

INDEX RESEARCH & DESIGN

DOES PAST PERFORMANCE MATTER? S&P PERSISTENCE SCORECARD

About the S&P 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® Scorecards, University of Chicago's Center for Research in Security Prices Survivorship (CRSP) Bias Free Mutual Fund Database serves as our underlying data source.

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 Global 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 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. This approach accounts for all initially available funds.
- Clean universe: The mutual fund universe used in these reports is composed of 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.

¹ 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.

SUMMARY OF RESULTS

Very few funds manage to repeat top-half or top-quartile performance consistently. Given the volatility in the domestic equity markets over the last five years, it is unsurprising that data for the period ending March 2012 show that the percentage of top-performing managers remaining in the top-half or top-quartile declined considerably in several categories.

- For the five years ending March 2012, only 5.23% of large-cap funds, 5.46% of mid-cap funds and 5.14% of small-cap funds maintained a top-half ranking over five consecutive 12-month periods. Random expectations would suggest a rate of 6.25%.
- Looking at longer-term performance, 5.97% of large-cap funds with a top-quartile ranking over the five years ending March 2007 maintained a top-quartile ranking over the next five years. Only 4.35% of mid-cap funds and 15.56% of small-cap funds maintained a top-quartile performance over the same period. Random expectations would suggest a repeat rate of 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.

| Mutual Fund Category | Fund Count at Start | Percentage Remain | ning in Top Quartile |
|----------------------|---------------------|-------------------|----------------------|
| | Mar-10 | Mar-11 | Mar-12 |
| Top Quartile | | | |
| All Domestic Funds | 716 | 22.63 | 4.05 |
| Large-Cap Funds | 259 | 18.92 | 3.47 |
| Mid-Cap Funds | 112 | 20.54 | 2.68 |
| Small-Cap Funds | 155 | 23.87 | 3.23 |
| Multi-Cap Funds | 190 | 27.89 | 6.32 |
| Mutual Fund Category | Fund Count at Start | Percentage Rema | aining in Top Half |
| | Mar-10 | Mar-11 | Mar-12 |
| Top Half | | | |
| All Domestic Funds | 1432 | 42.74 | 19.62 |
| Large-Cap Funds | 518 | 44.21 | 19.88 |
| Mid-Cap Funds | 224 | 33.48 | 16.07 |
| Small-Cap Funds | 310 | 41.94 | 19.68 |
| Multi-Cap Funds | 380 | 46.84 | 21.32 |

Source: S&P Dow Jones Indices. Data as of March 30, 2011. Tables are provided for illustrative purposes. Past performance is not a guarantee of future results.

| Exhibit 2: Performance Persistence over Five Consecutive 12-Month Periods | | | | | | | |
|---|---------------------|--------------------------------------|--------|--------|--------|--|--|
| Mutual Fund Category | Fund Count at Start | Percentage Remaining in Top Quartile | | | | | |
| | Mar-08 | Mar-09 | Mar-10 | Mar-11 | Mar-12 | | |
| Top Quartile | | | | | | | |
| All Domestic Funds | 535 | 31.03 | 2.24 | 1.31 | 0.93 | | |
| Large-Cap Funds | 162 | 32.1 | 0.62 | 0.62 | 0.62 | | |
| Mid-Cap Funds | 92 | 20.65 | 1.09 | 1.09 | 1.09 | | |
| Small-Cap Funds | 126 | 35.71 | 3.17 | 0.79 | 0 | | |
| Multi-Cap Funds | 155 | 32.26 | 3.87 | 2.58 | 1.94 | | |
| Mutual Fund Category | Fund Count at Start | Percentage Remaining in Top Half | | | Half | | |
| | Mar-08 | Mar-09 | Mar-10 | Mar-11 | Mar-12 | | |
| Top Half | | | | | | | |
| All Domestic Funds | 1072 | 54.76 | 14.27 | 7.56 | 5.22 | | |
| Large-Cap Funds | 325 | 56.92 | 13.85 | 7.08 | 5.23 | | |
| Mid-Cap Funds | 183 | 53.55 | 12.02 | 6.56 | 5.46 | | |
| Small-Cap Funds | 253 | 60.87 | 20.16 | 10.28 | 5.14 | | |
| Multi-Cap Funds | 311 | 48.23 | 11.25 | 6.43 | 5.14 | | |

| Exhibit 3: Three-Year Transition Matrix Performance over Two Non-Overlapping Three-Year Periods (Based on Quartiles) | | | | | | | | |
|--|--|------------------------|------------------------|------------------------|------------------------|------------------------------|-------------------------|--------------|
| | Three-Year Percentage at End | | | | | | | |
| Mutual Fund Category | Fund Count at Start (Mar- 09) | 1st Quartile (%) | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/ Liquidated (%) | Style Changed (%) | Total (%) |
| All Domestic Funds | , | | | | | | | |
| 1st Quartile | 493 | 10.34 | 18.86 | 23.12 | 38.74 | 8.92 | 0 | 100 |
| 2nd Quartile | 493 | 13.59 | 21.70 | 25.35 | 23.73 | 15.62 | 0 | 100 |
| 3rd Quartile | 493 | 21.10 | 22.52 | 24.34 | 14.00 | 18.05 | 0 | 100 |
| 4th Quartile | 493 | 38.13 | 20.08 | 10.14 | 6.69 | 24.95 | 0 | 100 |
| Large-Cap Funds | | | | | | | | |
| 1st Quartile | 169 | 14.20 | 11.24 | 26.04 | 33.14 | 8.28 | 7.10 | 100 |
| 2nd Quartile | 169 | 18.93 | 25.44 | 17.16 | 13.61 | 16.57 | 8.28 | 100 |
| 3rd Quartile | 168 | 20.83 | 16.07 | 14.29 | 17.26 | 17.26 | 14.29 | 100 |
| 4th Quartile | 169 | 18.93 | 20.12 | 15.38 | 8.88 | 22.49 | 14.20 | 100 |
| Mid-Cap Funds | | | | | | | | |
| 1st Quartile | 82 | 12.20 | 14.63 | 10.98 | 18.29 | 9.76 | 34.14 | 100 |
| 2nd Quartile | 83 | 10.84 | 12.05 | 16.87 | 8.43 | 18.07 | 33.74 | 100 |
| 3rd Quartile | 82 | 12.20 | 12.20 | 12.20 | 12.20 | 26.83 | 24.39 | 100 |
| 4th Quartile | 82 | 14.63 | 10.98 | 9.76 | 10.98 | 21.95 | 31.71 | 100 |
| Small-Cap Funds | | | | | | | | |
| 1st Quartile | 116 | 8.62 | 12.93 | 31.03 | 34.48 | 4.31 | 8.62 | 100 |
| 2nd Quartile | 115 | 20.00 | 21.74 | 20.87 | 17.39 | 9.57 | 10.43 | 100 |
| 3rd Quartile | 116 | 24.14 | 23.28 | 17.24 | 14.66 | 17.24 | 3.45 | 100 |
| 4th Quartile | 115 | 25.22 | 20.00 | 8.70 | 11.30 | 33.04 | 1.74 | 100 |
| Multi-Cap Funds | | | | | | | | |
| 1st Quartile | 127 | 11.81 | 7.87 | 11.02 | 34.65 | 6.30 | 28.35 | 100 |
| 2nd Quartile | 126 | 15.08 | 15.08 | 19.84 | 12.70 | 15.08 | 22.22 | 100 |
| 3rd Quartile | 127 | 10.24 | 17.32 | 19.69 | 5.51 | 22.05 | 25.19 | 100 |
| 4th Quartile | 126 | 22.22 | 19.05 | 8.73 | 6.35 | 25.40 | 18.25 | 100 |

Exhibit 3: Three-Year Transition Matrix (continued) Performance over Two Non-Overlapping Three-Year Periods (Based on Halves) Three-Year Percentage at End Merged/ Liquidated **Fund Count** Style Top Half **Bottom Mutual Fund Category** at Start Changed Total (%) (%) **Half (%)** (Mar-09) (%) (%) **All Domestic Funds** Top Half 986 32.25 12.27 0 100 55.48 0 **Bottom Half** 986 50.91 27.59 21.5 100 Large-Cap Funds Top Half 338 34.91 44.97 12.43 7.69 100 **Bottom Half** 337 37.98 27.89 19.88 14.24 100 Mid-Cap Funds Top Half 165 24.85 27.27 13.94 33.94 100 **Bottom Half** 100 164 25.00 22.56 24.39 28.05 **Small-Cap Funds** Top Half 231 31.60 51.95 6.93 9.52 100 **Bottom Half** 231 46.32 25.97 25.11 2.60 100 **Multi-Cap Funds** Top Half 253 24.9 39.13 10.67 25.3 100 **Bottom Half** 253 34.39 20.16 23.72 21.73 100

| Exhibit 4: Five-Year Transition Matrix | | | | | | | | |
|--|---------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------------|-------------------------|--------------|
| Performance over Two Non-Overlapping Five-Year Periods (Based on Quartiles) Five-Year Percentage at End | | | | | | | | |
| Mutual Fund Category | Fund Count at Start (Mar-07) | 1st Quartile (%) | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/ Liquidated (%) | Style Changed (%) | Total (%) |
| All Domestic Funds | | | | | | | | |
| 1st Quartile | 399 | 19.80 | 18.55 | 22.06 | 26.07 | 13.53 | 0 | 100 |
| 2nd Quartile | 398 | 16.33 | 20.10 | 20.35 | 25.38 | 17.84 | 0 | 100 |
| 3rd Quartile | 399 | 17.29 | 19.05 | 21.80 | 15.54 | 26.32 | 0 | 100 |
| 4th Quartile | 398 | 22.61 | 18.59 | 11.81 | 9.05 | 37.94 | 0 | 100 |
| Large-Cap Funds | | | | | | | | |
| 1st Quartile | 134 | 5.97 | 15.67 | 23.88 | 31.34 | 17.91 | 5.22 | 100 |
| 2nd Quartile | 133 | 7.52 | 18.05 | 22.56 | 21.05 | 19.55 | 11.28 | 100 |
| 3rd Quartile | 134 | 19.40 | 20.15 | 13.43 | 6.72 | 25.37 | 14.93 | 100 |
| 4th Quartile | 133 | 30.83 | 9.77 | 3.76 | 4.51 | 42.11 | 9.02 | 100 |
| Mid-Cap Funds | | | | | | | | |
| 1st Quartile | 69 | 4.35 | 11.59 | 17.39 | 15.94 | 8.70 | 42.02 | 100 |
| 2nd Quartile | 70 | 11.43 | 10.00 | 17.14 | 15.71 | 12.86 | 32.85 | 100 |
| 3rd Quartile | 69 | 17.39 | 11.59 | 5.80 | 7.25 | 20.29 | 37.68 | 100 |
| 4th Quartile | 69 | 10.14 | 11.59 | 2.90 | 4.35 | 42.03 | 28.98 | 100 |
| Small-Cap Funds | | | | | | | | |
| 1st Quartile | 90 | 15.56 | 17.78 | 22.22 | 25.56 | 14.44 | 4.45 | 100 |
| 2nd Quartile | 90 | 11.11 | 24.44 | 20.00 | 25.56 | 14.44 | 4.45 | 100 |
| 3rd Quartile | 89 | 20.22 | 20.22 | 23.60 | 15.73 | 17.98 | 2.24 | 100 |
| 4th Quartile | 90 | 27.78 | 11.11 | 8.89 | 6.67 | 40.00 | 5.56 | 100 |
| Multi-Cap Funds | | | | | | | | |
| 1st Quartile | 106 | 7.55 | 13.21 | 11.32 | 17.92 | 16.04 | 33.96 | 100 |
| 2nd Quartile | 106 | 12.26 | 11.32 | 11.32 | 15.09 | 19.81 | 30.19 | 100 |
| 3rd Quartile | 106 | 9.43 | 12.26 | 17.92 | 3.77 | 30.19 | 26.41 | 100 |
| 4th Quartile | 106 | 14.15 | 6.60 | 1.89 | 6.60 | 33.02 | 37.73 | 100 |
| | | | | | | | | |

Exhibit 4: Five-Year Transition Matrix (continued) Performance over Two Non-Overlapping Five-Year Periods (Based on Halves) Five-Year Percentage at End Fund Merged/ Style **Mutual Fund** Count at Top Half **Bottom** Liquidated Changed (%) Total (%) Category Start (Mar-(%) Half (%) (%) 07) **All Domestic Funds** Top Half 797 0 37.39 46.93 15.68 100 **Bottom Half** 0 100 797 38.77 29.11 32.12 Large-Cap Funds Top Half 267 23.6 49.44 18.73 8.24 100 **Bottom Half** 267 40.07 14.23 33.71 11.98 100 Mid-Cap Funds Top Half 139 18.71 33.09 10.79 37.41 100 **Bottom Half** 138 25.36 10.14 31.16 33.33 100 **Small-Cap Funds** Top Half 180 34.44 46.67 14.44 4.45 100 **Bottom Half** 179 39.66 27.37 29.05 3.91 100 **Multi-Cap Funds** 17.92 32.08 100 Top Half 212 22.17 27.83 **Bottom Half** 100 212 21.23 15.09 31.60 32.08

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