Satisfied Employees, Satisfied Investors: How Employee Well-being Impacts Mutual Fund Returns*

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Abstract: This paper uses proprietary data on self-reported employee reviews from Glassdoor.com to study the relationship between employee satisfaction and mutual funds' performance. Using the staggered adoption of Anti-SLAPP (Strategic Lawsuits Against Public Participation) laws in the U.S. and variation from mergers between asset management companies to identify exogenous variation in job satisfaction, we find that employee satisfaction is positively linked to fund performance and size but that only performance-critical employees' satisfaction matters. A one-point increase on the 5-point scale of employee satisfaction leads to a 36bps increase in abnormal fund performance. Finally, while there is a positive effect of employee satisfaction on risk-taking, we cannot establish a causal relationship.

Keywords: Mutual fund, employee satisfaction, performance, risk-taking, mergers

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1. Introduction

It is safe to assume that human beings prefer being happy to sad. However, in 2022 more than 23% of people stated that they felt sad at work[1]. This is even more prevalent in the UK, with 36% of employees saying they are unhappy in their jobs (Waugh, 2022). For employers, it is important to know if happiness at work is associated with better outcomes (e.g., profits and stock prices). Edmans et al. (2014) point out one mechanism through which employee satisfaction can increase job performance. Namely, the norm gift exchange model in Akerlof (1982). The starting premise is that there is a social construct to reciprocate a gift, such that a gift received requires a gift in kind. If an employer treats his/her employees well and, thus, increases their happiness, employees may view it as a gift from their employer and increase their effort exertion as a gift from themselves to their employer.

The literature often resorts to examining the impact of job satisfaction on overall firm performance and stock returns (e.g., Edmans, 2011; Green et al., 2019; Huang et al., 2015; Symitsi et al., 2018). However, measuring performance due to an individual employee's effort is challenging. Performance is often dependent on a combination of factors, including an employee's knowledge, skill, and ability, as well as the specific demands of the job and her level of motivation and engagement. For example, an individual's performance may be influenced not only by their own effort but also by factors such as the support they receive from their colleagues and the organisation's overall effectiveness. As a result, it is difficult to isolate the specific contribution of an individual to organizational outcomes and to attribute those outcomes to their individual performance.

Our paper examines the role of employee satisfaction on performance in U.S. active mutual funds. The outcome of the decisions made by portfolio managers in asset management companies to construct portfolios can be measured by fund performance characteristics – such as fund returns and volatility – that are directly linked to a manager's effort and risk-taking. Similarly, the outcome of sales and marketing employees' efforts can be measured via assets under management. Therefore, mutual funds provide a suitable setting to study the effect of job satisfaction on performance since there is a clear, measurable link between employee effort and performance.

[1] Gallup: State of the Global Work Place Report 2022.

Using proprietary data on more than one million employee job reviews posted on Glassdoor.com about 437 mutual fund companies managing 3,266 funds from 2009 to 2019, we study if mutual funds managed by companies with more satisfied employees perform better and change their total and idiosyncratic risk profiles. Mutual fund managers that work for companies with higher employee satisfaction perform better. More specifically, a 1-point increase on the 5-point scale of average employee satisfaction leads to a 36bps (36bps) higher annual 3- factor (4-factor) alpha in our regression correcting for selection bias. This is economically significant since a move from the lowest (1) to the highest (5) employee satisfaction implies an increase in 4-factor alpha of 1.44% per year. We also show that a one-point increase in the employee satisfaction score of marketing and sales employees increases fund size by 0.2%.

We start by defining three measures of job satisfaction based on self-reported reviews made on Glassdoor.com between 2009 and 2019. The first measure is based on the average score of all reviews made in the past 24 months for a particular mutual fund company. The second measure is based on reviews by employees with job titles relevant to mutual fund performance. Job titles that fall under this category are generally related to research, trading, and fund management. We call the satisfaction score derived from these reviews "Asset Management". Finally, "Marketing & Sales" contains job titles related to marketing and sales, such as "sales representative", "marketing manager", and "relationship manager". We can match 70% of total assets under management by active funds on the CRSP Mutual Fund database at the start of our sample in 2009 and over 90% by 2019. Our matched sample has an average of 2,003 funds per year managed by 437 companies.

Next, we estimate regressions with time and investment objective-fixed effects to compute the effect of employee satisfaction on funds' abnormal returns. Consistent with the hypothesis that happier employees exhibit superior performance, we find that an increase in the satisfaction of employees working in "Asset Management" jobs is associated with higher abnormal performance.

Estimating causal relationships in this context may be affected by several endogeneity issues. Employee review data may suffer from selection bias as inclusion in our sample is conditional on at least one employee of the company having reviewed their employer on Glassdoor.com. Without at least one employee review posted on Glassdoor.com in the past 24 months, we cannot quantify employee satisfaction at a mutual fund company level. If the companies reviewed on Glassdoor.com are inherently different from companies without any reviews, our analysis could be biased. To address this problem, we employ a Heckman-selection

model. Our instrument in the first-stage selection equation is the staggered adoption of Anti-SLAPP (Strategic Lawsuits Against Public Participation) laws in the U.S. A SLAPP suit is a lawsuit that aims to censor criticism by burying the defendant in legal costs. Anti-SLAPP laws add extra layers of protection for the reviewer and decrease the probability of being targeted by a SLAPP suit. As a result, the passing of Anti-SLAPP legislation increases the number of reviews written on Glassdoor.com and lowers average satisfaction ratings (Chemmanur et al., 2019).

Controlling for this selection bias, we find that satisfaction of employees working on "Asset Management" jobs is still associated with higher abnormal performance, but not employee satisfaction for the company as a whole nor for "Marketing & Sales" jobs. Going from the lowest satisfaction score of "Asset Management" jobs (1) to the highest (5) implies an increase in annual 3-factor (4-factor) alpha by 1.44% (1.44%). Similarly, the size of assets under management is positively related to the satisfaction of "Marketing & Sales" jobs but unrelated to the satisfaction of "Asset Management" jobs and overall employee satisfaction. These results show that job satisfaction only affects outcomes when measured for employees that directly impact the outcome metric employed.

Another potential endogeneity issue is due to reverse causality. For instance, companies with better-performing mutual funds may simply have more resources to spend on increasing employee satisfaction. To alleviate these concerns, we exploit mergers between mutual fund companies. Because individual employees have no impact on whether their company is being acquired, we argue that mergers constitute an exogenous shock to employee satisfaction. More specifically, we examine differences between mutual funds that are part of a mutual fund company that has been acquired by another company with a higher employee satisfaction rating (i.e., our treatment group) relative to mutual funds of mutual fund companies that have gone through a merger but where the acquiring company has an equal or worse employee satisfaction score (i.e., our control group). We search the SDC database for asset management companies' mergers and hand-collect newspaper articles on any merger and acquisition activity using Factiva from 2008 to 2020. We can identify 139 (381) mergers (funds) in our matched sample. Further, we identify funds that kept the same portfolio management team by looking at the first last and middle names of portfolio managers as reported by the CRSP Survivorship Bias Free Mutual Fund Database. Overall, 108 funds, run by 85 distinct mutual fund companies, keep the same managers after a merger.

Using a difference-in-differences estimation design, we find that mutual funds that merge into an acquiring asset management company with a higher employee satisfaction score have higher 3-factor and 4-factor abnormal returns compared to funds that went through a merger, but the acquirer had a lower or equal employee satisfaction score. We find that funds acquired by a company with a higher employee satisfaction enjoy a 4.3% (5.37%) higher annual 3-factor (4-factor) alpha.

Finally, we study if mutual funds exhibit different levels of risk-taking depending on job satisfaction. A fund's total risk is defined as the standard deviation of its returns over the past 12 months and its idiosyncratic risk as the standard deviation of residuals from a 4-factor regression. The psychology literature offers two competing theories on how happiness can influence risk-taking. The "mood maintenance hypothesis" (MMH) predicts a negative effect of happiness on risk-taking (Isen & Patrick, 1983). Instead, the "affect infusion model" (AIM) predicts a positive effect of happiness on risk-taking (Forgas, 1995). While we find support for the "affect infusion model", with a positive correlation between employee satisfaction and risk-taking in the sample-selection corrected Heckman regressions, this effect is not causal. In our differences-in-differences setup, we do not find evidence of significant changes in risk measures. This result is consistent with the suggestion by Lane (2017) that the true effect of happiness on risk-taking is zero but that existing evidence reports both positive and negative effects due to publication bias against null results in the literature to date.

Overall, our results provide evidence that employee satisfaction leads to higher fund performance, but it does not affect fund risk measures.

This paper adds to multiple strands of literature. First, it adds to the finance literature on employee satisfaction. Whether employee satisfaction matters to the firm's performance has been a topic of recent interest in the academic finance literature. Edmans (2011) investigates employee satisfaction and long-run returns in a non-causal analysis and uncovers a positive relation. Huang et al. (2015) employ Glassdoor data and show that employee satisfaction is higher for family-run firms than public or scion-run firms, and that employee satisfaction is positively related to firm performance. Symitsi et al. (2018) also employ Glassdoor Inc.'s data but focus on UK companies, finding that employee satisfaction positively impacts firm performance. Two other recent finance papers employ Glassdoor employee reviews, but instead of looking at employee satisfaction, they investigate the informational effects these public online reviews have on the financial market.

Chemmanur et al. (2019) look at the firm's external financing and show that equity investors gain new valuable information from employee reviews. Green et al. (2019) report a positive relation between employee satisfaction scores and stock market performance and attribute the effect to the revelation of new information contained in these reviews to the market. As previously mentioned, we add to this literature by providing evidence of the effect of employee satisfaction on performance closer to the employee level. Furthermore, we provide a causal analysis which is lacking in the empirical finance literature to date.

Second, we contribute to the existing literature on job satisfaction and performance in the fields of psychology and economics. While there is ample evidence of a relationship between employee satisfaction and on-the-job performance, causal evidence is difficult to establish. Prior studies link job satisfaction to higher productivity (Bellet et al., 2022; Böckerman & Ilmakunnas, 2012; Bryson et al., 2017; Harter et al., 2002; Iaffaldano & Muchinsky, 1985; Judge et al., 2001; Krekel et al., 2019; Oswald et al., 2015). To date, only two papers claim some causality regarding the effect of employee satisfaction/happiness on productivity/performance - an experimental study by Oswald et al. (2015) and an empirical paper by Bellet et al. (2022). The latter uses the weather as an instrumental variable for happiness in a survey study of British Telecom employees. We add to this literature by providing a more comprehensive analysis that covers 437 mutual fund companies that manage 3,266 funds over ten years and seeks to test for causality.

Finally, we add to the literature on employee satisfaction and risk-taking. There is existing empirical evidence for both the AIM (Kamstra et al., 2003; Kessler et al., 2022; Otto et al., 2016) and the MMH (Goudie et al., 2014; Guven & Hoxha, 2015; Kliger & Levy, 2003). Given the inconclusive evidence in the literature, our paper also adds additional evidence on how risk-taking is impacted by happiness by investigating the risk-taking of portfolio managers in managing their funds.

The rest of the paper is structured as follows. First, we provide an overview of the related literature. Secondly, we describe the data and how we measure employee satisfaction. We then present our empirical evidence by looking at performance and fund size. Subsequently, we analyse effort exertion as a potential channel for the effect of employee satisfaction on performance. We then explore the effect of employee satisfaction on risk-taking. Subsequently, we conclude.

2. Literature Review

Multiple studies have examined the relation between job satisfaction and financial variables in the past. For example, Huang et al. (2015) investigate job satisfaction differences between family-run, scion, and public firms, and find a positive impact of employee satisfaction on firm profitability. Symitsi et al. (2018) are the first to employ Glassdoor data for UK firms and find evidence of a positive correlation between employee satisfaction and corporate performance. Green et al. (2019) examine the link between Glassdoor reviews and corporate performance. The authors, nevertheless, focus on stock returns as a measure of firm performance, also uncovering a positive relationship. Unlike previous studies, they associate the positive returns with an information effect of online reviews. Online employee reviews bring novel company-specific information into the market, which slowly gets incorporated into stock prices, driving prices higher. Chemmanur et al. (2019) take a similar approach to Green et al. (2019) but investigate the impact of the information contained in employee reviews on a firm's access to external financing.

Three of these papers find a positive link between employee satisfaction, as measured by Glassdoor reviews, and corporate performance. Huang et al. (2015) claim causality, Symitsi et al. (2018) do not, and Green et al. (2019) attribute the increase in performance not to the underlying happiness of employees but rather to the dissemination of novel, company-specific information that is gradually incorporated into stock prices.

Our paper is closest to Huang et al. (2015) as we are both interested in the effect of employee satisfaction on performance. However, we examine performance not at the aggregate company level but closer to the employees themselves. We can do so by using mutual fund data, which allows us to measure the specific performance outcome of two groups of employees: portfolio managers, whose performance is measured by mutual fund risk-adjusted returns, and marketing & sales employees, whose performance is measured by fund size.

There is also evidence from the fields of psychology, behavioural finance, and economics on the impact of happiness on productivity and risk-taking. The first field that studied the effect of employee satisfaction/happiness on productivity was psychology. In this literature, happiness is often termed mood, with most of the evidence coming from meta-analyses. Early work uncovered little to no correlation between employee satisfaction and performance (Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985; Vroom, 1964) but suffer from small sample sizes. For example, Brayfield & Crockett (1955) include only nine studies in their meta-analysis. By the

1980s, the number of studies investigating the correlation between employee satisfaction and performance increased, with Iaffaldano & Muchinsky (1985) including 74 individual studies in their meta-analysis. They report a correlation of 0.17, reconfirming the earlier studies by Brayfield & Crockett (1955) and Vroom (1964). Judge et al. (2001) include 312 samples in their meta-analysis greatly increasing the power of their statistical procedures. They find a correlation coefficient of 0.3 between employee satisfaction and performance. Harter et al. (2002) employ data on 7,939 individual business units of 36 individual companies and report significant and positive correlations between employee happiness and business unit profitability and productivity. A similar result is found by Krekel et al. (2019), covering 339 individual studies on a total of 82,248 business units across 230 organisations.

Further evidence for the impact of employee satisfaction on employee performance comes from the human resource and economics literature. Böckerman & Ilmakunnas (2012) employ data from the European Community Household Panel and Finnish Longitudinal Employer-Employee Data and show a positive effect of employee satisfaction on productivity in Finish manufacturing plants. Bryson et al. (2017) find a positive effect in the UK using 2011 data from the Workplace Employment Survey. Bellet et al. (2022) use data from weekly surveys of call centre employees at British Telecom and report a positive effect of employee happiness on sales. The authors employ weather data as an instrument for employee happiness in their analysis, being the first purely empirical paper to claim causality.

However, apart from Bellet et al. (2022), most previous literature does not provide causal evidence of a relation between employee satisfaction and performance. In contrast to Bellet et al. (2022), who employ survey data from one UK company, our paper instead employs a much larger dataset on 437 individual mutual fund companies across a much wider period.

Finally, we discuss the existing literature on risk-taking. There are two competing theories on how happiness (mood) can influence risk-taking in the psychology literature. The "affect infusion model" (AIM) (Forgas, 1995) suggests that positive mood leads to more risk-taking, and the Mood-Maintenance Hypothesis (MMH) (Isen & Patrick, 1983) predicts the opposite. AIM postulates that mood affects the decision-making process through biases in cognitive processing and the selection of relevant information. High-mood (happy) individuals rely more heavily on positive signals during the decision-making process. Furthermore, these individuals are

(positively) primed and thus more likely to rely on the positive aspects of the risky decision. This leads high-mood individuals to be more risk-taking than individuals in poor moods.

The MMH predicts that individuals want to maintain their good mood and increase it if they are in a bad mood. Thus, good-mood (happy) individuals will take fewer risks to minimize the probability of reducing their current mood and poor-mood (unhappy) individuals will take higher risks in the hope of a good outcome that increases their mood.

To this day, there is mixed evidence in the literature. Some studies find support for the MMH, others for the AIM.

Kliger & Levy (2003) study the relationship between risk-taking and happiness by estimating market-wide risk-aversion coefficients using S&P 500 options data. The authors proxy for mood with weather data - relying on ample existing evidence that weather is highly correlated to happiness. The authors find evidence for the MMH by showing that investors' risk-aversion coefficient is higher on good weather days. Kamstra et al. (2003) study the effect of Seasonal Affective Disorder (SAD) on risk-taking in equity markets and find evidence for the AIM. SAD is the phenomenon of a direct relationship between depression and the lack of sunlight caused by seasonality. In winter, when sunlight is not as abundant, and individuals are more depressed, individuals hold fewer risky assets. The lower demand for risky assets during winter results in lower returns. In spring, once days become longer again, the risk appetite of investors increases due to a lift in their mood which is reflected by higher returns.

Goudie et al. (2014) show that the results of the MMH can readily be replicated using expected utility theory. In an expected utility framework happier people will be less attracted to risk because high-utility (happy) individuals have more to lose from taking risks. The authors test their theory through an empirical investigation into the decision to put on a seatbelt in the United States and find that happier individuals are more likely to wear a seatbelt.

Guven & Hoxha (2015) performs a similar study using weather data as a proxy for happiness. They show that happier people are more risk-averse and take more time in taking decisions, supporting the MMH. Otto et al. (2016) run an experiment on lottery gambling in New York City. The authors find that on days when the local sports team performed well or when a sunny day succeeded many cloudy days more people took part in the lottery. This finding is consistent with the AIM.

A more exhaustive literature review on the effect of happiness on risk-taking and economic behaviour is provided by Lane (2017). Regarding risk-taking, the author points out that while the sign of the effect of happiness on risk-taking varies across studies, the reported effect sizes are generally close to zero. This leads him to postulate that the actual effect may be zero and that publication bias may have resulted in null results being unreported in the literature thus far.

A later paper by Kessler et al. from 2022 employs an experimental setting and reports a coefficient in support of AIM, but the effect is statistically indistinguishable from zero. This study adds to the existing literature on happiness and risk-taking by performing a causal analysis of the effect of employee satisfaction on the investment risk mutual fund managers take in the funds they manage.

3. Hypothesis Development

This section describes our empirical hypotheses. Numerous papers have shown a positive correlation between employee satisfaction/happiness and productivity (Bellet et al., 2022; Böckerman & Ilmakunnas, 2012; Bryson et al., 2017; Harter et al., 2002; Judge et al., 2001; Krekel et al., 2019). Two studies claim a positive causal effect of employee happiness on productivity. Oswald et al. (2015) employ three different experiments to show a positive effect of happiness on productive. Bellet et al. (2022) employ survey data on a UK telecommunications company to show that employee happiness positively affects company sales. If happiness indeed increases productivity, we expect to see this reflected in better on-the-job performance.

The existing literature on employee satisfaction and productivity is silent on how employee satisfaction causes higher job productivity and performance. One mechanism pointed out by Edmans et al. (2014) is through the norm gift exchange model by Akerlof (1982). The starting premise is that there is a social norm to reciprocate receiving a gift by someone. If an employer treats his/her employees well and, thus, increases their happiness, employees may view it as a gift from their employer. Therefore, employees increase their effort exertion as a gift to their employer.

In the asset management industry, portfolio managers are employed to achieve high mutual fund performance, and marketing and sales personnel are employed to ensure the company's funds are large. We investigate whether happier portfolio managers produce better risk-adjusted returns and

whether happier marketing and sales personnel achieve higher assets under management, summarized by the following hypothesis:

Hypothesis 1a: *Higher employee satisfaction leads to better performance on the job. Higher employee satisfaction of mutual fund performance-critical employees achieve higher risk-adjusted returns, and higher employee satisfaction of marketing and sales personnel positively impacts mutual fund size.*

An alternative measure of effort-taking is the Beta Deviation, which captures the extent to which a mutual fund differs from its peers in terms of factor/style exposures. It requires more effort from a mutual fund manager to come up with distinct investment ideas compared to simply following one's peers. Zhou (2020) employs a similar measure, which looks at how differently a mutual fund is managed compared to its peers in terms of sector allocations. The author argues that most of the effort exertion in managing a distinct fund comes from information acquisition and the formulation of a unique investment approach. This is summarized by:

Hypothesis 1b: *Higher employee satisfaction leads to higher effort exertion by employees as measured by Beta Deviation.*

Finally, we investigate the effect of employee satisfaction on risk-taking. Previous evidence finds significant but contradictory effects of satisfaction/happiness on risk-taking. The psychology literature offers two models that describe how satisfaction or happiness can impact risk-taking. The "mood maintenance hypothesis" (MMH) predicts a negative effect of happiness on risk-taking (Isen & Patrick, 1983). Alternatively, the "affect infusion model" (AIM) predicts a positive effect of happiness on risk-taking (Forgas, 1995). Lane (2017) postulates that the actual effect size could be zero due to publication bias. We formulate two hypotheses. The first is related to whether satisfaction influences risk-taking at all. The second investigates if there is support for the AIM or the MMH.

Hypothesis 2a: *Higher employee satisfaction influences risk-taking.*

Hypothesis 2b: *Higher employee satisfaction leads to increased risk-taking, supporting the "Affect Infusion Model" but not the "Mood Maintenance Hypothesis".*

We examine these two hypotheses by looking at the investment risk-taken by portfolio managers in the fund they manage. More specifically, we look at both the total and idiosyncratic risk of mutual fund returns.

4. Data

For mutual fund data, we use the CRSP Survivorship Bias Free Mutual Fund Database and Morningstar Direct. We merge the two databases with the linking table provided by Pastor et al. (2020). We only include active equity mutual funds identified by the *CRSP Objective Code* and *Index Fund Flag* variables. Data from both vendors are reported at the share class level. To avoid double counting, we aggregate all share classes by weighting them by their total net assets (TNA). These two databases provide us with monthly fund characteristics such as the total assets under management, returns, the mutual fund company the fund belongs to, and the name of the fund managers.

We calculate gross returns by adding the fund's expense ratio to the monthly net returns, which provides a stronger indicator of a mutual fund manager's performance that is not masked by fee differentials. For our risk-adjusted performance measures, we use the Fama-French 3-factor model and the Carhart (1997) 4-factor model. We calculate alphas by using 36 months of prior data to estimate factor loadings. These factor loadings are then employed to estimate an expected return for the current month. Alpha is then defined as the current month's return minus the expected return.

Monthly mutual fund net flows are measured as the percentage change of assets under management that is not due to fund performance (1).

$$Net\ Flow_{i,t} = \frac{TNA_{i,t} - TNA_{i,t-1} \times \left(1 + r_{i,t}\right)}{TNA_{i,t-1}} \quad (1)$$

To gauge effort exertion by the mutual fund manager, we employ a Beta Deviation measure. This measure quantifies the deviation of a given mutual fund's factor exposures from that of its peers, following Chevalier & Ellison (1999). A similar measure focusing on *Sector*

Deviations rather than factor deviations is used by Zhou (2020). Doing one's own research and coming up with a distinct investment approach requires more effort than simply following one's peer group. The *Beta Deviation* measure is represented by the square root of the sum of the squared deviations of a fund's factor loadings from the average factor loadings of peer funds as defined by its CRSP Objective Code and is calculated as follows:

$$Beta\ Deviation_{i,t,o} = \sqrt{\sum_{f=1}^{3}\left(\beta_{f,i,t} - \bar{\beta}_{f,o,t}\right)^2} \tag{2}$$

where *f* stands for the factor, *i* for the fund, and *o* for the CRSP Objective Code.

To measure risk-taking, we look at total risk and idiosyncratic risk. Total risk is the standard deviation of gross returns over the past 12 months. Idiosyncratic risk is defined as the standard deviation of the residuals from a 4-factor regression.

We complement the mutual fund data with proprietary employee reviews provided by Glassdoor Inc. To match Glassdoor data to our mutual fund data, we match employer names from Glassdoor to the name of the mutual fund company. We employ a mix of fuzzy-string-matching and hand-matching to connect the mutual fund companies in CRSP with the companies in Glassdoor. This matches approximately 1 million reviews to 437 companies, with an average of 2,003 funds per year from 2009 to 2019.

Furthermore, we obtain more granular data on the employer by matching the mutual fund data to form ADV. Form ADV is an annually updated registration of investment advisors operating in the US with the SEC. It contains data on, for example, the number of employees and total assets managed. This data is collected from Excel files provided by the SEC and matched to mutual fund company names as reported in Morningstar Direct. Like the Glassdoor Inc. data, ADV filings are matched to mutual fund company names through a mix of fuzzy string and hand matching.

To identify mergers and acquisitions between asset management companies, we search the SDC database and hand-search each asset management company for newspaper articles regarding any merger and acquisition activity using Factiva from 2008 to 2020. We can identify 139 (381) mergers (funds) in our sample of 437 companies that have Glassdoor data. Furthermore, we identify changes in the portfolio management team by looking at the first last and middle names

of portfolio managers as reported by the CRSP Survivorship Bias Free Mutual Fund Database. Out of the 381 mutual funds that undergo a merger, 108 do not experience a change in their portfolio management team in the two year window around the merger – from one year before to one year after. These 108 mutual funds without a managerial change are run by 85 distinct mutual fund companies. Finally, all continuous variables are winsorized at the 1% level to mitigate the effect of outliers.

4.1. Glassdoor Employee Satisfaction

Glassdoor Inc. is a large international job site that allows current and former employees to review their employers. It was founded in 2008 and has accumulated over 7.7 million employee reviews between 2008 and 2020 on U.S. companies alone. The data include employee information such as age, job title, current job, highest degree attained and answers to questions on job satisfaction. Each review contains an overall job satisfaction score that ranges from 1 (lowest) to 5 (highest), as well as sub-scores on "Culture and Values ", "Career Opportunities", "Senior Management", and "Work Life".

Matching the Glassdoor data to the CRSP mutual fund data is based on the following procedure. First, we clean all company names to include only alphanumeric characters and convert them to lowercase letters. Next, we match these two cleaned strings directly. To increase the number of matches, we subsequently use different string distance measures on the cleaned names to find the five closest matches between mutual fund company names in CRSP and employer names in Glassdoor. After narrowing down the potential matches, we go through each potential match and hand-check the validity.

For our different string distance measures, we employ the standard Levenshtein distance measure, the Jaro-Winkler distance measure, and a weighted Levenshtein distance measure. The Levenshtein distance measure is defined as the minimum number of substitutions, insertions, or deletions necessary to change one string to match another. The Jaro-Winkler distance is a version of string distance that places more importance on the beginning of the strings. Therefore, if two sets of strings of the same length have the same Levenshtein edit distance, but one of the strings has mismatches at the beginning, and the other has mismatches at the end, the set with mismatches at the beginning will be considered more dissimilar. This is useful because names of mutual fund companies usually have a distinct name as their first word followed by less specific words such as

"advisor" or "management company". These distances can then be converted to similarity measures – the lower the edit distance, the more similar the two strings are. As a last measure, we use an approach that combines the Levenshtein similarity measure with the individual word frequency to build a similarity score. Here we first calculate the similarity between every single word in a company name with each word in the matching company name. Subsequently, we map a word in the comparison string to one word in the company name by choosing the matched word that has the lowest Levenshtein distance – highest similarity score. A company name consisting of three words will thus have three Levenshtein similarity scores. These scores are normalized to range from 0 to 1, where 1 is a perfect match, and zero is a complete mismatch. Next, we multiply each word's Levenshtein similarity by the inverse frequency of that word in all company names in CRSP. Therefore, distinct words will be assigned higher importance than relative common words such as "advisor" or "company".

Finally, we sum them to get a single number depicting the similarity of the two company names. This technique results in a successful match of 437 mutual fund companies to employers in the Glassdoor data.

[Figure 1 About Here]

Figure 1 shows the matching rate between CRSP and our Glassdoor reviews throughout our sample period. Using the previously described matching technique, we matched about 40% of active U.S. equity mutual funds to Glassdoor employee reviews in 2009. At the end of the sample in 2019, we were able to match roughly 70% of the funds in CRSP. Our sample with Glassdoor data covers 70% of total assets under management in 2009 and 90% at the end of our sample period.

The key variables in a review are the job title and the overall job satisfaction score. We use the job title to determine whether the employee of the mutual fund company is in a role critical for performance. More specifically, we build three broad groups of employees. The first includes all employees at the company. The second contains employees whose job title has some relation to the field of asset management. This group is designed to include job positions that have an impact on mutual fund performance (e.g., "portfolio manager", "research analyst", "trading associate", "equity valuation associate", "asset manager", etc.). The third group contains job titles related to

marketing and sales, such as “sales representative”, “marketing manager”, and “relationship manager”. We aggregate all employee reviews that fall within the different groups by averaging over the past two years. Figure 2 reports the mean and standard deviation of employee satisfaction scores by the three different job title groupings and shows their distribution.

[Figure 2 about here]

A common problem with online review data is that it follows a bimodal distribution as a result of polarization bias. Typically, customers will only go through the effort of writing a review if they are either very content or very discontent with the product they are reviewing. This results in a bimodal distribution with two spikes - one at the bottom of the scale and one at the top. In Figure 2, we can see this is not the case with Glassdoor Inc.’s employee satisfaction scores.

4.2. Summary Statistics

[Table 1 About Here]

Table 1 shows average fund characteristics and performance for different levels of employee satisfaction. We split all funds into quintiles by our job satisfaction measure. These univariate sorts show that funds with the lowest employee satisfaction achieve higher gross returns and risk-adjusted-performance. Furthermore, funds run by companies with lower employee satisfaction scores are smaller, more expensive, younger, have more idiosyncratic and total risk, and are managed more passively. These simple univariate sorts suggest that funds with more satisfied employees perform worse than funds with dissatisfied employees on a return and fund size dimension. Furthermore, these simply univariate statistics seem to suggest that happy employees exert less effort in managing their funds by managing their funds more passively and deviating less from their peers. Table 1 also seems to support the “mood maintenance hypothesis” because mutual funds managed by companies with lower employee satisfaction scores have higher idiosyncratic and total risk.

5. Empirical Analysis

In this section, we examine our testable hypotheses. First, we test if happier employees should achieve better on-the-job performance. Secondly, we investigate whether we can link changes in performance to effort taking as suggested by the gift-exchange model (Akerlof, 1982). Finally, we explore the effect of employee satisfaction on risk using three different empirical approaches. We start with simple OLS fixed-effects regressions. Next, we control for selection bias in the data by employing a Heckman Correction model. Finally, we exploit a difference-in-difference design around mutual fund company mergers to alleviate endogeneity concerns.

5.1. Employee Satisfaction and performance

We measure on-the-job performance using two measures. The first is the performance of the mutual fund, while the second is the size of the mutual fund. Our main independent variable of interest is the employee satisfaction score over the last 24 months. Because we are interested in whether it is the satisfaction of all employees or just the satisfaction of performance-critical employees that matters, we construct three different satisfaction measures. The first satisfaction measure includes all reviews over the past 24 months. The second measure only include satisfaction scores by employees who should impact a particular performance measure – i.e., mutual fund return performance or fund size. To ensure that we measure employee satisfaction just for employees that can impact a fund's return performance, we focus on employee reviews with relevant job titles for mutual fund performance. We call the employee satisfaction score derived from these reviews "asset management". Job titles that fall under this category are generally related to research, trading, and fund management. While it is also in the interest of employees in these jobs to ensure the fund is large, this is done mostly by providing above-par returns. The employees aiming to increase the assets under management belong to the marketing and sales teams. Thus, for our fund size outcome measure, we focus on satisfaction scores reported by marketing and sales employees.

We begin by testing whether job satisfaction impacts mutual fund performance by running the following OLS regressions:

$$Y_{i,t} = \beta_1 \, Satisfaction_{i,t-1} + X'_{i,t-1}\gamma + \alpha_o + \theta_t + \varepsilon_{i,t} \quad (3)$$

where the dependent variable is one of our performance measures, either 3- or 4-factor alpha or the natural logarithm of fund size. The independent variable of interest is the previous month's *Satisfaction* measure, defined as the average job satisfaction score reported by employees of the company over the past 24 months. The control variables are all lagged by one month and include the natural logarithm of fund size, the natural logarithm of fund family size, the expense ratio, turnover, the natural logarithm of fund age, as well as mutual fund net flow in percentages. We also control for past performance by including a 1-month lagged 4-factor alpha in our fund size regressions. We include time (θ) and investment objective (α) fixed effects and cluster standard errors by mutual fund companies. We run these regressions using our three different measures of job satisfaction – all reviews, "asset management" reviews, and "marketing and sales" reviews.

While the "Marketing and Sales" employee satisfaction should only matter for fund size and not fund performance, we also run the performance regression using this measure as a sort of placebo test. We do the same for the "asset management" employee satisfaction and fund size.

Table 2 reports the coefficients of our three job satisfaction measures for the 3-factor and 4-factor alpha regressions. Using this regression design, we find a positive and marginally statistically significant effect of employee satisfaction on mutual fund performance. This effect is only present for the employee satisfaction scores given by performance-relevant employees. The effect of the marketing and sales and the entire company's employee satisfaction has no bearing on mutual fund performance. Our control variables correspond to the prior literature. Contrary to the implications of our univariate sorts reported in Table 1, employee satisfaction does seem to positively impact mutual fund performance in a multivariate analysis, albeit the results are only significant at the 10% level. These findings lend some support to hypothesis 1a. On Table 3 we repeat the analysis with mutual fund size as the dependent variable. We find positive but not statistically significant effects of employee satisfaction on mutual fund size.

A problem with this multivariate regression framework is that our sample may suffer from selection biases. Our analysis only includes observations where at least one employee of the company decided to review their employer on Glassdoor. This selection into the sample could bias our results. Table 4 reports sample means across our independent and control variables for the entire CRSP sample and the sample where we observe at least one Glassdoor review. T-Statistics for the difference in mean tests are provided as well.

[Table 4 about here]

Table 4 shows that our sample of funds is quite different from the overall CRSP active equity mutual fund universe. Mutual funds with at least one Glassdoor review exhibit higher return performance, are larger, older, more passively managed, and have lower idiosyncratic risk. We next employ a Heckman Sample Selection model to tackle this selection problem.

The first stage of our Heckman regression model accounts for this sample selection bias by modelling the probability of observing an employee review for a fund. We use two instruments as independent variables in this first stage regression as follows:

$$Prob\big(SampleInclusion_{i,t} = 1\big) = \Phi(\mu + \lambda_1 Number\ Employees_{i,t-1} + \lambda_2 Anti\ SLAPP_{i,t} + X_{i,t}), \quad (4)$$

where *SampleInclusion* is a dummy variable equal to one if we observe at least one review for the fund and zero otherwise, *X* refers to other control variables included in the outcome equation and $\Phi(.)$ represents the standard normal cumulative distribution function. The instruments used in this first stage probit model are the number of employees of the mutual fund company managing the fund in question and the passing of an Anti-SLAPP Law. States in the U.S. adopted Anti-SLAPP laws at different times, with some still not having any Anti-SLAPP laws in place. These laws decrease the threat of being sued by a company for publishing (truthful) reviews online. As a result, the passing of these laws increased the number of reviews written by employees and lowered average satisfaction ratings (Chemmanur et al., 2019). Our instruments are both highly significant, with minimum Z-Values of 14.33 and 73.25 reported in the first-stage regressions in Table 5. Our outcome regression follows the simple OLS regressions with the inclusion of the inverse Mills ratio retrieved from our first-stage selection regression.

$$Y_{i,t} = \alpha + \beta_1 Satisfaction_{i,t-1} + X'_{i,t-1}\gamma + InvMill_{i,t} + InvObjective'\delta + \theta_y + \varepsilon_{i,t} \quad (5)$$

Rather than performing this regression in two steps, we estimate both steps simultaneously using a maximum likelihood estimation procedure. Furthermore, due to the first stage probit model, we changed the time-fixed effects from the monthly (θ_t) to the yearly (θ_y) level. Our standard errors still allow for clustering at the mutual fund company (firm) level.

[Table 5 about here]

Results of the Heckman selection model are reported in Table 5. In the top part of this table, we report the coefficient estimates from the first stage probit regression. We find that the number of employees at a mutual fund company and mutual fund family size both positively affect the probability of a Glassdoor review having been written. These both make sense, given that a larger pool of employees increases the chances of one of them having submitted a review on Glassdoor. Furthermore, we observe a positive coefficient on the Anti-SLAPP law dummy variable. This is also expected. As previously described, Anti-SLAPP laws reduce the probability of being sued by the reviewee company. Thus in states where Anti-SLAPP laws exist, the potential cost of writing an online review is lower. This lower expected cost of writing a review should lead more employees to write a review - especially if it is negative.

Having accounted for selection bias, we still find a statistically significant and positive effect of employee satisfaction on mutual fund performance for the asset management regressions. We do not find a significant effect on either the marketing and sales employee satisfaction or the overall employee satisfaction at the company. Control variables again are in line with prior results. The coefficient of the Heckman selection model suggests that an increase of one point on the 5-point scale of the employee satisfaction score for performance-sensitive employees increases mutual fund 3-factor (4-factor) alpha by 36 bps (36) per year. Moving from the lowest satisfaction score (1) to the highest (5) would thus imply an increase in annual 3-factor (4-factor) alpha by 1.44% (1.44%). This result is economically meaningful and confirms hypothesis 1a.

Next, we turn to mutual fund size. The dependent variable is the natural logarithm of the mutual fund size, and our key independent variable is the employee satisfaction score. Control variables remain the same as in the prior fund size regression. We again include investment objective fixed effects as well as year fixed effects. Standard errors allow for clustering at the mutual fund company (firm) level. Regression results are reported in Table 6.

[Table 6 about here]

The first stage selection equation results are virtually the same as for the performance regression reported in Table 5 and available upon request. Turning to the outcome equation, we find that the employee satisfaction of "marketing and sales" employees positively affects the size of the fund. A one-point increase in employee satisfaction of marketing and sales employees is associated with an increase in fund size by 0.2%. Moving from the lowest to the highest employee satisfaction level would increase fund size by 0.8%, supporting the hypothesis that employee satisfaction impacts on-the-job performance. Both the overall satisfaction and the employee satisfaction of the "asset management" employees do not seem to impact the size of the fund. The signs of control variables are in line with typical regressions investigating the impact on mutual fund size.

Despite correcting for selection bias, these results could still suffer from endogeneity. Huang et al. (2015) try to tackle this endogeneity by using an instrumental variable approach. Reviews can be written by current and ex-employees on Glassdoor. The authors use the percentage of reviews given by current employees and the industry average of that variable for their instruments in the first stage regression. We, nevertheless, refrain from using this approach because the instruments themselves are a proxy for job satisfaction given that happy employees are more likely to be current employees. Furthermore, the percentage of current employees effectively proxies for employee turnover, which in our view, leads to a violation of the exclusion restriction in our performance regressions. In an unreported regression, we follow Huang et al. (2015) and find that at least one of our instrumental variables violates the exclusion restriction. Furthermore, our estimation suffers from a weak instrument. For these reasons, we decided to instead try to tackle the endogeneity problem by looking at mutual fund company mergers.

We postulate that mergers of asset management companies provide exogenous variation in way employees are treated by a company in a way that is independent of the performance of the individual fund and the self-selection of mutual fund managers into companies. Generally, we are concerned with good employees endogenously choosing good companies to work for. When an asset management company is acquired by another company, the acquired asset manager's culture, human resources, and the way employees are treated change. Therefore, we look at an exogenous

shock to how the company is managed and how happy employees are at the company. More specifically, we run a two-way fixed effects regression where we define an event if the company a mutual fund belongs to is acquired, and the portfolio management team remains the same for at least one year before to one year after the acquisition. We then look at interactions between this treatment dummy with a dummy variable that takes the value of one if the acquirer has a higher employee satisfaction score than the acquired company and zero otherwise. The regression specification with the dependent variable, *Y*, taken as 3-factor and 4-factor alpha, is as follows:

$$\begin{aligned} Y_{i,t} = {} & \beta_1 \, Post\ Merger \times Same\ Manager \times Higher\ Satisfaction \\ & + \beta_2 \, Post\ Merger \times Higher\ Satisfaction \\ & + \beta_3 \, Post\ Merger \times Same\ Manage \\ & + \beta_4 \, Post\ Merger + X'_{i,t-1}\gamma + \alpha_i + \theta_t \end{aligned} \tag{6}$$

where α_i captures fund fixed effects and θ_t captures time-fixed effects. The coefficient of interest in the equation is β_1. In this design, a unit is defined to be treated if another company has acquired the company that owns the mutual fund, the fund's management team does not change around the merger, and the acquirer has a higher employee satisfaction score. The control group that this effect is compared to consists of funds managed by mutual fund companies that were acquired by another company, and the managers stayed the same. All regressions allow for the clustering of standard errors on the mutual fund company (firm) level. The regression results are reported in Table 7.

[Table 7 about here]

Looking at our coefficient of interest, we see that a mutual fund that has gone through a merger, where the managers stayed the same, and where the acquiring company has a higher employee satisfaction score has both a higher 3-factor and 4-factor alpha compared to a company that went through a merger and had no manager change but the acquirer had a lower or equal employee satisfaction score. This effect is not only highly statistically significant but also economically large. We find that funds that are acquired by a company with a higher employee satisfaction enjoy a 4.3% (5.37%) higher annual 3-factor (4-factor) alpha. All control variables have the expected coefficients. The regression suggests that general merger events do not

significantly impact mutual fund performance, given that our post-dummy variable shows no statistical significance. If the managers stay the same, we do nonetheless find a negative impact on mutual fund performance.

We also perform an event study that is equivalent in design to the difference-in-difference style regression described earlier. Figure 3 plots the coefficient of the interaction of being acquired by a better company with time to merger dummy variables. Panel A shows these event plots for the regression specification where all Glassdoor reviews are considered. Here we find that the parallel trend assumption does not seem to hold only for the 3-factor regression. In panel B, we show the event plot for the "Asset Management" reviews and find that our conditional parallel trends assumption seems to hold.

We refrain from performing this exercise for our fund size regression because we cannot observe whether the marketing and sales personnel that marketed and distributed the mutual fund changed during the merger.

Using standard OLS regressions, regressions controlling for sample selection bias, and a difference in difference setup, we conclude that employee satisfaction positively impacts job performance, thus confirming hypothesis 1a. Furthermore, we find that only performance-critical employees' job satisfaction matters.

5.1.1. Employee satisfaction and effort provision

Given that we have now established that employee satisfaction positively impacts job performance, we want to explore one potential channel through which this may happen. Thus, we explore whether more satisfied employees exert higher effort, as described in hypothesis 1b.

We proxy for effort exertion by a measure previously employed by Arnold et al. (2021) and Chevalier & Ellison (1999). It captures whether a mutual fund manager deviates more from his/her peers in the form of factor exposure. Deviating more from one's peers should require more effort than simply following the crowd. Zhou (2020) employs a similar measure for the same purpose. Instead of looking at factor deviations (style deviations), she employs sector deviations. The author argues that most of the extra effort exerted from managing a fund differently from one's peers comes from information acquisition and processing.

We employ the same methodology in this section as in the previous performance investigation. First, we perform a simple OLS regression. Next, we control for sample selection

bias through a Heckman correction and finally exploit our difference-in-difference set up using merger events.

The OLS regression follows the same design defined in equation (3) except that we lead the independent variable by 12 months to avoid concurrency in timing. On top of the control variables used in the performance regression, we also control for past performance by adding the past month's 4-factor alpha. Standard errors allow for clustering on the mutual fund company (firm) level, and we control for time and investment objective fixed effects. Regression results are reported in Table 8.

[Table 8 about here]

Looking at the asset management employee satisfaction coefficient in Table 8, we find that more satisfied employees deviate more from their peers in terms of style exposure. This suggests that happier employees exert more effort. Our control variables suggest that better performance in the form of higher 4-factor alpha is associated with higher factor deviations from one's peers. The coefficient on expense ratios shows that more expensive funds deviate more from their peers in the form of factor exposure.

Knowing from Table 4 that our results could suffer from selection bias, we now turn to a Heckman Selection model. This model was previously defined in equations (4) and (5). We again employ the same control variables as in the previous regression. Regression coefficients are reported in Table 9.

[Table 9 about here]

The first-stage regression results align with our previous first-stage regressions reported in Table 5 and are available upon request. Turning to the outcome regressions, we can see that while the employee satisfaction coefficient is still positive for the Beta Deviation measure, it is not statistically significant.

[Table 10 about here]

Finally, we employ our merger set up in our final investigation into the effect of employee satisfaction on effort taking. This regression corresponds to equation (6) and is reported in Table 10. The interaction effect between having undergone a merger, the managers staying unchanged, and the acquiring company having a higher employee satisfaction score is statistically indistinguishable from zero.

All in all, while some evidence from OLS regressions suggests that employee satisfaction leads to higher effort exertion, more robust regression models yield insignificant results. Thus, while we refrain from concluding that employee satisfaction does not impact effort exertion, we acknowledge that more work needs to be done. The task of pinning down a mechanism that may underly the positive effect of employee satisfaction on on-the-job performance may be aided by more theoretical work in the field of psychology.

5.2. Risk-taking

In this section, we explore hypotheses 2a and 2b by investigating whether mutual funds managed by happier employees have different total and idiosyncratic risk than those managed by unhappy employees. Total risk is measured by the standard deviation of returns over the past 12 months, and the standard deviation of residuals from a 4-factor regression measures idiosyncratic volatility. We employ a Heckman correction model as well as our mutual fund company merger design.

All regression designs are the same as in the effort-taking regression in section 5.1.1. The regression estimates of the outcome equation of the Heckman Selection model are reported in Table 11.

[Table 11 about here]

All our first-stage regression estimates correspond to the first-stage regressions previously reported in Table 5 and are available upon request. Like our mutual fund performance regression, we would expect to only find significant coefficients for the employee satisfaction of investment-related jobs. Looking at the coefficient of the "asset management" employee satisfaction score, we find that both coefficients on total risk and idiosyncratic risk are positive. Only the coefficient on idiosyncratic risk is statistically significant. This finding is in line with hypotheses 2a and 2b.

Namely, employee satisfaction has an impact on risk and the effect is positive in line with the "affect infusion model" (Forgas, 1995).

[Table 12 about here]

Finally, we turn to our merger difference-in-difference design. The model specifications are the same as in our previous effort regressions, and estimates are reported in Table 12. Parallel trend graphs on the interaction effect between a time-to-merger dummy where the managers stay unchanged and an indicator variable that is equal to one when the acquirer has a higher employee satisfaction score are plotted in Figure 5.

Looking at the effect of working for a company with a higher employee satisfaction score in table 3.12, we find no statistically significant effect. This result suggests no causal effect of employee satisfaction on risk-taking. Given our previous findings of positive coefficients in both the OLS and Heckman regression specifications, we conclude that there may be a positive correlation between employee satisfaction and risk-taking but that this effect is likely not of causal nature.

6. Conclusion

While prior studies have found that employee job satisfaction is positively correlated with future stock returns (for example Edmans, 2011 and Green et al., 2019), the setting does not allow for a direct test of whether job satisfaction leads to better employee performance as opposed to firm-level performance. Furthermore, previous papers that investigate the effect of employee satisfaction/happiness and productivity/performance fail to establish a causal relationship. In this paper, we examine whether employees' job satisfaction causally impacts their job performance. Mutual fund data allows us to precisely measure the exact performance metric that is important for employees, namely mutual fund performance for employees related to investment functions and mutual fund size for marketing & sales employees. Furthermore, the granularity of employee review data provided by Glassdoor allows us to group employees according to their job titles and determine whose job satisfaction matters most.

Accounting for selection bias as well as endogeneity concerns, we find that employee satisfaction of performance-critical employees, such as portfolio managers, materially increases

mutual fund performance. More specifically, a 1-point increase on the 5-point scale of average employee satisfaction leads to a 36bps (36bps) higher annual 3- factor (4- factor) alpha in our regression correcting for selection bias. We also find that a one-point increase in the employee satisfaction of marketing and sales employees increases mutual fund size by 0.2%.

In addition, we explore whether employee satisfaction has an impact on risk-taking. The existing literature reports mixed evidence on the effect of employee satisfaction/happiness on risk-taking behaviour. In simple OLS and Heckman selection models, we find that employee satisfaction positively impacts the idiosyncratic risk of the mutual fund returns, suggesting support for the "affect infusion model" by Forgas (1995). In our difference-in-difference design, we fail to find a significant effect. This is in line with the conjecture by Lane (2017) that the actual causal effect of happiness on risk-taking is zero. However, publication bias has resulted in the existing literature reporting statistically significant positive and negative effects of employee satisfaction/happiness on risk-taking.

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Tables and Figures

Table 1: Fund Summary Statistics by Job Employee Satisfaction

This table shows the arithmetic mean of fund characteristics in our sample by job satisfaction quintiles. Job satisfaction is the overall job satisfaction rating of all employees from Glassdoor and ranges from 1 (least satisfied) to 5 (most satisfied). Fund size is reported in millions and fund family size is in billions. Our factor-adjusted returns are all calculated using gross returns and factor loadings are estimated based on the previous 36 months of data. T-statistics of a difference in mean test between the lowest and highest quintile are provided in the last column.

Quintile	1 (lowest)	2	3	4	5 (highest)	T-Stat (1-5)
Observations	24,251	30,978	27,689	27,644	27,652	
Job Satisfaction	2.41	3.12	3.39	3.65	4.18	-413.94
Gross Return	0.92%	0.96%	0.74%	0.68%	0.74%	4.52
1-Factor Alpha	0.13%	0.17%	0.11%	0.14%	0.09%	2.03
3-factor Alpha	0.13%	0.18%	0.12%	0.13%	0.08%	2.69
4-factor Alpha	0.09%	0.12%	0.09%	0.11%	0.04%	2.11
Size ($M)	1,187.34	1,525.93	2,103.16	2,924.73	1,786.36	-21.20
Family Size ($B)	68.75	212.17	210.20	437.99	233.06	-52.97
Expense Ratio	1.19%	1.13%	1.10%	1.05%	1.13%	17.96
Turnover	68.73%	81.60%	80.54%	62.20%	69.08%	-0.58
Age	17.37	18.02	18.92	20.10	17.96	-5.32
Number of Employees	571.79	601.61	892.96	950.47	340.47	34.68
Beta Deviation	0.49	0.51	0.50	0.51	0.56	-22.54
Idiosyncratic Risk	1.52%	1.62%	1.51%	1.45%	1.46%	3.87
Total Risk	4.79%	5.10%	4.31%	3.84%	3.87%	53.46
Net Flow	-0.23%	-0.24%	-0.14%	-0.27%	-0.31%	1.83

Table 2: Employee Job Satisfaction and Mutual Fund Performance

Table 2 gives the regression estimates of the effect of employee satisfaction, proxied by the average overall Glassdoor review score over the past two years, on annual fund performance (three-factor alphas and 4-factor alphas) for OLS regressions. Controls include the following lagged fund observations. The natural logarithm of family size, the natural logarithm of fund size, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. The factor loadings for the risk-adjusted returns are estimated based on the previous 36 months. Sample refers to the subset of Glassdoor employee reviews considered. "All" makes use of all Glassdoor reviews. "Asset Management" only considers reviews with a financial/research job within the company that should be relevant for the performance of the funds. "Marketing and Sales" refers to reviews by job titles that fall within the marketing and sales department of the mutual fund company. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		3-Factor Alpha			**4-Factor Alpha**		
		(1)	(2)	(3)	(4)	(5)	(6)
Satisfaction	All	0.0029			0.0000		
		(0.2846)			*(-0.0043)*		
	Asset Management		0.0166*			0.0170*	
			(2.173)			*(2.317)*	
	Marketing & Sales			-0.0029			0.0025
				(-0.3408)			*(0.312)*
	LN Fund Size	-0.0157***	-0.0180***	-0.0228***	-0.0141***	-0.0162***	-0.0206***
		(-3.733)	*(-3.923)*	*(-4.992)*	*(-3.629)*	*(-3.896)*	*(-4.986)*
	LN Family Size	0.0140***	0.0147***	0.0214***	0.0135***	0.0148***	0.0208***
		(4.417)	*(4.318)*	*(5.710)*	*(3.957)*	*(4.095)*	*(5.468)*
	Net Flow	0.0708	0.0840	-0.0718	0.1110	0.1318	-0.0708
		(0.5328)	*(0.4993)*	*(-0.4461)*	*(0.7819)*	*(0.7321)*	*(-0.4030)*
	Expense Ratio	1.272	-0.2533	1.277	1.370	-0.3516	1.612
		(0.6566)	*(-0.1365)*	*(0.5757)*	*(0.7340)*	*(-0.1921)*	*(0.7544)*
	Turnover	-0.0200*	-0.0136	-0.0196*	-0.0205**	-0.0107	-0.0163
		(-2.492)	*(-1.645)*	*(-2.018)*	*(-2.677)*	*(-1.379)*	*(-1.910)*
	LN Age	0.0494***	0.0568***	0.0693***	0.0506***	0.0565***	0.0657***
		(5.312)	*(5.666)*	*(6.653)*	*(5.897)*	*(5.998)*	*(6.549)*
	Fixed Effects:						
	Date	Yes	Yes	Yes	Yes	Yes	Yes
	Objective	Yes	Yes	Yes	Yes	Yes	Yes
	Clustered SE	Firm	Firm	Firm	Firm	Firm	Firm
	R2	0.11811	0.11779	0.11452	0.11607	0.11592	0.11296
	Observations	181,280	141,685	115,536	181,280	141,685	115,536

Table 3: Employee Job Satisfaction and Mutual Fund Size

This table gives the regression estimates of the effect of employee satisfaction, proxied by the average overall Glassdoor review score over the past two years, on the natural logarithm of fund size. Controls include the following lagged fund observations. The natural logarithm of family size, the natural logarithm of fund size, monthly 4-factor alpha, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. Sample refers to the subset of Glassdoor employee reviews considered. "All" makes use of all Glassdoor reviews. "Asset Management" only considers reviews with a financial/research job within the company that should be relevant for the performance of the funds. "Marketing & Sales" refers to reviews by job titles that fall within the marketing and sales department of the mutual fund company. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		LN Fund Size		
		(1)	(2)	(3)
Satisfaction	All	-0.0001		
		(-0.1884)		
	Asset Management		0.0006	
			(1.099)	
	Marketing & Sales			0.0010
				(1.263)
	4-factor Alpha	0.1860***	0.2096***	0.1947**
		(4.474)	*(3.968)*	*(3.114)*
	LN Fund Size	0.9988***	0.9989***	0.9984***
		(2,760.9)	*(2,217.1)*	*(1,870.6)*
	LN Family Size	0.0012***	0.0012***	0.0017***
		(4.788)	*(4.279)*	*(4.663)*
	Net Flow	0.1238	0.0763	0.0653
		(1.874)	*(1.018)*	*(0.7780)*
	Expense Ratio	-0.2497	-0.3604	-0.2241
		(-1.481)	*(-1.760)*	*(-0.9805)*
	Turnover	-0.0008	-0.0002	3.21e-5
		(-1.565)	*(-0.3678)*	*(0.0400)*
	LN Age	-0.0037***	-0.0043***	-0.0045***
		(-3.882)	*(-3.914)*	*(-3.542)*
	Fixed Effects:			
	Date	Yes	Yes	Yes
	Objective	Yes	Yes	Yes
	Clustered SE	Firm	Firm	Firm
	R2	99.7%	99.7%	99.6%
	Observations	180,386	140,991	115,012

Table 4: Mean fund characteristics by sample inclusion

This table shows fund characteristics by sample inclusion conditional on having at least one Glassdoor review.

	In Sample	Total CRSP	T-Stat
Observations	183,611	281,664	
Gross Return	0.99%	1.02%	2.33
1-Factor Alpha	0.11%	0.12%	2.13
3-factor Alpha	0.11%	0.13%	3.43
4-factor Alpha	0.07%	0.09%	1.62
Size ($M)	1,817.71	1,464.84	-31.03
Family Size ($B)	231.00	162.20	-58.39
Expense Ratio	1.05%	1.11%	50.73
Turnover	70.68%	71.29%	2.42
Age	17.53	16.54	-26.46
Number of Employees	679.67	485.67	-66.93
Beta Deviation	0.50	0.53	26.43
Idiosyncratic Risk	1.36%	1.41%	16.61
Total Risk	4.21%	4.35%	22.21
Net Flow	-0.22%	-0.23%	-0.89

Table 5: Employee Job Satisfaction and Performance controlling for Selection Bias

This table gives the regression estimates of the effect of employee satisfaction, proxied by the average overall Glassdoor review score over the past two years, on annual fund performance (gross returns, one-factor alpha, three-factor alphas and 4-factor alphas) for regression controlling for selection bias. Controls include the following lagged fund observations. The natural logarithm of family size, the natural logarithm of fund size, the expense ratio, turnover, fund ag, as well as past month's mutual fund net flows. The factor loadings for the risk-adjusted returns are estimated over the prior 36 months. Selection is modelled by the lagged number of employees of the mutual fund company retrieved from form ADV filings. Employee reviews are split by job title as defined in Table 2. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

	Selection - Has Review=1	(1)	(2)	(3)	(4)	(5)	(6)
	Intercept	-3.952***	-4.866***	-5.853***	-3.952***	-4.866***	-5.853***
		(-166.27)	*(-192.18)*	*(-207.49)*	*(-166.27)*	*(-192.18)*	*(-207.49)*
	LN Number of Employees	0.212***	0.230***	0.175***	0.212***	0.230***	0.175***
		(90.27)	*(98.09)*	*(73.26)*	*(90.25)*	*(98.08)*	*(73.25)*
	LN Family Size	0.325***	0.364***	0.435***	0.325***	0.364***	0.435***
		(181.17)	*(192.47)*	*(205.96)*	*(181.17)*	*(192.47)*	*(205.95)*
	Anti-SLAPP (lag 24m)	0.210***	0.112***	0.240***	0.210***	0.112***	0.241***
		(28.19)	*(14.33)*	*(28.14)*	*(28.19)*	*(14.34)*	*(28.16)*
	LN Fund Size	-0.116***	-0.081***	-0.088***	-0.116***	-0.081***	-0.088***
		(-52.63)	*(-37.68)*	*(-40.30)*	*(-52.64)*	*(-37.69)*	*(-40.30)*
	Net Flow	0.140**	0.218***	0.242***	0.140**	0.218***	0.242***
		(2.35)	*(3.72)*	*(3.99)*	*(2.35)*	*(3.71)*	*(3.99)*
	Expense Ratio	19.067***	16.189***	12.539***	19.067***	16.181***	12.535***
		(23.52)	*(20.15)*	*(15.20)*	*(23.52)*	*(20.14)*	*(15.19)*
	Turnover	0.050***	0.055***	0.074***	0.050***	0.055***	0.074***
		(14.23)	*(15.43)*	*(20.24)*	*(14.23)*	*(15.43)*	*(20.24)*
	LN Age	0.177***	0.110***	0.157***	0.177***	0.110***	0.157***
		(30.96)	*(19.27)*	*(26.55)*	*(30.96)*	*(19.28)*	*(26.55)*
	Outcome	**3-factor Alpha**			**4-factor Alpha**		
Satisfaction	All	0.013			0.01		
		(0.32)			*(0.26)*		
	Asset management		0.030***			0.030***	
			(2.98)			*(3.09)*	
	Marketing & Sales			0.002			0.013
				(0.23)			*(1.10)*
	LN Fund Size	-0.018	-0.018***	-0.022***	-0.015	-0.014***	-0.018***
		(-0.30)	*(-2.96)*	*(-3.60)*	*(-0.26)*	*(-2.86)*	*(-3.29)*
	LN Family Size	0.019	-0.00005	-0.001	0.021	0.005	0.002
		(0.54)	*(-0.00)*	*(-0.04)*	*(0.62)*	*(0.47)*	*(0.11)*
	Net Flow	0.259*	0.253	0.055	0.369***	0.365*	0.129
		(1.83)	*(1.42)*	*(0.37)*	*(2.61)*	*(1.88)*	*(0.79)*
	Expense Ratio	-7.177***	-8.985***	-6.625**	-6.635***	-8.385***	-6.280**
		(-362.41)	*(-4.07)*	*(-2.24)*	*(-335.08)*	*(-4.04)*	*(-2.28)*
	Turnover	-0.018	-0.016*	-0.022**	-0.016	-0.01	-0.018*
		(-0.09)	*(-1.83)*	*(-2.09)*	*(-0.09)*	*(-1.15)*	*(-1.73)*
	LN Age	0.055	0.057***	0.068***	0.055	0.054***	0.061***
		(0.01)	*(4.64)*	*(4.79)*	*(0.01)*	*(4.85)*	*(4.54)*
	Intercept	0.352	0.671***	0.735**	-0.051	0.209	0.242
		(1.10)	*(3.44)*	*(2.17)*	*(-0.16)*	*(1.15)*	*(0.77)*
	Fixed Effects						
	Year	Yes	Yes	Yes	Yes	Yes	Yes
	Investment Objective	Yes	Yes	Yes	Yes	Yes	Yes
	Clustered SE	Firm	Firm	Firm	Firm	Firm	Firm
	Observations	240,361	240,361	240,361	240,361	240,361	240,361

Table 6: Employee Job Satisfaction and Fund Size controlling for Selection Bias

This table gives the regression estimates of the effect of employee satisfaction on the natural logarithm of mutual fund size for regression controlling for selection bias. The control variables are the same as in Table 3. Selection is modelled in the same way as in Table 5. Due to its similarity with the selection model reported in Table 5, the selection equation is omitted from this table. The first stage estimates of this model are available upon request. Employee satisfaction is split into the same three groups as in Table 2. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		LN Fund Size		
		(1)	(2)	(3)
Satisfaction	All	-0.0002		
		(-0.01)		
	Asset management		0.001	
			(1.04)	
	Marketing & Sales			0.002**
				(2.36)
	4-factor Alpha	0.174***	0.203***	0.189***
		(2.90)	*(3.44)*	*(2.70)*
	LN Fund Size	0.998***	0.998***	0.998***
		(28.60)	*(1973.86)*	*(1750.96)*
	LN Family Size	0.002	0.002***	0.002***
		(0.01)	*(4.28)*	*(2.88)*
	Net Flow	0.11	0.059	0.045
		(0.47)	*(0.72)*	*(0.48)*
	Expense Ratio	-0.231***	-0.38	-0.277
		(-11.58)	*(-1.57)*	*(-0.96)*
	Turnover	-0.001	-0.00001	0.0003
		(-0.00)	*(-0.01)*	*(0.32)*
	LN Age	-0.003	-0.004***	-0.004**
		(-0.00)	*(-2.98)*	*(-2.49)*
	Intercept	0.02	0.024**	0.017
		(0.06)	*(2.30)*	*(1.28)*
	Fixed Effects			
	Year	Yes	Yes	Yes
	Investment Objective	Yes	Yes	Yes
	Clustered SE	Firm	Firm	Firm
	Observations	238049	238049	238049

Table 7: Employee Job Satisfaction and Performance in a Difference in Difference Setting

This table gives the regression estimates of the effect of employee satisfaction, proxied by the average overall Glassdoor review score over the past two years, on annual fund performance (3-factor alphas and 4-factor alphas) for a two-way fixed effects difference in difference regression. Post is equal to one if the company that manages the fund was acquired by another company. "Same Manager" is equal to one if the mutual fund managers stay unchanged in the two years surrounding the merger event. Higher Satisfaction is equal to one if the acquirer has a higher employee satisfaction score than the target company. Controls include the following lagged fund observations. The natural logarithm of family size, the natural logarithm of fund size, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. The factor loadings for the risk-adjusted returns are estimated over the prior 36 months. Sample refers to the subset of Glassdoor employee reviews considered. All makes use of all Glassdoor reviews. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

	3 Factor Alpha		**4 Factor Alpha**	
	(1)	(2)	(3)	(4)
Higher Satisfaction x Post x Same Manager				
All	0.0016		0.0017	
	(0.87)		*(0.94)*	
Asset Management		0.0035***		0.0044***
		(2.80)		*(3.30)*
Higher Satisfaction x Post				
All	-0.0001		-0.0005	
	(-0.11)		*(-0.66)*	
Asset Management		-0.0007		-0.0012
		(-0.88)		*(-1.43)*
Post x Same Manager	-0.0012	-0.0022**	-0.0023*	-0.004***
	(-1.21)	*(-2.12)*	*(-1.92)*	*(-3.67)*
Post	-0.0007	-0.0006	0.0002	0.0005
	(-1.58)	*(-0.90)*	*(0.39)*	*(0.72)*
LN Fund Size	-0.0022***	-0.0024***	-0.0021***	-0.0022***
	(-9.81)	*(-8.54)*	*(-9.55)*	*(-7.87)*
LN Family Size	0.0002	0.0001	0.0002	0.0001
	(1.36)	*(0.66)*	*(1.22)*	*(0.39)*
Net Flow	-0.0025*	-0.0022	-0.0021	-0.0015
	(-1.89)	*(-1.25)*	*(-1.41)*	*(-0.76)*
Expense Ratio	-0.1535***	-0.1109**	-0.172***	-0.1171*
	(-2.85)	*(-2.02)*	*(-2.57)*	*(-1.76)*
Turnover	-0.0002	-0.0002	-0.0002	-0.0002
	(-1.08)	*(-0.95)*	*(-1.36)*	*(-1.05)*
LN Age	0.0032***	0.0029***	0.0027***	0.0025***
	(5.71)	*(4.63)*	*(4.50)*	*(3.62)*
Fixed Effects				
Fund	Yes	Yes	Yes	Yes
Date	Yes	Yes	Yes	Yes
Objective	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm
R2	0.14	0.142	0.142	0.143
Observations	185,547	143,943	185,547	143,943

Table 8: Employee Job Satisfaction and Effort

This table gives the regression estimates of the effect of employee satisfaction on effort-taking by mutual fund managers. Effort-taking is proxied by the Beta Deviation measure. It is estimated using the past 12 months of gross returns. Controls include the following lagged fund observations. The natural logarithm of family size, the natural logarithm of fund size, monthly 4 Factor alpha, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. Employee reviews are split by job titles. "All" makes use of all Glassdoor reviews. "Asset Management" only considers reviews with a financial/research job within the company. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		Beta Deviation	
		(1)	(2)
Satisfaction	All	0.0144	
		(1.762)	
	Asset Management		0.0180*
			(2.479)
	4 Factor Alpha	0.1440*	0.1342
		(2.442)	*(1.935)*
	LN Fund Size	-0.0029	-0.0058
		(-0.7541)	*(-1.449)*
	LN Family Size	-0.0058	-0.0006
		(-1.708)	*(-0.1719)*
	Expense Ratio	15.23***	14.62***
		(6.207)	*(5.570)*
	Turnover	0.0085	-0.0009
		(0.8831)	*(-0.1178)*
	LN Age	0.0138	0.0219*
		(1.532)	*(2.356)*
	Net Flow	0.0253	0.0553
		(0.7497)	*(1.584)*
	Fixed Effects:		
	Date	Yes	Yes
	Objective	Yes	Yes
	Clustered SE	Firm	Firm
	R2	0.16355	0.16422
	Observations	154,877	122,086

Table 9: Employee Job Satisfaction and Effort controlling for Selection Bias

This table gives the regression estimates of the effect of employee satisfaction on effort-taking by the mutual fund managers for regression controlling for selection bias. Effort-taking is proxied by the same variable as in Table 8 and the selection model is described in Table 5. Due to its similarity with the selection model reported in Table 5, the selection equation is omitted from this table. The first stage estimates of this model are available upon request. Employee reviews are split by job titles. "All" makes use of all Glassdoor reviews. "Asset Management" only considers reviews with a financial/research job within the firm. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		Beta Deviation	
		(1)	(2)
Satisfaction	All	0.006	
		(0.16)	
	Asset management		0.007
			(1.37)
	4-factor Alpha	0.008	0.006
		(0.29)	*(0.08)*
	LN Fund Size	-0.022	-0.022***
		(-1.21)	*(-4.20)*
	LN Family Size	0.078	0.109***
		(1.40)	*(10.73)*
	Net Flow	-0.007	0.05
		(-0.04)	*(0.79)*
	Expense Ratio	16.954***	15.990***
		(1088.91)	*(5.27)*
	Turnover	0.021	0.018
		(0.12)	*(0.98)*
	LN Age	0.048	0.048***
		(0.01)	*(3.29)*
	Intercept	-0.737***	-1.169***
		(-3.16)	*(-7.58)*
	Fixed Effects		
	Year	Yes	Yes
	Investment Objective	Yes	Yes
	Clustered SE	Firm	Firm
	Observations	219,201	219,201

Table 10: Employee Job Satisfaction and Effort Taking in a Difference in Difference Setting

This table gives the regression estimates of the effect of employee satisfaction, proxied by the average overall Glassdoor review score over the past two years, on mutual manager effort taking (Beta Deviation) for a two-way fixed effects difference in difference regression. Post is equal to one if the company that manages the fund was acquired by another company. "Same Manager" is equal to one if the mutual fund managers stay unchanged in the two years surrounding the merger event. Higher Satisfaction is equal to one if the acquirer has a higher employee satisfaction score than the target company. The Beta Deviation measure IS estimated in the same way as described in Table 9. Controls include the following lagged fund observations. The monthly 4 Factor alpha, the natural logarithm of family size, the natural logarithm of fund size, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. The factor loadings for the risk-adjusted returns are estimated over the prior 36 months. Sample refers to the subset of Glassdoor employee reviews considered. "All" makes use of all Glassdoor reviews. "Asset Management" only considers reviews with a financial/research job within the company. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

	Beta Deviation	
	(1)	(2)
Higher Satisfaction x Post x Same Manager		
All	-0.0782	
	(-1.29)	
Asset Management		-0.1492
		(-1.25)
Higher Satisfaction x Post		
All	0.0009	
	(0.02)	
Asset Management		-0.0877*
		(-1.70)
Post x Same Manager	0.069	0.1457
	(1.19)	*(1.45)*
Post	-0.0036	0.0632
	(-0.09)	*(1.51)*
4 Factor Alpha	0.1752***	0.1379***
	(3.48)	*(2.58)*
LN Fund Size	0.001	0.0051
	(0.20)	*(0.89)*
LN Family Size	-0.0041	-0.0007
	(-0.62)	*(-0.09)*
Net Flow	-0.0047	-0.0099
	(-0.21)	*(-0.41)*
Expense Ratio	-1.3994	-2.9322
	(-0.77)	*(-1.63)*
Turnover	0.0043	0.0018
	(0.76)	*(0.31)*
LN Age	-0.0707***	-0.0329
	(-3.05)	*(-1.43)*
Fixed Effects		
Fund	Yes	Yes
Date	Yes	Yes
Objective	Yes	Yes
Cluster	Firm	Firm
R2	0.506	0.518
Observations	153,200	119,586

Table 11: Employee Job Satisfaction and Mutual Fund Risk controlling for Selection Bias

This table gives the regression estimates of the effect of employee satisfaction on risk-taking by the mutual fund managers for regression controlling for selection bias. The total risk as well as the idiosyncratic risk measures are estimated using the past 12 months of gross returns. All other variables and regression specifications are the same as in Table 9. Due to its similarity with the selection model reported in Table 5, the selection equation is omitted from this table. The first stage estimates of this model are available upon request. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

		Total Risk		**Idiosyncratic Risk**	
		(1)	(2)	(3)	(4)
Satisfaction	All	-0.0003		0.0001	
		(-0.01)		*(0.00)*	
	Asset management		0.0003		0.0002**
			(1.52)		*(2.07)*
	4-factor Alpha	0.001	0.001	-0.008	-0.008***
		(0.02)	*(0.39)*	*(-0.19)*	*(-4.81)*
	LN Fund Size	0.0001	0.0001	-0.0004	-0.0004***
		(0.00)	*(1.27)*	*(-0.01)*	*(-3.91)*
	LN Family Size	0.0004	0.0005	0.001	0.001***
		(0.00)	*(1.01)*	*(0.01)*	*(4.86)*
	Net Flow	0.0001	0.001	0.001	0.002**
		(0.00)	*(0.67)*	*(0.00)*	*(2.26)*
	Expense Ratio	0.290***	0.319***	0.200***	0.199***
		(13.93)	*(5.87)*	*(10.30)*	*(3.84)*
	Turnover	0.001	0.001***	0.0004	0.0004
		(0.00)	*(2.63)*	*(0.00)*	*(1.35)*
	LN Age	0.002	0.002***	0.001	0.001***
		(0.00)	*(5.79)*	*(0.00)*	*(4.84)*
	Intercept	0.05	0.045***	0.006	0.001
		(0.15)	*(6.64)*	*(0.02)*	*(0.31)*
	Fixed Effects				
	Year	Yes	Yes	Yes	Yes
	Investment Objective	Yes	Yes	Yes	Yes
	SE Cluster	Firm	Firm	Firm	Firm
	Observations	224,425	224,425	219,201	219,201

Table 12: Employee Job Satisfaction and Mutual Fund Risk in a Difference in Difference Setting

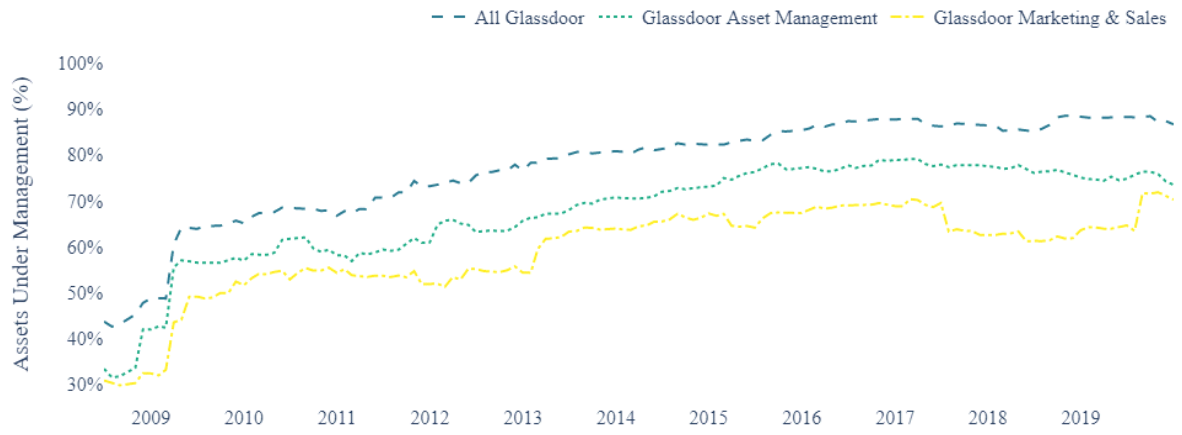
This table gives the regression estimates of the effect of employee satisfaction on mutual fund risk for a two-way fixed effects difference in difference regression. Post is equal to one if the company that manages the fund was acquired by another company. "Same Manager" is equal to one if the mutual fund managers stay unchanged in the two years surrounding the merger event. Higher Satisfaction is equal to one if the acquirer has a higher employee satisfaction score than the target company. Total risk and idiosyncratic risk are both estimated in the same way as described in Table 12. Controls include the following lagged fund observations. The monthly 4 Factor alpha, the natural logarithm of family size, the natural logarithm of fund size, the expense ratio, turnover, fund age, as well as past month's mutual fund net flows. The factor loadings for the risk-adjusted returns are estimated over the prior 36 months. Sample refers to the subset of Glassdoor employee reviews considered. All makes use of all Glassdoor reviews. Asset Management only considers reviews with a financial/research job within the company that should be relevant to the performance of the funds. T-statistics calculated from standard errors that allow for clustering on the mutual fund company (firm) level are reported in brackets. Significance Levels: p<0.1 *, p<0.05 **, p<0.01 ***

	Total Return		**Idiosyncratic Risk**	
	(1)	(2)	(3)	(4)
Higher Satisfaction x Post x Same Manager				
All	0.0023		-0.0006	
	(1.10)		*(-0.49)*	
Asset Management		-0.002		0.0008
		(-0.71)		*(0.41)*
Higher Satisfaction x Post				
All	-0.0003		-0.0005	
	(-0.16)		*(-0.53)*	
Asset Management		0.0007		-0.0018**
		(0.25)		*(-2.09)*
Post x Same Manager	-0.0018	-0.0007	-0.0019	-0.0022
	(-0.97)	*(-0.26)*	*(-1.50)*	*(-1.24)*
Post	0.0015	0.0015	0.0016*	0.0025***
	(0.92)	*(0.56)*	*(1.73)*	*(2.98)*
4 Factor Alpha	0.0111***	0.0111***	-0.0043***	-0.004***
	(6.60)	*(5.38)*	*(-4.33)*	*(-3.30)*
LN Fund Size	0.0011***	0.0013***	-0.0005***	-0.0006***
	(4.65)	*(4.60)*	*(-4.75)*	*(-4.29)*
LN Family Size	-0.0001	0	-0.0001	-0.0001
	(-0.35)	*(-0.02)*	*(-0.75)*	*(-0.46)*
Net Flow	-0.002***	-0.0023***	0.0002	0.0001
	(-3.42)	*(-3.85)*	*(0.46)*	*(0.25)*
Expense Ratio	-0.0636	-0.1136	-0.0376	-0.0281
	(-0.53)	*(-0.82)*	*(-0.83)*	*(-0.58)*
Turnover	0.0001	0.0001	0.0002	0.0002
	(0.34)	*(0.23)*	*(1.52)*	*(1.44)*
LN Age	-0.0068***	-0.0069***	0.0012**	0.0019***
	(-8.31)	*(-8.48)*	*(2.07)*	*(2.86)*
Fixed Effects				
Fund	Yes	Yes	Yes	Yes
Date	Yes	Yes	Yes	Yes
Objective	Yes	Yes	Yes	Yes
Cluster	Firm	Firm	Firm	Firm
R2	0.874	0.875	0.759	0.777
Observations	156,510	122,111	153,200	119,586

Figure 1: Matching between the CRSP Mutual Fund Database and Glassdoor

Figure 1 shows the matching rate of the Glassdoor review data to our mutual fund database over time. Reviews are matched by the company name reported in Glassdoor to the name of the mutual fund company reported in the CRSP Survivorship Bias Free Mutual Fund Database. Matching is performed by a mix of string distance measures as well as by hand. "All Glassdoor" shows the per cent of all assets (Panel A) and the number of funds (Panel B) in our mutual fund database that could be matched to reviews. "Glassdoor Asset Management" restricts the reviews to falling within job positions related to Asset Management. "Glassdoor Marketing & Sales" refers to reviews by marketing & sales employees.

A: Percent of Assets under Management



B: Number of Funds

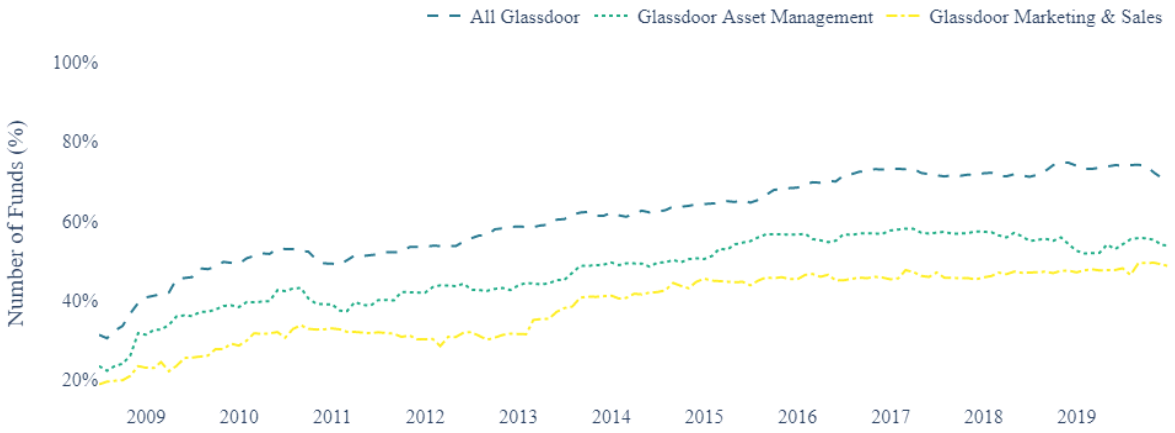
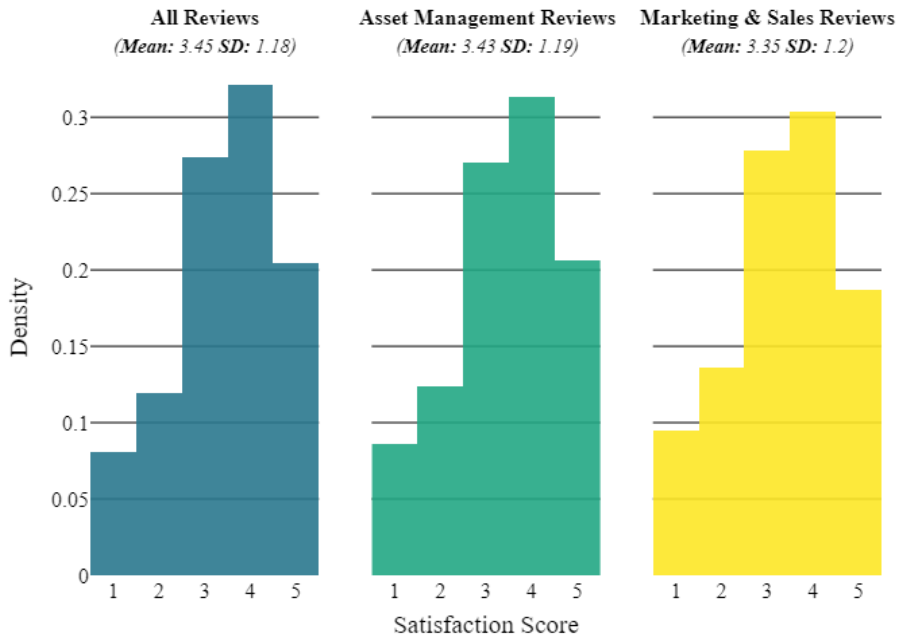


Figure 2: Glassdoor Employee Job Satisfaction Distribution

Figure 2 Plots the distribution of Glassdoor reviews. Panel A plots the raw employee satisfaction score data. Panel B plots the distribution of the employee score measure averaged over the past 24 months. I report the mean and standard deviation of the overall Glassdoor job satisfaction score above each distribution. The Glassdoor job satisfaction score ranges from 1 (lowest) to 5 (highest). "All" includes reviews by all employee job titles. "Asset management" only contains reviews with a job title related to a research/financial job within the company that should be relevant to a fund's performance. "Marketing & Sales" refers to reviews from employees with a job title that falls into the marketing and sales department of the company.

A: Raw Review Data



B: Company Average over 24 Months

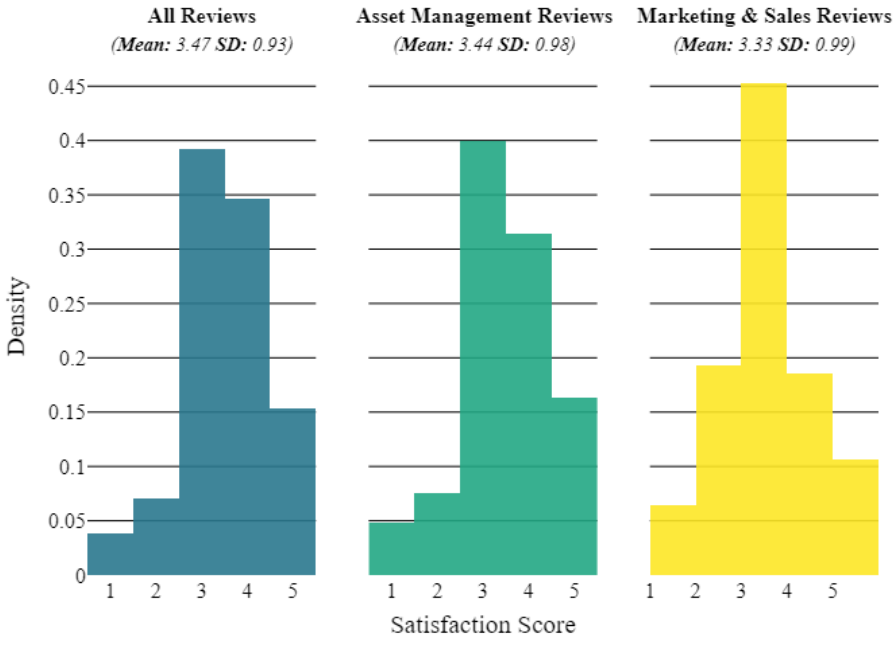
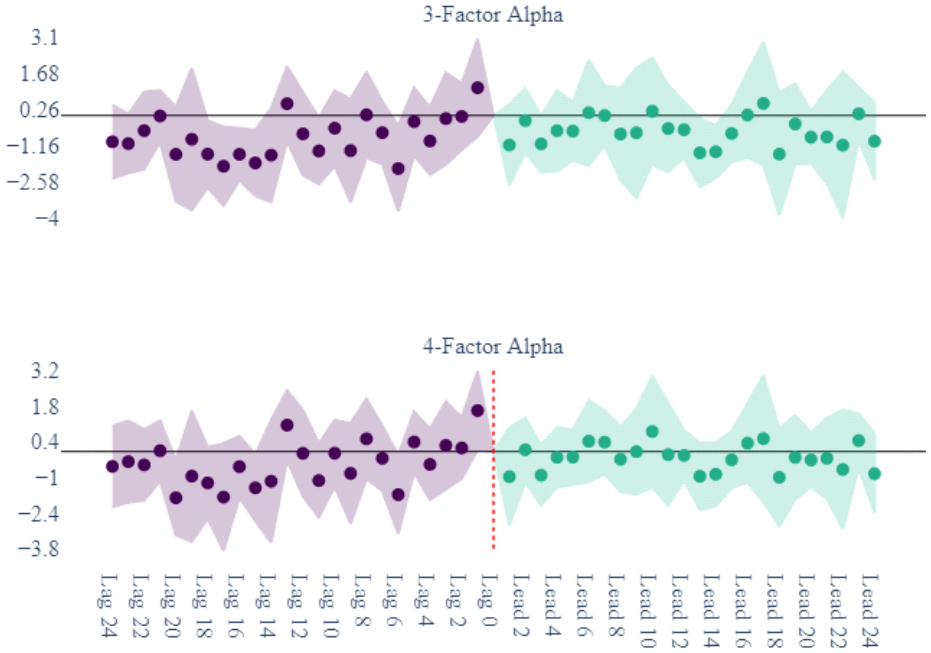


Figure 3: Parallel Trends for the Return Regressions

Figure 3 depicts the conditional parallel trend graphs for the performance difference in difference regressions. The base month in the regression is the month of treatment. The points indicate the coefficient estimates of the interaction effect between moving to a higher employee satisfaction company and event dummy variables of a merger happening and the managers staying the same. I employ the same control variables and fixed effects as in the difference-in-difference regression reported in Table 8. Standard errors allow for clustering on mutual fund companies. The shaded errors depict the 95% confidence intervals.

A: All Reviews



B: Asset Management Reviews

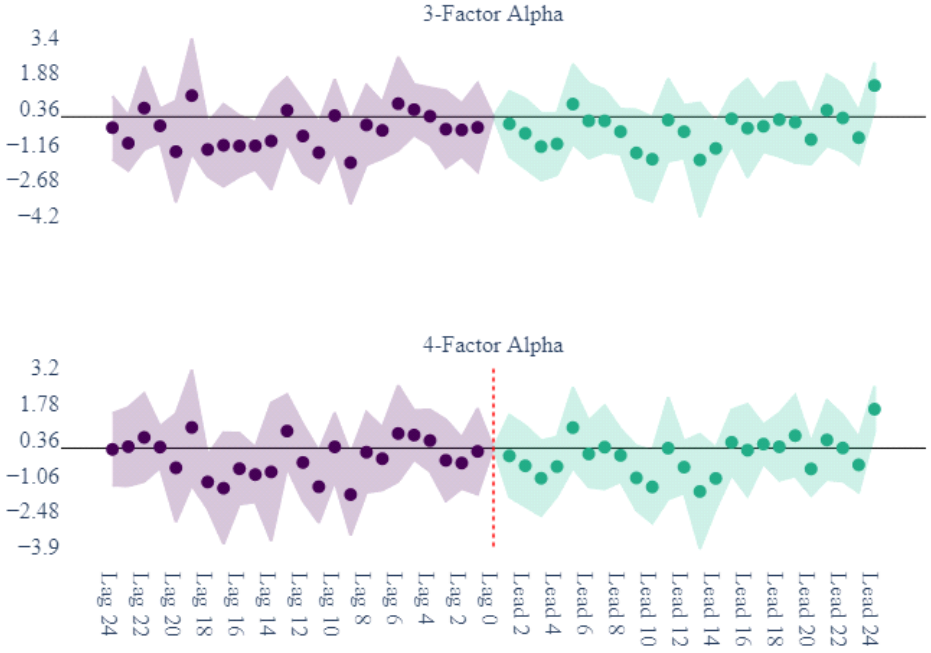
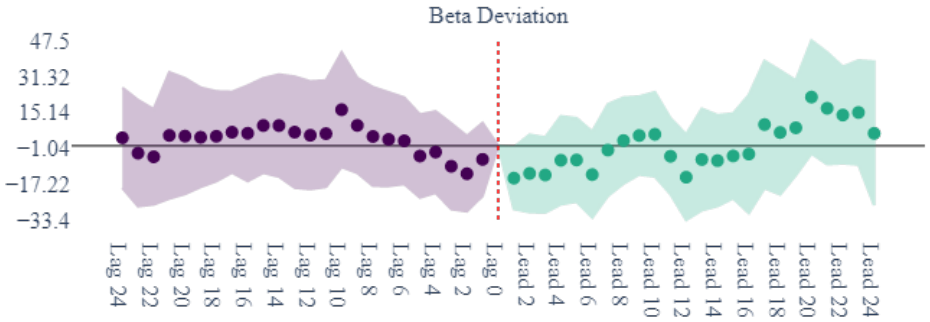


Figure 4: Parallel Trends for the Manager Effort Exertion Regressions

Figure 4 depicts the conditional parallel trend graphs for the mutual fund effort taking difference-in-difference regressions. The regression setup is analogue to Figure 3, and I employ the same control variables and fixed effects as in the difference-in-difference mutual fund effort-taking regressions reported in Table 10. Standard errors allow for clustering on mutual fund companies. The shaded errors depict the 95% confidence intervals.

A: All Reviews



B: Asset Management Reviews

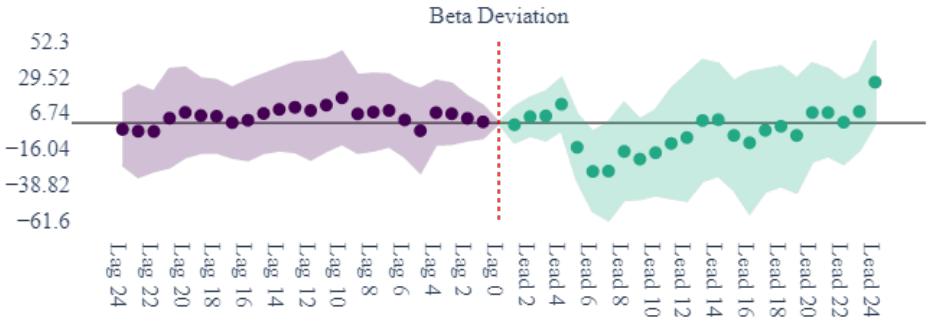
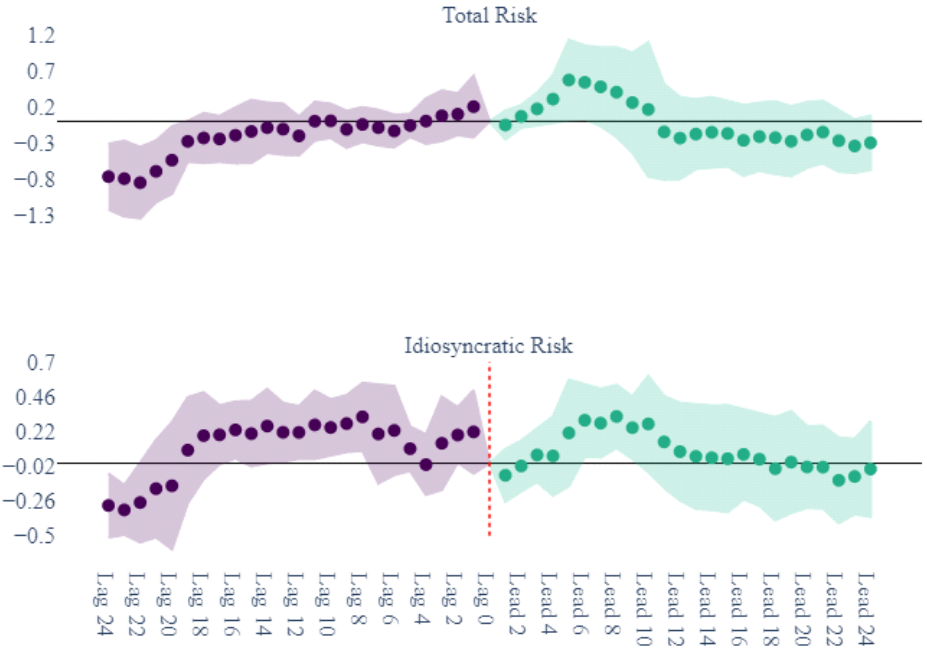


Figure 5: Parallel Trends for the Mutual Fund Risk Regressions

Figure 5 depicts the conditional parallel trend graphs for the mutual fund risk difference-in-difference regressions. The regression set-up is analogue to Figure 3, and I employ the same control variables and fixed effects as in the difference-in-difference mutual fund risk regression reported in Table 12. Standard errors allow for clustering on mutual fund companies. The shaded errors depict the 95% confidence intervals.

A: All Reviews



B: Asset Management Reviews