Original Article

The relation between manager description and fund performance Evidence from emerging market hedge funds

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ABSTRACT In this study, it is examined whether the manager description of a fund is related to its performance. It is hypothesized that the length of the manager description can be an indicator of both manager quality and overconfidence. Overall, the results of the study suggest that the manager description is related to fund performance when the performance is measured using the Sharpe ratio. In addition, the results reveal that past performance in particular explains the length of the manager description. This finding implies that fund managers attribute their performance to themselves making the manager description a potential indicator of overconfidence. However, when the alpha, which is a performance measure for a well-diversified fund investor, is used instead of the Sharpe ratio, the results suggest that it is rather the length of the strategy description that is an indicator of good fund performance.

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INTRODUCTION

Investment funds provide plenty of qualitative information in their reports and marketing materials, which are considered much less than quantitative performance indicators. The manager and strategy descriptions are typical examples of this kind of information. These descriptions should be important information for investors investing in investment funds because

they inform investors about the manager who runs the fund and the investment strategy run by the manager. From the perspective of global investors who cannot often meet fund managers, these descriptions can be useful indicators for investment decisions.

The purpose of this study is to apply manager descriptions to the investment analysis of emerging market hedge funds. It is examined

whether the length of a manager description has a relation to fund performance by using a database of 1712 emerging market hedge funds. The approach of this study is slightly similar to the study by Eshraghi and Taffler (2012), who studied the relation between managers' self-references and fund performance considering the former as an indicator of overconfidence. These authors considered the first-person singular and plural pronouns in each narrative (I, me, mine, we, us, our, ours) in the reports written by fund managers. This study, in turn, considers the length of manager descriptions, which should be related to managers' self-reference as a measure of overconfidence. In addition to manager descriptions, the relation between strategy description and fund performance is also examined in this study.

In this study, two alternative explanations are considered for the length of a manager description. First, the description can be an indicator of a manager's ability, and therefore positively related to fund performance. Those hedge fund managers who truly find themselves capable of outperforming may provide more extensive self-descriptions, while other managers who are not confident about their ability to outperform may rather provide limited self-descriptions. The evidence summarized by Vrij (2008), that trustworthy people tend to provide more self-references, may be related to self-descriptions supporting the expectation. Vrij (2008) also emphasized that less trustworthy people give shorter answers (Sporer and Schwandt, 2006a).

Second, a manager description may be an indicator of overconfidence and negatively related to future performance. A good prior performance of a fund may result in a biased attribution to the manager's skill due to the

self-serving attribution bias. This is when they behave as if good past performance is related to their own skill, but bad past performance is related to bad luck. As a result, managers may become overconfident after a good prior performance. Investors' self-serving attribution bias was first considered by Daniel *et al* (1998) and Gervais and Odean (2001), and it was then later discussed with regard to mutual fund managers by Choi and Lou (2010). Following the study by Choi and Lou (2010), it could be expected that managers' self-descriptions merely reflect their attribution bias. Therefore, the length of a manager description could be an indicator of poor future performance given that overconfident managers make poorer decisions.

The difference between the above-mentioned explanations is that the first explanation is related more to future performance, whereas the second explanation is related more to strong past performance and weak future performance. Thus, if the past performance of a fund has a positive relation to the length of its manager description, and the length also has a negative relation to its future performance, the manager description can be considered as quite a pure indicator of overconfidence. Accordingly, a positive relation between the length of a manager description and future performance would indicate that the length of the manager description is an indicator of manager quality. In this study, past performance is considered by using backfilled fund returns.

The use of emerging market hedge funds to look into the research problem of this study is reasonable as they are a relatively homogenous and conventional class of hedge funds, but still active investment vehicles by their nature. Thus, different strategies are well-controlled, while it can also be assumed that these investment

vehicles as hedge funds normally have the objective of outperforming their benchmarks as hedge funds are normally active investors. Moreover, the use of this database reduces some potential endogeneity problems as the earliest snapshot is relatively recent, and changes to manager and strategy descriptions of a fund are less likely. The non-backfilled returns in the database start from 2004.

The results of this study suggest that the length of a manager description is positively related to both the backfilled performance and non-backfilled performance of a fund. Thus, the manager description may contain information about both manager quality and overconfidence, but it is rather an indicator of quality, as no negative relation has been found between the description and performance. The length of a strategy description is negatively related to the Sharpe ratio and positively related to the alpha. This result implies that the strategy descriptions of investment funds are more related to performance ratios in the interests of well-diversified fund investors.

The remainder of the article is organized as follows. The next section presents a review of the literature about managers' characteristics related to the characteristics of fund managers. The section after that presents the hypotheses of the study. The following section presents the methods and measures used to indicate returns manipulation in a cross-section of hedge funds, as well as the data used in this study. The penultimate section presents the results of the study and the final section is for the conclusion.

LITERATURE REVIEW

This section first presents a review of the previous literature on manager characteristics that may be

related to manager descriptions. This review is then followed by a review of the previous literature on fund manager overconfidence and performance, which is relevant because overconfidence is a potential explanation for the length of a manager description.

Manager characteristics and fund performance

The relation between manager characteristics and fund performance has previously been considered in the academic literature. For mutual funds, Golec (1996) used a data set of 530 funds over the period 1988–1990, and found that three characteristics are associated with better fund performance: young age, an MBA degree and a long tenure at a manager's funds.

With regard to hedge funds, Maxam *et al* (2006) used a data set of 147 hedge funds over the period 1994–2004. Their results suggested that managers with degrees from top US schools showed a relatively better performance. However, they also found that managers with undergraduate degrees in economics and technical degrees showed a relatively poor performance. In contrast to the study by Golec (1996), prior work experience is not found to be a significant factor in terms of performance.

Li *et al* (2009) investigated the relation between hedge fund managers' characteristics and performance using a data set of more than 4000 hedge funds over the period 1994–2003. In this study, the authors differentiated between managers' job commitment and talent. They used manager career concerns as a proxy for manager job commitment. Their measure for manager career concerns is the total number of years working at a specific hedge fund and the manager's age. Managerial talent is measured

using the SAT scores from the manager's undergraduate institution. The evidence from this study suggested that manager talent is found to be related to better performance and less risk-taking, but more senior managers, who are considered as being more committed to their jobs, are found to have lower returns and to be less aggressive in terms of risk-taking. Overall, the evidence from all these previous studies suggests that manager-related information should be considered when analyzing fund performance.

Fund manager overconfidence and performance

While many studies examining overconfidence have been carried out among retail investors, Pütz and Ruenzi (2009) also considered overconfidence among professional mutual fund managers. The authors used a large sample of US open-end equity mutual funds to examine the relation between overconfidence and good prior performance by using a turnover ratio as a proxy for confidence. The results of the study suggested that higher turnover ratios are related to good past performance, indicating that professional fund managers can be overconfident as a result of biased self-attribution.

Choi and Lou (2010) continued to investigate investor overconfidence among mutual fund managers. The authors used any deviation from a manager's benchmark as a proxy for confidence and tested its relation to positive monthly benchmark-adjusted returns from the previous year. The sum of these returns is considered as the measure of confirming public signals. The results suggested that fund managers tend to be biased in order to boost their confidence, especially after confirming public signals indicating that they are prone to be overconfident. This evidence implies

overconfident managers make poor portfolio choices, which leads to poor future performance.

Eshraghi and Taffler (2012) also investigated overconfidence among mutual fund managers and focused on its effect on investment performance. What differed in this study in relation to the above-mentioned studies is that the authors measured overconfidence by carrying out content analysis on reports written by fund managers to their investors using three different proxies for overconfidence: overoptimism, excessive certainty and excessive self-reference. The study defined self-reference as the normalized frequency of first-person singular and plural pronouns in each narrative (I, me, my, mine, we, us, our, ours). In line with the study by Choi and Lou (2010), the results of the study by Eshraghi and Taffler (2012) suggest that overconfidence leads to poorer future returns.

HYPOTHESES

The first hypothesis of this study is intended to consider the possibility that past performance explains the length of a subsequent manager description as a result of self-serving attribution bias (see Daniel *et al*, 1998; Gervais and Odean, 2001). Thus, fund managers may be biased in relating good prior performance to their own success and become overconfident, which may be seen as a more extensive manager description about the manager of a fund. Indeed, Eshraghi and Taffler (2012), Choi and Lou (2010) and Pütz and Ruenzi (2009) presented evidence for mutual fund manager overconfidence, and thus overconfidence may be present among professional investors such as hedge fund managers. The reported backfilled returns in the database used in this study allows one to consider the relation between a manager

description and fund performance. In relation to Gervais and Odean (2001), who noted that the process of becoming wealthy can make traders overconfident, the backfilled returns used in this study can be considered as reflecting this process. Moreover, backfilled returns have also been reported by many already active funds, as no fund has reported non-backfilled returns in the database due to the late construction of the database. As backfilled returns are produced before the fund lists in the database and provide the first 'snapshot', manager descriptions can be measured as an effect of performance, and thus the following hypothesis related to biased self-attribution can be presented as:

Hypothesis 1: Funds with better prior performance have lengthier manager descriptions.

There are two alternative expectations for the relation between the length of a manager description and fund performance. First, overconfidence should result in poorer performance. Eshraghi and Taffler (2012) and Choi and Lou (2010) presented evidence that the overconfidence of a mutual fund manager is likely to result in poorer performance. As a result, the first alternative hypothesis for the relation between manager descriptions and fund performance on non-backfilled returns is the following:

Hypothesis 2a: The length of manager descriptions has a negative relation to fund performance.

Second, the length of a manager description may be a signal of his or her ability. Hedge fund managers who truly find themselves able to outperform their peers should provide rather more extensive descriptions of themselves, as less trustworthy people are likely to provide

shorter answers (Sporer and Schwandt, 2006a; Vrij, 2008), which especially concerns those who are motivated to be so (Sporer and Schwandt, 2006b).

The issue of trustworthiness is relevant when fund performance is considered; Dimmock and Gerken (2010) presented consistent evidence that those investment managers who are considered a low fraud risk showed a better performance than those with a high fraud risk. Brown *et al* (2009) presented evidence for a significant positive relation between the operational risks and financial risks of a hedge fund. The authors noted that this result is consistent with fund failures being associated with excessive risk-taking under weak operational control. Thus, trustworthiness may reduce risk-taking, thus having an opposite effect in relation to overconfidence. As a result, the second alternative hypothesis for the relation between manager descriptions and fund performance on non-backfilled returns is the following:

Hypothesis 2b: The length of manager descriptions has a positive relation to fund performance.

DATA AND METHODOLOGY

The data for this study is obtained from Eurekahedge, an emerging market database. This database is chosen for this study as it provides qualitative descriptions of fund strategies and fund managers. All in all, the database provides data for 1712 hedge funds in March 2010. The sample includes both live and dead hedge funds. The initial sample is divided into two sub-samples that may overlap: the first sub-sample includes funds that had at least 24 monthly backfilled returns (572 funds) over the

Table 1: Definitions of variables

<i>MANAGER</i>	Manager description: The number of characters used to describe the manager of a hedge fund
<i>STRATEGY</i>	Strategy description: The number of characters used to describe the strategy of a hedge fund
<i>MFEE</i>	Management fee of a hedge fund (in percentage)
<i>PFEE</i>	Performance fee of a hedge fund (in percentage)
<i>DAUDIT</i>	Dummy variable indicating 1 if a hedge fund names its auditor
<i>OFEES</i>	Dummy variable indicating 1 if a hedge fund charges other fees than performance and management fees
<i>DLISTED</i>	Dummy variable indicating 1 if a hedge fund is listed in stock exchange
<i>LOCKUP</i>	Lock-up period of a hedge fund
<i>NOTICE</i>	Redemption notice period of a hedge fund
<i>SIZE</i>	Size of a hedge fund (US dollar in million)
<i>BSHARPE</i>	Sharpe ratio on backfilled returns of a hedge fund
<i>BALPHA</i>	Alpha on backfilled returns of a hedge fund
<i>BAPR</i>	Appraisal ratio of backfilled returns of a hedge fund
<i>BFACTOR</i>	Factor risk: Adjusted R^2 obtained from a factor model on backfilled hedge fund returns
<i>SHARPE</i>	Sharpe ratio of a hedge fund
<i>ALPHA</i>	Alpha of a hedge fund
<i>APR</i>	Appraisal ratio of a hedge fund
<i>FACTOR</i>	Factor risk: Adjusted R^2 obtained from a factor model on hedge fund returns

Note: This table presents the definitions of the variables used in this study.

period January 1990–December 2009. The second sub-sample includes funds that had at least 24 monthly non-backfilled returns (790 funds included) over the period August 2004–December 2009. Hedge fund returns in the database are mainly reported as ‘net-of-fees’.

The main variables used in this study are the measures of the lengths of manager and strategy descriptions. Other variables used in this study are management fees, incentive fees, a dummy variable for the use of other fees, the most recently informed fund size, a dummy variable for listing the fund on a stock exchange, a lock-up period in months, a redemption notice period in business days and a dummy variable for the use

of a legal advisor. Fees, lock-up periods and fund size are often used as explanatory variables in the analysis of hedge funds (see, for example, Aragon, 2007; Kouwenberg and Ziemba, 2007; Ammann and Moerth, 2008).¹ The use of auditing and listing a hedge fund on a stock exchange are found to explain the data accuracy of a hedge fund (see Liang, 2003). Table 1 presents the definitions of the variables used in this study.

The performance measures used as dependent variables in this study are the Sharpe (1994) ratio, the factor risk, the alpha and the appraisal ratio.² Following Titman and Tiu (2011), the adjusted R^2 of the ordinary least squares (OLS) analysis in the model below is considered as the ‘factor risk’ variable. The estimates for the alpha and the

appraisal ratio are obtained from the following model:

$$r_{i,t} - r_{f,t-1} = \alpha_i + \beta_1 F_{1,t} \dots \beta_{12} F_{12,t} + e_{i,t} \quad (1)$$

where $r_{i,t}$ defines a return of a fund i ; $r_{f,t}$ defines the risk-free rate; and $F_{i,t}$ defines a return factor i . The set of control variables included 12 factors. The main return factors are the returns on the MSCI World Index and its lagged variable, and the returns on the J.P. Morgan Emerging Markets Bond Index Global. The lagged variable included in the regression is similar to the variable used by Chen (2011) to control for a potential lag effect in hedge fund returns. Furthermore, the returns on the following four geographical indexes are included in the analysis: MSCI Emerging Market Asia, MSCI Emerging Market Europe and MSCI Emerging Market Latin America. All the above-mentioned indexes are total return indexes, and the returns are in excess of the risk-free rate.³ In addition, the stock, bond, interest rate, commodity and currency trend-following factors by Fung and Hsieh (2001) are used to control for possible trend-following strategies by emerging market hedge funds.⁴

Table 2 presents the summary statistics of the variables. The means for the manager and strategy description variables are 791.18 and 84.99, respectively, in the sample of non-backfilled data. The statistics for the variables in the sample of backfilled data are similar. Thus, hedge funds on average report more extensive descriptions about their managers than their strategies.

Table 3 presents the correlation statistics for the variables used in this study. The length of the manager description variable has a positive relation to the lock-up dummy. Thus, the measure of a manager description of any given manager is related to the illiquidity premium,

given that lock-up periods are related to the earning illiquidity premium (see Aragon, 2007). A significant characteristic shown in Table 3 is that the strategy description has a positive relation to the alpha in Panel B, but a negative relation to the Sharpe ratio. It can also be seen in Panel A that its relation to the backfilled performance measures is similar.

Two different models are used in the OLS analysis of this study to examine the relation between the manager and strategy description variables and other variables. Model 1, which is used to study the impact of past fund performance on the length of the manager description using backfilled hedge fund returns, is as follows:

$$MANAGER_i = \alpha_i + \beta_i MEASURE_{ji} + \sum_{j=1}^N \lambda_j CONTROL_{ji} + e_i \quad (2)$$

where $MANAGER_i$ defines the description of a manager; $MEASURE_{ji}$ defines the performance measure used; and $CONTROL_{ji}$ defines the control variable. Each performance measure is analyzed individually to avoid multicollinearity between the performance measures, as the measures are highly correlated to one another. For example, Table 3 shows that the correlation between the alpha and the appraisal ratio on backfilled returns is 0.91. Model 1 includes nine geographical dummy variables and time effects as additional control variables. Model 1 is also analyzed using $STRATEGY_i$ as the explanatory variable. Model 2, which is used to analyze the impact of the length of the manager description on fund performance, is as follows:

$$MEASURE_{ji} = \alpha_i + \beta_i MANAGER_i + \gamma_i STRATEGY_i + \sum_{j=1}^N \lambda_j CONTROL_{ji} + e_i \quad (3)$$

Table 2: Summary statistics
Panel A

	<i>STRATEGY</i>	<i>MANAGER</i>	<i>MFEE</i>	<i>PFEE</i>	<i>SIZE</i>	<i>NOTICE</i>	<i>LOCKUP</i>
Mean	700.01	836.99	1.62	16.53	162.80	23.53	23.53
Median	678.00	712.50	1.59	20.00	49.00	14.00	14.00
Maximum	2144.00	5208.00	4.00	30.00	3408.00	180.00	180.00
Minimum	86.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation	378.23	627.15	0.54	6.67	340.78	29.74	29.74
Skewness	0.53	2.56	−0.64	−1.66	5.37	2.07	2.07
Kurtosis	3.02	13.24	5.14	4.49	42.87	9.09	9.09
<i>N</i>	572	572	557	543	529	571	572
	<i>BSHARPE</i>		<i>BALPHA</i>		<i>BAPR</i>		<i>BFACTOR</i>
Mean	0.41		0.74		0.34		0.39
Median	0.27		0.63		0.19		0.40
Maximum	3.55		8.18		3.84		0.99
Minimum	−0.44		−4.43		−0.83		−0.45
Standard deviation	0.53		1.21		0.60		0.30
Skewness	2.78		0.86		2.32		−0.20
Kurtosis	13.14		7.93		10.62		2.47
<i>N</i>	572		572		572		572
	<i>OFEES</i>		<i>DLISTED</i>		<i>DAUDITOR</i>		
Mean	0.53		0.74		0.96		

Panel B

	<i>STRATEGY</i>	<i>MANAGER</i>	<i>MFEE</i>	<i>PFEE</i>	<i>SIZE</i>	<i>NOTICE</i>	<i>LOCKUP</i>
Mean	791.18	876.17	1.65	17.29	162.63	30.01	1.25
Median	759.50	747.50	1.50	20.00	48.00	30.00	0.00
Maximum	2621.00	5208.00	4.00	25.00	3408.00	360.00	60.00
Minimum	75.00	0.00	0.00	0.00	0.00	0.00	0.00
Standard deviation	362.36	604.51	0.45	6.00	375.82	30.97	4.73
Skewness	0.86	2.47	−0.23	−2.03	5.72	2.56	5.67
Kurtosis	5.05	12.38	5.95	5.97	42.95	20.42	47.76
<i>N</i>	790	790	775	760	715	30.01	1.25
	<i>SHARPE</i>		<i>BSHARPE</i>		<i>BALPHA</i>		
Mean	0.21		0.40		0.96		
Median	0.12		0.39		0.85		

Table 2: (Continued)

	<i>SHARPE</i>		<i>BSHARPE</i>		<i>BALPHA</i>
Maximum	4.14		3.55		6.15
Minimum	−0.46		−11.31		−2.45
Standard deviation	0.47		0.84		1.03
Skewness	4.42		−4.59		0.95
Kurtosis	28.41		61.85		6.13
<i>N</i>	790		710		308

	<i>BAPR</i>	<i>BFACTOR</i>	<i>ALPHA</i>	<i>APR</i>	<i>FACTOR</i>
Mean	0.43	0.34	0.21	0.17	0.52
Median	0.24	0.35	0.28	0.10	0.55
Maximum	3.84	0.89	6.76	4.08	0.99
Minimum	−0.48	−0.45	−5.25	−1.37	−0.25
Standard deviation	0.65	0.26	1.11	0.53	0.28
Skewness	2.57	−0.24	−0.30	2.91	−0.50
Kurtosis	10.85	2.58	7.82	17.30	2.37
<i>N</i>	308	308	790	790	790

	<i>OFEEES</i>		<i>DLISTED</i>		<i>DAUDIT</i>
Mean	0.47		0.85		0.99

Note: This table presents the descriptive statistics for the variables of this study. Panel A presents the statistics for a backfilled sample and Panel B presents the statistics for a non-backfilled sample.

For each performance measure used as a dependent variable, an additional analysis of Model 2 is performed that includes the performance measure on backfilled returns as an additional control variable.

RESULTS

The results presented in Table 4 are used to test Hypothesis 1. The results provide support for the hypothesis, as the results evince a statistically significant and positive impact by the Sharpe and appraisal ratios on the manager description of a hedge fund manager. The results could be an

indication of overconfidence. The length of the strategy description has a statistically significant and positive relation to the alpha, but not to the other performance ratios used. Thus, the results presented in Table 4 suggest that there are two separate causalities between the description measures and performance measures: (i) the relation between the alpha and the length of the strategy description and (ii) the relation between the Sharpe ratio and the length of the manager description.

The other variables associated with the manager and strategy variables are also illustrated in Table 4. The results suggest that fees are

Table 3: Correlation statistics

<i>Panel A</i>										
	<i>STRATEGY</i>	<i>MANAGER</i>	<i>MFEE</i>	<i>OFEEs</i>	<i>PFEE</i>	<i>SIZE</i>	<i>DLISTED</i>	<i>LOCKUP</i>	<i>NOTICE</i>	<i>DAUDIT</i>
<i>STRATEGY</i>	1.00	—	—	—	—	—	—	—	—	—
<i>MANAGERP</i>	0.28	1.00	—	—	—	—	—	—	—	—
<i>MFEE</i>	0.03	0.27	1.00	—	—	—	—	—	—	—
<i>OFEEs</i>	−0.17	0.09	−0.03	1.00	—	—	—	—	—	—
<i>PFEE</i>	−0.02	−0.11	0.07	−0.09	1.00	—	—	—	—	—
<i>FUNDSIZE</i>	0.08	0.23	0.02	0.02	−0.18	1.00	—	—	—	—
<i>DLISTED</i>	0.14	−0.09	0.00	−0.11	0.57	−0.13	1.00	—	—	—
<i>LOCKUP</i>	0.12	0.05	0.03	−0.03	0.13	0.01	0.13	1.00	—	—
<i>NOTCE</i>	0.07	0.00	0.05	−0.06	0.36	0.02	0.26	0.31	1.00	—
<i>DAUDIT</i>	0.18	−0.01	−0.03	−0.11	0.05	0.02	0.16	0.03	−0.02	1.00
<i>BSHARPE</i>	−0.10	−0.03	−0.08	0.04	0.12	0.00	0.00	−0.03	−0.04	0.13
<i>BAPLHA</i>	0.11	−0.02	0.00	0.02	0.07	0.06	0.10	0.15	0.06	0.11
<i>BAPR</i>	−0.08	0.00	−0.06	0.06	0.12	0.03	0.01	−0.01	−0.02	0.11
<i>BFACTOR</i>	0.02	0.08	−0.07	0.05	−0.24	0.09	−0.16	−0.06	−0.16	−0.17
	<i>BSHARPE</i>			<i>BAPLHA</i>			<i>BAPR</i>		<i>BFACTOR</i>	
<i>BSHARPE</i>	1.00			—			—		—	
<i>BAPLHA</i>	0.31			1.00			—		—	
<i>BAPR</i>	0.91			0.52			1.00		—	
<i>BFACTOR</i>	−0.44			−0.41			−0.43		1.00	

Table 3: (Continued)

<i>Panel B</i>										
	<i>STRATEGY</i>	<i>MANAGER</i>	<i>MFEE</i>	<i>OFEEs</i>	<i>PFEE</i>	<i>SIZE</i>	<i>DLISTED</i>	<i>LOCKUP</i>	<i>NOTICE</i>	<i>DAUDIT</i>
<i>STRATEGY</i>	1	—	—	—	—	—	—	—	—	—
<i>MANAGER</i>	0.20	1	—	—	—	—	—	—	—	—
<i>MFEE</i>	0.04	0.28	1	—	—	—	—	—	—	—
<i>OFEEs</i>	-0.15	0.08	0.01	1	—	—	—	—	—	—
<i>PFEE</i>	0.03	-0.07	0.04	-0.09	1	—	—	—	—	—
<i>SIZE</i>	0.01	0.18	0.05	0.11	-0.15	1	—	—	—	—
<i>DLISTED</i>	0.15	-0.14	0.04	-0.15	0.61	-0.22	1	—	—	—
<i>LOCKUP</i>	-0.03	0.01	0.09	0.05	0.01	-0.05	0.02	1	—	—
<i>NOTICE</i>	0.13	0.02	0.03	-0.12	0.02	-0.05	0.05	0.29	1	—
<i>DAUDIT</i>	0.06	0.06	0.00	0.04	0.03	0.05	-0.05	-0.09	-0.14	1
<i>SHARPE</i>	-0.24	-0.04	-0.20	0.16	0.03	0.03	-0.09	-0.05	-0.08	0.04
<i>BSHARPE</i>	-0.23	0.00	-0.17	0.10	0.00	0.03	-0.13	-0.02	-0.03	0.06
<i>BALPHA</i>	-0.12	-0.05	0.01	0.13	0.09	0.08	0.08	0.02	-0.10	0.02
<i>BAPR</i>	-0.23	0.00	-0.18	0.15	0.08	0.04	-0.09	-0.04	-0.09	0.06
<i>BFACTOR</i>	0.24	0.07	0.01	-0.14	-0.20	0.13	-0.09	0.02	0.12	-0.08
<i>ALPHA</i>	0.14	-0.01	0.05	-0.04	0.13	0.00	0.11	-0.07	0.00	-0.02
<i>APR</i>	0.09	-0.06	0.00	-0.08	0.05	0.03	0.07	-0.11	-0.09	-0.02
<i>FACTOR</i>	0.01	0.07	0.04	0.02	-0.05	0.10	-0.06	0.05	-0.19	0.07
	<i>SHARPE</i>	<i>BSHARPE</i>	<i>BALPHA</i>	<i>BAPR</i>	<i>BFACTOR</i>	<i>ALPHA</i>	<i>APR</i>	<i>FACTOR</i>		
<i>SHARPE</i>	1	—	—	—	—	—	—	—		
<i>BSHARPE</i>	0.68	1	—	—	—	—	—	—		
<i>BALPHA</i>	0.15	0.18	1	—	—	—	—	—		
<i>BAPR</i>	0.76	0.79	0.42	1	—	—	—	—		
<i>BFACTOR</i>	-0.30	-0.34	-0.31	-0.36	1	—	—	—		
<i>ALPHA</i>	0.01	-0.01	0.08	0.00	0.03	1	—	—		
<i>APR</i>	0.03	0.02	0.09	0.05	0.02	0.62	1	—		
<i>FACTOR</i>	-0.06	-0.01	-0.07	-0.03	-0.09	-0.04	-0.29	1		

Note: This table presents the correlation statistics for the explanatory variables used in the analysis of this study. Panel A presents the statistics for a backfilled sample and Panel B presents the statistics for a non-backfilled sample.

Table 4: Analysis of strategy and manager descriptions*Dependent variable: MANAGER*

<i>Variable</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
<i>C</i>	-613.814	-0.90	-557.464	-0.83	-562.499	-0.85	-722.390	-1.06
<i>BSHARPE</i>	167.943**	2.41	—	—	—	—	—	—
<i>BALPHA</i>	—	—	3.346	0.16	—	—	—	—
<i>BAPR</i>	—	—	—	—	-34.476	-0.41	—	—
<i>BFACTOR</i>	—	—	—	—	—	—	141.712**	2.41
<i>MFEE</i>	321.723***	6.53	296.870***	6.05	295.466***	6.04	316.876***	6.63
<i>OFEEs</i>	97.599*	1.95	100.315**	2.02	100.701**	2.01	93.132*	1.86
<i>PFEE</i>	-4.904	-0.93	-3.879	-0.72	-4.093	-0.77	-5.003	-0.96
<i>SIZE</i>	0.308**	2.57	0.321***	2.69	0.324***	2.72	0.304**	2.52
<i>DLISTED</i>	24.994	0.31	7.293	0.09	9.530	0.11	23.187	0.28
<i>DAUDIT</i>	-0.616	-0.01	47.523	0.41	41.401	0.35	13.994	0.12
<i>LOCKUP</i>	3.335	0.60	3.381	0.58	3.389	0.61	3.128	0.56
<i>NOTICE</i>	-0.980	-1.13	-0.816	-0.93	-0.866	-1.01	-0.963	-1.09
Adjusted R^2	0.17	—	0.15	—	0.15	—	0.17	—
<i>F-statistics</i>	6.25	—	5.76	—	5.76	—	6.26	—
Probability	0.000	—	0.000	—	0.000	—	0.000	—
AIC	15.50	—	15.52	—	15.52	—	15.50	—
SIC	15.67	—	15.69	—	15.69	—	15.67	—
DW	1.48	—	1.45	—	1.46	—	1.48	—

Dependent variable: STRATEGY

<i>Variable</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
<i>C</i>	570.553	1.30	268.605	0.58	550.419	1.25	564.717	1.29
<i>BSHARPE</i>	24.916	0.71	—	—	—	—	—	—
<i>BALPHA</i>	—	—	37.319**	2.18	—	—	—	—
<i>BAPR</i>	—	—	—	—	23.978	0.81	—	—
<i>BFACTOR</i>	—	—	—	—	—	—	-19.066	-0.30
<i>MFEE</i>	35.018	1.30	35.182	1.28	34.723	1.29	30.696	1.15
<i>OFEEs</i>	-85.179***	-2.61	-90.410***	-2.77	-86.002*****	-2.62	-84.770***	-2.60
<i>PFEE</i>	-5.485**	-2.17	-5.276**	-2.09	-5.523**	-2.19	-5.449**	-2.17
<i>SIZE</i>	0.028	0.68	0.021	0.53	0.027	0.66	0.030	0.76
<i>DLISTED</i>	146.640***	3.36	138.300***	3.15	146.692***	3.36	145.040***	3.38
<i>DAUDIT</i>	289.819***	5.98	281.522***	5.72	291.258***	6.12	293.007***	6.09
<i>LOCKUP</i>	4.160	1.32	3.021	1.04	4.122	1.32	4.130	1.31
<i>NOTICE</i>	-0.067	-0.11	-0.142	-0.25	-0.067	-0.12	-0.074	-0.12
Adjusted R^2	0.15	—	0.16	—	0.15	—	0.15	—
<i>F-statistics</i>	5.47	—	5.89	—	5.48	—	5.44	—

Table 4: (Continued)

Dependent variable: *STRATEGY*

Variable	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
Probability	0.000	—	0.000	—	0.000	—	0.000	—
AIC	14.55	—	14.53	—	14.55	—	14.55	—
SIC	14.72	—	14.70	—	14.72	—	14.72	—
DW	1.38	—	1.38	—	1.38	—	1.38	—

★ refers to a statistical significance at the 10% level; ★★ refers to a statistical significance at the 5% level; ★★★ refers to a statistical significance at the 1% level.

Notes: This table presents the analysis of the strategy and manager descriptions. The *MANAGER* and *STRATEGY* variables are analyzed using the OLS analysis:

$$MANAGER_i = \alpha_i + \beta_i MEASURE_{ji} + \sum_{j=1}^N \lambda_j CONTROL_{ji} + e_i \quad (4)$$

$$STRATEGY_i = \alpha_i + \beta_i MEASURE_{ji} + \sum_{j=1}^N \lambda_j CONTROL_{ji} + e_i \quad (5)$$

where *MANAGER_i* defines the description of a manager; *STRATEGY_i* defines the description of a manager; *MEASURE_{ji}* defines the performance measure used and *CONTROL_{ji}* defines a control variable. See Table 1 for the definition of the variables. Each analysis includes geographical dummy variables and time effects as additional control variables. The time-effect variable is fund inception date. The geographical dummy variables include the different geographical focuses of hedge funds. 498 observations are included in the analysis.

positively related to the length of manager descriptions and negatively related to the length of strategy descriptions. Furthermore, funds with more extensive strategy descriptions are more likely to be audited and listed on stock exchanges.

The results presented in Table 5 are denoted for testing Hypotheses 2a and 2b. The risk and performance statistics excluding explanatory variables are calculated on non-backfilled returns. The results support Hypothesis 2b and do not support Hypothesis 2a, as the length of a manager description has a positive relation to the Sharpe ratio as expected. Controlling for the backfilled Sharpe ratio does not change the

result even though it has a statistically significant and positive relation to the manager description variable. This result also implies there is evidence for the performance persistence between backfilled and non-backfilled returns. However, the manager description variable does not have a statistically significant relation to the alpha or the appraisal ratio of a hedge fund.

The result for the relation between the appraisal ratio and the manager description variable is different from the result for the relation presented in Table 4. Only past fund performance measured using the appraisal ratio has an impact on future manager descriptions,

Table 5: Analysis of hedge fund performance*Dependent variable: SHARPE*

	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
<i>C</i>	0.179	0.45	0.317	0.82
<i>STRATEGY/1000</i>	-0.106**	-2.36	-0.110***	-2.70
<i>MANAGER/1000</i>	0.064**	2.14	0.071**	2.44
<i>BSHARPE</i>	0.133**	2.32	—	—
<i>MFEE</i>	-0.159***	-2.87	-0.191***	-3.34
<i>OFEEs</i>	-0.002	-0.63	0.000	-0.11
<i>PFEE</i>	0.035	1.30	0.045*	1.81
<i>SIZE</i>	0.000***	3.22	0.000***	3.29
<i>DLISTED</i>	-0.037	-0.60	-0.064	-1.08
<i>DAUDIT</i>	-0.102	-1.63	-0.096	-1.61
<i>LOCKUP</i>	0.001	0.45	0.004	1.60
<i>NOTICE</i>	0.000	-0.50	0.000	-0.79
Adjusted R^2	0.46	—	0.46	—
<i>F</i> -statistics	25.91	—	25.91	—
Probability	0.000	—	0.000	—
AIC	0.78	—	0.79	—
SIC	0.94	—	0.93	—
DW	1.69	—	1.65	—
<i>N</i>	620	—	684	—

Dependent variable: ALPHA

	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
<i>C</i>	3.269*	1.76	1.024	0.84
<i>STRATEGY/1000</i>	0.536**	2.60	0.092	0.70
<i>MANAGER/1000</i>	-0.050	-0.34	0.062	0.72
<i>BALPHA</i>	0.017	0.30	—	—
<i>MFEE</i>	0.010	0.09	-0.161*	-1.87
<i>OFEEs</i>	0.016	1.56	0.028***	3.49
<i>PFEE</i>	-0.032	-0.22	-0.047	-0.54
<i>SIZE</i>	0.000	0.00	0.000	-0.14
<i>DLISTED</i>	0.188	0.98	0.145	1.04
<i>DAUDIT</i>	-0.167	-0.56	-0.048	-0.20
<i>LOCKUP</i>	-0.021	-0.82	-0.004	-0.32
<i>NOTICE</i>	0.000	-0.06	0.003**	1.97
Adjusted R^2	0.02	—	0.03	—
<i>F</i> -statistics	1.23	—	2.02	—
Probability	0.224	—	0.005	—

Table 5: (Continued)

Dependent variable: ALPHA

	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
AIC	3.03	—	3.03	—
SIC	3.33	—	3.17	—
DW	2.16	—	1.51	—
N	268	—	684	—

Dependent variable: APR

	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
C	1.134	1.48	0.434	0.78
STRATEGY/1000	0.152	1.61	0.041	0.69
MANAGER/1000	−0.062	−1.36	0.029	0.48
BAPR	0.079	1.16	—	—
MFEE	−0.023	−0.27	−0.042	−0.86
OFEEs	0.001	0.17	0.006	1.59
PFEE	−0.055	−1.09	−0.031	−0.73
SIZE	0.000	0.84	0.000	0.03
DLISTED	0.160	1.64	0.075	0.89
DAUDIT	−0.065	−0.51	0.000	0.00
LOCKUP	−0.010**	−2.10	−0.004	−1.50
NOTICE	−0.001	−1.23	0.000	−0.58
Adjusted R ²	0.08	—	0.00	—
F-statistics	2.13	—	0.95	—
Probability	0.004	—	0.520	—
AIC	1.26	—	1.61	—
SIC	1.55	—	1.75	—
DW	1.52	—	1.28	—
N	268	—	684	—

Dependent variable: FACTOR

	<i>Coefficient</i>	<i>t-statistics</i>	<i>Coefficient</i>	<i>t-statistics</i>
C	0.539	0.94	0.578*	1.76
STRATEGY/1000	0.033	0.57	0.013	0.39
MANAGER/1000	0.010	0.43	0.019	0.98
BFACTOR	−0.201***	−2.68	—	—
MFEE	−0.011	−0.26	−0.032	−1.33
OFEEs	−0.004	−1.23	−0.002	−0.79
PFEE	−0.014	−0.41	0.019	0.90

Table 5: (Continued)

Dependent variable: *FACTOR*

	Coefficient	t-statistics	Coefficient	t-statistics
<i>SIZE</i>	0.000	0.52	0.000	0.91
<i>DLISTED</i>	0.007	0.12	0.006	0.15
<i>DAUDIT</i>	0.090	0.50	0.035	0.25
<i>LOCKUP</i>	0.008***	2.80	0.001	0.47
<i>NOTICE</i>	−0.002***	−3.87	−0.002***	−5.18
Adjusted R^2	0.06	—	0.03	—
F-statistics	1.86	—	2.21	—
Probability	0.015	—	0.002	—
AIC	0.21	—	0.28	—
SIC	0.51	—	0.41	—
DW	1.59	—	1.39	—
<i>N</i>	268	—	684	—

* refers to a statistical significance at the 10% level; ** refers to a statistical significance at the 5% level; *** refers to a statistical significance at the 1% level.

Notes: This table presents the analysis of fund performance measures on the measures of manager and strategy descriptions and other fund characteristics using the OLS analysis

$$MEASURE_{ji} = \alpha_i + \beta_i MANAGER_i + \gamma_i STRATEGY_i + \sum_{j=1}^N \lambda_j CONTROL_{ji} + e_i \quad (6)$$

where $MANAGER_i$ defines the description of a manager; $STRATEGY_i$ defines the description of a manager; $MEASURE_{ji}$ defines the performance measure used and $CONTROL_{ji}$ defines a control variable. See Table 1 for the definition of the variables. Each analysis includes geographical dummy variables and time effects as additional control variables. The time-effect variable is the inception date of a fund. The geographical dummy variables include the different geographical focuses of hedge funds. The Akaike Information Criterion (AIC), the Schwarz Information Criterion (SIC) and the Durbin Watson (DW) test for first order serial correlations are also included in the table. The standard errors are White heteroskedasticity robust. See Table 1 for definitions of the variables.

thus indicating that the length of a manager description may be rather an indicator of overconfidence than the manager's ability. This explanation for the manager description variable would be consistent with the results by Eshraghi and Taffler (2012), who used a closely related self-reference variable.

It can also be noted that the results presented in Table 5 do not support Hypothesis 2b when a hedge fund is considered as one component of an investor's portfolio and analyzed using performance measures suitable for that purpose, more specifically the alpha and the appraisal ratios. This result implies that the length of a

manager description is related to the maximization of a fund manager's own investment performance, considering that hedge fund managers typically invest a significant portion of their own wealth in their own funds. The results also suggest that manager descriptions are not related to the risk factors of a hedge fund, as the relations with the manager and strategy description variables are not statistically significant.

The length of a strategy description has a negative relation to the Sharpe ratio of a hedge fund. Yet, a strategy description has a positive and statistically significant relation to the alpha of a hedge fund once the past alpha has been controlled in the regression. This result is consistent with the correlation statistics presented in Table 3. To quantify the relation between the strategy description and the alpha, 1000 characters of strategy description relate to 0.54 per cent monthly alpha of a hedge fund. As such, the results between manager and strategy descriptions are interesting because the length of a manager description relates positively to a manager-related performance measure, considering that fund managers typically invest in their own funds, while the length of a strategy description relates positively only to a performance measure that is more relevant for fund investors. The results presented in Table 5 also consistently support the separate causalities between performances and their descriptions in the results presented in Table 4.

Potential endogeneity in the analysis of this study should be noted. As the data used in this study is from one 'snapshot', the time when the manager and strategy descriptions are submitted cannot be identified. Thus, it may be possible that some funds changed their descriptions after experiencing a good or poor performance, which

is when manager and strategy descriptions would not be useful indicators for investors to evaluate the future performance of mutual funds.

However, one may evaluate the endogeneity problem in this study by comparing the results presented in Tables 4 and 5. The analysis using backfilled returns provides 'pure' evidence on the impact of past performance on the variables of manager and strategy descriptions. As these results reveal that the relation between strategy description variables and performance is not statistically significant, the positive relation between strategy description variables and the alpha evidenced using non-backfilled returns is not likely to appear because funds may change their descriptions. If it is assumed that the results are biased because of the endogeneity problem, then the length of a strategy description can still be considered a proper indicator of future performance, while the length of a manager description is a less evident indicator of good future performance.

CONCLUSION

The evidence presented in this study suggests that strategy and manager descriptions provided by funds can be useful indicators for investors. The lengths of these descriptions have their own causalities on the performance of a fund; the strategy description has a positive relation to the alpha of a hedge fund, while the manager description has a positive relation to the Sharpe ratio of a hedge fund.

The results indicate that hedge fund managers are likely to exhibit self-attribution bias as the estimates of the Sharpe ratio and the appraisal ratio on backfilled returns have a positive relation to the length of manager descriptions. The evidence of this study suggests that after a good

(poor) performance the managers are more (less) likely to attribute the performance to themselves. As such, the results of this study support the conclusion of Gervais and Odean (2001), that the process of becoming wealthy can make traders overconfident. The results are also similar to other studies by Choi and Lou (2010) and Pütz and Ruenzi (2009), which used different measures of overconfidence. Thus, extensive manager descriptions may be useful indicators of overconfidence.

For well-diversified fund investors, the results of this study imply that the length of a strategy description is a more important indicator than the length of a manager description because the former indicator is related to fund performance measures that are more relevant to them. A potential explanation for this finding is that fund managers may use the Sharpe ratio as the main analysis tool for their self-assessment. When doing so, the measured Sharpe ratio should have a more significant impact on the managers' self-assessment than that of the less commonly used performance indicators. For example, the survey summarized by Amenc and Giraud (2004) suggested that the Sharpe ratio is the most important performance evaluation tool in the hedge fund industry. Furthermore, other performance measures such as the alpha are more dependent on the specifications of benchmark factors by analysts. Thus, it is reasonable to assume that the Sharpe ratio has the most significant impact on the overconfidence of fund managers because it is a very clear tool for self-assessment. Therefore, it may be better for investors to use strategy descriptions when analyzing fund quality because manager descriptions very likely reflect overconfidence on the part of managers.

In comparison to the manager description variable, outperformance related to the strategy description variable is associated with a higher level of transparency because of the statistically significant relation between the fund being listed on an exchange and the manager description variables. When considering the different results between the strategy description variable and the manager description variable, the evidence provides further support to a lengthier strategy description being a better indicator of quality and trustworthiness than a lengthier manager description.

One may consider that funds that use extensive manager descriptions in their marketing material are more expensive, as the length of the manager descriptions is also related to higher management fees. This result may simply mean that outstanding managers justify higher fees. Thus, the use of distinctive professionals does seem to be important in marketing funds. Moreover, higher management fees may also partly explain why the length of manager descriptions is not clearly related to the alpha, because the performance measures are calculated on returns that are net-of-fees.

For practitioners, the use of the analysis of strategy and manager descriptions can provide value-adding tools. Indeed, the results of this study may be applied by practitioners, as there are many unique ways of collecting and processing the qualitative data on funds. It would be also interesting to investigate how overconfidence is reflected in different kinds of fund information.

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NOTES

- 1 The data on redemption notice periods and lock-up periods were not always specific. The following two comments are examples of lock-up comments that could not be quantified: 'Yes (Discretion of Manager)' and 'Yes (Soft lock-up)'. When different lock-up comments were possible, the shortest possible period was considered. For example, one comment was '50 to 80 days' that would be considered as 35 business days.
- 2 Instead of using the conventional Sharpe ratio, it would have been possible to use a modified version of the Sharpe ratio. However, the conventional Sharpe ratio is used in this study because emerging market hedge funds follow relatively conventional investment strategies.
- 3 The risk-free rate was downloaded from the Kenneth R. French data library: mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.
- 4 The data was downloaded from David A. Hsieh's data library: faculty.fuqua.duke.edu/~dah7/HFRFData.html.

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