# Fund manager narcissism

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*Abstract*—Analyzing verbatim transcribed interviews with mutual fund managers, we show that their level of narcissism is highly relevant for the delegated investment task they are entrusted with. We find that narcissistic fund managers are 41% more likely to deviate from the advertised investment style. Moreover, while funds run by narcissistic managers on average feature significantly higher investment risk, this does not reflect in higher returns. Regardless of the fund's performance, however, we fail to observe any measurable investor reaction to fund manager narcissism, i.e. suggesting that investors are unaware of investment-relevant consequences of this personality trait.

Keywords: Narcissism, mutual funds, style consistency, personality traits, risk-taking, retail finance

JEL-Classification: D91, G11, G41, G51

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## 1. Introduction

Narcissism is a well-researched personality trait and has been the focus of psychology studies for decades. Specifically, the psychology literature suggests that the decisions of narcissistic personalities is impaired in at least two fundamental ways. In the pursuit of preserving a favorable image of ones' self to others, narcissists are prone to overestimate their own capabilities. Moreover, narcissists' inflated self-beliefs cause them to misjudge probabilities of failure, which tends to manifest in riskier decision behavior.[1] Both aspects are potentially detrimental for stakeholders facing the consequences of related decisions.

Yet, even though the management literature shows a meaningful impact of narcissism on actions and decisions of corporate managers[2], finance research has not yet turned its attention to potential consequences of narcissism on professional money managers. Given that half of all American households are invested in at least one mutual fund and the majority of individual investors' assets is held in actively managed funds (ICI 2019), the lack of research on the effect of narcissism on professional money management is rather surprising.

The present study fills this gap. Drawing on a comprehensive dataset of verbatim fund manager interviews provided by The Wall Street Transcript, we apply text mining techniques to analyze interviews with mutual fund managers and compute the only unobtrusive proxy of narcissism confirmed by experimental psychology literature.

We find that average narcissism among mutual fund managers is even higher than previously shown CEO narcissism (e.g. Aktas *et al.* 2016; Chatterjee and Hambrick 2007). Moreover, we document several consequences of narcissism among fund managers which are highly relevant for the delegated investment task they are entrusted with. First, we document that narcissistic fund managers invest less conform with their defined investment style as stated in the funds' prospectus. Controlling for several previously identified determinants of deviation from investment style, we observe that narcissistic fund managers are 41% more likely to

[1] See, e.g., Campbell, Goodie and Forster (2004) for a review of related research.

[2] See section 2 for a discussion of related research.

deviate from the advertised investment style. Second, we find that narcissistic fund managers engage in significantly riskier investment, while performance on average does not differ from their counterparts. Interestingly, the effect of narcissism on fund managers' level of investment risk is mediated by gender: female fund managers with a narcissistic trait are significantly less risk seeking as compared to their male colleagues. Third, our findings suggest evidence of narcissistic fund managers making their mark in a competitive environment by managing larger average assets under management. An increase in the measured narcissism score by one standard deviation translates into 10% more assets under management, which on average corresponds to as much as USD 54.9m larger net assets. Fourth and finally, regardless of the fund's performance, we fail to observe any measurable investor reaction to fund manager narcissism, i.e. suggesting that investors are unaware of its investment-relevant consequences.

At this, the study adds to various strands of the literature. First, by investigating narcissism, we contribute to research on the impact of personality traits and behavioral biases among professional investors. By establishing the link between narcissism and fund management, we confirm previous findings on cognitive biases and personality traits that found meaningful impact on the fund managers decision-making.[3]

Second, we extend the literature on the impact of narcissism on managers' decision behavior. Related studies show that narcissism has a significant effect on the investment behavior of CEOs. Specifically, CEO narcissism is associated with a rather bold investment style. Aktas *et al.* (2016) find that narcissism is linked to greater frequency of M&A deal initiation and deal size. At the same time, the probability of deal completion is decreased for narcissistic CEOs. Second, research indicates that narcissism is a determinant of performance and volatility of firm performance. While Lubit (2002), Petrenko et al. (2016) and Ham *et al.* (2017) find evidence of poor performance for narcissistic CEOs, Wales, Patel and Lumpkin (2013) and Kim (2018) find opposing results and argue that pronounced entrepreneurial spirit by contrast increases firm performance. Even though studies remain inconclusive on the direction of the impact on firm performance, consensus among studies prevails regarding the impact of performance volatility. Among

[3] See Kumar and Goyal 2015 for an excellent review of related research.

them, Wales, Patel and Lumpkin (2013) show that narcissism is positively linked to higher risk in terms of performance volatility. Third, CEO narcissism is associated with unethical behavior and failure to adhere to rules. By investigating Accounting and Auditing Enforcement Releases released by the SEC for the S&P 500 companies' CEOs, findings of Rijsenbilt and Commandeur (2013) suggest that firms headed by narcissistic CEOs are more frequently accused of fraud. In addition, (Chen 2010) shows that narcissism increases financial misreporting and that this effect is moderated by CEOs dishonesty.

Finally, we contribute to literature on textual analysis in finance by analyzing transcribed verbatim interviews of fund managers.[4] We show that interviews indeed provide a useful indication of individuals' personality traits in that we are able to detect narcissistic tendencies in the fund managers' use of words.

## 2. Related research and hypothesis development

### *2.1. Narcissism and decision-making*

Actions and decisions of top-level managers are greatly influenced by their personalities and past experiences (e.g., Carpenter et al. 2004; Finkelstein and Hambrick 1996). Contrary to the assumptions of fully "rational" agents as the predominant notion in neoclassical finance suggests, more recent findings established that behavior and decision-making is susceptible to each executives' information processing, preferences and dispositions (among others see Finkelstein and Hambrick 1996). Thus, agents and may not at all times act fully rational.

In general, there are numerous studies in finance focusing on the impact of biases and heuristics on investment decision-making[5]. Surprisingly, not only individual investors are inclined to draw on simple heuristics and biases, but even professionals investors. Evidence suggests that cognitive biases, such as herding, familiarity bias, home bias, the disposition effect or overconfidence significantly

[4] See e.g., Loughran and Mcdonald (2016) for a review of evidence obtained via textual analysis in the finance literature. We provide details on our sample and methodology in section 3.

[5] See, for instance, Kumar and Goyal (2015) for a comprehensive review on behavioral biases in investment decision-making.

impact fund managers' decisions and trading behavior. Studies closest to the present study examine the "Big Five" personality dimensions and find that these significantly impact fund management, in particular, the fund manager performance (e.g., Camgoz *et al.* 2011)[6]. However, literature has not shed light on the impact of narcissism as complete psychological trait on investment decision-making of professional investors.

Research identified the cognitive frame and personality dimension *narcissism* to fundamentally influence strategic decision-making of top-level executives (see Braun 2017, for a comprehensive review). Narcissism is a well-studied personality trait in psychology that in its essence can be described as a personality disorder ("narcissistic personality disorder" (NPD)) which is characterized by three main elements: an exaggerated sense of self-importance, a lack of empathy and the persistent need for admiration from others (APA[7] 2013). These characteristics typically cover up the narcissists lack of self-confidence as a self-protection mechanism in that the narcissist aims to feel superior to others and seek attention and admiration from them (APA 2013; Rijsenbilt and Commandeur 2013). The DSM-V criteria further state that narcissism develops early in adulthood and remains a stable trait irrespective of the time and setting the individual is situated.[8]

Research in the business and organization context finds that narcissists tend to compensate anger and overlook negative feedback by means of engaging in counterproductive work behavior (CWB) (Penney and Spector 2002). Chatterjee and Pollock (2017) find that this also holds true for executives. Decision-makers with narcissistic tendencies that continuously seek admiration and approval make it difficult for co-workers and employees to work with them, which

[6] The Big-Five personality pertains to 5 dimensions: Agreeableness (A), Conscientiousness (C), Extraversion (E), Neuroticism (N) and Openness to Experience (O) (McCrae & John 1992).

[7] The American Psychiatric Association established the DSM-5 criteria which serve as a guideline for diagnosis of mental disorders for health care professionals. The first release of the DSM was in 1952 and has been updated a five times since. More than 1,500 mental health and medical experts contributed to the criteria.

[8] Note that this study does attempt to claim that fund managers reveal a clinical and mental disorder of narcissistic personality disorder (NPD), but rather addresses the personality trait narcissism (also referred to as or "normal" or "grandiose" narcissism) as defined by Raskin and Hall (1979) and Raskin and Terry (1988) in their narcissistic personality inventory (NPI) that is derived from the American Psychiatric Association's DSM-III criteria. We mainly refer to the American Psychiatric Association's DSM criteria to outline the characteristics of a narcissistic personality. Moreover, we refer to managers scoring high in terms of "normal" narcissism as narcissistic fund managers.

in turn may impede management team performance. Moreover, the sense of self-importance rather often manifests itself in entitlement and arrogance towards others that in turn arguably affects their decision-making style (Campbell *et al.* 2011).

Only recently research in finance has shed light on narcissism and found meaningful impact, particularly, upper echelon research analyzing the impact of narcissism among CEOs of a firm. Evidence suggests that the investment style of a firm is moderated by fund manager narcissism. By analyzing CEO interviews recorded on Lexis Nexis and The Wall Street Transcript (TWST), Aktas *et al.* (2016) study the effect of narcissism on takeover negotiations and find that target and acquirer CEO narcissism correlates with more frequent M&A deal initiations, greater deal size and faster negotiations. They reason that narcissistic CEOs are in constant search for admiration and thus rather frequently engage in high-stake endeavors, such as M&A deals. However, they also find that M&A deal completion is less likely. Ham *et al.* (2017) confirm this finding by showing that in particular R&D and M&A expenditures are increased for companies led by narcissistic CEOs. CEO narcissism may also impair company value by executive dismissals even in times when their value is rather high (Johnson, Kolasinski and Nordlund 2018). Johnson, Kolasinski and Nordlund (2018) argue that this can be attributed to a lack of empathy which arguably makes narcissistic CEOs more likely to let off staff.

The impact of CEO narcissism on firm performance, however, remains controversially discussed. While Lubit (2002), Petrenko *et al.* (2016) and Ham *et al.* (2017) find poorer firm performance for rather narcissistic CEOs compared to non-narcissistic ones, Wales, Patel and Lumpkin (2013) and Kim (2018) find the opposite. Ham *et al.* (2017), for instance, ascribe inferior performance to lower operating cash flows and thus profits, whereas Wales, Patel and Lumpkin (2013) and Kim (2018) argue that narcissism positively attributes to performance, due to a pronounced entrepreneurial spirit among narcissistic CEOs.

In addition, studies on CEO narcissism were able to confirm the findings of psychological research that narcissistic personalities fail to adhere to rules and are linked to unethical behavior (e.g., Morf and Rhodewalt 2001). Rijsenbilt and Commandeur (2013), for instance, find that narcissism is associated with higher

fraud accusations among CEOs. In addition, Chen (2010) illustrates that narcissism and CEOs dishonesty positively attributes to financial misreporting. Even though CEO narcissism has been in the spotlight of recent studies, narcissism among mutual fund managers has, to the best of our knowledge, not been considered in prior research.

### *2.2. Hypothesis development*

In the light of increasing assets under management (estimated to rise to a total of US$ 145.4 trillion in 2025 by PWC 2017) and the majority of fund assets being invested in actively managed funds that are subject to the fund managers' rational decision-making (ICI 2019) it is of key interest to stakeholders to understand how narcissistic tendencies of managers affects fund management.

Inflated self-beliefs and feelings of uniqueness manifest themselves in a failure to adhere to rules (Brunell and Buelow 2017; Kets de Vries 2004; Morf and Rhodewalt 2001). Research in the sports context shows that narcissism is predictive of making use of antisocial behavior (such as an aggressive action in a soccer match) which is triggered by moral disengagement (Boardley and Kavussanu 2008; Jones *et al.* 2016). Narcissists are convinced that rules and standards apply to others, yet not to themselves. Consequently, in the prospect of enjoying an advantage, narcissists are inclined to violate rules and social norms. The divergence from standards has also been confirmed by the finance literature in the context CEO narcissism (Chen 2010; Rijsenbilt and Commandeur 2013).

Moreover, the need for admiration may also nurture grandiose strategic decisions. Findings of Chatterjee and Hambrick (2007) demonstrate that narcissistic CEOs are prone to greater strategic dynamism measured by the number and size of acquisitions. In the mutual fund context, a greater style inconsistency has been found to significantly outperform the less style-consistent funds (cf. Brown, Harlow and Zhang 2009). In addition, comparability between funds of the same style is impaired by managers diverting from the targeted style, which makes investment less transparent for the investor.

Due to above outlined findings, we propose that fund managers with narcissistic tendencies may arguably be more drawn to fail to adhere to conventions, such as

the style framework they operate in, but rather deviate from its benchmark investment strategy and therefore exhibit a greater style drift.

H1: Funds managed by narcissistic managers show a greater style drift.

The need of admiration and applause from others drives narcissistic individuals to actively pursue compensating opportunities (Finkel *et al.*, 2006). In their study, the find that these individuals do not shy away from going over and above their natural environments for their goal of admiration from others. Therefore, narcissists are prone to make decisions that are considered to be bold and very noticeable in the search of continuous affirmation (Chatterjee and Hambrick 2007; APA 2013). In that they do not consider preventing negative outcomes, but rather focus on their ultimate goals (Foster *et al.* 2009). Lakey *et al.* (2008) call this approach a "myopic focus on reward". Ignoring the probability to having to accept losses, paves the way for risky decision-making (Sanders and Hambrick 2007). As managers with narcissistic tendencies remain rather unconcerned in the light of prospective loss, they are also willing to tolerate a greater range of consequences (Campbell, Goodie and Forster 2004). Research has shown that narcissism is indeed related to riskier decision-making (Foster *et al.* 2009; Lewellen 2006; Campbell, Goodie and Forster 2004). Accepting a greater dispersion of possible outcomes has also been linked to narcissistic CEOs. In their study, Chatterjee and Hambrick (2007) find mixed results with regards to the firm's performance and conclude that it is not clear whether CEOs with a higher level of narcissism have a negative or positive impact on the firms' performance. However, they find that performance volatility is increased compared to their non-narcissistic counterparts. Thus, firms headed by narcissistic CEOs evidently engage in riskier investment decision-making.

Analogously, we hypothesize that narcissistic fund managers tend to be attracted by bold and rather risky investments that would results in greater fund risk (volatility of returns):

H2a: Funds managed by narcissistic managers feature a higher performance volatility.

Increased performance volatility reduces the investors to anticipate performance, dispersion of returns is increased and if this risk does not pay off in terms of outperformance, the investor is arguably impaired. Based on the above outlined findings, we therefore hypothesize that narcissistic fund managers on average do not outperform less narcissistic managers:

H2b: Fund manager narcissism does not affect fund performance.

Highly narcissistic top-level managers tend to have an exaggerated sense of their own importance, in their personal capabilities and a lack of empathy towards others (APA 2013). Combined with a great sense of entitlement narcissistic fund managers may feel to be able to take advantage of others, as they do not experience the feelings of guilt compared to non-narcissists (Campbell and Foster 2007). Evidence from Ham *et al.* (2017) indeed shows that narcissistic CEOs compensation was higher (in absolute and relative terms) compared to less narcissistic executives. Thus, we hypothesize that narcissists reveal their feelings of self-importance and a certain degree of ruthlessness towards the investors by requesting a higher payment from them, resulting in a higher management fee:

H3: Funds managed by narcissistic managers charge higher management fees.

Wallace and Baumeister (2002) find that narcissists perform well in competitive environments. As rivaling in highly competitive environments is also a great opportunity for the narcissist to reach more external admiration and glory, narcissists arguably appreciate competitions.[9] Combined with the tendency of narcissistic managers in the quest of making their mark and thus gaining approval by others, we hypothesize that fund managers manage greater funds (i.e. reflected in assets under management (AUM)). In that, lager assets under management may function as a benchmark for narcissistic fund managers with which they can gather recognition from peers. Moreover, the fund managers compensation depends on the AUM, as managers typically receive a percentage of the total assets under management. Therefore, these fund managers are arguably pursuing to increase their

[9] See also (Uziel 2007) for a review of social facilitation and personality traits.

fund size. At the same time, in their quest for appreciation, fund managers may prefer to work for greater funds in the first place.

H4: Narcissistic fund managers manage larger funds.

Furthermore, literature on psychology established that narcissism correlates with leadership and in particular charismatic leadership (Brunell *et al.*, 2008; Galvin, Balthazard and Waldmann 2010). Galvin, Balthazard and Waldmann (2010) state that this link is channeled via visionary boldness. Inspirational and convincing rhetoric is arguably a gift for narcissists that helps them to attract followers (Maccoby 2004). In the context of fund managers, we thus expect narcissistic fund managers to be able to attract a greater flock of investments when performing well and keep their investors onboard in times of poor performance.

H5: Narcissistic fund managers attract (avoid) excess inflows (outflows) following overperformance (underperformance).

## 3. Data and summary statistics

### *3.1. The Wall Street Transcript fund manager interviews*

Our main data consists of fund manager interviews by The Wall Street Transcript (TWST), a paid subscription publication and web site that features first-hand transcripts of interviews with CEOs, money managers, equity analysts and top-level corporate executives[10]. Specifically, we obtain all transcribed interviews with fund managers since 2012 from the websites' archive in the "investment strategies" category. Interviews differ in style and content but most often serve fund managers to discuss a fund's investment strategy, explain the investment environment or provide expert insights on a funds' management philosophy including ideas for specific stock picks (see excerpts in Figure A2 for examples of those interviews in the appendix). In contrast to existing literature analyzing textual information in regulatory documents (e.g., annual reports: Chatterjee and Hambrick 2007) or

[10] The Wall Street Transcript (www.twst.com) was established in 1963. Nowadays, The Wall Street Transcript has approximately 200,000 monthly readers and comprises more than 25,000 interviews.

analyst calls (e.g., Price *et al.* 2012; Aktas *et al.* 2016) interviews in the Wall Street Transcript provide first-hand information directly and unfiltered from the fund managers without being impacted by any investor relations or company communication department"[11].

Prior studies using The Wall Street Transcript (e.g. Aktas *et al.* 2016) analyzed interviews of top-level corporate executives. For our analysis, we focus on interviews with only one interviewee for assignment purposes, thus, we are able to draw on 744 fund manager interviews throughout the period from 2012 until 2018 that are disclosed in a bi-weekly fashion on the TWST website.

### *3.2. Fund data*

We collect information for all mutual funds of fund managers for which we have at least one interview in our sample of The Wall Street Transcript. We retrieve a host of fund characteristics from Morningstar Direct, among them style deviation, fund size, fund age, turnover ratio, (monthly) returns and fund flows. Variables at the share class level are converted to fund level aggregates by value-weighting their respective contribution to the fund's total net assets (c.f., e.g., Doshi *et al.* 2015). Most importantly, we collect (historic) fund data on fund managers including their respective start and exit dates at the fund allowing us to delimit the time period in which a fund manager has been in charge of managing the funds. Thus, our sample period starts with the first fund managers' start date on January 1st, 1982 and ends with the last observation in December 31st, 2018. As we are interested in examining active decision making of fund managers and due to the ease of comparability of key fund characteristics across funds, we limit our sample to actively managed mutual funds by restricting the sample to equity funds and eliminating index funds[12]. We are able to match 504 out of 744 fund manager interviews with respective data on fund characteristics on actively managed funds.

[11] The Wall Street Transcript's interviews are *verbatim*, the interviewee may review the interview before publications, but only for factual errors.

[12] We apply the standard method in mutual fund literature (see e.g. Solomon, Soltes and Sosyura, 2014) and filter fund names for words that include ''index'' ''idx'' ''S&P'' and variations of these words in addition to the Morningstar Direct filter.

### *3.3. Summary statistics*

[Please insert Table 1 about here.]

Table 1 reports summary statistic for the overall sample. Our sample consists of 504 single manager interviews since 2012 from The Wall Street Transcript with 424 different mutual fund managers being interviewed[13]. Panel A documents the interview characteristics: on average an interview is about 2.700 words in length (with large deviation to min and max number of words), contains 152 sentences, entails more plural (33.6) than singular (21.6) personal pronouns and is given in a positive tone (0.218). Panel B describes our sample of fund managers. The average fund manager in our sample has a tenure of about 5 years and is male (gender = 0). Panel C provides descriptive statistics of the mutual fund characteristics. We aggregate fund information on a fund manager level by value weighting the fund characteristics of all funds managed by a respective fund manager. In total, we retrieve fund characteristics for 2,110 funds. The average fund manager in our sample manages a 10 year old fund with USD 527mn assets under management. Moreover, the average fund charges 1.581 percent from its investors, thereof 0.876 percent in management fees, is managed by a team, provides a yearly return of 0.448 percent, turns over approximately 58 percent of its assets in a year, and is slightly less consistent in its declared investment style[14],[15]. Overall, the fund characteristics (in particular fund age and expense ratio) in our sample are in line with similar studies examining actively managed funds (e.g. Bär, Kempf and Ruenzi 2011)[16].

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[13] Some fund manager have multiple interviews in the respective period: two interviews (N= 44), three interviews (N=12), four, five or six (with N=1 each).

[14] Style Dispersion (*StyleDis*) as noted in Morningstar Direct measures the degree of the overall scatter of the holdings in the most recent portfolio along with both the value-growth and size dimensions. Morningstar indicates that low dispersion values are below 100, medium values between 100 and 148, whereas high dispersion is above 148. Thus, investments with a high score is considered to be less consistent. Prior studies (e.g. Blanchett 2011) and especially practitioners refer to this metric.

[15] The fund characteristics (such as size, fund age, expense and turnover ratio) in our sample are comparable other studies examining actively managed funds (e.g. Bär, Kempf and Ruenzi 2011).

[16] Even though the average turnover ratio of funds in our sample is with about two thirds of the ratio in the study of Bär, Kempf and Ruenzi (2011) significantly lower.

## 4. Methodology and univariate evidence

### *4.1. Measuring fund managers narcissism*

Textual information, especially if unscripted, can provide valuable information on the authors' personality (e.g., Ramsay 1968; Hogben 1977). Therefore, we make use of the fund manager interviews to learn about their level of narcissism and its potential impact on investor relevant fund metrics. Following Raskin and Shaw (1988) we construct a textual based measure of fund managers narcissism computed as

$$NarScore_i = \sum_{J=1}^{n} \frac{\sum 1st\ Person\ Singular\ Pronouns}{\sum 1st\ Person\ Singular\ Pronouns + \sum 1st\ Person\ Plural\ Pronouns} \quad (1)$$

where we average the relative usage of first person singular among all first person pronouns[17] if fund manager $i$ in interview $j$ over all interviews given by fund manager $i$. Thus, by definition $NarScore_i$ is distributed between [0, 1]; 1 being the highest narcissism score attainable and 0 denotes managers that do not show any narcissistic tendencies. Moreover, $NarScore_i$ is a time invariant narcissism measure, which is in line with the DSM-V criteria stating that narcissism is a fairly stable trait (APA 2013). We merge our key independent variables, fund managers narcissism, with the mutual fund data by fund manager names.[18] To synthesize data on fund manager level, we average fund characteristics per manager over all funds managed by this manger. We limit observations to a manager's "active" period in a fund taking account of the time period in which a manager was in charge of managing a fund. Further, we exclude turnover years, in which a change of the fund manager (team) could bias our results.

[17] 1st person singular pronouns comprise *I*, *Me*, *My*, *Myself*; 1st person plural pronouns comprise *We*, *Us*, *Our*, *Ourselves*.

[18] We are able to match fund managers with fund characteristics one-to-one by verifying each of the manager's fund management history. Thereby, we mitigate potential "John Smith" issues, as fund managers with common names are matched accurately to their corresponding fund characteristics.

We utilize Raskin and Shaw's (1988) indicator of narcissistic tendencies, as this is the only unobtrusive narcissism proxy that has been confirmed by experimental psychology research.[19] Prior research in finance used this measure in order to detect narcissism among CEOs (e.g. Chatterjee and Hambrick 2007; Aktas *et al.* 2016; Capalbo *et al.* 2018; Johnson, Kolasinski and Nordlund 2018).
In the vein of Raskin and Shaw's (1988), we believe that the measure captures the tendency of the respective manager to express superiority towards others. In that, the measure indicates his / her feeling of being the central character of the fund instead of pointing out that running a fund is rather a team effort given the amount of people involved in managing the fund's assets[20].

[Please insert Figure 1 about here.]

Figure 1 depicts the distribution of our primary proxy for fund manager narcissism, $NarScore_i$ showing an apparent right-skewed distribution indicating that the most fund managers do not exhibit high narcissistic tendencies. Moreover, $NarScore_i$ shows sufficient heterogeneity and features a mean of 0.373 indicating that 37.3% of the first person pronouns used by this manager are in the singular form[21]. Prior studies on CEO narcissism observe slightly lower mean scores (Johnson, Kolasinski and Nordlund 2018: 0.184; Aktas *et al.* 2016: 0.215 for the acquirer CEO and 0.185 for the target CEO; Capalbo *et al.* 2018: 0.26 and Chatterjee and Hambrick 2007: 0.21). The elevated average $NarScore_i$ may suggest that fund managers show on average higher narcissistic tendencies compared to CEOs. For interpretation reasons, we standardize the measure in our multivariate analysis by subtracting the mean and dividing by its standard deviation.

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[19] In their experimental study, Raskin and Shaw (1988) show that Raskin and Terry's (1988) Narcissism Personality Inventory (NPI) positively correlates with the ratio of first person singular to the sum of first person plural pronouns.

[20] We are aware of the measures' sensitivity to managers talking in their interviews in the role of managers of single-managed funds vs. team-managed funds (as a count of first person singular vs. plural pronouns should increase respectively). Yet, when examining the distribution of *NarScore* among team managed vs. single managed funds, the variation in *NarScore* virtually does not deviate from the distribution illustrated in Figure 1. Moreover, in section 6.1, we touch further upon the impact of team on fund manager narcissism. *NarScore* distributions for team-managed as well as single-managed funds are available upon request.

[21] $NarScore_i$ features the following moments: Std dev.: 0.227; 25$^{th}$-percentile: 0.185; 50$^{th}$-percentile: 0.331; 75$^{th}$-percentile: 0.524.

### *4.2. Univariate evidence*

To illustrate the relation of fund manager narcissism on the respective main fund characteristics of interest, Figure 2 provides scatter plots with univariate evidence on the differences between narcissistic and non-narcissistic fund managers.

As hypothesized under H1, we spot an apparent increase in style dispersion with increasing values of fund manager narcissism. While we do not observe a relation between return and narcissism, we find similar results for fund risk (i.e. logarithmized standard deviation of returns[22]). The slope of the fitted values visibly indicates that risk-taking appears to be positively correlated with narcissism, as would be in line with our hypotheses 2a and 2b.

With respect to management fees, the univariate evidence points to narcissistic managers charging their investors similar fees when compared to non-narcissistic managers, which does not support our hypothesis 3 in the univariate context. As can be inferred from the last scatter plot, highly narcissistic fund managers appear to manage significantly greater funds than their non-narcissistic counterparts. We will test robustness of our univariate findings in the next section.

[Please insert Figure 2 about here.]

In sum, the results presented in Figure 2 provide preliminary evidence in support of the hypotheses that fund manager narcissism has a positive effect on deviating from their conventional rules of investment style, greater fund risk and larger assets under management.

In section 5, we examine whether this relationship persists once we control for a battery of independent variables which have been shown to explain the respective key fund characteristic of interest.

[22] Note that we log-transform volatility, as in log form it is much closer to being normally distributed (Andersen, *et al.* 2001).

## 5. Results

### *5.1. Model*

In order to test our main hypothesis of narcissistic manager tendencies on key fund metrics from section 2, we run several linear regressions on (collapsed) cross-sectional data from our mutual fund sample on fund manager level outlined in 3.2. The generic regressions model takes the form

$$StyleDis_i\,;\ FundRisk_i\,; Return_i\,;\ MgmtFees_i\,;\ Fund\ Size_i = \alpha + \beta\ NarScore_i + \delta' MF_i + \delta' IV_i + \varepsilon_i \tag{2}$$

where $NarScore_i$ captures the effect of fund manager $i$'s narcissism on the respective dependent variable. $StyleDis_i$ denotes Morningstar's measure of the degree of overall scatter of the holdings along both, the value-growth and size dimensions, providing a proxy for how consistent a fund manager invests in terms of investment style of a fund as outlined in the fund's prospectus. For interpretation purposes, we dichotomize $StyleDis_i$ using the proposed methodology by Morningstar assigning 1 to managers that on average exhibit values above 148, indicating highly style inconsistent portfolio management and 0 for rather style consistent fund managers. $Return_i$ captures the performance outcome using abnormal returns in excess of the respective fund benchmark, $FundRisk_i$ captures the overall level of risk measured as the standard deviation of (monthly) returns. $MgmtFees_i$ displays the fund's fees charged for asset management and $Fund\ Size_i$ denotes the size of the fund in total net assets (mn.). $MF_i$ and $IV_i$ are vectors controlling for fund and interview characteristics, respectively. Fund controls are listed in Table 1 and comprise the full set of fund-level determinants found to impact the respective dependent variable. (e.g. Cremers and Petajisto 2009; Hillert, Niessen-Ruenzi and Ruenzi 2018).

In a second step we analyze the relation of fund manager narcissism on investor behavior using net fund flows (Fund Flows) as dependent variable. Based on the approach of Jin et al. (2016), we estimate the regression model

$$Fund\ Flows_{i,t} = \alpha + \alpha_1\, D_{i,t-1}^{Low} + \alpha_2\, D_{i,t-1}^{Top} + (\beta_1\, D_{i,t-1}^{Low,Neg} + \beta_2\, D_{i,t-1}^{Top,Neg} + \beta_3\, D + \beta_4\, D_{i,t-1}^{Top,Pos}) + \delta' MF_{i,t-1} + \delta' IV_{i,t-1} + \varepsilon_{i,t} \tag{3}$$

where $D_{i,t}^{Low}$ is an indicator variable of fund manager narcissism in the lowest quintile of fund manager $i$ in month $t-1$ [23]. Analogously, $D_{i,t}^{Top}$ denotes narcissism in the top quintile. $D_{i,t}^{Low,Neg}$ is an interaction between $D_{i,t}^{Low}$ and thus low narcissism and an indicator variable denoting negative past performance in $t-1$, whereas $D_{i,t}^{Low,Pos}$ denotes positive past performance and fund manager narcissism in the lowest quintile simultaneously. For this analysis, we utilize a subset of our sample by limiting it first, to single-managed funds (which reduces sample size to 399 funds) and second, fund managers that only managed one fund throughout their tenure reducing the sample to a total of 383 funds. Consequently, total fund-month observations amount to 10,607 for which the fund manager in a single-managed mutual fund has been in charge of actively managing the assigned fund.

### *5.2. Main results*

Table 2 reports the main results of our investigation into the effect of fund manager narcissism on key fund metrics for our hypotheses 1-4.

[Please insert Table 2 about here.]

Specifications (1) and (2) report the effect of fund manager narcissism on investment *Style Dispersion*. We have dichotomized our dependent variable (*StyleDis*) into management styles that do deviate from the conventional investment flexibility along a funds' value, growth and size dimension (*StyleDis* =1) and those that do not (*StyleDis* = 0). Accordingly, coefficient estimates on NarScore display log-odds of a fund manager to deviate from its respective 'target' investment style. Specification (2) provides evidence that narcissistic fund managers are about 41% (=exp(0.341)-1) more likely to deviate from their defined investment style as stated in the funds' prospectus. Clearly, this finding is highly significant (statistically and economically) and therefore supports our hypothesis 1. Our finding confirms previous findings in the corporate context, (Chen, 2010; Rijsenbilt and Commandeur, 2013) in that narcissistic CEOscare less about conventional rules, at least with respect to style conformity in the mutual fund context.

[23] Please note that in order to capture a time-varying $NarScore_{it}$ we refer to the raw $NarScore_{it}$ on the interview level rather than referring to averages by fund manager. We impute missing values in-between interviews by fund manager using the last observation carried forward (LOCF) method.

As hypothesized, specifications (3) and (4) show that fund manager narcissism is not associated with a significant outperformance. This effect is neither statistically nor economically meaningful and confirms the univariate evidence (see Figure 2) in a multivariate setting. At the same time we find evidence supporting the second part of hypothesis 2 (2b) as risk-taking increases with fund manager narcissism. From specification (6) follows that an increase in narcissism of the fund manager by one standard deviation increases fund risk, as measured by a fund managers' average standard deviation of monthly returns, by approximately 7%[24]. This relation is not only statistically significant at conventional levels, but also economically meaningful and therefore underlines our prior findings in the univariate setting (see Figure 2), where we observed an increase in fund risk for high narcissistic fund managers. Moreover, this finding extends literature on the relationship between financial performance, performance volatility and narcissism. Although we do not observe significant out- or underperformance of narcissistic managers (as do e.g. Chatterjee and Hambrick 2007; Ham *et al.* 2017) in the CEO context), we are able to underpin previous findings of finance research (e.g. Wales, Patel and Lumpkin 2013; Chatterjee and Hambrick 2007) as we are able to establish a clear and significant link between narcissism and performance volatility. We argue that increased fund risk that does not pay off in terms of return to the investor may be detrimental to investors.

Although we document a positive effect of fund manager narcissism on management fees when analyzing the unconditional and conditional effect, in specification (7) and (8), respectively, we do not find a significant effect– neither statistically nor economically[25]. Hence, we are not able to verify our hypothesis 2 stating that more narcissistic managers charge their investors higher fees for management. We argue that fund managers – as much as they would like to – are not able to set management fees arbitrarily. In fact, the SEC[26] points out that ultimately it is incumbent upon the fund's directors to set an appropriate management

[24] Coefficient estimate (*NarScore*) = 0.068, therefore effect on Fund Risk can be measured as exp(0.068)= 1.074, which corresponds to an increase of about 7%. Compared to a fund managers' average standard deviation in monthly returns (19.88), holding all things equal, a fund manager with a one standard deviation higher narcissism score features a standard deviation of 21.28.

[25] An increase in *NarScore* by one std. dev. increases fee by 0.094%, which compares very small to an average mgmt. fee of 0.88%.

[26] SEC Pub. No. 162 (5/14) (https://www.sec.gov/files/ib_mutualfundfees.pdf)

fee and that negotiating on contracts with the advisers belongs to their most important duties on the fund. Thus, narcissistic fund managers themselves do not have authority to set the management fees at their own discretion and therefore narcissism does not translate into higher management fees.

Lastly, we find a significant effect of narcissism on fund size confirming our hypothesis 4. Analogously to our finding on fund risk, specification (10) underlines our finding from the scatter plot. More narcissistic fund managers indeed manage larger funds. An increase by one standard deviation in narcissism translates into 10% higher assets under management, which corresponds to an average of USD 54.9mn higher net assets. In line with Wallace and Baumeister (2002), we argue that fund managers are inclined to seek opportunities to make a name for themselves and simultaneously appreciate competition where profiling and approval of others is more likely. On the one hand, lager assets under management may function as an accolade for narcissistic fund managers with which they can gather appreciation from others. As fund managers typically receive a percentage of the total assets under management, their compensation hinges on the fund size to a certain extent. Therefore, these fund managers are arguably pursuing to increase their fund size. Simultaneously, in their quest for appreciation, fund managers may prefer to work for greater funds in the first place.

In sum, we find that narcissistic fund managers are by far (41%) more prone to deviate from conventional rules set out by their expected investment style, more likely to engage in riskier investments while exhibiting no outperformance and appear to manage greater funds compared to their non-narcissistic counterparts. While we are able to confirm hypotheses 1, 2, and 4, our findings do not support hypothesis 3. Management fees remain fairly unresponsive and thus a 'narcissism effect' may not be observed.

## 6. Further analyses

### *6.1. Do team-managed funds mitigate or aggravate the impact of fund manager narcissism?*

Nowadays, most mutual funds are not managed by a single fund manager but rather a management team in charge of the daily portfolio tasks (e.g., Patel and

Sarkissian 2017). In this environment, narcissistic tendencies of fund managers may have a different impact on the fund metrics. Hence, it might be worthwhile investigating if teams mediate the impact of narcissistic fund managers as proposed by the diversification of opinions hypothesis (e.g., Bär, Kempf and Ruenzi 2011), in that extreme investment behaviors are averaged out. If narcissism would, however, be aggravated in teams, these findings would support the opposing literature strand on the group shift theory (e.g., Moscovici and Zavalloni 1969; Kerr 1992). This would imply that narcissistic fund managers are able to persuade the other fund manager(s) of their opinion and push through their approach to investment decision-making.

We estimate the linear regression model

$$\begin{aligned} StyleDis_i\,;\ FundRisk_i\,;Return_i\,;\ MgmtFees_i\,;\ Fund\ Size_i \\ = \ \alpha + \beta_1\, NarScore_i + \beta_2\, Team_i + \beta_3\, NarScore_i\ x\ Team_i + \ \delta' \\ + \ \delta' IV_{i,t} + \ \varepsilon_i \end{aligned} \tag{4}$$

where we analyze several fund characteristics as defined in our hypothesis in 2.2. and include an indicator variable, $Team_i$, which equals one if a fund is team-managed. The interaction term $NarScore_i\ x\ Team_i$ captures the mediation effect of teams on the fund characteristics of narcissistic fund managers. Specifications (1), (3), (5) and (7) of Table 5 report coefficient estimates on this model.

[Please insert Table 3 about here.]

We do not observe a mediation effect of team-managed funds on any of the fund characteristics under investigation (*StyleDis* (1), *Return* (3), *Fund Risk* (5) or *Fund Size* (7)). Yet, our finding on *Fund Risk*, support the general notion made above with regard to the 'opinion diversification theory' (e.g.; Bär, Kempf and Ruenzi, 2011). Even though the effect is not statistically significant, we observe that the direction of the interaction term of *NarScore x Team* is negative. Fund manager teams achieve less volatile performance outcomes, which might be a consequence of a less risk seeking investment style.

*6.2. Does gender impact have an impact on fund manager narcissism?*

There is ample evidence for females being less risk-seeking than men (e.g., Barber and Odean 2001). Female managers are found to have different risk preferences and thus engage significantly less in risky decision-making, while average performance is indistinguishable from those of male fund managers (e.g.; Brenner 2015; Niessen-Ruenzi and Ruenzi 2018), and follow more consistent investment styles (Niessen-Ruenzi and Ruenzi, 2018). In addition evidence from upper echelon literature suggests that female CEOs have been found to work for relatively smaller firms (Khan and Vieito 2013). Thus we believe that it is worthwhile to examine the impact of gender on fund manager narcissism, as literature suggests that especially the key fund metrics *StyleDis*, *Fund Risk*, *Return* and *Fund Size* may be affected by gender and thus gender potentially takes a moderating role of fund manager narcissism.

Thus, we estimate the linear regression model

$$\begin{aligned} StyleDis_i\,;\ FundRisk_i\,;Return_i\,;\ MgmtFees_i\,;\ Fund\ Size_i \\ = \ \alpha + \beta_1\ NarScore_i + \beta_2\ Gender_i + \beta_3\ NarScore_i\ x\ Gender_i + \\ + \delta' IV_{i,t} + \ \varepsilon_{i,t} \end{aligned} \tag{5}$$

where we include a gender indicator variable, $Gender_i$, which equals one if fund manager $i$ is female. Thus, the interaction term $NarScore_i\ x\ Gender_i$ captures the mediation effect of women on narcissism. Specifications (2), (4), (6) and (8) of Table 3 report coefficient estimates on this model.

As can be taken from the insignificant coefficient estimates, we cannot document an effect of gender on the majority of fund characteristics. Except for performance volatility, where we find a highly significant effect indicating that narcissistic female fund manager exhibit a less risky investment style resulting in less volatile performance outcomes compared to their narcissistic male counterparts. Compared to male managers, female managers – even if they exhibit narcissistic tendencies – perform less volatile. Our findings support the notion that female fund managers engage less in risk-taking actions. This effect remains unchanged, even among narcissistic female fund managers.

Next, we turn to the investors' side and analyze how narcissistic tendencies of fund managers impact their investing behavior as measured by fund flows.

### *6.3. Investor reaction to fund manager narcissism*

In this section, we aim to capture the investor response to fund manager narcissism. In that, we run panel-regressions, as outlined in section 5.2. If the investor knows their respective fund manager and in particular, the fund managers personality traits (i.e. narcissism), then we expect them to react to accordingly. This means that in case of prior poor performance, we hypothesize (H5) that narcissistic fund managers are able to maintain the investors' money compared to their non-narcissistic counterparts, due to their charismatic and persuasive leadership style (as has been established among others by (Galvin, Balthazard and Waldmann 2010). Analogously, we expect investors to target and invest in the narcissistic fund manager to a greater extent than non-narcissistic ones, and thus hypothesize to observe a greater fund inflow in response to good performance.

[Please insert Table 4 about here.]

Table 4 depicts the estimation coefficients of the panel-regression for a subset of fund managers, i.e. fund managers that are attributed to one fund only and are the sole managers on the respective fund. Specification (1) shows the results including two indicator variables pertaining to a narcissism in the highest and lowest quintile; whereas specification (2) addresses the investors' reaction in response to prior positive or negative performance. In contrast to our hypothesized impact, our estimation results do not reveal any statistically (nor economically) significant effect of fund manager narcissism on subsequent investor fund flows.

We argue that investors are hardly able to detect narcissism among the fund manager they invest in. From a retail investors' perspective, there is little information disclosed on the fund manager [27] and in particular information for

[27] Searching e.g. for Peter Dixon, a former Fidelity fund manager, we find no results on Google Finance and Morningstar.com provides only the following information: "Peter Dixon is portfolio manager of Retailing Portfolio, which he has managed since April 2010. Prior to joining Fidelity Investments in 2006 as a research analyst, Mr. Dixon received his MBA from the Kellogg School of Management at Northwestern University" (Morningstar.com).

assessing his or her personality traits. Thus, we attribute the inattention of investors to absent information on the fund managers' personality. On the contrary, this negligence also implies that the misconduct of fund managers (i.e. engaging in higher risk-taking and style drift while performing comparably) exhibiting narcissistic tendencies arguably harms investors to the full extent in that they do not have the possibility to evade investing in these fund managers.

## 7. Robustness

In order to rule out that our findings are confounded by our *NarScore* proxy, we re-estimate our model using an alternative specification of narcissism. In particular, we use *LinesofBio* that pertains to the number of lines counted in the biography section of the respective fund managers LinkedIn profile as alternative proxy for narcissism. This measure has already been utilized in similar studies in the CEO narcissism context (e.g., Rijsenbilt and Commandeur 2013; Buchholz, Lopatta and Maas 2019) and serves as a an indicator of the fund managers willingness to disclose information on him or her experience, past or present jobs and vita. The measure serves as a comprehensive extension of our prior analysis in at least two aspects. First, the fund manager is the only decision-maker with respect to publicly disclosed content on LinkedIn, thus there is no other party involved that could distort the measure of narcissism. Second, the inclusion of a biography and especially the extent of the biography captures another dimension of narcissism, "profiling". In that, the fund managers seek public exposure as an opportunity to take pride in him- or herself. Third, we are able to overcome potential limitations of the *NarScore* as proposed in 4.1, as this measure does not rely on context (as does *NarScore*) and can directly be attributed to the fund manager.

We are able to access and screen 349 out of 424 fund managers LinkedIn profiles for their *LinesofBio*[28] and replicate the regression setup outlined in 5.1.

[Please insert Table 5 about here.]

Table 5 reports coefficients of the linear regression using *LinesofBio* as alternative specification. Even though the effect of our alternative narcissism proxy

[28] $LinesofBio_i$ features the following moments: Mean: 1.917, Std dev.: 4.492; Min.: 0; Max: 35.

on *StyleDis*, using the number of lines in the fund manager's LinkedIn biography, does not hold the same magnitude and significance as in our main analysis (Table 2), we still observe a (weakly) significant effect of narcissism on a fund managers' tendency to deviate from its style benchmark. Specifically, the coefficient in specification (1) indicates a 3.3% higher probability of narcissistic managers to deviate from their "target" investment style. Again, we do not observe any outperformance of narcissistic fund managers. While the sign of the effect has been (marginally) positive in our main analysis, it switched negative in specification (2) of Table 5, supporting our hypothesis that narcissistic managers do not outperform their non-narcissist peers. Supporting our earlier finding that narcissists are more willing to take risk, our estimate on *NarScore* in specification (3) remains (weakly) significant. The coefficient of 0.032 can be interpreted as the impact of an one standard deviation increase in *NarScore* (corresponding to approximately 4 more lines in his LinkedIn biography) translates into a higher standard deviation of almost 3.3%[29]). Regression results applying management fees as dependent variable are similar to those of results of return, except that sign of coefficient remains constant – however far from being (statistically and economically) significant. Lastly, the effect of fund manager narcissism on fund size is still significant under alternative narcissism specification. Economically, a one standard deviation increase in narcissism is associated with USD14.43mn higher assets under management. In sum, our results outlined in section 5.2. have been found to be robust to an alternative specification of narcissism.

## 8. Discussion and concluding remarks

In this study, we document that the personality trait, narcissism, does indeed have an impact on fund management. First, fund managers are evidently less consistent with their defined investment style, as proposed by their fund's prospectus. The failure to adhere to rules as proposed in previous findings in business and finance literature (Chen 2010; Rijsenbilt and Commandeur 2013), manifests itself also in the fund manager context in that narcissistic fund managers tend to engage more frequently in a style drift. We find a statistically and economically

[29] (=exp(0.032)-1.

significant effect even when controlling for a number of previously identified determinants of style drift. Narcissistic fund managers are 41% more likely to deviate from their defined investment style.

Second, and more importantly, while we find that narcissistic fund managers' average performance is virtually identical to that of their non-narcissistic counterparts, the (average) fund risk is significantly higher. This finding is in line with evidence found among narcissistic CEOs (e.g., Chatterjee and Hambrick 2007). Interestingly, we find that this effect is mediated by gender. Narcissistic female fund managers are significantly less risk prone than their male counterparts.

Third, turning to the perspective of fund managers' incentives, we document that management fees (and thus partly the fund managers compensation) are not significantly different for narcissistic fund managers compared to their non-narcissistic counterparts. This effect may be attributed to the fact that fund directors are ultimately in charge of determining the appropriate fees. Yet, we find a significant effect of fund manager narcissism on fund size. The effect is statistically and economically significant with a one standard deviation increase in narcissism translating into 10% higher assets under management. Our findings suggest that narcissistic fund managers appear to pursue on making their mark by managing greater assets under management which typically are closely linked to their compensation.

Lastly, the above findings also raise the question if investors respond to the narcissism-induced mismanagement. Are investors aware of their fund managers' personality? We find that investors do not take a fund manager personality, in this case narcissism, into account when allocating their funds. We neither find a significant reaction after good nor after poor previous performance. In turn, this means that investors do not attempt to evade narcissistic fund managers and thus the effect of rather detrimental narcissistic fund management (i.e. lower risk-adjusted returns and higher style drift) materializes in full. We believe that investors' inability to detect narcissism among the fund manager lies at the root of this issue.

As we find lower risk-adjusted returns and lower style consistency associated with fund manager narcissism and investors tend not to incorporate information on the funds managers' personality, we believe this has important practitioner implications for investors and potentially the fund companies. From the

investors' perspective, thoroughly acquainting oneself with not only the funds' performance or investment style, but also the fund managers' personality may be beneficial. We emphasize – supporting the conjectures of prior research on behavioral biases among mutual fund managers – that even though information on the fund manager may at times be scarce, it is worthwhile to get an impression of the fund manager's personality the investors entrusts their money with.

From a mutual fund companies' perspective, we advise recruiters to get an holistic impression on the (potential) fund managers' personality before delegating portfolio management tasks of a fund. As narcissism among fund managers has been shown detrimental to shareholders without 'compensating' fund companies by higher net inflows (as could have been the case through 'charismatic' leadership), neglecting this personality trait can in the long-term endanger fund companies' prestige and shareholder base.

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## Tables and figures

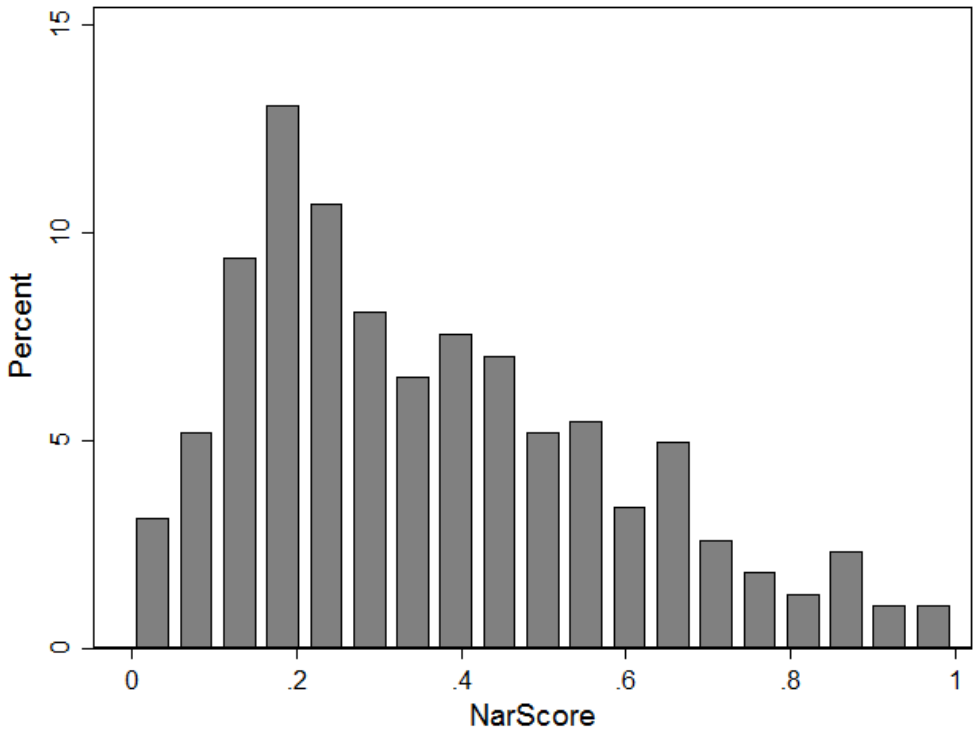
Table 1
Summary statistics

| | N | Mean | Sd | Min | 25th | Median | 75th | Max |
|---|---|---|---|---|---|---|---|---|
| **Panel A: Interviews** | | | | | | | | |
| # Words | 504 | 2.685 | 774.7 | 341 | 2.119 | 2.623 | 3.114 | 5.451 |
| # Sentences | 504 | 151.90 | 42.39 | 23 | 125 | 147 | 173 | 340 |
| # PS Pronouns | 504 | 21.62 | 17.92 | 0.00 | 9 | 16 | 29 | 124 |
| # PP Pronouns | 504 | 33.57 | 18.75 | 0.00 | 20 | 30 | 44 | 98 |
| Tone | 504 | 0.218 | 0.258 | -0.65 | 0.046 | 0.229 | 0.416 | 0.867 |
| **Panel B: Fund manager characteristics** | | | | | | | | |
| Tenure (avg. tenure, in years) | 424 | 4.993 | 3.007 | 0.070 | 2.732 | 4.741 | 6.709 | 15.497 |
| Gender | 424 | 0.074 | 0.261 | 0.000 | 0.000 | 0.000 | 0.000 | 1.000 |
| **Panel C: Fund characteristics** | | | | | | | | |
| Fund Size (TNA in mio. USD) | 415 | 527.1 | 1.340 | 1.242 | 22.34 | 80.25 | 390.4 | 8.864 |
| Fund Age (in months) | 424 | 10.03 | 7.017 | 0.287 | 4.907 | 8.690 | 13.16 | 46.56 |
| Expense Ratio (in %) | 312 | 1.581 | 0.632 | 0.316 | 1.108 | 1.435 | 1.920 | 3.260 |
| Return (in %) | 414 | 0.448 | 0.669 | -6.498 | 0.265 | 0.487 | 0.785 | 2.321 |
| Fund Risk (std. dev. of returns) | 372 | 19.88 | 7.414 | 2.234 | 14.99 | 19.25 | 23.52 | 42.47 |
| Style Dispersion | 377 | 150.37 | 19.09 | 98.82 | 137.27 | 149.96 | 163.66 | 191.64 |
| Tracking Error (in %) | 375 | 5.158 | 2.153 | 0.682 | 3.772 | 4.940 | 6.353 | 14.23 |
| Turnover (in %) | 389 | 58.03 | 42.41 | 1.950 | 28.26 | 47.44 | 75.67 | 226.00 |
| Mgmt Fee (in %) | 363 | 0.876 | 0.330 | 0.060 | 0.695 | 0.833 | 1.000 | 2.000 |
| Team Size | 424 | 2.878 | 2.096 | 0.000 | 1.613 | 2.239 | 3.429 | 14.93 |
| MoSt Rating | 359 | 2.949 | 0.886 | 1.000 | 2.362 | 3.000 | 3.420 | 5.000 |
| # Stock Holdings | 406 | 129.8 | 242.9 | 3.516 | 39.89 | 65.24 | 115.5 | 2.553 |
| Segment Flow (in mio. USD) | 349 | -457 | 1.350 | -5.230 | -852.0 | -274.0 | 185.0 | 3.690 |
| Fund Family TNA (in bn. USD) | 318 | 68.30 | 210.0 | 0.062 | 0.533 | 5.470 | 38.70 | 1.190 |
| Max Drawdown | 411 | -9.626 | 3.906 | -25.10 | -12.19 | -9.640 | -6.909 | -1.220 |
| Kurtosis | 411 | 0.298 | 0.369 | -0.830 | 0.072 | 0.286 | 0.512 | 1.989 |
| Skewness | 411 | -0.228 | 0.211 | -1.160 | -0.336 | -0.231 | -0.130 | 0.515 |
| 12b-1 Fee (in %) | 254 | 0.328 | 0.157 | 0 | 0.250 | 0.291 | 0.427 | 0.750 |

*Notes:* This table reports descriptive statistics of our sample of N=504 interviews conducted with N=424 fund managers, who manage N=2,110 funds. Interview variables reported in Panel A are average values per fund manager i, for managers that gave more than one interview.

Panel B reports fund manager characteristics and fund characteristics in Panel C reflect averages per fund manager over the fund(s) managed by the fund manager. Moreover fund characteristics are average values per fund manager throughout the time the interviewed fund manager is actively managing the fund(s). Tone is measured by the fraction of negative words by all words that the respective fund manager said in an interview according to the Loughran and McDonald (2011) dictionary. Style Dispersion denotes Morningstar's measure of the degree of overall scatter of the holdings in the most recent portfolio along both the value-growth and size dimensions. We provide a detailed description of the applied variables in our appendix Table A1. The sample includes all actively managed equity funds managed by the interviewed fund manager (starting from the first observation in 1982 until 2018).

Figure 1
Frequency distribution of ***NarScore***



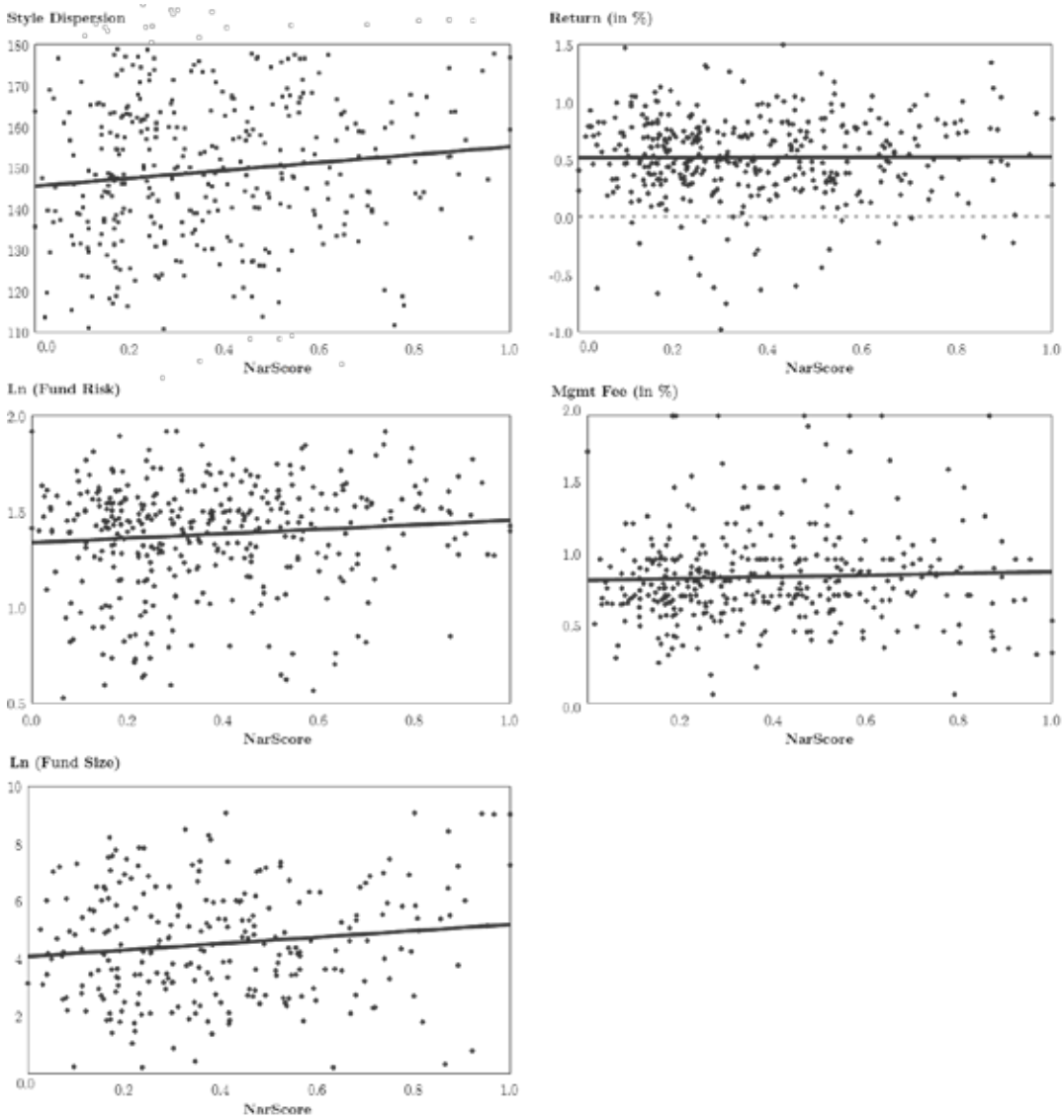

*Notes:* This figure illustrates the distribution of our main independent variable, *NarScore*, computed as

$$NarScore_i = \sum_{j=1}^{n} \frac{\sum 1st\ Person\ Singular\ Pronouns}{\sum 1st\ Person\ Singular\ Pronouns + \sum 1st\ Person\ Plural\ Pronouns}$$

where $NarScore_i$ is the relative usage of first person singular among all first person pronouns of fund manager $i$ in interview $j$ over all interviews given by fund manager $i$. The sample comprises N=504 interviews conducted with N=424 fund managers.

Figure 2

Fund manager narcissism, style dispersion, return, risk, management fees and fund size




*Notes:* This figure illustrates scatter plots using our main independent variable, *NarScore,* on the horizontal axis and different fund manager level characteristics as variables on the vertical axis. Fitted values are indicated by a line.

Table 2

Style, Risk, Return, Fees, Size and Narcissism

| | Dependent variable | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | StyleDis (H1) | | Return (H2) | | Fund Risk (ln) (H2) | | Mgmt Fee (H3) | | Fund Size (ln) (H4) | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| *NarScore* | 0.266*** | 0.341** | 0.007 | 0.184 | 0.041* | 0.068** | 0.020 | 0.094 | 0.101** | 0.099* |
| | (2.58) | (2.19) | (0.05) | (1.02) | (1.92) | (2.47) | (0.70) | (1.29) | (2.16) | (1.91) |
| Fund specific control variables | | | | | | | | | | |
| Tenure (ln) | | -0.043 | | 1.301*** | | -0.010 | | 0.178*** | | -0.195*** |
| | | (-0.18) | | (4.35) | | (-0.30) | | (3.61) | | (-2.93) |
| Fund Age (ln) | | -0.340 | | -0.043 | | 0.130*** | | -0.125*** | | 0.245*** |
| | | (-1.30) | | (-0.12) | | (2.76) | | (-3.00) | | (3.49) |
| Turnover | | 0.000 | | -0.003 | | 0.001 | | 0.002** | | 0.001 |
| | | (0.01) | | (-0.52) | | (0.64) | | (2.22) | | (1.23) |
| Expense Ratio | | -0.034 | | 0.485 | | 0.232*** | | | | -0.232*** |
| | | (-0.10) | | (0.92) | | (3.03) | | | | (-3.28) |
| Fund Size (ln) | | -0.176 | | 0.168 | | 0.064** | | -0.044** | | |
| | | (-1.42) | | (1.03) | | (2.36) | | (-2.32) | | |
| Return (4-Factor Alpha) | | -0.283 | | | | | | 0.114* | | |
| | | (-0.74) | | | | | | (1.68) | | |
| 12b-1 Fee | | 0.648 | | | | | | | | |
| | | (0.69) | | | | | | | | |
| Net Fund Flow | | | | 20.335** | | -0.185 | | | | |
| | | | | (2.04) | | (-0.14) | | | | |
| Fund Risk (ln) | | | | 0.060 | | | | 9.460* | | |
| | | | | (0.12) | | | | (1.73) | | |
| Max Drawdown | | | | | | | | -0.009 | | |
| | | | | | | | | (-1.16) | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| FundFam TNA (ln) | | | | | | | | 0.033** | | |
| | | | | | | | | (2.36) | | |
| Segment Flow (ln) | | | | | | | | -0.011 | | |
| | | | | | | | | (-0.87) | | |
| # Stock holdings (ln) | | | | | | | | -0.109*** | | |
| | | | | | | | | (-3.46) | | |
| Interview control variables | | | | | | | | | | |
| # Words (ln) | | -0.363 | | -2.002 | | 0.318 | | 0.285** | | 0.135 |
| | | (-0.38) | | (-1.41) | | (1.59) | | (2.25) | | (-0.48) |
| # Sentences (ln) | | -0.296 | | 3.136** | | -0.123 | | -0.232 | | -0.21 |
| | | (-0.29) | | (2.17) | | (-0.60) | | (-1.37) | | (-0.70) |
| Tone | | -1.447* | | 2.375** | | 0.582*** | | 0.070 | | 0.274 |
| | | (-1.90) | | (2.54) | | (4.43) | | (0.69) | | -1.49 |
| Robust s.e. | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| N | 377 | 235 | 373 | 206 | 414 | 211 | 363 | 126 | 418 | 312 |
| $R^2$ (adj.) | 0.0126 | 0.0852 | 0.000 | 0.206 | 0.009 | 0.247 | 0.002 | 0.546 | 0.013 | 0.118 |

*Notes:* This table shows the regression results of Style Dispersion (*StyleDis*), Return, Fund risk (logarithmized), Management Fees and Fund size (logarithmized) on the narcissism proxy and various fund characteristics and interview control variables. *StyleDis* denotes Morningstar's measure of the degree of overall scatter of the holdings in the most recent portfolio along both the value-growth and size dimensions. We dichotomize $StyleDis_i$ using the proposed methodology by Morningstar assigning 1 to managers that on average exhibit values above 148, indicating highly style inconsistent portfolio management and 0 otherwise. Return is measured as the excess returns of the respective benchmark return. Fund risk is measured by the logarithmized standard deviation of returns. Fund specific control variables are average values by manager over the time a fund manager actively managed the fund(s). *NarScore* is calculated as: (# of first-person singular pronouns/(# of first-person plural pronouns + # of first-person singular pronouns)) following Raskin and Shaw (1988). Return denotes estimated 4-factor alphas (Carhart, 1997). We provide a detailed description of the applied variables in our appendix Table A1.

In (1) and (2) logit regressions are estimated due to the dichotomous nature of *StyleDis*. Interview control variables are average values per manager i, for managers that gave more than 1 interview, these variables denote the average scores thereof. Adjusted R-squared is reported in the last row except for logit regressions in specification (1) and (2), where the pseudo R-squared is reported. t-statistics based on robust standard errors are provided in parentheses. Statistical significance, denoted by $*$, $**$, and $***$, corresponds to the significance levels of 10%, 5%, and 1%, respectively.

Table 3

Team, Gender, Experience and Narcissism

| | Dependent Variable | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | StyleDis (H1) | | Return (H2) | | Fund Risk (ln) (H2) | | Mgmt Fee (H3) | | Fund Size (ln) (H4) | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| *NarScore* | 0.260 | 0.346** | -0.223 | 0.205 | 0.078* | 0.058** | -0.064 | -0.012 | 0.099* | 0.044 |
| | (0.68) | (2.14) | (-0.58) | (1.08) | (1.75) | (2.15) | (-1.35) | (-0.41) | (1.91) | (0.38) |
| *Team* | 0.145 | | -2.039*** | | 0.048 | | -0.035 | | 0.077 | |
| | (0.36) | | (-3.86) | | (0.58) | | (-0.42) | | (1.36) | |
| *NarScore x Team* | 0.191 | | 0.358 | | -0.038 | | -0.029 | | 0.063 | |
| | (0.46) | | (0.87) | | (-0.72) | | (-0.37) | | (1.38) | |
| *Gender* | | -0.776 | | -0.088 | | -0.078 | | 0.069 | | 0.122 |
| | | (-1.48) | | (-0.14) | | (-0.88) | | (0.44) | | (0.73) |
| *NarScore x Gender* | | 0.169 | | -0.280 | | -0.175*** | | -0.085 | | -0.134 |
| | | (0.31) | | (-0.54) | | (-3.35) | | (-0.89) | | (-0.84) |
| Fund controls | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Interview controls | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Robust s.e. | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| Time-fund FE | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES |
| N | 233 | 235 | 204 | 206 | 204 | 206 | 126 | 126 | 308 | 312 |
| $R^2$ (adj.) | 0.106 | 0.0915 | 0.277 | 0.206 | 0.283 | 0.291 | 0.426 | 0,473 | 0.115 | 0.115 |

*Notes:* This table shows the regression results of *StyleDis*, Return, Fund risk (logarithmized), Management Fees and Fund size (logarithmized) on the narcissism proxy and various fund characteristics and interview control variables. Experienced denotes an indicator variable being equal to 1 for above median tenure, 0 for below median tenure. Gender denotes an indicator variable being equal to 1 for female fund managers and 0 for male fund managers. Team denotes an indicator variable being equal to 1 for managers that are on average part of team-managed and 0 for managers that are on average part of single-managed funds. Style Dispersion denotes Morningstar's measure of the degree of overall scatter of the holdings in the most recent portfolio along both the value-growth and size dimensions. We dichotomize $StyleDis_i$ using the proposed methodology by Morningstar assigning 1 to managers that on average exhibit values above 148, indicating highly style inconsistent portfolio management and 0 otherwise. Return is measured as the excess returns of the respective benchmark return. Fund risk is measured by the logarithmized standard deviation of returns. Fund specific control variables are average values by manager over the time a fund manager actively managed the fund(s). NarScore is a standardized measure calculated as: (# of first-person singular pronouns/(# of first-person plural pronouns + # of first-person singular pronouns)) following Raskin and Shaw (1988). Ret denotes estimated 4-factor alphas (Carhart, 1997). We provide a detailed description of the applied variables in our appendix Table A1.

In (1) and (2) logit regressions are estimated due to the dichotomous nature of *StyleDis*. Interview control variables are average values per manager i, for managers that gave more than 1 interview, these variables denote the average scores thereof. Adjusted R-squared is reported in the last row except for logit regressions in specification (1) and (2), where the pseudo R-squared is reported. t-statistics based on robust standard errors are provided in parentheses. Statistical significance, denoted by $*$, $**$, and $***$, corresponds to the significance levels of 10%, 5%, and 1%, respectively.

Table 4
Narcissism and investor reaction

| | Dependent variable: Net Fund Flows | |
|---|---|---|
| | (1) | (2) |
| *NarScore_low*$_{t-1}$ | 0.018 | 0.018 |
| | (1.37) | (1.29) |
| *NarScore_high*$_{t-1}$ | 0.007 | 0.007 |
| | (0.74) | (0.77) |
| *NarScore_low_neg*$_{t-1}$ | | -0.766 |
| | | (-0.38) |
| *NarScore_top_neg*$_{t-1}$ | | 0.747 |
| | | (0.30) |
| *NarScore_low_pos*$_{t-1}$ | | 0.009 |
| | | (0.33) |
| *NarScore_top_pos*$_{t-1}$ | | 0.012 |
| | | (0.06) |
| Fund controls | YES | YES |
| Interview controls | YES | YES |
| Robust s.e. | YES | YES |
| N | 1.185 | 1.185 |
| R-squared (adj.) | 0.062 | 0.063 |

*Notes:* This table shows the regression results of Net Fund Flows on quintiles of NarScore and various controls variables. Net Fund Flow is computed as $(TNA_{i,t} - TNA_{i,t-1})/TNA_{i,t-1} - r_{i,t}$. NarScore_low represents the bottom quintile of NarScore and NarScore_top represents the top quintile of NarScore. The next four dummy variables are the interaction between the top and bottom quintiles of NarScore and the sign of past performance (e.g. NarScore_low_negt-1 equals to one if a fund belongs to the bottom quintile of NarScore and has negative past performance). Ret denotes estimated 4-factor alphas (Carhart, 1997). Due to endogeneity concerns, we lag all other variables by one month except the Expense ratio, Skewness, Kurtosis, Turnover which are lagged one year. The sample shows monthly observations for fund managers of only one fund that is single managed. We provide a detailed description of the applied variables in our appendix Table A1. All regressions include fund and time fixed effects. t-statistics provided in parentheses are based on robust standard errors that are clustered at the fund dimension. Statistical significance, denoted by $*$, $**$, and $***$, corresponds to the significance levels of 10%, 5%, and 1%, respectively.

Table 5
Alternative specification of Narcissism

| | Dependent variable | | | | |
|---|---|---|---|---|---|
| | StyleDis (H1) | Return (H2) | Fund Risk (ln) (H2) | Mgmt Fee (H3) | Fund Size (ln) (H4) |
| | (1) | (2) | (3) | (4) | (5) |
| *NarScore (LinesofBio)* | 0.032* | -0.021 | 0.032* | 0.024 | 0.027** |
| | (1.92) | (-0.47) | (1.92) | (0.57) | (2.36) |
| Fund controls | YES | YES | YES | YES | YES |
| Interview controls | YES | YES | YES | YES | YES |
| Robust s.e. | YES | YES | YES | YES | YES |
| Inv. Category FE | YES | YES | YES | YES | YES |
| N | 199 | 166 | 171 | 81 | 255 |
| $R^2$ (adj.) | 0.110 | 0.195 | 0.227 | 0.392 | 0.192 |

*Notes:* This table shows the regression results of our alternative proxy for fund manager level of narcissism, *NarScore (LinesofBio)*, using the mangers LinkedIn profile, on StyleDis, Fund Risk, Return, Management Fees and Fund size (ln). We provide a detailed description of the applied variables in our appendix Table A1. Fund specific control variables are average values by fund j across the time a fund manager actively managed the fund. Interview control variables are average values per manager i, for managers that gave more than 1 interview, these variables denote the average scores thereof. Performance extremity is measured following the approach of Bär et al. (2011) utilizing Fama and French (1993) 3-Factor excess returns. *NarScore* is standardized and measured as outlined in section 4.1. Statistical significance, denoted by $*$, $**$, and $***$, corresponds to the significance levels of 10%, 5%, and 1%, respectively.

## Appendix

Table A1
Variable descriptions

| Variable name | Description | Source |
|---|---|---|
| **Interview-related variables** | | |
| NarScore | Narcissism proxy that denotes the number of first-person singular pronouns/(number of first-person plural pronouns + number of first-person singular pronouns) following Raskin and Shaw (1988) said by fund manager i in the interview. The variable denotes the average per fund manager i in case of multiple interviews. The proxy is calculated as $NarScore_i = \sum_{j=1}^{n} \frac{\sum 1st\ Person\ Singular\ Pronouns}{\sum 1st\ Person\ Singular\ Pronouns + \sum 1st\ Person\ Plural\ Pronouns}$ For interpretation purposes, we standardized the measure. | TWST |
| Tone | Tone is calculated as (Positive words - Negative words)/(Positive words + Negative words) based on the Loughran and McDonald (2011) dictionary. The variable denotes the average per fund manager i in case of multiple interviews. | TWST, L&McD (2011) dict |
| # Words (ln) | Natural logarithm of the number of words said by a fund manager during his/her interview. The variable denotes the average per fund manager i in case of multiple interviews. | TWST |
| # Sentences (ln) | Natural logarithm of the number of sentences said by a fund manager during his/her interview. The variable denotes the average per fund manager i in case of multiple interviews. | TWST |
| # PS Pronouns | Number of first-person singular pronouns (I, me, my, mine and myself) said by a fund manager during his/her interview. The variable denotes the average per fund manager i in case of multiple interviews. | TWST |
| # PP Pronouns | Number of first-person plural pronouns (we, our, ours, ourselves) said by a fund manager during his/her interview. The variable denotes the average per fund manager i in case of multiple interviews | TWST |
| **Fund manager – personal characteristics** | | |
| Tenure | Total tenure of mutual fund manager i. | MoSt |
| Gender | Gender is an indicator variable that equals to 1 if manager i is female and 0 if manager i is male. | MoSt |
| LinesofBio | Based on Rijsenbilt and Commandeur (2013) as well as Buchholz et al. (2015) LinesOfBioi counts the lines of biography that a manager i published on LinkedIn. | LinkedIn |

| Fund manager – fund characteristics | | |
|---|---|---|
| Fund $Age_j$ (ln) | Logarithm of the fund age computed from the date of a fund's inception. The variable denotes the average per fund manager i in case of multiple funds managed. | MoSt |
| StyleDis | StyleDis measures the (average) degree of overall scatter of the holdings in the most recent portfolio along both the value-growth and size dimensions per fund manager i. The metric is calculated from the Value-Growth Dispersion Metric and Size Dispersion Metric according to the Pythagorean theorem: SQRT(Value-Growth Dispersion Metric + Size Dispersion Metric). The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. In our regressions, we dichotomize $StyleDis_i$ using the proposed methodology by Morningstar assigning 1 to managers that on average exhibit values above 148, indicating highly style inconsistent portfolio management and 0 otherwise. | MoSt |
| Fund size (ln) | Logarithm of total net assets under management. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Return | Denotes the monthly return in excess of the fund j's respective benchmark. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Turnover | A fund's quarterly turnover ratio in percent reported in Morningstar Direct. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Fund Risk | Standard deviation of monthly returns. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Expense Ratio | A fund's quarterly expense ratio in percent. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| TNA | Total Net Assets of fund j measured in month t. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Team | Team is an indicator variable that which is equal to one if the fund is managed by a team and zero otherwise for fund j. The variable denotes an average per fund manager i in case of multiple funds managed. | MoSt |
| Net Fund Flow | (Monthly) net fund flows are the net growth in fund assets beyond reinvested dividends, computed as $Net\ Fund\ Flows\ (FF)_{i,t} = \frac{TNA_{i,t} - TNA_{i,t-1}}{TNA_{i,t-1}} - r_{i,t}$ where $TNA_{i,t}$ denotes fund i's total net assets (TNA) in month t and $r_{i,t}$ denotes fund i's return in month t as reported in MoSt. The variable denotes an average | MoSt |

| | | |
|---|---|---|
| | per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | |
| Return (4F) | Performance alpha estimated using the extension of the Fama and French (1993) model by Carhart (1997) including factor returns for the market, HML, SMB and UMD factors from the Kenneth French data library. The variable is estimated on a monthly basis, denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt, KF |
| Segment Flow | (Monthly) net fund flows of all funds in a Morningstar segment, computed as $$Segment\ Flow_{j,t} = \frac{TNA_{j,t} - TNA_{j,t-1}}{TNA_{j,t-1}} - r_{j,t}$$ Where $TNA_{j,t}$ denotes segment j's total net assets in month t and $r_{j,t}$ denotes segment j's equal weighted return in month t. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Family TNA | Total net assets of fund family (company). Refers to the total net assets reported in Morningstar Direct managed by a fund family. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | |
| # Stock Holdings | Total number of (long) equity (stock) holdings in the a fund The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| MoSt Rating (1 to 5 stars) | Morningstar rates mutual funds and ETFs from 1 to 5 stars based on how well they have performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds and ETFs. Within each Morningstar Category, the top 10% of funds and ETFs receive 5 stars and the bottom 10% receive 1 star. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| Kurtosis | Kurtosis indicates the yearly degree of 'peakedness' of the return distribution for fund j. The variable denotes an average per fund manager i and is winsorized at the 1st and 99th percentile. | MoSt |
| Skewness | Skewness measures the yearly degree of asymmetry from the normal distribution for fund j. The variable denotes an average per fund manager i and is winsorized at the 1st and 99th percentile. | MoSt |
| Max Drawdown | Measures a portfolio's maximum loss in a peak-to-trough decline before a new peak is attained. It is quoted as the percentage between the peak and the trough and measured on a yearly basis. The variable denotes an average per fund manager i and is winsorized at the 1st and 99th percentile. | MoSt |
| 12b-1 Fee | Component of total fees that is attributed for marketing and distribution expenditures. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |
| NarScore_low | Indicator variabe that is equal to one for values of the bottom quintile of NarScore and zero otherwise. | TWST |

| | | |
|---|---|---|
| NarScore_high | Indicator variabe that is equal to one for values of the top quintile of NarScore and zero otherwise. | TWST |
| NarScore_low_neg | Indicator variable that equals to one if a fund belongs to the bottom quintile of NarScore and has negative past performance, and zero otherwise. | TWST, MoSt |
| NarScore_top_neg | Indicator variable that equals to one if a fund belongs to the top quintile of NarScore and has negative past performance, and zero otherwise. | TWST, MoSt |
| NarScore_low_pos | Indicator variable that equals to one if a fund belongs to the bottom quintile of NarScore and has positive past performance, and zero otherwise. | TWST, MoSt |
| NarScore_top_pos | Indicator variable that equals to one if a fund belongs to the top quintile of NarScore and has positive past performance, and zero otherwise. | TWST, MoSt |
| Mgmt Fee | The management fee is reported as an actual percentage that was deducted from an investment's average net assets to pay the investment's management. The variable denotes an average per fund manager i in case of multiple funds managed and is winsorized at the 1st and 99th percentile. | MoSt |

*Notes:* This table defines the main variables used in the empirical analysis. The data sources are: (i) MoSt: Morningstar Direct Database (ii) TWST: The Wall Street Transcripts (iii) LinkedIn: Online profiles on LinkedIn (iv) KF: Kenneth French Data Library (v) L&McD (2011) dict: Loughran and McDonald (2011) dictionary.

Figure A1
TWST interview excerpts

Sample interview 1:

[...] *TWST: I thought perhaps to get started, maybe you could tell me a little bit about your process and the current makeup of your portfolio and maybe about the parameters that you use in terms of sectors and cap size.*

Mr. Montemaggiore: It's good to start here because everything comes back to philosophy and process. For me, essentially what I am trying to do is buy better-than-average or high-quality businesses when I think they are on sale or trading at valuations that are not indicative of their future earnings power. I'm trying to find the intersection of quality and price, and that's across geographies, across sectors, I really don't distinguish, and it's across market caps as well. So I don't have a whole lot of limits in terms of the size of the company. [...]

*TWST: And tell me a little bit about the sectors in your portfolio at present and where you're overweight and where you're underweight.*

Mr. Montemaggiore: From a sector perspective, I am overweight health care, technology and consumer discretionary. And then there are these groups of companies that I'm overweight called business services. They generally have a lot of the characteristics I look for. It's hard to categorize, and most of them are categorized as industrials. But essentially they are capital-light, they don't have big manufacturing plants, they tend to provide a service for companies, and they tend to lower a company's cost. So they are an outsourcing-type business, whether it'd be call centers, whether it'd be a chemical distributor, there are a number of these really interesting niche businesses that fall under business services that have fantastic characteristics that I found across the world, and I lump them together in business services. [...]

Vincent Montemaggiore - Portfolio Manager at Fidelity Management & Research Company. He co-manages Fidelity Advisor Overseas Fund with Andres Sergeant.

Sample interview 2:

[...] Ms. Kessler: We sold the last of our utility holdings recently and now have no exposure to what we perceive to be an overvalued sector. That's illustrative of the process of selling into momentum and stretched valuations, and redeploying gains into undervalued issues. We also sold a company that was a beneficiary of activist activity as well as merger discussions: Staples (NASDAQ:SPLS). We bought Staples a couple of years ago and sold it recently with a nice gain. [...]

*TWST: You are at over 9%, and the S&P is at 8.25%. How have you been able to perform better than the S&P 500?*

Ms. Kessler: Our goal is to outperform in strong markets while protecting client assets in down markets. We're now in our seventh year of a bull market, and our portfolio returns have been solid. But just as importantly, we want to protect on the downside. That's where the attention to intrinsic value relative to valuation of an individual stock becomes critical to, we hope, build a cushion in challenging markets. [...]"

Marian L. Kessler - Portfolio Manager at Becker Capital Management, Inc. She co-manages, among others, the Becker Value Equity Fund with Blake Howells, Steve Laveson, Andy Murray, Thomas McConville and Sid Parakh.