0.260) | (0.220) | (0.478) | (1.628) |
| Constant | 1.735*** | 2.305*** | 4.177*** | −16.591*** |
| | (0.371) | (0.214) | (0.537) | (2.645) |
| Observations | 594,021 | 490,682 | 209,203 | 79,793 |
| R-squared | 0.034 | 0.043 | 0.031 | 0.071 |
| Time FE | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes |
| *Panel B—Wald test for difference in coefficients* | | | | |
| Exclusions only vs. ESG integration only | 2.530*** | 1.299*** | 1.428** | 4.130 |
| Exclusions only vs. ESG integration and exclusions | 4.499*** | 1.756*** | 3.238*** | 14.285*** |
| Exclusions only vs. thematic | 4.382*** | 3.117*** | 2.693*** | 10.010*** |
| ESG integration only vs. ESG integration and exclusions | 1.969*** | 0.457 | 1.810*** | 10.154*** |
| ESG integration only vs. thematic | 1.852** | 1.818*** | 1.265 | 5.879 |
| ESG integration and exclusions vs. thematic | −0.117 | 1.361*** | −0.545 | −4.275 |

Panel A of this table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 10/2022 on fund characteristics with dummy-variables for the sustainable investment approach of the fund. The analysis is conducted for the Full Sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception. In Panel B, after each regression, a pairwise Wald test is conducted to examine the significance of differences between the coefficients of interest. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

In Column (3), the results for retail funds are comparable to those shown in Column (1), where both sustainability references in the prospectus and in the name of a fund show a positive effect on fund flows. In Column (4), we observe that the coefficient for the Sustainable Name dummy is statistically significant. Retail investors tend to allocate more capital towards funds with sustainability references in their names, even though the prospectuses of these funds do not detail how sustainability is implemented in the investment process. Similarly to the observations in Column (2), funds receive more inflows when they include sustainability references in the prospectus, and even more so when the sustainability orientation is additionally indicated in the fund's name.

In Column (5), results indicate that for institutional funds, both the Sustainable Prospectus dummy and the Sustainable Name dummy are significantly positive. Conversely, Column (6) presents an insignificant coefficient for the Sustainable Name dummy. Unlike retail investors, institutional investors do not allocate additional capital to funds that only advertise sustainability in their names. The coefficients for the 'Sustainable Prospectus' dummy and the interaction term, however, remain significant.

In Column (7), both the Sustainable Prospectus dummy and the Sustainable Name dummy are statistically significant and positively associated with ETF flows. Column (8) reveals that the interaction term has a statistically significant positive effect on ETF flows, while the Sustainable Prospectus and Sustainable Name dummies are now negatively correlated with the fund flows. This suggests that investors predominantly invest in either conventional ETFs or in sustainable ETFs that are explicitly marked as sustainable both in the prospectus and the name. Note that these results may be influenced by the fact that the ETF market has a high concentration of capital in a very small number of ETFs, as also documented by Clifford et al. (2014). In our sample, the large ETFs with high inflows are predominantly categorized as either fully conventional ETFs or ETFs that indicate their sustainability in both their prospectus and their name. To account for this, we additionally analyze relative inflows, which leads to results that are comparable to those of the mutual fund sample. The detailed results are presented in Appendix Table 10.

Overall, sustainability information in the prospectus attracts higher flows, even after controlling for sustainability references in the name of a fund. Generally, a sustainability reference in the name alone does not materially affect flows. However, funds with a Sustainable Prospectus that also signal sustainability in their name attract significantly higher flows than funds whose sustainability is not apparent from the name alone. We observe that retail investors are more likely to invest in funds that advertise sustainability in their name but do not mention sustainability in the prospectus when describing the investment strategy. In contrast, institutional investors do not disproportionately invest in such funds. This could suggest that some retail investors, possibly due to limited sustainable finance literacy (Filippini et al. 2024), are enticed by trendy sustainability names (compare Cooper et al. 2005 and El Ghoul and Karoui 2021), without further investigation into the prospectus' details. Conducting the analyses with relative flows leads to comparable results (see Appendix, Table 10).

## Sustainable investment approaches

Our approach allows us to differentiate Sustainable Prospectus funds based on their investment strategies regarding the consideration of sustainability in the investment process. To the best of our knowledge, Ielasi and Rossolini (2019) are the only ones to date to have conducted an empirical analysis that differentiates between distinct sustainability approaches of funds. Their study, however, focuses on return differences rather than on fund flows. Therefore, we are interested in whether the sustainability approaches outlined in the fund prospectus attract different levels of flows. Specifically, we examine four distinct sustainability approaches (Exclusion Only, ESG Integration Only, ESG Integration and Exclusion, and Thematic).

We replace the Sustainable Prospectus fund dummy from the regression from Table 2, Column (3), with four dummy variables representing the different sustainability strategies mentioned above. For the analysis of the full sample in Table 5, Panel A, Column (1), we observe that all strategy dummies are significantly positive. On average, Exclusion Only funds have USD 0.587 million higher monthly flows, ESG Integration Only funds have USD 3.117 million higher flows, ESG Integration and Exclusion funds have USD 5.086 million higher flows, and Thematic funds have USD 4.969 million higher flows compared to conventional funds. Panel B shows the results of a pairwise Wald test, which is conducted to examine the significance of differences between the coefficients of interest. While Sustainable Prospectus funds, in general, receive more flows than conventional funds, there are significant differences in flows among different sustainability strategies. For instance, funds adopting the ESG Integration Only strategy receive USD 2.53 million more flows on average than Exclusion Only funds. Thematic funds attract USD 4.382 million more flows than Exclusion Only funds, USD 1.852 million more flows than ESG Integration Only funds, and comparable high flows as ESG Integration and Exclusion funds. Note that after controlling for the different sustainability approaches, the coefficient for the Sustainable Globe Rated funds is now only significant at the 5 percent significance level and lower compared to Table 2 (Column (3)). This finding further strengthens our earlier proposition that, when analyzing fund flows, it is preferable

**Table 6** Determinants of fund flows: prospectus sustainability vs. sustainability ratings separated into two time periods

| *Panel A: 10/2018–09/2020* | Full sample | | Retail Mutual fund share classes | | Institutional Mutual fund share classes | | ETFs | |
|---|---|---|---|---|---|---|---|---|
| Fund net flow (million) | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Sustainable prospectus | | 3.257*** | | 2.119*** | | 2.104*** | | 7.524*** |
| | | (0.324) | | (0.204) | | (0.476) | | (2.030) |
| Sustainable globe rated | 1.349*** | 0.914*** | 0.449*** | 0.156 | 1.022*** | 0.772** | 1.473 | 0.545 |
| | (0.243) | (0.243) | (0.155) | (0.154) | (0.324) | (0.325) | (1.370) | (1.339) |
| Sustainable carbon rated | 1.174*** | 0.914*** | 0.487** | 0.314 | 0.893* | 0.772* | 4.482** | 4.004** |
| | (0.341) | (0.341) | (0.213) | (0.211) | (0.459) | (0.460) | (1.857) | (1.868) |
| Return *t*−1 | 29.256*** | 28.575*** | 11.582*** | 11.213*** | 24.291*** | 24.101*** | 108.953*** | 106.814*** |
| | (1.816) | (1.814) | (1.002) | (0.999) | (3.304) | (3.302) | (15.110) | (15.025) |
| Return *t*−2 | 21.395*** | 20.852*** | 9.332*** | 9.070*** | 25.799*** | 25.642*** | 70.697*** | 68.759*** |
| | (1.776) | (1.772) | (0.964) | (0.962) | (3.334) | (3.331) | (14.573) | (14.547) |
| Return *t*−3 | 21.600*** | 21.287*** | 9.768*** | 9.639*** | 23.946*** | 23.890*** | 48.441*** | 46.991*** |
| | (1.836) | (1.835) | (0.954) | (0.954) | (3.132) | (3.129) | (11.298) | (11.283) |
| Volatility | −41.020*** | −38.435*** | −0.236*** | −0.217*** | −0.730*** | −0.722*** | 0.571* | 0.554* |
| | (6.376) | (6.372) | (0.038) | (0.038) | (0.126) | (0.126) | (0.332) | (0.330) |
| Fund fee | −13.980 | −2.862 | −2.267 | 6.933 | −10.792 | −4.802 | −2542.539*** | −2514.351*** |
| | (18.530) | (18.563) | (12.519) | (12.565) | (39.545) | (39.418) | (405.494) | (405.050) |
| Log fund size | −1.441*** | −1.434*** | −1.125*** | −1.129*** | −1.112*** | −1.092*** | 3.270*** | 3.309*** |
| | (0.090) | (0.089) | (0.053) | (0.053) | (0.099) | (0.099) | (0.524) | (0.524) |
| Five star rating | 8.320*** | 8.516*** | 3.483*** | 3.611*** | 9.346*** | 9.436*** | 8.240*** | 8.831*** |
| | (0.508) | (0.507) | (0.298) | (0.297) | (0.732) | (0.730) | (2.899) | (2.909) |
| Fund age | −0.120*** | −0.110*** | −0.061*** | −0.055*** | −0.093*** | −0.084*** | −0.210 | −0.144 |
| | (0.012) | (0.012) | (0.008) | (0.008) | (0.019) | (0.019) | (0.182) | (0.181) |
| Index fund dummy | 4.133*** | 4.326*** | 2.221*** | 2.239*** | 2.006*** | 1.875*** | −3.281 | −3.698* |
| | (0.356) | (0.356) | (0.292) | (0.291) | (0.678) | (0.672) | (2.011) | (2.035) |
| Constant | 6.104*** | 5.318*** | 4.006*** | 3.478*** | 6.202*** | 5.693*** | −3.606 | −4.311 |
| | (0.591) | (0.593) | (0.341) | (0.345) | (0.937) | (0.936) | (3.647) | (3.656) |
| Observations | 199,093 | 199,093 | 164,657 | 164,657 | 74,107 | 74,107 | 26,336 | 26,336 |
| R-squared | 0.041 | 0.043 | 0.064 | 0.067 | 0.038 | 0.039 | 0.043 | 0.043 |
| *Panel B:10/2020–10/2022* | | | | | | | | |
| Sustainable prospectus | | 2.032*** | | 1.074*** | | 1.625*** | | 4.116*** |
| | | (0.203) | | (0.126) | | (0.246) | | (1.399) |
| Sustainable globe rated | 0.852*** | 0.541*** | 0.531*** | 0.366*** | 0.844*** | 0.615** | 1.377 | 0.734 |
| | (0.191) | (0.190) | (0.117) | (0.117) | (0.277) | (0.280) | (1.246) | (1.232) |
| Sustainable carbon rated | −0.034 | −0.206 | −0.034 | −0.127 | −0.223 | −0.330 | 0.094 | −0.288 |
| | (0.198) | (0.198) | (0.120) | (0.121) | (0.302) | (0.300) | (1.297) | (1.285) |
| Return *t*−1 | 38.586*** | 38.631*** | 15.539*** | 15.563*** | 28.897*** | 28.902*** | 156.981*** | 156.814*** |
| | (1.529) | (1.530) | (0.819) | (0.820) | (2.313) | (2.314) | (11.735) | (11.715) |
| Return *t*−2 | 24.185*** | 24.201*** | 11.930*** | 11.935*** | 19.821*** | 19.834*** | 57.354*** | 57.231*** |
| | (1.271) | (1.271) | (0.713) | (0.713) | (1.989) | (1.989) | (8.961) | (8.937) |
| Return *t*−3 | 20.695*** | 20.613*** | 9.267*** | 9.217*** | 25.262*** | 25.294*** | 36.993*** | 36.769*** |
| | (1.214) | (1.214) | (0.665) | (0.666) | (1.943) | (1.945) | (8.928) | (8.892) |
| Volatility | −26.822*** | −26.852*** | −0.257*** | −0.257*** | −0.437*** | −0.439*** | 0.859*** | 0.829*** |
| | (4.554) | (4.545) | (0.029) | (0.029) | (0.079) | (0.079) | (0.238) | (0.237) |
| Fund fee | 88.491*** | 97.497*** | 41.237*** | 46.145*** | 65.205** | 87.783*** | −1733.295*** | −1688.440*** |
| | (13.436) | (13.490) | (8.893) | (8.945) | (25.789) | (26.004) | (254.885) | (256.089) |
| Log fund size | 0.090 | 0.053 | −0.235*** | −0.255*** | −0.826*** | −0.807*** | 8.249*** | 8.230*** |
| | (0.066) | (0.067) | (0.036) | (0.036) | (0.070) | (0.070) | (0.499) | (0.500) |

**Table 6** (continued)

| *Panel A: 10/2018–09/2020* | Full sample | | Retail Mutual fund share classes | | Institutional Mutual fund share classes | | ETFs | |
|---|---|---|---|---|---|---|---|---|
| Fund net flow (million) | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Five star rating | 6.318*** | 6.368*** | 3.203*** | 3.231*** | 6.062*** | 6.053*** | 10.541*** | 10.570*** |
| | (0.368) | (0.367) | (0.216) | (0.216) | (0.492) | (0.491) | (2.768) | (2.765) |
| Fund age | −0.160*** | −0.149*** | −0.098*** | −0.092*** | −0.084*** | −0.074*** | −0.356*** | −0.308** |
| | (0.009) | (0.009) | (0.006) | (0.006) | (0.013) | (0.013) | (0.133) | (0.133) |
| Index fund dummy | 5.080*** | 5.301*** | 2.198*** | 2.268*** | 1.194** | 1.338** | −6.114*** | −6.209*** |
| | (0.276) | (0.279) | (0.228) | (0.228) | (0.539) | (0.539) | (1.838) | (1.843) |
| Constant | 0.348 | −0.097 | 1.986*** | 1.733*** | 4.059*** | 3.334*** | −23.915*** | −24.529*** |
| | (0.401) | (0.398) | (0.228) | (0.228) | (0.567) | (0.570) | (3.063) | (3.070) |
| Observations | 394,928 | 394,928 | 326,025 | 326,025 | 135,096 | 135,096 | 53,457 | 53,457 |
| R-squared | 0.029 | 0.030 | 0.033 | 0.034 | 0.026 | 0.027 | 0.087 | 0.087 |

This table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 09/2020 in Panel A and 10/2020 through 10/2022 in Panel B on fund characteristics with Morningstar Sustainability Globe Rating and Low Carbon Designation of the fund lagged by one month (Column (1)) and Prospectus Sustainability Information dummy variable (Column (2)). The same analysis is conducted for Retail Mutual Funds (Columns (3)–(4)), Institutional Mutual Funds (Columns (5)–(6)) and ETFs (Columns (7)–(8)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. Thesample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

to consider sustainability information provided in prospectuses rather than relying solely on external ratings.

In the results for the retail share classes of mutual funds (Column (2)), we find that all sustainability strategies receive more flows than conventional funds. Funds with a thematic focus receive the highest flows compared to conventional funds or funds with other sustainability approaches, as demonstrated by the pairwise Wald test. The results are all statistically significant at the one percent level and indicate that retail investors exhibit a pronounced preference for mutual funds that align their investments with trendy sustainability goals or themes, such as climate action.

Turning to the institutional share classes of the funds (Column (3)), we similarly find that all strategies had significantly higher flows than conventional funds. Through the coefficients for the sustainability strategy dummies and the associated Wald tests, it becomes apparent that ESG Integration and Exclusion as well as Thematic funds received the highest flows among the Sustainable Prospectus funds.

In the case of ETFs (Column (4)), however, we find that Exclusion Only ETFs do receive significantly lower flows than conventional ETFs. We suspect that this may be due to shifts towards products with a more recent sustainability strategy, like funds that combine an ESG integration approach with exclusions or thematic funds. All other sustainability strategies attract higher flows, although the flow difference between ESG Integration Only and conventional ETFs is not significant. Particularly, ESG Integration and Exclusion ETFs have substantially higher flows compared to conventional ETFs. These results indicate that among ETFs, this strategy has attracted the highest flows, which is confirmed by the Wald test.

In summary, we observe varying preferences for the different approaches communicated by Sustainable Prospectus funds. We obtain the same results when explaining relative fund flows (see Appendix, Table 11). Differences in preferences are particularly evident between retail and institutional investors. For instance, our results suggest that retail investors have a significant preference for thematic sustainability approaches. As thematic investment is a quite modern approach, we assume that retail investors might follow a trend (compare Cooper et al. 2005) and are able to adopt this faster than institutional investors. The latter may need to update their investment policies accordingly or even encounter challenges when investing in such concentrated or specialized investment products (compare Somefun et al. 2023). Overall, these findings suggest that in both practice and academic research, the particular sustainability strategy, along with the investor and fund types, significantly influence sustainable fund flows and should thus be explicitly taken into account. For robustness, we additionally controlled for name effects in the analyses from Table 5, as some sustainability approaches may indicate their sustainability in their names more frequently. The fund name does not affect the relevance of the sustainability approach for fund flows and the main findings remain unchanged (see Appendix A.2.).

**Table 7** Sustainable investment approaches controlling for sustainability names

| Fund net flow (million) | Full Sample | Retail mutual fund share classes | Institutional mutual fund share classes | ETFs |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| *Panel A—regression analysis* | | | | |
| Exclusions only | 0.571*** | 0.591*** | 0.579** | −2.777** |
| | (0.193) | (0.133) | (0.244) | (1.162) |
| ESG integration only | 2.686*** | 1.701*** | 1.565*** | 2.036 |
| | (0.435) | (0.308) | (0.555) | (2.678) |
| ESG integration and exclusions | 4.671*** | 2.169*** | 3.426*** | 12.222*** |
| | (0.387) | (0.241) | (0.554) | (2.454) |
| Thematic | 4.599*** | 3.546*** | 2.907*** | 7.818** |
| | (0.629) | (0.494) | (0.843) | (3.174) |
| Sustainable name | 0.712** | 0.343* | 0.670* | −0.835 |
| | (0.297) | (0.195) | (0.377) | (1.515) |
| Sustainable globe rated | 0.342** | 0.130 | 0.477* | −0.410 |
| | (0.171) | (0.106) | (0.249) | (1.034) |
| Sustainable carbon rated | 0.123 | 0.065 | −0.095 | 0.678 |
| | (0.189) | (0.116) | (0.280) | (1.130) |
| Return $t-1$ | 35.132*** | 13.537*** | 27.778*** | 138.803*** |
| | (1.270) | (0.684) | (2.078) | (9.669) |
| Return $t-2$ | 23.135*** | 10.556*** | 22.319*** | 60.489*** |
| | (1.075) | (0.583) | (1.822) | (8.091) |
| Return $t-3$ | 20.753*** | 8.929*** | 25.196*** | 38.801*** |
| | (1.087) | (0.559) | (1.773) | (7.469) |
| Volatility | −35.111*** | −0.268*** | −0.540*** | 0.549*** |
| | (3.947) | (0.025) | (0.072) | (0.204) |
| Fund fee | 71.520*** | 36.726*** | 62.180** | −1935.820*** |
| | (12.776) | (8.574) | (25.670) | (256.594) |
| Log fund size | −0.423*** | −0.531*** | −0.907*** | 6.463*** |
| | (0.064) | (0.037) | (0.068) | (0.435) |
| Five star rating | 7.009*** | 3.298*** | 7.197*** | 9.789*** |
| | (0.344) | (0.196) | (0.475) | (2.300) |
| Fund age | −0.130*** | −0.077*** | −0.075*** | −0.205 |
| | (0.009) | (0.006) | (0.013) | (0.128) |
| Index fund dummy | 5.012*** | 2.300*** | 1.450*** | −5.061*** |
| | (0.260) | (0.220) | (0.478) | (1.627) |
| Constant | 1.677*** | 2.281*** | 4.116*** | −16.504*** |
| | (0.371) | (0.214) | (0.538) | (2.651) |
| Observations | 594,021 | 490,682 | 209,203 | 79,793 |
| R-squared | 0.034 | 0.043 | 0.031 | 0.071 |
| Time FE | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes |
| *Panel B—Wald test for difference in coefficients* | | | | |
| Exclusions only vs. ESG integration only | −2.115*** | −1.110*** | −0.986* | −4.806* |
| Exclusions only vs. ESG integration and exclusions | −4.100*** | −1.578*** | −2.847*** | −14.990*** |
| Exclusions only vs. thematic | −4.028*** | −2.955*** | −2.328*** | −10.588*** |
| ESG integration only vs. ESG integration and exclusions | −1.985*** | −0.468 | −1.861*** | −10.184*** |
| ESG integration only vs. thematic | −1.913*** | −1.845*** | −1.342 | −5.782 |
| ESG integration and exclusions vs. thematic | 0.072 | −1.377*** | 0.519 | 4.402 |

**Table 7** (continued)

Panel A of this table shows the results of panel regressions with fixed effects of monthly USD flows from 10/2018 through 10/2022 on fund characteristics with dummy-variables for the sustainable investment approach of the fund. We used a string analysis to analyze the fund names for sustainability cues and the dummy variable Sustainable Name indicates if a name of a fund entails a sustainability reference. The analysis is conducted for the Full Sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months afterinception. In Panel B, after each regression, a pairwise Wald test is conducted to examine the significance of differences between the coefficients of interest. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

## Conclusion

Recent fund flow reports reveal a decline in the demand for sustainable funds compared to previous years (Morningstar 2024). Despite this downturn, it remains plausible to suggest a gradual shift in investor preferences towards sustainability. Prior academic research has predominantly posited that investors express this preference by choosing sustainable funds based largely on external sustainability ratings. However, our findings challenge the previously assumed high significance of external sustainability ratings for fund investors.

Prospectus information has been overlooked in previous studies, despite investors very likely consider it when identifying and selecting sustainable funds. We investigate the effect of sustainability information in fund prospectuses on fund flows and find that it strongly affects investor decisions. The economic relevance of prospectus information outweighs that of external sustainability ratings by far. The overestimation of the latter's importance stems from studies relying solely on ratings. The influence of ratings must be examined with care, as they do not affect investor decisions for conventional funds but do for funds that indicate sustainability in their prospectuses. We posit that investors may use ratings to verify a fund's self-proclaimed sustainability.

Other fund characteristics and information also influence investor decisions. We find that sustainability cues in fund names attract more investors, likely because they make such funds easier to find or identify. In particular, retail investors are influenced by superficial fund characteristics, such as the name, and may be guided by a fund's perceived rather than actual sustainable investment commitments. Additionally, we reveal that retail and institutional investors exhibit different preferences for various sustainability approaches. For instance, while retail investors prefer thematic funds with trendy investment approaches (e.g., climate change), institutional investors opt for funds combining exclusions and ESG criteria.

Our study highlights the importance of sustainability information supplied by fund providers in guiding investment decisions. Andrikogiannopoulou et al. (2022) demonstrate that the way sustainability disclosures are presented in fund prospectuses can affect investors. As our findings underscore the overall importance of prospectus information there may be a rationale for examining and exposing misleading or exaggerated sustainability commitments in this context. This may necessitate a review or even regulation of the disclosures made by fund providers. The European Union's Sustainable Finance Disclosure Regulation of 2021, for instance, adopts such an approach (European Commission 2019). It outlines the sustainability information that funds are required to disclose and counteracts the dissemination of exaggerated sustainability claims to prevent the creation of false expectations among investors, commonly referred to as greenwashing.

Overall, our findings suggest that the attention of academics, practitioners and policy makers may have been misdirected. The focus on sustainability ratings and their revision or regulation should at least be extended by prospectus information, fund names and the investment approach of the fund.

## Appendix

### Appendix: A.1

When examining the flows over time, we notice that the Sustainable Prospectus funds received continuous inflows. The conventional funds, on the other hand, had strong outflows during the period from October 2018 to October 2020, while they had mostly inflows thereafter. We then re-run the analysis of Table 2, dividing our sample into two periods accordingly, to check the robustness of our findings. We find that the results are robust, as we obtain very similar results for the two time periods. Table 6 Panel A and B show the results of this robustness check. The preference for sustainable funds is comparable between the two periods and the main analysis in Table 2.

**Table 8** Determinants of fund flows: prospectus sustainability versus sustainability ratings

| Relative flow | Full sample | | Retail Mutual fund share classes | | Institutional Mutual fund share classes | | ETFs | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Sustainable prospectus | | 0.005*** | | 0.005*** | | 0.004*** | | 0.015*** |
| | | (0.000) | | (0.000) | | (0.001) | | (0.002) |
| Sustainable globe rated | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.001** | 0.001 | 0.003** | 0.001 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) |
| Sustainable carbon rated | 0.002*** | 0.002*** | 0.002*** | 0.002*** | 0.001** | 0.001* | 0.005*** | 0.003** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) |
| Return $t-1$ | 0.101*** | 0.101*** | 0.073*** | 0.073*** | 0.141*** | 0.141*** | 0.310*** | 0.308*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.007) | (0.007) | (0.017) | (0.017) |
| Return $t-2$ | 0.069*** | 0.069*** | 0.058*** | 0.058*** | 0.094*** | 0.094*** | 0.161*** | 0.159*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.006) | (0.006) | (0.013) | (0.013) |
| Return $t-3$ | 0.053*** | 0.053*** | 0.047*** | 0.047*** | 0.080*** | 0.080*** | 0.104*** | 0.102*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.006) | (0.006) | (0.014) | (0.013) |
| Volatility | −0.054*** | −0.053*** | −0.001*** | −0.001*** | −0.001*** | −0.001*** | 0.002*** | 0.002*** |
| | (0.010) | (0.010) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| fund fee | −0.282*** | −0.261*** | −0.271*** | −0.250*** | −0.298*** | −0.260*** | −2.481*** | −2.336*** |
| | (0.028) | (0.028) | (0.029) | (0.029) | (0.072) | (0.072) | (0.282) | (0.280) |
| Log fund size | −0.001*** | −0.002*** | −0.002*** | −0.002*** | −0.002*** | −0.002*** | −0.003*** | −0.003*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Five star rating | 0.010*** | 0.011*** | 0.011*** | 0.011*** | 0.016*** | 0.016*** | 0.008*** | 0.008*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.002) | (0.002) |
| Fund age | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.001*** | −0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Index fund dummy | 0.008*** | 0.009*** | 0.007*** | 0.007*** | 0.002** | 0.002** | 0.002 | 0.001 |
| | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) |
| Constant | 0.013*** | 0.012*** | 0.014*** | 0.013*** | 0.017*** | 0.016*** | 0.033*** | 0.031*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.004) | (0.004) |
| Observations | 594,021 | 594,021 | 490,682 | 490,682 | 209,203 | 209,203 | 79,793 | 79,793 |
| R-squared | 0.034 | 0.035 | 0.033 | 0.034 | 0.025 | 0.025 | 0.048 | 0.050 |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly relative fund flows from 10/2018 through 10/2022 on fund characteristics with Morningstar Sustainability Globe Rating and Low Carbon Designation of the fund lagged by one month (Column (1)) and Prospectus Sustainability Information dummy variable (Column (2)). The same analysis is conducted for Retail Mutual Funds (Columns (3)–(4)), Institutional Mutual Funds (Columns (5)–(6)) and ETFs (Columns (7)–(8)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds, excluding funds that are younger than three months. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

## Appendix: A.2

Sustainability indicators in names may vary across different sustainability approaches. Therefore, we complement the analyses from Table 5 with the name dummy introduced and shown in Table 4. We observe that a sustainability indicator in a fund's name has a positive effect on its flows. The coefficients for the individual sustainability approaches change only marginally compared to Table 5, and the interpretation of the results remains unchanged (Tables 7, 8).

## Appendix: A.3

Several studies use relative flows instead of absolute net flows to examine the preferences and behavior of investors (e.g., Hartzmark and Sussman 2019; Reboredo and Otero

**Table 9** Interactions of prospectus sustainability information and sustainability ratings

| Relative flow | Full Sample | Retail Mutual Fund Share Classes | Institutional Mutual Fund Share Classes | ETFs |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Sustainable prospectus | 0.005*** | 0.005*** | 0.003*** | 0.010*** |
| | (0.000) | (0.001) | (0.001) | (0.002) |
| Sustainable globe rated | 0.001** | 0.001** | 0.000 | −0.001 |
| | (0.000) | (0.000) | (0.001) | (0.001) |
| Sustainable prospectus × sustainable globe rated | 0.004*** | 0.003*** | 0.002* | 0.011*** |
| | (0.001) | (0.001) | (0.001) | (0.003) |
| Sustainable carbon rated | 0.002*** | 0.002*** | 0.001** | 0.004** |
| | (0.000) | (0.000) | (0.001) | (0.001) |
| Sustainable prospectus × sustainable carbon rated | −0.002*** | −0.002*** | −0.001 | −0.002 |
| | (0.001) | (0.001) | (0.001) | (0.003) |
| Return $t-1$ | 0.101*** | 0.073*** | 0.141*** | 0.309*** |
| | (0.003) | (0.003) | (0.007) | (0.017) |
| Return $t-2$ | 0.069*** | 0.057*** | 0.094*** | 0.159*** |
| | (0.003) | (0.003) | (0.006) | (0.013) |
| Return $t-3$ | 0.053*** | 0.047*** | 0.080*** | 0.102*** |
| | (0.003) | (0.003) | (0.006) | (0.013) |
| Volatility | −0.052*** | −0.001*** | −0.001*** | 0.001*** |
| | (0.010) | (0.000) | (0.000) | (0.000) |
| Fund fee | −0.261*** | −0.249*** | −0.259*** | −2.359*** |
| | (0.028) | (0.029) | (0.072) | (0.281) |
| Log fund size | −0.002*** | −0.002*** | −0.002*** | −0.003*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Five star rating | 0.011*** | 0.011*** | 0.016*** | 0.009*** |
| | (0.000) | (0.000) | (0.001) | (0.002) |
| Fund age | −0.000*** | −0.000*** | −0.000*** | −0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Index fund dummy | 0.009*** | 0.007*** | 0.002** | 0.001 |
| | (0.000) | (0.001) | (0.001) | (0.002) |
| Constant | 0.012*** | 0.013*** | 0.016*** | 0.032*** |
| | (0.001) | (0.001) | (0.002) | (0.004) |
| Observations | 594,021 | 490,682 | 209,203 | 79,793 |
| R-squared | 0.035 | 0.034 | 0.025 | 0.051 |
| Time FE | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly relative fund flows from 10/2018 through 10/2022 on fund characteristics with interactions of the Sustainable Fund Dummy and the Morningstar Sustainability Globe Rating and Low Carbon Designation. The analysis is conducted for the Full Sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over thefirst three months after inception. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

2021; Becker et al. 2022; Ceccarelli et al. 2024). In our main analyses, we are using absolute net flows because they would not be affected by the adjustment for fund size. Furthermore, we are interested in which fund characteristics have attracted more money in the past in absolute terms and not in relative terms of fund size. To check the robustness of our results, we re-run the analyses of Tables 2, 3, 4, and 5 with relative flows following Sirri and Tufano (1998). We obtain very

**Table 10** Sustainable fund name analysis

| Relative flow | Full sample | | Retail Mutual fund share classes | | Institutional Mutual fund share classes | | ETFs | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Sustainable prospectus | 0.004*** | 0.003*** | 0.004*** | 0.003*** | 0.002*** | 0.001* | 0.012*** | 0.004** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.002) | (0.002) |
| Sustainable name | 0.004*** | 0.000 | 0.004*** | 0.001 | 0.005*** | −0.001 | 0.004** | −0.009*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.003) |
| Sustainable prospectus × sustainable name | | 0.006*** | | 0.004*** | | 0.008*** | | 0.026*** |
| | | (0.001) | | (0.001) | | (0.002) | | (0.004) |
| Sustainable globe rated | 0.001*** | 0.001*** | 0.001*** | 0.001*** | 0.001 | 0.001 | 0.000 | −0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) |
| Sustainable carbon rated | 0.002*** | 0.002*** | 0.001*** | 0.002*** | 0.001 | 0.001 | 0.003** | 0.003** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) |
| Return $t-1$ | 0.100*** | 0.100*** | 0.072*** | 0.072*** | 0.141*** | 0.141*** | 0.308*** | 0.308*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.007) | (0.007) | (0.017) | (0.017) |
| Return $t-2$ | 0.069*** | 0.069*** | 0.057*** | 0.057*** | 0.094*** | 0.094*** | 0.159*** | 0.159*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.006) | (0.006) | (0.013) | (0.013) |
| Return $t-3$ | 0.053*** | 0.053*** | 0.047*** | 0.047*** | 0.080*** | 0.079*** | 0.102*** | 0.102*** |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.006) | (0.006) | (0.013) | (0.013) |
| Volatility | −0.053*** | −0.053*** | −0.001*** | −0.001*** | −0.001*** | −0.001*** | 0.002*** | 0.001*** |
| | (0.010) | (0.010) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Fund fee | −0.250*** | −0.248*** | −0.243*** | −0.241*** | −0.240*** | −0.247*** | −2.308*** | −2.370*** |
| | (0.028) | (0.028) | (0.029) | (0.029) | (0.072) | (0.072) | (0.281) | (0.280) |
| Log fund size | −0.002*** | −0.002*** | −0.002*** | −0.002*** | −0.002*** | −0.002*** | −0.003*** | −0.003*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Five star rating | 0.011*** | 0.011*** | 0.011*** | 0.011*** | 0.016*** | 0.016*** | 0.008*** | 0.009*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.001) | (0.001) | (0.002) | (0.002) |
| Fund age | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.000*** | −0.001*** | −0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Index fund dummy | 0.009*** | 0.009*** | 0.007*** | 0.007*** | 0.002** | 0.002** | 0.001 | 0.002 |
| | (0.000) | (0.000) | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) |
| Constant | 0.011*** | 0.011*** | 0.013*** | 0.013*** | 0.015*** | 0.016*** | 0.031*** | 0.032*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.004) | (0.004) |
| Observations | 594,021 | 594,021 | 490,682 | 490,682 | 209,203 | 209,203 | 79,793 | 79,793 |
| R-squared | 0.035 | 0.036 | 0.034 | 0.034 | 0.026 | 0.026 | 0.050 | 0.051 |
| Time FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

This table shows the results of panel regressions with fixed effects of monthly relative flows from 10/2018 through 10/2022 on sustainability information from the fund prospectus and sustainability hints in the name of the fund. We used a string analysis to analyze the fund names for sustainability cues and the dummy variable Sustainable Name indicates if a name of a fund entails a sustainability reference. The analysis is conducted for the full sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months afterinception. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

**Table 11** Sustainable investment approaches

| *Panel A—regression analysis* | Full sample | Retail Mutual fund share classes | Institutional Mutual fund share classes | ETFs |
|---|---|---|---|---|
| Relative flow | (1) | (2) | (3) | (4) |
| Exclusions only | 0.001** | 0.001*** | −0.000 | 0.001 |
| | (0.000) | (0.000) | (0.001) | (0.002) |
| ESG integration only | 0.010*** | 0.011*** | 0.006*** | 0.014** |
| | (0.001) | (0.001) | (0.002) | (0.006) |
| ESG integration and exclusions | 0.009*** | 0.007*** | 0.009*** | 0.024*** |
| | (0.001) | (0.001) | (0.001) | (0.003) |
| Thematic | 0.013*** | 0.014*** | 0.015*** | 0.021*** |
| | (0.001) | (0.001) | (0.003) | (0.005) |
| Sustainable globe rated | 0.001*** | 0.001*** | 0.000 | −0.001 |
| | (0.000) | (0.000) | (0.001) | (0.001) |
| Sustainable carbon rated | 0.002*** | 0.002*** | 0.001 | 0.003** |
| | (0.000) | (0.000) | (0.001) | (0.001) |
| Return $t-1$ | 0.100*** | 0.072*** | 0.141*** | 0.308*** |
| | (0.003) | (0.003) | (0.007) | (0.017) |
| Return $t-2$ | 0.069*** | 0.057*** | 0.094*** | 0.159*** |
| | (0.003) | (0.003) | (0.006) | (0.013) |
| Return $t-3$ | 0.053*** | 0.047*** | 0.079*** | 0.102*** |
| | (0.003) | (0.003) | (0.006) | (0.013) |
| Volatility | −0.051*** | −0.001*** | −0.001*** | 0.001*** |
| | (0.010) | (0.000) | (0.000) | (0.000) |
| Fund fee | −0.262*** | −0.251*** | −0.263*** | −2.293*** |
| | (0.028) | (0.028) | (0.072) | (0.280) |
| Log fund size | −0.001*** | −0.002*** | −0.002*** | −0.003*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Five star rating | 0.011*** | 0.011*** | 0.016*** | 0.009*** |
| | (0.000) | (0.000) | (0.001) | (0.002) |
| Fund age | −0.000*** | −0.000*** | −0.000*** | −0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Index fund dummy | 0.009*** | 0.007*** | 0.002** | 0.002 |
| | (0.000) | (0.001) | (0.001) | (0.002) |
| Constant | 0.011*** | 0.013*** | 0.016*** | 0.031*** |
| | (0.001) | (0.001) | (0.002) | (0.004) |
| Observations | 594,021 | 490,682 | 209,203 | 79,793 |
| R-squared | 0.036 | 0.036 | 0.026 | 0.052 |
| Time FE | Yes | Yes | Yes | Yes |
| Fund category FE | Yes | Yes | Yes | Yes |
| Fund-level clustered SE | Yes | Yes | Yes | Yes |
| *Panel B—Wald test for difference in coefficients* | | | | |
| Exclusions only vs. ESG integration only | 0.009*** | 0.010*** | 0.006*** | 0.013** |
| Exclusions only vs. ESG integration and exclusion | 0.008*** | 0.006*** | 0.009*** | 0.023*** |
| Exclusions only vs. thematic | 0.012*** | 0.013*** | 0.015*** | 0.020*** |
| ESG integration only vs. ESG integration and exclusions | −0.001 | −0.004*** | 0.003 | 0.010 |
| ESG integration only vs. thematic | 0.003* | 0.003* | 0.009** | 0.007 |
| ESG integration and exclusions vs. thematic | 0.004*** | 0.007*** | 0.006* | −0.003 |

Panel A of this table shows the results of panel regressions with fixed effects of monthly relative fund flows from 10/2018 through 10/2022 on fund characteristics with dummy-variables for the sustainable investment approach of the fund. The analysis is conducted for the Full Sample (Column (1)), Retail Mutual Funds (Column (2)), Institutional Mutual Funds (Column (3)) and ETFs (Column (4)). Funds with five or four Morningstar Sustainability Globes are considered as Sustainable Globe Rated funds and funds with the Low Carbon Designation as Sustainable Carbon Rated funds. All regressions use lagged variables and control for fund category-by-month fixed effects. The sample includes equity mutual funds and ETFs, excluding fund periods over the first three months after inception. In Panel B, after each regression, a pairwise Wald test is conducted to examine the significance of differences between the coefficients of interest. The standard errors are clustered at the fund-level, and robust standard errors are reported in parentheses. *, **, *** denote significance on the 10%, 5%, and 1% level, respectively

similar results, which can also be interpreted in the same economic sense as those of our main analyses (Tables 9, 10, and 11).

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## References

Ammann, M., C. Bauer, S. Fischer, and P. Müller. 2019. The impact of the Morningstar sustainability rating on mutual fund flows. *European Financial Management* 25 (3): 520–553. https://doi.org/10.1111/eufm.12181.

Andrikogiannopoulou, A., P. Krueger, S. F. Mitali, and F. Papakonstantinou. 2022. Discretionary information in ESG investing: A text analysis of mutual fund prospectuses. Working paper. https://doi.org/10.2139/ssrn.4082263.

Aragon, G. O., and S. Chen. 2023. Machine-learning about ESG preferences: Evidence from fund flows. Working paper. https://doi.org/10.2139/ssrn.4522156.

Becker, M.G., F. Martin, and A. Walter. 2022. The power of ESG transparency: The effect of the new SFDR sustainability labels on mutual funds and individual investors. *Finance Research Letters* 47: 102708. https://doi.org/10.1016/j.frl.2022.102708.

Berg, F., K. Fabisik, and Z. Sautner. 2020. Rewriting history II: The (un)predictable past of ESG ratings. Working paper. https://doi.org/10.2139/ssrn.3722087.

Berg, F., J.F. Koelbel, and R. Rigobon. 2022. Aggregate confusion: The divergence of ESG ratings. *Review of Finance* 26 (6): 1315–1344. https://doi.org/10.1093/rof/rfac033.

Billio, M., M. Costola, I. Hristova, C. Latino, and L. Pelizzon. 2021. Inside the ESG ratings: (Dis) agreement and performance. *Corporate Social Responsibility and Environmental Management* 28 (5): 1426–1445. https://doi.org/10.1002/csr.2177.

Bollen, N.P. 2007. Mutual fund attributes and investor behavior. *Journal of Financial and Quantitative Aanalysis* 42 (3): 683–708. https://doi.org/10.1017/S0022109000004142.

Ceccarelli, M., S. Glossner, M. Homanen. 2022. Catering through transparency: Voluntary ESG disclosure by asset managers and fund flows. Working paper. https://doi.org/10.2139/ssrn.4110596.

Ceccarelli, M., S. Ramelli, and A.F. Wagner. 2024. Low carbon mutual funds. *Review of Finance* 28 (1): 45–74. https://doi.org/10.1093/rof/rfad015.

Charlin, V., A. Cifuentes, and J. Alfaro. 2022. ESG ratings: an industry in need of a major overhaul. *Journal of Sustainable Finance and Investment*. https://doi.org/10.1080/20430795.2022.2113358.

Chatterji, A.K., R. Durand, D.I. Levine, and S. Touboul. 2016. Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic Management Journal* 37 (8): 1597–1614. https://doi.org/10.1002/smj.2407.

Christoffersen, S.E., and H. Xu. 2017. Investor attrition and fund flows in mutual funds. *Journal of Financial and Quantitative Analysis* 52 (3): 867–893. https://doi.org/10.1017/S0022109017000291.

Clifford, C.P., J.A. Fulkerson, and B.D. Jordan. 2014. What drives ETF flows?. *Financial Review* 49 (3): 619–642. https://doi.org/10.1111/fire.12049.

Cooper, M.J., H. Gulen, and P.R. Rau. 2005. Changing names with style: Mutual fund name changes and their effects on fund flows. *The Journal of Finance* 60 (6): 2825–2858. https://doi.org/10.1111/j.1540-6261.2005.00818.x.

Del Guercio, D., and P.A. Tkac. 2008. Star power: The effect of monrningstar ratings on mutual fund flow. *Journal of Financial and Quantitative Analysis* 43 (4): 907–936. https://doi.org/10.1017/S0022109000014393.

Döttling, R., and S. Kim. 2024. Sustainability preferences under stress: Evidence from mutual fund flows during COVID-19. *Journal of Financial and Quantitative Analysis* 59 (2): 435–473. https://doi.org/10.1017/S0022109022001296.

El Ghoul, S., and A. Karoui. 2021. What's in a (green) name? The consequences of greening fund names on fund flows, turnover, and performance. *Finance Research Letters* 39: 101620. https://doi.org/10.1016/j.frl.2020.101620.

Escrig-Olmedo, E., M.Á. Fernández-Izquierdo, I. Ferrero-Ferrero, J.M. Rivera-Lirio, and M.J. Muñoz-Torres. 2019. Rating the raters: Evaluating how ESG rating agencies integrate sustainability principles. *Sustainability* 11 (3): 915. https://doi.org/10.3390/su11030915.

Escrig-Olmedo, E., M.J. Muñoz-Torres, M.Á. Fernández-Izquierdo, and J.M. Rivera-Lirio. 2014. Lights and shadows on sustainability rating scoring. *Review of Managerial Science* 8 (4): 559–574. https://doi.org/10.1007/s11846-013-0118-0.

European Commission. 2010. Comission Regulation (EU) No 583/2010 of 1 July 2010. https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:176:0001:0015:en:PDF. Last accessed on 19 Apr 2023.

European Commission. 2019. Regulation (EU) 2019/2088 of 27 November 2019. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R2088. Last accessed on 19 Apr 2024.

European Commission. 2023. Call for evidence for an impact assessment. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13330-Sustainable-finance-environmental-social-and-governance-ratings-and-sustainability-risks-in-credit-ratings_en. Last accessed on 19 Apr 2024.

Filippini, M., M. Leippold, and T. Wekhof. 2024. Sustainable finance literacy and the determinants of sustainable investing. *Journal of Banking and Finance* 163: 107167. https://doi.org/10.1016/j.jbankfin.2024.107167.

Gutsche, G., and A. Ziegler. 2019. Which private investors are willing to pay for sustainable investments? Empirical evidence from stated choice experiments. *Journal of Banking and Finance* 102: 193–214. https://doi.org/10.1016/j.jbankfin.2019.03.007.

Gutsche, G., and B. Zwergel. 2020. Investment barriers and labeling schemes for socially responsible investments. *Schmalenbach Business Review* 72: 111–157. https://doi.org/10.1007/s41464-020-00085-z.

Hartzmark, S.M., and A.B. Sussman. 2019. Do investors value sustainability? A natural experiment examining ranking and fund flows.

*The Journal of Finance* 74 (6): 2789–2837. https://doi.org/10.1111/jofi.12841.
Hornuf, L., and G. Yüksel. 2024. The performance of socially responsible investments: A meta-analysis. *European Financial Management* 30 (2): 1012–1061. https://doi.org/10.1111/eufm.12439.
Ielasi, F., and M. Rossolini. 2019. Responsible or thematic? The true nature of sustainability-themed mutual funds. *Sustainability* 11 (12): 3304. https://doi.org/10.3390/su11123304.
Larcker, D. F., L. Pomorski, B. Tayan, and E. M. Watts. 2022. ESG ratings: A Compass without direction. Working Paper. https://ssrn.com/abstract=4179647.
Li, F., and A. Polychronopoulos. 2020. What a difference an ESG ratings provider makes. *Research affiliates*, 24. https://www.researchaffiliates.com/content/dam/ra/publications/pdf/770-what-a-difference-an-esg-ratings-provider-makes.pdf.
Morningstar. 2023. Global Sustainable Fund Flows: Q1 2023 in Review. https://assets.contentstack.io/v3/assets/blt4eb669caa7dc65b2/bltefc96189f40e7a3f/6489ebdd48a8ff3e794767d7/Global_ESG_fund_flow_report_Q1_2023_FINAL(1).pdf. Last accessed on 19 Apr 2024
Morningstar. 2024. Global Sustainable Fund Flows: Q1 2024 in Review. https://assets.contentstack.io/v3/assets/blt4eb669caa7dc65b2/bltc4c7114f9f208d6b/66293d71ac4b00bffec432a1/Global_ESG_Flows_Q1_2024_Report.pdf. Last accessed on 29 Apr 2024.
Pástor, Ľ, and M.B. Vorsatz. 2020. Mutual fund performance and flows during the COVID-19 crisis. *The Review of Asset Pricing Studies* 10 (4): 791–833. https://doi.org/10.1093/rapstu/raaa015.
Ramos, S. B., M. C. Cortez, and F. Silva. 2023. Divergence in mutual fund sustainability labelling. Working paper. https://doi.org/10.2139/ssrn.4112227.
Reboredo, J.C., and L.A. Otero. 2021. Are investors aware of climate-related transition risks? Evidence from mutual fund flows. *Ecological Economics* 189: 107148. https://doi.org/10.1016/j.ecolecon.2021.107148.
Schoenmaker, D. 2017. Investing for the common good: A sustainable finance framework. *Brussels: Bruegel*, 80. ISBN: 978-9-078910-43-5.
Sirri, E.R., and P. Tufano. 1998. Costly search and mutual fund flows. *The Journal of Finance* 53 (5): 1589–1622. https://doi.org/10.1111/0022-1082.00066.
Somefun, K., R. Perchet, C. Yin, and R. Leote de Carvalho. 2023. Allocating to thematic investments. *Financial Analysts Journal* 79 (1): 18–36. https://doi.org/10.1080/0015198X.2022.2112895.
Van der Beck, P. 2021. Flow-driven ESG returns. Working paper. https://doi.org/10.2139/ssrn.3929359.



**Kevin Birk** graduated in business administration from the University of Augsburg, Germany, in 2020. In 2021, he joined the Chair of Finance and Banking at the same University as a doctoral candidate. His research activities are focused on sustainable investment strategies for funds. He is a member of the Sustainable Finance Research Platform (Germany).

**Stefan Jacob** , CFA, graduated in business administration from the University of Augsburg, Germany, in 2020. In 2020, he joined the Chair of Finance and Banking at the same University as a doctoral candidate. His research activities are focused on sustainable finance and impact investing. He is a member of the Sustainable Finance Research Platform (Germany).

**Marco Wilkens** graduated in business administration from the University of Hamburg, Germany, in 1988. Then he joined the Chair of Banking and Insurance at the same university as a doctoral candidate. He received the doctoral degree in business administration from the University of Hamburg in 1993. From 1993, he was a post-doctoral research associate at the Chair of Banking and Finance at the University of Göttingen, Germany. He received his habilitation from the same University in 1999. From 2001 to 2010, he was Professor of Finance and Banking and holder of the Chair of Finance and Banking at the Catholic University of Eichstätt-Ingolstadt, Germany. Since 2010, he has been Professor of Finance and Banking and holder of the Chair of Finance and Banking at the University of Augsburg, Germany. He has been a visiting Professor of Finance and Banking at the University of New South Wales, the University of Sydney, and at the Macquarie University, Australia, as well as at the University of Tasmania. His research activities are focused on mutual funds, interest rate risk, credit risk, carbon risk, risk management, sustainable finance, bank management, valuation of financial instruments, and financial engineering. He is a founding member of the Center for Climate Resilience and a member of the Sustainable Finance Research Platform (Germany).