

## Do Past Mutual Fund Winners Repeat?

The S&P Persistence Scorecard

- The phrase “past performance is not an indicator of future outcomes” is a common fine print line found in all mutual fund literature. Yet due to either force of habit or conviction, both investors and advisors consider past performance and related metrics to be important factors in fund selection.
- *Does past performance really matter?* The semi-annual S&P Persistence Scorecard seeks to track the consistency of top performers over three- and five-consecutive year periods, and measure performance persistence through transition matrices for three- and five-year non-overlapping holding periods. As in our widely followed Standard & Poor’s Indices Versus Active Funds (SPIVA™) Scorecards, the University of Chicago’s CRSP Survivorship Bias Free Mutual Fund Database underlies our analysis.
- Very few funds manage to consistently repeat top-half or top-quartile performance. Over the five years ending September 2009, only 4.27% large-cap funds, 3.98% mid-cap funds, and 9.13% small-cap funds maintained a top-half ranking over the five consecutive 12-month periods. No large- or mid-cap funds, and only one small-cap fund maintained a top-quartile ranking over the same period.
- Looking at longer term performance, 24.32% of large-cap funds with a top-quartile ranking over the five years ending September 2004 maintained a top-quartile ranking over the next five years. Only 16.39% of mid-cap funds and 27.06% of small-cap funds maintained a top-quartile performance over the same period. Random expectations would suggest a repeat rate of 25%.
- Our research suggests that screening for top-quartile funds may be inappropriate. A healthy plurality of future top-quartile funds comes from the prior period’s second, third and even fourth quartiles. Screening out bottom quartile funds may be appropriate, however, since they have a very high probability of being merged or liquidated.

### Introduction

“Past performance is not an indicator of future outcomes” is a phrase found in the fine print of all mutual fund related literature. However, investors and advisors alike consider past performance and related metrics to be crucial to the fund selection process.

Does past performance really matter? To answer this question on an ongoing basis, we are reintroducing the semi-annual S&P Persistence Scorecard. The scorecard seeks to track the consistency of top performers over consecutive year periods, as well as measure performance persistence through transition matrices. As in our widely followed SPIVA reports, the University of Chicago’s CRSP Survivorship Bias Free Mutual Fund Database serves as our underlying data source.

Listed below are the key features of the S&P Persistence Scorecard:

- **Historical Rankings without Survivorship bias:** For anyone making an investment decision at the beginning of a time period, all funds available at that time are part of the initial opportunity set. However, many funds might liquidate or merge during a period of study. Often analysts use a finite set of funds that cover the complete historical time period, in essence, ranking the survivors. By using the University of Chicago’s Center for Research in Security Prices (CRSP) Survivorship Bias Free Mutual fund Database, the S&P Persistence Scorecard ranks all funds available at each point in time, and tracks the top-quartile and top-half performers throughout the time period.
- **Clean Universe:** The mutual fund universe used in these reports comprises actively managed domestic U.S. equity funds. Index funds, sector funds, and index-based dynamic (bull/bear) funds are excluded from the sample. To avoid double counting of multiple share classes, only the largest share class of a fund is used.
- **Transition Matrices:** Transition matrices show the movements between quartiles and halves for two non-overlapping three- and five-year periods. They also track the percentage of funds that have merged or liquidated. Additionally, we monitor movements between capitalization levels; for example, if some large-cap funds have become mid- or small-cap funds.
- **Tracking reports of top performers:** The tracking reports show the percentages of funds that remain in the top-quartile or top-half rankings for three and five-consecutive year periods.

Standard & Poor’s Persistence Scorecard is the only comprehensive, periodic and publicly available source of such data. The semi-annual reports can be found online at [www.spiva.standardandpoors.com](http://www.spiva.standardandpoors.com).

## Very Few Funds Consistently Stay in the Top-Quartile or Top-Half

Reports 1 and 2, found at the end of this paper, show very few funds managing to consistently repeat top-half or top-quartile performance. Over the five years ending September 2009, only 15 (4.27%) large-cap funds, 7 (3.98%) mid-cap funds, and 21 (9.13%) small-cap funds maintained a top-half ranking over five consecutive 12-month periods. No large- or mid-cap funds, and only one small-cap fund, maintained a top-quartile ranking over the same period. While low in absolute terms, these percentages are best understood in a probabilistic context. If fund returns are random and independent of prior returns, one would expect the top-half repeat rate to be 6.25% and the top-quartile repeat rate to be 0.39%.

Looking at longer term performance, 24.32% of large-cap funds with a top-quartile ranking over five years ending September 2004 maintained a top-quartile ranking over the next five years. Only 16.39% of mid-cap funds and 27.06% of small-cap funds maintained a top-quartile performance over the same period. Again, these percentages should be put in context of random expectations. If one were to pick a fund randomly, the chance of choosing a fund that will occupy the top-quartile during the next five years would be 25%.

Therefore, using the past five years' annual returns as well as cumulative five-year historical returns to find futures winners is roughly equivalent to, and for cases like small-cap funds, slightly superior to, rolling the dice.

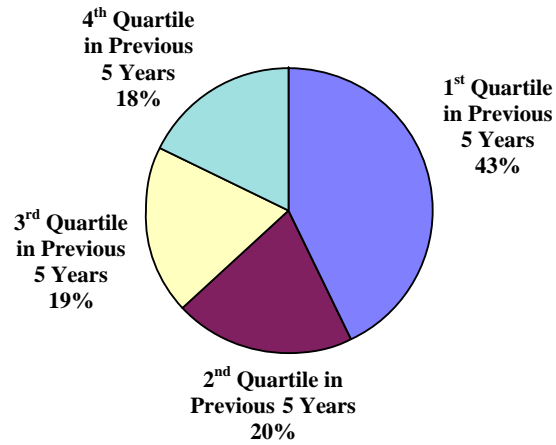
## Is Quartile Based Screening for Funds Appropriate?

In this scorecard, we reference random expectations because they set a benchmark for the usefulness of screening funds based on past returns. The fact that in many cases the repeat rates are higher than random expectations suggests that past performance should not be dismissed as completely irrelevant. However, we believe the common practice of screening for funds based on current top-quartile rankings may be inappropriate for the following reasons:

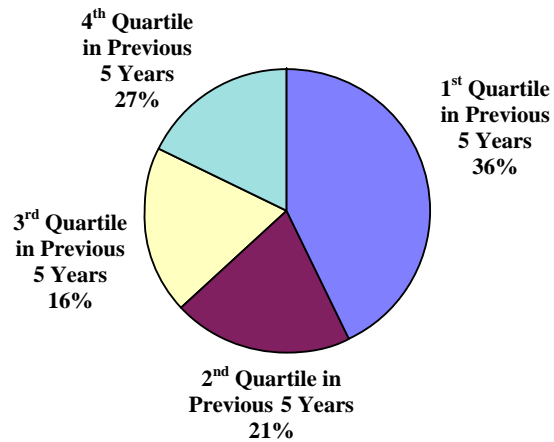
- The low absolute counts of repeat top performers suggest that past performance cannot be the sole or most important criteria in fund selection.
- Furthermore, the transition matrices of Report 3 and 4, found at the end of the paper, suggest that a healthy percentage of current top-quartile funds come from prior period second or third quartiles. This is illustrated in the charts found on the next page. Therefore, advisors and consultants who use granular rankings such as quartiles, or even quintiles and deciles, may be missing out on funds that should belong to their initial selection set.

There does seem to be some logic in deeply scrutinizing or even screening out bottom-quartile funds. Many of the bottom quartile funds are subsequently merged or liquidated. Clearly, asset management companies do not want to have laggards in their advertised line-ups.

### Where did the top-quartile large-cap funds for the last five years come from?



### Where did the top-quartile small-cap funds for the last five years come from?



Source: Standard & Poors, CRSP. Breakdown of top-quartile performers from 10/2004 to 9/2009 based upon their quartile ranking from 10/1999 to 2/2004.

**Report 1: Performance Persistence over Three Consecutive 12-Month Periods**

Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Quartile	
	Sep-07	Sep-08	Sep-09
<b>Top Quartile</b>			
All Domestic Funds	570	14.91	3.86
Large-Cap Funds	172	17.44	5.81
Mid-Cap Funds	97	12.37	2.06
Small-Cap Funds	133	14.29	3.01
Multi-Cap Funds	168	14.29	3.57
Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Half	
	Sep-07	Sep-08	Sep-09
<b>Top Half</b>			
All Domestic Funds	1139	41.53	20.11
Large-Cap Funds	344	46.22	24.71
Mid-Cap Funds	194	38.14	16.49
Small-Cap Funds	266	40.6	20.3
Multi-Cap Funds	335	39.4	17.31

Source: Standard &amp; Poor's. For Periods Ending September 30, 2009

**Report 2: Performance Persistence over Five Consecutive 12-Month Periods**

Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Quartile			
	Sep-05	Sep-06	Sep-07	Sep-08	Sep-09
<b>Top Quartile</b>					
All Domestic Funds	524	25.19	7.25	1.34	0.38
Large-Cap Funds	176	25	4.55	1.7	0
Mid-Cap Funds	88	26.14	9.09	2.27	0
Small-Cap Funds	115	26.09	6.96	0.87	0.87
Multi-Cap Funds	145	24.14	9.66	0.69	0.69
Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Half			
	Sep-05	Sep-06	Sep-07	Sep-08	Sep-09
<b>Top Half</b>					
All Domestic Funds	1046	50.38	25.14	12.05	5.54
Large-Cap Funds	351	48.15	20.51	10.26	4.27
Mid-Cap Funds	176	47.16	23.3	12.5	3.98
Small-Cap Funds	230	55.22	30	15.65	9.13
Multi-Cap Funds	289	51.21	28.03	11.07	5.19

Source: Standard &amp; Poor's. For Periods Ending September 30, 2009

**Report 3: Three-Year Transition Matrix**  
**(Performance over Two Non-Overlapping Three-Year Periods)**

**Based On Quartiles**

	No of Funds at Start	Three-Year Percentages at End						Style Changed (%)	Total (%)
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)			
<b>Sep-06</b>									
<b>All Domestic Funds</b>									
1st Quartile	481	23.28	19.33	23.49	24.74	9.15	0	100	
2nd Quartile	482	19.09	18.88	20.54	26.14	15.35	0	100	
3rd Quartile	481	20.79	21	21.62	17.46	19.13	0	100	
4th Quartile	481	17.26	21.41	14.76	12.06	34.51	0	100	
<b>Large-Cap Funds</b>									
1st Quartile	164	13.41	15.85	26.83	33.54	8.54	1.83	100	
2nd Quartile	164	14.02	14.63	21.34	21.95	19.51	8.54	100	
3rd Quartile	163	21.47	20.25	14.11	10.43	23.31	10.43	100	
4th Quartile	164	21.95	20.12	7.93	4.88	39.02	6.1	100	
<b>Mid-Cap Funds</b>									
1st Quartile	81	20.99	16.05	25.93	18.52	8.64	9.88	100	
2nd Quartile	81	17.28	16.05	19.75	22.22	12.35	12.35	100	
3rd Quartile	81	11.11	27.16	8.64	18.52	19.75	14.81	100	
4th Quartile	81	20.99	11.11	16.05	11.11	24.69	16.05	100	
<b>Small-Cap Funds</b>									
1st Quartile	109	26.61	20.18	20.18	24.77	8.26	0	100	
2nd Quartile	108	16.67	25.93	20.37	19.44	15.74	1.85	100	
3rd Quartile	109	23.85	21.1	23.85	17.43	13.76	0	100	
4th Quartile	108	13.89	12.96	16.67	18.52	32.41	5.56	100	
<b>Multi-Cap Funds</b>									
1st Quartile	128	15.63	11.72	21.09	18.75	7.81	25	100	
2nd Quartile	128	10.16	17.97	10.94	19.53	20.31	21.09	100	
3rd Quartile	128	17.97	17.97	19.53	9.38	17.19	17.97	100	
4th Quartile	128	15.63	10.94	7.81	10.94	32.03	22.66	100	

**Based On Halves**

	No of funds at Start	Three-Year Percentages at End				Style Changed (%)	Total (%)
		Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)			
<b>All Domestic Funds</b>							
Top Half	963	40.29	47.46	12.25	0	100	
Bottom Half	962	40.23	32.95	26.82	0	100	
<b>Large-Cap Funds</b>							
Top Half	328	28.96	51.83	14.02	5.18	100	
Bottom Half	327	41.9	18.65	31.19	8.26	100	
<b>Mid-Cap Funds</b>							
Top Half	162	35.19	43.21	10.49	11.11	100	
Bottom Half	162	35.19	27.16	22.22	15.43	100	
<b>Small-Cap Funds</b>							
Top Half	217	44.7	42.4	11.98	0.92	100	
Bottom Half	217	35.94	38.25	23.04	2.76	100	
<b>Multi-Cap Funds</b>							
Top Half	256	27.73	35.16	14.06	23.05	100	
Bottom Half	256	31.25	23.83	24.61	20.31	100	

Source: Standard & Poor's. For Periods Ending September 30, 2009

**Report 4: Five-Year Transition Matrix**  
**(Performance over Two Non-Overlapping Five-Year Periods)**

**Based On Quartiles**

	Five-Year Percentages at End							
	No of Funds at Start	1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)	Style Changed (%)	Total (%)
	Sep-04							
<b>All Domestic Funds</b>								
1st Quartile	384	29.95	20.83	16.15	20.31	12.76	0	100
2nd Quartile	384	17.71	24.48	19.01	18.49	20.31	0	100
3rd Quartile	384	12.76	14.32	24.48	16.93	31.51	0	100
4th Quartile	384	12.24	13.02	12.76	16.93	45.05	0	100
<b>Large-Cap Funds</b>								
1st Quartile	148	24.32	17.57	12.16	22.3	18.92	4.73	100
2nd Quartile	147	11.56	14.97	19.05	13.61	31.29	9.52	100
3rd Quartile	148	10.81	10.14	16.22	12.84	40.54	9.46	100
4th Quartile	147	10.2	14.29	8.84	8.16	49.66	8.84	100
<b>Mid-Cap Funds</b>								
1st Quartile	61	16.39	22.95	18.03	14.75	3.28	24.59	100
2nd Quartile	60	13.33	13.33	15	16.67	26.67	15	100
3rd Quartile	61	18.03	18.03	21.31	14.75	19.67	8.2	100
4th Quartile	60	15	6.67	8.33	15	40	15	100
<b>Small-Cap Funds</b>								
1st Quartile	85	27.06	27.06	12.94	23.53	7.06	2.35	100
2nd Quartile	85	15.29	20	23.53	21.18	16.47	3.53	100
3rd Quartile	85	11.76	14.12	28.24	15.29	27.06	3.53	100
4th Quartile	85	20	12.94	9.41	14.12	40	3.53	100
<b>Multi-Cap Funds</b>								
1st Quartile	91	14.29	12.09	16.48	16.48	14.29	26.37	100
2nd Quartile	91	12.09	19.78	8.79	9.89	15.38	34.07	100
3rd Quartile	91	7.69	12.09	14.29	12.09	23.08	30.77	100
4th Quartile	91	15.38	5.49	8.79	10.99	38.46	20.88	100

**Based On Halves**

	Five-Year Percentages at End					
	No of funds at Start	Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)	Style Changed (%)	Total (%)
<b>All Domestic Funds</b>						
Top Half	768	46.48	36.98	16.54	0	100
Bottom Half	768	26.17	35.55	38.28	0	100
<b>Large-Cap Funds</b>						
Top Half	295	34.24	33.56	25.08	7.12	100
Bottom Half	295	22.71	23.05	45.08	9.15	100
<b>Mid-Cap Funds</b>						
Top Half	121	33.06	32.23	14.88	19.83	100
Bottom Half	121	28.93	29.75	29.75	11.57	100
<b>Small-Cap Funds</b>						
Top Half	170	44.71	40.59	11.76	2.94	100
Bottom Half	170	29.41	33.53	33.53	3.53	100
<b>Multi-Cap Funds</b>						
Top Half	182	29.12	25.82	14.84	30.22	100
Bottom Half	182	20.33	23.08	30.77	25.82	100

Source: Standard & Poor's. For Periods Ending September 30, 2009

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