

Launching for the “Greater Good”: Spillover Effect of ESG Funds

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ABSTRACT

We examine the incentives for mutual fund families to launch ESG funds. Our analyses reveal that introducing a new ESG fund is associated with a significant increase in capital inflows to sibling non-ESG funds in the family. This flow spillover accounts for a significant portion of the monetary gains for families to offer ESG funds. We also find that spillover is stronger among retail funds and cannot be attributed to changes in the ESG profiles or abnormal returns of the sibling funds. Our analyses underscore the marketing benefit of introducing ESG funds for fund families.

Keywords: ESG, Mutual fund family, Spillover effect, Fund flows, Affect-based judgment.

JEL classification: G10, G20, G23

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I. Introduction

ESG investing has experienced remarkable growth over the past decade, with assets surging as investors increasingly prioritize sustainability and corporate social responsibility. Although this expansion has recently slowed amid growing debates over greenwashing, regulatory uncertainty, and potential financial trade-offs, ESG remains a prominent investment theme. While extensive research has examined why ESG investing has been popular among investors, less is known about the incentives for financial intermediaries to offer ESG-oriented products. In this paper, we investigate how mutual fund families—key players in the financial market—generate revenue from launching ESG funds, whether the revenue sources differ from those of regular funds, and why such differences arise. Our study provides insights into the monetary incentives for financial intermediaries in promoting ESG investing, shedding light on the supply-side factors shaping the evolution of the ESG investment landscape.

The launch of an ESG fund, like any new fund, can attract inflows and generate fee revenue for the family. What differentiates ESG funds is that they appeal to investors with prosocial preferences, who derive utility from nonpecuniary attributes alongside expected financial performance (e.g., Barber, Morse, and Yasuda, 2021; Hart, Thesmar, and Zingales, 2024; Giglio, Maggiori, Stroebel, Tan, Utkus, and Xu, 2025). When an ESG offering is perceived as especially compelling (providing high non-pecuniary utilities, expected returns, or both), it can generate an affect-based halo effect (Thorndike, 1920), in which favorable perceptions of the ESG product spill over to the family brand and increase demand for the family’s other, non-ESG funds. More broadly, the launch of new ESG funds gives the fund family an opportunity to market its ESG activities, enhance its social image, and strengthen family-level ESG branding. We therefore hypothesize that ESG launches generate positive

demand spillovers, increasing flows to non-ESG sibling funds and raising family-level fee revenue. We study this spillover channel as a distinct and underexplored source of intermediary gains from ESG product expansion.

Consistent with our hypothesis, using a sample of U.S. equity mutual funds from 2004 to 2024, we find that ESG fund launches over the preceding 12 months are associated with a 0.269 percentage point increase in monthly flows to non-ESG sibling funds within the same family, controlling for fund and month fixed effects.¹ This positive spillover is robust to alternative fixed effects and controlling for the "star fund effect" previously documented by Nanda, Wang, and Zheng (2004). In contrast, conventional non-ESG launches do not generate significant flow spillovers.

To illustrate the potential economic magnitude of these spillovers, we conduct a simple back-of-the-envelope calibration. Assuming 12 non-ESG sibling funds, the fees associated with one month of incremental spillover flows amount to approximately \$0.010 million, exceeding the median monthly stand-alone revenue of \$0.003 million generated by a newly launched ESG fund. Under the alternative calibration in which spillover flows recur monthly and remain invested through the end of the first year, spillovers generate approximately \$0.804 million in first-year fee revenue (\$0.067 million per month), compared with \$0.036 million in stand-alone revenue (\$0.003 million per month). By comparison, a newly launched non-ESG fund generates median first-year stand-alone revenue of approximately \$0.084 million (\$0.007 million per

¹ We expect the halo effect to generate a transitory spillover in capital flows, which are a change-based measure, whereas its effect on assets under management (AUM), a stock measure, may be more persistent. Accordingly, to capture the short-run response, our flow-spillover analysis focuses on the first year following an ESG fund launch.

month) and, unlike an ESG fund launch, is not associated with the spillover revenues, highlighting notable differences in revenue structures.

We also observe that spillovers are concentrated among ESG funds launched before mid-2022, a period characterized by strong pro-ESG sentiment and favorable perceptions of ESG investing. The point estimates suggest that spillovers are larger from June 2020 to May 2022, particularly for socially oriented ESG funds launched in the aftermath of George Floyd's murder.² By contrast, spillovers become substantially weaker after May 2022, consistent with rising greenwashing concerns, intensifying political backlash against ESG, and the relative underperformance of high-ESG stocks amid recent geopolitical shocks, high inflation, and rising interest rates that benefited traditionally low-ESG stocks.

Next, we assess the causal interpretation of the ESG launch spillovers. An alternative interpretation of our observations is that unobservable demand shocks simultaneously drive both ESG fund launches and capital inflows to existing non-ESG funds. However, if this were the primary driver, the same shocks should also lead to launches of non-ESG funds and generate similar spillovers. This prediction is inconsistent with our evidence that non-ESG fund launches are associated with no flow spillovers.

We employ two additional methods to further address the omitted variable concern. First, we construct a matched sample around each fund family's initial ESG fund launch. We match non-ESG funds in launching families to comparable funds in families that do not launch an ESG fund within the previous two-year window. Using this stacked sample, we find that flow

² George Floyd, an African American man, was killed by a Minneapolis police officer on May 25, 2020. The incident, captured on video, sparked nationwide and global protests against racial injustice and police brutality, heightening investor attention to social issues within ESG.

spillovers emerge immediately after the ESG fund's inception month, with no evidence of differential pre-trends. This pattern mitigates the concern that the documented spillover effect is driven by pre-existing upward trends in family-level demand or a gradual buildup of branding activity prior to the launch.

Second, we use the number of natural disasters occurring near a fund family's headquarters in the past year as an instrumental variable for ESG fund launches. Natural disasters increase climate awareness among top managers at family headquarters, thereby increasing the likelihood of launching ESG funds. At the same time, these events are unlikely to directly affect market demand for the family's existing non-ESG products, since mutual fund investors, especially those in large fund families, are geographically dispersed and therefore unlikely to be directly exposed to local disasters near the families' headquarters. In two-stage least squares (2SLS) estimates based on the sample of large fund families, we find that local disasters are a strong positive predictor of ESG fund launches. Moreover, the positive flow spillover effect remains robust when the ESG fund launches are instrumented. These results suggest that the observed spillover effect is unlikely to be driven entirely by omitted variable bias.

While disaster-induced ESG launches are plausibly motivated by non-monetary considerations—making the spillovers identified in our 2SLS regressions likely to reflect unintended outcomes—this is unlikely to be the whole story. Fund families can learn from past spillovers and incorporate anticipated spillover revenues into their subsequent launch decisions. Consistent with this, we find a strong positive association between the number of ESG funds launched in a given three-year period and the magnitude of spillovers in the preceding three-year window. For example, spillover effects peak in 2016–2018, followed by the most active ESG

launch period in 2019–2021. This pattern is consistent with fund families recognizing potential spillover benefits and incorporating them into subsequent ESG fund launch decisions.

We next explore the economic channels underlying these spillover effects. Specifically, we investigate whether the launch of ESG funds leads to *real* changes in non-ESG sibling funds, such as adjustments to their ESG profile or financial performance, and whether investor-side behaviors and biases contribute to the observed spillover effects.

First, we examine whether the launch of ESG funds coincides with the adoption of sustainable investing policies at the fund family level, thereby attracting ESG-conscious investors. We find no evidence that the ESG profiles of sibling funds—measured by the ESG scores of portfolio holdings or their return sensitivity to ESG indices—improve following the introduction of ESG funds. This suggests that the flow spillover is unlikely to be driven by fundamental changes in the ESG strategies of sibling funds.

Second, we consider the possibility that the introduction of ESG funds has improved the financial performance of sibling funds by facilitating knowledge sharing within the family on how to incorporate ESG factors into trading strategies, thereby attracting return-sensitive investors. We find no significant improvement in either raw or risk-adjusted returns for the non-ESG sibling funds after the launch of ESG funds. Moreover, we observe that the spillover effect is more pronounced among passive sibling funds than active ones, despite the latter being better positioned to benefit from within-family knowledge sharing. These findings suggest that the flow spillover is unlikely to result from enhancements in the financial performance of the non-ESG funds.³

³ We acknowledge that our choice to analyze realized abnormal returns instead of directly surveying investors' beliefs leaves open the possibility that the observed spillover effect could be associated with investors holding a

These analyses suggest that the fundamental characteristics of non-ESG sibling funds remain unchanged following ESG fund launches, so that the documented spillovers therefore appear more consistent with investor perceptions and related demand-side channels. We next examine whether the spillover patterns are consistent with affect-based investor responses and halo-type effects at the fund-family level.

Several findings are broadly consistent with this interpretation. First, we find that the spillover effect is stronger among funds with a higher proportion of retail investors than among institutional funds, consistent with retail investors being more responsive to ESG-related perceptions and halo-type effects. Furthermore, such effects are likely to be amplified when ESG initiatives attract greater investor attention. In line with this prediction, we observe stronger spillovers when ESG fund launches are accompanied by greater media coverage and higher marketing expenditures.

To provide additional evidence on perception-driven spillovers, we study fund family flows around the launch of anti-ESG funds, defined as products that reject ESG screening, heavily invest in “sin stocks,” or market themselves as “anti-woke” or against ESG principles. These funds cater to investors who are skeptical of ESG, either because they derive negative nonpecuniary utility from ESG mandates or because they hold pessimistic beliefs about the financial prospects of ESG stocks. Because such investors were not the majority, especially before 2022, anti-ESG launches can trigger a “reverse halo effect” among prosocial investors. Consistently, we find negative spillovers to incumbent family funds, driven primarily by retail

wrong belief that fund families with ESG funds can generate superior abnormal returns. We address this alternative interpretation in Section III.E.2.

investors, indicating that unfavorable perceptions of one product can spill over to the broader brand.

Our back-of-the-envelope calibrations show that the spillover losses associated with a new anti-ESG fund can be substantial relative to its stand-alone revenue, although the implied net revenue effect is positive under some calibrations and negative under others.⁴ The negative spillover is also statistically significant for launches before mid-2022 but not for later launches, potentially reflecting a small number of anti-ESG launches after mid-2022. Overall, these results provide additional evidence that investor perceptions and related family-level spillover effects play an important role in ESG-related fund flows.⁵

Our paper contributes to the growing literature on socially responsible investing. A central theme in this literature is distinguishing between investors' value versus values

⁴ These mixed estimates leave several possible explanations for why families launch anti-ESG funds despite the potential for negative spillovers. Families may value offering these products for reasons beyond the revenue captured in our calibration, including nonpecuniary motives; they may underestimate spillovers when making launch decisions; or they may focus on near-term revenue effects rather than anticipate that spillover flows will persist and accumulate. We cannot distinguish among these explanations. The potential for substantial spillover losses may also make anti-ESG launches less attractive to some families, consistent with their lower frequency relative to ESG fund launches.

⁵ A related investor-behavior channel is "shopping at one store": a new fund launch that attracts new investors may bring them to the family, and they then allocate to other family funds to economize on search and transaction costs (Massa, 2003; Gavazza, 2011). If this mechanism were the primary driver, similar within-family spillovers should arise broadly around other new fund launches that expand the family's investor base, yet we find no supporting evidence for such spillovers. Moreover, it does not naturally account for either the stark ESG-versus-anti-ESG asymmetry or the attenuation in ESG-launch spillovers after mid-2022, unless one assumes implausibly large and time-varying changes in "one-store" shopping.

motivations (Starks, 2023). While several studies suggest that ESG investing is shaped by investors' prosocial preferences (e.g., Riedl and Smeets, 2017; Hartzmark and Sussman, 2019; Bauer, Ruof, and Smeets, 2021; Heeb, Kölbel, Paetzold, and Zeisberger, 2023), others highlight the importance of financial performance considerations (Giglio et al., 2025; Gantchev, Giannetti, and Li, 2024). Recent research further formalizes heterogeneity in moral motivations and distinguishes impact-seeking from value-alignment (deontological moral preference) channels, emphasizing the cost sensitivity of moral preferences (Bonnefon, Landier, Sastry, and Thesmar, 2025; Hart et al., 2024; Giglio et al., 2025).

We extend this literature by moving from focal-fund demand to fund-family spillovers. We study a fund-family marketing mechanism in which ESG fund launches are associated with spillovers to otherwise unrelated sibling funds through changes in family-level perceptions and branding. Our findings suggest that value-alignment motivations may extend beyond demand for the focal ESG fund itself and influence investors' allocation decisions across the broader fund family. Finally, we show that these spillovers are state-dependent: the attenuation after 2022 suggests that investors' willingness to invest in a "green family" is sensitive to perceived financial trade-offs and to the credibility of ESG branding.

Moreover, our analyses reveal that flow spillover brings fund families substantial monetary gains, providing a significant *value* motivation for fund families to offer ESG investment products. In this regard, our paper strongly resonates with the cause marketing model proposed by Krishna and Rajan (2009), which suggests that firms can strategically offer cause-related products—not only to enhance their social image, but also to increase overall profitability through positive spillovers to their existing product lines. In our context, ESG funds function similarly: by appealing to investor values and prosocial preferences, they not only attract direct

flows but also boost flows to non-ESG sibling funds, thereby benefiting the fund family as a whole.

In addition, our research sheds light on the connection between ESG investing and affect-based judgment, which refers to decision-making based on emotional responses to stimuli rather than rational analysis (e.g., Finucane, Alhakami, Slovic, and Johnson, 2000; Slovic, Peters, Finucane, and MacGregor, 2005; Slovic, Finucane, Peters, and MacGregor, 2007). While it is well-established that affect-based judgment influences financial decisions (e.g., Kuhnen and Knutson, 2011; MacGregor, Slovic, Dreman, and Berry, 2000; Ma, Noussair, and Renneboog, 2022), a growing body of work examines its role in ESG investing. Hartzmark and Sussman (2019) and Heeb et al. (2023) show that affective heuristics drive investors' valuation of, and willingness-to-pay for, sustainable investments. Our study contributes to this literature by highlighting a distinct dimension of affect-based judgment: spillover effects across funds within a family that are broadly consistent with halo-type perceptions and family-brand spillovers.

Last, this paper contributes to the literature on the importance of family membership in the mutual fund industry. This literature recognizes that, although mutual funds are legally independent, fund families manage multiple funds in ways analogous to firms operating multiple product lines, creating important interactions among member funds (e.g., Massa, 2003; Gaspar, Massa, and Matos, 2006; Cohen and Schmidt, 2009; Bhattacharya, Lee, and Pool, 2013; Choi, Kahraman, and Mukherjee, 2016; Eisele, Nefedova, Parise, and Peijnenburg, 2020; Dannhauser and Spilker, 2023). Our paper is most related to Nanda et al. (2004), who find a strong positive spillover effect of star funds in the family. However, our study distinguishes itself by focusing on the introduction of ESG funds, which are unique and differentiated products compared to the alpha-driven traditional portfolio. We show that our findings are not driven by fund performance

and therefore contribute a non-performance metric that generates a substantial spillover effect to other funds in the family.

II. Data, Variables, and Descriptive Statistics

A. Data

We obtain data from several sources. Our primary data source is the CRSP Survivor-Bias-Free US Mutual Funds database, which includes a comprehensive list of U.S. open-end mutual funds and provides information on fund names, inception dates, fund returns, assets under management (AUM), expense ratios, turnover ratios, investment objectives, fund family names, and other fund characteristics. We focus on funds that primarily invest in US common stocks. Our sample period begins in 2004, the year when the United Nations introduced the concept of ESG, and extends up to 2024. Following Elton, Gruber, and Blake (2001), Chen, Hong, Huang, and Kubik (2004), and Pástor, Stambaugh, and Taylor (2015), we exclude funds with less than \$15 million in total net assets (TNA). To address the incubation bias documented in Evans (2010), we drop the first three years of return history for every fund in our regression sample.⁶ For funds with multiple share classes, we compute fund-level variables by aggregating across different share classes. Specifically, fund size is measured as the sum of assets across all share classes, while all other fund characteristics are computed as value-weighted averages across share classes.

Our second data source is Thomson Reuters Mutual Fund Holdings database, formerly known as CDA/Spectrum S12 database. It contains the quarterly or semiannual equity holdings

⁶ This filter only applies to our regression sample of non-ESG funds (to be described later) and does not affect our identification of ESG fund launch (inception) time. This filter does not apply to Panel A of Table 3 and Table 12.

of U.S. open-end mutual funds. Following Wermers' (2000) methodology, we merge the Thomson Reuters database with the CRSP database using MFLINKS tables.

Recognizing the well-documented challenges related to the divergence of ESG ratings across various ESG rating agencies (Berg, Kölbel, and Rigobon, 2022), we employ three distinct data sources to assess the ESG profile of portfolio holdings, aiming to mitigate the limitations inherent in relying exclusively on one data provider. These data sources include the MSCI KLD database, MSCI ESG Ratings, and Morningstar Sustainability Rating. MSCI's KLD database, which contains, from 1991 to 2018, firms' ESG performance ratings in seven qualitative issue areas: community, corporate governance, diversity, employee relations, environment, human rights, and products. KLD separately rates positive indicators (strengths) and negative indicators (concerns) of corporate ESG performance for each of these dimensions; MSCI ESG Ratings, which has been available since 2007, analyzes companies' environmental, social, and governance issues, and rates companies on an AAA-CCC scale relative to industry peers for ESG issues; Morningstar Sustainability Rating was launched by Morningstar on March 1, 2016, and was designed to provide "a reliable, objective way to evaluate how investments are meeting environmental, social, and governance challenges."⁷ Within the framework of the Morningstar Sustainability Rating System, mutual funds are classified into a simple rating between one and five globes.

Next, we obtain data on climatic disasters from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) at Arizona State University. This database contains natural hazards information on the event date, event location, and corresponding direct losses

⁷ We use the Sustainability Rating based on the methodology introduced in September 2019 consistently for the entire 2016-2024 period.

such as property losses and fatalities, at the county level in the U.S. For completeness, we select all hazard types.⁸

Finally, we extract news articles from Factiva.com, an online database which provides access to news archives from around the world. For each fund family that launches at least one ESG fund in our sample, we retrieve articles by querying a set of tags related to ESG topics in the launching year.

B. ESG-Related Funds

ESG funds. Lacking a single definition, an ESG Fund is a broad term used to describe any investment vehicle where fund managers use environmental, social, and governance (ESG) criteria to inform its composition and asset allocation. As our paper focuses on the behavior of investor flows, where investor awareness is a key driver, we identify ESG funds based on ESG or sustainability-related terms in fund names.⁹ To examine whether our sample of ESG funds indeed exhibits better ESG performance, we conduct a comparative analysis of the MSCI ESG scores of holdings between ESG and non-ESG funds during the initial six months since launch. The results, as shown in Internet Appendix Table IA1, Panel A, reveal a notable distinction, with

⁸ There are in total 18 types of hazards in SHELUDS, including avalanche, coastal, drought, earthquake, flood, fog, hail, heat, hurricane/tropical storm, landslide, lightning, severe thunderstorm, tornado, tsunami/seiche, volcano, wildfire, wind, and winter weather.

⁹ In particular, we start by searching the following keywords in fund names, including sustain, social, esg, pax, green, responsi, clean, impact, water, environm, catholic, parnassus, aquina, women, alternative energy, equality, wind energy, fossil free, low carbon, amana, ecolog, eco, epiphany, solar, climate, better world, gender, just, sri, community, ethics, human, sdg, kld, renew, and diversity, following the recent studies of Michaely, Ordonez-Calafi, and Rubio (2024) and Cremers, Riley, and Zambrana (2023). We then manually review each of these funds and exclude those that are not ESG funds (such as the “Global X Social Media ETF”).

the average MSCI ESG score of the ESG funds being significantly higher than that of their non-ESG counterparts. We also separately identify funds that are Environmental, Social, or Governance oriented based on keywords in the fund names.¹⁰

As shown in Figure 1, there is a clear increasing trend for both the number of newly launched ESG funds and the cumulative number of total ESG funds each year since 1992. The rising trend becomes more evident after several major events, such as the United Nations Global Compact formally proposing the concept of ESG in 2004 and the Paris Agreement being sealed in 2016, which significantly evoked public awareness of ESG issues. However, new ESG launches declined in 2023–2024 relative to 2020–2022, coinciding with stricter SEC disclosure requirements aimed at curbing greenwashing and increased political and legislative tensions toward ESG investing.

During our sample period of 2004 to 2024, there are 688 ESG funds offered by 194 fund families in our sample, of which 128 funds were rebranded as ESG funds while the remaining 560 were newly introduced to the market. The 10 fund families offering the largest number of ESG funds are reported in Internet Appendix Table IA1, Panel B. Nine of them also offer sibling non-ESG funds, and their non-ESG AUM varies substantially across families.

[Insert Figure 1 about here]

¹⁰ The Environmental keywords include sustain, green, clean, water, environm, alternative energy, wind energy, fossil free, low carbon, ecolg, eco, solar, climate, renew, impact (manually check E-related), ESG, and KLD. The Social keywords include social, pax, responsi, ethics, human, diversity, SDG, catholic, parnassus, aquina, women, equality, epiphany, better world, gender, just, sri, community, amana, impact (manually check S-related), ESG, KLD. The Governance keywords include ESG, KLD. Note that the three categories are not mutually exclusive.

Anti-ESG funds. We define anti-ESG funds as those that reject ESG screening, concentrate in “sin stocks,” or market themselves as “anti-woke” or explicitly opposed to ESG principles. Because these funds often lack clear name-based keywords, we do not rely on fund names alone to identify them. For example, Point Bridge America First ETF (MAGA), God Bless America ETF (YALL), Inspire 100 ETF (BIBL), and Strive U.S. Energy ETF (DRLL) are frequently described as anti-ESG in the media but contain no unambiguous naming signals. We therefore identify anti-ESG funds using the fund’s stated strategy in the prospectus. We classify funds via systematic analysis of strategy descriptions extracted at inception from the Mutual Fund Prospectus Risk/Return Summary database. We employ a large language model (DeepSeek-Chat) guided by explicit decision rules derived from Morningstar and common financial-media usage.¹¹ These funds are further classified as anti-Environmental or anti-Social; although we identify several anti-governance funds in the full sample, none are included in our estimation sample because they belong to families without sibling funds.¹²

¹¹ A fund is classified as anti-ESG if any of the following holds: (i) the prospectus explicitly rejects ESG; (ii) the fund invests in industries penalized by ESG (e.g., fossil fuels, guns, tobacco, defense, alcohol, gambling, nuclear power); or (iii) the prospectus markets itself as “anti-woke” or against ESG principles. All identified anti-ESG funds are subsequently manually verified through direct review of the fund prospectus.

¹² The three categories are non-mutually exclusive and defined as follows. Anti-Environmental funds primarily oppose environmental or climate initiatives (e.g., pro-fossil fuels or other high-carbon industries; rejection of climate regulation, carbon reduction, decarbonization, net-zero targets, emissions limits, carbon disclosure, or the Paris Agreement). Anti-Social funds emphasize social or ideological themes (e.g., “anti-woke,” “woke capitalism,” “anti-DEI,” highlighting conservative or patriotic values; criticism of firms’ focus on social justice, identity politics, diversity and inclusion, or “political agendas”). Anti-Governance funds target governance mechanisms (e.g.,

We supplement the prospectus-based identification with a holding-based approach for robustness tests. Specifically, we classify a fund as anti-ESG if the weighted average MSCI ESG score (the Intangible Value Assessment measure) of its top 10 holdings falls in the bottom quartile during the first two quarters after launch. While the prospectus-based measure identifies funds concentrated in structurally low-ESG industries (e.g., energy, weapons, gambling), the holding-based measure primarily flags fund portfolios tilted toward ESG laggards within industry.

As shown in Panel C of Internet Appendix Table IA1, the prospectus-based approach identifies 108 anti-ESG funds launched between 2010 and 2023, while the holdings-based approach identifies 242. We do not classify anti-ESG funds prior to December 2010 due to limited MSCI ESG coverage and the unavailability of the Mutual Fund Prospectus Risk/Return Summary database before 2010. Within the prospectus-based set, 84 are classified as anti-Environmental and 24 as anti-Social.

C. Variable Construction

ESG launches. For each new ESG fund, we record the exact month of fund inception and flag all its sibling funds (i.e., non-ESG funds offered by the same family) in the same month. We create an indicator variable, *ESG Launch*, for these sibling funds during the subsequent year. Specifically, *ESG Launch* equals one if at least one new ESG fund has been launched by the fund family during the past 12 months, and zero otherwise. The variable of *Anti-ESG Launch* is defined in the same way.

opposition to ESG-related proxy voting or shareholder proposals; criticism of proxy advisors such as ISS or Glass Lewis for ESG activism; rejection of governance mandates or shareholder rights used to advance ESG policies).

In a similar approach, we pinpoint the specific month in which each fund underwent a “green rebranding”, and introduce an indicator variable, *ESG Rebrand*, for non-ESG sibling funds. In particular, *ESG Rebrand* equals one if at least one incumbent fund within the family was rebranded as an ESG fund in the preceding 12 months, and zero otherwise.

ESG ratings. We measure funds’ ESG performance utilizing three distinct ESG data sources. First, we calculate the adjusted KLD score for each firm-year following Deng, Kang, and Low (2013). This methodology addresses concerns regarding variations in the number of performance metrics within each of the seven dimensions (community, corporate governance, diversity, employee relations, environment, human rights, and product quality and safety) across different years. Consequently, the adjusted KLD scores are standardized, ensuring comparability across both years and dimensions. Then, we aggregate the adjusted KLD score at the fund-quarter level using the fund holding data. Specifically, we calculate the value-weighted average adjusted KLD score for all the stocks in a fund’s portfolio at the end of each quarter. Second, we adjust the MSCI ESG Ratings to a scale ranging from 1 (CCC) to 7 (AAA) following Bizjak, Kalpathy, Mihov, and Ren (2022) and aggregate it at the fund-quarter level. Recognizing that both KLD and MSCI ESG ratings cover only a subset of portfolio firms, we follow Borger, Derwall, Koedijk, and Horst (2015) and exclude funds with rating coverage of less than 75% of the portfolio value or fewer than 25 stocks from the regression sample. Lastly, we convert the Morningstar Sustainability Rating into a scale ranging from 1 (one globe) to 5 (five globes).

Net flows. We follow Nanda et al. (2004) to construct the net capital flow measures for both the fund and the family. Specifically, for each fund-month observation in our sample, we first calculate the new capital by the following formula, where TNA is the total net assets and R is the net-of-fee return of the fund.

$$(1) \quad \text{New Capital}_{i,t} = \text{TNA}_{i,t} - \text{TNA}_{i,t-1} \times (1 + R_{i,t})$$

We then normalize the new money growth by TNA at the beginning of the month to have the net flows measured at the fund level:

$$(2) \quad \text{Net Flows}_{i,t} = \frac{\text{New Capital}_{i,t}}{\text{TNA}_{i,t-1}}$$

Fund performance. We measure fund performance using the Carhart (1997) four-factor model. Specifically, using 36-month rolling windows ending in $t-1$, we estimate the following regression to get the risk exposures to the market, size, book-to-market, and momentum factors:

$$(3) \quad R_{i,s} - R_{f,s} = \alpha_{i,t-1} + \sum_{k=1}^4 \beta_{i,k,t-1} f_{k,s} + \varepsilon_{i,s}$$

Here, $R_{i,s} - R_{f,s}$ is the net return of fund i in month s minus the risk-free rate, $f_{k,s}$ refers to the four factors in Carhart (1997). We then compute four-factor alpha for each fund-month observation as follows:

$$(4) \quad \text{Alpha}_{i,t} = R_{i,t} - R_{f,t} - \sum_{k=1}^4 \beta_{i,k,t-1} f_{k,t}$$

We also construct alpha using alternative asset pricing models including Fama-French's three-factor model and Capital Asset Pricing Model.

Other variables. We include a set of additional variables to control for fund- and family-specific characteristics. *Fund Size* is the sum of assets under management across all share classes; *Family Size* is the aggregated fund sizes in the same family; *Fund Return* is the monthly raw net return; *Fund Age* is the number of months that the oldest share class has been traded; *Expense Ratio* is calculated by dividing the fund's operating expenses by the average dollar value of its assets under management; *Turnover Ratio* is defined as the minimum of sales or purchases divided by the TNA of the fund; Following Nanda et al. (2004), we define a *Star Fund*

as one with the previous 12 months' three-factor adjusted returns ranking among the top 5 percent of all funds in that month; For any given month, a fund family is defined as a *Star Family* if it has at least one star fund under management.

Instrumental variable. We employ an instrumental variable approach to gauge the propensity of fund families towards launching ESG funds, leveraging their changing awareness of climate issues. Specifically, we calculate the natural logarithm of one plus the number of natural disasters occurring within a 100-mile radius of each fund family's headquarters in each year, denoted as $\text{Log}(\text{Num_Hazards}+1)$. A surge in hazards around family headquarters is likely to heighten the perceived urgency of environmental protection and potentially leads to an accelerated introduction of ESG products. Since natural disasters cannot be perfectly foreseen and are beyond the control of fund families, this source of variation is unlikely to be systematically related to investor demand for the family's sibling products. Moreover, since mutual fund investors, particularly those of large fund families, are not geographically concentrated around the family's headquarters, local disasters are unlikely to influence their investment decisions through channels other than the family's product offerings and marketing activities.

D. Descriptive Statistics

Our final sample consists of 6,159 unique equity funds from 1,004 fund families, covering 638,538 fund-month observations from January 2004 to December 2024. Table 1 Panel A presents the descriptive statistics of all key variables used in the empirical analysis. These variables are all similar in magnitude to those documented in earlier literature. In particular, a typical fund in our sample has approximately \$1.88 billion in AUM, an average four-factor alpha of -0.11%, an expense ratio of 0.89%, a turnover rate of 64.46%, and net flows of 0.39%.

Panel B lists the number of ESG and non-ESG fund launches, as well as number of funds that rebrand to ESG-themed products. On average, the monthly likelihood of launching an ESG fund in each month is 1.6%, while the monthly launching rate of non-ESG funds is 11.2%. The average rate of funds undergoing ESG rebranding is 0.3%.

[Insert Table 1 about here]

III. Empirical Results

A. Flow Spillover

In this section, we provide baseline evidence on spillovers in capital flows within fund families following the introduction of ESG funds. Using monthly data on non-ESG equity funds from 2004 to 2024, we estimate the following panel regression:

$$(5) \quad FundFlow_{i,t} = \beta \times ESG\ Launch_{i,(t-12,t-1)} + \gamma' X_{i,t-1} + \alpha_i + \delta_t + \varepsilon_{i,t}$$

where i indexes a fund, t indexes a month, α represents fund fixed effects, δ denotes month fixed effects, and ε is the error term. The dependent variable is fund's net flows, as defined in equation (2), in month t . Our key variable of interest is the dummy variable $ESG\ Launch_{i,(t-12,t-1)}$ that indicates the launch of ESG fund(s) in the family during the past year. Both fund and time fixed effects are included to control for a fund's time-invariant characteristics and market-wide capital flows. We double cluster the standard errors at the fund family and month level.¹³

Regarding the control variables, X is a vector of fund characteristics that include the average CAPM alpha of the fund during the past year and its square term (which captures the non-linear return-performance relationship), the natural logarithm of the fund size, fund age, the natural logarithm of the turnover ratio, and expense ratio. We also control for family scale and

¹³ Note that our regression sample only contains the non-ESG funds. If a fund is rebranded (renamed) to an ESG fund, it is excluded from our sample since the rebranding.

scope by including the natural logarithm of the family size. All control variables are measured as of the previous month-end.

To control for the star fund phenomenon documented by Nanda et al. (2004), we include an indicator variable that equals one if the fund itself is a star fund. We first control for *Star Family*, which equals one if the family contains a star fund during the past year. We also report an alternative specification using *Star Family (excl. Star Funds)*, which identifies only non-star funds within star families and is therefore mutually exclusive with Star Fund, following Nanda et al. (2004). Moreover, to account for the potential impact of non-ESG fund launches, we include an indicator variable *NonESG Launch_{i,(t-12,t-1)}* that equals one if a new non-ESG fund was launched in the family during the past 12 months and zero otherwise.

In this model specification, the coefficient β captures the flow spillover, which refers to the incremental monthly net flows for sibling non-ESG funds within one year following the launch of ESG funds in the fund family. We choose to focus on the one-year window following the approach of Nanda et al. (2004), ensuring comparability in the magnitude of spillover effects. Another reason for choosing a one-year window is that we expect the flow spillovers associated with ESG fund launches to be temporary rather than permanent. In other words, we do not expect the launch of ESG funds to result in sustained growth in flows to the sibling funds indefinitely.

Table 2 presents the estimation results. The estimates of β across all specifications are positive and statistically significant at the 1% level, indicating that launching an ESG fund is associated with a positive spillover on the demand for sibling funds within the fund family. This spillover is incremental to the effects of fund performance, star phenomenon, and other control variables, which we note have the same signs as those commonly reported in the literature (e.g., Nanda et al., 2004). This positive spillover translates into an increase of 0.269 percentage points

(mean=0.39%) in the monthly net flows to non-ESG sibling funds. In contrast, we do not observe a significant spillover effect for non-ESG fund inceptions. The coefficient estimate on *NonESG Launch* is -0.003 (t -stat. = -0.05), suggesting that the positive spillover is unique to ESG fund rollouts.

[Insert Table 2 about here]

To illustrate the potential economic magnitude of the spillover effect, we conduct a simple back-of-the-envelope calibration that compares the fee revenue generated through two channels following an ESG fund launch: the assets gathered directly by the new ESG fund and the additional assets attracted to the family's existing non-ESG funds through flow spillovers. Panel A of Table 3 presents the resulting estimates. These calibrations use representative sample medians and fixed assumptions about the number of sibling funds; they differ from an event-by-event family-level analysis we will conduct in Internet Appendix C.

We begin with the stand-alone channel. Because the ESG fund is newly established, its TNA provides a measure of the new fee-paying asset base created by the launch. We calculate monthly stand-alone revenue by multiplying the fund's TNA by its monthly expense rate. Because launch-month TNA is often missing and, when reported, tends to be small and volatile, we use the fund's average monthly TNA during its first year as a more stable measure of its early post-launch asset base. The median stand-alone revenue for a new ESG fund is \$0.003 million per month, compared with \$0.007 million for a new non-ESG fund.

We next consider the spillover channel. Panel A reports two calibration methods, each capturing a different aspect of spillover revenue. The first measures the fees associated with one month of incremental spillover flows. For a representative non-ESG sibling fund, we calculate the incremental dollar flow as the fund's TNA multiplied by the estimated spillover coefficient.

The median TNA of sibling funds during the post-launch period is \$514.979 million, and the estimated spillover coefficient from column 4 of Table 2 is 0.269 percentage points. Thus, one month of spillover generates approximately \$1.385 million in additional assets per representative sibling fund. Applying the median monthly expense rate of 0.062% yields fee revenue of approximately \$0.001 million per sibling fund. Assuming that a family has 6 non-ESG sibling funds, as in Nanda et al. (2004), the estimated family-level revenue is approximately \$0.005 million per month. Using 12 sibling funds—the sample median in 2014—yields an estimate of approximately \$0.010 million per month. These calibrated estimates capture the fees earned on the incremental assets generated by a single month of flow spillovers.

The second measure accounts for the accumulation of spillover flows over the first post-launch year. If the spillover occurs each month and the resulting assets remain invested, earlier monthly flow cohorts generate fees for longer than later cohorts. Specifically, the 12 monthly cohorts remain invested for 12, 11, ..., and 1 months, respectively, implying an average exposure of 6.5 months during the first year. The average incremental spillover AUM during the first year is therefore \$9.004 million per sibling fund ($6.5 \times 0.269\% \times \514.979 million). Applying the monthly expense rate and aggregating across 6 or 12 sibling funds yields family-level spillover revenue of approximately \$0.033 million or \$0.067 million per month, respectively. Thus, the first measure estimates the fees associated with one month of incremental spillover flows, whereas the second estimates the fees generated by the average stock of spillover assets accumulated during the first post-launch year. Within this back-of-the-envelope calibration, under both measures and either assumption about the number of sibling funds, estimated family-level spillover revenue exceeds the median monthly stand-alone revenue of \$0.003 million generated by a newly launched ESG fund.

Another noteworthy finding in Table 3 is that new ESG funds generate lower stand-alone revenue than new non-ESG funds. Panel A shows that the median monthly stand-alone revenue is \$0.003 million for new ESG funds and \$0.007 million for new non-ESG funds. Panel B further shows that the difference in mean monthly stand-alone revenue between the two groups is statistically significant. This finding is notable because ESG investing is often viewed as a promising source of revenue for mutual fund families, and ESG funds typically command higher fees than their non-ESG counterparts (Baker, Egan, and Sarkar, 2022).¹⁴ The results in Panel B suggest that the lower stand-alone revenue of new ESG funds is associated with the smaller capital flows that they initially attract. One possible explanation is that investors need time to assess whether a new ESG fund is genuinely sustainable or merely engaging in greenwashing. Consistent with this explanation, Figure IA1 indicates that the stand-alone flow gap between ESG and non-ESG funds largely disappears two years after launch. Internet Appendix Table IA2 similarly shows that, over the 2004–2024 sample period, ESG funds receive lower monthly flows than non-ESG funds only during their first two years after launch.¹⁵

[Insert Table 3 about here]

Internet Appendix C further examines heterogeneity in spillover revenue across fund families. Tables IC1 and IC2 use illustrative launches by a large-TNA family and a median-TNA

¹⁴ E.g., Michael Wursthorn, “Tidal Wave of ESG funds Brings Profit to Wall Street,” Wall Street Journal (March 16, 2021 <https://www.wsj.com/articles/tidal-wave-of-esg-funds-brings-profit-to-wall-street-11615887004>); “Sustainable Funds U.S. Landscape Report,” Morningstar Investment Research (Feb. 21, 2023 <https://www.morningstar.com/lp/sustainable-funds-landscape-report>).

¹⁵ An exception occurs during 2023–2024, when ESG funds attract lower monthly flows than non-ESG funds regardless of fund age. This pattern may reflect heightened concerns about greenwashing, intensified political and legislative debates surrounding ESG investing, and weaker perceived financial prospects for high-ESG stocks.

family to demonstrate how the calibration in Table 3 varies with family size and with the distribution of sibling-fund TNA and expense ratios. To move beyond the representative inputs and fixed sibling-fund assumptions used in the back-of-the-envelope calibrations, Tables IC3 and IC4 implement an event-by-event procedure that applies the corresponding estimated spillover coefficient to each eligible sibling fund using its actual TNA and expense ratio and then aggregates revenue across sibling funds within each launch event. Despite substantial cross-sectional variation, the event-by-event estimates yield conclusions consistent with those from the back-of-the-envelope calibrations.

B. Robustness Analyses

Before moving forward, we conduct several robustness analyses for our baseline regressions. First, we modify the baseline by including alternative fixed effects, including Morningstar category fixed effects, category and month interacted fixed effects, and/or family fixed effects. The results of these alternative specifications are reported in columns 1-4 of Internet Appendix Table IA3, where the coefficient estimates of *ESG Launch* remain positive and significant at the 5% level or lower. Additionally, our findings remain robust when we include additional control variables such as Morningstar Ratings (e.g., Del Guercio and Tkac, 2008), Morningstar Sustainability Ratings (Hartzmark and Sussman, 2019), and family-level marketing or distribution fees. These results alleviate the concern that the observed flow spillovers are driven by a salience effect at the family level. We report these results in columns 5-7 of the Internet Appendix Table IA3.¹⁶ Finally, we refine the definition of ESG funds by

¹⁶ The limited availability of these additional control variables significantly reduces the sample size. In column 6, we exclude the fund fixed effect from the regression because the Morningstar Sustainability Rating is only available after 2019, resulting in a short sample period.

removing the religious keywords, such as catholic, aquinas, amana, and epiphany, and find a robust baseline result in column 8 of Internet Appendix Table IA3.

In addition, we examine whether flow spillovers are unique to the introduction of new ESG funds. Another strategy for fund families to offer ESG products is to rebrand an existing fund—typically one that has been underperforming—by incorporating the ESG theme. While this approach leverages the growing interest in ESG investing, it is associated with little marketing effort and tends to attract less public attention (e.g., Lynch and Musto, 2003). As a result, we expect ESG rebranding to attract less investor attention and generate weaker family-level branding effects than the launch of a new ESG fund. Consequently, we do not expect ESG rebranding to generate significant flow spillovers. In the Internet Appendix Table IA4, Panel A, we confirm that market attention, measured by ESG-related news coverage of the fund family, increases significantly following the launch of new ESG funds during the pre-2022 period, but not after rebranding. In Panel B, we observe no significant flow spillover to sibling funds following ESG rebranding. This evidence highlights the importance of new fund launches and the associated publicity in driving spillover effects.

We also assess whether our baseline results merely reflect the effect of fund families signing the “Principles for Responsible Investment” (PRI). By signing the PRI, fund families commit to socially responsible practices, which may be linked to an increased introduction of ESG funds. Previous research, such as Kim and Yoon (2023), documents significant capital inflows following PRI signings. To test if our flow spillovers stem from independent factors, we add PRI signing as a control variable. As shown in column 1 of Internet Appendix Table IA5, the positive and significant flow spillover effect persists, suggesting that ESG fund introductions are linked to marketing advantages beyond the PRI commitment. Moreover, we explore whether

ESG fund launches coincide with PRI signings to signal a family's commitment to ESG principles. As shown in column 2 of Internet Appendix Table IA5, the spillover effect of ESG fund launches is more significant outside the one-year window surrounding PRI signing. This suggests that ESG fund launches can generate flow spillovers independent of the PRI's impact.

Additionally, we examine whether the flow spillovers simply reflect the growing popularity of co-managed ESG and non-ESG funds, which is likely, given the literature's emphasis on the increasing prevalence of team management (e.g., Bliss, Potter, and Schwarz, 2008; Han, Noe, and Rebello, 2017; Patel and Sarkissian, 2017). Specifically, we categorize sibling non-ESG funds into those that share a management team with the new ESG funds and those that do not. As shown in Internet Appendix IA6, flow spillovers occur for both types of sibling funds, with effects of similar magnitude. This finding does not support the argument that team management alone explains our results, distinguishing our study from concurrent research by Li, Ruan, Titman, and Xiang (2023), which focuses on ESG and non-ESG funds managed by overlapping teams.

Next, we assess whether flow spillovers are exclusively driven by a few large families that aggressively market sustainable investing. Internet Appendix Table IA7 shows that our baseline results remain robust after excluding (i) BlackRock, (ii) the Big Three asset managers (BlackRock, Vanguard, and State Street Global Advisors), (iii) the ten largest ESG families (by cumulative ESG fund count, shown in Panel B of Table IA1), and (iv) the ten largest non-ESG families (by total non-ESG fund AUM). The estimated coefficient on *ESG Launch* is smaller when the largest families are excluded, indicating that spillovers are larger for ESG funds launched by big fund families. This is consistent with an equilibrium in which families with the greatest spillover benefits are the most active in offering ESG funds.

Finally, we examine family-level flows following new fund launches in Internet Appendix Table IA8. In column 1, we regress total family-month flows, including flows to the newly launched funds themselves, on indicator variables for ESG fund launches during the previous year. We find a positive and statistically significant coefficient. In column 2, we exclude all funds younger than 12 months to isolate spillover flows of new launches to existing funds, and find that the ESG launch indicator remains positive and statistically significant. This evidence suggests that the documented spillovers are associated with incremental family-level inflows rather than merely within-family reallocations.

C. Heterogeneity

Because the spillovers associated with ESG launches likely depend on investor perceptions and family-level ESG branding, we expect them to vary as the ESG landscape evolves over time. In recent years, concerns about greenwashing have attracted increasing public attention. In May 2022, the U.S. SEC's proposed amendments to the Investment Company Names Rule marked an escalation in regulatory scrutiny of ESG marketing and labeling, plausibly making greenwashing concerns more salient to investors. Moreover, in late July and throughout August 2022, ESG investing became increasingly politicized. For example, state-level policy actions included West Virginia restricting certain state banking contracts with major financial institutions over alleged fossil fuel boycotts and a coalition of nineteen state attorneys general publicly challenging BlackRock's ESG agenda; Texas and Florida issued related signals around the same time that prioritized pecuniary factors.

At the same time, the financial appeal of ESG-oriented portfolios also became less compelling. Amid geopolitical shocks, elevated inflation, and rising interest rates, traditionally lower ESG sectors such as energy and defense performed exceptionally well. This shift likely

weakened the relative performance of ESG-oriented strategies and reduced their perceived return-based appeal.

Taken together, these developments suggest that, beginning in mid-2022, ESG launches are less likely to generate strong ESG-related spillovers. Internet Appendix B develops the conceptual framework that guides our interpretation of the spillover patterns and motivates the key empirical predictions.

In column 1 of Table 4, we split the ESG-launch indicator into two dummies—launches before June 2022 and launches after June 2022. The positive spillovers are driven by pre-June 2022 launches, consistent with our expectation.

Second, we examine whether flow spillovers differ across subperiods surrounding the murder of George Floyd on May 25, 2020, which marked a sharp increase in public attention to racial and social justice issues. As shown in column 2 of Table 4, spillovers appear stronger for ESG fund launches occurring between June 2020 and mid 2022 than for launches prior to June 2020, though the difference is not statistically significant.

Columns 3 and 4 further report the point estimates separately for Social-related and Other-related ESG launches. During the June 2020–May 2022 period, the point estimate is larger for Social-related launches (0.542) than for Other-related launches (0.337), consistent with heightened investor attention to social issues following the Floyd protests. After mid-2022, the coefficient on Social-related launches becomes statistically indistinguishable from zero.

[Insert Table 4 about here]

D. Identification

The evidence so far indicates that ESG launches are associated with increased flows into sibling non-ESG funds within the family. Before interpreting this relationship as causal, we

consider the alternative that omitted positive demand shocks drive both the decision to launch ESG funds and rising flows to existing funds. This explanation appears unlikely: unobserved demand shocks would plausibly spur the introduction of both ESG and non-ESG funds, yet we do not find significant spillovers from non-ESG launches.

To further address concerns about omitted variable bias, we implement two tests. First, we conduct an event study around each fund family's initial ESG fund launch since 2004.¹⁷ For each event, we examine a window spanning one year before and one year after the launch. For each non-ESG fund in the ESG-launching family (treated fund), we select comparable control funds within the same investment category using nearest-neighbor matching based on average fund size, fund flows, fund returns, and family size over the pre-event period. To avoid using previously treated observations as controls, we restrict the control sample to funds from families that have not launched any ESG funds during the preceding two-year window (Baker, Larcker, and Wang, 2022).¹⁸ We group events occurring in the same month into a single cohort and estimate a stacked difference-in-differences specification that includes the same control variables as in Table 2, along with cohort-by-fund fixed effects and cohort-by-month fixed effects.

As shown in Figure 2, we find no evidence of differential pre-trends prior to the event, while the increase in fund flows emerges immediately after the launch. The spillover effects vary

¹⁷ We exclude ESG fund launches prior to 2004 to maintain consistency with the sample used in Table 2. ESG fund launches were rare before 2004 and were likely motivated by considerations different from those launches after the formal introduction of the ESG concept by the United Nations Global Compact in 2004.

¹⁸ Allowing funds treated more than two years earlier to enter the control pool improves match quality. As a robustness check, we also restrict the control sample to funds from families that have not launched an ESG fund for *ten* years and the results are similar.

over the post-event period, potentially because investor attention to ESG-launching families and related branding effects are not persistent over time.¹⁹ The average treatment effect, captured by the interaction term *Treated* $\times$ *Post*, is positive and significant, with a coefficient close to that of *ESG Launch* in Table 2, as shown in Internet Appendix Table IA9. Overall, the absence of pre-trend differences mitigates the concern that the ESG launch reflects pre-existing upward trends in family-level demand or a gradual buildup of broader family-level branding activity prior to the launch.²⁰

[Insert Figure 2 about here]

Second, we use local natural disasters near fund family headquarters as an instrumental variable for ESG fund launches. Previous literature has shown that natural disasters significantly influence individuals' prosocial preferences and behaviors (e.g., Li, Li, Decety, and Lee, 2013; Deryugina and Marx, 2021; Choi, Shin, and Kim, 2023). We expect that increased occurrences

¹⁹ We also find that flows to newly launched ESG funds are volatile over time, with a correlation of 0.513 between ESG fund flows and the estimated spillover coefficients. This pattern is consistent with our interpretation that ESG fund launches attract time-varying investor attention and related family-branding effects, but that such effects are not persistent over time.

²⁰ A related concern is that ESG fund launches may coincide with a broader family-level marketing campaign unrelated to ESG, such that the observed increase in flows to non-ESG funds is driven by general marketing efforts rather than by the ESG launch itself. To address this concern, we examine whether marketing expenses for non-ESG funds, as measured by 12b-1 fees, increase following the ESG launching event. As shown in columns 10 and 11 of Internet Appendix Table IA9, we find no significant increase in the 12b-1 fees of non-ESG funds. This evidence suggests that the documented flow spillovers are unlikely to be driven by contemporaneous marketing campaigns targeting the existing non-ESG funds.

of environmental disasters raise awareness of climate issues among top managers at the fund families' headquarters, leading to a greater propensity to introduce ESG funds.

Crucially, local natural disasters are unlikely to directly influence investors' demand for the current funds offered by the affected fund families, except through changes in their product offerings and brand image. Specifically, mutual fund investors, particularly those in *large* families, are geographically dispersed, making it unlikely that local disasters near a fund family's headquarters will directly impact their investment decisions. Moreover, we provide supporting evidence that the fundamental prospects of the current non-ESG funds are largely unaffected by local disasters. As shown in Internet Appendix Table IA10, the number of hazards within 100 miles of a fund family's headquarters in the previous year does not correlate with the monthly financial performance, ESG profile, or turnover rate of the non-ESG funds offered by these families. This suggests that local disasters do not directly affect demand for funds by altering investment strategies or ESG practices.²¹

In Table 5, we estimate the two-stage least squares (2SLS) regressions using the fund-month sample of *large* fund families, where the exclusion condition of our IV is more likely to hold. We report results for the full 2004-2024 period in columns 1 to 2 and for the pre-2022

²¹ Although Alok, Kumar, and Wermers (2020) find that fund managers overreact to natural disasters by underweighting disaster zone stocks in their portfolio, there is no evidence that such trading behavior translates into observable changes in fund performance. This suggests that investors are unlikely to immediately detect or respond to these portfolio adjustments when allocating capital across funds. Moreover, to the extent that such investor responses do exist, they would likely bias against the positive spillover effects we document. In untabulated results, we further confirm that our main findings remain robust after excluding funds that hold stocks positively affected by natural disasters. This alleviates concerns that our results are driven by ESG fund launches whose non-ESG sibling funds happen to benefit disproportionately from such events.

period, when the positive spillovers were most significant, in columns 3 to 4. In Columns 1 and 3, we find that a greater number of hazards within 100 miles of a family’s headquarters has a strong and positive effect on the likelihood of introducing ESG funds in the following year. In columns 2 and 4, the second stage, we continue to observe a positive and significant incremental flow to related funds after the launch of ESG funds. Internet Appendix Table IA11 shows that our results are robust when the first stage is estimated at the family-month level, addressing that launch decisions are made at the fund-family level. These findings suggest that omitted variables, such as demand shocks to fund families, are unlikely to be the primary drivers of positive flow spillovers.

[Insert Table 5 about here]

The spillover effects identified in our 2SLS regressions likely reflect unintended outcomes, since disaster-induced ESG launches are plausibly motivated by non-monetary considerations. By contrast, flow spillovers are unlikely to be entirely incidental: fund families can learn from past spillovers and incorporate anticipated spillover revenues into launch decisions. To examine this, we re-estimate the baseline specification in column 3 of Table 2 in rolling three-year subsamples from 2004 to 2024. Figure 3 plots the number of new ESG launches in each three-year period alongside the spillover coefficients from the preceding three-year window, which reveals a close alignment. For example, spillovers peak in 2016–2018, while ESG launches are most active in 2019–2021. This pattern is consistent with fund families recognizing potential spillover benefits and incorporating them into subsequent ESG fund launch decisions.

[Insert Figure 3 about here]

E. Exploring Potential Channels

In this section, we explore the economic channels underlying these spillover effects. We investigate the potential factors related to fundamental changes of the non-ESG sibling funds as well as investor bias and behaviors.

1. ESG Performance

To begin with, we examine whether the flow spillover is driven by the fact that the ESG fund launches coincide with the adoption of sustainable investment policies at the fund family level, attracting increased capital flows from socially responsible investors. If this is the case, we would expect to find that the portfolio of non-ESG funds began to tilt toward green stocks and/or that these funds start to track the ESG indexes more closely.

First, we employ three ESG ratings to assess the ESG profile of the sibling funds. In particular, for each fund in our sample, we calculate the quarterly weighted average MSCI ESG and KLD scores of the holding firms, and obtain its monthly Morningstar Globe rating. Given that ESG performance tends to be quite persistent over time, we construct the quarterly/monthly change of the ESG measures as the dependent variable.²² The regression specification resembles our baseline regression of equation (5).

As shown in columns 1-3 of Table 6, we do not find any significant change in the non-ESG funds' ESG scores following the introduction of ESG funds in the family. This evidence does not support the argument that the flow spillover effect is mainly driven by the sibling funds' improving ESG performance.

One might argue that quarterly holdings do not adequately reflect the actual changes in the funds' ESG profiles. We thus further investigate whether the sensitivity of non-ESG fund returns to ESG index increases following ESG fund launches. We first estimate the return

²² Our results are robust to using the level of ESG performance as the dependent variable (untabulated).

correlation of each non-ESG fund with the MSCI USA Selection Index over the past three years. We then regress the correlation on the dummy indicator of ESG fund launches in the family, by replacing the dependent variable of equation (5) with the correlation measure. As shown in column 4 of Table 6, our findings reveal no significant spillover effect from the introduction of ESG funds on the return sensitivity of sibling funds to the ESG index. In sum, the evidence does not lend support to the hypothesis that the overall adoption of ESG principles at the fund family level is the driving force behind the observed positive flow spillover.

[Insert Table 6 about here]

2. Financial Performance

In this section, we investigate whether the flow spillover can be attributed to investors' expectations that non-ESG fund managers would learn from their ESG peers about ESG-related information and trading strategies and apply this knowledge to improve the financial performance of their funds. In other words, we study whether the flow spillover could result from investors' desire to leverage ESG factors and pursue superior financial performance.

To examine this possibility, we first analyze the impact of the launch of the ESG fund on the non-ESG sibling funds' abnormal returns by comparing their performance before and after the introduction. Specifically, we replace the dependent variable of the baseline regression (i.e., equation (5)) with the monthly raw net-of-fee returns and abnormal returns calculated using the CAPM alpha, three-factor alpha, and four-factor alpha. As shown in Table 7, the introduction of ESG funds does not yield any statistically significant changes in the four performance measures for the sibling non-ESG funds. This evidence does not support the idea that launching ESG funds results in superior financial performance for the non-ESG sibling funds. Thus, even if the flow

spillover arises from investors' intention to achieve abnormal returns through ESG factors, the realized post-launch return evidence does not support such a belief.

[Insert Table 7 about here]

Furthermore, if the flow spillover arises from investors' expectation of cross-learning regarding ESG-related information and trading strategies within the fund family, one would anticipate a more pronounced spillover effect on actively managed non-ESG funds in comparison to their passive counterparts. To examine this, in Table 8, we divide the sample into two groups based on whether a sibling non-ESG fund is actively or passively managed, and independently estimate our baseline regression for each subset. The findings suggest that the point estimate for passive funds exceeds that of active funds. This finding does not support the argument that the flow spillover is primarily driven by within-family cross-learning.

[Insert Table 8 about here]

An alternative interpretation of the flow spillovers is that investors may hold a *wrong* belief that fund families with ESG funds can generate superior abnormal returns. Although we cannot directly measure investors' beliefs, we posit that such a belief is more likely to form following a period when ESG funds demonstrated superior financial performance in the recent past. To investigate this hypothesis, we calculate the average CAPM alpha of all the ESG funds in the market over the past year, and categorize an ESG fund launching event as following high (low) performance of the "ESG sector" if the corresponding past alpha is above (below) the sample median. As presented in column 1 of Internet Appendix Table IA12, the spillover effect is observed following both high and low past performance of the "ESG sector", and the two effects are statistically indistinguishable, with the magnitude even larger for the low-performance period. This evidence does *not* support the *wrong* belief hypothesis.

We also consider another source of the *wrong* belief—return extrapolation. Investors might have been attracted to a fund family whose incumbent ESG funds have earned high return during the past period. If the fund family tends to take advantage of such a behavioral bias, the introduction of new ESG funds may be timed exactly following high returns of the incumbent ESG funds. This could have been manifested as the flow spillover effect we observe. However, column 2 of Internet Appendix Table IA12 demonstrates that the spillover effect is evident and of similar magnitude following both high and low levels of past performance of the incumbent ESG fund(s), and the two effects are statistically indistinguishable ($p = 0.290$), which does not lend support to the return extrapolation argument.

Finally, if the flow spillover were indeed driven by investors' *wrong* belief in earning abnormal returns, one would expect a stronger effect following the introduction of active ESG funds compared to passive ESG funds. This expectation arises from the fact that passive ESG funds typically do not market themselves as vehicles for achieving superior financial returns; instead, they emphasize tracking ESG indexes to uphold social values. However, as shown in column 3 of Internet Appendix Table IA12, we observe a flow spillover with a similar magnitude and statistical significance for both the launches of passive and active ESG funds. This once again fails to corroborate the notion that the spillover is generated by investors' pursuit of better financial performance.

3. Investor Perceptions

In this section, we provide additional evidence consistent with the view that ESG fund launches generate spillovers through investor perceptions and halo-type effects at the fund-family level.

First, we examine whether the spillovers differ between institutional and retail investors. Institutional investors, who tend to focus more on underlying fund characteristics such as ESG profiles and investment strategies, may be less responsive to halo-type effects associated with ESG fund launches. By contrast, retail investors may be more sensitive to investor attention and related perception effects. Therefore, if the documented spillovers are related to these channels, they should be more pronounced among retail investors.

To test this argument, we examine the spillover effect separately for institutional and retail funds. We classify a fund as targeting institutional investors if the proportion of institutional capital exceeds a predetermined threshold (e.g., 70%) during the sample period, with the remaining funds classified as retail. As shown in columns 1 and 2 of Table 9, we find that the flow spillover is only present in the retail fund subsample, consistent with the view that retail investors are more responsive to ESG-related perceptions and halo-type effects associated with fund-family ESG launches. This result is robust to alternative thresholds (e.g., 50% or 80%).

In columns 3 and 4 of Table 9, we analyze ESG funds launched by two types of fund families: those that charge load fees (i.e., sales commissions), reflecting a reliance on financial advisors for product distribution, and those that do not charge load fees. According to Guercio and Reuter (2014), the clientele of the former is likely to be more concentrated among unsophisticated investors. Consistent with our predictions, we find that the point estimate is larger for families with load funds than for those without.

[Insert Table 9 about here]

Next, we investigate whether the spillovers are more pronounced when ESG fund launches are likely to attract greater investor attention and stronger family-level ESG branding effects. Publicity surrounding ESG launches may amplify investors' perceptions of the fund

family and strengthen halo-type effects, potentially leading to stronger spillovers to sibling funds. To test this hypothesis, we split the *ESG Launch* dummy in the baseline regression into two indicators for launches with high versus low investor attention.

We introduce three proxies for investor attention: first, the number of ESG-related news articles associated with the fund family, adjusted for the number of ESG funds launched by the family in a given year. A family-year is classified as having high (low) news coverage if this measure exceeds (falls below) the median level. Second, we consider family size, as larger fund families typically command greater investor recognition when launching new ESG funds. Third, we measure marketing expenses using the 12b-1 fee, following Sirri and Tufano (1998) and Barber, Odean, and Zheng (2005).

As presented in Table 10, we find that flow spillovers are predominantly evident when ESG launches are associated with greater media coverage, and among families with sizes or marketing expenses above the median level. These findings are consistent with investor attention and related family-level branding effects playing an important role in the observed spillovers.²³

[Insert Table 10 about here]

F. Anti-ESG Funds

As discussed earlier in the paper, socially responsible investing (SRI) has gained increasing popularity over time. Nevertheless, a contrasting view toward ESG investing persists among a subset of investors. In this section, we examine whether the introduction of anti-ESG funds generates negative spillovers to sibling funds within the family. Such spillovers could arise

²³ It is noteworthy that the flow-spillover effect of an ESG fund launch is incremental to marketing expenses. Specifically, the baseline effect of flow spillover remains robust even when we control for the 12b-1 fee, as demonstrated in column 7 of Internet Appendix Table IA3.

if investors, particularly retail investors, react negatively to anti-ESG launches because these products conflict with their ESG-related preferences or alter their perceptions of the fund family’s positioning and brand image. This interpretation is consistent with a “reverse halo effect” or “devil effect,” in which anti-ESG launches generate adverse family-brand spillovers across related funds.

As described in Section II.B, we identify anti-ESG funds mainly based on textual analysis of strategy in the prospectus. In Table 11, we regress the monthly flows to sibling funds (i.e., non-ESG and non-anti-ESG) on the indicator of launching anti-ESG funds by the family, controlling for ESG fund launches. We find that introducing anti-ESG funds is associated with a negative spillover to other funds in the family. Moreover, in columns 2 and 3 of Table 11, where we distinguish the flows to the retail and institutional funds, the spillover effect is concentrated among the retail funds. We further split anti-ESG launches into the pre- versus post-mid-2022 periods in column 4. The pre-mid-2022 coefficient is negative and statistically significant, whereas the post-mid-2022 coefficient is not. The latter estimate is more negative but substantially less precisely estimated, potentially reflecting the relatively small number of launches in that period.

[Insert Table 11 about here]

Internet Appendix Table IA13 examines the robustness using the holding-based identification of anti-ESG funds. We find robust but slightly weaker negative spillovers than in Table 11, consistent with the argument that investors pay more attention to the textual descriptions of fund strategy than the actual holdings. Internet Appendix Table IA14 examines spillovers from anti-Environmental and anti-Social fund launches separately. We find that the

point estimate is more negative for anti-Social funds—those emphasizing social or ideological themes—than for anti-Environmental funds, which oppose environmental or climate initiatives.

In Table 12, we provide a back-of-the-envelope calibration comparing the magnitude of negative spillover revenue following anti-ESG fund launches with the stand-alone revenue generated by the newly launched funds. The median monthly stand-alone revenue of a new anti-ESG fund, calculated using its average TNA during the first post-launch year, is \$0.011 million. This amount exceeds the corresponding stand-alone revenue of \$0.003 million for new ESG funds reported in Table 3. Consistent with this result, Internet Appendix Figure IA2 shows that the life-cycle patterns of monthly flows and TNA for anti-ESG funds more closely resemble those of traditional funds—that is, funds classified as neither ESG nor anti-ESG—than those of ESG funds. The relatively high stand-alone revenue of anti-ESG funds may therefore provide a buffer against the negative spillovers imposed on their sibling funds.

Table 12 also presents back-of-the-envelope calibrations of negative spillover revenue using the two methods introduced in Table 3. Method I measures the revenue effect associated with one month of incremental spillover flows. The estimated flow spillover is $-\$0.774$ million per representative eligible sibling fund classified as neither ESG nor anti-ESG fund, corresponding to a monthly revenue loss of approximately \$0.0005 million per sibling fund. Assuming 6 sibling funds yields a family-level revenue loss of \$0.0032 million per month, while assuming 10.5 sibling funds yields a loss of \$0.0056 million. Within this fixed-family-size calibration, both estimates are smaller in magnitude than the stand-alone revenue of \$0.011 million generated by the new anti-ESG fund. The implied net monthly revenue effect associated with the launch—stand-alone revenue plus spillover revenue—therefore remains positive at

approximately \$0.0078 million under the 6-fund assumption and \$0.0054 million under the 10.5-fund assumption.

Method II accounts for the accumulation of negative spillover flows during the first post-launch year. Under this method, the calibrated family-level spillover revenue is $-\$0.0208$ million per month for 6 sibling funds and $-\$0.0365$ million for 10.5 sibling funds. Within the calibration, these losses exceed the new anti-ESG fund's stand-alone revenue, resulting in an implied net monthly revenue effect associated with the launch of approximately $-\$0.0098$ million and $-\$0.0255$ million, respectively. Internet Appendix Table IC4 presents a complementary event-by-event analysis for the subset of anti-ESG launch events with sufficient fund-level information.

Taken together, these calibrations suggest that the spillover losses associated with a new anti-ESG fund can be substantial relative to its stand-alone revenue, although the implied net revenue effect is positive under some calibrations and negative under others. Several explanations may account for why families launch anti-ESG funds despite the potential for negative spillovers. Families may have nonpecuniary motives for offering anti-ESG products; they may underestimate the negative spillovers at the time of the launch decision; or they may place greater weight on near-term revenue effects without fully anticipating that spillover flows will persist and accumulate. We cannot distinguish among these explanations in our setting. At the same time, the potential for substantial spillover losses may make anti-ESG launches less attractive to some families. This possibility is consistent with the substantially smaller number of anti-ESG than ESG funds launched during 2010–2024, as shown in Panel C of Table IA1.

[Insert Table 12 about here]

Beyond investor perception and family-branding channels, positive spillovers from ESG fund launches may also arise from market frictions: retail investors attracted by a new ESG fund may allocate additional capital to other funds within the same family to minimize search and transaction costs. This “shopping at one store” behavior (e.g., Massa, 2003; Gavazza, 2011) generates positive spillovers whenever a new product brings incremental clientele to the family. However, if this mechanism were the primary driver, we would expect similar spillovers following other types of new fund launches, which we do not observe in the data.

Moreover, “shopping at one store” alone struggles to explain the negative spillovers observed for anti-ESG fund launches. Retail investors drawn to anti-ESG funds would face similar frictions and thus be inclined to purchase other funds within the family, which would predict a positive—rather than negative—spillover. Also, there is little reason to believe that search and transaction frictions changed sharply after mid-2022, making “shopping at one store” unlikely to explain why the negative spillover is statistically significant before mid-2022 but not thereafter.

IV. Conclusion

Investing in funds with environmental, social, and governance (ESG) considerations has attracted significant attention in recent years. While ESG investing is often viewed as financially attractive, our comparative analysis shows that the stand-alone revenues generated by ESG funds are generally smaller than those of comparable non-ESG funds. We hypothesize and document that ESG fund launches generate an additional source of value for fund families through positive spillovers to sibling funds within the same family. The fee income associated with these spillovers is economically significant and substantially exceeds the stand-alone revenues

generated by newly launched ESG funds, highlighting a distinctive revenue structure associated with ESG fund offerings.

The spillover effect cannot be attributed to any fundamental changes in the ESG profiles of sibling funds or to changes in their financial performance. The launch of anti-ESG funds generates negative spillover effects. Taken together, these findings are broadly consistent with investor perceptions and halo-type effects playing an important role in generating spillovers across funds within a family.

Overall, our study provides insights into the interplay between investor demand and intermediary incentives in shaping the expansion of ESG investment products. Our findings highlight the importance of family-level spillovers as a potential economic motivation for fund families to offer ESG products, particularly during periods of heightened investor attention to ESG issues. More broadly, by examining how ESG-related product launches affect demand for other products within the same financial intermediary, our study contributes to a better understanding of the supply-side forces shaping the evolution of sustainable investing.

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Appendix: Variable Definitions

Variable Name	Definition
Panel A: Fund Characteristics	
<i>FundFlow</i> (%)	Computed as $\frac{FundSize_{i,t} - FundSize_{i,t-1}(1 + FundReturn_{i,t})}{FundSize_{i,t-1}}$, where <i>FundSize</i> _{<i>i,t</i>} denotes fund <i>i</i> 's total net assets in month <i>t</i> and <i>FundReturn</i> _{<i>i,t</i>} denotes fund <i>i</i> 's raw net return in month <i>t</i> .
<i>FundReturn</i> (%)	A fund's monthly raw net-of-fee returns.
<i>CAPM alpha</i> (%)	Jensen (1968) one-factor alpha. We use three years of monthly returns to compute factor loadings and then use the last 12 months of realized fund and factor return data in this period to compute alphas.
<i>Three-factor alpha</i> (%)	Fama and French (1993) three-factor alpha. We use three-year rolling window of monthly returns to compute factor loadings and then use the last 12 months of realized fund and factor return data in this period to compute alphas.
<i>Four-factor alpha</i> (%)	Carhart (1997) four-factor alpha. We use three-year window of monthly returns to compute factor loadings and then use the last 12 months of realized fund and factor return data in this period to compute alphas.
<i>FundSize</i> (millions)	Sum of assets under management across all share classes for a fund.
<i>FamilySize</i> (millions)	Sum of assets under management across all funds in the family, excluding the fund itself.
<i>FundAge</i> (months)	Number of months since the inception of the fund's oldest share class.
<i>Turnover</i> (%)	The lesser of purchases or sales divided by average net assets.
<i>Expense</i> (%)	Ratio of the fund's annual operating expenses to the average dollar value of its assets under management.
<i>StarFund</i>	An indicator of the funds that have ranked in the top 5 percent of all funds in the market in terms of their three-factor adjusted return within a given month over the past year, as defined by Nanda et al. (2004).
<i>StarFamily</i>	An indicator equal to one if the fund family contains at least one star fund over the past year.
<i>StarFamily (excl. Star Funds)</i>	An indicator equal to one for non-star funds in a family that contains at least one star fund over the past year, following the "star family" indicator in Nanda et al. (2004).
<i>Institutional Percent</i>	Percent of institutional capital in the fund.
<i>Adj CSR Score</i>	The value-weighted average <i>adjusted CSR Score</i> , calculated following Deng et al. (2013), of all the portfolio firms within a fund for a given quarter.
<i>MSCI ESG Rating</i>	The value-weighted average <i>MSCI ESG Rating</i> , converted to a scale ranging from 1 (CCC) to 7 (AAA) following Bizjak et al. (2022), of all the portfolio firms within a fund for a given quarter.
<i>MS Sustain Rating</i>	A fund-level Morningstar Sustainability Rating is measured by converting the globe rating into a scale that spans from 1 (one globe) to 5 (five globes).
<i>Return Sensitivity on ESG Index</i>	The return correlation of a fund with the MSCI USA Selection Index over the past three years.
<i>MS Rating</i>	A fund-level Morningstar Rating is measured by converting the star rating into a scale that spans from 1 (one star) to 5 (five stars), which measures risk-adjusted performance relative to peer funds within its category.
Panel B: Key Independent Variables	
<i>ESG Launch</i>	Binary variable that equals one if the fund family launches at least one ESG fund during the past 12 months, and zero otherwise. ESG funds are identified based on fund names.
<i>ESG Rebrand</i>	Binary variable that equals one if at least one fund within the family is rebranded as an ESG fund during the past 12 months, and zero otherwise. ESG funds are identified based on fund names.

<i>NonESG Launch</i>	Binary variable that equals one if the fund family launches at least one non-ESG fund during the past 12 months, and zero otherwise.
<i>AntiESG Launch</i>	Binary variable that equals one if the fund family launches at least one anti-ESG fund during the past 12 months, and zero otherwise. Anti-ESG funds are identified using two approaches. For the prospectus-based approach, anti-ESG funds are those with any of following the features: (i) the prospectus explicitly rejects ESG criteria or considerations in the investment mandate; (ii) the fund invests in industries penalized by ESG (e.g., fossil fuels, guns, tobacco, defense, alcohol, gambling, nuclear power); or (iii) the prospectus markets itself as "anti-woke" or against ESG principles. For the holding-based approach, anti-ESG funds are those whose weighted average MSCI ESG score for the top ten holdings falls in the bottom quartile during the first two quarters after launch.
<i>AntiES Launch</i>	Binary variable that equals one if the fund family launches at least one anti-ES fund during the past 12 months, and zero otherwise. Anti-ES funds are identified as those whose weighted average MSCI ES score for the top ten holdings falls in the bottom quartile during the initial two quarters after launch. Each firm's ES score is calculated as: $ES\ Score = (Environmental_Pillar_Score \times Environmental_Pillar_Weight) + (Social_Pillar_Score \times Social_Pillar_Weight)$, then adjusted for industry average: $Adjusted\ ES\ Score = Firm\ ES\ Score - Industry\ Average\ ES\ Score$. At the fund level, we use the weighted average Adjusted ES Score across each fund's top ten holdings.
<i>Other Launch</i>	Binary variable that equals one if the fund family launches at least one fund (neither ESG nor anti-ESG/anti-ES) during the past 12 months, and zero otherwise.

Panel C: Additional Family Characteristics

<i>Family 12b1-Fee</i>	The value-weighted average fund's <i>12b1 Fee</i> across all funds in the family.
<i>ESG Past Perf. (Incumbent)</i>	The average CAPM alpha of the family's incumbent ESG funds during the past year.
<i>Sign PRI</i>	Binary variable that equals one if the fund family has signed PRI and zero otherwise.
<i>PRI Sign Period</i>	Binary variable that equals one if the current month is within a 12-month window around the time when a fund family signs PRI.

Panel D: Other Variables

<i>ESG Past Perf. (Market)</i>	The average CAPM alpha of all the ESG funds in the market during the past year.
<i>MSCI USA Selection Index</i>	The MSCI USA Selection Index is a free float-adjusted market capitalization-weighted index designed to represent the performance of companies that are selected from the MSCI USA Index (Parent Index) based on Environmental, Social and Governance (ESG) criteria
<i>Log(Num_Hazards+1)</i>	The natural logarithm of one plus the number of climatic disasters occurred annually within 100-mile radius of a fund family's headquarters office. Climatic disasters information is from the Spatial Hazard Events and Losses Database for the United States (SHELDUS) at Arizona State University, from which all hazard types are selected.
<i>News Coverage</i>	Fund families' annual ESG news records from Factiva, normalized by the number of ESG funds launched that year.

Figure 1. Number of New ESG Funds by Year

This figure shows the number of new ESG funds launched annually (blue bar, right y-axis), the number of ESG funds with name change annually (orange bar, right y-axis), the number of total ESG funds annually (orange line, left y-axis), and the total number of fund families with ESG funds annually (gray line, left y-axis) between 1992 and 2024. The X-axis denotes the year. Significant ESG-related events during this period are displayed in the box above the corresponding year in which an event took place.

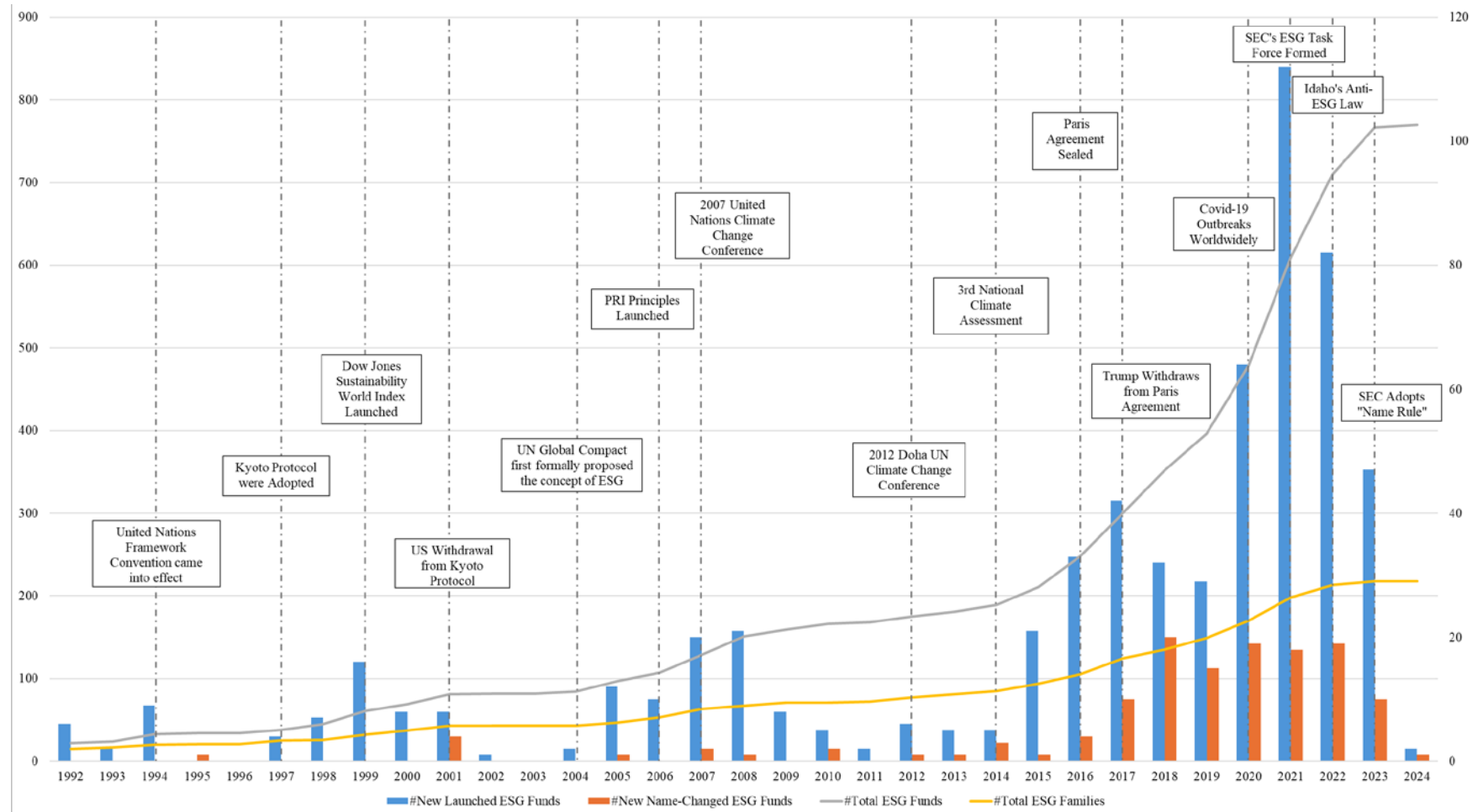


Figure 2: Event Study Surrounding Initial ESG Launches

This figure plots event-time coefficients from a stacked difference-in-differences specification estimating fund flows for non-ESG funds around a fund family's initial ESG fund launch. The event window spans 12 months before to 12 months after the launch month, where month 0 denotes the ESG fund launch. For each treated non-ESG fund in an ESG-launching family, control funds are selected within the same investment category using nearest-neighbor matching based on average fund size, fund flows, fund returns, and family size during the pre-event period. The control sample is restricted to funds from families that have not launched any ESG funds during the preceding two-year window. The regression includes the same control variables as in Table 2, as well as cohort-by-fund fixed effects and cohort-by-month fixed effects. Error bars represent 95% confidence intervals.

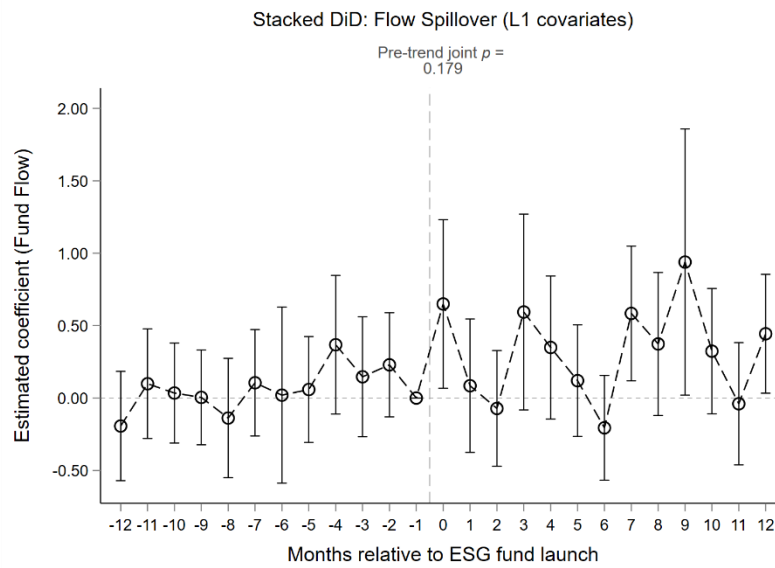


Figure 3: ESG Fund Launches and Previous Spillover Effects

This figure presents the dynamic relationship between the number of newly launched ESG funds and the magnitude of flow spillover effects from ESG fund launches in prior periods. The analysis spans 2004-2024, partitioned into seven consecutive subsamples: 2004-2006 (baseline), 2007-2009, 2010-2012, 2013-2015, 2016-2018, 2019-2021, and 2022-2024. For each period starting from 2007-2009, we report two key metrics: (1) the number of newly launched ESG funds during that period (displayed as blue bars on the left y-axis), and (2) the estimated spillover coefficient from regressions (following the specification of Table 2, column 3) estimated on the preceding three-year window (depicted as an orange line on the right y-axis).

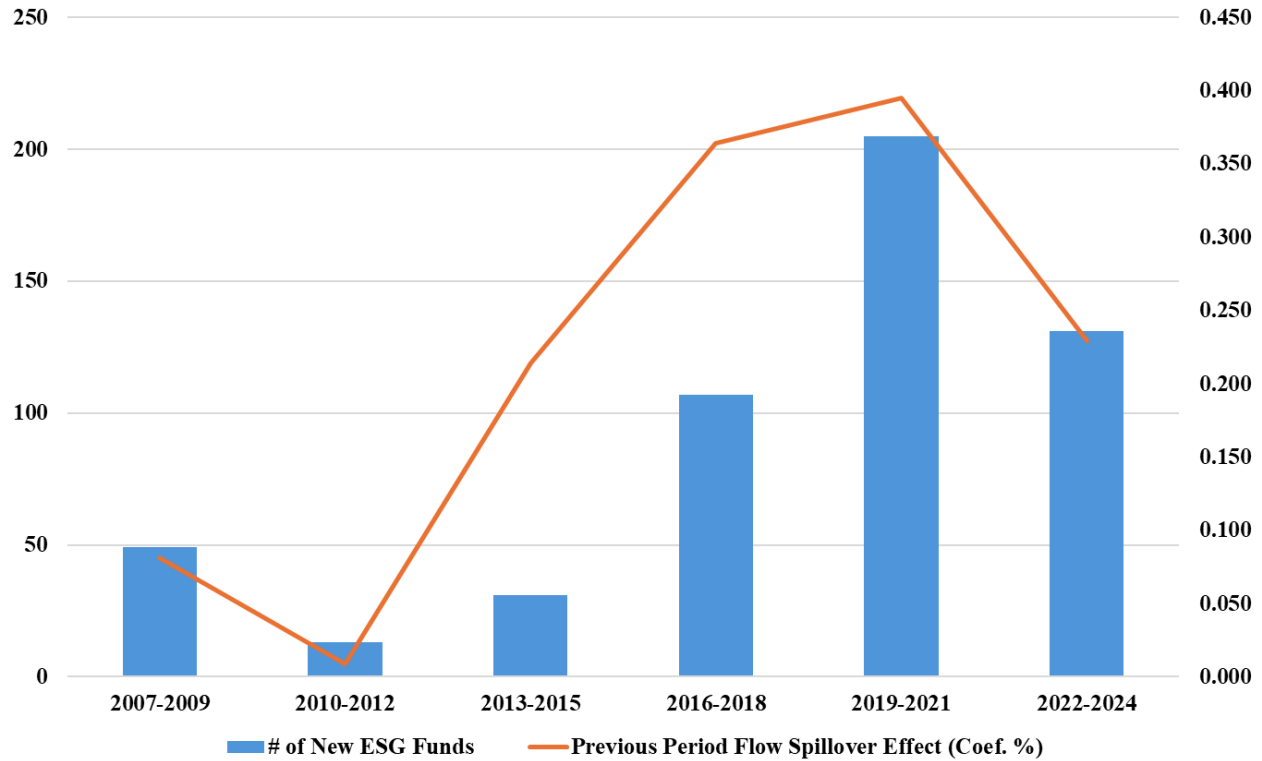


Table 1. Descriptive Statistics

This table presents descriptive statistics for the sample of fund-month observations over the period of 2004-2024. Panel A describes the number of observations, mean, standard deviation, the 1st percentile, median, and the 99th percentile for fund characteristics variables. Variable definitions are described in the Appendix. Panel B describes fund launch and name change variables. *(Non) ESG Launch_t* equals one if the fund family launches at least one (Non-) ESG fund during the current month and zero otherwise. *ESG Rebrand_t* equals one if the fund family changes at least one Non-ESG fund's name into ESG fund during the current month, and zero otherwise.

Panel A. Summary statistics

	Nobs	Mean	St. Dev.	1 st Pctl.	Median	99 th Pctl.
<i>FundFlow (in %)</i>	638,538	0.39	6.55	-14.81	-0.33	28.33
<i>FundReturn (in %)</i>	638,538	0.76	4.62	-13.11	1.07	12.59
<i>CAPM alpha (in %)</i>	634,554	-0.10	2.08	-6.50	-0.09	6.51
<i>Three-factor alpha (in %)</i>	634,554	-0.11	1.82	-6.02	-0.09	5.84
<i>Four-factor alpha (in %)</i>	634,554	-0.11	1.83	-6.10	-0.10	5.79
<i>FundSize (in millions)</i>	638,538	1884.14	4655.95	17.20	375.70	30331.10
<i>FamilySize (fund level, in millions)</i>	638,538	208548.90	453268.77	0.00	23397.65	2253385.00
<i>FundAge (in months)</i>	638,538	194.20	156.60	38.00	154.00	889.00
<i>Turnover ratio (in %)</i>	638,538	64.46	76.05	2.00	42.00	464.00
<i>Expense ratio (in %)</i>	638,538	0.89	0.48	0.02	0.92	2.12
<i>StarFund</i>	632,931	0.04	0.20	0.00	0.00	1.00
<i>StarFamily</i>	632,931	0.54	0.50	0.00	1.00	1.00

Panel B. Fund launch and rebrand

	Nobs.	Mean	Num. (=1)
<i>ESG Launch_t</i>	638,538	0.016	10,531
<i>ESG Rebrand_t</i>	638,538	0.003	1,738
<i>NonESG Launch_t</i>	638,538	0.112	71,534

Table 2. Flow Spillover from Launching ESG Funds

This table shows the spillover effect of an ESG fund on the monthly flows of non-ESG funds in the same family. The sample comprises monthly observations for non-ESG funds from 2004 to 2024. The dependent variable is the net flow of the month, and the main independent variable of interest is an indicator of ESG fund launch in the family during the past year. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>			
	1	2	3	4
<i>ESG Launch</i>	0.269*** (3.82)	0.268*** (3.81)	0.268*** (3.80)	0.269*** (3.85)
<i>Log(Fund Size+1)</i>	-0.805*** (-12.00)	-0.806*** (-12.01)	-0.806*** (-12.01)	-0.806*** (-12.01)
<i>Log(Family Size+1)</i>	0.028 (1.04)	0.026 (0.99)	0.025 (0.94)	0.026 (1.01)
<i>CAPM alpha</i>	0.864*** (12.40)	0.820*** (13.30)	0.820*** (13.28)	0.820*** (13.32)
<i>CAPM alpha_Sq</i>	0.045* (1.93)	0.028 (1.20)	0.028 (1.20)	0.028 (1.20)
<i>Log(Fund Age+1)</i>	-1.780*** (-8.86)	-1.780*** (-8.83)	-1.780*** (-8.83)	-1.780*** (-8.85)
<i>Log(Turnover+1)</i>	0.028 (0.64)	0.027 (0.61)	0.027 (0.61)	0.027 (0.61)
<i>Expense</i>	-1.929*** (-9.53)	-1.927*** (-9.49)	-1.927*** (-9.49)	-1.927*** (-9.49)
<i>StarFund</i>		0.346** (2.23)	0.392*** (2.60)	0.346** (2.23)
<i>StarFamily</i>		0.035 (1.03)		0.035 (1.04)
<i>StarFamily (excl. Star Funds)</i>			0.069* (1.81)	
<i>NonESG Launch</i>				-0.003 (-0.05)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	623,754	623,754	623,754	623,754
Adj. R-squared	0.075	0.075	0.075	0.075

Table 3. Stand-Alone and Spillover Revenue Following New ESG Fund Launches

Panel A presents back-of-the-envelope estimates of the stand-alone and spillover revenue associated with new ESG fund launches. Unless otherwise indicated, the inputs used in these calculations are sample medians. Stand-alone revenue is calculated at the fund level as each newly launched fund's average monthly TNA during the first 12 months after launch multiplied by its monthly expense rate. We then report the median stand-alone revenue separately for newly launched ESG and non-ESG funds. The spillover calculations use the sample medians of sibling funds' average monthly TNA and monthly expense rates over the 12-month post-launch window, together with the estimated flow spillover coefficient of 0.269 percentage points from column 4 of Table 2. Method I estimates the fee revenue associated with one month of incremental spillover flows. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year. Assuming that spillover flows occur each month and remain invested through the end of the year, the 12 monthly flow cohorts remain invested for 12, 11, ..., and 1 months, respectively, implying an average holding period of 6.5 months. Fund-level estimates are reported in column 1. Family-level estimates are reported assuming either 6 non-ESG sibling funds (reported in column 2), following Nanda et al. (2004), or 12 non-ESG sibling funds (reported in column 3), the sample median in 2014. Panel B compares mean monthly capital flows and mean monthly stand-alone revenue between newly launched ESG and non-ESG funds. All dollar amounts are expressed in millions. Numbers in parentheses are t-statistics. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively. Minor differences may arise from rounding.

Panel A: Back-of-the-Envelope Revenue Calibration Using Median Inputs

	1	2	3
Median Stand-alone ESG Revenue (initial 12-month average, \$Mil)	0.003		
Median Stand-alone non-ESG Revenue (initial 12-month average, \$Mil)	0.007		
(1) Median Sibling Fund TNA (post-launch monthly average, \$Mil)	514.979		
(2) Flow Spillover Coef. (column 4 of Table 2, %)	0.269		
(3) Average holding period (one-year window, #months)	6.5		
(4) Median Sibling Fund Expense Ratio (post-launch monthly average, %)	0.062		
(5) Number of Non-ESG Sibling Funds	-	6	12
	Fund-Level	Family-level	
<i>Method I: One Month of Incremental Flow Spillover</i>			
Flow Spillover (\$Mil) = (1)x(2); or (1)x(2)x(5)	1.385	8.312	16.624
Flow Spillover Revenue (\$Mil) = (1)x(2)x(4); or (1)x(2)x(4)x(5)	0.001	0.005	0.010
<i>Method II: Accumulated Stock of Spillover Assets</i>			
AUM Spillover (\$Mil) = (1)x(2)x(3); or (1)x(2)x(3)x(5)	9.004	54.026	108.053
AUM Spillover Revenue (\$Mil) = (1)x(2)x(3)x(4); or (1)x(2)x(3)x(4)x(5)	0.006	0.033	0.067

Panel B: T-test between New ESG and Non-ESG Funds

	ESG (mean)	Non-ESG (mean)	Difference (diff/t-stat)
Monthly Capital Flows (initial 12-month, %)	9.088	14.118	-5.030*** (-5.16)
Monthly Stand-Alone Revenue (\$Mil)	0.022	0.043	-0.021* (-1.75)

Table 4. Heterogeneity of ESG Fund Launches

This table reports the time-varying spillover effects of ESG fund launches. The sample comprises monthly observations for non-ESG funds from 2004 to 2024. The dependent variable is monthly net flow. The main independent variables are indicators for ESG launches in different periods: before versus after June 2022 in column 1, and before June 2020, June 2020–May 2022, and after June 2022 in column 2. Columns 3 and 4 separately analyze Social- and Other-related ESG launches using the same period splits as in column 2. The control variables in column 3 of Table 2 are included but not reported for brevity. Variable definitions are provided in the Appendix. The row p-value reports the p-value from a Wald test of equality between coefficients: in column 1, the null hypothesis is that the coefficients on *ESG Launch [2004.01–2022.05]* and *ESG Launch [2022.06–2024.12]* are equal; in column 2–4, the null hypothesis is that the coefficients on *ESG Launch [2004.01–2020.05]* and *ESG Launch [2020.06–2022.05]* are equal. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>			
	1	2	3	4
	All ESG Launch	All ESG Launch	S- Related Launch	Other-Related Launch
<i>ESG Launch [2004.01-2022.05]</i>	0.279*** (4.03)			
<i>ESG Launch [2004.01-2020.05]</i>		0.261*** (2.86)	0.401*** (3.37)	0.265*** (2.81)
<i>ESG Launch [2020.06-2022.05]</i>		0.379*** (2.66)	0.542*** (3.92)	0.337** (2.06)
<i>ESG Launch [2022.06-2024.12]</i>	0.097 (0.93)	0.107 (0.96)	-0.105 (-0.59)	0.191* (1.72)
<i>p-value</i>	0.063	0.410	0.243	0.675
Control Variables	Yes	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	623,754	623,754	623,754	623,754
Adj. R-squared	0.075	0.075	0.075	0.075

Table 5. Two-Stage Least Squares Regressions

This table shows the spillover effect of an ESG fund on the monthly flows of non-ESG funds in the same family using two-stage instrumental variable (IV) regressions. The sample is restricted to large fund families, excluding family-month clusters with less than 20 observations. Columns 1 and 2 (3 and 4) are based on the full sample period of 2004 to 2024 (pre-2022 sample period of 2004 to 2021). Columns 1 and 3 present the first-stage results from regressing the assumed endogenous variable, *ESG Launch*, on the IVs, i.e., natural logarithm of one plus the number of hazards which occur annually within 100-mile radius of a fund family's headquarters, and all control variables. Columns 2 and 4 present the respective second-stage results from regressing the sibling funds' net flow on the predicted value of the main independent variable of interest, i.e., *ESG Launch*, and control variables. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>ESG Launch</i>	<i>Fund Flow</i>	<i>ESG Launch</i>	<i>Fund Flow</i>
	1	2	3	4
<i>Sample period:</i>	<i>Full sample</i>		<i>Pre-2022</i>	
<i>Log(Num_Hazards+1)</i>	0.066*** (2.83)		0.150*** (3.82)	
<i>ESG Launch</i>		1.814* (1.76)		1.634** (2.28)
<i>Log(Fund Size+1)</i>	0.006 (0.61)	-1.078*** (-8.60)	0.009 (0.86)	-1.161*** (-7.31)
<i>Log(Family Size+1)</i>	0.073* (1.67)	0.228 (1.39)	0.060 (1.49)	0.385** (2.53)
<i>CAPM alpha</i>	0.002 (0.40)	0.586*** (7.53)	0.000 (0.10)	0.670*** (7.67)
<i>CAPM alpha_Sq</i>	0.001 (0.41)	0.022 (0.62)	0.002 (0.73)	0.024 (0.58)
<i>Log(Fund Age+1)</i>	-0.065 (-1.25)	-1.240*** (-3.97)	-0.029 (-0.49)	-1.319*** (-3.83)
<i>Log(Turnover+1)</i>	-0.010 (-0.92)	-0.027 (-0.34)	-0.003 (-0.36)	-0.062 (-0.80)
<i>Expense</i>	0.096* (1.80)	-1.975*** (-4.63)	0.093* (1.80)	-2.054*** (-4.39)
<i>StarFund</i>	0.009 (0.99)	0.287 (1.11)	0.012 (1.23)	0.264 (0.94)
<i>StarFamily</i>	0.012 (0.54)	0.049 (0.64)	0.001 (0.04)	0.096 (1.26)
<i>NonESG Launch</i>	0.047 (1.56)	-0.058 (-0.50)	0.023 (0.89)	-0.005 (-0.05)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Cragg-Donald Wald F statistic	2315.47	-	7,503.21	-
Sanderson-Windmeijer F statistic	7.98	-	14.57	-
Nobs	271,492	271,492	238,521	238,521
R-squared	-	0.009	-	0.012

Table 6. ESG Performance of the Sibling Non-ESG Funds

This table shows the spillover effect of an ESG fund on the ESG profile of non-ESG funds in the same family. The dependent variables for the four columns are (1) quarterly change in the average MSCI ESG ratings of fund portfolio firms, (2) quarterly change in the average KLD CSR scores of fund portfolio firms, (3) the monthly change of Morningstar Sustainability Globe rating for mutual funds, and (4) the sensitivity of fund return to the MSCI USA Selection Index estimated using the monthly data over the past three years. The main independent variable of interest is an indicator of ESG fund launch during the past year. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and quarter/month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>MSCI ESG Rating Chg.</i>	<i>Adj. CSR Score Chg.</i>	<i>MS Sustain Rating Chg.</i>	<i>Return Sensitivity on ESG Index</i>
	1	2	3	4
<i>ESG Launch</i>	0.001 (0.36)	-0.015 (-1.40)	-0.001 (-0.83)	0.000 (0.22)
<i>Log(Fund Size+1)</i>	-0.001 (-0.83)	-0.005 (-0.83)	0.001 (0.48)	0.003** (2.15)
<i>Log(Family Size+1)</i>	-0.001 (-1.13)	-0.004 (-1.23)	-0.002* (-1.77)	0.001 (0.81)
<i>CAPM alpha</i>	0.003 (0.71)	-0.107 (-1.47)	0.002 (1.05)	-0.043*** (-11.12)
<i>CAPM alpha_Sq</i>	0.001 (0.40)	0.022 (1.17)	-0.000 (-0.01)	-0.003 (-1.62)
<i>Log(Fund Age+1)</i>	-0.007 (-1.08)	0.035 (0.98)	-0.018 (-0.93)	-0.030*** (-5.04)
<i>Log(Turnover+1)</i>	-0.001 (-1.08)	-0.005 (-0.53)	-0.002 (-0.94)	-0.002 (-1.25)
<i>Expense</i>	-0.005 (-0.87)	0.018 (0.85)	0.038 (1.20)	0.010 (1.20)
<i>StarFund</i>	0.002 (0.27)	0.044 (0.71)	-0.003 (-0.59)	0.025*** (3.70)
<i>StarFamily</i>	0.002 (1.37)	0.001 (0.06)	-0.004** (-2.04)	0.003** (2.26)
<i>NonESG Launch</i>	-0.002 (-0.87)	-0.003 (-0.50)	0.000 (0.11)	0.001 (0.67)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Quarter	Quarter	Month	Month
Nobs	79,288	85,114	178,164	619,285
Adj. R-squared	0.254	0.980	-0.000	0.813

Table 7. Risk-Adjusted Return of the Sibling Non-ESG Funds

This table shows the spillover effect of an ESG fund launch on the non-ESG funds' monthly return in the same family. The dependent variables in columns 1 to 4 are *Fund Return* (raw net-of-fee returns), *CAPM Alpha* (Jensen, 1968), *Three-Factor Alpha* (Fama and French, 1993), and *Four-Factor Alpha* (Carhart, 1997), respectively. The main independent variable of interest is an indicator of ESG fund launch during the past year. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Return</i>	<i>CAPM Alpha</i>	<i>Three-Factor Alpha</i>	<i>Four-Factor Alpha</i>
	1	2	3	4
<i>ESG Launch</i>	0.038 (1.19)	0.036 (1.32)	0.027 (1.59)	0.026 (1.62)
<i>Log(Fund Size+1)</i>	-0.171*** (-7.44)	-0.142*** (-6.93)	-0.115*** (-7.64)	-0.121*** (-7.95)
<i>Log(Family Size+1)</i>	-0.010* (-1.69)	-0.010* (-1.75)	-0.004 (-0.90)	-0.005 (-1.16)
<i>Log(Fund Age+1)</i>	0.151** (2.36)	0.140*** (2.68)	0.105*** (3.00)	0.099*** (2.94)
<i>Log(Turnover+1)</i>	-0.047*** (-3.11)	-0.041*** (-3.15)	-0.038*** (-3.88)	-0.037*** (-3.92)
<i>Expense</i>	-0.317*** (-5.34)	-0.230*** (-4.80)	-0.168*** (-4.33)	-0.161*** (-4.24)
<i>StarFamily</i>	-0.016 (-1.18)	-0.015 (-1.20)	-0.016* (-1.67)	-0.015 (-1.47)
<i>FundFlow</i>	-0.000 (-0.25)	-0.001 (-0.53)	-0.001 (-1.21)	-0.002 (-1.61)
<i>NonESG Launch</i>	-0.002 (-0.19)	0.003 (0.26)	0.001 (0.14)	0.002 (0.19)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	623,754	623,754	623,754	623,754
Adj. R-squared	0.767	0.107	0.089	0.087

Table 8. Heterogeneity Test: Passive versus Active Sibling Funds

This table shows the subsample analyses of the spillover effect of ESG fund launch on different types of sibling non-ESG funds. We partition the sample based on whether the sibling fund is passively versus actively managed. The dependent variable is the net flow of the month, and the main independent variable of interest is an indicator of ESG fund launch during the past year. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>	
	1 Passive Siblings	2 Active Siblings
<i>ESG Launch</i>	0.316*** (2.69)	0.191*** (2.69)
<i>Log(Fund Size+1)</i>	-1.096*** (-6.48)	-0.759*** (-13.73)
<i>Log(Family Size+1)</i>	0.097 (1.18)	-0.010 (-0.39)
<i>CAPM alpha</i>	0.664*** (4.32)	0.884*** (15.91)
<i>CAPM alpha_Sq</i>	0.015 (0.34)	0.028 (1.20)
<i>Log(Fund Age+1)</i>	-1.454*** (-3.95)	-2.117*** (-13.30)
<i>Log(Turnover+1)</i>	0.325** (2.52)	-0.058 (-1.46)
<i>Expense</i>	-2.133** (-2.04)	-2.018*** (-9.39)
<i>StarFund</i>	0.600* (1.89)	0.286** (2.07)
<i>StarFamily</i>	0.263** (2.51)	-0.002 (-0.07)
<i>NonESG Launch</i>	-0.147 (-1.38)	0.050 (1.01)
Fund Fixed Effects	Yes	Yes
Time Fixed Effects	Month	Month
Nobs	142,152	476,595
Adj. R-squared	0.064	0.084

Table 9. Heterogeneity Test: Unsophisticated versus Sophisticated Investors

This table shows the subsample analyses of the spillover effect of ESG fund launch on different types of funds or fund families. In columns 1 and 2, we partition the sample based on whether the sibling fund predominantly targets retail versus institutional investors. In columns 3 and 4, we partition the sample based on whether the fund belongs to a family that charges a load fee on at least one of its funds or to a family without any load funds. The dependent variable is the net flow of the month. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>			
	1 Retail Siblings	2 Institutional Siblings	3 Family with Load	4 Family without Load
<i>ESG Launch</i>	0.280*** (3.67)	0.097 (0.56)	0.455*** (3.41)	0.151** (2.29)
<i>Log(Fund Size+1)</i>	-0.789*** (-11.02)	-1.001*** (-7.34)	-0.994*** (-6.24)	-0.772*** (-11.01)
<i>Log(Family Size+1)</i>	0.044 (1.48)	-0.066* (-1.74)	0.048 (0.99)	0.018 (0.46)
<i>CAPM alpha</i>	0.842*** (13.29)	0.647*** (4.84)	0.770*** (8.32)	0.843*** (11.90)
<i>CAPM alpha_Sq</i>	0.034 (1.38)	-0.023 (-0.53)	0.008 (0.27)	0.036 (1.25)
<i>Log(Fund Age+1)</i>	-1.751*** (-8.00)	-1.874*** (-7.29)	-1.659*** (-4.02)	-1.813*** (-9.76)
<i>Log(Turnover+1)</i>	0.030 (0.64)	-0.010 (-0.10)	0.065 (1.16)	-0.010 (-0.18)
<i>Expense</i>	-1.883*** (-8.84)	-2.212*** (-3.82)	-2.120*** (-7.50)	-1.818*** (-6.30)
<i>StarFund</i>	0.333* (1.92)	0.474* (1.84)	0.372 (1.26)	0.331** (2.35)
<i>StarFamily</i>	0.051 (1.47)	-0.115 (-1.32)	0.089 (1.28)	0.015 (0.40)
<i>NonESG Launch</i>	0.016 (0.29)	-0.168 (-1.55)	-0.007 (-0.08)	0.008 (0.13)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	550,290	71,958	206,712	417,038
Adj. R-squared	0.075	0.078	0.071	0.082

Table 10. Heterogeneity Test: High versus Low Investor Attention

This table shows the spillover effect of different types of ESG fund launches. The dependent variable is the net flow of the month. The main independent variable of interest is two split indicators from the original *ESG Launch* dummy based on (1) whether the launching family-year is associated with above-median level of ESG news coverage, (2) whether the size of the launching family is above the median level, and (3) whether the launching family-year is associated with above-median level of marketing expenses measured by the 12b-1 fees. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>		
	1	2	3
	P1: High News Coverage vs. P2: Low News Coverage	P1: Large Families vs. P2: Small Families	P1: High Family-12b1-Fee vs. P2: Low Family-12b1-Fee
<i>ESG Launch P1</i>	0.330*** (3.81)	0.267*** (3.81)	0.306*** (4.31)
<i>ESG Launch P2</i>	0.120 (1.12)	0.026 (0.06)	0.132 (0.51)
<i>Log(Fund Size+1)</i>	-0.807*** (-12.02)	-0.806*** (-12.01)	-0.807*** (-12.01)
<i>Log(Family Size+1)</i>	0.026 (0.98)	0.026 (1.01)	0.026 (0.98)
<i>CAPM alpha</i>	0.820*** (13.31)	0.820*** (13.32)	0.820*** (13.31)
<i>CAPM alpha_Sq</i>	0.028 (1.19)	0.028 (1.20)	0.028 (1.20)
<i>Log(Fund Age+1)</i>	-1.785*** (-8.92)	-1.780*** (-8.85)	-1.779*** (-8.83)
<i>Log(Turnover+1)</i>	0.026 (0.59)	0.027 (0.61)	0.027 (0.61)
<i>Expense</i>	-1.931*** (-9.45)	-1.926*** (-9.49)	-1.928*** (-9.51)
<i>StarFund</i>	0.347** (2.24)	0.346** (2.23)	0.346** (2.23)
<i>StarFamily</i>	0.037 (1.09)	0.035 (1.04)	0.035 (1.03)
<i>NonESG Launch</i>	-0.001 (-0.02)	-0.002 (-0.04)	-0.003 (-0.07)
Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	623,754	623,754	623,754
Adj. R-squared	0.075	0.075	0.075

Table 11. Flow Spillover of Launching Anti-ESG Funds

This table reports the spillover effect of anti-ESG fund launches on sibling funds that are neither ESG nor anti-ESG. The dependent variable is monthly net flow. The main independent variable is an indicator for an anti-ESG fund launch during the past year. Anti-ESG funds are defined as in Section II.B. The sample spans January 2009 to December 2024. Anti-ESG fund launches are identified using the Mutual Fund Prospectus Risk/Return Summary database, which is available from December 2010; the regression sample begins in January 2009 to allow a full 12-month pre-launch window for the earliest identified Anti-ESG launches. *Other Launch* is an indicator for a fund (neither ESG nor anti-ESG) launch during the past year. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>			
	1	2	3	4
	All Siblings	Retail Siblings	Institutional Siblings	All Siblings
<i>AntiESG Launch</i>	-0.220*	-0.217*	-0.179	
	(-1.89)	(-1.69)	(-0.89)	
<i>AntiESG Launch [2010.01-2022.05]</i>				-0.211*
				(-1.95)
<i>AntiESG Launch [2022.06-2024.12]</i>				-0.486
				(-1.27)
<i>ESG Launch</i>	0.285***	0.306***	0.036	
	(3.50)	(3.55)	(0.21)	
<i>ESG Launch [2010.01-2022.05]</i>				0.297***
				(3.69)
<i>ESG Launch [2022.06-2024.12]</i>				0.060
				(0.46)
<i>Other Launch</i>	0.030	0.036	-0.035	0.034
	(0.52)	(0.57)	(-0.29)	(0.58)
Control Variables	Yes	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	483,920	420,205	63,364	483,920
Adj. R-squared	0.075	0.075	0.079	0.075

Table 12. Stand-Alone and Spillover Revenue Following New Anti-ESG Fund Launches

This table presents back-of-the-envelope estimates of the stand-alone and spillover revenue associated with new anti-ESG fund launches. Unless otherwise indicated, the inputs used in the calculations are sample medians. Stand-alone revenue is calculated at the fund level as each newly launched anti-ESG fund's average monthly TNA during the first 12 months after launch multiplied by its monthly expense rate. We then report the median stand-alone revenue across all newly launched anti-ESG funds. The spillover calculations use the sample medians of eligible traditional sibling funds' average monthly TNA and monthly expense rates over the 12-month post-launch window, together with the estimated flow spillover coefficient of -0.22 percentage points from column 1 of Table 11. Method I estimates the revenue effect associated with one month of incremental spillover flows. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year. Assuming that spillover flows occur each month and remain invested through the end of the 12-month post-launch window, the 12 monthly flow cohorts remain invested for 12, 11, ..., and 1 months, respectively, implying an average holding period of 6.5 months. Fund-level estimates are reported in column 1. Family-level estimates are reported assuming either 6 sibling funds (reported in column 2), following Nanda et al. (2004), or 10.5 sibling funds (reported in column 3), the median number of sibling funds classified as neither ESG nor anti-ESG per family in 2014. Negative values indicate losses in fee revenue resulting from outflows from sibling funds. All dollar amounts are expressed in millions. Minor differences may arise from rounding.

	1	2	3
Median Stand-Alone Anti-ESG Revenue (initial 12-month average, \$Mil)	0.011		
(1) Median Sibling Fund TNA (post-launch monthly average, \$Mil)	352.025		
(2) Flow Spillover Coef. (column 1 of Table 11, %)	-0.22		
(3) Average holding period (one-year window, #months)	6.5		
(4) Median Sibling Fund Expense Ratio (post-launch monthly average, %)	0.069		
(5) Number of Traditional Sibling Funds (Neither ESG nor Anti-ESG)	-	6	10.5
	Fund-Level	Family-level	
Method I: One Month of Incremental Flow Spillover			
Flow Spillover (\$Mil) = (1)x(2); or (1)x(2)x(5)	-0.774	-4.647	-8.132
Flow Spillover Revenue (\$Mil) = (1)x(2)x(4); or (1)x(2)x(4)x(5)	-0.0005	-0.0032	-0.0056
Method II: Accumulated Stock of Spillover Assets			
AUM Spillover (\$Mil) = (1)x(2)x(3); or (1)x(2)x(3)x(5)	-5.034	-30.204	-52.857
AUM Spillover Revenue (\$Mil) = (1)x(2)x(3)x(4); or (1)x(2)x(3)x(4)x(5)	-0.0035	-0.0208	-0.0365

Internet Appendix A. Supplementary Evidence

Figure IA1. Life-Cycle of ESG versus Non-ESG Funds

This figure presents a comparative analysis of ESG and non-ESG funds over their first 60 months after launch. The upper figure shows the median monthly flow dynamics for both types of funds. The lower figure illustrates the median monthly total assets under management (TNA) for both types of funds.

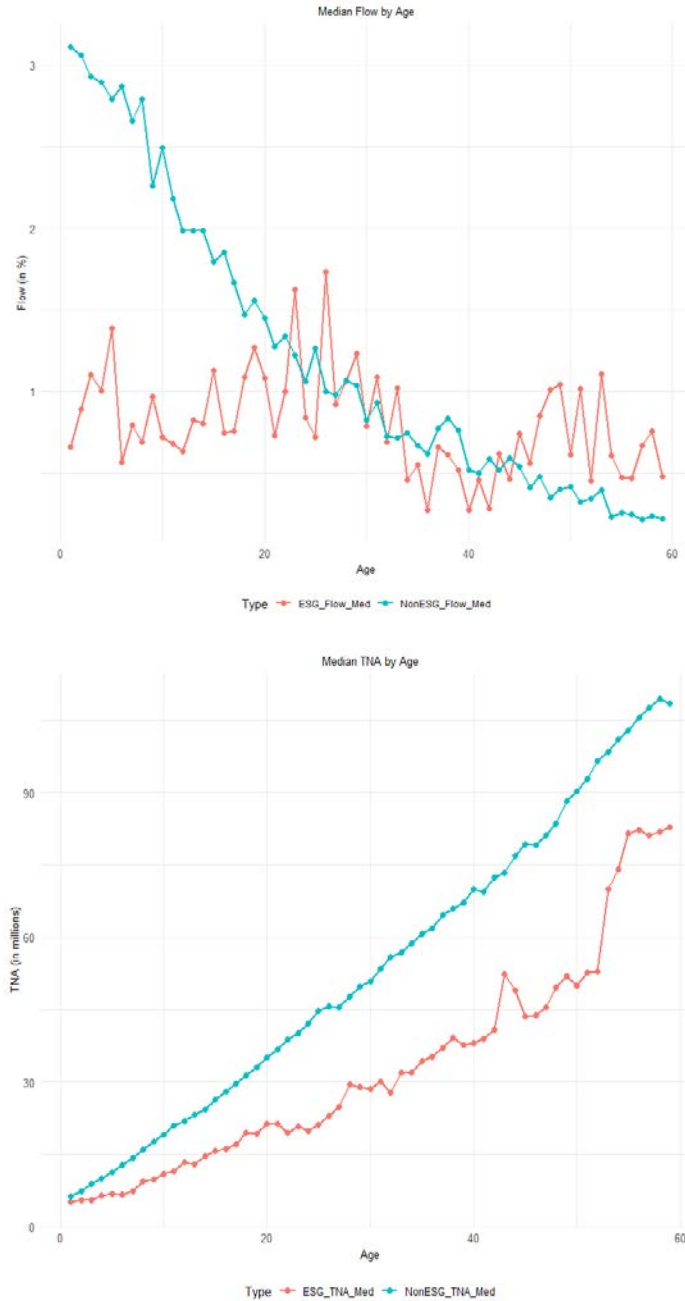


Figure IA2. Life-Cycle of ESG, Anti-ESG, and Other Funds

This figure presents a comparative analysis of ESG, Anti-ESG, and other funds over their first 60 months after launch. The upper figure shows the median monthly flow dynamics for all three fund types. The lower figure illustrates the median monthly total assets under management (TNA) for all three fund types.

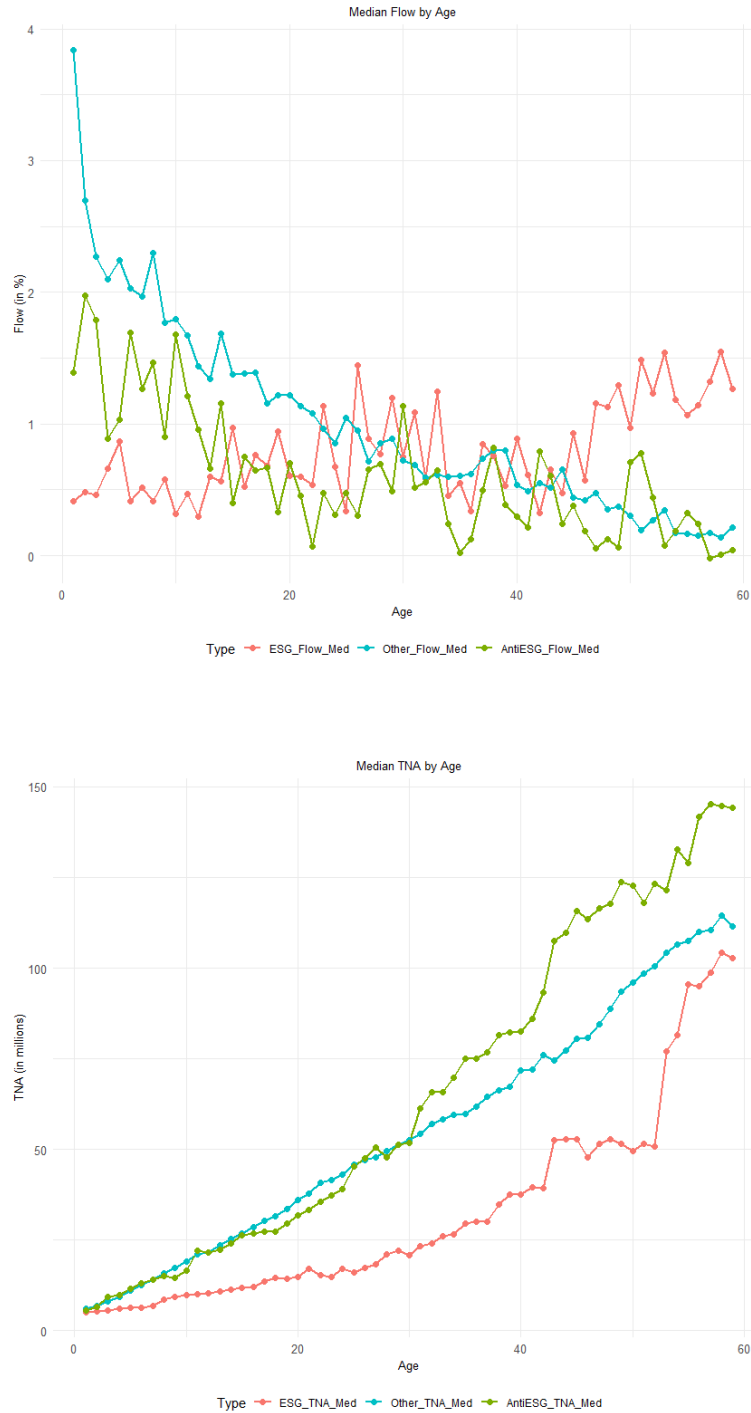


Table IA1. Summary of ESG and Anti-ESG Funds

Panel A compares the initial ESG profile of ESG funds, anti-ESG funds, and other funds. The initial ESG profile is measured as the weighted average MSCI ESG score of all (top 10) holding firms during the first six months since the fund launch. The sample spans from 2010 to 2024, since the MSCI ESG rating starts from 2007 and has good coverage for holding firms from 2010. Columns 1, 2, 4, and 6 show the mean values, and column 3 reports the T-tests between ESG funds and other funds, and columns 5 and 7 report the T-tests between ESG funds and anti-ESG funds. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively. Panel B reports the largest ESG fund families and, for each: the cumulative number of ESG funds, the cumulative counts of new and rebranded ESG funds, the number of non-ESG sibling funds per family-month, and the average AUM of non-ESG sibling funds in each family-month. The last two columns report the time-series median values. Panel C shows the number of anti-ESG funds introduced per year. In column 1, anti-ESG funds are those that explicitly reject ESG in their prospectus, invest in industries penalized by ESG (e.g., fossil fuels, firearms, tobacco, defense, alcohol, gambling, nuclear power), or market themselves as “anti-woke” or against ESG principles. In column 2, anti-ESG funds are identified as those whose weighted-average MSCI ESG score for the top ten holdings falls in the bottom quartile during the initial two quarters after launch.

Panel A: ESG Profiles of Three Types of Funds

	1	2	3	4	5	6	7
	ESG Funds	Other Funds	Diff. 1-2	Prospectus-Based Anti-ESG Funds	Diff. 1-4	Holding-Based Anti-ESG Funds	Diff. 1-6
<i>MSCI ESG Rating-Overall Holdings</i>	4.47	4.05	0.42*** (9.83)	3.57	0.90*** (7.68)	3.37	1.10*** (27.00)
<i>MSCI ESG Rating-Top 10 Holdings</i>	4.61	4.21	0.40*** (7.92)	3.61	1.00*** (6.90)	3.14	1.47*** (30.31)

Panel B: Largest ESG Fund Families

	Family Name	Total ESG Funds	Launch	Rebrand	# Non-ESG Sibling Funds	AUM (\$Mil.) of Non-ESG Funds
1	BlackRock	70	63	7	127	3394
2	Fidelity	41	41	0	161	4667
3	Calvert	20	18	2	16	1766
4	Putnam Investments	20	7	13	2	158
5	DWS Asset Management	18	12	6	20	754
6	Pax World	17	15	2	0	0
7	Dimensional	16	16	0	16	4206
8	Nuveen	15	13	2	14	430
9	Natixis Investment Managers	15	15	0	6	438
10	Invesco	13	11	2	92	1564

Panel C: Number of Anti-ESG Funds Launched per Year

Year	1 # Prospectus-based Anti-ESG Funds	2 # Holding-based Anti-ESG Funds
2010	22	2
2011	17	10
2012	9	8
2013	14	37
2014	7	31
2015	5	44
2016	6	35
2017	8	31
2018	2	18
2019	2	14
2020	3	7
2021	2	4
2022	7	1
2023	4	
Total	108	242

Table IA2. Stand-Alone Flows to New Funds

This table examines the stand-alone flows to new ESG funds. Specifically, we compare the cash inflows of ESG and non-ESG funds during the first two years following fund launch. The dependent variable is the net flow of the month, and the main independent variables include an indicator of ESG fund, an indicator of the initial two years after launch, and their interactions. The control variables include fund size, family size, fund return, square of fund return, fund age, fund turnover, and expense ratio, as defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>				
	1	2	3	4	5
	2004-2024	2004-2010	2011-2016	2017-2022	2023-2024
<i>ESG Fund* Initial Period</i>	-2.034*** (-2.96)	0.681 (0.49)	-1.917 (-1.26)	-1.922*** (-2.92)	-1.310 (-0.84)
<i>ESG Fund</i>	-0.061 (-0.26)	-0.048 (-0.05)	-0.498 (-1.08)	0.356 (1.41)	-0.564*** (-2.93)
<i>Initial Period</i>	3.415*** (14.83)	3.546*** (10.64)	3.804*** (9.31)	2.355*** (6.15)	2.754*** (5.78)
Control Variables	Yes	Yes	Yes	Yes	Yes
Fund Fixed Effects	No	No	No	No	No
Category Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month	Month
Nobs	819,490	262,312	240,672	257,324	59,182
Adj. R-squared	0.088	0.108	0.085	0.071	0.073

Table IA3. Robustness for Flow Spillover

This table shows the robustness for the flow spillover of ESG fund launch in Table 2. The dependent variable is the net flow of the month, and the main independent variable of interest is an indicator of ESG fund launch during the past year. The control variables are defined in the Appendix and lagged by one period. In columns 1-4, we include different fixed effects where “Category” denotes a fund’s investment strategy, e.g., blend, growth, value. In columns 5-7, we include additional control variables of Morningstar Rating, Morningstar Sustainability Rating, and the 12b-1 fee of the fund family. In column 8, we remove funds with explicitly religious keywords in their names (e.g., catholic, aquinas, amana, epiphany) from the ESG classification to ensure that our results are not driven by religiously motivated funds. The control variables include fund size, family size, fund CAPM alpha, square of CAPM alpha, fund age, turnover, expense ratio, star-fund, and star-family, as defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>							
	1	2	3	4	5	6	7	8
<i>ESG Launch</i>	0.272*** (3.77)	0.151* (1.82)	0.137* (1.69)	0.240*** (3.40)	0.174*** (2.82)	0.146 (1.54)	0.328*** (4.74)	0.268*** (3.76)
<i>NonESG Launch</i>	0.009 (0.19)	0.019 (0.32)	0.008 (0.14)	-0.003 (-0.07)	0.009 (0.18)	-0.063 (-0.58)	0.009 (0.17)	-0.002 (-0.03)
<i>MS Rating</i>					1.068*** (26.68)			
<i>MS Sustain Rating</i>						0.027 (0.97)		
<i>Log(Family 12b1+1)</i>							0.164 (1.63)	
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fund Fixed Effects	Yes	No	No	No	Yes	No	Yes	Yes
Month Fixed Effects	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Category Fixed Effects	No	No	Yes	No	No	No	No	No
Category×Month Fixed Effects	Yes	Yes	No	No	No	No	No	No
Family Fixed Effects	No	No	No	Yes	No	No	No	No
Nobs	623,733	623,760	623,781	623,776	603,937	178,996	537,573	623,754
Adj. R-squared	0.080	0.033	0.027	0.044	0.092	0.027	0.072	0.075

Table IA4. Rebranding ESG Funds

Panel A shows the correlation of launching and rebranding ESG funds with the families' ESG-related news coverage. The dependent variable is the annual number of ESG-related News articles that mention the family name and ESG keywords at the same time. The main independent variables of interest are the number of new ESG funds and the number of existing funds rebranded as ESG funds during that year. All variables were standardized using their respective means and standard deviations to address magnitude differences across measures. The constant term is included but not reported for brevity. Panel B shows the spillover effect of rebranding a fund as an ESG fund on the monthly flows of non-ESG funds in the same family. The dependent variable is the net flow of the month, and the main independent variable of interest is an indicator of rebranding an ESG fund during the past year. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A: ESG News

<i>Sample:</i>	1	2
	# ESG News	
	<i>Full sample</i>	<i>Pre-2022 sample</i>
<i># of Launched ESG Funds</i>	0.114 (1.50)	0.143* (1.84)
<i># of Rebranded ESG Funds</i>	0.051 (1.05)	0.100 (1.43)
Family Fixed Effects	Yes	Yes
Time Fixed Effects	Year	Year
Nobs	3,269	2,904
Adj. R-squared	0.672	0.724

Panel B: Flow spillovers

	<i>Fund Flow</i>		
	1	2	3
<i>ESG Rebrand</i>	0.170 (1.13)	0.169 (1.12)	0.169 (1.12)
<i>Log(Fund Size+1)</i>	-0.801*** (-11.95)	-0.802*** (-11.97)	-0.802*** (-11.97)
<i>Log(Family Size+1)</i>	0.031 (1.16)	0.030 (1.12)	0.029 (1.11)
<i>CAPM alpha</i>	0.865*** (12.42)	0.821*** (13.33)	0.821*** (13.34)
<i>CAPM alpha_Sq</i>	0.045* (1.93)	0.028 (1.20)	0.028 (1.20)
<i>Log(Fund Age+1)</i>	-1.788*** (-9.01)	-1.788*** (-8.99)	-1.788*** (-9.00)
<i>Log(Turnover+1)</i>	0.028 (0.64)	0.027 (0.61)	0.027 (0.61)
<i>Expense</i>	-1.909*** (-9.27)	-1.907*** (-9.24)	-1.907*** (-9.23)
<i>StarFund</i>		0.345** (2.24)	0.345** (2.24)
<i>StarFamily</i>		0.037 (1.08)	0.037 (1.09)

<i>NonESG Launch</i>			0.008 (0.15)
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Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	623,754	623,754	623,754
Adj. R-squared	0.075	0.075	0.075

Table IA5. Confounding Factors: Signing PRI

This table shows the interplay of new ESG fund launch and signing PRI by the family. The dependent variable is the net flow of the month. The main independent variable of interest in column 1 is an indicator of ESG fund launch during the past year. The main independent variables of interest in column 2 are two split indicators from the original *ESG Launch* dummy based on whether the new ESG fund is introduced during a 12-month window around the family signing PRI. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. In column 1, we also control the dummy variable of *Sign PRI* that indicates the months subsequent to the family signing PRI. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>	
	1	2
	Control for <i>Sign PRI</i>	P1: PRI Sign Period vs. P2: Not PRI Sign Period
<i>ESG Launch</i>	0.257*** (3.38)	
<i>Sign PRI</i>	0.102 (0.99)	
<i>ESG Launch P1</i>		-0.052 (-0.36)
<i>ESG Launch P2</i>		0.283*** (3.95)
<i>Log(Fund Size+1)</i>	-0.807*** (-12.02)	-0.806*** (-12.01)
<i>Log(Family Size+1)</i>	0.023 (0.86)	0.026 (1.00)
<i>CAPM alpha</i>	0.820*** (13.32)	0.821*** (13.35)
<i>CAPM alpha_Sq</i>	0.028 (1.20)	0.028 (1.21)
<i>Log(Fund Age+1)</i>	-1.780*** (-8.89)	-1.782*** (-8.89)
<i>Log(Turnover+1)</i>	0.027 (0.61)	0.027 (0.60)
<i>Expense</i>	-1.923*** (-9.53)	-1.927*** (-9.47)
<i>StarFund</i>	0.347** (2.23)	0.346** (2.22)
<i>StarFamily</i>	0.035 (1.05)	0.035 (1.04)
<i>NonESG Launch</i>	-0.004 (-0.07)	-0.003 (-0.06)
Fund Fixed Effects	Yes	Yes
Time Fixed Effects	Month	Month
Nobs	623,754	623,754
Adj. R-squared	0.075	0.075

Table IA6. Confounding Factors: Co-managed Funds

This table shows the subsample analyses of the spillover effect of ESG fund launch on two types of sibling non-ESG funds: those that have ever been managed by the same managers as the new ESG funds, and the other unrelated funds. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>	
	1 Unrelated Siblings	2 Co-managed Siblings
<i>ESG Launch</i>	0.258*** (3.41)	0.266** (2.32)
<i>Log(Fund Size+1)</i>	-0.848*** (-11.05)	-0.564*** (-7.50)
<i>Log(Family Size+1)</i>	0.033 (1.15)	-0.001 (-0.03)
<i>CAPM alpha</i>	0.806*** (12.40)	0.942*** (7.55)
<i>CAPM alpha_Sq</i>	0.025 (1.01)	0.035 (0.69)
<i>Log(Fund Age+1)</i>	-1.841*** (-8.52)	-1.496*** (-5.37)
<i>Log(Turnover+1)</i>	0.050 (0.96)	-0.098 (-1.50)
<i>Expense</i>	-1.973*** (-8.67)	-1.713*** (-3.83)
<i>StarFund</i>	0.355** (2.26)	0.418 (1.29)
<i>StarFamily</i>	0.036 (0.98)	0.022 (0.27)
<i>NonESG Launch</i>	0.006 (0.10)	-0.022 (-0.31)
Fund Fixed Effects	Yes	Yes
Time Fixed Effects	Month	Month
Nobs	528,967	94,787
Adj. R-squared	0.075	0.077

Table IA7. Robustness: Excluding the Largest Fund Families

This table presents robustness checks for the flow spillover of ESG fund launch in Table 2. The dependent variable is the net flow of the month, and the main independent variable of interest is an indicator of ESG fund launch during the past year. The sample spans 2004 to 2024. The control variables are defined in the Appendix and lagged by one period. In column 1, we exclude BlackRock. In column 2, we exclude the Big Three asset managers—BlackRock, Vanguard, and State Street Global Advisors. In column 3, we exclude the top 10 ESG families identified in Panel B of Table IA1. In column 4, we exclude the largest ten families based on the total AUM of non-ESG sibling funds in each family-month. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>			
	1	2	3	4
	Exclude BlackRock	Exclude BigThree	Exclude Top 10 ESG Families	Exclude Top 10 non-ESG Families
<i>ESG Launch</i>	0.208*** (3.86)	0.199*** (2.98)	0.167** (2.43)	0.126* (1.76)
<i>Log(Fund Size+1)</i>	-0.811*** (-11.51)	-0.833*** (-11.42)	-0.806*** (-10.15)	-0.843*** (-9.79)
<i>Log(Family Size+1)</i>	0.021 (0.79)	0.019 (0.70)	0.016 (0.60)	0.003 (0.10)
<i>CAPM alpha</i>	0.840*** (13.77)	0.876*** (15.02)	0.853*** (12.79)	0.903*** (14.16)
<i>CAPM alpha_Sq</i>	0.026 (1.10)	0.016 (0.68)	0.019 (0.72)	0.006 (0.26)
<i>Log(Fund Age+1)</i>	-1.872*** (-9.65)	-1.925*** (-9.47)	-2.048*** (-12.48)	-2.124*** (-13.97)
<i>Log(Turnover+1)</i>	0.024 (0.51)	0.029 (0.62)	0.020 (0.39)	0.030 (0.57)
<i>Expense</i>	-1.901*** (-8.96)	-1.946*** (-8.98)	-1.971*** (-8.99)	-2.011*** (-8.91)
<i>StarFund</i>	0.414*** (2.83)	0.477*** (3.27)	0.337** (2.28)	0.429*** (2.85)
<i>StarFamily</i>	0.034 (1.01)	0.035 (1.02)	0.031 (0.94)	0.035 (1.00)
<i>NonESG Launch</i>	-0.007 (-0.14)	0.022 (0.45)	0.002 (0.04)	0.038 (0.78)
Fund Fixed Effects	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	595,482	567,806	515,851	474,918
Adj. R-squared	0.078	0.080	0.082	0.084

Table IA8. Family Level Flow Test

This table examines the overall and spillover effects of ESG and non-ESG fund launches on family-level net flows. Column 1 includes all funds within the family — including the newly launched fund itself — and thus captures the overall flow effect at the family level. Column 2 excludes funds with age less than 12 months and therefore isolates the pure spillover effect of newly launched ESG funds on incumbent sibling funds. The sample spans 2004 to 2024. The control variables include family size, CAPM alpha, the square of CAPM alpha, age, turnover, non-ESG fund launch, and expense ratio. All variables are constructed at the family-month level and lagged by one period. Family Size is the sum of TNA across all funds within the family, while all remaining variables are computed as TNA-weighted averages of the corresponding fund-level variables. *StarFamily* is defined following Nanda et al. (2004) and captures the overall star fund effect at the family level in both columns. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Family Flow</i>	
	1 All funds	2 Excluding new funds
<i>ESG Launch</i>	0.543*** (3.84)	0.276** (2.08)
<i>StarFamily</i>	0.372*** (5.04)	0.367*** (5.39)
Control Variables	Yes	Yes
Family Fixed Effects	Yes	Yes
Time Fixed Effects	Month	Month
Nobs	117,461	117,444
Adj. R-squared	0.132	0.141

Table IA9 Stacked DID: Flows, ESG Profile, Performance, and Marketing Expenses

This table reports estimates from stacked difference-in-differences regressions around a fund family's initial ESG fund launch. The sample consists of non-ESG funds in ESG-launching families and matched control funds from non-launching families. Control funds are selected within the same investment category using nearest-neighbor matching based on average fund size, fund flows, fund returns, and family size during the pre-event period. The event window spans one year before to one year after the ESG launch. Families that launched any ESG fund during the preceding two-year window are excluded from the control group. The specification includes the same control variables as in Table 2, along with cohort-by-fund fixed effects and cohort-by-time (quarter/month) fixed effects. The dependent variables are Fund Flow, MSCI ESG Rating Change, Adjusted CSR Score Change, Morningstar Sustainability Rating Change, Return Sensitivity to ESG Index Change, Fund Return, CAPM Alpha, Three-Factor Alpha, Four-Factor Alpha, Fund 12b-1 Fee (%), and Fund 12b-1 Fee (\$). The variable Treated $\times$ Post equals one for treated non-ESG funds in ESG-launching families during the post-launch period, and zero otherwise. Standard errors are clustered at the family and quarter/month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flows</i>										
	<i>Fund Flow</i>	<i>MSCI ESG Rating Chg.</i>	<i>Adj. CSR Score Chg.</i>	<i>MS Sustain Rating Chg.</i>	<i>Ret. Sensitivity on ESG Index Chg.</i>	<i>Fund Return</i>	<i>CAPM Alpha</i>	<i>Three-Factor Alpha</i>	<i>Four-Factor Alpha</i>	<i>Fund 12b-1 Fee (%)</i>	<i>Fund 12b-1 Fee (\$)</i>
	1	2	3	4	5	6	7	8	9	10	11
<i>Treated$\times$Post</i>	0.252** (2.57)	0.004 (1.12)	-0.015 (-0.79)	-0.004 (-0.54)	-0.000 (-0.46)	-0.002 (-0.05)	-0.014 (-0.58)	-0.008 (-0.44)	-0.003 (-0.15)	0.000 (0.11)	0.062 (0.79)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stack $\times$ Fund FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stack $\times$ Time FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nobs	271,970	109,660	103,797	97,422	269,912	271,970	271,970	271,970	271,970	194,304	194,304
Adj. R-squared	0.108	0.340	0.975	0.004	0.211	0.790	0.144	0.140	0.134	0.974	0.987

Table IA10. Supplementary Evidence for the IV

This table shows the effect of the instrumental variable (IV), i.e., natural logarithm of one plus the number of hazards which occur annually within 100-mile radius of a fund family's headquarters, on non-ESG funds' financial performance (proxied by CAPM alpha, Fama-French three-factor Alpha, and Carhart four-factor Alpha, in columns 1-3, respectively), ESG profile (proxied by fund's Morningstar sustainability rating) in column 4, and turnover ratio in column 5. Observations in family-month clusters with less than 20 observations are excluded. The sample spans 2004 to 2021. The IV and control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>CAPM Alpha</i>	<i>Three-Factor Alpha</i>	<i>Four-Factor Alpha</i>	<i>MS Sustain Rating</i>	<i>Fund Turnover</i>
	1	2	3	4	5
<i>Log(Num_Hazards+1)</i>	0.022 (1.11)	0.021 (1.27)	0.022 (1.20)	-0.036 (-1.28)	-1.248 (-0.97)
<i>Log(Fund Size+1)</i>	-0.131*** (-4.34)	-0.119*** (-4.58)	-0.129*** (-4.89)	0.029 (0.95)	-4.319*** (-4.23)
<i>Log(Family Size+1)</i>	0.021 (0.81)	0.027 (1.19)	0.027 (1.22)	0.057 (1.00)	11.455*** (3.04)
<i>CAPM alpha</i>				-0.002 (-0.19)	-2.416*** (-3.84)
<i>CAPM alpha_Sq</i>				-0.048*** (-6.29)	1.131** (2.06)
<i>Log(Fund Age+1)</i>	0.172** (2.50)	0.164*** (3.35)	0.160*** (3.64)	0.119 (0.54)	13.607* (1.83)
<i>Log(Turnover+1)</i>	-0.059*** (-3.54)	-0.059*** (-4.19)	-0.059*** (-4.13)	0.014 (0.56)	
<i>Expense</i>	-0.234*** (-3.56)	-0.155*** (-2.76)	-0.165*** (-3.28)	0.023 (0.09)	8.979 (1.50)
<i>StarFund</i>				0.019 (0.83)	0.193 (0.10)
<i>StarFamily</i>	-0.011 (-0.63)	-0.012 (-0.79)	-0.004 (-0.22)	0.022 (1.18)	0.900 (1.06)
<i>Fund Flow</i>	-0.001 (-1.00)	-0.002* (-1.91)	-0.002** (-2.00)		
<i>NonESG Launch</i>	0.008 (0.47)	0.019 (1.45)	0.018 (1.34)	0.018 (0.79)	1.702 (1.43)
Fund Fixed Effects	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month	Month	Month
Nobs	238,521	238,521	238,521	50,718	238,521
Adj. R-squared	0.095	0.087	0.084	0.695	0.772

Table IA11. Robustness for 2SLS: First Stage at the Family Level

This table reports a robustness check for Table 5, estimating the first stage at the family-month level, reflecting that new fund launch decisions are made at the family rather than the fund level. The sample is restricted to large fund families, excluding family-month clusters with less than 20 observations. Columns 1 and 2 (3 and 4) are based on the full sample period of 2004 to 2024 (pre-2022 sample period of 2004 to 2021). Columns 1 and 3 present the first-stage results from regressing the assumed endogenous variable, *ESG Launch*, on the IVs, i.e., natural logarithm of one plus the number of hazards which occur annually within 100-mile radius of a fund family's headquarters, and control variables (All control variables are measured at the family level. Family size is the sum of assets under management across all funds in the family, while all remaining family-level characteristics are the value-weighted average of fund-level characteristics). Columns 2 and 4 present the respective second-stage results from regressing the sibling funds' net flow on the predicted value of the main independent variable of interest, i.e., *ESG Launch*, and control variables. The control variables are defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>ESG Launch</i>	<i>Fund Flow</i>	<i>ESG Launch</i>	<i>Fund Flow</i>
	1	2	3	4
<i>Sample period:</i>	<i>Full sample</i>		<i>Pre-2022</i>	
<i>Log(Num_Hazards+1)</i>	0.062*		0.108***	
	(1.97)		(3.22)	
<i>ESG Launch</i>		2.165**		1.788**
		(2.36)		(2.04)
Control Variables	Yes	Yes	Yes	Yes
Family Fixed Effects	Yes		Yes	
Fund Fixed Effects		Yes		Yes
Time Fixed Effects	Month	Month	Month	Month
Nobs	6,233	265,890	5,673	232,919
Adj. R-squared	0.281	0.070	0.282	0.075

Table IA12. Heterogeneity Test: High versus Low Past Performance of ESG Funds

This table shows the spillover effect of different types of ESG fund launches. The main independent variable of interest is split into two indicators based on (1) whether the average CAPM alpha of all the ESG funds in the market during the past year is above sample median, (2) whether the average CAPM alpha of the family's incumbent ESG funds during the past year is above sample median, and (3) whether the new ESG fund being introduced is actively or passively managed. In column 2, both indicators are set to zero when the launch is the family's first ESG fund, due to the absence of incumbent return histories. The sample spans 2004-2024. The control variables include fund size, family size, fund CAPM alpha, square of CAPM alpha, fund age, turnover, expense ratio, star-fund, and star-family, as defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. The row *p*-value reports the *p*-value from a Wald test of the null hypothesis that the coefficients on *ESG Launch P1* and *ESG Launch P2* are equal. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>		
	1	2	3
	P1: High ESG Past Returns vs. P2: Low ESG Past Returns	P1: High Incumbent ESG Past Returns vs. P2: Low Incumbent ESG Past Returns	P1: Passive ESG Funds Launch vs. P2: Active ESG Funds Launch
<i>ESG Launch P1</i>	0.238*** (2.65)	0.296*** (3.06)	0.251** (2.55)
<i>ESG Launch P2</i>	0.287** (2.38)	0.455*** (2.67)	0.354*** (4.17)
<i>NonESG Launch</i>	-0.005 (-0.11)	0.001 (0.03)	-0.007 (-0.13)
<i>p</i> -value	0.717	0.290	0.254
Control Variables	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	623,754	623,754	623,754
Adj. R-squared	0.075	0.075	0.075

Table IA13. Robustness: Holding-Based Anti-ESG Funds

Panel A reports the spillover effect of launching anti-ESG funds defined based on the ESG profile of fund holdings. Panel B examines the robustness of spillover effect of anti-ES fund launches. Anti-ESG funds are identified as those whose weighted-average MSCI ESG score for the top ten holdings falls in the bottom quartile during the initial two quarters after launch. Anti-ES funds are identified as those whose weighted-average MSCI ES score for the top ten holdings falls in the bottom quartile during the initial two quarters after launch (see Appendix for ES score methodology). The sample spans 2009–2024, as MSCI ESG ratings begin in 2007 and have good coverage from 2010. The dependent variable is monthly net flow. The main independent variable is an indicator for an anti-ESG or anti-ES fund launch during the past year. *Other Launch* is an indicator for a fund (neither ESG nor anti-ESG) launch during the past year. The control variables include fund size, family size, fund CAPM alpha, square of CAPM alpha, fund age, turnover, expense ratio, star-fund, and star-family, as defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

Panel A: Anti-ESG Funds Identified by Top-10 Holdings

	<i>Fund Flow</i>		
	1 All Siblings	2 Retail Siblings	3 Institutional Siblings
<i>AntiESG Launch</i>	-0.145* (-1.74)	-0.165* (-1.86)	0.041 (0.28)
<i>ESG Launch</i>	0.303*** (3.58)	0.325*** (3.55)	0.037 (0.24)
<i>Other Launch</i>	0.025 (0.44)	0.034 (0.55)	-0.076 (-0.66)
Control Variables	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	479,988	417,579	62,058
Adj. R-squared	0.074	0.074	0.079

Panel B: Anti-ES Funds

	<i>Fund Flow</i>		
	1 All Siblings	2 Retail Siblings	3 Institutional Siblings
<i>AntiES Launch</i>	-0.074 (-1.14)	-0.115* (-1.75)	0.227 (1.56)
<i>ESG Launch</i>	0.301*** (3.46)	0.327*** (3.42)	0.024 (0.16)
<i>Other Launch</i>	0.013 (0.22)	0.021 (0.34)	-0.081 (-0.69)
Control Variables	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	480,179	417,639	62,189
Adj. R-squared	0.075	0.074	0.079

Table IA14. Robustness: Spillover Effects of Anti-Environmental and Anti-Social Fund Launches

This table reports the spillover effects of different types of anti-ESG fund launches. Anti-ESG funds are identified by DeepSeek-Chat and manually verified using strategy information from the Mutual Fund Prospectus Risk/Return Summary datasets, then classified as anti-Environmental or anti-Social (see Section II.B for details). Column 1 analyzes all prospectus-based anti-ESG launches, while columns 2 and 3 separately examine anti-Environmental and anti-Social launches, respectively. *Other Launch* is an indicator for a fund (neither ESG nor anti-ESG) launch during the past year. The sample spans 2009–2024. The control variables include fund size, family size, fund CAPM alpha, square of CAPM alpha, fund age, turnover, expense ratio, star-fund, and star-family, as defined in the Appendix and lagged by one period. The constant term is included but not reported for brevity. T-statistics are in parentheses. Standard errors are clustered at the family and month levels. ***, **, and * represent statistical significance at 1%, 5%, and 10% levels, respectively.

	<i>Fund Flow</i>		
	1	2	3
	All Prospectus-based Anti-ESG Launch	Prospectus-based Anti- Environmental Launch	Prospectus-based Anti-Social Launch
<i>AntiESG Launch</i>	-0.220* (-1.89)	-0.206* (-1.74)	-0.605*** (-5.92)
<i>ESG Launch</i>	0.285*** (3.50)	0.286*** (3.53)	0.269*** (3.45)
<i>Other Launch</i>	0.030 (0.52)	0.029 (0.50)	0.033 (0.56)
Control Variables	Yes	Yes	Yes
Fund Fixed Effects	Yes	Yes	Yes
Time Fixed Effects	Month	Month	Month
Nobs	483,920	483,920	483,920
Adj. R-squared	0.075	0.075	0.075

Internet Appendix B. Conceptual Framework

We illustrate the heterogeneity in investors' preferences and beliefs regarding ESG investing, which jointly determine an ESG fund's appeal. Consider a representative fund with an explicit ESG mandate. We assume that one unit of this fund provides investor, i , the expected utility U_i , consisting of a net expected monetary return r_i and a non-pecuniary utility component u_i .

$$(1) \quad U_i^{ESG} = r_i + u_i \dots \dots$$

Here, r_i represents the *certainty-equivalent net pecuniary value* of the ESG fund, i.e., the abnormal return and/or the hedging benefit that investor i expects to derive from the ESG fund, net of fees and other transaction costs. The *non-pecuniary utility* u_i captures investor i 's willingness-to-pay for ESG exposure, multiplied by their perceived level of ESG exposure provided by the fund.

Prior literature, including Giglio et al. (2025), Hart et al. (2024), and Barber et al. (2021), documents substantial heterogeneity across investors in both expected returns and intrinsic ESG preferences. In our framework, this heterogeneity for a given ESG fund is characterized by the pair (u_i, r_i) .

For comparison, a traditional fund without an ESG mandate yields per-unit utility:

$$(2) \quad U_i^{non-ESG} = r_i \dots \dots$$

where r_i again denotes investor i 's money-metric, risk-adjusted valuation of the investment. Since this fund lacks an ESG mandate, the investor perceives no ESG exposure and thus derives no ESG-related non-pecuniary utility from holding the fund.

1. Investment Decision and Spillover Effects

Investor i chooses to invest in a given fund if $U_i > 0$. For non-ESG funds, this condition is $r_i > 0$. An ESG fund is attractive whenever $r_i + u_i > 0$, which corresponds to the region above the red dashed line in Figure IB1. The farther an investor lies above this line in the (u_i, r_i) space, the stronger their demand for the ESG fund. This reflects the fact that financial considerations and non-pecuniary motives independently contribute to investment decisions, consistent with Giglio et al. (2025). Socially responsible investors with $u_i > 0$ may choose to invest in ESG funds even when the expected financial

return r_i is negative, highlighting a positive average willingness-to-pay for impact investing as documented in Giglio et al. (2025) and Barber et al. (2021).

The halo effect occurs when a new product is highly impressive, creating positive perceptions among investors about the entire fund family, even if the quality of other funds offered by the family is not directly related (Thorndike, 1920). In simple terms, we hypothesize that the halo effect emerges and drives the flow spillover effect when $U_i > S^*$.²⁴ For non-ESG funds, this condition is $r_i > S^*$, corresponding to the area above the dashed purple line in Figure IB1. For ESG funds, the halo condition is $r_i + u_i > S^*$, represented by the area above the dashed green line. Notably, the spillover effect for ESG funds could arise even with relatively modest monetary utilities, provided they offer sufficiently high ESG exposure and thus non-pecuniary utility to investors.

Given the competitive nature of financial markets, funds capable of generating exceptionally high money-metric, risk-adjusted valuation are limited. As a result, only “star” non-ESG funds are typically found to generate flow spillover effects, as noted by Nanda et al. (2004). By contrast, we observe that the launch of ESG funds consistently produces robust positive flow spillovers. This effect is likely driven by a significant group of investors located within the triangular area between the green and purple lines in Figure IB1. These investors are ESG-sensitive, exhibiting a positive willingness-to-pay for ESG investing while also valuing strong financial performance.

2. Evolution of Investor Preferences and Beliefs over ESG Investing

As discussed, a new ESG fund is likely to attract investors who derive positive utility from it, i.e., $r_i + u_i > 0$, and to generate halo effects among those who find the product sufficiently compelling, i.e., $r_i + u_i > S^*$. Consequently, flow spillovers should be strongest when a sizable mass of investors has preferences and beliefs that place them in the region where of $r_i + u_i > S^*$.

In the two decades leading up to 2022, investor awareness of ESG principles increased steadily. Over much of this period, ESG-oriented stocks also performed strongly, and many investors plausibly held optimistic beliefs about their financial prospects. As a result, a large group of investors likely

²⁴ S^* can be interpreted as an effective halo threshold that varies with salience, perceived credibility, and investor attention.

exhibited both high financial expectation r_i and non-pecuniary utility u_i from investing in ESG funds, placing them in the area above the green line in Figure IB2, Panel A. When a new ESG fund was introduced, these investors found it highly appealing, generating halo effects and positive flow spillovers.

However, around 2022, scrutiny of ESG claims intensified, with growing concerns about greenwashing and inconsistent standards, and political polarization made ESG investing more contentious. These changes likely shifted some investors with low willingness-to-pay for ESG investing to a neutral or even negative preference over ESG investing, i.e., $u_i \leq 0$.²⁵ At the same time, ESG-oriented stocks began to underperform more traditional sectors such as energy and defense, amid geopolitical shocks (e.g., the Russia-Ukraine war), high inflation, and rising interest rates. Even among the ESG-sensitive investors with $u_i > 0$, many likely adopted more pessimistic beliefs over ESG investing, e.g., $r_i \leq 0$. As illustrated in Figure IB2, Panel B, these shifts reduce the mass of investors above the green line and thus weaken the scope for halo effects and spillovers. Together, a decline in both perceived monetary benefits and nonpecuniary utility provides a natural explanation for the attenuation of flow spillovers after 2022.

3. Anti-ESG Funds and Reverse-Halo Effect

A subset of investors remains skeptical of ESG investing. They view ESG as politically motivated or as a marketing device that may mask underperformance, and argue that investment decisions should focus on financial metrics to best satisfy fiduciary duty. Others question ESG's real-world effectiveness, pointing to disagreement across ESG ratings and concerns about greenwashing, where firms overstate environmental or social credentials without delivering substantive impact. Such investors may derive negative nonpecuniary utility from ESG exposure, i.e., $u_i < 0$, and/or hold a pessimistic belief about the financial potential of ESG funds, i.e., $r_i < 0$.

To cater to this clientele, some mutual fund families introduced products referred to as “anti-ESG funds” or “pro-freedom funds.” These funds typically either exclusively invest in “sin stocks” such as

²⁵ An alternative way to capture the post-2022 shift is to model heightened greenwashing concerns and ESG politicization as an increase in the effective halo threshold S^* . Holding investor preferences and fund families' product design fixed, a higher S^* makes it less likely that an ESG launch crosses the threshold and thus predicts weaker halo effects.

those associated with firearms, tobacco, and alcohol industries, or implicitly tilt their portfolios toward low-ESG stocks by avoiding ESG screenings. Some of these funds align with conservative values, actively voting against ESG-driven shareholder proposals. They emphasize financial metrics as their primary objective and position themselves as champions of free-market principles and ideological neutrality in investing.

We assume that investor i derives the following utility from a representative anti-ESG fund:

$$(3) \quad U_i^{anti} = r_i^{anti} + v_i \dots \dots$$

where r_i^{anti} captures perceived risk-adjusted net financial value (including fees and any hedging benefits) and v_i represents the non-pecuniary utility (or disutility) the investor derives from anti-ESG positioning or avoiding ESG mandates. We further assume that both components are negatively associated with the investor's corresponding components for ESG funds. This is because anti-ESG funds typically tilt away from high-ESG stocks, effectively offering the opposite exposure from the ESG funds. Specifically, we assume that

$$(4) \quad r_i^{anti} = \alpha_i - \lambda r_i; \quad v_i = \kappa(-u_i).$$

with $\lambda, \kappa \in (0,1]$ as “how opposite” the product is in financial and non-pecuniary dimensions.

For simplicity, we illustrate the intuition by further assuming that the anti-ESG fund effectively offers a short position in ESG factors, generating symmetric utility from ESG funds. Specifically, in Figure IB3, we set $\lambda, \kappa = 1$ and $\alpha_i = 0$. As illustrated in the figure, the investors below the red dashed line ($r_i + u_i < 0$) are likely to invest in an anti-ESG fund. Moreover, those below the brown dashed line ($r_i + u_i < -S^*$) could find the anti-ESG fund exceptionally *attractive* and exhibit a halo effect, potentially driving *positive* flow spillovers. However, investors above the dashed green line ($r_i + u_i > S^*$) may view the product extremely *undesirable*, as it conflicts with both their financial expectations and non-pecuniary preferences. For these investors, the launch of such an anti-ESG fund could create a “reverse halo effect” and *negative* flow spillovers. The net effect—whether positive or negative flow spillovers dominate—depends on which group of investors holds the majority.

In the two decades leading up to 2022, investor sentiment toward ESG was largely favorable, implying $r_i > 0$ and $u_i > 0$ for many investors. Consequently, when an anti-ESG fund was launched, it primarily

appealed to a niche group with $r_i + u_i < 0$. At the same time, the mass of investors with $r_i + u_i > S^*$ was likely larger than that with $r_i + u_i < -S^*$. Because the former group viewed the anti-ESG product as strongly undesirable, the launch could generate a reverse-halo effect and negative flow spillovers, as illustrated in Figure IB3, Panel A. However, after 2022, enthusiasm for ESG investing weakened, leaving fewer investors with $r_i + u_i > S^*$ as illustrated in Panel B of Figure IB3. As a result, the launch of anti-ESG funds is less likely to trigger a reverse halo effect and negative flow spillovers.

Figure IB1. Investment Decision and Spillover Effect

This figure illustrates investors' heterogeneous preferences and beliefs with respect to a given fund. The horizontal axis represents an investor's non-pecuniary utility derived from investing in an ESG fund, while the vertical axis reflects their financial utility, specifically the risk-adjusted net expected return from the fund. The yellow (red) dashed line represents the threshold where investors are indifferent to investing in a non-ESG (ESG) fund. Investors positioned above the purple (green) dashed line are assumed to find the non-ESG (ESG) fund exceptionally impressive, generating halo effects and flow spillovers.

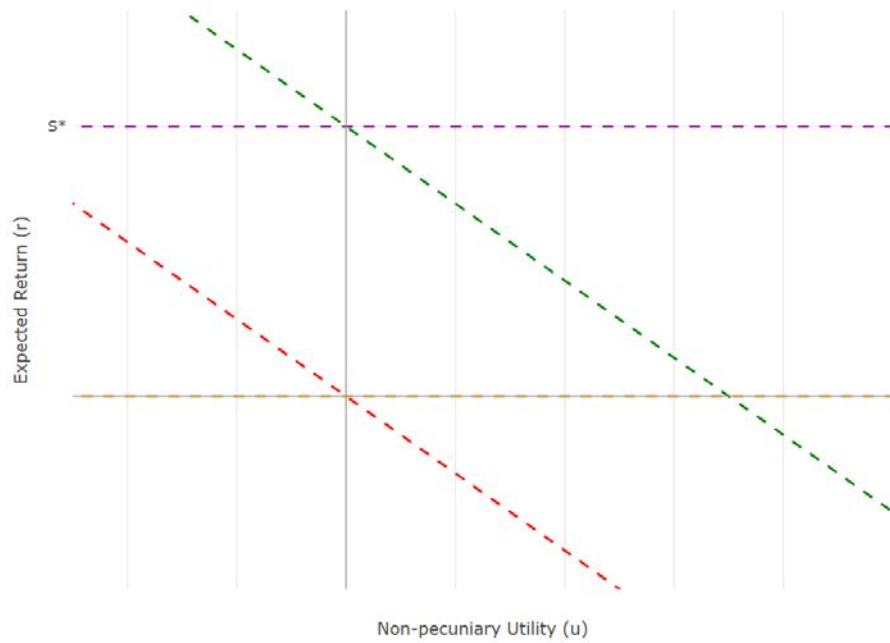
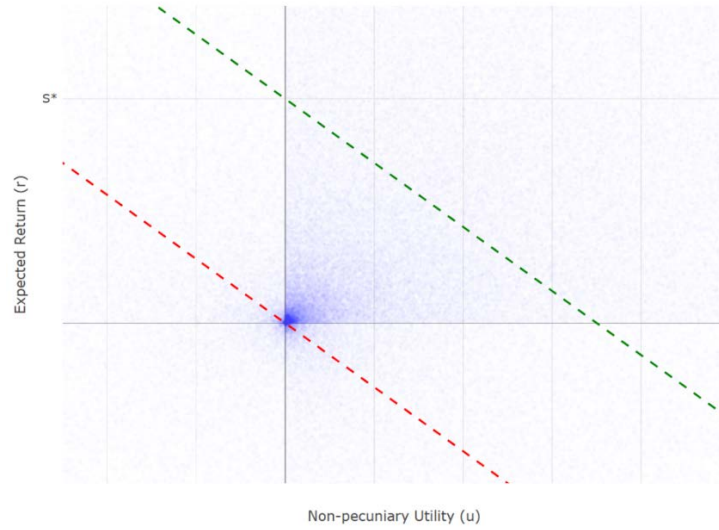


Figure IB2. Evolution of Investor Preferences and Beliefs over ESG Investing

This figure illustrates the evolution of investor preferences and beliefs over time, with the background darkness indicating investor density. Panel A shows that prior to 2022, the majority of investors held positive expectations for financial returns from ESG investing and derived positive non-pecuniary utility from it. In contrast, Panel B demonstrates that after 2022, some investors shifted toward neutral or negative non-pecuniary utility for ESG investing, and some adjusted their expectations of financial returns, tilting them toward the negative side.

Panel A: Pre-2022 Period



Panel B: Post-2022 period

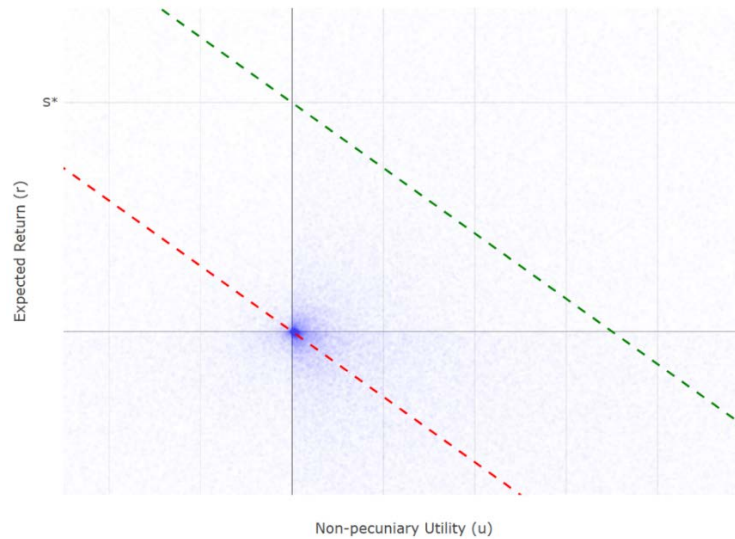
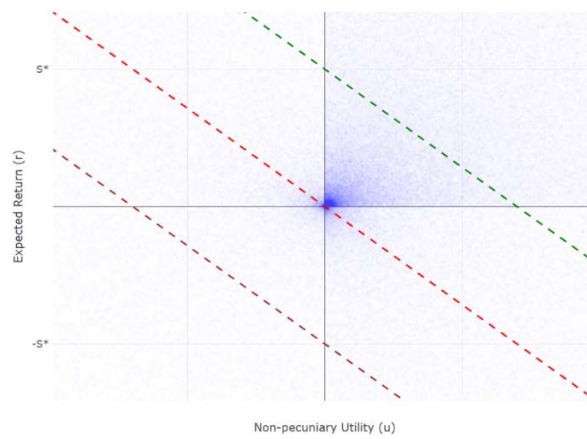


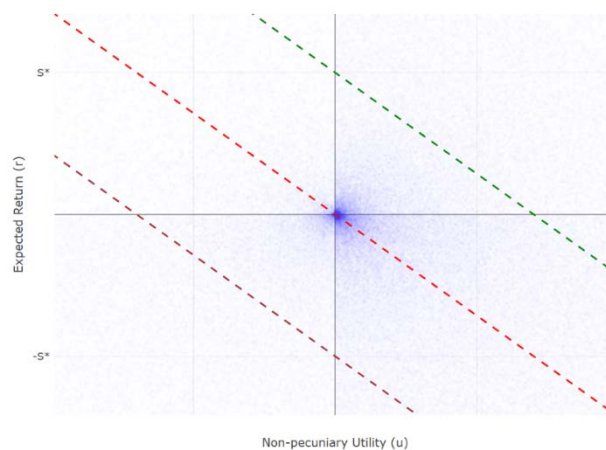
Figure IB3: Anti-ESG Funds and Reverse Halo Effect

This figure illustrates investors' heterogeneous preferences and beliefs regarding a particular fund. The horizontal axis represents an investor's non-pecuniary utility derived from investing in an ESG fund, while the vertical axis reflects their financial utility, specifically the net expected return from the fund. The red dashed line represents the threshold where investors are indifferent to investing in an ESG/anti-ESG fund. Investors above this line are willing to buy an ESG fund, while those below it are inclined to invest in an anti-ESG fund. In addition, investors positioned above (below) the green (brown) dashed line are assumed to find the ESG (anti-ESG) fund exceptionally impressive, deriving a halo effect and positive spillover. In contrast, those above (below) the green (brown) dashed line are assumed to find the anti-ESG (ESG) fund extremely undesirable, deriving a reverse halo effect and negative spillover. The figure's background darkness indicates investor density, with Panel A illustrating the scenario before 2022, and Panel B showing the scenario after 2022.

Panel A: Pre-2022 Period



Panel B: Post-2022 period



Internet Appendix C: Spillover Revenue Estimation

This appendix provides supplementary analyses of the economic magnitude and cross-sectional variation of spillover revenue across fund families. We first provide two illustrative ESG fund launches from families that differ substantially in family TNA and in the number of non-ESG sibling funds. These examples apply the same back-of-the-envelope calibration used in Table 3 and illustrate its sensitivity to family size and sibling-fund characteristics. We then present a separate event-by-event analysis that uses the actual TNA and expense ratio of each available sibling fund. Because the event-by-event procedure requires substantially more complete fund-level information, missing values reduce the available samples and tilt them toward larger families with better data coverage. Accordingly, we treat the event-by-event results as a complementary analysis.

1. Illustrative Examples: Large- and Median-TNA Families

We begin with two illustrative ESG fund launches to demonstrate how the back-of-the-envelope calibration in Table 3 varies with family size and with the distribution of sibling-fund characteristics.²⁶ The first is the BlackRock Sustainable U.S. Value Equity Fund, launched by a large-TNA family with 158 non-ESG sibling funds. The second is the Neuberger Berman U.S. Equity Impact Fund, launched by the median-TNA family, which has 13 non-ESG sibling funds.

Table IC1 applies the back-of-the-envelope calibration used in Table 3. The calculations use the median post-launch AUM and expense ratio among the non-ESG sibling funds in each family. The estimated revenue for a representative sibling fund is then multiplied by the family's number of non-ESG sibling funds to obtain the calibrated family-level estimate. Despite the substantial difference in sibling-fund TNA, the estimated *fund-level* spillover revenue is similar across the two examples because BlackRock's sibling funds have a higher median TNA but a lower median expense ratio. Under Method I, which captures the fees associated with one month of incremental spillover flows, estimated fund-level revenue is approximately \$0.001 million per month for both families. Under Method II, which

²⁶ These examples apply representative median or mean sibling-fund inputs and are intended to illustrate the calibration; they do not sum estimates calculated separately using the actual characteristics of every sibling fund. They are therefore distinct from the actual-sibling, event-by-event calculations reported in Section II.

accounts for the accumulation of spillover assets during the first post-launch year, estimated fund-level revenue is approximately \$0.006 million per month for both families.

The family-level estimates, however, differ substantially because BlackRock has many more non-ESG sibling funds. Under Method I, estimated family-level spillover revenue is \$0.151 million per month for BlackRock and \$0.013 million for Neuberger Berman. Under Method II, the corresponding estimates are \$0.979 million and \$0.082 million, respectively. Thus, even when the spillover revenue generated by an individual sibling fund is similar, the total revenue effect can vary substantially across families because of differences in the number of sibling funds.

Because sibling-fund TNA is highly right-skewed, the median-based calibration in Table IC1 may differ substantially from a calibration based on mean sibling-fund characteristics. To illustrate this sensitivity, Table IC2 repeats the calculations using the mean, rather than the median, of sibling funds' post-launch average TNA and monthly expense ratios. As in Table IC1, these are means of the component inputs, and the calibrated fund-level estimate is multiplied by the number of sibling funds. The resulting estimates are substantially larger. Under Method I, estimated family-level spillover revenue increases to \$0.635 million for BlackRock and \$0.042 million for Neuberger Berman. Under Method II, the corresponding estimates increase to \$4.125 million and \$0.271 million. These comparisons demonstrate that spillover-revenue calibrations depend not only on family size and the number of sibling funds but also on the distribution of TNA and expense ratios within the family.

2. Event-by-Event Estimates

To move beyond the representative inputs and fixed sibling-fund assumptions used in the back-of-the-envelope calibrations, we calculate stand-alone and spillover revenue separately for each ESG fund launch event with sufficient information for both calculations. We define an ESG launch event as a family-month in which the family launches one or more ESG funds. The unit of observation is therefore a family-month launch event rather than a unique ESG launch, and a family may contribute more than one event. Unlike the calibrations in Tables 3, 12, IC1, and IC2, this procedure uses the actual characteristics of each available sibling fund and aggregates the resulting estimates within the launch event. For each event j , we calculate the average monthly stand-alone fee revenue generated by the newly launched ESG fund or funds during the first 12 months after launch:

$$Standalone\ Revenue_j = \frac{1}{12} \sum_{i \in E_j} \sum_{t=1}^{12} TNA_{j,i,t} \times ExpenseRatio_{j,i,t}$$

where $TNA_{j,i,t}$ is the month-end TNA of newly launched ESG fund i in post-launch month t , $ExpenseRatio_{j,i,t}$ is its monthly expense ratio, and E_j is the set of ESG funds launched in event j . When multiple ESG funds are launched by the same family in the same month, the measure aggregates their fee revenue.

We next estimate spillover revenue using the two methods introduced in Table 3. Method I measures the fees associated with one month of incremental spillover flows. For non-ESG sibling fund i associated with launch event j , the estimate is

$$Spillover\ Rev_{j,i}^{MI} = \frac{1}{12} \sum_{t=1}^{12} \beta \times TNA_{j,i,t-1} \times ExpenseRatio_{j,i,t}$$

where β is the estimated spillover coefficient of 0.269 percentage points from column 4 of Table 2, $TNA_{j,i,t-1}$ is sibling fund i 's TNA at the end of the preceding month, and $ExpenseRatio_{j,i,t}$ is its monthly expense ratio. The family-level estimate sums this amount across all non-ESG sibling funds associated with event j :

$$Spillover\ Rev_j^{MI} = \frac{1}{12} \sum_{i \in S_j} \sum_{t=1}^{12} \beta \times TNA_{j,i,t-1} \times ExpenseRatio_{j,i,t}$$

where S_j denotes the set of non-ESG sibling funds in the ESG-launching family j .

Method II accounts for the accumulation of spillover flows during the first post-launch year. The estimated average monthly spillover revenue for sibling fund i is

$$Spillover\ Rev_{j,i}^{MII} = \frac{1}{12} \sum_{t=1}^{12} \beta \times TNA_{j,i,t-1} \times (13-t) \times ExpenseRatio_{j,i,t}$$

The term $(13-t)$ represents the number of months during the first-year window for which the incremental flow generated in month t remains invested and generates fee revenue. Thus, the flow generated in the first month earns fees for 12 months, whereas the flow generated in the twelfth month earns fees for one month. The corresponding family-level measure is

$$Spillover Rev_j^{MII} = \frac{1}{12} \sum_{i \in S_j} \sum_{t=1}^{12} \beta \times TNA_{j,i,t-1} \times (13 - t) \times ExpenseRatio_{j,i,t}.$$

Table IC3 reports summary statistics for 149 ESG launch events with sufficient information to estimate stand-alone and spillover revenue. The results reveal substantial cross-sectional variation. Average monthly stand-alone revenue ranges from approximately zero at the first percentile to \$0.233 million at the 99th percentile. Its mean of \$0.024 million is more than three times its median of \$0.007 million, indicating a strongly right-skewed distribution.

Fund-level spillover revenue is also right-skewed. Under Method I, median spillover revenue is \$0.001 million per sibling fund, compared with a mean of \$0.003 million. Under Method II, the median and mean increase to \$0.005 million and \$0.019 million, respectively. These estimates demonstrate that variation in sibling-fund TNA and expense ratios produces substantial variation in the revenue contributed by an individual sibling fund.

The variation is even greater at the family level. The number of non-ESG sibling funds has a median of 19, a mean of 46, and a 99th-percentile value of 266. Reflecting this variation, family-level spillover revenue under Method I has a median of \$0.030 million, a mean of \$0.133 million, and a 99th-percentile value of \$1.123 million. Under Method II, the corresponding values are \$0.215 million, \$0.883 million, and \$7.609 million. Thus, spillover revenue is especially large for families that have many sibling funds or manage sibling funds with high AUM and expense ratios.

Table IC4 applies the same event-by-event procedure to 36 anti-ESG launch events with available information for estimating stand-alone and spillover revenues. These estimates also display substantial cross-sectional variation. Median monthly stand-alone revenue is \$0.010 million, compared with a mean of \$0.053 million. Median family-level spillover revenue is $-\$0.018$ million under Method I and $-\$0.115$ million under Method II, while the corresponding means are $-\$0.056$ million and $-\$0.361$ million. The differences between the means and medians, together with the wide percentile ranges, indicate that both stand-alone and spillover revenue are highly skewed across anti-ESG launch events.

Although this event-by-event procedure provides the matched family-level comparison, it requires valid first-year TNA and expense-ratio information for the newly launched funds and valid lagged TNA and expense-ratio information for eligible sibling funds. Missing values therefore substantially reduce

the number of usable launch events. Of the 278 ESG launch events (observation at family-month level) in the main sample, 149 have sufficient information for this analysis; of the 63 anti-ESG launch events (observation at family-month level), 36 have sufficient information. Moreover, the retained sample is tilted toward larger families, which generally contain more funds and have more complete data coverage. The event-by-event estimates may consequently be affected by sample selection and need not be representative of the full set of launches. We therefore report them as a complementary analysis of cross-sectional heterogeneity.

3. Cross-Validation

The results also provide two internal validation checks on the back-of-the-envelope calibration in Table 3. First, the median-based estimates for the Neuberger Berman U.S. Equity Impact Fund in Table IC1 are close to those in Table 3. Its family-level spillover revenue is \$0.013 million under Method I and \$0.082 million under Method II, compared with \$0.010 million and \$0.067 million, respectively, in Table 3 under the 12-sibling-fund assumption. This similarity is expected because Neuberger Berman represents the median-TNA launching family and Table IC1, like Table 3, uses median sibling-fund characteristics.

Second, the mean-based estimates for Neuberger Berman in Table IC2—\$0.042 million under Method I and \$0.271 million under Method II—are close to the corresponding median event-level estimates of \$0.030 million and \$0.215 million in Table IC3. This similarity is also intuitive because Neuberger Berman represents the median-TNA launching family and family size is an important determinant of family-level spillover revenue. Its estimated spillover revenue would therefore be expected to lie near the middle of the event-level distribution. Taken together, these comparisons lend confidence to the back-of-the-envelope estimates, while the wide distributions in Table IC3 underscore substantial heterogeneity in spillover revenue across fund families.

**Table IC1: Spillover Revenue for ESG Fund Launches by Large- and Median-TNA Families:
Median-Based Calibration**

This table presents illustrative back-of-the-envelope calibrations of stand-alone and spillover revenue for two ESG fund launches: the BlackRock Sustainable U.S. Value Equity Fund, launched by a large-TNA family, and the Neuberger Berman U.S. Equity Impact Fund, launched by the median-TNA family. Stand-alone revenue is calculated by multiplying the new ESG fund's average monthly TNA during its first 12 months after launch by its monthly expense ratio. For each family, sibling-fund TNA and expense ratio are the medians of non-ESG sibling funds' average monthly TNA and expense ratios over the 12-month post-launch window. The spillover calculations use the estimated flow spillover coefficient of 0.269 percentage points from column 4 of Table 2. Method I estimates the fee revenue associated with one month of incremental spillover flows. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year, using an average holding period of 6.5 months. Fund-level estimates apply to a representative non-ESG sibling fund. Family-level estimates multiply the fund-level estimates by the number of non-ESG sibling funds in the family—158 for BlackRock and 13 for Neuberger Berman. All dollar amounts are expressed in millions. Minor differences may arise from rounding.

	BlackRock Sustainable U.S. Value Equity Fund		Neuberger Berman U.S. Equity Impact Fund	
Stand-alone ESG Revenue (initial 12-month average, \$Mil)	0.002		0.005	
(1) Sibling Fund TNA (post-launch monthly average, \$Mil)	1350.386		517.125	
(2) Flow Spillover Coef. (column 4 of Table 2, %)	0.269		0.269	
(3) Average holding period (one-year window, #months)	6.5		6.5	
(4) Sibling Fund Expense Ratio (post-launch monthly average, %)	0.026		0.070	
(5) Number of Sibling Non-ESG Funds	-	158	-	13
	Fund-Level	Family-level	Fund-Level	Family-level
<i>Method I: One Month of Incremental Flow Spillover</i>				
Flow Spillover (\$Mil) = (1) x (2); or (1) x (2) x (5)	3.633	573.941	1.391	18.084
Flow Spillover Revenue (\$Mil) = (1) x (2) x (4); or (1) x (2) x (4) x (5)	0.001	0.151	0.001	0.013
<i>Method II: Accumulated Stock of Spillover Assets</i>				
AUM Spillover (\$Mil) = (1) x (2) x (3); or (1) x (2) x (3) x (5)	23.611	3730.617	9.042	117.545
AUM Spillover Revenue (\$Mil) = (1)x(2)x(3)x(4); or (1)x(2)x(3)x(4)x(5)	0.006	0.979	0.006	0.082

**Table IC2: Spillover Revenue for ESG Fund Launches by Large- and Median-TNA Families:
Mean-Based Calibration**

This table repeats illustrative back-of-the-envelope calibrations in Table IC1 using the *means*, rather than the medians, of non-ESG sibling funds' average monthly TNA and expense ratios over the 12-month post-launch window. Stand-alone revenue is calculated by multiplying the new ESG fund's average monthly TNA during its first 12 months after launch by its monthly expense ratio. The spillover calculations use the estimated flow spillover coefficient of 0.269 percentage points from column 4 of Table 2. Method I estimates the fee revenue associated with one month of incremental spillover flows. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year, using an average holding period of 6.5 months. Fund-level estimates apply to a representative non-ESG sibling fund. Family-level estimates multiply the fund-level estimates by the number of non-ESG sibling funds in the family—158 for BlackRock and 13 for Neuberger Berman. All dollar amounts are expressed in millions. Minor differences may arise from rounding.

	BlackRock Sustainable U.S. Value Equity Fund		Neuberger Berman U.S. Equity Impact Fund	
Stand-alone ESG Revenue (initial 12-month average, \$Mil)	0.002		0.005	
(1) Sibling Fund TNA (post-launch monthly average, \$Mil)	5,669.763		1,805.599	
(2) Flow Spillover Coef. (column 4 of Table 2, %)	0.269		0.269	
(3) Average holding period (one-year window, #months)	6.5		6.5	
(4) Sibling Fund Expense Ratio (post-launch monthly average, %)	0.026		0.066	
(5) Number of Sibling Non-ESG Funds	-	158	-	13
	Fund-Level	Family-level	Fund-Level	Family-level
<i>Method I: One Month of Incremental Flow Spillover</i>				
Flow Spillover (\$Mil) = (1) x (2); or (1) x (2) x (5)	15.252	2,409.763	4.857	63.142
Flow Spillover Revenue (\$Mil) = (1) x (2) x (4); or (1) x (2) x (4) x (5)	0.004	0.635	0.003	0.042
<i>Method II: Accumulated Stock of Spillover Assets</i>				
AUM Spillover (\$Mil) = (1) x (2) x (3); or (1) x (2) x (3) x (5)	99.136	15,663.457	31.571	410.422
AUM Spillover Revenue (\$Mil) = (1)x(2)x(3)x(4); or (1)x(2)x(3)x(4)x(5)	0.026	4.125	0.021	0.271

Table IC3: Summary Statistics of Event-Level Stand-alone and Spillover Revenue Estimates for ESG Fund Launches

This table reports summary statistics for stand-alone and spillover revenue estimates associated with 149 ESG launch events with available information. An ESG launch event is defined as a family-month in which one or more ESG funds are launched. ESG stand-alone revenue is the average monthly fee revenue generated by all ESG funds launched in the event during their first 12 post-launch months. Fund-level spillover revenue is calculated separately for each non-ESG sibling fund associated with an ESG launch event, producing 6,851 sibling-fund-event observations. Family-level spillover revenue is obtained by summing the fund-level estimates across all non-ESG sibling funds associated with each event. Method I estimates the fee revenue associated with one month of incremental spillover flows, using the estimated flow spillover coefficient of 0.269 percentage points from column 4 of Table 2. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year by assuming that each monthly flow cohort remains invested through the end of the 12-month window. “# of Sibling Funds” is the number of non-ESG sibling funds associated with each launch event. All revenue measures are expressed in millions of dollars per month. P1, P25, P50, P75, and P99 denote the 1st, 25th, 50th, 75th, and 99th percentiles, respectively. Minor differences may arise from rounding.

	Nobs	Mean	St. Dev.	P1	P25	P50	P75	P99
<i>ESG Stand-alone Revenue</i>	149	0.024	0.056	0.000	0.002	0.007	0.020	0.233
<i>Fund-Level Flow Spillover Revenue (Method I)</i>	6,851	0.003	0.006	0.000	0.000	0.001	0.003	0.035
<i>Fund-Level AUM Spillover Revenue (Method II)</i>	6,851	0.019	0.042	0.000	0.001	0.005	0.018	0.233
<i># of Sibling Funds</i>	149	46	63	1	5	19	55	266
<i>Family-level Flow Spillover Revenue (Method I)</i>	149	0.133	0.236	0.000	0.004	0.030	0.124	1.123
<i>Family-level AUM Spillover Revenue (Method II)</i>	149	0.883	1.577	0.000	0.025	0.215	0.819	7.609

Table IC4: Summary Statistics of Event-Level Stand-alone and Spillover Revenue Estimates for Anti-ESG Fund Launches

This table reports summary statistics for stand-alone and spillover revenue associated with 36 anti-ESG launch events for which the required information is available. An anti-ESG launch event is defined as a family-month in which one or more anti-ESG funds are launched. Stand-alone revenue is the average monthly fee revenue generated by all anti-ESG funds launched in the event during the first 12 post-launch months. Fund-level spillover revenue is calculated separately for each eligible traditional sibling fund—that is, each sibling fund classified as neither ESG nor anti-ESG—using the fund’s actual lagged TNA and monthly expense ratio. This calculation produces 1,203 sibling-fund-event observations. Family-level spillover revenue is obtained by summing the fund-level estimates across all eligible sibling funds associated with each event. Method I estimates the fee revenue associated with one month of incremental spillover flows, using the estimated flow spillover coefficient of –0.22 percentage points from column 1 of Table 11. Method II accounts for the accumulation of monthly spillover flows during the first post-launch year by assuming that each monthly flow cohort remains invested through the end of the 12-month window. “# of Sibling Funds” is the number of eligible traditional sibling funds associated with each event. All revenue measures are expressed in millions of dollars per month. P1, P25, P50, P75, and P99 denote the 1st, 25th, 50th, 75th, and 99th percentiles, respectively. Minor differences may arise from rounding.

	Nobs	Mean	St. Dev.	P1	P25	P50	P75	P99
<i>Anti-ESG Stand-alone Revenue</i>	36	0.053	0.095	0.000	0.003	0.010	0.032	0.349
<i>Fund-Level Flow Spillover Revenue (Method I)</i>	1,203	-0.002	0.004	-0.019	-0.002	0.000	0.000	0.000
<i>Fund-Level AUM Spillover Revenue (Method II)</i>	1,203	-0.011	0.026	-0.114	-0.010	-0.003	-0.001	0.000
<i># of Sibling Funds</i>	36	33	43	1	4	9	50	175
<i>Family-level Flow Spillover Revenue (Method I)</i>	36	-0.056	0.115	-0.625	-0.068	-0.018	-0.001	0.000
<i>Family-level AUM Spillover Revenue (Method II)</i>	36	-0.361	0.738	-3.997	-0.425	-0.115	-0.004	0.000