Fleeting Alpha: The Challenge of Consistent Outperformance

Contributors

Berlinda Liu, CFA
Director
Global Research & Design
berlinda.liu@spglobal.com

Hamish Preston
Associate Director
Global Research & Design
hamish.preston@spglobal.com

Aye M. Soe, CFA
Managing Director
Global Research & Design
aye.soe@spglobal.com

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**.[1] 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 September 30, 2015, **there was typically negligible performance persistence among domestic and international equity categories beyond the one-year horizon**. In other words, past performance did not typically help identify superior performing managers in advance.

[1] 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 the highest previous period return of each fund is used. At each measurement period, the universe consists of over 2,300 active equity funds, on average (see Appendix I).

Based on the earliest availability of Lipper style classifications, **our study covers the period from March 31, 2000, through September 30, 2018**. 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 $j = \text{Year 1}, \text{Year 2}, \text{and Year 3}$.

Our study shows negligible performance persistence beyond a one-year horizon.

LITTLE PERSISTENCE AMONG OUTPERFORMING FUNDS

Exhibit 1 shows the performance persistence of managers investing in various domestic and international equity categories as of September 30, 2018, based on trailing three-year returns. Aside from the real estate category, where additional factors such as benchmark mismatch may have contributed to higher persistance, **we observe little to no evidence of performance persistence among active managers.**

Only 2.73% of funds that beat the S&P 500 stayed in the winners' enclosure in each of the next three years.

For example, only 27.38% (or 298) of the 1,089 large-cap funds that existed in the universe as of September 30, 2015 outperformed the S&P 500® in the previous three years.[2] During the following year, 9.38% of those winners beat the benchmark. And by the end of September 2018, only 2.73% of the 298 winners were able to maintain that status for three consecutive years.

In addition, **the data suggests the persistence of fund performance was worse than would be expected from luck**. Indeed, 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. Instead, only 9.52% of the winners in the most

[2] For context, the S&P 500 posted a 12.40% annualized total return between Sept. 30, 2012, and Sept. 30, 2015, based on monthly data.

persistent category (Real Estate) beat the benchmark in each of the last three one-year periods.

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 September 30, 2018. The figures in Exhibit 2 are calculated by: 1) creating Exhibit 1 in each quarter between March 2003 and September 2018, and 2) taking simple averages of the persistence figures for each of the categories.

Quarterly average numbers paint a slightly more favorable persistance picture: on average, there was a fair degree of outperformance persistence in the first year across most categories. However, we can observe an inverse relationship between the level of persistence and time horizon; persistence declined in each subsequent year.

There was a higher degree of persistence among Real Estate and International equity managers .

As we have reported in earlier reports, **real estate and international equity managers showed a higher degree of outperformance persistence than their domestic core equity counterparts**. For example, international small-cap managers led the way across the board; the category typically had the greatest proportion of winners that maintained their status in each of the next three 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**.

Combined with the fact that the persistence of fund performance in many categories has been worse than we would expect under luck alone, 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, 2015		SEPT. 30, 2016	SEPT. 30, 2017	SEPT. 30, 2018
DOMESTIC EQUITY							
All Domestic	S&P Composite 1500®	2702	759	28.10	12.81	6.40	3.06
All Large-Cap	S&P 500	1089	298	27.38	9.38	6.64	2.73
All Mid-Cap	S&P MidCap 400®	416	123	29.55	11.54	4.81	0.96
All Small-Cap	S&P SmallCap 600®	610	101	16.64	7.78	3.33	2.22
All Multi-Cap	S&P Composite 1500	740	217	29.34	9.94	3.87	2.21
Large-Cap Growth	S&P 500 Growth	328	99	30.07	10.47	4.65	3.49
Large-Cap Core	S&P 500	414	94	22.59	12.20	8.54	3.66
Large-Cap Value	S&P 500 Value	370	83	22.38	14.06	7.81	3.13
Mid-Cap Growth	S&P MidCap 400 Growth	201	48	23.75	5.26	2.63	2.63
Mid-Cap Core	S&P MidCap 400	154	43	28.00	11.43	5.71	0.00
Mid-Cap Value	S&P MidCap 400 Value	84	35	41.79	3.57	0.00	0.00
Small-Cap Growth	S&P SmallCap 600 Growth	227	30	13.30	11.11	3.70	0.00
Small-Cap Core	S&P SmallCap 600	288	45	15.52	5.56	2.78	0.00
Small-Cap Value	S&P SmallCap 600 Value	133	38	28.30	3.33	3.33	0.00
Multi-Cap Growth	S&P Composite 1500 Growth	240	60	25.00	12.50	10.42	4.17
Multi-Cap Core	S&P Composite 1500	396	88	22.15	2.78	1.39	0.00
Multi-Cap Value	S&P Composite 1500 Value	136	58	43.00	13.95	2.33	2.33
Real Estate	S&P U.S. REITs	86	25	28.77	14.29	9.52	9.52
INTERNATIONAL EQUITY							
Global	S&P Global 1200	281	92	32.58	13.79	6.90	3.45
International	S&P 700	409	205	50.19	20.77	3.85	0.77
International Small-Cap	S&P Developed Ex-U.S. Small Cap	74	32	43.86	20.00	12.00	0.00
Emerging Markets	S&P/IFCI Composite	241	98	40.85	7.46	4.48	0.00

Source: S&P Dow Jones Indices LLC and CRSP. Data as of Sept. 30, 2018. 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	YEAR 3
DOMESTIC EQUITY							
All Domestic	S&P Composite 1500	2401	700	32.70	39.81	15.57	5.26
All Large-Cap	S&P 500	845	198	26.47	33.13	11.72	3.64
All Mid-Cap	S&P MidCap 400	393	86	24.35	30.25	9.36	2.40
All Small-Cap	S&P SmallCap 600	527	115	25.26	32.57	11.54	3.70
All Multi-Cap	S&P Composite 1500	670	177	30.69	28.42	10.25	3.27
Large-Cap Growth	S&P 500 Growth	275	56	23.08	32.03	8.92	1.32
Large-Cap Core	S&P 500	316	57	20.82	24.17	7.56	2.25
Large-Cap Value	S&P 500 Value	264	79	33.20	30.71	11.71	3.82
Mid-Cap Growth	S&P MidCap 400 Growth	188	38	22.21	29.55	7.72	1.91
Mid-Cap Core	S&P MidCap 400	116	24	23.06	19.43	5.14	1.03
Mid-Cap Value	S&P MidCap 400 Value	95	22	25.99	20.37	5.55	1.48
Small-Cap Growth	S&P SmallCap 600 Growth	201	33	17.89	32.74	11.33	3.44
Small-Cap Core	S&P SmallCap 600	214	40	23.20	24.98	7.83	2.06
Small-Cap Value	S&P SmallCap 600 Value	122	36	33.72	25.09	8.05	2.33
Multi-Cap Growth	S&P Composite 1500 Growth	194	48	28.67	29.41	9.91	2.54
Multi-Cap Core	S&P Composite 1500	297	71	28.75	22.12	6.86	2.34
Multi-Cap Value	S&P Composite 1500 Value	188	44	29.15	18.82	5.71	1.84
Real Estate	S&P U.S. REITs	85	22	31.44	38.12	13.86	5.27
INTERNATIONAL EQUITY							
Global	S&P Global 1200	136	39	32.24	37.05	15.55	6.04
International	S&P 700	316	71	26.99	37.22	14.29	5.62
International Small-Cap	S&P Developed Ex-U.S. Small Cap	51	18	40.64	47.75	21.67	10.23
Emerging Markets	S&P/IFCI Composite	114	25	22.54	34.12	12.25	4.34

Source: S&P Dow Jones Indices LLC and CRSP. Data as of Sept. 30, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX I: NUMBER OF FUNDS

Exhibit 3: Universe Statistics

FUND CATEGORY	AVERAGE	MEDIAN
DOMESTIC EQUITY		
All Domestic	2401	2201
All Large-Cap	845	778
All Mid-Cap	393	378
All Small-Cap	527	504
All Multi-Cap	670	632
Large-Cap Growth	275	244
Large-Cap Core	316	299
Large-Cap Value	264	219
Mid-Cap Growth	188	192
Mid-Cap Core	116	104
Mid-Cap Value	95	92
Small-Cap Growth	201	199
Small-Cap Core	214	214
Small-Cap Value	122	119
Multi-Cap Growth	194	186
Multi-Cap Core	297	298
Multi-Cap Value	188	172
Real Estate	85	80
INTERNATIONAL EQUITY		
Global	136	114
International	316	313
International Small-Cap	51	53
Emerging Markets	114	89

Source: S&P Dow Jones Indices LLC and CRSP. Data as of Sept. 30, 2018. Average and median are calculated based on all quarterly snapshots between March 31, 2003, and Sept. 30, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

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S&P DJI RESEARCH CONTRIBUTORS		
Sunjiv Mainie, CFA, CQF	Global Head	sunjiv.mainie@spglobal.com
Jake Vukelic	Business Manager	jake.vukelic@spglobal.com
GLOBAL RESEARCH & DESIGN		
AMERICAS		
Aye M. Soe, CFA	Americas Head	aye.soe@spglobal.com
Cristopher Anguiano, FRM	Analyst	cristopher.anguiano@spglobal.com
Phillip Brzenk, CFA	Director	phillip.brzenk@spglobal.com
Smita Chirputkar	Director	smita.chirputkar@spglobal.com
Rachel Du	Senior Analyst	rachel.du@spglobal.com
Bill Hao	Director	wenli.hao@spglobal.com
Qing Li	Director	qing.li@spglobal.com
Berlinda Liu, CFA	Director	berlinda.liu@spglobal.com
Hamish Preston	Associate Director	hamish.preston@spglobal.com
Maria Sanchez	Associate Director	maria.sanchez@spglobal.com
Kunal Sharma	Senior Analyst	kunal.sharma@spglobal.com
Kelly Tang, CFA	Director	kelly.tang@spglobal.com
Hong Xie, CFA	Senior Director	hong.xie@spglobal.com
APAC		
Priscilla Luk	APAC Head	priscilla.luk@spglobal.com
Arpit Gupta	Senior Analyst	arpit.gupta1@spglobal.com
Akash Jain	Associate Director	akash.jain@spglobal.com
Xiaoya Qu	Senior Analyst	xiaoya.qu@spglobal.com
Yan Sun	Senior Analyst	yan.sun@spglobal.com
Liyu Zeng, CFA	Director	liyu.zeng@spglobal.com
EMEA		
Sunjiv Mainie, CFA, CQF	EMEA Head	sunjiv.mainie@spglobal.com
Leonardo Cabrer, PhD	Senior Analyst	leonardo.cabrer@spglobal.com
Andrew Cairns	Senior Analyst	andrew.cairns@spglobal.com
Andrew Innes	Associate Director	andrew.innes@spglobal.com
INDEX INVESTMENT STRATEGY		
Craig J. Lazzara, CFA	Global Head	craig.lazzara@spglobal.com
Chris Bennett, CFA	Director	chris.bennett@spglobal.com
Fei Mei Chan	Director	feimei.chan@spglobal.com
Tim Edwards, PhD	Managing Director	tim.edwards@spglobal.com
Anu R. Ganti, CFA	Director	anu.ganti@spglobal.com
Sherifa Issifu	Analyst	sherifa.issifu@spglobal.com
Howard Silverblatt	Senior Index Analyst	howard.silverblatt@spglobal.com

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