

Millennial managers

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Abstract

Research Question/Issue: This paper investigates whether and how millennial mutual fund managers differ from managers born in other generations in terms of environmental, social, and governance (ESG) orientation in portfolio choices and voting decisions.

Research Findings/Insights: We find that millennial mutual fund managers hold portfolios that are more ESG oriented than do managers from other generations, consistent with anecdotal evidence suggesting that millennials are more driven by purpose than profits. Our findings suggest that the observed relationship is stronger when managers have more discretion over portfolio choices, that is, in active funds and funds with lower flow-performance sensitivity. Furthermore, we find that millennial managers respond more strongly to social movements by reallocating assets into more socially conscious firms. We also find that millennial managers are more supportive of environmental proposals when their outcome is contested.

Theoretical/Academic Implications: Our paper shows how cultural, political, and economic events, including social movements experienced by people of the same age cohort, shape preferences and beliefs and result in different investment strategies and voting among mutual fund managers. We also show how institutional constraints might limit managers' ability to impose their own preferences when investing or voting their shares.

Practitioner/Policy Implications: Millennials are increasingly replacing older generations in managerial roles and investing in the stock market due to wealth transfers from their parents. This study offers insights to policymakers and investors interested in understanding the drivers of ESG investment.

KEYWORDS

corporate governance, corporate social responsibility, CSR mechanisms, millennial managers

[M]illennial workers were asked what the primary purpose of businesses should be—63 percent more of them said “improving society” than said “generating profit.” ... [T]he sentiments of these generations will drive not only their decisions as employees but also as investors, with the world undergoing the largest transfer of wealth in history: \$24 trillion from baby boomers to millennials. Larry Fink, CEO of BlackRock

1 | INTRODUCTION

Millennials are now the largest generation and will represent 75% of the workforce by 2025.¹ Survey and anecdotal evidence suggests that this generation favors social and environmental goals over financial ones,² but there is little rigorous empirical evidence to support this claim. Studies exploring saving and consumption patterns find that millennials do not differ from previous generations (Knittel &

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Murphy, 2019; Kurz et al., 2019). Understanding millennials' approach to environmental, social, and governance (ESG) issues is important, as this generation is increasingly entering managerial positions and the stock market, and their views will shape the future of business. In this paper, we study US mutual fund managers and find that millennial managers are more ESG oriented than other generations when making investment and voting decisions for mutual funds.

Social movements as well as cultural, political, and economic events that members of the same generation experience in their early years influence the way they experience the world (Mannheim, 1952), creating common traits and attitudes (Lyons & Kuron, 2014; Schuman & Scott, 1989). Studies consistently show that early-life experiences contribute to unique management and investment styles (Bernile et al., 2017; Malmendier et al., 2011; Schoar & Zuo, 2017). Further, a common generational view can also be shaped through similar educational experiences (Jung & Shin, 2019). Millennials grew up during a time of terrorism (after the September 11, 2001, attacks), increasingly frequent natural and man-made disasters, and the rapid growth of technology and social media, and many entered the labor market during the Great Recession (Ricci & Sautter, 2021). They saw climate change emerge as a pressing global challenge, which gives stakeholders a more central role in companies (Kahan & Rock, 2023). Attention toward ESG investing—an approach that integrates ESG factors into the investment process—has grown exponentially over the last decade (Gillan et al., 2021). ESG investing can be viewed as a channel through which individuals address ESG-related issues (Heeb et al., 2023), with the intrinsic social preferences of investors playing a central role (Barber et al., 2021; Hartzmark & Sussman, 2019; Riedl & Smeets, 2017). Based on these arguments, we hypothesize that generational-shaping factors experienced by millennials influence their approach to ESG issues through investment and voting choices.

To test this conjecture, we rely on the mutual fund setting for two reasons. First, we can observe fund managers' decisions, as their portfolio holdings and voting records must be regularly disclosed. We focus on solo-managed funds because this allows us to identify who makes the decision, which is blurred in team-managed funds (Hong & Kostovetsky, 2012). Second, there are enough millennial managers in the mutual fund industry to test our predictions empirically. That is not the case for publicly listed firms, where only a few millennials currently are CEOs, but we believe the conclusions can be extended to these companies.³

We first study whether millennial managers invest in firms with higher ESG scores. We use two proxies from Morningstar to capture millennials' preference for ESG in portfolio holdings: ESG portfolio score (a weighted average company-level ESG score for the holdings in the portfolio) and Morningstar Globes (a fund's sustainability ranking within a peer group, on a 1–5 scale). For our main explanatory variable, we hand-collect data on the year of birth of US mutual fund managers to define the different generations: millennials (1981–1997), Generation X (1965–1980), baby boomers (1946–1964), and the silent generation (1928–1945). Our empirical specifications control for other determinants of ESG scores, including fund and family size, past performance and volatility, fees, turnover, fund age, fund

type, and manager gender. Importantly, our main specification includes fund family fixed effects and exploits variation in ESG scores by fund managers who belong to the same fund family. This specification allows us to control for potential selection of managers with certain characteristics into different fund families (e.g., socially conscious managers working for socially conscious fund families).

We find that the portfolio holdings of funds managed by millennial managers are more ESG oriented than those of managers from other generations. In particular, we find that millennials' portfolios have ESG portfolio scores that are 0.654 higher than those of baby boomers, on average, which represents a 1.4% increase relative to the mean, or 0.173 standard deviations. Regarding our second proxy, we find that millennial managers have 0.417 more Globes than baby boomers, which represents a 14.1% increase relative to the mean (or 0.359 standard deviations). These effects are economically large and statistically significant using alternative ways of clustering standard errors (Hong & Kostovetsky, 2012).⁴ We do not find significant differences in ESG orientation between other generations. That is, baby boomers are not more (or less) ESG oriented than Generation X or the silent generation. We then examine funds experiencing a change from a non-millennial to a millennial manager, where the replacement of a manager is not likely to be driven by a marketable ESG motive, and find that the ESG score of the fund increases after a millennial manager steps in.

We further examine whether the observed effect of higher ESG portfolio scores by millennial managers is more pronounced when managers have more discretion over portfolio choices. Specifically, we study factors that moderate the relationship between the generational differences and portfolio holdings' ESG scores. First, we find that generational differences are present only in the subsample of actively managed funds, as opposed to passive funds, consistent with the limited ability of passive fund managers to deviate from benchmarks to favor ESG stocks (e.g., Chen et al., 2008). Second, we find that the results are stronger in funds with low flow-performance sensitivity, where managers can risk a lower financial return in the short run to invest in assets that may outperform on the ESG dimension (Gantchev et al., 2022). These results suggest that the type of fund and the type of client can influence the extent to which millennials can incorporate their ESG preferences into their funds' portfolio holdings.

To better understand how managers of different generations respond to social movements, we exploit the largest #MeToo protest, which occurred in October 2017, and analyze changes in portfolio holdings around the event. We find that millennials allocate more fund assets to stocks with higher social scores, while we do not observe changes across other managers. Using the environmental or governance score as a placebo test, we do not find any significant effect for millennials or any other generation. These results indicate that millennials respond differently to social movements than do other managers.

Finally, we provide evidence consistent with millennial managers having a differential ESG orientation in their voting decisions by examining shareholder-sponsored ESG proposals. We exploit variation

in support for ESG proposals within the same fund family by managers from different generations voting on the same proposal in the same company meeting at the same point in time. We further include the same time-varying controls described above. Different from portfolio holdings decisions, which are typically made at the fund level, several recent papers show that fund families play a major role in mutual funds' voting decisions (Bolton et al., 2020; Dasgupta et al., 2021; Michaely et al., 2023). Therefore, it is unclear whether generational differences will be reflected in different support for ESG issues. Our results show that generational differences cannot explain differences in support for ESG issues in general, consistent with the centralization of voting policies limiting fund managers' ability to impose their preferences. However, we find some evidence that millennial managers are more supportive of environmental proposals when a proposal is contested (i.e., proposals with a voting outcome close to the 50% approval threshold).

Taken together, our results are consistent with the common view that millennial managers consider ESG issues more than do managers from previous generations, despite concerns that this might compromise financial performance (Gantchev et al., 2022).⁵ However, some institutional settings constrain managers' ability to pursue more ESG investments, such as the type of fund, the type of client, or centralized voting policies. Our results suggest that millennial managers favor companies with better ESG scores and that generational changes in the coming years might pressure more companies to adopt ESG policies if they want to cater to these investors (Liang & Vansteenkiste, 2022).

Our paper contributes to the literature in several ways. The literature shows that there are large CEO fixed effects in corporate policies (Bernile et al., 2017; Bertrand & Schoar, 2003; Lemmon et al., 2008; Schoar & Zuo, 2017) and that these fixed effects can be explained by life-shaping events, such as natural disasters, major economic events, or early-life experiences (Benmelech & Frydman, 2015; Bernile et al., 2017; Cotofan et al., 2023; Malmendier et al., 2011; Schoar & Zuo, 2017). A few papers have studied how managers' preferences and beliefs affect ESG policies and investment. Hong and Kostovetsky (2012) find that mutual fund managers who donate to Democrats' political campaigns invest less of their portfolios in companies deemed socially irresponsible. Di Giuli and Kostovetsky (2014) find a similar result for firm CEOs. In a contemporaneous paper, Zhi (2021) studies whether nature-loving CEOs are more likely to pursue projects to protect the environment. Unlike these authors, we examine generational differences and, in particular, whether millennial managers invest and vote in an ESG-friendly manner.

Our paper also adds to the literature exploring the drivers of ESG investment. Riedl and Smeets (2017) and Bauer et al. (2021) show that social preferences are a key driver of sustainable investment. While in these papers the authors are agnostic as to the formation of these social preferences, we illuminate the role of common experiences and events within generations in shaping preferences and beliefs. Our results suggest that the current trends toward sustainable investment can be partially explained by the inflow of ESG-conscious workers and investors into the market and therefore are likely to be permanent.

Finally, our work adds rigor to a discussion that has been dominated by anecdotal and survey evidence. The main limitation of the survey evidence used to justify the claims that millennials favor ESG over financial returns is the fact that they rely on a cross section of people at one point in time with different ages. Therefore, it is impossible to separate their age or generation from their stage in their career (e.g., Rudolph et al., 2018). We partially address this issue by examining a relatively homogeneous sample of mutual fund managers (i.e., individuals holding similar positions and with discretion over ESG orientation). One caveat is that our sample is relatively short, and therefore, we cannot fully separate age from generation. Our results are consistent with the anecdotal evidence and add to a broader literature studying how generational differences affect other social dimensions, such as work values (Twenge, 2010) or consumption and saving patterns (Knittel & Murphy, 2019; Kurz et al., 2019).

2 | LITERATURE REVIEW

2.1 | Generational differences

The idea of “generation” is rooted in the field of sociology (e.g., Mannheim, 1952; Ryder, 1965) and was developed to explain how large-scale social change happens (Rudolph et al., 2018). The social forces perspectives to generations proposed by Mannheim argues that social, cultural, political, and economic events that members of the same generation experience in their formative years shape the way they experience life and the world (Lyons & Kuron, 2014). Schuman and Scott (1989) likewise find that different generations recall different events, with those occurring during adolescence and early adulthood being recalled more often. Personality—individual differences that affect emotions, cognition, and behavior—seems to stabilize by the age of 30 years (Terracciano et al., 2010), so experiences in later life might have less impact on individual traits. Generation-shaping moments (e.g., the Great Depression or the assassinations of John F. Kennedy and Martin Luther King, the fall of the Berlin Wall, the September 11 attacks, and the Black Lives Matter protests), including social movements, can influence managers' attitudes toward investment.

Consistent with this idea, the literature documents that common events experienced by managers born in the same generation can shape the mindset and actions of that generation. Malmendier et al. (2011) show that growing up during the Great Depression makes CEOs more averse to debt and overly reliant on internal finance. Similarly, Schoar and Zuo (2017) find that CEOs who enter the labor market during recessions have more conservative managerial styles. Bernile et al. (2017) similarly find that CEOs who experience fatal disasters with (without) extremely negative consequences manage firms more conservatively (aggressively), suggesting that the relationship between exposure to these disasters and risk-taking is nonmonotonic.

Further, education can shape and reinforce the effect of common events on generational differences, as members of the same

generation will be educated following a similar paradigm. Jung and Shin (2019) show that historical changes in the academic view explain managers' preferences for diversifying acquisitions. They show that managers who graduated from an MBA program before the 1970s (when diversifying acquisitions were seen as a way of reducing risk) were more likely to pursue these sorts of acquisitions. Meanwhile, managers who graduated from an MBA after the 1980s (under the agency view of corporate diversification) were less likely to do so.

While research does not focus specifically on the behavior of millennials, we hypothesize that both early-life and educational experiences also shape the unique views of millennial managers.⁶ Specifically, this generation grew up after the September 11 attacks, increasingly frequent natural and man-made disasters, and the rapid growth of technology and social media, and many entered the labor market during the Great Recession (Ricci & Sautter, 2021). While generations should be understood within their socio-historical context (Mannheim, 1952), the influence of technology, communication, and globalization experienced by younger generations might lead to global generations (Edmunds & Turner, 2005). In other words, millennials might have a more common identity than do older generations.

In addition, fundamental concerns about the value maximization paradigm have arisen, with climate change and social issues emerging as pressing challenges. The increasing focus on sustainability over the past decade (Gillan et al., 2021) coincides with the emergence of a new conception of the corporation in which stakeholders play a more central role (Kahan & Rock, 2023) and ESG investments are viewed as a means to mitigate negative externalities (Heeb et al., 2023).⁷ While this is still a developing paradigm, these new conceptions have started to permeate the curricula of business programs, and discussions over ESG have likely occurred during the formative years of millennial managers, potentially affecting their attitude toward ESG concerns and making ESG a significant consideration for their investment decisions.⁸

Based on the aforementioned arguments, we predict that millennial managers will exhibit a more favorable approach toward ESG, as these decisions are predominantly guided by intrinsic social preferences (Barber et al., 2021; Riedl & Smeets, 2017) that can be shaped by shared generational experiences. Fund managers have a responsibility to invest their clients' funds and to vote shares at shareholder meetings.⁹ We expect generational differences to be reflected in both dimensions. However, while decisions over portfolio holdings are typically made at the fund level, corporate governance decisions (e.g., voting) are usually made at the mutual fund family level (Dasgupta et al., 2021). Therefore, generational differences, if any, should be more salient when examining investment decisions than voting.

2.2 | Moderating effects

The mutual fund industry has characteristics that might reinforce or weaken the relationship between generational differences and the extent to which managers incorporate ESG concerns in their portfolio

holdings. We consider two well-studied characteristics: the role of active versus index funds and flow-performance sensitivity.

First, the possibility that millennial managers incorporate their ESG preferences in investments should depend on whether funds are actively or passively managed. While active fund managers have a fair degree of discretion over which assets they include in their portfolios, the mandate of passive funds means they are more constrained in their investment decision as they cannot seriously deviate from their benchmark index (Chen et al., 2008; Gantchev et al., 2022). Therefore, we predict that millennial managers in actively managed funds will be more likely to tilt their portfolio toward ESG assets than will managers of passively managed funds.

Second, the approach to ESG investment by millennial managers can vary with fund flow-performance sensitivity. Portfolio managers in the United States are compensated (at least partly) based on assets under management (AUM) (Chevalier & Ellison, 1997; Ma et al., 2019). Recognizing the potential impact that certain investment decisions might have on fund performance, managers might be reluctant to invest in companies that might experience poor performance in the short run (Shleifer & Vishny, 1997), as this might lead to fund outflows (e.g., Chevalier & Ellison, 1997; Gantchev et al., 2022; Sirri & Tufano, 1998). Investing in stocks with high ESG ratings might come at a cost for fund managers, as the literature documents that asset managers face a trade-off between sustainability and performance (Gantchev et al., 2022). When investment flows are more sensitive to performance, managers have incentives to work harder to increase returns, but this might also limit a manager's ability to invest in ESG firms if that investment comes at a cost of financial returns. Therefore, we predict that millennial managers in funds with high flow-performance sensitivity will be less likely to tilt their portfolios toward ESG firms than will managers in funds with low flow-performance sensitivity.

3 | DATA AND METHODOLOGY

3.1 | Data

Our sample consists of all open-end equity mutual funds domiciled in the United States from survivorship-bias-free data from Morningstar for the period from February 2009 to December 2019. We retrieve the manager history for each fund from Morningstar. We employ the Morningstar mutual fund database for our analysis because Morningstar is considered to be more precise with respect to the time series of manager information (Massa et al., 2010; Niessen-Ruenzi & Ruenzi, 2019; Shu et al., 2012). We then restrict our sample to funds managed by a single manager for at least one quarter because it is not clear how to classify "generation" for funds managed by multiple managers born in different generations in a similar spirit to Hong and Kostovetsky (2012). This step leads to a clean setting of portfolio choices and voting decisions at the individual fund manager level. We hand-collect managerial biographical information (year of birth and gender) for 998 unique managers from multiple publicly available

TABLE 1 Descriptive statistics.

Panel A: Fund-level summary statistics for team-managed and solo-managed samples				
	Team	Solo	Diff (mean)	t-statistics
No. of observations	209,226	74,084		
No. of unique funds	3195	1472		
No. of unique fund families	464	320		
ESG portfolio score	46.45	46.35	0.14***	(8.57)
Fund assets	19.74	19.59	0.23***	(28.04)
Fund family assets	23.80	24.07	−0.05***	(−4.30)
Fund age (log)	2.39	2.50	−0.11***	(−32.30)
Fund age (years)	12.45	13.91	−1.59***	(−48.54)
Net expense ratio	1.06	1.08	−0.08***	(−40.97)
Turnover	0.60	0.60	−0.04***	(−10.95)
Load fee	2.79	2.67	0.23***	(20.24)
Past 12-month returns	11.32	12.06	−0.24***	(−4.48)
Institutional fund	0.41	0.30	0.13***	(68.47)
ES fund	0.03	0.03	−0.00	(−0.55)
Return volatility	3.55	3.66	−0.07***	(−13.67)
Panel B: Fund-level summary statistics for solo-managed fund sample (solo)				
	Non-miss	Miss	Diff (mean)	t-statistics
No. of observations	66,184	4667		
No. of unique funds	1330	164		
No. of unique fund families	300	75		
No. of unique managers	998	125		
Manager age (years)	48.26			
Female manager	0.08			
ESG portfolio score	46.25	47.77	−1.48***	(−29.91)
Fund assets	19.61	19.54	0.01	(0.30)
Fund family assets	24.12	23.18	0.75***	(17.75)
Fund age (log)	2.50	2.45	0.06***	(5.74)
Fund age (years)	13.95	13.10	1.00***	(9.43)
Net expense ratio	1.07	1.18	−0.09***	(−15.80)
Turnover	0.58	0.63	−0.19***	(−24.07)
Load fee	2.57	3.86	−1.09***	(−29.90)
Past 12-month returns	12.07	11.65	0.09	(0.49)
Institutional fund	0.29	0.34	−0.05***	(−8.60)
ES fund	0.02	0.07	−0.04***	(−17.29)
Return volatility	3.65	3.81	−0.16***	(−11.03)

Note: This table reports summary statistics for the Morningstar funds for the period 2009 to 2019. Panel A shows univariate comparative statistics between team-managed (Team) and solo-managed (Solo) funds. Panel B reports the mean value of variables for the solo-managed sample, splitting by the sample with available manager biographical information (Non-Miss) and the sample without that information (Miss). Note that we drop funds where managers have not managed for one quarter. Table A1 provides variable definitions.

Abbreviation: ESG, environmental, social, and governance.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

sources, accounting for 89% of the solo-managed funds in the Morningstar sample over the sample period.¹⁰ From the information on manager year of birth, we classify fund managers into four generations as our main explanatory variables: managers born between 1981 and 1997 are millennials, managers born between 1965 and 1980 are Generation X, managers born between 1946 and 1964 are baby boomers, and managers born between 1928 and 1945 are the silent generation. The final sample with non-missing variables of interest consists of 752 unique managers. We perform empirical analysis at the fund level because the underlying portfolios as well as the fund management are the same across share classes.

Our main dependent variable is the overall fund-level portfolio ESG score provided by Morningstar (Kim & Yoon, 2023), defined as an asset-weighted average of normalized company-level ESG scores for the covered holdings in the portfolio. A high ESG portfolio score indicates that a fund has a larger fraction of its assets in companies with high Sustainability ESG scores. Data for ESG scores are available from 2009 until 2019. As a robustness check, we also use fund-level Morningstar Sustainability Globes ratings (Hartzmark & Sussman, 2019), which rank funds' sustainability performance within peer groups (Morningstar category). Morningstar Globes are measured on a 1–5 scale, with 5 depicting the top 10% sustainability performers in the peer group. Data for Globes are only available from 2016.

Our main control variables consist of manager gender and various fund characteristics to control for factors influencing fund investment decisions. *Female manager* is defined as an indicator variable equal to 1 if the fund manager is female to account for potentially different approaches toward ESG by male and female managers (e.g., Adams & Funk, 2012). Managers' genders are inferred from their first names, where those with gender prediction power lower than 80% are manually collected by cross-checking biographical information using managers' full names (Niessen-Ruenzi & Ruenzi, 2019). For each fund, we collect monthly information at the fund level and fund family level, following the literature (e.g., Chevalier & Ellison, 1997; Gantchev et al., 2022; Hong & Kostovetsky, 2012). These factors include the total AUM at the fund level (the sum of the assets in the different share classes) and fund family level (the sum of the assets in the different funds of any given fund family), *Fund assets* and *Fund family assets*, respectively. *Fund age* (retrieved from the oldest share class) is defined as the natural logarithm of the number of years since the fund inception date. *Net expense ratio* is defined as the total annual expenses as a fraction of AUM. *Load fee* is the sum of front-end, deferred, and rear-end charges as a fraction of AUM. *Turnover ratio* is defined as the aggregate value of position change between quarters ($t - 1$) and t for all portfolio stocks, as a fraction of the fund's total net assets at $(t - 1)$. *Past 12-month returns* is fund accumulated returns from monthly returns in the past 12 months. *Return volatility*, capturing investment risk, is defined as the standard deviation of fund monthly returns in the past 12 months. *Institutional fund* is an indicator variable that equals 1 if the aggregate fund-level AUM has more than a 50% weight in the institutional share class (Ceccarelli et al., 2023). *ES fund* is an indicator variable that equals 1 if the fund name contains a string related to environmental or social issues

(Michaely et al., 2023), with the full list of strings provided in Table A1. We also collect information on the investment global category to control for fund investment style fixed effects.

Table 1 shows the summary statistics of our final sample of solo-managed funds domiciled in the United States. To provide a broader picture on our sample selection, we also provide summary statistics comparing our final sample to a team-managed fund sample (panel A) and a solo-managed fund sample for which manager biographical information is not readily available (panel B). Panel A shows that team- and solo-managed funds differ in observable characteristics. Notably, the former have higher ESG portfolio and Globes scores and lower past returns. Like Patel and Sarkissian (2021), we document that funds run by management teams are on average larger but belong to smaller fund families, are cheaper, and have lower turnover than funds run by solo managers. The empirical tests rely on the subsample of solo-managed funds because there is less ambiguity as to who makes the decisions in these funds (Chevalier & Ellison, 1999). We believe this advantage outweighs the potential lack of external validity in our results. Panel B shows that our final sample also differs in observables from the solo-managed funds with missing fund manager biographical information. Unfortunately, despite our best efforts to collect these data, we have to drop these observations from the final sample.

Panel B also shows that the fraction of female fund managers is relatively small in solo-managed funds, at only 8%. Adams and Kim (2020) find similar figures for recent years in a sample of solo- and team-managed mutual funds. Further, they show that gender diversity in the industry declined from 1999 to 2015.

3.2 | Methodology

To test our prediction that generational differences affect managers' approach to ESG issues, we estimate ordinary least squares (OLS) regression at the fund level following the literature (e.g., Hong & Kostovetsky, 2012; Niessen-Ruenzi & Ruenzi, 2019):

$$ESG_{it} = \beta_1 \text{Millennials}_i + \beta_2 \text{GenX}_i + \beta_3 \text{GenSilent}_i + \sigma \text{Controls}_{i,t-1} + \gamma_{c,t} + \eta_i + \epsilon_{i,t}, \quad (1)$$

where ESG_{it} is the ESG portfolio score (or Globes), Millennials_i is a dummy equal to 1 if the manager was born between 1981 and 1997, GenX_i is a dummy equal to 1 if the manager was born between 1965 and 1980, and GenSilent_i is a dummy equal to 1 if the manager was born between 1928 and 1945 (Twenge, 2010). The omitted category, that is, benchmark group, is baby boomers (managers born between 1946 and 1964).¹¹

$\text{Controls}_{i,t-1}$ include a set of control variables that can affect managers' investment decisions, following the literature (Chevalier & Ellison, 1997; Gantchev et al., 2022; Hong & Kostovetsky, 2012). These variables capture fund and family characteristics that can be correlated with the generation a fund manager belongs to, leading to omitted variable bias. These variables include an indicator variable for female manager, fund size, fund family size, fund age, net expense ratio, fund

turnover, load fee, past 12-month returns, return volatility, institutional fund, and Environment and Social fund (ES fund). A detailed description of variables is provided in Section 3.1 and in Table A1.

Our specification includes different fixed effects to control for potential omitted variables that might bias our results. $\gamma_{c,t}$ are investment style-by-month fixed effects, which absorb time-varying trends specific to an investment strategy. (This is omitted when we use Morningstar Globes as our dependent variable because this proxy is already estimated within the fund investment style.) That is, these fixed effects exploit variation within the same fund style at the same point in time, and therefore, differences in investment strategy or risk associated with them are controlled for. We also control for fund family fixed effects, as captured by η_i , to account for time-invariant differences in the institutions' ESG practices. Standard errors are clustered at the manager, fund, or fund family level in our regressions (Hong & Kostovetsky, 2012).

4 | RESULTS

4.1 | Generational differences and portfolio holdings

We first present descriptive evidence on the association between generational differences and managers' attitudes toward ESG concerns, as reflected in portfolio holdings, by splitting the sample into

different generations: millennials, Generation X, baby boomers, and the silent generation. The results in Table 2 indicate that the portfolios of younger generations exhibit a larger ESG footprint, as proxied by portfolio ESG scores and Morningstar Globes. The table also shows that millennial managers are more likely to work for larger fund families. Their expense ratios and turnover also differ, relative to the funds managed by other managers. Therefore, it is important to account for these differences to obtain meaningful results.

More formally, we examine the differences in fund ESG scores between millennial managers and other managers after controlling for other potential confounding effects by estimating Equation (1). Table 3 presents the results using the ESG portfolio score as the dependent variable. The coefficients on millennials are always positive and statistically significant and are economically stronger after controlling for other factors that matter for ESG performance and can be correlated with millennial managers (columns 2–5), as discussed above. In particular, we find that millennials' portfolios have ESG portfolio scores that are 0.654 higher than those of baby boomers, on average, which represents a 1.4% increase relative to the mean or 0.173 standard deviations. These effects are economically meaningful and statistically significant using alternative ways of clustering standard errors, that is, by fund manager level, fund level, and fund family level (Hong & Kostovetsky, 2012). Importantly, our results are robust to allowing for clustered standard errors at the fund manager level, to account for the correlation of portfolio ESG outcomes by fund

TABLE 2 Summary statistics by generations—holdings.

	Year of birth											
	Millennials (1981–1997)			Generation X (1965–1980)			Baby boomers (1946–1964)			Silent generation (1928–1945)		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
No. of unique managers	33			411			291			17		
ESG portfolio score	2051	46.65	3.86	36,011	46.54	3.74	25,983	45.90	3.86	2153	45.21	3.06
Morningstar Globes	1034	3.05	1.23	11,646	2.94	1.14	6506	2.94	1.19	339	2.88	1.08
Manager age	2051	33.28	2.99	36,011	42.97	4.59	25,983	54.79	5.00	2153	71.79	4.26
Female manager	2051	0.04	0.20	36,011	0.07	0.25	25,983	0.10	0.30	2153	0.00	0.02
Fund assets	2051	19.40	1.66	36,011	19.70	1.97	25,983	19.49	2.10	2153	19.63	1.88
Fund family assets	2051	25.24	3.52	36,011	24.76	3.11	25,983	23.40	3.20	2153	21.01	2.49
Fund age (log)	2051	2.60	0.82	36,011	2.48	0.70	25,983	2.52	0.66	2153	2.60	0.65
Net expense ratio	2051	1.10	0.35	36,011	1.01	0.46	25,983	1.13	0.45	2153	1.30	0.33
Turnover	2051	0.90	0.60	36,011	0.59	0.53	25,983	0.55	0.54	2153	0.65	0.96
Load fee	2051	2.50	2.90	36,011	2.48	2.79	25,983	2.74	2.82	2153	2.13	3.07
Past 12-month returns	2051	11.77	13.31	36,011	12.16	12.52	25,983	11.92	12.60	2153	12.70	12.06
Institutional fund	2051	0.09	0.29	36,011	0.29	0.45	25,983	0.32	0.47	2153	0.20	0.40
ES fund	2051	0.00	0.00	36,011	0.03	0.18	25,983	0.02	0.12	2153	0.00	0.02
Return volatility	2051	3.53	1.04	36,011	3.61	1.05	25,983	3.71	1.10	2153	3.63	1.06

Note: This table reports summary statistics for the solo-managed fund sample by four different generations: millennials (1981–1997), Generation X (1965–1980), baby boomers (1946–1964), and silent generation (1928–1945). The sample period goes from 2009 to 2019, except for Morningstar Globes for which data are available from 2016. Table A1 provides variable definitions.

Abbreviation: ESG, environmental, social, and governance.

managers across time. The economic impact is modest but reasonable. The mutual fund industry is exceptionally competitive, pushing fund managers to maximize profits rather than reflecting their own beliefs

in their portfolio choices (Shu et al., 2012). Therefore, if anything, our setting makes finding a result more difficult, hence the magnitude of the coefficients.

TABLE 3 Generational differences and portfolio holdings.

	ESG portfolio score				
	(1)	(2)	(3)	(4)	(5)
Millennials	0.550*** (9.91)	0.654*** (11.73)	0.654* (1.68)	0.654** (2.00)	0.654*** (2.95)
Generation X	0.026 (1.25)	0.062*** (3.04)	0.062 (0.36)	0.062 (0.41)	0.062 (0.44)
Silent generation	0.207*** (2.71)	0.039 (0.51)	0.039 (0.08)	0.039 (0.09)	0.039 (0.09)
Female manager		0.048 (1.46)	0.048 (0.21)	0.048 (0.21)	0.048 (0.23)
Fund assets		0.064*** (9.80)	0.064 (1.50)	0.064 (1.48)	0.064 (1.33)
Fund family assets		0.010 (0.36)	0.010 (0.09)	0.010 (0.09)	0.010 (0.09)
Fund age		-0.049*** (-3.07)	-0.049 (-0.42)	-0.049 (-0.43)	-0.049 (-0.42)
Net expense ratio		-0.131*** (-3.46)	-0.131 (-0.58)	-0.131 (-0.58)	-0.131 (-0.54)
Turnover		-0.301*** (-16.67)	-0.301*** (-2.75)	-0.301*** (-2.95)	-0.301** (-2.28)
Load fee		-0.007 (-1.30)	-0.007 (-0.25)	-0.007 (-0.19)	-0.007 (-0.30)
Past 12-month returns		-0.014*** (-11.11)	-0.014** (-2.58)	-0.014*** (-2.93)	-0.014** (-2.49)
Institutional fund		0.175*** (6.93)	0.175 (1.30)	0.175 (1.21)	0.175 (0.95)
ES fund		0.870*** (13.60)	0.870* (1.73)	0.870 (1.63)	0.870 (1.20)
Return volatility		-0.044*** (-3.02)	-0.044 (-0.28)	-0.044 (-0.37)	-0.044 (-0.29)
N	65,919	65,919	65,919	65,919	65,919
Adjusted R ²	.751	.765	.765	.765	.765
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' ESG portfolio score on indicator variables of manager generation. Baby Boomers are the omitted category. All regressions control for lagged fund characteristics, investment style-by-month FE, and family FE. The sample includes all Morningstar solo-managed funds domiciled in the United States, and where the manager has managed the fund solo for at least a quarter. t-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

Next, we employ an alternative proxy for the portfolio ESG performance for our analysis. Table 4 presents the results of estimating Equation (1) using the Sustainability Globes rating as the

dependent variable. Because this rating is constructed within peer groups (Morningstar category), we include family and time fixed effects and drop investment style-by-month fixed effects in these

TABLE 4 Alternative proxies for ESG score (Globes).

	Morningstar Globes				
	(1)	(2)	(3)	(4)	(5)
Millennials	0.273*** (6.50)	0.417*** (9.64)	0.417* (1.73)	0.417** (2.10)	0.417*** (3.89)
Generation X	0.044** (2.07)	0.082*** (3.77)	0.082 (0.85)	0.082 (0.96)	0.082 (1.11)
Silent generation	0.519*** (4.15)	0.293** (2.34)	0.293 (1.20)	0.293 (1.05)	0.293 (1.30)
Female manager		0.186*** (5.76)	0.186 (1.14)	0.186 (1.41)	0.186** (1.97)
Fund assets		0.050*** (8.17)	0.050** (1.97)	0.050** (1.98)	0.050* (1.78)
Fund family assets		0.005 (0.11)	0.005 (0.04)	0.005 (0.04)	0.005 (0.04)
Fund age		-0.071*** (-4.85)	-0.071 (-1.12)	-0.071 (-1.16)	-0.071 (-1.27)
Net expense ratio		0.210*** (5.71)	0.210 (1.56)	0.210 (1.63)	0.210 (1.53)
Turnover		-0.113*** (-9.81)	-0.113** (-2.42)	-0.113*** (-2.63)	-0.113** (-2.11)
Load fee		-0.020*** (-3.92)	-0.020 (-1.08)	-0.020 (-0.92)	-0.020 (-1.38)
Past 12-month returns		-0.004*** (-4.94)	-0.004 (-1.42)	-0.004* (-1.70)	-0.004* (-1.72)
Institutional fund		0.080*** (3.05)	0.080 (0.91)	0.080 (0.82)	0.080 (1.02)
ES fund		0.413*** (6.04)	0.413* (1.86)	0.413* (1.85)	0.413 (1.59)
Return volatility		-0.067*** (-5.81)	-0.067 (-1.59)	-0.067* (-1.86)	-0.067* (-1.85)
N	19,462	19,462	19,462	19,462	19,462
Adjusted R ²	.243	.255	.255	.255	.255
Family FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' Morningstar Sustainability Globes rating (on a scale of 1–5, where 5 means the highest sustainability level) on indicator variables of manager generation. The baby boomer generation is the baseline. Tests are performed at the fund level. All regressions control for lagged fund characteristics (except column 1), fund family, and time FE. The sample includes all Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. *t*-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

specifications. Note that, due to data availability, these regressions include data from 2016. Nevertheless, the results are qualitatively similar, regardless of the dependent variable used to estimate managers' portfolio decisions. We find that millennial managers have 0.417 more Globes than baby boomers after controlling for other determinants of portfolio holdings, which represents a 14.1% increase relative to the mean or 0.359 standard deviations.¹² Overall, our findings for fund ESG scores suggest that millennial managers tilt their portfolios toward companies with better ESG performance.

Millennials' portfolios also have higher ESG portfolio scores than those of Generation X and silent generation managers, although the difference is insignificant at conventional levels for the silent generation, which could be partially explained by the small number of managers of that generation in our sample. Interestingly, we do not find differences across managers that belong to other generations. That is, the ESG performance of the portfolio holdings of Generation X, baby boomers, and silent generation managers are statistically the same. It is likely that these generations share other characteristics in their investment style, but these do not significantly relate to ESG issues. Overall our findings suggest that, while generational differences can influence portfolio selection, only millennial managers approach ESG issues differently, as reflected by the ESG portfolio score and the number of globes. This evidence is consistent with recent survey and anecdotal evidence suggesting that millennials favor social and environmental goals, even at the cost of lower financial returns. It is also consistent with the literature documenting the effect of managerial traits on corporate policies (Benmelech & Frydman, 2015; Bernile et al., 2017; Bertrand & Schoar, 2003; Cotofan et al., 2023; Lemmon et al., 2008; Malmendier et al., 2011; Schoar & Zuo, 2017; Zhi, 2021) and mutual fund managers' investment decisions (Hong & Kostovetsky, 2012).

4.2 | Managerial change and portfolio holdings

The results presented above indicate that funds managed by millennials exhibit better ESG performance, and the result is robust to alternative proxies of ESG performance. One potential concern with the previous results is that they might be capturing fund characteristics rather than manager characteristics, in particular, the generation to which the manager belongs. For instance, millennial managers may be chosen to manage funds with ESG orientations, rather than them driving the change in ESG performance of the funds. To address this concern, we estimate an alternative specification in which we exploit changes in managers within the same fund and explore whether the ESG performance of the fund improves after the millennial manager arrives. By comparing the same fund before and after the change in manager, we expect most characteristics of the fund to remain unchanged. Specifically, we estimate the following specification:

$$ESG_{it} = \beta_1 Post_t \times Treat_i + \beta_2 Treat_i + \beta_3 Post_t + \sigma Controls_{i,t-1} + \gamma_{c,t} + \eta_f + \epsilon_{i,t}. \quad (2)$$

$Treat_i$ is a dummy equal to 1 if the fund experiences a change in manager from a non-millennial to a millennial at some point during our sample period. The control group includes funds that experienced a change in managers from a non-millennial to a non-millennial manager, and thus $Treat$ equals 0. We focus on an event window close to the change in manager and define $Post$ as an indicator variable equal to 1 (0) for the 2 years after (before) the change in manager. We include the same set of controls used in Equation (1). The main coefficient of interest is the interaction term, which captures changes in ESG performance for funds that change from a non-millennial to a millennial manager relative to funds that experience a change to a non-millennial manager.

We present the results in Table 5. The main coefficient of interest is positive in these specifications, and the magnitude of the effect is larger than in our benchmark results. The statistical significance is smaller in some cases, which can be partially explained by the smaller sample size, as we only focus on a relatively narrow window around the change in manager. However, the results are statistically significant at least at the 10% level, regardless of how we cluster the standard errors. Our findings further support the hypothesis that millennial managers change portfolio holdings to improve the ESG scores of the funds they manage. Note that, although the research design in Equation (2) resembles a difference-in-differences specification, the change in manager is arguably endogenous, due to other unobservable factors (e.g., poor past performance), and thus, we do not claim causality even in this case.

4.3 | Cross-sectional tests

In this section, we study factors that moderate the relationship between the generational differences and portfolio holdings' ESG scores. In particular, we consider the case of active versus passive funds and that of funds with high versus low flow-performance sensitivity.

4.3.1 | Active versus passive funds

Because passive funds aim to replicate indexes, their managers have limited ability to select holdings in the portfolios, as deviation from their benchmarks would increase tracking error (Chen et al., 2008; Gantchev et al., 2022). On the contrary, managers of active funds can pick stocks they believe have good prospects or have desirable characteristics. Therefore, the results presented above are expected to be driven by active funds rather than by passive ones. To test this hypothesis, we split our sample of funds into active and passive and estimate Equation (1) for both fund types separately. Passive funds

TABLE 5 Managerial change and portfolio holdings.

	ESG portfolio score				
	(1)	(2)	(3)	(4)	(5)
Post × treat	1.051*** (4.78)	0.931*** (4.38)	0.931* (1.66)	0.931* (1.79)	0.931* (1.82)
Post	-0.125 (-0.99)	-0.122 (-0.97)	-0.122 (-0.26)	-0.122 (-0.29)	-0.122 (-0.25)
Treat	0.265 (1.23)	0.343 (1.63)	0.343 (0.54)	0.343 (0.51)	0.343 (0.38)
Female manager		-1.033*** (-6.38)	-1.033* (-1.94)	-1.033* (-1.78)	-1.033** (-2.61)
Fund assets		-0.190*** (-4.93)	-0.190 (-1.23)	-0.190 (-1.04)	-0.190 (-0.84)
Fund family assets		-0.850*** (-2.73)	-0.850 (-1.46)	-0.850 (-1.01)	-0.850 (-1.14)
Fund age		-0.345*** (-3.14)	-0.345 (-0.79)	-0.345 (-0.83)	-0.345 (-0.93)
Net expense ratio		-1.216*** (-6.00)	-1.216* (-1.71)	-1.216* (-1.74)	-1.216 (-1.54)
Turnover		0.351*** (3.68)	0.351 (0.67)	0.351 (0.67)	0.351 (0.68)
Load fee		-0.036* (-1.73)	-0.036 (-0.40)	-0.036 (-0.32)	-0.036 (-0.64)
Past 12-month returns		0.025*** (3.77)	0.025 (0.91)	0.025 (0.87)	0.025 (1.61)
Institutional fund		0.190 (1.09)	0.190 (0.32)	0.190 (0.27)	0.190 (0.21)
ES fund		3.713*** (5.65)	3.713*** (3.05)	3.713*** (4.19)	3.713*** (4.10)
Return volatility		0.103 (1.21)	0.103 (0.37)	0.103 (0.43)	0.103 (0.54)
N	3012	3012	3012	3012	3012
Adjusted R ²	.796	.812	.812	.812	.812
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regression results of funds' ESG portfolio score on the change in fund manager. *Treat* is an indicator variable that equals 1 for funds that ever experienced a change in managers from a non-millennial to millennial at any point during our sample period. The control group is funds that experienced a change in managers to a non-millennial. *Post* is an indicator variable that equals 1 (0) for the 2-year post (prior to) the change in manager. Tests are performed at the fund level. All regressions control for lagged fund characteristics (except column 1), investment style-by-month FE, family FE. The sample includes all Morningstar solo-managed funds domiciled in the United States and experienced the replacement of a prior manager by a millennial fund manager and where the manager has managed the fund solo for at least a quarter. *t*-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

are those that the Morningstar mutual fund dataset classified as indexers, while the remaining funds are considered actively managed.

We present the results in Table 6. Panel A shows the results for active funds and panel B for passive funds. Consistent with our predictions, we find that millennial managers exhibit higher ESG performance for the subsample of actively managed funds but not for the passively managed funds. In the former subsample, the coefficient is positive and statistically significant in all specifications, and the effect almost double, relative to the main specification presented in Table 4. In contrast, in panel B, the coefficient is negative but statistically insignificant in most specifications.

Overall, these results indicate that millennial managers only tilt their portfolios when the type of funds they manage give them the flexibility to select firms with higher ESG scores, while no effect is found when portfolio holdings are constrained by explicit benchmarks.

4.3.2 | Flow-performance sensitivity

Flow-performance sensitivity captures the extent to which the fund investors increase or decrease their positions in response to fund

TABLE 6 Cross-sectional I: active versus passive funds.

	ESG portfolio score				
	(1)	(2)	(3)	(4)	(5)
Panel A: active funds					
Millennials	0.648*** (11.17)	0.766*** (13.15)	0.766* (1.91)	0.766** (2.26)	0.766*** (3.53)
Generation X	0.088*** (3.96)	0.144*** (6.47)	0.144 (0.78)	0.144 (0.88)	0.144 (0.96)
Silent generation	0.191** (2.45)	0.018 (0.23)	0.018 (0.03)	0.018 (0.04)	0.018 (0.04)
N	60,369	60,369	60,369	60,369	60,369
Adjusted R ²	.753	.757	.757	.757	.757
Control variables	No	Yes	Yes	Yes	Yes
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family
Panel B: passive funds					
Millennials	-1.101*** (-5.01)	-0.806*** (-3.79)	-0.806 (-1.22)	-0.806 (-1.41)	-0.806*** (-5.65)
Generation X	-0.140*** (-2.74)	-0.046 (-0.80)	-0.046 (-0.10)	-0.046 (-0.13)	-0.046 (-0.16)
N	4616	4616	4616	4616	4616
Adjusted R ²	.927	.935	.935	.935	.935
Control variables	No	Yes	Yes	Yes	Yes
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' ESG portfolio score on indicator variables of manager generation by fund activeness. Panel A reports the results for the subsample of active funds. Panel B reports the results for the subsample of passive funds (we do not report the coefficient for the silent generation as we do not have enough managers from this generation in this subsample to estimate it). Baby boomers are the omitted category. All regressions control for lagged fund characteristics (except column 1) as shown in Table 3, investment style-by-month FE, and family FE. The sample includes all Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. *t*-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

performance. When flow-performance sensitivity is low, managers can risk investing in assets that will outperform on the ESG dimension, even if they might underperform financially in the short term. If flow-performance sensitivity is high, managers will be reluctant to invest in assets that might offer high ESG performance at the cost of lower financial returns. Therefore, we expect millennial managers to be more strongly associated with ESG performance if they manage funds that exhibit low flow-performance sensitivity.

Following He et al. (2023), we estimate flow-performance sensitivity for each fund using 36-month rolling regressions where fund flows are regressed on average four-factor alpha in the past 12 months and controlling for the 1-month lag of fund assets, fund family assets, fund age, net expense ratio, turnover, and load fee. The estimated coefficient on alpha is the proxy for fund flow-performance sensitivity. We then estimate Equation (1) on the subsample of funds with above- and below-the-median flow-performance sensitivity.

	ESG portfolio score				
	(1)	(2)	(3)	(4)	(5)
Panel A: low flow-performance sensitivity					
Millennials	0.985*** (11.66)	1.050*** (12.48)	1.050** (2.07)	1.050** (2.44)	1.050*** (3.21)
Generation X	-0.076*** (-2.60)	-0.066** (-2.26)	-0.066 (-0.40)	-0.066 (-0.43)	-0.066 (-0.44)
Silent generation	0.433*** (3.44)	0.249** (1.98)	0.249 (0.60)	0.249 (0.43)	0.249 (0.55)
N	31,193	31,193	31,193	31,193	31,193
Adjusted R ²	.797	.802	.802	.802	.802
Control variables	No	Yes	Yes	Yes	Yes
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family
Panel B: high flow-performance sensitivity					
Millennials	0.256*** (3.24)	0.470*** (5.93)	0.470 (1.17)	0.470 (1.32)	0.470** (2.27)
Generation X	0.092*** (3.10)	0.169*** (5.65)	0.169 (0.85)	0.169 (0.97)	0.169 (1.13)
Silent generation	0.196* (1.92)	-0.008 (-0.08)	-0.008 (-0.01)	-0.008 (-0.02)	-0.008 (-0.02)
N	30,992	30,992	30,992	30,992	30,992
Adjusted R ²	.760	.765	.765	.765	.765
Control variables	No	Yes	Yes	Yes	Yes
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' ESG portfolio score on indicator variables of manager generation by fund flow-performance sensitivity. Panel A reports the results for the subsample of funds with low flow-performance sensitivity, defined as the sensitivity proxy below the sample median within the same month. Panel B reports the results for the subsample of funds with high flow-performance sensitivity. Baby boomers are the omitted category. All regressions control for lagged fund characteristics (except column 1) as shown in Table 3, investment style-by-month FE, and family FE. The sample includes all funds Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. *t*-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

TABLE 7 Cross-sectional II: flow-performance sensitivity.

We present the results in Table 7. Panel A shows the results for funds with above-median flow-performance sensitivity, and panel B presents the results for funds with below-median sensitivity. Consistent with our predictions, we find that the results are stronger among funds with low flow-performance sensitivity. The coefficient doubles in this subsample relative to funds with high sensitivity, and the results are statistically significant in all specifications. In contrast, results for low flow-performance sensitivity funds are insignificant when clustering the standard errors at the manager and fund levels.

To sum up, this cross-sectional test suggests that millennial managers only tilt their portfolios toward ESG stocks when fund investors are not

too sensitive to (past) financial performance. That is, millennials managing funds with low flow-performance sensitivity are more willing to invest in companies that may exhibit poor performance in the short run.

4.4 | Social movements

In this section, we test whether millennial managers differentially adjust their holdings in response to social movements. If millennial managers have a different approach toward ESG concerns as a result of events experienced during their formative years (Lyons &

TABLE 8 Social movement: #MeToo.

	Portfolio score				
	(1)	(2)	(3)	(4)	(5)
Panel A: S score					
Millennials	-2.068*** (-2.86)	-0.235 (-0.32)	-0.235 (-0.17)	-0.235 (-0.18)	-0.235 (-0.25)
Millennials × #MeToo	3.014*** (3.41)	2.759*** (3.26)	2.759* (1.69)	2.759* (1.75)	2.759* (1.91)
Panel B: E score					
Millennials	-1.565* (-1.77)	1.130 (1.27)	1.130 (0.72)	1.130 (0.73)	1.130 (0.64)
Millennials * #MeToo	1.754 (1.62)	1.441 (1.40)	1.441 (0.87)	1.441 (0.87)	1.441 (0.75)
Panel C: G score					
Millennials	-1.938** (-2.58)	0.252 (0.33)	0.252 (0.16)	0.252 (0.17)	0.252 (0.22)
Millennials × #MeToo	2.821*** (3.07)	2.488*** (2.84)	2.488 (1.43)	2.488 (1.52)	2.488 (1.64)
N	1197	1197	1197	1197	1197
Control variables	No	Yes	Yes	Yes	Yes
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' ESG and social score on indicator variables of manager generation around the largest #MeToo protest in October 2017. #MeToo is an indicator variable that equals 1 (0) for 6 months post (prior to) the protest in October 2017 (dropping the event month). To decompose the effect of the social movement on each dimension of the portfolio ESG score, we construct the portfolio score from the fund portfolio holdings sample (CRSP Mutual Fund Holdings) and each dimension of the company-level ESG score (Morningstar Sustainalytics ESG ratings), following the methodology used by Morningstar to construct the Morningstar Historical Portfolio Sustainability Score. Panel A reports the regression results of funds' "S" score on the interactions between millennials and the #MeToo event (other generations are also included but are not reported). Panel B (panel C) reports the regression results of funds' social "E" ("G") score. All regressions control for lagged fund characteristics (except column 1) as shown in Table 3, investment style-by-month FE, and family FE. The sample includes all Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. t-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

Kuron, 2014; Mannheim, 1952), we expect them to respond differently to recent salient social movements. We use the #MeToo movement to test that prediction. In particular, we consider the largest protest, which took place in October 2017, and examine changes in the social score of funds managed by managers that belong to different generations.

For this test, we focus on the social dimension (S) of the ESG score, as this better captures issues related to gender equality and attitudes toward women in the workplace. The environment (E) and governance (G) dimensions, on the contrary, should not vary as a result of the #MeToo movement. We collect information from Morningstar Sustainalytics' E, S, and G ratings for the different dimensions and construct the E, S, and G performance for each fund. We then estimate the following specification:

$$E/S/G_{it} = \beta_1 \#MeToo_t \times \text{Millennial}_i + \beta_2 \#MeToo_t \times \text{GenX}_i + \beta_3 \#MeToo_t \times \text{Silent}_i + \beta_4 \text{Millennial}_i + \beta_5 \text{GenX}_i + \beta_6 \text{Silent}_i + \sigma \text{Controls}_{i,t-1} + \gamma_{c,t} + \eta_f + \epsilon_{i,t}, \quad (3)$$

where the dependent variable is the social (S), environmental (E), or governance score of the fund. We focus on an event window close to the event and define #MeToo as an indicator variable equal to 1 (0) for the 6 months after (before) the #MeToo movement of October 2017. We include interaction terms for all manager generations (using baby

boomers as the omitted category) with the dummy #MeToo and the same set of controls used in Equation (1). The main coefficients of interest are the interaction terms, which capture changes in E, S, or G performance following the #MeToo movement.

We present the results in Table 8. Panel A presents the results for the social dimension. The interaction term between #MeToo and millennial managers is positive and statistically significant at the 10% level, consistent with millennials reallocating assets toward firms with better social scores around the #MeToo protest. The interaction terms for the other generations are statistically insignificant in all cases (untabulated). We also present the results for the environmental and governance dimensions in panels B and C, respectively. As expected, these interaction terms are statistically insignificant, as the #MeToo movement is only relevant for the social dimension.

Overall, these results indicate not only that millennial managers hold portfolios that are more ESG oriented in the cross section but also that they respond more strongly to social movements by reallocating assets into more socially conscious firms.

4.5 | Generational differences and voting

Fund managers make investment decisions on behalf of their clients and cast their clients' proxy votes during shareholder meetings. In this section, we test whether there are generational differences in

TABLE 9 Summary statistics by generations—voting.

	Millennials (1981–1997)			Generation X (1965–1980)			Baby boomers (1946–1964)			Silent generation (1928–1945)		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
No. of unique managers	38			367			235			15		
Manager age	4385	35.36	2.36	77,599	44.09	4.47	43,288	55.40	4.46	3949	73.58	2.45
Vote for (ESG)	4301	0.20	0.40	75,672	0.28	0.45	42,769	0.30	0.46	3928	0.17	0.38
Vote for (E)	599	0.11	0.31	9068	0.23	0.42	4769	0.24	0.43	536	0.07	0.25
Vote for (S)	1052	0.08	0.27	20,983	0.18	0.39	12,349	0.22	0.41	1109	0.09	0.29
Vote for (G)	2650	0.26	0.44	45,621	0.33	0.47	25,651	0.36	0.48	2283	0.24	0.43
Female manager	4385	0.01	0.10	77,599	0.11	0.31	43,288	0.11	0.31	3949	0.00	0.00
Fund assets	4385	20.46	1.57	77,599	20.62	1.98	43,288	20.59	2.36	3949	19.34	1.65
Fund family assets	4385	25.80	2.31	77,599	25.68	3.03	43,288	24.68	3.36	3949	20.13	2.37
Fund age (log)	4385	2.47	0.76	77,599	2.61	0.66	43,288	2.68	0.65	3949	3.11	0.32
Net expense ratio	4385	0.98	0.28	77,599	0.62	0.45	43,288	0.84	0.48	3949	1.48	0.37
Turnover	4385	0.79	0.42	77,599	0.37	0.39	43,288	0.44	0.47	3949	1.08	1.44
Load fee	4385	3.42	2.85	77,599	1.69	2.47	43,288	2.09	2.83	3949	2.93	3.68
Past 12-month returns	4385	11.07	12.00	77,599	12.81	11.91	43,288	12.12	12.77	3949	11.69	11.71
Institutional fund	4385	0.02	0.14	77,599	0.29	0.45	43,288	0.24	0.43	3949	0.03	0.16
ES fund	4385	0.00	0.00	77,599	0.05	0.21	43,288	0.01	0.10	3949	0.00	0.00
Return volatility	4385	3.22	0.93	77,599	3.18	0.87	43,288	3.29	0.90	3949	3.01	0.74
Female manager	4385	0.01	0.10	77,599	0.11	0.31	43,288	0.11	0.31	3949	0.00	0.00

Note: This table reports the summary statistics for the solo-managed fund sample by four different generations: millennials (1981–1997), Generation X (1965–1980), baby boomers (1946–1964), and silent generation (1928–1945). Summary statistics are presented at the vote level. Table A1 provides variable definitions.

Abbreviation: ESG, environmental, social, and governance.

TABLE 10 Support for shareholder proposals.

	Vote for			
	ESG (1)	E (2)	S (3)	G (4)
Panel A: full sample				
Millennials	−0.011 (−1.39)	0.003 (0.27)	−0.009 (−0.97)	−0.014 (−1.66)
Generation X	−0.010 (−1.25)	0.004 (0.27)	−0.012 (−1.11)	−0.012 (−1.32)
Silent generation	−0.005 (−0.50)	−0.007 (−0.72)	−0.006 (−0.41)	−0.006 (−0.53)
Female manager	−0.032 (−1.33)	−0.030 (−0.93)	−0.036 (−1.06)	−0.030 (−1.48)
Fund assets	−0.002 (−1.38)	−0.001 (−0.42)	−0.002 (−0.97)	−0.002 (−1.61)
Fund age	−0.006 (−1.18)	−0.004 (−1.53)	−0.008 (−1.25)	−0.006 (−1.09)
Net expense ratio	−0.009 (−0.60)	−0.030 (−1.24)	−0.012 (−0.58)	−0.004 (−0.31)
Turnover	0.007 (0.62)	−0.002 (−0.24)	0.010 (0.57)	0.008 (0.73)
Load fee	0.002 (0.69)	0.004* (1.90)	0.003 (0.90)	0.001 (0.39)
Past 12-month returns	−0.001 (−1.02)	0.000 (0.07)	−0.001 (−0.69)	−0.001 (−1.52)
Institutional fund	0.012 (1.17)	0.006 (0.78)	0.017 (1.26)	0.010 (1.08)
ES fund	0.274 (1.61)	0.174* (1.68)	0.372 (1.56)	0.249 (1.63)
Return volatility	−0.003 (−0.58)	−0.009 (−1.33)	−0.007 (−1.16)	0.000 (0.02)
N	78,887	9141	22,255	47,491
Adj R ²	.942	.934	.925	.947
Proposal × family FE	Yes	Yes	Yes	Yes
Cluster SE	Family	Family	Family	Family
Panel B: contested proposals				
Voting outcome [20%, 80%]				
Millennials	−0.012 (−1.29)	0.016 (1.65)	−0.009 (−0.77)	−0.018 (−1.58)
Generation X	−0.011 (−1.16)	0.011 (0.52)	−0.012 (−0.99)	−0.015 (−1.25)
Silent generation	−0.007 (−0.57)	−0.009 (−0.69)	−0.012 (−0.68)	−0.007 (−0.52)
N	47,572	5163	11,377	31,032
Adjusted R ²	.935	.936	.936	.936
Control variables	Yes	Yes	Yes	Yes
Proposal × family FE	Yes	Yes	Yes	Yes

(Continues)

TABLE 10 (Continued)

	Vote for			
	ESG (1)	E (2)	S (3)	G (4)
Voting outcome [30%, 70%]				
Millennials	−0.012 (−1.28)	0.020** (2.31)	−0.008 (−0.59)	−0.017* (−1.67)
Generation X	−0.012 (−1.15)	0.008 (0.38)	−0.014 (−1.05)	−0.013 (−1.10)
Silent generation	−0.006 (−0.42)	−0.008 (−0.77)	−0.013 (−0.60)	−0.007 (−0.50)
N	29,075	2535	5742	20,798
Adjusted R ²	.931	.946	.935	.930
Control variables	Yes	Yes	Yes	Yes
Proposal × family FE	Yes	Yes	Yes	Yes
Voting outcome [40%, 60%]				
Millennials	−0.016 (−1.34)	0.027*** (2.89)	−0.016 (−0.95)	−0.020 (−1.48)
Generation X	−0.016 (−1.26)	−0.004 (−0.25)	−0.026 (−1.41)	−0.015 (−1.10)
Silent generation	−0.007 (−0.46)	−0.016 (−0.71)	−0.018 (−0.68)	−0.008 (−0.52)
N	12,433	791	1860	9782
Adjusted R ²	.927	.952	.942	.923
Control variables	Yes	Yes	Yes	Yes
Proposal × family FE	Yes	Yes	Yes	Yes

Note: This table reports regressions of manager support for ESG proposals on managers' generation. Panel A shows regression results for the full voting sample. Panel B presents regression results for three subsamples: proposals with voting outcome between 20% and 80%, proposals with voting outcome between 30% and 70%, and proposals with voting outcome between 40% and 60%. Baby boomers are the omitted category. Tests are performed at the vote level. All regressions control for lagged fund characteristics and proposal-by-family FE. Fund control variables are observed 2 months before the meeting (at record date, approximately). The sample includes all Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. *t*-statistics are based on standard errors clustered at the fund family level and are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

managers' support for ESG proposals intended to advance ESG issues in portfolio companies.

Voting is a powerful tool investors can use to influence the companies they own (Shleifer & Vishny, 1986), and voting on ESG issues has been advocated as the main mechanism for investors to promote environmental and social policies (Hart & Zingales, 2017). These proposals are typically submitted by shareholders, and, while they are advisory in nature, firms generally implement proposals approved by shareholders (Ertimur et al., 2010). If millennial managers favor action on ESG issues, it is reasonable to expect them to vote more often in favor of ESG proposals. It is well documented, however, that voting policies are typically centralized at the family level, leaving little discretion for individual fund managers to cast their votes independently (Bolton et al., 2020; Dasgupta et al., 2021). So whether millennial

managers follow a differentiated voting policy when it comes to these issues is an empirical question.

To examine whether millennial managers support shareholder-sponsored ESG proposals, we gather voting data from Proxy Insight from the 2014 proxy season until 2020. We start in 2014 because data for earlier years are incomplete and unreliable. We construct a variable *Vote For* that is a dummy equal to 1 if the manager votes in favor of the proposal and 0 otherwise. We use the proposal type from Proxy Insight to classify shareholder proposals into environmental (E), social (S), or governance (G) related. Table A1 describes the voting record variables, and detailed information on proposal classification is available in Table A2.

Table 9 presents summary statistics for the sample used in this analysis. Summary statistics are presented at the vote level, which is

TABLE 11 Manager age group and portfolio holdings.

	ESG portfolio score				
	(1)	(2)	(3)	(4)	(5)
Under 40	−0.069** (−2.27)	−0.019 (−0.61)	−0.019 (−0.08)	−0.019 (−0.09)	−0.019 (−0.07)
Age 40–50	−0.127*** (−5.99)	−0.117*** (−5.48)	−0.117 (−0.72)	−0.117 (−0.86)	−0.117 (−1.04)
Age 61–70	0.032 (0.78)	−0.039 (−0.95)	−0.039 (−0.18)	−0.039 (−0.20)	−0.039 (−0.19)
Over 70	0.062 (0.75)	−0.036 (−0.43)	−0.036 (−0.12)	−0.036 (−0.11)	−0.036 (−0.13)
Female manager		0.022 (0.66)	0.022 (0.09)	0.022 (0.10)	0.022 (0.11)
Fund assets		0.059*** (8.98)	0.059 (1.37)	0.059 (1.34)	0.059 (1.23)
Fund family assets		0.013 (0.45)	0.013 (0.11)	0.013 (0.12)	0.013 (0.11)
Fund age		−0.056*** (−3.54)	−0.056 (−0.48)	−0.056 (−0.50)	−0.056 (−0.49)
Net expense ratio		−0.135*** (−3.56)	−0.135 (−0.60)	−0.135 (−0.59)	−0.135 (−0.57)
Turnover		−0.295*** (−16.24)	−0.295*** (−2.70)	−0.295*** (−2.89)	−0.295** (−2.32)
Load fee		−0.011** (−2.21)	−0.011 (−0.42)	−0.011 (−0.33)	−0.011 (−0.52)
Past 12-month returns		−0.014*** (−11.09)	−0.014*** (−2.58)	−0.014*** (−2.94)	−0.014*** (−2.61)
Institutional fund		0.170*** (6.72)	0.170 (1.27)	0.170 (1.17)	0.170 (0.92)
ES fund		0.866*** (13.52)	0.866* (1.70)	0.866 (1.59)	0.866 (1.18)
Return volatility		−0.044*** (−3.03)	−0.044 (−0.28)	−0.044 (−0.37)	−0.044 (−0.29)
N	65,919	65,919	65,919	65,919	65,919
Adjusted R ²	.762	.765	.765	.765	.765
Family FE	Yes	Yes	Yes	Yes	Yes
Style × time FE	Yes	Yes	Yes	Yes	Yes
Cluster SE	No	No	Manager	Fund	Family

Note: This table reports regressions of funds' ESG portfolio score on indicator variables of manager age group. Managers of age group 51–60 are the omitted category. All regressions control for lagged fund characteristics (except column 1), investment style-by-month FE, and family FE. The sample includes all Morningstar solo-managed funds domiciled in the United States and where the manager has managed the fund solo for at least a quarter. *t*-statistics, based on robust standard errors clustered at the manager level (column 3), fund level (column 4), or fund family level (column 5), are reported in parentheses. Table A1 provides variable definitions.

Abbreviations: ESG, environmental, social, and governance; FE, fixed effects.

***Statistically significant at the 1% level.

**Statistically significant at the 5% level.

*Statistically significant at the 10% level.

the same level of analysis that we use in the regressions below. We have 41 millennial, 396 Generation X, 245 baby boomer, and 15 silent generation managers who we managed to merge with Proxy Insight. Notably, millennial managers are less supportive of ESG proposals in general or any of the subcategories of E, S, and G proposals. This can be partially explained by the fact that millennial managers in our sample typically work for the largest fund families, which traditionally provide little support for these types of proposals (Michaely et al., 2023).

To examine millennials' support for ESG proposals, we estimate Equation (1) at the vote level. The main dependent variable is *Vote For*, a dummy that indicates managers' support for the proposal. We augment the specification to include proposal \times family fixed effects. That is, we exploit variation in support for shareholder ESG proposals on the same proposal voted on at the same firm at the same point in time for managers of the same fund family who belong to different generations.

Panel A of Table 10 presents the results. Column 1 shows the results for all shareholder-sponsored ESG proposals, and in columns 2 to 4, we estimate separate regressions for E, S, and G proposals, respectively. We do not find evidence that millennials (or other generations) are more or less supportive of ESG proposals relative to baby boomers. All the coefficients are statistically indistinguishable from 0. Proposal \times family fixed effects capture most of the variation in support for these proposals, consistent with centralization of votes at the family level (Bolton et al., 2020; Dasgupta et al., 2021).

It is well documented that shareholder-sponsored ESG proposals typically receive little support, and ES proposals almost always fail (Michaely et al., 2023). Therefore, managers might not have incentives to cast their shares independently, given that their votes are unlikely to affect the voting outcome. However, the literature shows that the incentives to do governance-related research and vote are stronger when a proposal is contested (Cvijanović et al., 2016; Michaely et al., 2023). Therefore, the subsample of contested proposals (i.e., proposals that end up close to the majority threshold) provides a setting in which finding a result is more likely. We estimate the same specification over the subsample of proposals with voting outcomes in the [20%, 80%], [30%, 70%], and [40%, 60%] intervals in panel B of Table 10.¹³ The results show that millennial managers are more supportive of environmental proposals in these subsamples. The coefficient and the statistical significance increase as we zoom in closer to the 50% approval threshold. The results for social proposals, however, are still statistically insignificant. Interestingly, we find a negative and marginally significant coefficient for governance proposals in the tighter interval, consistent with prior evidence suggesting that the G in ESG differs from E and S (Matos, 2020; Michaely et al., 2023).

Overall, the results in this section show that centralized voting policies typically result in fund managers of the same family voting in a similar way. However, when a vote is contested, fund managers might deviate and vote according to their preferences. Our results are consistent with the literature documenting the link between manager identity and votes (Iliev & Lowry, 2015), as fund managers are responsible for the voting decisions of the fund.

4.6 | Additional analyses

One important advantage of our study is that, by comparing individuals in the same position within the organization, that is, individuals in a managerial role, our results rule out the possibility that generational effects might capture the current role that the individual is performing (typically less senior positions for younger generations), which might also affect perceptions and actions (Rudolph et al., 2018). However, one limitation of this study is that, due to the relatively short sample period, we cannot perfectly disentangle the life cycle (i.e., how managers of different generations behave at the same age) from the generational effects. Importantly, Chevalier and Ellison (1999) find that younger managers tend to hold less unsystematic risk and portfolios that are more conventional, which suggests that, if anything, millennial managers should be less likely to tilt their portfolios toward ESG stocks, biasing against our finding a result.

To address potential concerns that our variables for generations are actually capturing life cycle effects, we re-estimate our main specification, replacing the dummies for generations with dummies for age groups. Table 11 presents the results. We find that the dummies for age are economically small and statistically insignificant in most specifications. The coefficient on "Under 40," which captures most millennials, is negative. That is, once millennials are combined with the young Generation X, the results vanish, suggesting that our dummies for generation are unlikely to just be capturing an age effect.

5 | CONCLUSION AND DISCUSSION

Using a sample of US solo-managed mutual funds from 2009 through 2019, we find that mutual funds managed by millennials exhibit higher ESG scores, compared to those managed by other generations. Cross-sectional tests indicate that the extent to which millennial managers can incorporate ESG depends on the type of fund they manage (active or passive) and their type of client (more or less sensitive to financial performance). Our findings suggest that millennial managers respond more strongly to the #MeToo movement, improving the S dimension of their holdings (but not the E or G dimensions). In addition, by examining voting behavior regarding ESG proposals, our findings suggest that millennial managers are more likely to vote in favor of environmental proposals when a proposal is contested. However, we do not find significant differences on S or G, which can be explained by highly centralized voting policies at the fund family level.

Our results have important implications. Millennials are now the most numerous generation, representing almost two thirds of the workforce. Their views on ESG will shape firms' policies and investment decisions. While we examine mutual fund managers, our results may well extend to other settings and hence be generalizable to firm managers (e.g., Di Giuli & Kostovetsky, 2014; Hong & Kostovetsky, 2012). Therefore, our paper provides early evidence on the future of ESG considerations for public and private firms. The results also imply that the current interest in and flow of funds toward

sustainable mutual funds might be permanent, as the coming investors might prefer more ESG-focused funds than did prior generations.

Two limitations should be acknowledged in this paper. First, our results are consistent with fund managers imposing their personal preferences on stock selection on behalf of their clients. We do not test whether this serves the interests of fund clients. Information on investors' preferences for ESG is typically unavailable, and, while prior evidence shows that sustainable fund investors prefer more sustainable portfolios (even at the cost of financial performance) (Bauer et al., 2021), our results show that millennial managers tilt their portfolios toward more ESG-oriented firms even for non-ES funds. We leave it to future research to investigate the economic consequences of managers imposing their own preferences rather than strictly maximizing fund value. Second, our empirical setting has limitations. While we control for a broad set of determinants of ESG (e.g., fund size, past return and volatility, expense ratio, and turnover) and examine the change in portfolio scores following a change in managers within the fund, our variables for different generations might capture some omitted variables that we cannot fully account for. Future studies could use exogenous variation in manager generation to assess whether there is a causal effect.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests, personal relationships, or other conflicts of interests that could have appeared to influence the work reported in this paper.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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NOTES

- ¹ Peters, K. (2021, August 3). What's your workplace language? How millennials are reshaping office culture. *Forbes*.
- ² Adamczyk, A. (2021, May). Middle-aged millennials: 76% of older millennials are worried about climate change—And it's impacting how they spend their money. *CNBC*. Tett, G. (2018, September 21). Millennial heirs to change investment landscape. *Financial Times*.
- ³ While mutual fund managers and CEOs are not necessarily identical, the literature has shown that they are comparable, and therefore, the results from our study might extend more broadly to CEOs. For instance, Di Giuli and Kostovetsky (2014) find that firms score higher on corporate social responsibility when they have Democrat-leaning CEOs rather than Republican-leaning ones, while Hong and Kostovetsky (2012) find that Democratic mutual fund managers hold less of their portfolios in companies that are socially irresponsible. Hilary and

Hui (2009) find that religiosity affects risk-taking for CEOs, while Shu et al. (2012) find the same result for fund managers.

- ⁴ We cluster at the fund manager, fund, and fund family levels. Importantly, our results are robust to allowing for clustered standard errors at the fund manager level, to account for the correlation of the portfolio ESG score by manager across time.
- ⁵ In untabulated results, we find that millennial managers tend to exhibit lower financial performance relative to managers of other generations.
- ⁶ A related literature considers the role of millennials in the workplace from the perspective of millennials as employees rather than managers. For instance, Becton et al. (2014) provide evidence of generational differences based on actual workplace behavior. See also Anderson et al. (2017) for a comprehensive review of generational differences among employees.
- ⁷ These are accompanied by changes in regulation that promote stakeholder interests, such as the disclosure of use of conflict minerals and mine safety (imposed by the Dodd–Frank Act of 2010), gender quotas imposed by states (e.g., California) and market regulations (e.g., NASDAQ).
- ⁸ For instance, the Center for Responsible Business at the University of California at Berkeley's Haas Business School was established in 2003. The Center for Ethics and Social Responsibility at the Leeds School of Business and the Cornell Atkinson Center for Sustainability at Cornell University were founded in 2007.
- ⁹ This includes management proposals related to director elections, Say on Pay, and auditor ratification as well as ESG proposals submitted by shareholders at annual meetings.
- ¹⁰ We first search for disclosure of year of birth or manager age from SEC filings, including ADV part 2B, N-1A(A) forms, N-CRS. We complement our search by cross-checking a manager's location and manually searching via <https://www.zabasearch.com/> and <https://www.zoominfo.com/> following Kostovetsky (2017), and from fund managers' public profiles on LinkedIn, Ticker Funds, *Wall Street Journal* articles, *Barron's*, *RocketReach*, and *Citywire*.
- ¹¹ Although different studies use different years to define generations, the precise boundaries are not crucially important, as common features across generations should manifest in spite of the fuzziness of these boundaries (Lyons & Kuron, 2014).
- ¹² Our results that show that funds run by millennials have better ESG portfolio scores and are robust to using an alternative generation of manager as the baseline (Generation X or silent generation).
- ¹³ To examine manager support for contested ESG proposals, we rely on the voting outcome of each proposal, defined as the number of votes for divided by the number of votes for, votes against, and abstentions.

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APPENDIX A

TABLE A1 Variable definitions.

Variable	Definition (data source)
<i>Manager information</i>	
Millennials	An indicator variable that equals 1 if a manager is born between 1981 and 1997 (hand-collected data)
Generation X	An indicator variable that equals 1 if a manager is born between 1965 and 1980 (hand-collected data)
Baby boomers	An indicator variable that equals 1 if a manager is born between 1946 and 1964 (hand-collected data)
Silent generation	An indicator variable that equals 1 if a manager is born between 1926 and 1945 (hand-collected data)
Female manager	Takes a value of 1 if the fund manager is female (hand-collected data)
<i>Fund characteristics</i>	
ESG portfolio score	ESG portfolio score is the sustainability portfolio score provided by Morningstar. (Morningstar mutual fund)
Morningstar Globes	Morningstar Globes ratings, on a scale from 1 to 5, with Globe = 5 indicating top sustainability performers (Morningstar mutual fund)
Fund assets	Natural logarithm of total AUM, in million US dollars. Fund-level AUM is the sum of the assets across all share classes (Morningstar mutual fund)
Fund family assets	Natural logarithm of total AUM by the fund family, in million US dollars. Fund family level is the sum of the assets across all funds of the fund family (Morningstar mutual fund)
Fund age (log)	Natural logarithm of the number of years since the fund inception date (Morningstar mutual fund)
Net expense ratio	Total annual expenses as a fraction of AUM (Morningstar mutual fund)
Turnover	Fund turnover is defined as the aggregate value of position change between quarter $(t - 1)$ and t for all portfolio stocks, as a fraction of the fund's total net assets at $(t - 1)$ (Morningstar mutual fund)
Load fees	Total front-end, deferred, and rear-end charges as a fraction of AUM (Morningstar mutual fund)
Past 12-month returns	Fund accumulated returns from monthly returns in the 12 months prior to the observation month (Morningstar mutual fund)
Return volatility	Standard deviation of fund monthly returns in the 12 months prior to the observation month (Morningstar mutual fund)
Institutional fund	An indicator variable that equals 1 for each fund if the aggregate fund-level AUM has more than 50% weight in the institutional share class (Morningstar mutual fund)
ES fund	An indicator variable that equals 1 if the fund name contains a string related to environmental or social issues (Michaely et al., 2023). The comprehensive list of strings include sustain (excluding "sustainable dividend"), social (excluding "social media"), esg, pax, responsib, clean, impact, water, sri, environm, green, catholic, parnassus, aquina, women, alternative energy, equality, wind energy, fossil, low carbon, amana, eco or ecolog, epiphany, solar, climate, better world, energy solutions, gender, and just (fund names obtained from Morningstar mutual fund).
<i>Variables for cross-sectional tests and additional analyses</i>	
Passive	An indicator variable that equals 1 if a fund is managed passively (indexing) (Morningstar mutual fund)
Flow-performance sensitivity	For each fund, flow-performance sensitivity estimated from 36-month rolling regressions where fund flows are regressed on average four-factor alpha in the past 12 months (He et al., 2023) and controlling for the 1-month lag of fund assets (log), fund family assets (log), fund age (log), net expense ratio, turnover, and load fee. The estimated coefficient on alpha is the proxy for fund flow-performance sensitivity. (Data to construct this proxy are obtained from Morningstar mutual fund.)
E/S/G score (constructed from holdings sample)	Portfolio ESG score. These are the asset-weighted average of Sustainalytics' company-level E/S/G scores. To construct the portfolio E/S/G score, we require that at least 67% of a portfolio's assets under management must have a company S rating from Morningstar Sustainalytics. The percentage of assets under management of the covered securities is rescaled to 100% before calculating the portfolio score. Portfolio asset weights are obtained from CRSP mutual fund holdings (CRSP mutual fund holdings, Morningstar Sustainalytics company-level ESG ratings).
<i>Voting records</i>	
Vote for	Dummy equal to 1 if the manager votes for the proposal, and 0 otherwise. (Proxy Insight)
Voting outcome	Number of votes for divided by the number of votes for, votes against, and abstentions. (Proxy Insight)
ESG proposal	All shareholder-sponsored proposals (Proxy Insight)

TABLE A1 (Continued)

Variable	Definition (data source)
E/S proposal	Shareholder-sponsored proposals with an environmentally/socially related goal as described in Table A2. (Proxy Insight)
G proposal	All shareholder-sponsored proposal types not classified as E or S. (Proxy Insight)

Abbreviations: AUM, assets under management; CRSP, Center for Research in Security Prices; ESG, environmental, social, and governance.

TABLE A2 Proposal type to classify proposals into E, S, and G.*Environmental proposals*

- Adopt/amend nuclear policy [S]
- Adopt/amend environmental policy [S]
- Create industrial waste/pollution report [S]
- Create climate change report [S]
- Create sustainability report [S] create environmental report [S]
- Adopt/amend energy policy [S]
- Create energy report [S]
- Create nuclear report [S]
- Assess impact of a two-degree S scenario [S]
- Create fracking report [S]
- Adopt say on climate vote [S]
- Approve strategic resilience for 2035 and beyond [S]
- Adopt/amend climate change policy [S]
- Include sustainability as a performance measure for remuneration [S]

Social proposals

- Create political/lobbying contributions report [S]
- Approve/amend diversity/EEO policy [S]
- Adopt/amend social policy [S]
- Create social report [S]
- Create human rights report [S]
- Create report on animal testing/welfare [S]
- Adopt/amend human rights policy [S]
- Create charitable contributions report [S]
- Adopt holy land principles [S]
- Adopt/amend political/lobbying contributions policy [S]
- Adopt/amend board diversity policy [S]
- Create board diversity report[S]
- Create pay disparity report [S]
- Report on integrating drug pricing into compensation [S]

Governance proposals

- All shareholder-sponsored proposal types not classified as E or S

[S] means shareholder proposals.