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INDICES**

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## DOES PAST PERFORMANCE MATTER? THE PERSISTENCE SCORECARD

### *About the Persistence Scorecard*

The phrase “past performance is not an indicator of future outcomes” (or some variation thereof) can be found in the fine print of most mutual fund literature. Yet due to either force of habit or conviction, investors and advisors consider past performance and related metrics to be important factors in fund selection. So does past performance really matter?

To answer this question on a continuous basis, the S&P Persistence Scorecard, released twice per year, tracks the consistency of top performers over yearly consecutive periods and measures performance persistence through transition matrices. As in our widely followed SPIVA<sup>®</sup> Scorecards, the University of Chicago’s Center for Research in Security Prices Survivorship (CRSP) Bias Free Mutual Fund Database serves as our underlying data source.<sup>1</sup>

S&P Dow Jones Indices is one of the world’s leading index providers, maintaining a wide variety of investable and benchmark indices to meet an array of investor needs. Our Index Research & Design team is dedicated to conducting unbiased, in-depth analysis on a broad range of topics and issues facing investors in today’s marketplace. This scorecard highlights performance persistence over three- and five-year consecutive 12-month periods and two non-overlapping three- and five-year periods.

Key features of the S&P Persistence Scorecard include:

- **Historical rankings without survivorship bias:** For anyone making an investment decision, all funds available at the time of that decision are part of the initial opportunity set. Nevertheless, in their persistence calculations, analysts often limit their sample to funds that continue to exist over the complete time period examined, ranking only the survivors. If that happens, funds that liquidate or merge during a period of study are disregarded, biasing measurements of persistence. Using the University of Chicago’s 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. This approach accounts for all initially available funds.

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<sup>1</sup>The CRSP Survivor-Bias-Free US Mutual Fund Database is the only complete database of both active and liquidated/merged mutual funds. It was created in 1995 and contains fund data from December 1961. Current and historical data from August 1998 has been supplied by Lipper and Thomson Reuters. The fund classifications are based on the Lipper fund classification system.

- **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 multiple share classes, only the largest share class of a fund is used.
- **Transition matrices:** Transition matrices show the movements between quartiles and halves over two non-overlapping three- and five-year periods. They also track the percentage of funds that have merged or liquidated. In addition, we monitor movements between capitalization levels. This helps us capture, for example, the conversion of some large-cap funds to mid- and 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 over three- and five-consecutive-year periods.

## SUMMARY OF RESULTS

- Very few funds can consistently stay at the top. Out of 703 funds that were in the top quartile as of March 2011, only 4.69% managed to stay in the top quartile over three consecutive 12-month periods at the end of March 2013. Further, 3.35% of the large-cap funds and 6.08% of the small-cap funds remain in the top quartile. It is worth noting that no mid-cap funds managed to remain in the top quartile.
- For the three years ended March 2013, 16.57% of large-cap funds, 14.22% of mid-cap funds and 23.05% of small-cap funds maintained a top-half ranking over three consecutive 12-month periods. Random expectations would suggest a rate of 25%.
- Looking at longer-term performance, only 2.41% of large-cap funds, 3.21% of mid-cap funds and 4.65% of small-cap funds maintained a top-half performance over five consecutive 12-month periods. Random expectations would suggest a repeat rate of 6.25%.
- While top-quartile and top-half repeat rates have been at or below the levels one expects based on chance, there is consistency in the death rate of bottom-quartile funds. Across all market cap categories and all periods studied, fourth-quartile funds had a much higher rate of being merged and liquidated.

## EXHIBITS

Exhibit 1: Performance Persistence Over Three Consecutive 12-Month Periods				
Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Quartile		
		Mar-11	Mar-12	Mar-13
<b>Top Quartile</b>				
All Domestic Funds	703	30.73	4.69	
All Large-Cap Funds	269	30.11	3.35	
All Mid-Cap Funds	102	29.41	0	
All Small-Cap Funds	148	30.41	6.08	
All Multi-Cap Funds	184	32.61	8.15	
		<b>Mar-11</b>	<b>Mar-12</b>	<b>Mar-13</b>
<b>Top Half</b>				
All Domestic Funds	1,405	49.75	18.36	
All Large-Cap Funds	537	51.96	16.57	
All Mid-Cap Funds	204	49.51	14.22	
All Small-Cap Funds	295	51.53	23.05	
All Multi-Cap Funds	369	45.26	19.51	

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

<b>Exhibit 2: Performance Persistence Over Five Consecutive 12-Month Periods</b>					
Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Quartile			
	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13
<b>Top Quartile</b>					
All Domestic Funds	558	11.83	4.3	1.79	0.18
All Large-Cap Funds	187	8.02	5.35	1.6	0
All Mid-Cap Funds	94	11.7	2.13	2.13	0
All Small-Cap Funds	129	16.28	5.43	1.55	0.78
All Multi-Cap Funds	148	12.84	3.38	2.03	0
Mutual Fund Category	Fund Count at Start	Percentage Remaining in Top Half			
	Mar-09	Mar-10	Mar-11	Mar-12	Mar-13
<b>Top Half</b>					
All Domestic Funds	1,115	32.02	15.61	9.87	3.59
All Large-Cap Funds	374	31.55	18.72	10.16	2.41
All Mid-Cap Funds	187	29.41	10.7	9.09	3.21
All Small-Cap Funds	258	35.27	15.89	8.53	4.65
All Multi-Cap Funds	296	31.42	14.53	11.15	4.39

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

<b>Exhibit 3: Three-Year Transition Matrix</b>								
<b>Performance Over Two Non-Overlapping Three-Year Periods (Based on Quartiles)</b>								
Mutual Fund Category	Fund Count at Start (Mar-10)	Three-Year Percentage at End						Total (%)
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)	Style Changed (%)	
<b>All Domestic Funds</b>								
1st Quartile	483	23.81	20.91	21.95	24.02	9.32	0	100
2nd Quartile	483	21.12	23.81	22.77	21.53	10.77	0	100
3rd Quartile	483	18.43	18.22	21.74	21.53	20.08	0	100
4th Quartile	483	19.46	20.08	16.36	15.73	28.36	0	100
<b>Large-Cap Funds</b>								
1st Quartile	170	18.82	18.24	18.24	22.35	10	12.35	100
2nd Quartile	170	20	17.06	21.18	16.47	15.29	10	100
3rd Quartile	170	14.71	19.41	15.29	19.41	18.82	12.36	100
4th Quartile	170	16.47	15.29	14.12	11.76	31.18	11.17	100
<b>Mid-Cap Funds</b>								
1st Quartile	74	17.57	16.22	14.86	17.57	13.51	20.27	100
2nd Quartile	73	15.07	17.81	13.7	12.33	13.7	27.4	100
3rd Quartile	74	12.16	8.11	16.22	10.81	13.51	39.19	100
4th Quartile	73	10.96	13.7	10.96	15.07	31.51	17.81	100

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

**Exhibit 3: Three-Year Transition Matrix (continued)**  
**Performance Over Two Non-Overlapping Three-Year Periods (Based on Quartiles)**

Mutual Fund Category	Fund Count at Start (Mar-10)	Three-Year Percentage at End					Merged/Liquidated (%)	Style Changed (%)	Total (%)
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)				
<b>Small-Cap Funds</b>									
1st Quartile	112	23.21	12.5	21.43	31.25	6.25	5.36	100	
2nd Quartile	111	16.22	27.03	27.03	15.32	3.6	10.81	100	
3rd Quartile	112	18.75	23.21	19.64	18.75	16.07	3.57	100	
4th Quartile	111	22.52	18.02	11.71	15.32	28.83	3.6	100	
<b>Multi-Cap Funds</b>									
1st Quartile	128	17.97	21.09	11.72	14.84	7.81	26.57	100	
2nd Quartile	128	15.63	14.84	17.97	21.88	11.72	17.97	100	
3rd Quartile	128	10.94	10.94	19.53	15.63	20.31	22.66	100	
4th Quartile	128	16.41	14.06	11.72	8.59	29.69	19.53	100	

**Performance Over Two Non-Overlapping Three-Year Periods (Based on Halves)**

Mutual Fund Category	Fund Count at Start (Mar-10)	Three-Year Percentage at End			Merged/Liquidated (%)	Style Changed (%)	Total (%)
		Top Half (%)	Bottom Half (%)				
<b>All Domestic Funds</b>							
Top Half	966	44.82	45.13	10.04	0	100	
Bottom Half	966	38.1	37.68	24.22	0	100	
<b>Large-Cap Funds</b>							
Top Half	340	37.06	39.12	12.65	11.17	100	
Bottom Half	340	32.94	30.29	25	11.76	100	
<b>Mid-Cap Funds</b>							
Top Half	147	33.33	29.25	13.61	23.8	100	
Bottom Half	147	22.45	26.53	22.45	28.57	100	
<b>Small-Cap Funds</b>							
Top Half	223	39.46	47.53	4.93	8.07	100	
Bottom Half	223	41.26	32.74	22.42	3.59	100	
<b>Multi-Cap Funds</b>							
Top Half	256	34.77	33.2	9.77	22.26	100	
Bottom Half	256	26.17	27.73	25	21.09	100	

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

**Exhibit 4: Five-Year Transition Matrix****Performance Over Two Non-Overlapping Five-Year Periods (Based on Quartiles)**

Mutual Fund Category	Fund Count at Start (Mar-08)	Five-Year Percentage at End						Total (%)
		1st Quartile (%)	2nd Quartile (%)	3rd Quartile (%)	4th Quartile (%)	Merged/Liquidated (%)	Style Changed (%)	
<b>All Domestic Funds</b>								
1st Quartile	403	29.78	23.08	16.13	18.86	12.16	0	100
2nd Quartile	403	21.84	17.62	20.84	16.38	23.33	0	100
3rd Quartile	402	13.43	16.42	20.65	23.13	26.37	0	100
4th Quartile	403	10.67	18.36	18.11	17.12	35.73	0	100
<b>Large-Cap Funds</b>								
1st Quartile	134	11.94	20.15	18.66	23.88	18.66	6.71	100
2nd Quartile	134	16.42	17.91	17.91	16.42	18.66	12.68	100
3rd Quartile	134	11.94	11.19	13.43	11.19	28.36	23.88	100
4th Quartile	134	20.15	11.19	10.45	8.96	38.81	10.44	100
<b>Mid-Cap Funds</b>								
1st Quartile	69	10.14	5.8	14.49	11.59	8.7	49.27	100
2nd Quartile	69	15.94	8.7	10.14	13.04	18.84	33.33	100
3rd Quartile	69	10.14	18.84	8.7	7.25	24.64	30.43	100
4th Quartile	69	5.8	7.25	8.7	8.7	34.78	34.79	100
<b>Small-Cap Funds</b>								
1st Quartile	93	12.9	18.28	26.88	25.81	8.6	7.53	100
2nd Quartile	94	17.02	25.53	22.34	17.02	11.7	6.39	100
3rd Quartile	93	25.81	18.28	11.83	15.05	27.96	1.07	100
4th Quartile	93	17.2	9.68	11.83	13.98	41.94	5.37	100
<b>Multi-Cap Funds</b>								
1st Quartile	107	12.15	13.08	9.35	13.08	17.76	34.58	100
2nd Quartile	106	12.26	7.55	8.49	9.43	29.25	33.01	100
3rd Quartile	107	6.54	9.35	17.76	10.28	26.17	29.9	100
4th Quartile	106	12.26	12.26	7.55	9.43	29.25	29.24	100

**Performance Over Two Non-Overlapping Five-Year Periods (Based on Halves)**

Mutual Fund Category	Fund Count at Start (Mar-08)	Five-Year Percentage at End				Style Changed (%)	Total (%)
		Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)			
<b>All Domestic Funds</b>							
Top Half	806	46.15	36.1	17.74	0	100	
Bottom Half	805	29.44	39.5	31.06	0	100	

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

**Exhibit 4: Five-Year Transition Matrix (continued)**  
**Performance Over Two Non-Overlapping Five-Year Periods (Based on Halves)**

Mutual Fund Category	Fund Count at Start (Mar-08)	Five-Year Percentage at End				
		Top Half (%)	Bottom Half (%)	Merged/Liquidated (%)	Style Changed (%)	Total (%)
<b>Large-Cap Funds</b>						
Top Half	268	33.21	38.43	18.66	9.7	100
Bottom Half	268	27.24	22.01	33.58	17.17	100
<b>Mid-Cap Funds</b>						
Top Half	138	20.29	24.64	13.77	41.3	100
Bottom Half	138	21.01	16.67	29.71	32.61	100
<b>Small-Cap Funds</b>						
Top Half	187	36.9	45.99	10.16	6.95	100
Bottom Half	186	35.48	26.34	34.95	3.22	100
<b>Multi-Cap Funds</b>						
Top Half	213	22.54	20.19	23.47	33.81	100
Bottom Half	213	20.19	22.54	27.7	29.58	100

Source: S&P Dow Jones Indices. Data as of March 31, 2013. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

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