

Should investors follow US fund managers?

The US may be an economic powerhouse but as **J.B. CHAY** and **JOE CHEUNG** point out there is no evidence to suggest that US mutual fund managers perform better than anyone else.

Investors sometimes face the decision whether to switch mutual funds when fund managers change. While the answer may not be evident, the issue is simple. Is mutual fund performance largely attributable to managers rather than companies behind the funds?

Unfortunately, mutual funds performance has traditionally been measured at the fund level. Most studies find that the universe of mutual funds does not outperform its benchmarks.¹ We decided to part with tradition and assess the performance of fund managers rather than mutual funds. This involves tracking changes in funds managed by a particular manager (or a team of managers) over time.

Our approach of examining managers' rather than funds' performance provides a clean assessment of the value of active management. It eliminates measurement problems due to tactics such as the merging of funds to conceal poor performance.

There are many reasons for changes in fund managers. Managers rotate amongst funds within the same management company. Some managers start their own funds, while others might be recruited by rival funds due to their recent performance. We are not concerned about these reasons. Our aim is to find out whether fund managers add value. We ask if investors can benefit by following individual fund managers rather than funds. Due to data availability, our study is based on a sample of fund managers in the United

States only. However, our findings should be of interest to investors in other markets, particularly those who allocate assets to US fund managers.

DATA AND METHOD

Our data comes from the Center for the Study of Securities Prices (CRSP) US Mutual Fund Database. The data set, which covers the period between January 1992 and December 1999, is free of the survivorship bias that plagues most studies of mutual fund performance. Since the data set includes data for funds that had ceased during the sample period, we have a more balanced view of overall performance. Our sample consists of US equity mutual funds that had at least 50 per cent of assets invested in equity. The funds are classified into five types: Aggressive Growth (AG), Growth and Income (GI), Long-term Growth (G), Balanced (BL), and Sector funds (SF). Sector funds include financial, health and technology mutual funds.

To track the net asset backing (NAV) returns for each manager, the fund manager(s) for each fund is first identified.² The data is then sorted into two groups: individual and team managers. When there is only one person who manages the fund, the manager is classified as an 'individual' manager. If the fund is managed by a group of named managers, these managers are classified as a 'team' manager. If the classification cannot be established due to vague descriptions, the managers are excluded from the sample.



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In order to compile monthly NAV returns for each manager, monthly NAV returns of all mutual funds that had been managed by the manager are collaged. For instance, if a manager had managed Fund A for three years and then moved on to manage Fund B, the NAV return series will consist of Fund A's monthly NAV returns for the initial three years and Fund B's NAV returns for subsequent months. When a manager controls several funds at the same time, the available multiple NAV monthly returns are averaged across the funds. Given that there are often inconsistencies in the records relating to a manager's starting month, we exclude returns for the first year for all managers.

SAMPLE CHARACTERISTICS

From January 1992 to December 1999, there were 2,758 individual managers and 1,952 teams of managers in our sample. Table 1 shows the number of managers and manager-years for different types of funds.

Table 2 summarises the tenure for both individual and team managers according to the five types of funds. In all five categories, individual managers' average tenure exceeds the average tenure of teams, consistent with the observation that team management was a more recent arrangement.

The table also shows that the average tenure for a manager is less than three years. Therefore, there had been on average more than two managerial changes for each fund over the eight-year period. This supports our rationale to examine performance at the manager level rather than at the fund level.

PERFORMANCE OF INDIVIDUAL MANAGERS

A fund manager's performance can be estimated from the average excess return of the manager's fund(s) against some benchmark. This measure is known as 'alpha'. We first group managers by fund type and apply the same weight to each manager within the group. This is achieved by forming five equally weighted portfolios classified by fund type.

Table 3 reports performance of the five equally weighted portfolios of individual managers. We estimate performance relative to the Capital Asset Pricing Model (CAPM) and Carhart's (1997) 4-factor models.

Using the CAPM as the benchmark model, only Long-term Growth (G) funds have a significant and negative alpha at the 5 per cent level when NAV returns net of expenses are used in the estimation. When Carhart's (1997) 4-factor model is used as the benchmark model, Growth and Income (GI), Long-term Growth (G), and Balanced (BL) funds have significant negative alphas at the 5 per cent level. However, after adding back expenses, none of the funds' alphas are significant, as shown in Panel B of Table 3. This indicates that fund managers have kept up with the benchmarks only before expenses are charged.

PERFORMANCE OF TEAM MANAGERS

Similarly, we classify teams into five equally weighted portfolios by fund types and calculate the alpha for each portfolio. As shown in Table 4, the team results are similar to the individual results. Under the CAPM benchmark, the Growth and Income (GI) funds have a significantly

negative alpha at the 5 per cent level when NAV returns net of expenses are used in the estimation. Under Carhart's (1997) 4-factor model, the Growth and Income (GI) and Balanced (BL) funds have significantly negative alphas at the 5 per cent level. Again, after adding back expenses, as shown in Panel B of Table 4, none of the funds' alphas are significant at the 5 per cent level.

DISTRIBUTIONS OF PERFORMANCE

Although there is no evidence of positive average alphas in each fund type, there could be many individual or team managers who performed well but their performance is masked by those who performed poorly. Therefore, in Tables 5 and 6, we report actual numbers as well as percentages of managers and teams within each fund type who yield significant alphas. Since we need statistically reliable

TABLE 1 NUMBER OF INDIVIDUAL MANAGERS AND GROUPS OF TEAM MANAGERS

Fund Type	Managers			
	Number	% of Sample	Manager-years	
<i>Panel A : Individual Managers (January 1992 – December 1999)</i>				
Aggressive Growth	AG	643	23.31%	3,467
Growth and Income	GI	603	21.86%	3,010
Long-term Growth	G	1,001	36.29%	5,131
Balanced Funds	BL	233	8.45%	1,093
Sector Funds	SF	278	10.08%	1,285
Total		2,758	100.00%	13,986
<i>Panel B : Team Managers (January 1992 – December 1999)</i>				
Aggressive Growth	AG	507	25.97%	1,699
Growth and Income	GI	406	20.80%	1,420
Long-term Growth	G	639	32.74%	2,213
Balanced Funds	BL	257	13.17%	883
Sector Funds	SF	143	7.33%	465
Total		1,952	100.00%	6,680

TABLE 2 DESCRIPTIVE STATISTICS OF MANAGERIAL TENURES (IN MONTHS)

Fund Type	Mean	Median	Std. Dev.	
<i>Panel A : Individual Managers (January 1992 – December 1999)</i>				
Aggressive Growth	AG	32.610	24	24.062
Growth and Income	GI	31.272	24	22.042
Long-term Growth	G	31.835	24	23.501
Balanced Funds	BL	26.266	24	18.604
Sector Funds	SF	29.910	24	21.581
<i>Panel B : Team Managers (January 1992 – December 1999)</i>				
Aggressive Growth	AG	20.736	12	14.382
Growth and Income	GI	22.315	12	15.379
Long-term Growth	G	22.634	17	15.019
Balanced Funds	BL	22.875	21	14.884
Sector Funds	SF	20.021	12	12.983

estimates of the performance of each manager or team, we limit our analyses to managers or teams with at least 18 monthly observations.

The results for individual managers are presented in Table 5. As shown in Panel A, only the Sector Fund (SF) type under the 4-factor model contains more than 5 per cent of managers who achieved significant and positive alphas. On the other hand, managers with significantly negative alphas (at the 5 per cent level) constitute more than 5 per cent of each fund type in all cases and more than 10 per cent in half of the cases. It is reasonable to conclude that while there are individual fund managers who added value during the sample period, the numbers are too few to rule out chance as the explanation.

The results for team managers, as shown in Table 6, are largely similar to those in Table 5. The team-managed Sector Funds (SF) category provides a noticeable exception with about 15 per cent of the teams achieving a significant positive alpha under the CAPM model. Nevertheless, almost 30 per cent of the teams in the same category also achieved a significant negative alpha, which probably reflects a high variance in performance given the small sample size of 27 Sector Funds teams in total. There is no strong evidence that many team managers added value during the sample period.

SUMMARY AND CONCLUSIONS

In this study, we track the performance of managers rather than mutual funds. Previous studies measured performance at the funds level and thus are unable to assess the active management abilities of fund managers. We investigate if a statistically significant number of fund managers has added value to funds under their management in our sample.

We follow the performance of 2,758 individual managers and 1,952 teams of managers from 1992 to 1999 in the US mutual funds industry. First, we examine the performance of individual fund managers under an equally weighted portfolio approach. None of the five sub-samples produces a significant positive alpha. This suggests that, on average, individual fund managers have not added value. Second, we look at the distribution of performance of individual managers and find that most alphas in our sub-samples are insignificant. Although there are managers with positive and highly significant alphas who outperformed the market, the percentage of these 'star' managers rarely exceeds 5 per cent in each sub-sample. Third, we look at the distribution of performance of teams and find results by and large similar to those of individual managers, particularly after expenses are deducted. The quest for abnormal return seems to have eluded even the highly skilled professionals in the US mutual funds industry. In summary, we are unable to establish a strong reason to switch funds in order to follow US fund managers. **■**

Part of this research was done while Chay was at the National University of Singapore. We thank Micheal Ng for his expert research assistance.

TABLE 3 INDIVIDUAL MANAGERS' PERFORMANCE RESULTS USING AN EQUALLY WEIGHTED PORTFOLIO APPROACH

Portfolio	Monthly Excess Return	Std Dev	CAPM			4-Factor Model					
			Alpha	VWRF	Adj R-Sq	Alpha	RMRF	SMB	HML	PR1YR	Adj R-Sq
<i>Panel A : Before Adding Back Expenses to Net Returns</i>											
AG	1.43%	4.58%	-0.21% (-0.91)	1.11 (17.94)	0.771	-0.08% (-0.96)	1.00 (42.43)	0.68 (25.91)	-0.06 (-2.07)	0.07 (3.10)	0.976
GI	1.31%	3.26%	-0.08% (-1.63)	0.89 (70.45)	0.981	-0.12%** (-3.54)	0.94 (93.73)	-0.04 (-3.83)	0.10 (7.65)	-0.03 (-3.08)	0.991
G	1.37%	3.71%	-0.15%* (-2.15)	1.01 (54.12)	0.969	-0.10%* (-2.14)	(0.96) (70.21)	0.15 (9.89)	-0.06 (-3.24)	0.02 (0.02)	0.988
BL	0.97%	2.23%	-0.09% (-1.76)	0.60 (46.32)	0.958	-0.16%** (-3.68)	0.64 (50.15)	0.01 (0.43)	0.10 (6.12)	1.66 (1.46)	0.970
SF	1.38%	3.80%	-0.09% (-0.54)	0.96 (22.38)	0.840	-0.08% (-0.64)	0.97 (28.02)	0.39 (10.16)	0.12 (2.81)	0.00 (0.15)	0.925
<i>Panel B : After Adding Back Expenses to Net Returns</i>											
AG	1.55%	4.58%	-0.09% (-0.38)	1.11 (17.91)	0.771	0.05% (0.57)	1.00 (42.38)	0.68 (25.92)	-0.06 (-2.04)	0.07 (3.09)	0.976
GI	1.40%	3.25%	0.02% (0.39)	0.89 (70.55)	0.981	-0.03% (-0.74)	0.94 (93.78)	-0.04 (-3.78)	0.10 (7.66)	-0.03 (-3.06)	0.991
G	1.48%	3.71%	-0.04% (-0.59)	1.01 (54.19)	0.969	0.01% (0.20)	0.96 (70.10)	0.15 (9.84)	-0.06 (-3.23)	0.02 (1.66)	0.988
BL	1.07%	2.23%	0.01% (0.24)	0.60 (46.35)	0.958	-0.06% (-1.46)	0.64 (50.35)	0.01 (0.43)	0.10 (6.17)	0.02 (1.49)	0.970
SF	1.52%	3.80%	0.05% (0.30)	0.96 (22.42)	0.841	0.06% (0.51)	0.97 (28.15)	0.39 (10.19)	0.13 (2.85)	0.00 (0.14)	0.926

t-statistics are in parentheses. * Significant at the 5 per cent level. ** Significant at the 1 per cent level. All are two-tailed tests.

TABLE 4 TEAM MANAGERS' PERFORMANCE RESULTS USING AN EQUALLY WEIGHTED PORTFOLIO APPROACH

Portfolio	Monthly Excess Return	Std. Dev.	CAPM			4-Factor Model					
			Alpha	VWRF	Adj R-Sq	Alpha	RMRF	SMB	HML	PR1YR	Adj R-Sq
<i>Panel A: Before Adding Back Expenses to Net Returns</i>											
AG	1.54%	4.50%	-0.07% (-0.32)	1.09 (17.69)	0.767	0.02% (0.24)	0.97 (40.05)	0.67 (24.88)	-0.07 (-2.10)	0.11 (5.14)	0.974
GI	1.26%	3.23%	-0.12%* (-2.25)	0.88 (62.44)	0.976	-0.17%** (-4.31)	0.94 (79.60)	-0.03 (-2.19)	0.12 (7.78)	-0.03 (-2.45)	0.988
G	1.39%	3.73%	-0.13% (-1.83)	1.01 (52.81)	0.967	-0.08% (-1.62)	0.96 (69.27)	0.14 (9.31)	-0.08 (-4.75)	0.03 (2.48)	0.988
BL	0.98%	2.20%	-0.07% (-1.31)	0.59 (44.78)	0.955	-0.14%** (-3.28)	0.64 (49.92)	-0.02 (-1.47)	0.09 (5.80)	0.02 (1.38)	0.969
SF	1.37%	3.87%	-0.10% (-0.51)	0.96 (19.18)	0.794	0.00% (0.00)	0.88 (20.75)	0.39 (8.36)	-0.06 (-1.180)	0.04 (1.00)	0.892
<i>Panel B: After Adding Back Expenses to Net Returns</i>											
AG	1.67%	4.50%	0.05% (0.23)	1.09 (17.68)	0.766	0.15% (1.76)	0.97 (39.99)	0.67 (24.85)	-0.07 (-2.11)	0.11 (5.09)	0.974
GI	1.35%	3.23%	-0.03% (-0.49)	0.88 (61.81)	0.976	-0.08% (-1.98)	0.94 (78.95)	-0.03 (-2.17)	0.12 (7.81)	-0.03 (-2.49)	0.988
G	1.50%	3.73%	-0.02% (-0.34)	1.01 (52.64)	0.967	0.03% (0.69)	0.96 (68.770)	0.14 (9.27)	-0.08 (-4.70)	0.03 (2.32)	0.987
BL	1.07%	2.20%	0.02% (0.46)	0.59 (44.68)	0.955	-0.05% (-1.24)	0.64 (49.75)	-0.02 (-1.50)	0.09 (5.76)	0.02 (1.38)	0.969

TABLE 5 SUMMARY OF THE PERFORMANCE RESULTS FOR INDIVIDUAL MANAGERS

Number of Alphas																						
Fund Type	Size	CAPM										4-Factor Model										
		Total		Statistically Significant								Total		Statistically Significant								
		+	-	5% level				1% level				+	-	5% level				1% level				
				+	%	-	%	+	%	-	%			+	%	-	%	+	%	-	%	
Panel A: Expenses not added back to net returns																						
AG	290	77	213	5	1.7%	36	12.4%	3	1.0%	10	3.4%	121	169	14	4.8%	31	10.7%	3	1.0%	13	4.5%	
GI	256	126	130	7	2.7%	20	7.8%	2	0.8%	3	1.2%	100	156	4	1.6%	17	6.6%	1	0.4%	6	2.3%	
G	426	167	259	10	2.3%	47	11.0%	2	0.5%	15	3.5%	179	247	10	2.3%	30	7.0%	1	0.2%	9	2.1%	
BL	87	23	64	0	0.0%	14	16.1%	0	0.0%	5	5.7%	13	74	0	0.0%	24	27.6%	0	0.0%	10	11.5%	
SF	106	47	59	4	3.8%	10	9.4%	1	0.9%	3	2.8%	44	62	6	5.7%	7	6.6%	2	1.9%	2	1.9%	
Panel B: Expenses added back to net returns																						
AG	290	97	193	7	2.4%	26	9.0%	2	0.7%	7	2.4%	146	144	19	6.6%	21	7.2%	4	1.4%	5	1.7%	
GI	256	155	101	14	5.5%	9	3.5%	4	1.6%	1	0.4%	145	111	11	4.3%	8	3.1%	3	1.2%	2	0.8%	
G	426	203	223	24	5.6%	31	7.3%	5	1.2%	7	1.6%	223	203	24	5.6%	17	4.0%	3	0.7%	3	0.7%	
BL	87	34	53	1	1.1%	7	8.0%	0	0.0%	1	1.1%	27	60	1	1.1%	11	12.6%	0	0.0%	2	2.3%	
SF	106	53	53	4	3.8%	8	7.5%	1	0.9%	2	1.9%	51	55	9	8.5%	3	2.8%	3	2.8%	2	1.9%	

TABLE 6 SUMMARY OF THE PERFORMANCE RESULTS FOR TEAM MANAGERS

Number of Alphas																						
Fund Type	Size	CAPM										4-Factor Model										
		Total		Statistically Significant								Total		Statistically Significant								
		+	-	5% level				1% level				+	-	5% level				1% level				
				+	%	-	%	+	%	-	%			+	%	-	%	+	%	-	%	
Panel A: Expenses not added back to net returns																						
AG	106	29	77	5	4.7%	13	12.3%	0	0.0%	5	4.7%	45	61	7	6.6%	7	6.6%	1	0.9%	2	1.9%	
GI	104	51	53	4	3.8%	11	10.6%	0	0.0%	4	3.8%	39	65	3	2.9%	9	8.7%	1	1.0%	3	2.9%	
G	157	52	105	4	2.5%	24	15.3%	0	0.0%	7	4.5%	53	104	4	2.5%	14	8.9%	3	1.9%	3	1.9%	
BL	68	24	44	1	1.5%	5	7.4%	0	0.0%	2	2.9%	15	53	0	0.0%	9	13.2%	0	0.0%	3	4.4%	
SF	27	11	16	4	14.8%	8	29.6%	2	7.4%	3	11.1%	12	15	2	7.4%	4	14.8%	2	7.4%	1	3.7%	
Panel B: Expenses added back to net returns																						
AG	106	32	74	8	7.5%	10	9.4%	1	0.9%	2	1.9%	56	50	11	10.4%	4	3.8%	4	3.8%	1	0.9%	
GI	104	66	38	5	4.8%	9	8.7%	1	1.0%	4	3.8%	53	51	4	3.8%	7	6.7%	2	1.9%	3	2.9%	
G	157	62	95	6	3.8%	14	8.9%	1	0.6%	4	2.5%	65	92	8	5.1%	7	4.5%	4	2.5%	1	0.6%	
BL	68	37	31	2	2.9%	4	5.9%	0	0.0%	1	1.5%	23	45	1	1.5%	4	5.9%	0	0.0%	2	2.9%	
SF	27	12	15	6	22.2%	6	22.2%	2	7.4%	2	7.4%	13	14	3	11.1%	4	14.8%	2	7.4%	0	0.0%	

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Notes

¹ See, for example, Malkiel (1995), Gruber (1996), Carhart (1997), and Daniel, Grinblatt, Titman, and Wermers (1997).

² Names of managers in the database are sometimes inaccurate due to typographical errors, names being shortened or changes in the order of names. These inaccuracies are rectified using the starting date of a manager's tenure as the sorting guide.