

## Fleeting Alpha: The Challenge of Consistent Outperformance

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### INTRODUCTION

The phrase “past performance is no guarantee of future results” (or some variation thereof) can be found in most funds’ literature, and for good reason: **a wealth of studies show a lack of long-term performance persistence among actively managed mutual funds.**<sup>1</sup> However, many investors appear to believe that winners persist: past performance and related metrics remain important factors in manager selection.

Since 2002, S&P Dow Jones Indices has published the [SPIVA® U.S. Scorecard](#), measuring the percentage of active managers that beat their benchmarks across various equity and fixed income categories. Its sister report, the [Persistence Scorecard](#), shows the likelihood that a top-quartile manager maintains its status in subsequent periods.

By marrying the two reports, **this paper studies the degree to which outperforming funds from one period continue to beat their benchmarks thereafter.** Specifically, we first identify funds that beat their benchmarks, based on three-year annualized returns, net-of-fees. We then examine whether these funds (the “winners”) can continue to outperform during each of the next three one-year periods.

Our results show that among equity funds that beat their benchmarks over the three-year period ending Sept. 30, 2016, the **performance persistence among domestic and international equity categories in the following three years was worse (in general) than a random draw.** In other words, past performance did not typically help identify superior performing managers in advance.

<sup>1</sup> The earliest work on mutual performance persistence is by Jensen (1968), who found that historically, mutual funds had not outperformed a buy-and-hold strategy, on average. For additional key studies on mutual fund performance, see Grinblatt and Titman (1989, 1992), Goetzmann and Ibbotson (1994), Brown and Goetzmann (1995), and Carhart (1997).

## DATA AND METHODOLOGY

*One key measure of successful active management is the ability to deliver consistent positive excess returns, net-of-fees.*

The University of Chicago's Center for Research and Security Prices (CRSP) Survivorship-Bias-Free US Mutual Fund Database serves as the underlying data source for our study. The universe used for the study only includes actively managed domestic U.S. equity funds. Index funds, sector funds, and index-based dynamic (leveraged or inverse) funds are excluded from the sample. To avoid double counting multiple share classes, only the share class with greater assets is used. At each measurement period, the universe consists of over 2,300 active equity funds, on average (see Appendix I).

*Our study shows 12 out of 18 categories in domestic equity showed zero performance persistence after three years.*

Based on the earliest availability of Lipper style classifications, **our study covers the period from March 31, 2000, through Sept. 30, 2019**. On a quarterly basis beginning on March 31, 2003, we compute the trailing three-year annualized returns for each fund in our universe, as well as for their benchmarks. We then identify funds that beat their benchmarks and track their relative performance in each of the next three years. By identifying funds that beat their benchmarks as winners and those that do not as losers, this approach applies the "winner-winner, winner-loser" methodology developed by Brown and Goetzmann (1995) and examines if winners in period  $t$  are also winners in  $t + j$ , where  $j = \text{Year 1, Year 2, and Year 3}$ .

### LITTLE PERSISTENCE AMONG OUTPERFORMING FUNDS

Exhibit 1 shows the performance persistence of managers investing in various domestic and international equity categories as of Sept. 30, 2019, based on trailing three-year returns. **Of the 18 categories in domestic equity, 12 showed zero performance persistence after three years.**

For example, roughly 11% of the 938 large-cap funds that existed in the universe as of Sept. 30, 2016, outperformed the [S&P 500®](#) in the previous three years. By the end of September 2019, none of the 99 winners had been able to maintain that status for three consecutive years.

*Less than 2% of funds that beat the S&P 500 stayed in the winners' circle in each of the next three years.*

In addition, **the data suggest the persistence of fund performance was worse than would be expected from luck**. If the ability of managers to beat their benchmarks arose by chance, we would expect 12.50% of the winners in each category to maintain their status in each of the next three years. In fact, less than 2% of the winners of all domestic equity funds beat the benchmark in each of the three following one-year periods.

**The vast majority of domestic equity funds showed little outperformance persistence, with noticeable exceptions in the small- and mid-cap spaces.** The improvement in persistence mainly came from the Mid-Cap Growth funds and the Small-Cap Growth funds, in which 59% and 44% of the past winners were able to generate positive alpha in the three subsequent one-year periods, respectively.

**Additionally, fewer winners in all domestic equity funds continued to beat the [S&P Composite 1500®](#) in each of the next three years compared with the persistence score we saw one year prior (3%).**

**Furthermore, all categories in international equity showed persistence scores worse than a random draw by the end of the third year.**

*There is an inverse relationship between the level of persistence and time horizon.*

Of course, a point-in-time snapshot of the performance persistence figure can be unduly influenced by cyclical market conditions. As a result, Exhibit 2 shows the rolling average performance persistence figures between March 31, 2003, and Sept. 30, 2019. The figures in Exhibit 2 are calculated by: 1) creating Exhibit 1 in each quarter between March 2003 and September 2019, and 2) taking simple averages of the persistence figures for each of the categories.

Quarterly average numbers showed an inverse relationship between the level of persistence and time horizon. Persistence declined in each subsequent year. On average, the outperformance persistence in each of the following three years fell below the odds of a random draw (i.e., 50% in the first year, 25% in the second year, and 12.5% in the third year).

*There was a higher degree of persistence among Real Estate managers .*

As we have reported in the past, **real estate managers showed a higher degree of outperformance persistence than their domestic core equity counterparts.** The category typically had the greatest proportion of winners that maintained their status in each of the three next one-year periods.

## CONCLUSION

*Recent outperformers found it difficult to stay in the (relative) winners' cohort.*

For many years, the Persistence Scorecard has highlighted the small probability of a top-quartile fund maintaining its status over three- and five-year horizons. While some market participants may believe selecting among recently outperforming active mutual funds provides a way to better identify persistent alpha, **this report shows recent outperformers found it challenging to maintain their status in the (relative) winners' cohort.**

Despite the improved outperformance persistence of funds in the most recent quarter, on average, the historical outperformance persistence in each of the following three years was lower than the odds of a random draw. Market participants may want to reconsider chasing “hot hands” or picking managers based on past performance.

**Exhibit 1: Outperformance Persistence Over Three Consecutive Years**

FUND CATEGORY	BENCHMARK	TOTAL NUMBER OF FUNDS	NUMBER OF FUNDS OUTPERFORMING THE BENCHMARK	PERCENTAGE OF FUNDS OUTPERFORMING THE BENCHMARK	PERCENTAGE OUTPERFORMING THE BENCHMARK (PERIOD END)		
			SEPT. 30, 2016		SEPT. 30, 2017	SEPT. 30, 2018	SEPT. 30, 2019
<b>DOMESTIC EQUITY</b>							
All Domestic	S&P Composite 1500	2387	193	8.09	63.21	53.37	1.55
All Large-Cap	S&P 500	938	99	10.55	58.59	50.51	0.00
All Mid-Cap	S&P MidCap 400®	342	45	13.16	46.67	37.78	28.89
All Small-Cap	S&P SmallCap 600®	524	35	6.68	31.43	22.86	11.43
All Multi-Cap	S&P Composite 1500	584	44	7.53	31.82	25.00	0.00
Large-Cap Growth	S&P 500 Growth	275	16	5.82	50.00	12.50	0.00
Large-Cap Core	S&P 500	353	25	7.08	32.00	16.00	0.00
Large-Cap Value	S&P 500 Value	310	47	15.16	34.04	14.89	0.00
Mid-Cap Growth	S&P MidCap 400 Growth	158	22	13.92	68.18	63.64	59.09
Mid-Cap Core	S&P MidCap 400	121	17	14.05	29.41	5.88	0.00
Mid-Cap Value	S&P MidCap 400 Value	63	10	15.87	0.00	0.00	0.00
Small-Cap Growth	S&P SmallCap 600 Growth	189	9	4.76	66.67	66.67	44.44
Small-Cap Core	S&P SmallCap 600	228	13	5.70	7.69	0.00	0.00
Small-Cap Value	S&P SmallCap 600 Value	107	9	8.41	11.11	0.00	0.00
Multi-Cap Growth	S&P Composite 1500 Growth	187	9	4.81	55.56	22.22	0.00
Multi-Cap Core	S&P Composite 1500	301	13	4.32	23.08	0.00	0.00
Multi-Cap Value	S&P Composite 1500 Value	96	16	16.67	25.00	6.25	0.00
Real Estate	S&P U.S. REITs	79	16	20.25	68.75	50.00	37.50
<b>INTERNATIONAL EQUITY</b>							
Global	S&P Global 1200	179	33	18.44	42.42	24.24	3.03
International	S&P 700	259	126	48.65	18.25	5.56	0.00
International Small-Cap	S&P Developed Ex-U.S. Small Cap	58	19	32.76	63.16	31.58	10.53
Emerging Markets	S&P/IFCI Composite	183	38	20.77	52.63	0.00	0.00

Source: S&P Dow Jones Indices LLC and CRSP. Data as of Sept. 30, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Exhibit 2: Rolling Quarterly Average Outperformance Persistence Over Three Consecutive Years**

FUND CATEGORY	BENCHMARK	TOTAL AVERAGE NUMBER OF FUNDS	NUMBER OF FUNDS OUTPERFORMING THE BENCHMARK	PERCENTAGE OF FUNDS OUTPERFORMING THE BENCHMARK	PERCENTAGE OUTPERFORMING THE BENCHMARK (PERIOD END)		
					CURRENT PERIOD	YEAR 1	YEAR 2
<b>DOMESTIC EQUITY</b>							
All Domestic	S&P Composite 1500	2309	801	35	42.51	18.50	7.25
All Large-Cap	S&P 500	811	223	29	34.73	14.19	5.20
All Mid-Cap	S&P MidCap 400	375	96	26	30.90	10.60	3.70
All Small-Cap	S&P SmallCap 600	489	129	27	34.31	13.39	4.95
All Multi-Cap	S&P Composite 1500	641	212	33	31.34	12.58	4.62
Large-Cap Growth	S&P 500 Growth	260	60	24	35.09	11.93	3.07
Large-Cap Core	S&P 500	306	70	24	26.93	9.64	3.16
Large-Cap Value	S&P 500 Value	247	86	36	32.43	14.15	4.81
Mid-Cap Growth	S&P MidCap 400 Growth	177	41	23	29.10	9.61	4.19
Mid-Cap Core	S&P MidCap 400	109	27	25	20.75	5.81	1.29
Mid-Cap Value	S&P MidCap 400 Value	90	26	28	23.88	7.23	1.64
Small-Cap Growth	S&P SmallCap 600 Growth	185	36	19	31.43	13.10	6.18
Small-Cap Core	S&P SmallCap 600	196	49	26	27.67	9.38	2.51
Small-Cap Value	S&P SmallCap 600 Value	109	40	36	27.77	9.43	3.20
Multi-Cap Growth	S&P Composite 1500 Growth	187	57	32	32.20	12.45	4.33
Multi-Cap Core	S&P Composite 1500	295	91	32	25.89	9.05	3.35
Multi-Cap Value	S&P Composite 1500 Value	162	53	32	21.61	6.87	2.09
Real Estate	S&P U.S. REITs	76	23	32	42.46	19.56	9.77
<b>INTERNATIONAL EQUITY</b>							
Global	S&P Global 1200	128	43	34	40.03	17.99	7.15
International	S&P 700	262	72	27	39.55	16.98	7.10
International Small-Cap	S&P Developed Ex-U.S. Small Cap	42	19	43	48.40	23.87	11.86
Emerging Markets	S&P/IFCI Composite	94	24	23	35.81	13.12	4.18

Source: S&P Dow Jones Indices LLC and CRSP. Data from March 31, 2000 to Sept. 30, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**APPENDIX I: NUMBER OF FUNDS**

<b>Exhibit 3: Universe Statistics</b>		
<b>FUND CATEGORY</b>	<b>AVERAGE</b>	<b>MEDIAN</b>
<b>DOMESTIC EQUITY</b>		
All Domestic	2309	2190
All Large-Cap	811	765
All Mid-Cap	375	371
All Small-Cap	489	505
All Multi-Cap	641	631
Large-Cap Growth	260	253
Large-Cap Core	306	324
Large-Cap Value	247	232
Mid-Cap Growth	177	179
Mid-Cap Core	109	108
Mid-Cap Value	90	88
Small-Cap Growth	185	189
Small-Cap Core	196	219
Small-Cap Value	109	106
Multi-Cap Growth	187	191
Multi-Cap Core	295	314
Multi-Cap Value	162	157
Real Estate	76	75
<b>INTERNATIONAL EQUITY</b>		
Global	128	116
International	262	262
International Small-Cap	42	43
Emerging Markets	94	72

Source: S&P Dow Jones Indices LLC and CRSP. Data as of Sept. 30, 2019. Average and median are calculated based on all quarterly snapshots between March 31, 2000, and Sept. 30, 2019. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

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