Are hedge fund managers' charitable donations truly altruistic?

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Abstract

We study whether hedge fund managers use charitable donations to further their business interests. Examining a large sample of hedge fund managers' charitable donations matched with fund performance data, we find that donations are driven by lower fund risk prior to the donations. Post-donation, donors' funds experience higher inflows compared to matched, non-donating peers. These higher inflows are concentrated among funds where managers donate to focal charities that are popular among hedge funds suggesting that donations help stimulate investors' interest and attract capital. Moreover, we find better post-donation performance for funds when managers donate to the same focal charities as other well-performing co-donors. Such donations are also associated with a shift in donor funds' strategies towards co-donors' strategies, indicating that donations also help in acquisition of business-related information through charity-based networks. Together, these findings suggest that charitable giving may be motivated by professional gains in the form of acquiring capital and information, rather than pure altruism.

Are hedge fund managers' charitable donations truly altruistic?

Large charitable gifts from wealthy donors have long attracted media and public adulation. As hedge fund managers have become one of the wealthiest groups in America, their gifts have become the occasional focus of mass media.[1] While there is a large body of research on charitable giving, most research focuses on motivations, preferred causes and demographics of givers, often to aid efforts to cultivate and realize "major" gifts. However, little attention has been paid to information these gifts reveal about the donor's corporate interests. We examine this question by looking at the effects of hedge fund managers' large gifts on the funds they manage. Specifically, we examine if managers donate in order to further their business interests. That is, do they donate to increase the capital flows into their funds and improve their funds' performance?

Managers could increase flows by using donations to generate goodwill among current and potential investors. In the process, managers gain investors' trust and effectively market their funds to stimulate future flows into their funds.[2] Since hedge funds were restricted from advertising until recently, this can be viewed as an alternative marketing mechanism being used by funds to attract investment.[3] In addition, hedge funds managers may use the goodwill and connections generated by the donations to obtain valuable information that can be used to improve their investment strategies. For example, managers may learn about the strategies of other fund managers that donate to the same

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[1] The popular press has frequent reports of large donations by hedge fund managers. Most recently, these include John Paulson's $400 million dollar gift to Harvard ("Hedge-Fund Manager Paulson to Donate $400 Million to Harvard," Wall Street Journal, June 3, 2015) and Ray Dalio's $400 million contribution to his foundation (see "Hedge Fund Billionaire Ray Dalio Steps Up Foundation Giving," Forbes, March 30, 2015). More generally, see "Here's a switch: Big hedge funders going nonprofit," CNBC, Dec 30, 2013 for examples.
[2] Pareek and Zuckerman (2013) show that trust is important for hedge fund investments and it helps the managers benefit from lower convexity in the flow-performance relation and higher likelihood of survival.
[3] Lu, Musto, and Ray (2013) uncover another marketing mechanism where hedge funds' parent firms can advertise indirectly through the mutual fund siblings of hedge funds within the same parent firm.

charities, or they may use fundraisers as an opportunity to exchange information with each other. Such charity-based networking can potentially help the managers improve their fund's performance.

We test for this *business interest* hypothesis as an explanation for hedge fund managers' charitable gifts that predicts both an increase in investor flows and fund performance subsequent to the managers' donations. Our null hypothesis of *altruism* is that managers donate purely for altruistic reasons in which case donations should not have any implications for future fund flows and performance.

We test for the two competing hypotheses using a large sample of 5,072 charitable donations by 489 hedge fund managers between January 1994 and December 2012. We obtain information about manager donations from NOZA, the world's largest searchable database of charitable donations. We merge this data with fund characteristics and performance from the widely used Lipper TASS commercial hedge fund database using manager names and additional information including the city and state of each respective management company. If there are multiple matches with the same middle initials, we use other internet sources to identify possible relatives, and then reverse locate to identify the correct person. For some of our empirical tests, we also use the long equity positions of hedge funds from the 13F data from Thomson Reuters, and manager bios from Linkedin and web searches, which are hand-collected.

Before examining the effects of donations, we model the determinants of donations since it is a choice made by the fund managers. Our first main finding from this analysis is that the key determinant of large charitable donations is lower risk prior to the donations. This is intuitive as donors need to be financially secure so that they can honor their

donations without significant personal hardship.[4] Interestingly, in our sample, neither past performance nor investor flows are a significant determinant of large donations. This suggests that charitable donations of hedge fund managers do not seem to be tax motivated since benefits from tax deductions are likely to accrue only when funds have superior performance and high net flows.

We next examine the effects of charitable donations on fund performance and investor flows. For our analysis, we use the propensity score matching to explicitly control for the fact that some fund managers choose to donate while others do not. We observe that charitable donations are followed by about 20% greater annualized net flows compared to similar (i.e., propensity-score matched) non-donating peers. However, larger charitable donations are also followed by annual underperformance of about 7% compared to matched peers. The underperformance is robust to controlling for the additional inflows subsequent to donations, suggesting our finding is not driven simply by diseconomies to scale from the additional inflows.

The increase in net flows are consistent with our business interest hypothesis, but the underperformance following donations is not. We explore the heterogeneity of the effects of donation both at the fund level and at the charity level to further test between the two competing hypotheses (business interest versus altruism). First, we appeal to the intuition that not all charities are equally likely to help further business interests through donations. Charities with many other hedge fund donors are more likely to serve as a networking platform for both fundraising activities and idea exchange among fund

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[4] Indeed, two of the most common drivers for giving by high net worth individuals, as identified by *The 2012 Bank of America Study of High Net Worth Philanthropy*, are (1) "Being Moved at How a Gift Can Make a Difference" (74% of respondents) and (2) "Feeling Financially Secure" (70.8% of respondents).

managers.[5] Thus, we divide the donating funds into those that donate to focal charities (i.e., charities that are popular among hedge fund managers) versus those that do not donate to such charities. The increased flows following donations are concentrated in the subsample of donations made to focal charities. This evidence suggests that these focal charities may be acting as networking platforms for fund managers to stimulate demand. However, the post-donation performance of funds whose managers donate to both focal and non-focal charities continues to be significantly negative, and not statistically distinguishable from each other.

It is not surprising that we find little evidence of enhanced performance through learning in the overall sample of funds donating to focal charities. In order to learn from other donating managers, it is important that the other hedge funds co-donors have valuable insights to share. Thus, we perform a further subsample analysis on donations to focal charities by restricting ourselves to the subsample where co-donor funds that have performed well in the past and can therefore help improve the performance of other managers by exchanging information through charity-based networking. We form subsamples of funds donating to focal charities based on past performance of co-donor hedge funds and find evidence consistent with exchange of information or learning when fund managers donate to focal charities with well-performing co-donor fund managers. Specifically, fund managers who donate to focal charities experience better post-donation performance.

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[5] The Sohn Conference Foundation would be an example of such a charity. Prominent hedge fund managers gather once a year to present their ideas at this conference. Larger donors receive an invitation to the event and access to presenting managers. See "How the hedge fund picks from last year's Sohn conference are performing," *Bloomberg,* May 2, 2016 for details on the conference and recent presentations.

Learning by donating fund managers is further supported by a shift in the factor loadings and stock characteristics of donor funds towards those of well-performing co-donors. For this test, we utilize the long equity positions of hedge funds disclosed in their 13F filings.[6] In this subsample, in addition to donations leading to superior performance in terms of both returns and style-adjusted returns for donating funds, we find donating funds' factor tilts and equity holdings shift significantly towards the holdings of the other incumbent co-donor funds for the focal charity. There is no corresponding shift in factor tilts and equity holdings in the case of focal charities where incumbent donor funds are underperforming. This evidence, together with our earlier finding of post-donation increase in flows for funds where the managers donate to focal charities, supports the business interest hypothesis.

The overall underperformance of donating hedge funds remains puzzling. We propose and test for two alternative hypotheses that predict post-donation underperformance. First, fund managers may be aware of the future adverse performance and strategically time their donations before poor performance to mitigate potential outflows resulting from the poor performance. To test for this possibility, we divide the donating funds into funds with higher and lower information asymmetry. The intuition for this test is that in funds with greater information asymmetry, it is more likely that managers have better information about future performance compared to the investors. We use the illiquidity of the funds measured in terms of the serial correlation of fund returns (Aragon, 2007; Lo and Khandani, 2011) to proxy for information asymmetry. Our results show that

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[6] Prior literature (Aragon, Hertzel, and Shi, 2012; Agarwal et al. 2013) has uncovered evidence of hedge fund managers' informativeness and skill by examining their long equity positions disclosed in 13F filings on a quarterly basis when the fund company's investments in 13F assets (equities, convertible bonds, and options) exceed $100 million.

funds with *lower*, and not higher, information asymmetry actually exhibit a greater effect of donations on future performance. This suggests that it is unlikely that hedge fund managers donate to hedge against outflows based on their private information about future poor fund performance.

Second, the finding of post-donation poor performance could potentially be associated with a shift in managers' ambitions away from fund management to other pursuits. To test for this possibility, we divide the donating funds into those whose managers take board seats of the charitable organizations to which they donate, and those who just restrict themselves to making donations but not serving on boards of charities. We find that fund managers who make donations to charities where they also serve on the boards of charities, experience even worse subsequent fund performance than their matched counterparts. We also find limited evidence that such managers are also more likely to leave their active managerial roles at their funds after large charitable donations.

In summary, findings from our study support the business interest hypothesis as we observe an increase in flows when managers donate to focal charities and an improvement in fund performance when co-donors to the same focal charities are well-performing managers. However, despite the evidence that charitable donations are used to further business interests, performance decreases following donations for our overall sample. We find some evidence that the underperformance subsequent to the donations being explained by a shift in managers' ambitions from professional pursuits to altruistic pursuits.

I.   **Literature review and contribution**

Our paper contributes to two separate strands of literature. First, it builds on the prior work on the determinants of personal charitable donations by individuals (see, for example, Karlan and List 2007; Della Vigna, List, and Malmendier, 2012). We contribute to this literature by showing how donations by professionals affect the enterprises that they run. Specifically, we study both the economic motivations and effects of personal donations on businesses of the donating hedge fund managers.

Second, we contribute to a large body of research that studies corporate social responsibility (CSR) that includes studies on corporate charitable contributions. Prior literature has uncovered both value-enhancing and value-destroying views of CSR.[7] As the focus of the CSR literature is on the actions of the firms' managers donating "other people's money" (Cheng, Hong, and Shue, 2012), arguably agency problems are likely to be exacerbated in this context. Specifically, managers donating firm money may do so to personally benefit from the adulation and perquisites that are generated by these donations. We contribute to this literature by being the first to examine hedge fund managers' charitable donations using their personal money. On one hand, since such donations come from the personal wealth of the managers, they are less likely to suffer from agency problems uncovered in the corporate finance literature. On the other hand, since hedge fund managers are compensated handsomely with both management and performance-based incentive fee, it is possible that managers engage in charitable activities for business interests rather than truly altruistic reasons.

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[7] The value-enhancing view of CSR argues that firms' efforts to protect the environment, improve employee satisfaction and relationship with the community at large can positively impact the firms by enhancing their reputation with different stakeholders and regulatory agencies (Navarro, 1988; and Brown, Helland, and Smith, 2006; Edmans, 2011; Deng, Kang, and Low, 2013). In contrast, the value-destroying view contends that CSR is a manifestation of agency problems that allows the managers to benefit themselves at the expense of the shareholders (Benabou and Tirole, 2010; Krueger, 2013; Borghesi, Houston, and Naranjo, 2014; Masulis and Reza, 2014).

II.   Data

This study is based upon a sample of charitable donation records of Lipper TASS hedge fund managers. We search for all donations made by hedge fund managers using NOZA, which is the world's largest searchable database of charitable donations. Our sample period is from January 1994 through December 2012.

II.A Data collection and description

We hand-collect data on these fund managers' annual charitable donation records from NOZA by doing a name search.[8] This results in 5,072 charitable donation records of 489 hedge fund managers. NOZA compiles donation data from annual reports of non-profit organizations. As such, donations made anonymously do not appear in our dataset. Annual charitable donation records often do not disclose the exact amount and date of the donation. While NOZA does not provide the specific dollar amount of donations, it provides upper and lower bounds of donation amount, corresponding to ranges presented in the annual report of the non-profit organization receiving the donation. Therefore, we compute estimated donation amount as the average of the lower and upper bounds.[9] We observe that around 28% of donation amounts are recorded as "not specified", in which case we set donation amount as missing.

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[8] In cases where name searches on NOZA result in multiple matches, we refine the matching using two criteria: spousal cross-reference and address matching. Many charitable donations are under names of both husband and wife. Online public records show spouse names, which helps refine matches. Additionally, both Lipper TASS and NOZA have address information for the fund and donating fund manager, which we use to help refine and ensure accuracy of our matches.

[9] Oftentimes, donors will donate so as to meet the hurdle for a particular donation level. Thus, in unreported robustness tests, we also use the lower bound as our estimate of donation amount. Our findings are qualitatively similar with the alternative measure of donation amount.

NOZA provides donation dates as a 12-month period, depending on the release date of a charity's annual report. Most charities report on a calendar year basis or on a July to June basis. In order to match donations to Lipper-TASS monthly records, we assume the donation is made at the midpoint of the donation period. For instance, if the donation period is recorded as 2002 July – 2003 June, the donation date is set as Jan 2003. Our results are not sensitive to this choice as we obtain similar findings when we use either the beginning or the end of the donation period instead of the midpoint.

Panel A of Table I reports the time series of total donation amount and donation frequency of hedge funds by year. The table shows that charitable donations rise steadily from 1995 to 2007, and then jump from $17 million in 2007 to $47 million in 2008. From 2009 through 2011, donation amounts fall to pre-2008 level and then reach another peak of $63 million in 2012.

II.B Summary Statistics

Panel B of Table I reports the summary statistics of the donation amount. *Amount* provides unconditional statistics for all charitable donations. Considering that small donations are unlikely to materially affect hedge fund managerial decisions, we also conduct our analysis separately for "large" donations. We choose the 75th percentile of donation amount, or a $7,500 donation, in our baseline specification to denote large donations. Specifically, we create a variable, *Amount(>7.5K)*, which corresponds to a donation amount equal to or greater than $7,500. We also construct another variable, *Normalized Amount(>7.5K),* which is the ratio of donation amount to the total annual revenue of management fees. Conditional on donations being equal to or greater than $7,500, the average donation amount is $307,925. The average of normalized donation

amount is 0.618, which implies that charitable donations represent a significant proportion of the hedge fund's annual total income from management fees (about 62% on average). In robustness test, we vary the cutoff for large donations, to include different dollar amounts ($10,000, $25,000) and different normalized amounts. Our results are broadly consistent using these alternate cutoffs.[10]

Panel C presents distributions of donation recipient category. For brevity, we only list top six categories and sum up all other categories as "others". Among recipient categories, educational donations dominate at close to 33% of our overall sample. Panel D displays statistics of fund-level variables, which are split by funds with and without charitable donations. Funds with charitable donations have lower management fees, higher incentive fees, and higher incidence of high water mark provision in their compensation contracts. Further, a higher proportion of them have lockups although conditional on having a lockup, the average lockup does not significantly differ between donor and non-donor funds. We also observe significant differences between the performance of donor and non-donor funds. Averaging across the fund's life, funds with donations have higher raw returns and seven-factor alphas although style-adjusted returns are similar across the two groups. Average net flows of donor funds are almost twice as high as funds without donations. We also find that donating managers tend to manage smaller funds. Panel E of Table I present biographical data on fund managers obtained from LinkedIn and web searches. We obtain data for 84% of managers in our sample. We use bio data to obtain information on charitable board membership which we use in our analysis. Average

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[10] A number of the donations are annual gifts to the same charities (78% of all donations and 71% of large donations). In base specifications, we consider all repeated gifts as separate gifts. In robustness tests, we consider only the first large gift made to each charity by each donor and exclude all future large gifts. Our results are robust to this specification.

manager in our sample was born in 1960, making him/her close to 52 years of age at the end of our sample period in 2012. An average of 13% of the 489 managers in our sample sit on the boards of non-profit organizations.

III. Empirical results

Before we conduct analysis to test whether managers do indeed make charitable donations to further their business interests, we first examine the determinants of charitable donations in our sample.

III.A Determinants of charitable donations

We examine the fund characteristics that are associated with the fund managers' decision to donate by estimating the following logistic regression:

$$
\begin{aligned}
Donate_{i,t} = \beta_0 &+ \beta_1 Performance_{i,t-1,t-12} + \beta_2 Risk_{i,t-1,t-12} + \beta_3 Management\ Fee_{i,t} \\
&+ \beta_4 Incentive\ Fee_{i,t} + \beta_5 High\ Watermark_{i,t} + \beta_6 Lockup\ Period_{i,t} \qquad (1) \\
&+ \beta_7 Size_{i,t-12} + \beta_8 Fund\ Flow_{i,t-12} + \beta_9 Fund\ Age_{i,t} + \varepsilon_{it}
\end{aligned}
$$

where the dependent variable is an indicator variable $Donate_{i,t}$, which takes a value of one if the manager of fund i makes a charitable donation during month t, and zero otherwise. Explanatory variables include prior year's fund performance (raw returns, style-adjusted returns, and Fung and Hsieh (2004) seven-factor alphas), prior year's net flows, prior year's fund risk (total risk and idiosyncratic risk), prior year's fund size, fund's age at the time of donation, and time-invariant fund-level characteristics such as management and incentive fees, high water mark provision and lockup period.[11]

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[11] Style-adjusted returns are calculated by subtracting average monthly returns across all the funds within the same category from monthly raw returns. This peer-based approach of adjusting for the risks does not require estimation as in the case of alphas. Also, it automatically accounts for the nonlinearity in hedge fund returns and is an intuitive performance measure since investors typically compare returns of a fund to those of indices.

We report the results of the regression in equation (1) in Table II. Columns (1) to (3) include all donation records while columns (4) to (6) only include large donations that are equal to or greater than the 75th percentile of all donations ($7,500). Across all specifications, fund's past return volatility is consistently a strong predictor of charitable donations. For example, see columns (4) and (5) that report the coefficients of -7.86 and -11.64 on total risk and idiosyncratic risk with t-statistics of -1.96 and -2.65, respectively. This is consistent with financial stability being a determinant of charitable giving, as suggested by survey evidence from "The 2012 Bank of America Study of High Net Worth Philanthropy."

Interestingly, neither past performance nor net flows turn out to be a significant determinant of decision to donate. This suggests that tax implications of charitable donations are not evidenced by our sample of gifts, as benefits from tax deductions can accrue only when funds have superior performance and high net flows.

Further, high water mark, size, and fund age exhibit positive and significant coefficients across different specifications. Intuitively, larger and older funds are more likely to have donating managers. The high water mark (HWM) feature can mitigate the risk-taking behavior of fund managers. HWM provision induces the managers to care about the future payoffs from incentive fees, which can become less likely if the excessive risk does not pay off and the incentive fee call-option becomes out of the money (Panageas and Westerfield, 2009). Therefore, it is intuitive that managers who are willing to employ

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Brown and Goetzmann (2003) show that styles can explain a significant proportion of cross-sectional variation in hedge fund returns.

this feature and therefore less likely to indulge in extreme risk-taking behavior, are more likely to make charitable donations.

III.B Test of *business interest* hypothesis

Our central question in this paper is whether hedge fund managers make charitable donations to further business interests, rather than for truly altruistic purposes. If this were the case, such donations would likely be followed by increased fund flows and by better performance.

In this section, we empirically examine the effects of charitable donations on hedge funds. In order to mitigate endogeneity concerns, we use a matched-sample approach. For each fund whose manager makes a charitable donation in a given month and year, we find a matched fund in the sample whose manager does not make donations in the same month and year. We select the matched fund using the smallest absolute difference of propensity scores generated from the regression in equation (1) above. Thus, the donating funds are in the treatment group and the propensity-score-matched non-donating funds form the control group. The propensity scores used for matching are based on the dependent variable being analyzed and the size of the donation. For example, when analyzing the effect of any donation on returns, we use propensity scores estimated using the specification presented in column (1) of Table II. Similarly, when analyzing the effect of large (>$7,500) donations on returns, we use the propensity scores from column (4) of Table II.[12] We compare changes in fund performance, risk, and net flows before and after the donation to determine

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[12] To ensure our matched, control, sample is similar enough to our donating, treatment sample, we perform two tests, reported in the Appendix. First, we rerun the determinants analysis in Table 2 for just the treatment and control group. There are no significant determinants of donations in this sample. Second, we compare the p-scores of the treatment and control group. There are no significant differences in the p-scores across the groups.

the effect of charitable donations. The difference-in-differences (DiD) specification we employ is as follows:

$$\Delta Y_i = \beta_0 + \beta_1 Donate_i + \beta_2 Management\, Fee_i + \beta_3 Incentive\, Fee_i$$
$$+ \beta_4 High\, Watermark_i + \beta_5 Lockup\, Period_i + \beta_6 Size_{i,t-2} + \beta_7 Fund\, Age_{i,t-2} + \varepsilon_i \tag{2}$$

where the dependent variable, ΔY_i, are changes in average monthly performance or risk or net flows between one year before and one year after the donation. The key explanatory variable is an indicator variable, *Donate_i*, set to one for all treatment group funds with donation records and zero for all propensity scored matched control group funds with no donation records. The coefficient on this variable, therefore, can be interpreted as the effect of the donation on the change in the dependent variable.

We present the results in Table III. Panel A reports the results for all donations while Panel B only includes large donations. From panel A of Table III, we observe that flows increase significantly by 2.2% following all donations, while the Sharpe ratio declines significantly by 0.17. Using all charitable donation records, there is no significant result associated with other measures of performance. However, when examining the performance after large donations, as shown in panel B, funds experience a significant decrease in performance using all four performance measures. Columns (1) to (4) show monthly decreases of 62 bps in raw returns (*t*-stat $= -3.32$), 87 bps in style-adjusted returns (*t*-stat $= -4.97$), 10 bps in seven-factor alphas (*t*-stat $= -2.00$), and 0.30 in Sharpe ratios (*t*-stat $= -3.39$). We also find a significant increase in post-donation net flows. Column (5) reports a 155 bps increase in net flows after the donation (*t*-stat $= 2.93$). There are no significant changes in either the total risk or the idiosyncratic risk after the donations.

The higher flows subsequent to donations are consistent with the business interest hypothesis. Managers seem to use donations to further business interests by "advertising" their funds. However, the lower performance subsequent to donations does not appear to be consistent with the business interest hypothesis. In the following section, we examine a subsample of donations where business interests are more likely to be driving charitable donations. Subsequently, we also explore alternative explanations that also predict underperformance of funds following charitable donations.

III.C Subsample analysis

III.C.1 Focal charities

In this section, we examine a subset of charitable donations made to charities that are popular among hedge fund donors, or "focal charities." Charities with many other hedge fund donors are more likely to serve as a networking platform for both fundraising activities and idea exchange among fund managers. We classify focal charities as those charities that receive donations from more than the median number of hedge fund donors in our sample. We exclude educational institutions from the list of "focal" charities. Although a number of universities receive donations from many fund managers (e.g. Harvard, Chicago, etc.), it is unlikely that donations to such educational institutions are made with the intention of using the education institution as a networking platform.[13] These focal charities in our sample, which have 6 or more hedge fund donors (sample median being 6 managers), are presumably charities that allow more access to other fund managers

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[13] An exception can be the case where the university endowment itself were to invest in the donor's fund subsequent to the donation. Using a sample of hedge fund investments made by endowments and foundations from the Preqin database, we find no instances of endowments investing in donating funds despite investment in other funds. However, we note that the Preqin data has a limited coverage of the endowments and foundations in our sample.

and investors, and donations to these charities are more likely to be used to further business interests. [14]

We re-conduct our effects analysis separately for the sample of focal charities and non-focal charities. We restrict our sample to managers making large donations for these analyses. We present the results in Panel A of Table IV. For the sake of brevity, we report only the coefficients on the *Donate* regressor, along with the difference in the coefficients for the focal charity sample and non-focal charity sample, as well as a test of whether the difference is statistically significant.

We find donations made to focal charities within the hedge fund community do result in significantly higher investor flows by 1.75% per month compared to other donations. This is an economically significant increase considering that the average net flows across all funds in our sample is 1.41% per month. This supports the business interest hypothesis that fund managers donate to stimulate flows to their funds.

However, donors to focal charities do not perform significantly better than donors to non-focal charities. The only significant difference is that focal charity donors have significantly worse alpha than non-focal charity recipients. If fund managers were trying to obtain information to improve performance through charitable networking, they would likely do so only when co-donor fund managers to the charities are outperforming. To test this, we further restrict our focal charity subsample to focal charities where existing co-donor hedge funds performed better than the median hedge fund in our sample over the 12 months before the donation (focal charities with above-median co-donors, or FCAMs) and

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[14] Examples of focal charities in our sample include Central Park Conservancy, Children's hospital of Los Angeles, Metropolitan Museum of Art, and Lincoln Center for the Performing Arts. In general, these charities are high-profile local charities in major metropolitan areas.

focal charities with below-median existing co-donors (FCBMs).[15] We run the effects analysis separately for these two subsamples.

We present the results in panel B of Table IV. We observe that in the subsample of focal charities where existing co-donor managers have performed well, there is some evidence of value creation, as new donors experience significant increase in monthly raw returns (0.97%) after their donations. In contrast, for the other subsample of focal charities where below-median performing managers donate, we observe significant decreases in monthly raw returns (–1.34%). The difference-in-differences of 2.31% (0.97% – (–1.34%)) in the raw returns is also significant. Additionally, significant differences are also observed for style-adjusted returns and alphas. Sharpe ratios are not significantly different, although this is likely to be driven by the decrease in risk for donors to FCBMs.

III.C.2 Channels for performance improvement associated with donations to focal charities

We next examine the channel behind the improvement in fund performance for the subsample of managers that donate to focal charities with better performing co-donor managers. Specifically, we investigate if the investment strategies and holdings of new donors to these FCAMs are significantly more similar to those of existing co-donors following the donations. We follow Lynch and Musto (2003) and Agarwal, Lu, and Ray (2016) to compute the difference in the vector of betas from Fung and Hsieh (2004) regressions using their seven-factor model for donors to FCAMs. Specifically, we compute the average absolute difference in the factors for the period before and after the donations

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[15] FCAMs and FCBMs are determined by first taking the average of all existing co-donor returns for a given charity in the past year. These averages are computed for all focal charities. Charities with average existing hedge fund donor returns are classified as FCAMs and the others are classified as FCBMs.

as $\sum_{i=1}^{7} \frac{1}{7} \left| \beta_{i,after} - \beta_{i,before} \right|$ where $\beta_{i,before}$ and $\beta_{i,after}$ are the factor loadings on the seven factors

in the Fung and Hsieh (2004) model before and after the donations, respectively.

We present the results from the analysis of changes in investment strategy in panel A of Table V. Column one presents the change in factor loadings of donating funds 12 months before and after the donations. We see that donors to FCAMs change their factor loadings significantly more than the donors to FCBMs. That is, the difference of 0.492 (= 2.128 – 1.636) is statistically significant at the 5% level. Moreover, the average absolute change in factor loadings of donors to FCAMs is also significantly greater than that of the donors to non-focal charities (2.128 versus 0.645), the difference of 1.483 being significant at the 1% level. Together, these results suggest that there appears to be some exchange of information or learning between managers that donate to focal charities where other well-performing managers also donate.

We also estimate the shift in the factor tilts for the donors to FCAMs towards existing co-donors. The equation estimating this difference is similar to the one above, but rather than simply comparing the factors before and after the donation, we consider the average absolute difference in the factors between new donors and existing co-donors, and compute the difference in this difference before and after the donation. This approach should allow us to absorb any passive changes in factor loadings over time assuming that such passive changes are similar between the treatment group (i.e., new donors) and the control group (i.e., existing co-donors). We report the results of this analysis in column 2 of panel A of Table V. We find that the difference in factor tilts between new donors to FCAMs and existing co-donors to FCAMs decreases significantly more following the

donation, compared to the corresponding measure for donations to FCBMs (difference of −1.895 significant at the 1% level).

We also use long equity holdings, as reported in 13F filings, to conduct a similar analysis at the holdings level. We follow the methodology in Cici, Gibson, and Moussawi (2010) and construct a measure of similarity in the three stock characteristics that have been shown to be important in explaining the cross-section of stock returns, namely size, book-to-market, and momentum. Specifically, we compute this measure referred to as COMPARE in Cici, Gibson, and Moussawi (2010) as follows:

$$COMPARE = \frac{1}{3}\left|SIZE_{ND} - SIZE_{ED}\right| + \frac{1}{3}\left|BTM_{ND} - BTM_{ED}\right| + \frac{1}{3}\left|MOM_{ND} - MOM_{ED}\right| \quad (3)$$

where $SIZE_{ND}$ and $SIZE_{ED}$ are the value-weighted size quintile scores of all the stocks in the portfolios of the new donors (ND) and existing co-donors (ED), respectively.[16] Similarly, BTM_{ND} and BTM_{ED} are the value-weighted book-to-market quintile scores, MOM_{ND} and MOM_{ED} are the value-weighted momentum quintile scores of all the stocks in the portfolios of the new donors (ND) and existing co-donors (ED), respectively.

We compute the COMPARE measure by comparing the new donors with the two subsamples of existing co-donors with above-median and below-median performance, both before and after the donations to the same focal charities. We report the results panel B of Table V. We observe that the COMPARE measure decreases after the donation by 0.171 for funds donating to FCAMs. This decline in COMPARE measure is significant at the 1% level. In contrast, there is a statistically insignificant increase of 0.047 in the COMPARE

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[16] Each stock is ranked by size, book-to-market and momentum characteristic and sorted into five quintiles. Characteristics at the fund level are computed by taking a value-weighted (based on holding size) average of the quintile size for each of the characteristics. For example, if a new donor fund has two holdings, equally weighted, that are in top and bottom size quintile respectively, $SIZE_{ND}$ measure is 50% x 1 + 50% x 5 = 3.

measure for funds donating to FCBMs. These results suggest that there is greater convergence in the investments between the new donors and existing donors of FCAMs.

Taken together with our earlier finding of improved performance for this subsample, this evidence is consistent with funds donating to focal charities to further business interests by obtaining information about the strategies of outperforming existing co-donors and subsequently implementing similar strategies in their own funds.

Thus, for this subsample of donations, where managers donate to focal charities popular in hedge fund circles, and there are existing manager donors who are doing well, we find evidence of donations being used to further business interests. Specifically, we observe both increased flows and performance following the donations along with evidence suggesting that new donors are learning from the existing outperforming donors that contributes to better post-donation performance.

III.C.3 Alternative explanations

The overall underperformance following donations remains puzzling. Therefore, we probe further to examine two alternative explanations, aside from donations being used to further business interests, which also predict post-donation underperformance.

First, fund managers may be donating with the foreknowledge of information about future underperformance. Donations might be designed to mitigate outflows stemming from the impending underperformance. To test this possibility, we rely on differing asset opacity across hedge funds. We argue that hedging against *known* future poor performance is more likely to apply to funds with more opaque assets. As more opaque assets are the ones that are more likely to be illiquid since their prices are not updated as frequently, we follow Getmansky, Lo, and Makarov (2004) and Bollen and Pool (2008) to use the serial

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autocorrelation of fund returns to proxy for fund illiquidity. We then split the funds into above-median autocorrelation and below-median return autocorrelation and conduct the effects analysis separately for the two subsamples. We report the results in panel A of Table VI. We find that funds with *low* autocorrelation (or *less* opacity) actually exhibit worse post-donation performance. Thus, it is unlikely that the fund managers strategically time their donations being aware of imminent poor fund performance.

Second, donations might be indicative of a shift of managers' ambitions away from hedge fund management to pursue other activities that enhance their personal reputations and social status but do not necessarily help improve fund performance. To test this hypothesis, we exploit the fact that donations by fund managers are sometimes coupled with the managers obtaining board seats on non-profit organizations. It is likely that donating fund managers that also sit on the boards of charities they donate to are more likely to shift attention away from professional fund management.

We test this hypothesis by examining the effects of donations for the subsample of managers who are also on the boards of charities they donate to. These results are presented in panel B of Table VI. Donating managers that also sit on the board of the charities receiving their donations, incur significant additional underperformance of 0.59% per month compared to the donating managers who do not sit on boards. Style-adjusted returns and Sharpe ratios are also significantly lower. This suggests that the distraction away from fund management offers a partial explanation for the post-donation underperformance observed in the overall sample.

Additionally, donating managers are also significantly more likely to sit on boards and eventually leave the hedge fund industry (pairwise correlation of 18% for board

membership and 6% for leaving the hedge fund industry, both significant at the 5% level or above). This further suggests that large donations also reflect a shift in focus away from professional fund management in addition to being used to promote business interests of donating managers.

IV.   Conclusion

Our paper is the first study of the charitable donations from the personal wealth of hedge fund managers. Our findings provide economic rationale for managers' charitable donations. Our results are consistent with managers using donations to further their business interests, rather than simply donating for altruistic reasons. We find evidence of donations being used to identify new investors and stimulate flows from existing investors in an industry where explicit solicitation was, until recently, prohibited legally.[17] It is also conceivable that donations are a way for the managers to gain trust of the investors to mitigate operational risk associated with hedge fund investments (Brown et al. 2012).

When we examine the subsample of focal charities that are popular among hedge fund managers and more likely to be networking platforms to further hedge fund business interests, we find both improvement in flows and performance when managers donate to focal charities along with other well-performing hedge fund managers. We also uncover two channels for the increased post-donation performance of this subsample of donating managers. We observe that there is a shift in both the factor loadings and stock characteristics of their funds towards other well-performing co-donors. We interpret this evidence as being consistent with exchange of information or learning by donating

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[17] Hedge funds were not allowed to solicit (advertise) until the JOBS Act lifted the prohibition in September 2013. See Lu, Musto, and Ray (2013) for further details on the advertising ban for hedge funds.

managers as a result of charity-based networking with well-performing existing co-donors donors.

Despite this finding, the overall effects of donations on performance are negative. This finding cannot be explained by either diseconomies of scale from the added inflows, or by managers donating to mitigate outflows from known future underperformance. However, we do find some evidence that suggests distraction from professional fund management as a partial explanation for inferior fund performance subsequent to the donations. In particular, we find that managers that also sit on the board of the charity they donate to experience more severe underperformance following the donation. Such managers are also more likely to leave the hedge fund industry following the donation. Despite the glum news for investors, this final finding suggests that while many fund managers donate to further business interests, some donations are accompanied by other actions that likely further the charity's interests at the expense of the manager's business interests.

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Table I: Summary Statistics

This table reports the summary statistics of 5,072 charitable donations from 489 hedge fund managers. Panel A presents annual total donations made and numbers of donations by year. Panel B reports the summary statistics of donation amount if the amount value is not recorded as "not specified". *Amount* is the unconditional statistics of all charitable donations. *Amount(>7.5K)* is the summary statistics if donation amount is equal or greater than $7,500, which is the 75 percentile of all unconditional donations. *Normalized Amount(>7.5K)* is the ratio of donation amount to the total annual revenue of management fees. Panel C presents distributions of the recipient category. Panel D displays statistics of fund-level variables, which are split by funds with and without charitable donations. Management fee and Incentive fee are both in percentage. High water mark is an indicator variable which takes one if the hedge fund uses high water mark and zero otherwise. Lock up period is in months, conditional on non-zero records. This table also reports the fraction of funds with lockups. Time series data include average monthly fund raw returns, style-adjusted returns, seven factor alphas, net inflow, and assets under management across the fund's life. Panel E presents the summary statistics of the data obtained from manager bios including graduate degrees, year of birth, and non-profit board membership.

Panel A: Annual total donations and distributions

	Total donation ($)	No. of donation
1995	1,250	1
1996	1,250	2
1997	91,425	4
1998	100,499	6
1999	144,271	10
2000	202,892	34
2001	1,063,756	69
2002	1,545,758	98
2003	2,375,539	192
2004	7,581,067	327
2005	14,712,584	513
2006	10,665,524	580
2007	17,501,536	518
2008	47,451,717	446
2009	19,604,845	509
2010	15,554,666	525
2011	24,791,604	516
2012	63,949,281	470

Panel B: Summary Statistics of donation amount

Variable	Obs	Mean	Std. Dev.	25th percentile	75th percentile
amount	3,673	67,391	788,165	500	7,500
amount(>7.5K)	786	307,925	1,682,882	17,500	75,000
normalized amount(>7.5K)	786	0.618	5.903	0.008	0.106

Panel C: Summary Statistics of recipients

Recipient Category	Frequency	Percent
Education	1671	32.96
Art	824	16.25
Human	422	8.32
Environment	400	7.89
Health Care	373	7.36
Religion	217	4.28
Others	1163	22.94
Total	5070	100.00

Panel D: Summary Statistics of fund-level variables

	Funds with donation	Funds without donation	
	(1)	(2)	(1)–(2)
Fund Characteristics			
N	927	17,645	
Management Fee (%)	1.40	1.44	–0.04**
Incentive Fee (%)	17.93	13.03	4.90***
High water mark	0.75	0.52	0.23***
Proportion with lockups	0.42	0.15	0.27***
Mean lockups (days)	12.52	12.66	–0.14
Time series data			
Fund Size ($MM)	101.12	263.85	–162.73***
Raw return (%)	0.74	0.43	0.31***
Style-adjusted return (%)	–0.05	–0.08	0.03
Alpha (%)	0.56	0.22	0.34***
Flow (%)	2.52	1.35	1.17***

Panel E: Summary Statistics on fund managers in our sample

Variable	Obs	Mean	Std. Dev.	25th percentile	75th percentile
Managers with bio data	489	0.84	0.36	–	–
Year of birth	489	1960	8.70	1947	1975
Non-profit board membership	489	0.13	0.33	–	–

Table II: Determinants of charitable donations

This table presents the results of panel regressions analyzing the determinants of charitable donations from hedge fund managers. Columns (1) to (3) report the results for all donation records, while columns (4) to (6) report the findings for donations equal to and greater than $7,500. Dependent variable is *donate$_{i,t}$*, which takes a value of one if the portfolio manager of fund i makes a charitable donation in month t, and zero otherwise. Explanatory variables include prior year's monthly average fund raw return, style-adjusted return, seven-factor alpha, net flow, total risk, idiosyncratic risk, and other fund-level characteristics. Fund-level control variables are as defined in Table I. Standard errors are clustered both at the fund and time level. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Return $_{t-1, t-12}$	–3.61			–4.77		
	(–0.45)			(–0.59)		
Style Adj. Return $_{t-1,t-12}$		1.59			2.00	
		(0.39)			(0.38)	
Alpha $_{t-1,t-12}$			–1.68			–4.07
			(–0.21)			(–0.34)
Flow $_{t-1,,t-12}$	–1.09	–1.25	0.15	–1.06	–1.32	0.86
	(–1.53)	(–1.64)	(0.15)	(–0.94)	(–1.07)	(0.44)
Total Risk $_{t-1, t-12}$	–7.55**			–7.86*		
	(–2.18)			(–1.96)		
Idiosyncratic Risk $_{t-1, t-12}$		–9.34**	–8.06**		–11.64***	–9.93**
		(–2.44)	(–2.00)		(–2.65)	(–2.03)
Management Fee	0.16	0.16	0.17	0.34**	0.35***	0.36**
	(1.45)	(1.50)	(1.47)	(2.52)	(2.59)	(2.37)
Incentive Fee	–0.02	–0.02	–0.02	0.00	0.01	0.01
	(–1.61)	(–1.38)	(–1.08)	(0.10)	(0.32)	(0.41)
High water mark	0.89***	0.88***	0.85***	1.00***	0.97***	1.01***
	(5.48)	(5.52)	(5.25)	(3.53)	(3.52)	(3.53)
Lockup Period	0.02**	0.02**	0.01	–0.01	–0.01	–0.02
	(2.26)	(2.20)	(1.30)	(–0.70)	(–0.75)	(–1.29)
Size $_{t-12}$	0.27**	0.26**	0.23**	0.27***	0.25**	0.22**
	(2.44)	(2.31)	(2.06)	(2.73)	(2.48)	(2.28)
Fund Age	0.08***	0.08***	0.07***	0.10***	0.10***	0.09***
	(4.64)	(4.76)	(3.65)	(5.13)	(5.22)	(4.17)
R-squared	0.0490	0.0493	0.0345	0.0535	0.0551	0.0445
N	68622	68622	50137	68622	68622	50137

Table III: Univariate Effects of Charitable Donations using Matched-Sample Analysis

This table reports the univariate results of changes in fund performance or net flows or risk using a matched-sample approach. Reported variables are change in fund performance (raw return, style-adjusted return, Fung and Hsieh (2004) seven-factor alpha, and Sharpe ratio), or net flows (in %), or risk (total risk and idiosyncratic risk) between one year before and one year after the donation. Each fund in the treatment group is matched with a fund in the control group by minimizing the absolute difference of propensity score using the estimates from the logistic regressions reported in Table II. We also report the difference before and after donations for donating funds and the difference-in-difference before and after donations for donating funds and non-donating funds. Panel A reports result for all donation records while panel B presents the findings for large donations that are equal to or greater than $7,500 (top quartile of donations). The *t*-statistics are reported in parentheses below the slope coefficients. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: All donations

	Return		Style Adj.		Alpha		Sharpe		Flow		Total Risk		Idio. Risk	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
Before	0.82	1.00	0.12	0.24	0.69	0.46	0.52	0.34	0.44	0.12	3.08	4.08	2.80	3.83
After	0.64	0.75	–0.09	0.08	0.50	0.67	0.30	0.24	0.67	–0.45	3.10	4.11	2.79	3.69
After-Before	–0.19**		–0.20**		–0.18***		–0.21***		0.23***		0.02		–0.01	
DID	0.06		–0.05		–0.40***		–0.11***		0.80***		–0.02		0.12	

Panel B: Only donations above $7,500 (Top Quartile of donations)

	Return		Style Adj.		Alpha		Sharpe		Flow		Total Risk		Idio. Risk	
	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control	Treatment	Control
Before	0.79	0.55	0.09	–0.19	0.66	0.64	0.49	0.22	0.39	0.26	3.04	3.62	2.77	2.72
After	0.41	0.64	–0.20	0.11	0.37	0.49	0.32	0.34	0.92	–0.37	3.09	3.43	2.80	2.57
After-Before	–0.38***		–0.29***		–0.29***		–0.17***		0.54***		0.04		0.03	
DID	–0.48***		–0.59***		–0.15*		–0.30***		1.16***		0.38		0.18	

Table IV: Multivariate Effects of Charitable Donations using Matched-Sample Analysis

This table reports the results from multivariate regressions of changes in fund performance or net flows or risk using a matched-sample approach. Dependent variables are change in fund performance (raw return, style-adjusted return, Fung and Hsieh (2004) seven-factor alpha, and Sharpe ratio), or net flows (in %), or risk (total risk and idiosyncratic risk) between one year before and one year after the donation. *Donate* is an indicator variable that takes a value of one if the fund manager donates in a given month and year, and zero otherwise. Each fund in the treatment group is matched with a fund in the control group by minimizing the absolute difference of propensity score using the estimates from the logistic regressions reported in Table II. Control variables include fund characteristics such as management fee, performance fee, high watermark indicator, lockup period, size, and fund age prior to donation. For fund performance measures, we also include net flows after the donation as an additional control variable. Panel A reports result for all donation records while panel B presents the findings for large donations that are equal to or greater than $7,500 (top quartile of donations). The *t*-statistics are reported in parentheses below the slope coefficients. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: All donations

	Return	Style-adj.	Alpha	Sharpe	Flow (%)	Totrisk	Idiorisk
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Donate_dummy	0.07	0.07	0.16	–0.17***	2.21***	0.00	–0.03
	(0.40)	(0.40)	(1.33)	(–2.84)	(5.09)	(0.04)	(–0.27)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.014	0.011	0.033	0.005	0.060	0.007	0.009
N	2182	2182	1758	2182	1966	2182	2182

Panel B: Only donations above $7,500 (Top Quartile of donations)

	Return	Style-adj.	Alpha	Sharpe	Flow (%)	Totrisk	Idiorisk
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Donate_dummy	–0.62***	–0.87***	–0.10**	–0.30***	1.55***	–0.05	–0.19
	(–3.32)	(–4.97)	(–2.00)	(–3.39)	(2.93)	(–0.35)	(–1.20)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.090	0.086	0.065	0.045	0.053	0.042	0.087
N	998	998	896	1012	994	1012	1012

Table V: Subsample analysis of the effects of charitable donations to focal charities

This table presents the results of the effects of charitable donations for different subsamples. Dependent variables are change in fund performance (raw return, style-adjusted return, Fung and Hsieh (2004) seven-factor alpha, and Sharpe ratio), or net flows (in %), or risk (total risk and idiosyncratic risk) between one year before and one year after the donation. The presented coefficients are from different subsamples. Diffferences of coefficients for different subsamples are also presented. The other independent variables include fund characteristics such as management fee, performance fee, high-water mark indicator, lockup period, lagged size, and fund age. Coefficient estimates on these control variables are omitted for brevity. *Focal charity* donating managers are managers donating to charities that also receive donations from more than median number donors. *Not focal charity* donating managers are managers donating to charities that also receive donations from less than median number donors. *Above (below) median co-donors* are cases of donations to focal charities with co-donors that have performed above (below) the median hedge fund performance in the trailing twelve months. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Focal charity vs. Not focal charity

	Return (1)	Style-adj. (2)	Alpha (3)	Sharpe (4)	Flow (%) (5)	Totrisk (6)	Idiorisk (7)
Focal Charity	–0.84***	–1.00***	–0.23***	–0.28**	1.67***	0.14	–0.23
	(–2.81)	(–2.95)	(–3.00)	(–2.24)	(2.62)	(0.80)	(–1.01)
Not Focal Charity	–0.51**	–0.77***	–0.03	–0.26*	–0.08	–1.30***	–0.43*
	(–1.93)	(–3.44)	(–0.41)	(–1.80)	(–0.06)	(–3.11)	(–1.93)
Difference	–0.33	–0.23	0.20**	–0.02	1.75*	1.44*	0.20

Panel B: Above vs. below median performance co-donors (for subsample involving focal charities)

	Return (1)	Style-adj. (2)	Alpha (3)	Sharpe (4)	Flow (%) (5)	Totrisk (6)	Idiorisk (7)
Above-median co-donors	0.97***	1.18***	0.02	–0.14	1.94	–0.73**	0.36
	(2.77)	(2.72)	(0.13)	(–1.38)	(1.59)	(–2.47)	(1.39)
Below-median co-donors	–1.34***	–1.01**	–0.16*	–0.01	1.52**	0.32	–1.56*
	(–6.50)	(–2.07)	(–1.88)	(–0.16)	(2.30)	(1.50)	(–1.86)
Difference	2.31***	2.19***	0.18*	–0.13	0.42	–1.05**	1.92**

Table VI: Analysis of factor loadings and fund holdings for evidence of learning

This table presents the results of analysis of factor loadings and equity holdings for donating funds before and after their donations. Panel A presents the results of the analysis of change in the factor loadings around the donations. It compares average differences in absolute factor loadings of the seven factors in the Fung and Hsieh (2004) model for donating and existing co-donor funds 12-month before and after donations. Panel B presents the results from the analysis of the characteristics of the stock holdings before and after the donations. It compares the scores of the three stock characteristics (size, book-to-market, and momentum) sorted into quintiles for donating and existing co-donor funds 12-month before and after donations. *Focal charity* donating managers are managers donating to charities that also receive donations from more than six donors (median figure in our sample). *Not focal charity* donating managers are managers donating to charities that receive donations from less than six donors. *Focal Charity Above Median (FCAM) and Focal Charity Below Median (FCBM) co-donors* are cases of donations to focal charities with co-donors that have performed above and below the median fund, respectively, in the trailing twelve months. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Factor loading changes		
	$\text{After}_{\text{new donor}} - \text{Before}_{\text{new donor}}$	$(\text{After}_{\text{new donor}} - \text{After}_{\text{existing donor}}) - (\text{Before}_{\text{new donor}} - \text{Before}_{\text{existing donor}})$
Focal charity Above median co-donor (FCAM)	2.13***	−1.87***
Focal charity Below median co-donor (FCBM)	1.64**	0.03
Non-focal charity	0.65	N/A
Difference (FCAM vs FCBM)	0.49**	−1.90***
Difference (FCAM vs Non-focal)	1.48***	N/A

Panel B: Holdings analysis	
	$(\text{After}_{\text{new donor}} - \text{After}_{\text{existing donor}}) - (\text{Before}_{\text{new donor}} - \text{Before}_{\text{existing donor}})$
Focal charity Above median co-donor (FCAM)	−0.17***
Focal charity Below median co-donor (FCBM)	0.05
Difference (FCAM vs FCBM)	−0.22***

Table VII: Alternative explanations:
Subsample analysis of the effects of charitable donations

This table presents the results of the effects of charitable donations for different subsamples. Dependent variables are change in fund performance (raw return, style-adjusted return, Fung and Hsieh (2004) seven-factor alpha, and Sharpe ratio), or net flows (in %), or risk (total risk and idiosyncratic risk) between one year before and one year after the donation. The presented coefficients are from different subsamples. Diffferences of coefficients for different subsamples are also presented. The other independent variables suppressed in the table for the sake of brevity include fund characteristics such as management fee, performance fee, high-water mark indicator, lockup period, lagged size, and fund age. *High (Low) autocorrelation* are funds with returns that exhibit higher (lower) than median AR1 coefficient (0.345 is the median AR1 coefficient in our sample), where the high (low) AR1 coefficient proxies for high (low) asset opacity. *On board of recipient* represents the subsample that manager is on the board of the charity receiving the donation. *Not On board of recipient* represents the subsample that manager is not on the board of the charity receiving the donation. Superscripts *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Panel A: Low vs high asset opacity

	Return	Style-adj.	Alpha	Sharpe	Flow (%)	Totrisk	Idiorisk
High autocorrelation	–0.14	–0.33***	–0.02	–0.09	0.10	0.01	0.06
	(–0.86)	(–2.76)	(–0.36)	(–0.45)	(0.13)	(0.05)	(0.37)
Low autocorrelation	–0.76***	–1.02***	–0.17*	–0.37***	1.84***	–0.00	–0.21
	(–2.66)	(–3.99)	(–1.80)	(–5.18)	(2.95)	(–0.01)	(–0.96)
Difference	0.62**	0.69**	0.15*	0.28**	–1.74***	–0.01	0.27

Panel B: On board of charity vs. not on board of charity

	Return	Style-adj.	Alpha	Sharpe	Flow (%)	Totrisk	Idiorisk
On board of recipient	–1.32***	–1.04***	–0.12**	–0.36***	0.88	–0.10	–0.08
	(–5.22)	(–5.10)	(–2.04)	(–4.58)	(1.20)	(–0.38)	(–0.30)
Not on board of recipient	–0.73***	–0.50**	–0.11	–0.10	1.57**	–0.10	–0.28
	(–3.00)	(–2.15)	(–1.36)	(–0.48)	(2.35)	(–0.49)	(–1.44)
Difference	–0.59*	–0.54*	–0.01	–0.26*	–0.69	0.00	0.20

Appendix: Diagnostic tests of matched sample analysis

This table reports diagnostic tests of the matched sample analysis of charitable donations of hedge fund managers. Panel A presents the post-match diagnostic regressions replicating Table II. This sample only includes treatment group and matched control group. Panel B presents the distribution of propensity scores of treatment group and matched control group. Panel C presents the post-match differences of explanatory variables of treatmen group and matched control group. Reported fund characteristics include management fee, incentive fee, high-water mark, lockup period and log(size) one year before.

Panel A: Post-match Diagnostic Regression of Determinant of Charitable Donations

	(1)	(2)	(3)	(4)	(5)	(6)
Return $_{t-1, t-12}$	2.81			2.75		
	(0.99)			(0.91)		
Style Adj. Return $_{t-1,t-12}$		1.84			1.05	
		(0.43)			(0.23)	
Alpha $_{t-1,t-12}$			4.15			3.85
			(0.68)			(0.65)
Flow $_{t-1,,t-12}$	–0.46	–0.46	–1.85	–0.37	–0.36	–1.81
	(–0.54)	(–0.49)	(–1.50)	(–0.41)	(–0.38)	(–1.45)
Total Risk $_{t-1, t-12}$				3.49		
				(0.97)		
Idiosyncratic Risk $_{t-1, t-12}$					4.83	3.75
					(1.11)	(1.09)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.0065	0.0061	0.0059	0.0074	0.0073	0.0067
N	1000	1000	896	1000	1000	896

Panel B: Estimated Propensity Score Distribution

Propensity scores	No. of Obs	Min	P5	Median	Mean	Std Dev	P95	Max
Treatment	500	0.069	0.101	0.202	0.208	0.071	0.346	0.443
Control	500	0.069	0.102	0.203	0.208	0.071	0.342	0.443
Difference	–	0.000	–0.001	–0.001	0.000	0.000	0.004	0.000

Panel C: Post-match Differences

Variable	Treatment	Control	Difference	t-statistics
Management fee	1.58	1.51	0.08	1.18
Incentive fee	18.00	17.73	0.27	0.97
High-water Mark	0.87	0.89	−0.02	−1.13
Lockup Period	4.52	4.60	−0.09	−0.20
$Size_{t-12}$	240.59	254.42	−13.83	−0.42
Fund Age	101.41	103.66	−2.25	−0.56