

CONTRIBUTOR

Aye M. Soe, CFA  
Senior Director  
Global Research & Design  
[aye.soe@spglobal.com](mailto:aye.soe@spglobal.com)

# Does Past Performance Matter? The Persistence Scorecard

## SUMMARY OF RESULTS

- When it comes to the active versus passive debate, one of the key measurements of successful active management lies in the ability of a manager or a strategy to deliver above-average returns consistently over multiple periods. Demonstrating the ability to outperform peers repeatedly is the only proven way to differentiate a manager's luck from skill.
- According to the S&P Persistence Scorecard, relatively few funds can consistently stay at the top. Out of 641 domestic equity funds that were in the top quartile as of March 2014, only 7.33% managed to stay in the top quartile at the end of March 2016. Furthermore, 8.5% of the large-cap funds, 3.26% of the mid-cap funds, and 0.68% of the small-cap funds remained in the top quartile.
- For the three-year period that ended in March 2016, persistence figures for funds in the top half were mixed. Over three consecutive 12-month periods, 30.36% of large-cap funds, 24.04% of mid-cap funds, and 19.18% of small-cap funds maintained a top-half ranking.
- An inverse relationship generally exists between the measurement time horizon and the ability of top-performing funds to maintain their status. It is worth noting that only 0.78% of large-cap funds and no mid-cap or small-cap funds managed to remain in the top quartile at the end of the five-year measurement period. This figure paints a negative picture regarding the lack of long-term persistence in mutual fund returns.
- Similarly, only 3.7% of large-cap funds, 5.79% of mid-cap funds, and 7.82% of small-cap funds maintained top-half performance over five consecutive 12-month periods. Random expectations would suggest a repeat rate of 6.25%.

- The transition matrices are designed to track the performance of top- and bottom-quartile performers over subsequent time periods. The data show a stronger likelihood for the best-performing funds to become the worst-performing funds than vice versa. Of the 434 funds that were in the bottom quartile, 15.21% moved to the top quartile over the five-year horizon, while 29.49% of the 434 funds that were in the top quartile moved into the bottom quartile during the same period.
- Our research also suggests that 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 or liquidated. The five-year transition matrix shows that 32.72% of large-cap funds, 35% of mid-cap funds, and 32.04% of small-cap funds in the fourth quartile disappeared.
- While much has been written about the persistence of equity funds, there is little research on the persistence of fixed income funds. In March 2015, we added a fixed income persistence section.
- Compared with domestic equity funds, there was a higher level of performance persistence among the top-quartile fixed income funds over the three-year period ending March 2016. Intermediate-term government funds, global income funds, and New York municipal funds were the only categories in which the results show no performance persistence.
- Over the five-year measurement horizon, the results show a lack of persistence among nearly all the top-quartile fixed income categories. Funds investing in mortgage-backed securities and general municipal debt funds were the only two groups in which a noticeable level of persistence was observed.

## **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 (CRSP) Survivorship 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 the following.

- 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.
- 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 or bear) 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.
- 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 consecutive three- and five-year periods.

## EXHIBITS

| Exhibit 1: Performance Persistence of Domestic Equity Funds Over Three Consecutive 12-Month Periods |                                  |                                      |  |            |
|---|----------------------------------|--------------------------------------|--|------------|
| Mutual Fund Category  | Fund Count at Start (March 2014) | Percentage Remaining in Top Quartile |  |            |
|   |                                  | March 2015                           |  | March 2016 |
| <b>Top Quartile</b>   |                                  |                                      |  |            |
| All Domestic Funds  | 641                              | 29.80                                |  | 7.33       |
| Large-Cap Funds   | 247                              | 43.32                                |  | 8.50       |
| Mid-Cap Funds   | 92                               | 22.83                                |  | 3.26       |
| Small-Cap Funds   | 146                              | 24.66                                |  | 0.68       |
| Multi-Cap Funds   | 156                              | 29.49                                |  | 4.49       |
| Mutual Fund Category  | Fund Count at Start (March 2014) | Percentage Remaining in Top Half     |  |            |
|   |                                  | March 2015                           |  | March 2016 |
| <b>Top Half</b>   |                                  |                                      |  |            |
| All Domestic Funds  | 1,281                            | 52.69                                |  | 27.48      |
| Large-Cap Funds   | 494                              | 55.47                                |  | 30.36      |
| Mid-Cap Funds   | 183                              | 49.18                                |  | 24.04      |
| Small-Cap Funds   | 292                              | 52.40                                |  | 19.18      |
| Multi-Cap Funds   | 312                              | 50.00                                |  | 22.76      |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 2: Performance Persistence of Domestic Equity Funds Over Five Consecutive 12-Month Periods |                                  |                                      |            |            |            |
|--|----------------------------------|--------------------------------------|------------|------------|------------|
| Mutual Fund Category   | Fund Count at Start (March 2012) | Percentage Remaining in Top Quartile |            |            |            |
|  |                                  | March 2013                           | March 2014 | March 2015 | March 2016 |
| <b>Top Quartile</b>  |                                  |                                      |            |            |            |
| All Domestic Funds   | 664                              | 11.90                                | 2.26       | 0.75       | 0.30       |
| Large-Cap Funds  | 257                              | 15.56                                | 1.95       | 0.78       | 0.78       |
| Mid-Cap Funds  | 95                               | 11.58                                | 3.16       | 2.11       | 0.00       |
| Small-Cap Funds  | 147                              | 23.13                                | 4.08       | 0.68       | 0.00       |
| Multi-Cap Funds  | 165                              | 19.39                                | 4.85       | 3.03       | 1.21       |
| Mutual Fund Category   | Fund Count at Start (March 2012) | Percentage Remaining in Top Half     |            |            |            |
|  |                                  | March 2013                           | March 2014 | March 2015 | March 2016 |
| <b>Top Half</b>  |                                  |                                      |            |            |            |
| All Domestic Funds   | 1,328                            | 43.67                                | 18.22      | 10.39      | 6.02       |
| Large-Cap Funds  | 513                              | 37.04                                | 13.65      | 8.38       | 3.70       |
| Mid-Cap Funds  | 190                              | 37.37                                | 16.84      | 7.89       | 5.79       |
| Small-Cap Funds  | 294                              | 51.36                                | 24.83      | 15.65      | 7.82       |
| Multi-Cap Funds  | 331                              | 39.27                                | 17.52      | 10.27      | 5.74       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 3: Three-Year Transition Matrix—Performance Over Two Non-Overlapping Three-Year Periods (Based on Quartiles) |                                    |                               |                  |                  |                  |                       |                   |           |
|--|------------------------------------|-------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| All Domestic Funds   | No. of Funds at Start (March 2013) | Three-Year Percentages at End |                  |                  |                  |                       |                   |           |
|  |                                    | 1st Quartile (%)              | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| 1st Quartile   | 593                                | 16.53                         | 21.42            | 25.80            | 29.51            | 6.75                  | 0.00              | 100       |
| 2nd Quartile   | 594                                | 27.10                         | 23.06            | 21.89            | 19.19            | 8.75                  | 0.00              | 100       |
| 3rd Quartile   | 593                                | 26.31                         | 21.92            | 19.90            | 16.02            | 15.85                 | 0.00              | 100       |
| 4th Quartile   | 593                                | 15.18                         | 18.72            | 17.37            | 20.40            | 28.33                 | 0.00              | 100       |
| <b>Large-Cap Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 223                                | 25.11                         | 22.87            | 21.08            | 19.73            | 4.04                  | 7.17              | 100       |
| 2nd Quartile   | 223                                | 19.73                         | 21.08            | 14.80            | 21.52            | 13.90                 | 8.97              | 100       |
| 3rd Quartile   | 222                                | 18.47                         | 16.67            | 22.07            | 18.02            | 13.96                 | 10.81             | 100       |
| 4th Quartile   | 223                                | 13.45                         | 16.14            | 18.83            | 17.49            | 24.22                 | 9.87              | 100       |
| <b>Mid-Cap Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 87                                 | 18.39                         | 13.79            | 19.54            | 27.59            | 5.75                  | 14.94             | 100       |
| 2nd Quartile   | 87                                 | 28.74                         | 19.54            | 18.39            | 13.79            | 9.20                  | 10.34             | 100       |
| 3rd Quartile   | 87                                 | 18.39                         | 26.44            | 19.54            | 11.49            | 14.94                 | 9.20              | 100       |
| 4th Quartile   | 87                                 | 8.05                          | 13.79            | 14.94            | 20.69            | 22.99                 | 19.54             | 100       |
| <b>Small-Cap Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 136                                | 33.82                         | 21.32            | 18.38            | 20.59            | 5.88                  | 0.00              | 100       |
| 2nd Quartile   | 135                                | 19.26                         | 27.41            | 28.15            | 16.30            | 8.15                  | 0.74              | 100       |
| 3rd Quartile   | 136                                | 16.18                         | 20.59            | 25.00            | 25.00            | 10.29                 | 2.94              | 100       |
| 4th Quartile   | 135                                | 17.78                         | 17.04            | 15.56            | 24.44            | 20.00                 | 5.19              | 100       |
| <b>Multi-Cap Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 148                                | 22.97                         | 19.59            | 20.95            | 14.19            | 8.11                  | 14.19             | 100       |
| 2nd Quartile   | 148                                | 22.97                         | 23.65            | 17.57            | 9.46             | 8.78                  | 17.57             | 100       |
| 3rd Quartile   | 148                                | 11.49                         | 8.11             | 13.51            | 16.22            | 31.76                 | 18.92             | 100       |
| 4th Quartile   | 148                                | 4.73                          | 11.49            | 10.14            | 22.30            | 34.46                 | 16.89             | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| <b>Exhibit 4: Three-Year Transition Matrix—Performance Over Two Non-Overlapping Three-Year Periods (Based on Halves)</b> |   |                                      |                        |                              |                          |                  |
|--|---|--------------------------------------|------------------------|------------------------------|--------------------------|------------------|
| <b>All Domestic Funds</b>  | <b>No. of funds at Start (March 2013)</b> | <b>Three-Year Percentages at End</b> |                        |                              |                          |                  |
|  |   | <b>Top Half (%)</b>                  | <b>Bottom Half (%)</b> | <b>Merged/Liquidated (%)</b> | <b>Style Changed (%)</b> | <b>Total (%)</b> |
| Top Half   | 1,187                                     | 44.06                                | 48.19                  | 7.75                         | 0.00                     | 100              |
| Bottom Half  | 1,186                                     | 41.06                                | 36.85                  | 22.09                        | 0.00                     | 100              |
| <b>Large-Cap Funds</b>   |   |                                      |                        |                              |                          |                  |
| Top Half   | 446                                       | 44.39                                | 38.57                  | 8.97                         | 8.07                     | 100              |
| Bottom Half  | 445                                       | 32.36                                | 38.20                  | 19.10                        | 10.34                    | 100              |
| <b>Mid-Cap Funds</b>   |   |                                      |                        |                              |                          |                  |
| Top Half   | 174                                       | 40.23                                | 39.66                  | 7.47                         | 12.64                    | 100              |
| Bottom Half  | 174                                       | 33.33                                | 33.33                  | 18.97                        | 14.37                    | 100              |
| <b>Small-Cap Funds</b>   |   |                                      |                        |                              |                          |                  |
| Top Half   | 271                                       | 50.92                                | 41.70                  | 7.01                         | 0.37                     | 100              |
| Bottom Half  | 271                                       | 35.79                                | 45.02                  | 15.13                        | 4.06                     | 100              |
| <b>Multi-Cap Funds</b>   |   |                                      |                        |                              |                          |                  |
| Top Half   | 296                                       | 44.59                                | 31.08                  | 8.45                         | 15.88                    | 100              |
| Bottom Half  | 296                                       | 17.91                                | 31.08                  | 33.11                        | 17.91                    | 100              |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 5: Five-Year Transition Matrix—Performance Over Two Non-Overlapping Five-Year Periods (Based on Quartiles) |                                    |                              |                  |                  |                  |                       |                   |           |
|--|------------------------------------|------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| All Domestic Funds   | No. of Funds at Start (March 2011) | Five-Year Percentages at End |                  |                  |                  |                       |                   |           |
|  |                                    | 1st Quartile (%)             | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| 1st Quartile   | 434                                | 17.28                        | 18.66            | 22.58            | 29.49            | 11.98                 | 0.00              | 100       |
| 2nd Quartile   | 434                                | 23.96                        | 15.21            | 18.66            | 20.05            | 22.12                 | 0.00              | 100       |
| 3rd Quartile   | 433                                | 19.17                        | 22.40            | 19.40            | 12.47            | 26.56                 | 0.00              | 100       |
| 4th Quartile   | 434                                | 15.21                        | 19.35            | 14.98            | 13.59            | 36.87                 | 0.00              | 100       |
| <b>Large-Cap Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 162                                | 21.60                        | 20.37            | 16.67            | 14.20            | 17.28                 | 9.88              | 100       |
| 2nd Quartile   | 162                                | 17.90                        | 15.43            | 12.35            | 19.75            | 22.22                 | 12.35             | 100       |
| 3rd Quartile   | 161                                | 13.04                        | 15.53            | 17.39            | 11.80            | 27.33                 | 14.91             | 100       |
| 4th Quartile   | 162                                | 9.88                         | 10.49            | 16.05            | 16.05            | 32.72                 | 14.81             | 100       |
| <b>Mid-Cap Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 60                                 | 13.33                        | 11.67            | 15.00            | 20.00            | 18.33                 | 21.67             | 100       |
| 2nd Quartile   | 60                                 | 16.67                        | 20.00            | 15.00            | 11.67            | 13.33                 | 23.33             | 100       |
| 3rd Quartile   | 60                                 | 16.67                        | 20.00            | 18.33            | 10.00            | 21.67                 | 13.33             | 100       |
| 4th Quartile   | 60                                 | 11.67                        | 8.33             | 10.00            | 16.67            | 35.00                 | 18.33             | 100       |
| <b>Small-Cap Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 103                                | 18.45                        | 17.48            | 27.18            | 23.30            | 9.71                  | 3.88              | 100       |
| 2nd Quartile   | 103                                | 19.42                        | 19.42            | 20.39            | 25.24            | 11.65                 | 3.88              | 100       |
| 3rd Quartile   | 102                                | 16.67                        | 22.55            | 15.69            | 20.59            | 21.57                 | 2.94              | 100       |
| 4th Quartile   | 103                                | 24.27                        | 18.45            | 15.53            | 8.74             | 32.04                 | 0.97              | 100       |
| <b>Multi-Cap Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 109                                | 16.51                        | 12.84            | 14.68            | 17.43            | 13.76                 | 24.77             | 100       |
| 2nd Quartile   | 110                                | 13.64                        | 9.09             | 13.64            | 10.91            | 30.00                 | 22.73             | 100       |
| 3rd Quartile   | 109                                | 11.93                        | 16.51            | 11.01            | 9.17             | 32.11                 | 19.27             | 100       |
| 4th Quartile   | 109                                | 6.42                         | 11.01            | 9.17             | 11.01            | 44.95                 | 17.43             | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| <b>Exhibit 6: Five-Year Transition Matrix—Performance Over Two Non-Overlapping Five-Year Periods (Based on Halves)</b> |   |                                     |                        |                              |                          |                  |
|--|---|-------------------------------------|------------------------|------------------------------|--------------------------|------------------|
| <b>All Domestic Funds</b>  | <b>No. of Funds at Start (March 2011)</b> | <b>Five-Year Percentages at End</b> |                        |                              |                          |                  |
|  |   | <b>Top Half (%)</b>                 | <b>Bottom Half (%)</b> | <b>Merged/Liquidated (%)</b> | <b>Style Changed (%)</b> | <b>Total (%)</b> |
| Top Half   | 868                                       | 37.56                               | 45.39                  | 17.05                        | 0.00                     | 100              |
| Bottom Half  | 867                                       | 38.06                               | 30.22                  | 31.72                        | 0.00                     | 100              |
| <b>Large-Cap Funds</b>   |   |                                     |                        |                              |                          |                  |
| Top Half   | 324                                       | 37.65                               | 31.48                  | 19.75                        | 11.11                    | 100              |
| Bottom Half  | 323                                       | 24.46                               | 30.65                  | 30.03                        | 14.86                    | 100              |
| <b>Mid-Cap Funds</b>   |   |                                     |                        |                              |                          |                  |
| Top Half   | 120                                       | 30.83                               | 30.83                  | 15.83                        | 22.50                    | 100              |
| Bottom Half  | 120                                       | 28.33                               | 27.50                  | 28.33                        | 15.83                    | 100              |
| <b>Small-Cap Funds</b>   |   |                                     |                        |                              |                          |                  |
| Top Half   | 206                                       | 37.38                               | 48.06                  | 10.68                        | 3.88                     | 100              |
| Bottom Half  | 205                                       | 40.98                               | 30.24                  | 26.83                        | 1.95                     | 100              |
| <b>Multi-Cap Funds</b>   |   |                                     |                        |                              |                          |                  |
| Top Half   | 219                                       | 26.03                               | 28.31                  | 21.92                        | 23.74                    | 100              |
| Bottom Half  | 218                                       | 22.94                               | 20.18                  | 38.53                        | 18.35                    | 100              |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



| <b>Exhibit 7: Performance Persistence of Domestic Fixed Income Funds Over Three Consecutive 12-Month Periods</b> |   |   |                   |
|--|---|---|-------------------|
| <b>Mutual Fund Category</b>  | <b>Fund Count at Start<br/>(March 2014)</b> | <b>Percentage Remaining in Top Quartile (%)</b> |                   |
|  |   | <b>March 2015</b>                               | <b>March 2016</b> |
| <b>Top Quartile</b>  |   |   |                   |
| Government Long Funds  | 16  | 6.25  | 6.25              |
| Government Intermediate Funds  | 7   | 14.29   | 0.00              |
| Government Short Funds   | 10  | 20.00   | 10.00             |
| Investment-Grade Long Funds  | 25  | 24.00   | 4.00              |
| Investment-Grade Intermediate Funds  | 60  | 21.67   | 5.00              |
| Investment-Grade Short Funds   | 19  | 57.89   | 26.32             |
| High-Yield Funds   | 53  | 20.75   | 5.66              |
| Mortgage-Backed Securities Funds   | 15  | 33.33   | 6.67              |
| Global Income Funds  | 30  | 23.33   | 0.00              |
| Emerging Markets Debt Funds  | 13  | 53.85   | 15.38             |
| General Municipal Debt Funds   | 20  | 20.00   | 10.00             |
| California Municipal Debt Funds  | 9   | 33.33   | 22.22             |
| New York Municipal Debt Funds  | 7   | 0.00  | 0.00              |
| <b>Mutual Fund Category</b>  | <b>Fund Count at Start<br/>(March 2014)</b> | <b>Percentage Remaining in Top Half (%)</b>     |                   |
|  |   | <b>March 2015</b>                               | <b>March 2016</b> |
| <b>Top Half</b>  |   |   |                   |
| Government Long Funds  | 31  | 38.71   | 32.26             |
| Government Intermediate Funds  | 14  | 28.57   | 21.43             |
| Government Short Funds   | 20  | 55.00   | 30.00             |
| Investment-Grade Long Funds  | 50  | 50.00   | 16.00             |
| Investment-Grade Intermediate Funds  | 120   | 42.50   | 16.67             |
| Investment-Grade Short Funds   | 38  | 63.16   | 36.84             |
| High-Yield Funds   | 106   | 43.40   | 24.53             |
| Mortgage-Backed Securities Funds   | 31  | 61.29   | 35.48             |
| Global Income Funds  | 60  | 43.33   | 8.33              |
| Emerging Markets Debt Funds  | 26  | 73.08   | 46.15             |
| General Municipal Debt Funds   | 40  | 50.00   | 30.00             |
| California Municipal Debt Funds  | 18  | 50.00   | 38.89             |
| New York Municipal Debt Funds  | 14  | 42.86   | 35.71             |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| <b>Exhibit 8: Performance Persistence of Domestic Fixed Income Funds Over Five Consecutive 12-Month Periods</b> |   |   |                   |                   |                   |  |
|---|---|---|-------------------|-------------------|-------------------|--|
| <b>Mutual Fund Category</b>   | <b>Fund Count at Start (March 2012)</b> | <b>Percentage Remaining in Top Quartile (%)</b> |                   |                   |                   |  |
|   |   | <b>March 2013</b>                               | <b>March 2014</b> | <b>March 2015</b> | <b>March 2016</b> |  |
| <b>Top Quartile</b>   |   |   |                   |                   |                   |  |
| Government Long Funds   | 20                                      | 35.00   | 0.00              | 0.00              | 0.00              |  |
| Government Intermediate Funds   | 8                                       | 50.00   | 0.00              | 0.00              | 0.00              |  |
| Government Short Funds  | 11                                      | 54.55   | 18.18             | 9.09              | 0.00              |  |
| Investment-Grade Long Funds   | 29                                      | 41.38   | 20.69             | 10.34             | 0.00              |  |
| Investment-Grade Intermediate Funds   | 69                                      | 34.78   | 10.14             | 7.25              | 0.00              |  |
| Investment-Grade Short Funds  | 19                                      | 42.11   | 21.05             | 15.79             | 0.00              |  |
| High-Yield Funds  | 50                                      | 24.00   | 20.00             | 2.00              | 0.00              |  |
| Mortgage-Backed Securities Funds  | 16                                      | 31.25   | 18.75             | 18.75             | 6.25              |  |
| Global Income Funds   | 27                                      | 33.33   | 3.70              | 0.00              | 0.00              |  |
| Emerging Markets Debt Funds   | 11                                      | 18.18   | 9.09              | 9.09              | 0.00              |  |
| General Municipal Debt Funds  | 19                                      | 57.89   | 15.79             | 10.53             | 10.53             |  |
| California Municipal Debt Funds   | 8                                       | 50.00   | 12.50             | 0.00              | 0.00              |  |
| New York Municipal Debt Funds   | 7                                       | 42.86   | 14.29             | 0.00              | 0.00              |  |
| <b>Mutual Fund Category</b>   | <b>Fund Count at Start (March 2012)</b> | <b>Percentage Remaining in Top Half (%)</b>     |                   |                   |                   |  |
|   |   | <b>March 2013</b>                               | <b>March 2014</b> | <b>March 2015</b> | <b>March 2016</b> |  |
| <b>Top Half</b>   |   |   |                   |                   |                   |  |
| Government Long Funds   | 40                                      | 52.50   | 12.50             | 10.00             | 10.00             |  |
| Government Intermediate Funds   | 17                                      | 64.71   | 23.53             | 23.53             | 17.65             |  |
| Government Short Funds  | 21                                      | 66.67   | 42.86             | 42.86             | 28.57             |  |
| Investment-Grade Long Funds   | 58                                      | 50.00   | 37.93             | 27.59             | 8.62              |  |
| Investment-Grade Intermediate Funds   | 139                                     | 61.87   | 27.34             | 22.30             | 7.91              |  |
| Investment-Grade Short Funds  | 38                                      | 55.26   | 34.21             | 31.58             | 23.68             |  |
| High-Yield Funds  | 101                                     | 40.59   | 26.73             | 10.89             | 8.91              |  |
| Mortgage-Backed Securities Funds  | 32                                      | 56.25   | 34.38             | 25.00             | 15.63             |  |
| Global Income Funds   | 54                                      | 46.30   | 22.22             | 16.67             | 7.41              |  |
| Emerging Markets Debt Funds   | 22                                      | 45.45   | 27.27             | 27.27             | 27.27             |  |
| General Municipal Debt Funds  | 37                                      | 75.68   | 40.54             | 29.73             | 21.62             |  |
| California Municipal Debt Funds   | 17                                      | 70.59   | 35.29             | 29.41             | 29.41             |  |
| New York Municipal Debt Funds   | 15                                      | 80.00   | 26.67             | 20.00             | 13.33             |  |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 9: Three-Year Transition Matrix Over Two Non-Overlapping Three-Year Periods (Based on Quartiles) |                                    |                               |                  |                  |                  |                       |                   |           |
|--|------------------------------------|-------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| Mutual Fund Category   | No. of Funds at Start (March 2013) | Three-Year Percentages at End |                  |                  |                  |                       |                   |           |
|  |                                    | 1st Quartile (%)              | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Government Long Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 15                                 | 46.67                         | 26.67            | 6.67             | 6.67             | 13.33                 | 0.00              | 100       |
| 2nd Quartile   | 15                                 | 40.00                         | 26.67            | 13.33            | 0.00             | 20.00                 | 0.00              | 100       |
| 3rd Quartile   | 15                                 | 0.00                          | 26.67            | 46.67            | 20.00            | 6.67                  | 0.00              | 100       |
| 4th Quartile   | 15                                 | 0.00                          | 0.00             | 20.00            | 53.33            | 26.67                 | 0.00              | 100       |
| <b>Government Intermediate Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 7                                  | 42.86                         | 28.57            | 0.00             | 0.00             | 28.57                 | 0.00              | 100       |
| 2nd Quartile   | 8                                  | 37.50                         | 25.00            | 25.00            | 0.00             | 12.50                 | 0.00              | 100       |
| 3rd Quartile   | 7                                  | 0.00                          | 28.57            | 14.29            | 14.29            | 42.86                 | 0.00              | 100       |
| 4th Quartile   | 7                                  | 0.00                          | 0.00             | 28.57            | 71.43            | 0.00                  | 0.00              | 100       |
| <b>Government Short Funds</b>  |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 9                                  | 66.67                         | 22.22            | 11.11            | 0.00             | 0.00                  | 0.00              | 100       |
| 2nd Quartile   | 9                                  | 11.11                         | 44.44            | 22.22            | 0.00             | 22.22                 | 0.00              | 100       |
| 3rd Quartile   | 9                                  | 0.00                          | 11.11            | 22.22            | 33.33            | 33.33                 | 0.00              | 100       |
| 4th Quartile   | 9                                  | 0.00                          | 0.00             | 22.22            | 44.44            | 33.33                 | 0.00              | 100       |
| <b>Investment-Grade Long Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 26                                 | 46.15                         | 11.54            | 19.23            | 7.69             | 15.38                 | 0.00              | 100       |
| 2nd Quartile   | 27                                 | 25.93                         | 33.33            | 11.11            | 11.11            | 18.52                 | 0.00              | 100       |
| 3rd Quartile   | 26                                 | 0.00                          | 30.77            | 30.77            | 15.38            | 23.08                 | 0.00              | 100       |
| 4th Quartile   | 26                                 | 3.85                          | 0.00             | 11.54            | 42.31            | 42.31                 | 0.00              | 100       |
| <b>Investment-Grade Intermediate Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 63                                 | 23.81                         | 12.70            | 9.52             | 6.35             | 47.62                 | 0.00              | 100       |
| 2nd Quartile   | 63                                 | 19.05                         | 30.16            | 14.29            | 3.17             | 33.33                 | 0.00              | 100       |
| 3rd Quartile   | 62                                 | 17.74                         | 20.97            | 14.52            | 12.90            | 33.87                 | 0.00              | 100       |
| 4th Quartile   | 63                                 | 1.59                          | 0.00             | 23.81            | 39.68            | 34.92                 | 0.00              | 100       |
| <b>Investment-Grade Short Funds</b>  |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 17                                 | 47.06                         | 17.65            | 11.76            | 23.53            | 0.00                  | 0.00              | 100       |
| 2nd Quartile   | 17                                 | 29.41                         | 23.53            | 23.53            | 17.65            | 5.88                  | 0.00              | 100       |
| 3rd Quartile   | 17                                 | 11.76                         | 35.29            | 35.29            | 5.88             | 11.76                 | 0.00              | 100       |
| 4th Quartile   | 17                                 | 0.00                          | 5.88             | 17.65            | 35.29            | 41.18                 | 0.00              | 100       |
| <b>High-Yield Funds</b>  |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 45                                 | 33.33                         | 15.56            | 20.00            | 26.67            | 4.44                  | 0.00              | 100       |
| 2nd Quartile   | 44                                 | 27.27                         | 31.82            | 15.91            | 15.91            | 9.09                  | 0.00              | 100       |
| 3rd Quartile   | 45                                 | 13.33                         | 22.22            | 35.56            | 17.78            | 11.11                 | 0.00              | 100       |
| 4th Quartile   | 44                                 | 15.91                         | 20.45            | 18.18            | 29.55            | 15.91                 | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 9: Three-Year Transition Matrix Over Two Non-Overlapping Three-Year Periods (Based on Quartiles) (cont.) |                                    |                               |                  |                  |                  |                       |                   |           |
|--|------------------------------------|-------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| Mutual Fund Category   | No. of Funds at Start (March 2013) | Three-Year Percentages at End |                  |                  |                  |                       |                   |           |
|  |                                    | 1st Quartile (%)              | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Mortgage-Backed Securities Funds</b>  |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 14                                 | 50.00                         | 14.29            | 21.43            | 0.00             | 14.29                 | 0.00              | 100       |
| 2nd Quartile   | 15                                 | 20.00                         | 40.00            | 13.33            | 20.00            | 6.67                  | 0.00              | 100       |
| 3rd Quartile   | 14                                 | 7.14                          | 14.29            | 21.43            | 42.86            | 14.29                 | 0.00              | 100       |
| 4th Quartile   | 14                                 | 0.00                          | 14.29            | 21.43            | 14.29            | 50.00                 | 0.00              | 100       |
| <b>Global Income Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 22                                 | 27.27                         | 22.73            | 18.18            | 18.18            | 13.64                 | 0.00              | 100       |
| 2nd Quartile   | 22                                 | 18.18                         | 13.64            | 27.27            | 22.73            | 18.18                 | 0.00              | 100       |
| 3rd Quartile   | 22                                 | 31.82                         | 22.73            | 13.64            | 18.18            | 13.64                 | 0.00              | 100       |
| 4th Quartile   | 22                                 | 4.55                          | 27.27            | 22.73            | 22.73            | 22.73                 | 0.00              | 100       |
| <b>Emerging Markets Debt Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 6                                  | 33.33                         | 16.67            | 16.67            | 33.33            | 0.00                  | 0.00              | 100       |
| 2nd Quartile   | 6                                  | 33.33                         | 50.00            | 16.67            | 0.00             | 0.00                  | 0.00              | 100       |
| 3rd Quartile   | 5                                  | 40.00                         | 40.00            | 0.00             | 20.00            | 0.00                  | 0.00              | 100       |
| 4th Quartile   | 6                                  | 0.00                          | 0.00             | 50.00            | 50.00            | 0.00                  | 0.00              | 100       |
| <b>General Municipal Debt Funds</b>  |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 18                                 | 44.44                         | 27.78            | 16.67            | 0.00             | 11.11                 | 0.00              | 100       |
| 2nd Quartile   | 18                                 | 33.33                         | 22.22            | 27.78            | 5.56             | 11.11                 | 0.00              | 100       |
| 3rd Quartile   | 18                                 | 11.11                         | 33.33            | 22.22            | 33.33            | 0.00                  | 0.00              | 100       |
| 4th Quartile   | 18                                 | 5.56                          | 11.11            | 22.22            | 55.56            | 5.56                  | 0.00              | 100       |
| <b>California Municipal Debt Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 9                                  | 55.56                         | 11.11            | 22.22            | 11.11            | 0.00                  | 0.00              | 100       |
| 2nd Quartile   | 8                                  | 25.00                         | 25.00            | 25.00            | 25.00            | 0.00                  | 0.00              | 100       |
| 3rd Quartile   | 9                                  | 22.22                         | 33.33            | 11.11            | 33.33            | 0.00                  | 0.00              | 100       |
| 4th Quartile   | 8                                  | 0.00                          | 25.00            | 50.00            | 25.00            | 0.00                  | 0.00              | 100       |
| <b>New York Municipal Debt Funds</b>   |                                    |                               |                  |                  |                  |                       |                   |           |
| 1st Quartile   | 7                                  | 28.57                         | 28.57            | 14.29            | 28.57            | 0.00                  | 0.00              | 100       |
| 2nd Quartile   | 7                                  | 14.29                         | 42.86            | 28.57            | 0.00             | 14.29                 | 0.00              | 100       |
| 3rd Quartile   | 6                                  | 16.67                         | 16.67            | 16.67            | 33.33            | 16.67                 | 0.00              | 100       |
| 4th Quartile   | 7                                  | 28.57                         | 14.29            | 28.57            | 28.57            | 0.00                  | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 10: Three-Year Transition Matrix Over Two Non-Overlapping Three-Year Periods (Based on Halves) |                                    |                               |                 |                       |                   |           |
|--|------------------------------------|-------------------------------|-----------------|-----------------------|-------------------|-----------|
| Mutual Fund Category   | No. of Funds at Start (March 2013) | Three-Year Percentages at End |                 |                       |                   |           |
|  |                                    | Top Half (%)                  | Bottom Half (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Government Long Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 30                                 | 70                            | 13.33           | 16.67                 | 0.00              | 100       |
| Bottom Half  | 30                                 | 13.33                         | 70.00           | 16.67                 | 0.00              | 100       |
| <b>Government Intermediate Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 15                                 | 66.67                         | 13.33           | 20.00                 | 0.00              | 100       |
| Bottom Half  | 14                                 | 14.29                         | 64.29           | 21.43                 | 0.00              | 100       |
| <b>Government Short Funds</b>  |                                    |                               |                 |                       |                   |           |
| Top Half   | 18                                 | 72.22                         | 16.67           | 11.11                 | 0.00              | 100       |
| Bottom Half  | 18                                 | 5.56                          | 61.11           | 33.33                 | 0.00              | 100       |
| <b>Investment-Grade Long Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 53                                 | 58.49                         | 24.53           | 16.98                 | 0.00              | 100       |
| Bottom Half  | 52                                 | 17.31                         | 50.00           | 32.69                 | 0.00              | 100       |
| <b>Investment-Grade Intermediate Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 126                                | 42.86                         | 16.67           | 40.48                 | 0.00              | 100       |
| Bottom Half  | 125                                | 20.00                         | 45.60           | 34.40                 | 0.00              | 100       |
| <b>Investment-Grade Short Funds</b>  |                                    |                               |                 |                       |                   |           |
| Top Half   | 34                                 | 58.82                         | 38.24           | 2.94                  | 0.00              | 100       |
| Bottom Half  | 34                                 | 26.47                         | 47.06           | 26.47                 | 0.00              | 100       |
| <b>High-Yield Funds</b>  |                                    |                               |                 |                       |                   |           |
| Top Half   | 89                                 | 53.93                         | 39.33           | 6.74                  | 0.00              | 100       |
| Bottom Half  | 89                                 | 35.96                         | 50.56           | 13.48                 | 0.00              | 100       |
| <b>Mortgage-Backed Securities Funds</b>  |                                    |                               |                 |                       |                   |           |
| Top Half   | 29                                 | 62.07                         | 27.59           | 10.34                 | 0.00              | 100       |
| Bottom Half  | 28                                 | 17.86                         | 50.00           | 32.14                 | 0.00              | 100       |
| <b>Global Income Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 44                                 | 40.91                         | 43.18           | 15.91                 | 0.00              | 100       |
| Bottom Half  | 44                                 | 43.18                         | 38.64           | 18.18                 | 0.00              | 100       |
| <b>Emerging Markets Debt Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 12                                 | 66.67                         | 33.33           | 0.00                  | 0.00              | 100       |
| Bottom Half  | 11                                 | 36.36                         | 63.64           | 0.00                  | 0.00              | 100       |
| <b>General Municipal Debt Funds</b>  |                                    |                               |                 |                       |                   |           |
| Top Half   | 36                                 | 63.89                         | 25.00           | 11.11                 | 0.00              | 100       |
| Bottom Half  | 36                                 | 30.56                         | 66.67           | 2.78                  | 0.00              | 100       |
| <b>California Municipal Debt Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 17                                 | 58.82                         | 41.18           | 0.00                  | 0.00              | 100       |
| Bottom Half  | 17                                 | 41.18                         | 58.82           | 0.00                  | 0.00              | 100       |
| <b>New York Municipal Debt Funds</b>   |                                    |                               |                 |                       |                   |           |
| Top Half   | 14                                 | 57.14                         | 35.71           | 7.14                  | 0.00              | 100       |
| Bottom Half  | 13                                 | 38.46                         | 53.85           | 7.69                  | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 11: Five-Year Transition Matrix Over Two Non-Overlapping Five-Year Periods (Based on Quartiles) |                                    |                              |                  |                  |                  |                       |                   |           |
|---|------------------------------------|------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| Mutual Fund Category  | No. of Funds at Start (March 2011) | Five-Year Percentages at End |                  |                  |                  |                       |                   |           |
|   |                                    | 1st Quartile (%)             | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Government Long Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 11                                 | 36.36                        | 27.27            | 18.18            | 9.09             | 9.09                  | 0.00              | 100       |
| 2nd Quartile  | 10                                 | 20.00                        | 20.00            | 20.00            | 10.00            | 30.00                 | 0.00              | 100       |
| 3rd Quartile  | 11                                 | 0.00                         | 9.09             | 9.09             | 27.27            | 54.55                 | 0.00              | 100       |
| 4th Quartile  | 10                                 | 10.00                        | 10.00            | 20.00            | 20.00            | 40.00                 | 0.00              | 100       |
| <b>Government Intermediate Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 10                                 | 30.00                        | 20.00            | 10.00            | 10.00            | 30.00                 | 0.00              | 100       |
| 2nd Quartile  | 9                                  | 22.22                        | 22.22            | 22.22            | 11.11            | 22.22                 | 0.00              | 100       |
| 3rd Quartile  | 10                                 | 10.00                        | 0.00             | 20.00            | 10.00            | 60.00                 | 0.00              | 100       |
| 4th Quartile  | 9                                  | 0.00                         | 11.11            | 11.11            | 22.22            | 55.56                 | 0.00              | 100       |
| <b>Government Short Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 10                                 | 40.00                        | 20.00            | 20.00            | 0.00             | 20.00                 | 0.00              | 100       |
| 2nd Quartile  | 10                                 | 0.00                         | 30.00            | 10.00            | 30.00            | 30.00                 | 0.00              | 100       |
| 3rd Quartile  | 9                                  | 11.11                        | 0.00             | 11.11            | 11.11            | 66.67                 | 0.00              | 100       |
| 4th Quartile  | 10                                 | 10.00                        | 10.00            | 20.00            | 20.00            | 40.00                 | 0.00              | 100       |
| <b>Investment-Grade Long Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 19                                 | 36.84                        | 26.32            | 10.53            | 0.00             | 26.32                 | 0.00              | 100       |
| 2nd Quartile  | 18                                 | 11.11                        | 22.22            | 16.67            | 22.22            | 27.78                 | 0.00              | 100       |
| 3rd Quartile  | 19                                 | 15.79                        | 10.53            | 15.79            | 26.32            | 31.58                 | 0.00              | 100       |
| 4th Quartile  | 18                                 | 0.00                         | 5.56             | 16.67            | 16.67            | 61.11                 | 0.00              | 100       |
| <b>Investment-Grade Intermediate Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 48                                 | 12.50                        | 16.67            | 14.58            | 2.08             | 54.17                 | 0.00              | 100       |
| 2nd Quartile  | 49                                 | 14.29                        | 24.49            | 14.29            | 14.29            | 32.65                 | 0.00              | 100       |
| 3rd Quartile  | 48                                 | 12.50                        | 10.42            | 16.67            | 20.83            | 39.58                 | 0.00              | 100       |
| 4th Quartile  | 48                                 | 18.75                        | 6.25             | 10.42            | 20.83            | 43.75                 | 0.00              | 100       |
| <b>Investment-Grade Short Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 17                                 | 29.41                        | 35.29            | 5.88             | 17.65            | 11.76                 | 0.00              | 100       |
| 2nd Quartile  | 17                                 | 11.76                        | 23.53            | 29.41            | 29.41            | 5.88                  | 0.00              | 100       |
| 3rd Quartile  | 16                                 | 25.00                        | 12.50            | 18.75            | 18.75            | 25.00                 | 0.00              | 100       |
| 4th Quartile  | 17                                 | 11.76                        | 11.76            | 23.53            | 11.76            | 41.18                 | 0.00              | 100       |
| <b>High-Yield Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 30                                 | 23.33                        | 36.67            | 16.67            | 13.33            | 10.00                 | 0.00              | 100       |
| 2nd Quartile  | 30                                 | 26.67                        | 13.33            | 20.00            | 30.00            | 10.00                 | 0.00              | 100       |
| 3rd Quartile  | 29                                 | 13.79                        | 20.69            | 34.48            | 20.69            | 10.34                 | 0.00              | 100       |
| 4th Quartile  | 30                                 | 20.00                        | 16.67            | 13.33            | 20.00            | 30.00                 | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 11: Five-Year Transition Matrix Over Two Non-Overlapping Five-Year Periods (Based on Quartiles) (cont.) |                                    |                              |                  |                  |                  |                       |                   |           |
|---|------------------------------------|------------------------------|------------------|------------------|------------------|-----------------------|-------------------|-----------|
| Mutual Fund Category  | No. of Funds at Start (March 2011) | Five-Year Percentages at End |                  |                  |                  |                       |                   |           |
|   |                                    | 1st Quartile (%)             | 2nd Quartile (%) | 3rd Quartile (%) | 4th Quartile (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Mortgage-Backed Securities Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 13                                 | 30.77                        | 46.15            | 7.69             | 7.69             | 7.69                  | 0.00              | 100       |
| 2nd Quartile  | 13                                 | 7.69                         | 0.00             | 46.15            | 23.08            | 23.08                 | 0.00              | 100       |
| 3rd Quartile  | 13                                 | 0.00                         | 15.38            | 15.38            | 38.46            | 30.77                 | 0.00              | 100       |
| 4th Quartile  | 13                                 | 38.46                        | 15.38            | 7.69             | 7.69             | 30.77                 | 0.00              | 100       |
| <b>Global Income Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 13                                 | 15.38                        | 23.08            | 30.77            | 7.69             | 23.08                 | 0.00              | 100       |
| 2nd Quartile  | 13                                 | 15.38                        | 23.08            | 15.38            | 30.77            | 15.38                 | 0.00              | 100       |
| 3rd Quartile  | 12                                 | 16.67                        | 16.67            | 8.33             | 16.67            | 41.67                 | 0.00              | 100       |
| 4th Quartile  | 13                                 | 23.08                        | 7.69             | 15.38            | 15.38            | 38.46                 | 0.00              | 100       |
| <b>Emerging Markets Debt Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 5                                  | 0.00                         | 20.00            | 20.00            | 60.00            | 0.00                  | 0.00              | 100       |
| 2nd Quartile  | 5                                  | 60.00                        | 0.00             | 40.00            | 0.00             | 0.00                  | 0.00              | 100       |
| 3rd Quartile  | 4                                  | 25.00                        | 25.00            | 25.00            | 0.00             | 25.00                 | 0.00              | 100       |
| 4th Quartile  | 5                                  | 0.00                         | 40.00            | 0.00             | 20.00            | 40.00                 | 0.00              | 100       |
| <b>General Municipal Debt Funds</b>   |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 17                                 | 17.65                        | 11.76            | 23.53            | 35.29            | 11.76                 | 0.00              | 100       |
| 2nd Quartile  | 18                                 | 5.56                         | 44.44            | 11.11            | 11.11            | 27.78                 | 0.00              | 100       |
| 3rd Quartile  | 17                                 | 23.53                        | 11.76            | 35.29            | 11.76            | 17.65                 | 0.00              | 100       |
| 4th Quartile  | 17                                 | 35.29                        | 11.76            | 11.76            | 23.53            | 17.65                 | 0.00              | 100       |
| <b>California Municipal Debt Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 9                                  | 11.11                        | 22.22            | 33.33            | 22.22            | 11.11                 | 0.00              | 100       |
| 2nd Quartile  | 9                                  | 0.00                         | 22.22            | 0.00             | 66.67            | 11.11                 | 0.00              | 100       |
| 3rd Quartile  | 9                                  | 11.11                        | 22.22            | 55.56            | 0.00             | 11.11                 | 0.00              | 100       |
| 4th Quartile  | 9                                  | 66.67                        | 22.22            | 0.00             | 0.00             | 11.11                 | 0.00              | 100       |
| <b>New York Municipal Debt Funds</b>  |                                    |                              |                  |                  |                  |                       |                   |           |
| 1st Quartile  | 8                                  | 12.50                        | 12.50            | 62.50            | 0.00             | 12.50                 | 0.00              | 100       |
| 2nd Quartile  | 7                                  | 14.29                        | 28.57            | 0.00             | 42.86            | 14.29                 | 0.00              | 100       |
| 3rd Quartile  | 8                                  | 12.50                        | 12.50            | 12.50            | 25.00            | 37.50                 | 0.00              | 100       |
| 4th Quartile  | 7                                  | 42.86                        | 28.57            | 0.00             | 14.29            | 14.29                 | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

| Exhibit 12: Five-Year Transition Matrix Over Two Non-Overlapping Five-Year Periods (Based on Halves) |                                    |                              |                 |                       |                   |           |
|--|------------------------------------|------------------------------|-----------------|-----------------------|-------------------|-----------|
| Mutual Fund Category   | No. of Funds at Start (March 2011) | Five-Year Percentages at End |                 |                       |                   |           |
|  |                                    | Top Half (%)                 | Bottom Half (%) | Merged/Liquidated (%) | Style Changed (%) | Total (%) |
| <b>Government Long Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 21                                 | 52.38                        | 28.57           | 19.05                 | 0.00              | 100       |
| Bottom Half  | 21                                 | 14.29                        | 38.10           | 47.62                 | 0.00              | 100       |
| <b>Government Intermediate Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 19                                 | 47.37                        | 26.32           | 26.32                 | 0.00              | 100       |
| Bottom Half  | 19                                 | 10.53                        | 31.58           | 57.89                 | 0.00              | 100       |
| <b>Government Short Funds</b>  |                                    |                              |                 |                       |                   |           |
| Top Half   | 20                                 | 45.00                        | 30.00           | 25.00                 | 0.00              | 100       |
| Bottom Half  | 19                                 | 15.79                        | 31.58           | 52.63                 | 0.00              | 100       |
| <b>Investment-Grade Long Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 37                                 | 48.65                        | 24.32           | 27.03                 | 0.00              | 100       |
| Bottom Half  | 37                                 | 16.22                        | 37.84           | 45.95                 | 0.00              | 100       |
| <b>Investment-Grade Intermediate Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 97                                 | 34.02                        | 22.68           | 43.30                 | 0.00              | 100       |
| Bottom Half  | 96                                 | 23.96                        | 34.38           | 41.67                 | 0.00              | 100       |
| <b>Investment-Grade Short Funds</b>  |                                    |                              |                 |                       |                   |           |
| Top Half   | 34                                 | 50.00                        | 41.18           | 8.82                  | 0.00              | 100       |
| Bottom Half  | 33                                 | 30.30                        | 36.36           | 33.33                 | 0.00              | 100       |
| <b>High-Yield Funds</b>  |                                    |                              |                 |                       |                   |           |
| Top Half   | 60                                 | 50.00                        | 40.00           | 10.00                 | 0.00              | 100       |
| Bottom Half  | 59                                 | 35.59                        | 44.07           | 20.34                 | 0.00              | 100       |
| <b>Mortgage-Backed Securities Funds</b>  |                                    |                              |                 |                       |                   |           |
| Top Half   | 26                                 | 42.31                        | 42.31           | 15.38                 | 0.00              | 100       |
| Bottom Half  | 26                                 | 34.62                        | 34.62           | 30.77                 | 0.00              | 100       |
| <b>Global Income Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 26                                 | 38.46                        | 42.31           | 19.23                 | 0.00              | 100       |
| Bottom Half  | 25                                 | 32.00                        | 28.00           | 40.00                 | 0.00              | 100       |
| <b>Emerging Markets Debt Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 10                                 | 40.00                        | 60.00           | 0.00                  | 0.00              | 100       |
| Bottom Half  | 9                                  | 44.44                        | 22.22           | 33.33                 | 0.00              | 100       |
| <b>General Municipal Debt Funds</b>  |                                    |                              |                 |                       |                   |           |
| Top Half   | 35                                 | 40.00                        | 40.00           | 20.00                 | 0.00              | 100       |
| Bottom Half  | 34                                 | 41.18                        | 41.18           | 17.65                 | 0.00              | 100       |
| <b>California Municipal Debt Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 18                                 | 27.78                        | 61.11           | 11.11                 | 0.00              | 100       |
| Bottom Half  | 18                                 | 61.11                        | 27.78           | 11.11                 | 0.00              | 100       |
| <b>New York Municipal Debt Funds</b>   |                                    |                              |                 |                       |                   |           |
| Top Half   | 15                                 | 33.33                        | 53.33           | 13.33                 | 0.00              | 100       |
| Bottom Half  | 15                                 | 46.67                        | 26.67           | 26.67                 | 0.00              | 100       |

Source: S&P Dow Jones Indices LLC. Data for periods ending March 31, 2016. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



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