
SPIVA[®] U.S. Scorecard

CONTRIBUTOR

Aye M. Soe, CFA
Senior Director
Index Research & Design
aye.soe@spdji.com

SUMMARY

- The first half of 2015 witnessed modest fluctuations in the domestic equity market. Based on the June 30, 2015, SPIVA U.S. Scorecard data, 65.34% of large-cap managers underperformed the benchmark (S&P 500[®], 7.42%) during the past one-year period. The figure is equally unfavorable when viewed over longer-term investment horizons. Over the five- and 10-year investment horizons, 80.8% and 79.59% of large-cap managers, respectively, failed to deliver incremental returns over the benchmark.
- The investment landscape improved modestly for mid-cap managers, with roughly 48.21% failing to beat the S&P MidCap 400[®] over the one-year period. Despite a modest decrease in the percentage of small-cap managers underperforming the benchmark, 58.52% of active small-cap funds still lagged the benchmark.
- However, over the longer-term horizons, such as the five- and 10-year periods, an overwhelming majority of actively managed mid- and small-cap funds underperformed their respective benchmarks.
- It is commonly believed that active management works best in inefficient markets, such as small-cap or emerging markets. This argument is disputed by the findings of this SPIVA report. The majority of small-cap active managers consistently underperformed the benchmark in both the 10-year period and each rolling five-year period since 2002.
- Over the past 12 months, market conditions have been highly favorable for growth style investing, with growth indices across market cap ranges returning higher than value indices. During the same period, the majority of active large, mid-, and small-cap growth funds have outperformed their benchmarks.
- While the headline equity indices of the international and emerging markets rebounded in the second half of 2015, the gains were not sufficient, as they posted negative returns for the past 12 months ending June 30, 2015. During the same period, with the exception of emerging market equity funds, funds invested in global, international, and international small-cap equity categories fared better or at par with their respective benchmarks.
- Meanwhile, managers across all international equity categories were outperformed by their benchmarks over the 10-year investment horizon.
- Within the domestic fixed income space, rates rose across the yield curve, while investor risk aversion contributed to wider spreads across most sectors during the first six months of 2015. The negative price impact is reflected in the declines of the longer-term government and investment-grade credit indices, cancelling the gains made six months prior. The one-year results show that the majority of fixed income managers across all maturity ranges in the government and credit categories underperformed their respective benchmarks.

- Active fixed income funds invested in long-term government bonds fared the worst, with nearly 9 out of 10 managers underperforming their benchmarks.
- The high-yield bond market is often considered to be best accessed via active investing, as passive vehicles have structural constraints that limit their ability to deal with credit risk. Nevertheless, the 10-year results for the actively managed high-yield fund category show that over 90% of the funds underperformed the broad-based benchmark.
- While the one-, three-, and five-year performance figures favor actively managed municipal funds, the majority of the managers underperformed their respective municipal indices over the 10-year period.
- The past decade has witnessed significant growth in terms of the size of the floating-rate bank loans, or senior loans, market. The number of new loan participation funds continues to increase; there are currently 47 funds, compared with 20 funds five years ago. This is a testament to the growing popularity of the asset class. Actively managed senior loan funds fared favorably over the past 12 months, with just over 12% of the funds underperforming the S&P/LSTA U.S. Leveraged Loan 100 Index. Over the longer-term, five-year investment horizon, however, 70% of the funds failed to deliver higher returns than the benchmark.
- Funds disappear at a meaningful rate. Over the past five years, nearly 23% of domestic equity funds, 23% of international equity funds, and 17% of fixed income funds have been merged or liquidated. This finding highlights the importance of addressing survivorship bias in mutual fund analysis.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of investors falling somewhere in between. Since its first publication 11 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. Over the past decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

Beyond the SPIVA Scorecard's widely cited headline numbers is a rich data set that addresses issues related to measurement techniques, universe composition, and fund survivorship that are far less frequently discussed, but are often far more fascinating. These data sets are rooted in the following fundamental principles of the SPIVA Scorecard, with which regular readers will be familiar.

- **Survivorship bias correction:** Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.
- **Apples-to-apples comparison:** Fund returns are often compared to popular benchmarks such as the S&P 500, regardless of size or style classification. SPIVA Scorecards avoid this pitfall by measuring a fund's returns against the returns of a benchmark appropriate for that particular investment category.
- **Asset-weighted returns:** Average returns for a fund group are often calculated using only equal weighting, which results in the returns of a USD 10 billion fund affecting the average in the same manner as the returns of a USD 10 million fund. An accurate representation of how investors fared in a particular period can be ascertained by calculating weighted average returns where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- **Style consistency:** SPIVA Scorecards measure style consistency for each style category across different time horizons. Style consistency is an important metric because style drift (the tendency of funds to diverge from their initial investment categorization) can have an impact on asset allocation decisions.

- **Data cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations, using only the share class with greater assets. Since this is meant to be a scorecard for active managers, index funds, leveraged and inverse funds, and other index-linked products are excluded.

ANNUAL LEAGUE TABLE

We have often written about the lack of consistency in short-term active versus index results. The annual league table is evidence of that, and it shows the yearly match up of the active funds versus indices in the major U.S. equity categories (see Exhibit 1).

Exhibit 1: Annual League Table																
Fund Category	Benchmark Index	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
All Domestic Funds	S&P Composite 1500	40.50	54.50	59.00	47.70	51.40	44.00	67.80	48.8	64.23	41.67	57.63	84.07	66.08	46.05	87.23
All Large-Cap Funds	S&P 500	36.90	57.60	61.00	64.60	61.60	44.50	69.10	44.8	54.34	50.75	61.83	81.28	63.25	55.80	86.44
All Mid-Cap Funds	S&P MidCap 400	78.90	67.30	70.30	56.40	61.80	76.00	46.70	46.4	74.74	57.60	78.19	67.36	80.45	38.97	66.23
All Small-Cap Funds	S&P SmallCap 600	70.70	66.40	73.60	38.80	85.00	60.50	63.60	45.0	83.77	32.22	63.02	85.78	66.50	68.09	72.92
Large-Cap Growth Funds	S&P 500 Growth	16.00	87.50	71.80	44.70	39.50	31.60	76.10	31.6	89.95	39.15	82.00	95.63	46.08	42.63	96.01
Large-Cap Core Funds	S&P 500	35.60	58.10	63.00	66.00	66.90	44.60	71.30	44.0	52.03	52.06	63.20	81.31	66.29	57.74	79.28
Large-Cap Value Funds	S&P 500 Value	54.50	20.60	39.40	78.50	83.20	58.80	87.70	46.3	22.17	46.24	34.67	54.26	85.06	66.56	78.59
Mid-Cap Growth Funds	S&P MidCap 400 Growth	78.40	79.00	86.90	31.70	59.60	78.50	34.80	39.3	88.95	59.60	82.14	75.39	87.22	36.72	56.25
Mid-Cap Core Funds	S&P MidCap 400	72.80	70.50	64.60	50.00	51.80	72.40	35.90	64.6	62.28	68.60	82.00	64.07	79.66	43.48	58.39
Mid-Cap Value Funds	S&P MidCap 400 Value	94.80	55.80	74.30	81.90	63.60	71.80	38.40	56.1	67.06	47.83	71.76	64.86	76.24	45.33	73.61
Small-Cap Growth Funds	S&P SmallCap 600 Growth	73.00	81.30	94.20	35.30	93.60	72.20	52.10	39.4	95.50	33.49	72.68	93.75	63.72	55.61	64.49
Small-Cap Core Funds	S&P SmallCap 600	66.80	65.60	75.20	33.30	82.90	61.40	62.80	51.9	82.46	34.45	60.21	86.10	68.44	77.70	67.92
Small-Cap Value Funds	S&P SmallCap 600 Value	74.40	48.70	37.50	49.30	77.50	46.00	76.70	39.8	72.55	26.27	51.81	83.00	61.83	78.99	94.31

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Outperformance is based upon equal-weighted fund counts. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

REPORTS

Report 1: Percentage of U.S. Equity Funds Outperformed by Benchmarks					
Fund Category	Comparison Index	One-Year (%)	Three-Year (%)	Five-Year (%)	Ten-Year (%)
All Domestic Equity Funds	S&P Composite 1500 [®]	63.57	62.02	78.36	75.02
All Large-Cap Funds	S&P 500	65.34	64.47	80.80	79.59
All Mid-Cap Funds	S&P MidCap 400	48.21	67.69	78.44	86.96
All Small-Cap Funds	S&P SmallCap 600 [®]	58.52	73.21	78.83	80.57
All Multi-Cap Funds	S&P Composite 1500	67.11	66.58	83.07	84.06
Large-Cap Growth Funds	S&P 500 Growth	44.26	57.49	82.02	89.71
Large-Cap Core Funds	S&P 500	71.24	65.89	83.42	81.72
Large-Cap Value Funds	S&P 500 Value	69.84	70.67	78.4	61.14
Mid-Cap Growth Funds	S&P MidCap 400 Growth	47.54	67.24	81.12	88.82
Mid-Cap Core Funds	S&P MidCap 400	57.69	71.43	80.47	91.49
Mid-Cap Value Funds	S&P MidCap 400 Value	45.45	63.46	68.24	83.95
Small-Cap Growth Funds	S&P SmallCap 600 Growth	44.8	61.93	79.5	85.88
Small-Cap Core Funds	S&P SmallCap 600	70.25	77.69	86.57	83.17
Small-Cap Value Funds	S&P SmallCap 600 Value	76.23	83.33	86.49	82.28
Multi-Cap Growth Funds	S&P Composite 1500 Growth	58.9	66.21	83.87	82.22
Multi-Cap Core Funds	S&P Composite 1500	79.42	72.44	87.39	86.18
Multi-Cap Value Funds	S&P Composite 1500 Value	59.84	54.01	75.97	80.12
Real Estate Funds	S&P US Real Estate Investment Trust	60.14	58.87	85.42	78.38

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 2: Survivorship and Style Consistency of U.S. Equity Funds			
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)
One-Year			
All Domestic Funds	2819	96.91	89.22
All Large-Cap Funds	1053	96.77	90.79
All Mid-Cap Funds	390	96.67	85.9
All Small-Cap Funds	622	96.78	90.68
All Multi-Cap Funds	754	97.35	87.53
Large-Cap Growth Funds	296	96.62	89.53
Large-Cap Blend Funds	379	95.78	88.65
Large-Cap Value Funds	378	97.88	93.92
Mid-Cap Growth Funds	183	95.08	89.07
Mid-Cap Blend Funds	130	96.92	87.69
Mid-Cap Value Funds	77	100.00	75.32
Small-Cap Growth Funds	221	96.83	93.21
Small-Cap Blend Funds	279	97.13	90.32
Small-Cap Value Funds	122	95.90	86.89

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 2: Survivorship and Style Consistency of U.S. Equity Funds (cont.)			
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)
One-Year			
Multi-Cap Growth Funds	219	95.89	84.02
Multi-Cap Core Funds	413	98.31	90.56
Multi-Cap Value Funds	122	96.72	83.61
Real Estate Funds	148	97.97	97.97
Three-Year			
All Domestic Funds	2878	86.59	64.21
All Large-Cap Funds	1106	85.53	68.35
All Mid-Cap Funds	390	87.95	56.15
All Small-Cap Funds	616	87.99	68.83
All Multi-Cap Funds	766	86.29	58.62
Large-Cap Growth Funds	334	82.93	67.37
Large-Cap Blend Funds	431	84.92	63.57
Large-Cap Value Funds	341	88.86	75.37
Mid-Cap Growth Funds	174	86.78	69.54
Mid-Cap Blend Funds	112	83.93	51.79
Mid-Cap Value Funds	104	94.23	38.46
Small-Cap Growth Funds	218	84.40	76.61
Small-Cap Blend Funds	260	90.00	68.46
Small-Cap Value Funds	138	89.86	57.25
Multi-Cap Growth Funds	219	87.21	56.16
Multi-Cap Core Funds	410	86.59	65.37
Multi-Cap Value Funds	137	83.94	42.34
Real Estate Funds	141	95.04	95.04
Five-Year			
All Domestic Funds	2976	77.08	52.76
All Large-Cap Funds	1078	74.58	57.05
All Mid-Cap Funds	450	76.67	44.44
All Small-Cap Funds	633	81.04	60.98
All Multi-Cap Funds	815	77.55	45.28
Large-Cap Growth Funds	356	75.28	58.15
Large-Cap Blend Funds	398	72.11	52.51
Large-Cap Value Funds	324	76.85	61.42
Mid-Cap Growth Funds	196	70.41	56.12
Mid-Cap Blend Funds	169	79.88	39.05
Mid-Cap Value Funds	85	84.71	28.24
Small-Cap Growth Funds	239	78.24	67.36
Small-Cap Blend Funds	283	81.63	59.72
Small-Cap Value Funds	111	85.59	50.45

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 2: Survivorship and Style Consistency of U.S. Equity Funds (cont.)			
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)
Five-Year			
Multi-Cap Growth Funds	217	76.04	43.78
Multi-Cap Core Funds	444	77.70	50.9
Multi-Cap Value Funds	154	79.22	31.17
Real Estate Funds	144	88.19	88.19
Ten-Year			
All Domestic Funds	2050	59.32	34.93
All Large-Cap Funds	676	54.59	37.72
All Mid-Cap Funds	345	62.32	31.01
All Small-Cap Funds	458	63.76	42.36
All Multi-Cap Funds	571	59.54	28.02
Large-Cap Growth Funds	204	47.55	34.31
Large-Cap Core Funds	279	51.25	32.97
Large-Cap Value Funds	193	66.84	48.19
Mid-Cap Growth Funds	170	52.94	35.88
Mid-Cap Core Funds	94	67.02	30.85
Mid-Cap Value Funds	81	76.54	20.99
Small-Cap Growth Funds	177	54.80	44.63
Small-Cap Core Funds	202	66.34	42.57
Small-Cap Value Funds	79	77.22	36.71
Multi-Cap Growth Funds	135	54.07	25.19
Multi-Cap Core Funds	275	61.45	33.45
Multi-Cap Value Funds	161	60.87	21.12
Real Estate Funds	74	72.97	71.62

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 3: Average U.S. Equity Fund Performance (Equal-Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
S&P Composite 1500	7.31	17.48	17.43	8.1
All Domestic Funds	5.64	16.46	15.67	7.46
S&P 500	7.43	17.31	17.34	7.89
All Large-Cap Funds	5.75	16.02	15.51	7.03
S&P MidCap 400	6.39	18.6	17.83	9.75
All Mid-Cap Funds	6.6	17.59	16.38	8.48
S&P SmallCap 600	6.73	18.81	18.44	9.28
All Small-Cap Funds	4.98	17	16.23	7.94
S&P Composite 1500	7.31	17.48	17.43	8.10
All Multi-Cap Funds	5.25	15.89	14.9	6.97

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 3: Average U.S. Equity Fund Performance (Equal-Weighted) (cont.)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
Large-Cap				
S&P 500 Growth	10.07	17.79	18.64	9.04
Large-Cap Growth Funds	10.34	17.46	16.95	7.80
S&P 500	7.43	17.31	17.34	7.89
Large-Cap Core Funds	5.62	16.13	15.37	6.84
S&P 500 Value	4.55	16.83	16.01	6.68
Large-Cap Value Funds	2.52	14.82	14.41	6.51
Mid-Cap				
S&P MidCap 400 Growth	9.05	18.37	18.38	10.34
Mid-Cap Growth Funds	9.46	17.38	16.73	8.81
S&P MidCap 400	6.39	18.60	17.83	9.75
Mid-Cap Core Funds	4.55	17.39	15.93	7.81
S&P MidCap 400 Value	3.52	18.77	17.25	9.08
Mid-Cap Value Funds	3.19	18.02	16.08	8.36
Small-Cap				
S&P SmallCap 600 Growth	9.59	18.88	19.40	10.05
Small-Cap Growth Funds	10.12	18.18	17.45	8.41
S&P SmallCap 600	6.73	18.81	18.44	9.28
Small-Cap Core Funds	3.33	16.66	15.85	7.70
S&P SmallCap 600 Value	3.75	18.68	17.50	8.47
Small-Cap Value Funds	0.11	15.78	14.78	7.43
Multi-Cap				
S&P Composite 1500 Growth	10.03	17.89	18.68	8.99
Multi-Cap Growth Funds	9.04	17.09	16.29	7.92
S&P Composite 1500	7.31	17.48	17.43	8.10
Multi-Cap Core Funds	4.17	15.18	14.24	6.72
S&P Composite 1500 Value	4.42	17.06	16.16	7.14
Multi-Cap Value Funds	2.35	16.05	14.65	6.24
Real Estate				
S&P U.S. REIT	3.98	8.75	14.27	6.91
Real Estate Funds	2.32	8.67	12.59	5.48

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 4: Average U.S. Equity Fund Performance (Asset-Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year Annualized (%)
S&P Composite 1500	7.31	17.48	17.43	8.10
All Domestic Funds	6.34	16.84	15.91	7.73
S&P 500	7.43	17.31	17.34	7.89
All Large-Cap Funds	6.29	16.62	15.86	7.24
S&P MidCap 400	6.39	18.60	17.83	9.75
All Mid-Cap Funds	7.44	18.13	16.72	8.94
S&P SmallCap 600	6.73	18.81	18.44	9.28
All Small-Cap Funds	4.94	17.02	16.33	8.38
S&P Composite 1500	7.31	17.48	17.43	8.10
All Multi-Cap Funds	6.39	16.65	15.37	7.72
Large-Cap				
S&P 500 Growth	10.07	17.79	18.64	9.04
Large-Cap Growth Funds	10.55	18.23	17.27	7.81
S&P 500	7.43	17.31	17.34	7.89
Large-Cap Core Funds	5.82	16.81	15.71	6.73
S&P 500 Value	4.55	16.83	16.01	6.68
Large-Cap Value Funds	3.12	14.81	14.54	6.77
Mid-Cap				
S&P MidCap 400 Growth	9.05	18.37	18.38	10.34
Mid-Cap Growth Funds	9.49	17.68	16.86	9.52
S&P MidCap 400	6.39	18.60	17.83	9.75
Mid-Cap Core Funds	6.07	18.36	16.66	8.75
S&P MidCap 400 Value	3.52	18.77	17.25	9.08
Mid-Cap Value Funds	2.93	17.92	15.90	8.19
Small-Cap				
S&P SmallCap 600 Growth	9.59	18.88	19.40	10.05
Small-Cap Growth Funds	9.22	18.25	18.04	9.11
S&P SmallCap 600	6.73	18.81	18.44	9.28
Small-Cap Core Funds	3.05	16.39	15.58	8.05
S&P SmallCap 600 Value	3.75	18.68	17.50	8.47
Small-Cap Value Funds	-0.08	15.54	14.62	7.54
Multi-Cap				
S&P Composite 1500 Growth	10.03	17.89	18.68	8.99
Multi-Cap Growth Funds	11.22	19.16	18.26	9.39
S&P Composite 1500	7.31	17.48	17.43	8.10
Multi-Cap Core Funds	4.62	15.25	14.23	7.18
S&P Composite 1500 Value	4.42	17.06	16.16	7.14
Multi-Cap Value Funds	3.41	16.66	14.48	6.29
Real Estate				
S&P U.S. REIT	3.98	8.75	14.27	6.91
Real Estate Funds	3.24	9.02	13.02	6.08

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 5: Quartile Breakpoints of U.S. Equity Funds			
Fund Category	Third Quartile	Second Quartile	First Quartile
One-Year			
Large-Cap Growth Funds	8.40	10.99	13.08
Large-Cap Core Funds	3.93	6.32	7.65
Large-Cap Value Funds	1.08	3.29	5.08
Mid-Cap Growth Funds	7.15	9.94	12.71
Mid-Cap Core Funds	3.00	5.72	7.40
Mid-Cap Value Funds	1.89	3.80	5.06
Small-Cap Growth Funds	7.15	10.74	13.46
Small-Cap Core Funds	0.67	4.59	7.34
Small-Cap Value Funds	-1.62	1.07	3.64
Multi-Cap Growth Funds	6.59	9.19	11.71
Multi-Cap Core Funds	1.98	4.12	6.80
Multi-Cap Value Funds	-0.12	3.65	5.96
Real Estate Funds	0.49	3.43	4.88
Three-Year			
Large-Cap Growth Funds	16.27	17.85	19.12
Large-Cap Core Funds	14.99	16.89	18.10
Large-Cap Value Funds	14.05	15.91	17.39
Mid-Cap Growth Funds	16.03	17.47	19.26
Mid-Cap Core Funds	15.61	18.02	19.37
Mid-Cap Value Funds	16.45	18.30	19.47
Small-Cap Growth Funds	16.51	18.50	20.28
Small-Cap Core Funds	15.18	17.34	18.77
Small-Cap Value Funds	14.37	16.51	18.16
Multi-Cap Growth Funds	15.54	17.21	18.89
Multi-Cap Core Funds	12.47	15.30	18.06
Multi-Cap Value Funds	15.48	17.44	18.98
Real Estate Funds	8.01	8.61	9.33
Five-Year			
Large-Cap Growth Funds	16.00	17.20	18.52
Large-Cap Core Funds	14.52	15.99	17.15
Large-Cap Value Funds	14.21	15.32	16.15

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 5: Quartile Breakpoints of U.S. Equity Funds (cont.)			
Fund Category	Third Quartile	Second Quartile	First Quartile
Five-Year			
Mid-Cap Growth Funds	15.73	16.96	18.46
Mid-Cap Core Funds	15.55	16.62	17.76
Mid-Cap Value Funds	14.67	16.72	17.76
Small-Cap Growth Funds	16.37	18.08	19.46
Small-Cap Core Funds	14.60	16.46	17.78
Small-Cap Value Funds	14.00	15.81	16.79
Multi-Cap Growth Funds	14.83	16.93	18.45
Multi-Cap Core Funds	11.99	14.48	16.79
Multi-Cap Value Funds	13.12	15.08	16.44
Real Estate Funds	11.25	12.93	13.88
Ten-Year			
Large-Cap Growth Funds	7.29	8.11	8.93
Large-Cap Core Funds	6.66	7.50	8.27
Large-Cap Value Funds	5.94	6.90	7.86
Mid-Cap Growth Funds	8.09	8.99	10.08
Mid-Cap Core Funds	7.27	8.61	9.09
Mid-Cap Value Funds	6.85	8.02	8.80
Small-Cap Growth Funds	8.12	9.28	10.09
Small-Cap Core Funds	7.40	8.40	9.28
Small-Cap Value Funds	6.79	7.90	8.41
Multi-Cap Growth Funds	7.07	8.26	9.63
Multi-Cap Core Funds	5.64	6.87	7.96
Multi-Cap Value Funds	5.64	6.55	7.51
Real Estate Funds	5.15	6.07	7.00

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 6: Percentage of International Equity Funds Outperformed by Benchmarks					
Fund Category	Comparison Index	One-Year (%)	Three-Year (%)	Five-Year (%)	Ten-Year (%)
Global Funds	S&P Global 1200	50.00	68.40	72.93	78.13
International Funds	S&P 700	34.38	55.30	60.67	82.49
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	50.65	49.28	55.36	56.52
Emerging Market Funds	S&P/IFCI Composite	73.26	70.87	74.52	92.19

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Outperformance is based upon equal weighted fund counts. All index returns used are total returns. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 7: Survivorship and Style Consistency of International Equity Funds				
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)	
One-Year				
Global Funds	270	94.07	94.07	
International Funds	352	95.17	94.03	
International Small-Cap Funds	77	97.40	97.40	
Emerging Market Funds	258	97.67	97.29	
Three-Year				
Global Funds	250	81.20	78.80	
International Funds	349	85.67	83.38	
International Small-Cap Funds	69	94.20	91.30	
Emerging Market Funds	206	87.38	86.89	
Five-Year				
Global Funds	181	70.72	69.61	
International Funds	356	75.28	73.03	
International Small-Cap Funds	56	91.07	87.50	
Emerging Market Funds	157	82.17	81.53	
Ten-Year				
Global Funds	96	57.29	54.17	
International Funds	257	61.48	59.14	
International Small-Cap Funds	46	78.26	60.87	
Emerging Market Funds	64	78.13	76.56	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 8: Average International Equity Fund Performance (Equal-Weighted)					
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)	
S&P Global 1200	1.69	14.43	13.41	7.05	
Global Funds	0.82	12.99	11.65	6.44	
S&P 700	-4.76	11.17	9.28	6.12	
International Funds	-3.40	10.85	9.02	5.22	
S&P World Ex-U.S. SmallCap	-1.62	14.86	12.02	7.46	
International Small-Cap Funds	-1.92	14.30	11.93	7.85	
S&P/IFCI Composite	-3.70	5.19	4.69	9.08	
Emerging Market Funds	-6.33	4.15	3.60	7.15	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Funds are equal-weighted, but indices are not. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 9: Average International Equity Fund Performance (Asset-Weighted)					
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)	
S&P Global 1200	1.69	14.43	13.41	7.05	
Global Funds	1.14	13.51	12.15	7.24	
S&P 700	-4.76	11.17	9.28	6.12	
International Funds	-2.21	11.91	9.73	6.01	
S&P Developed Ex-U.S. SmallCap	-1.62	14.86	12.02	7.46	
International Small-Cap Funds	-1.21	14.18	12.16	8.26	
S&P/IFCI Composite	-3.7	5.19	4.69	9.08	
Emerging Market Funds	-7.54	4.09	4.57	7.87	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 10: Quartile Breakpoints of International Equity Funds				
Fund Category	Third Quartile	Second Quartile	First Quartile	
One-Year				
Global Funds	-1.61	1.83	4.24	
International Funds	-5.37	-3.07	-1.2	
International Small-Cap Funds	-4.96	-1.56	2.5	
Emerging Market Funds	-10.07	-6.83	-3.14	
Three-Year				
Global Funds	11.14	13.66	15.41	
International Funds	9.72	11.26	12.50	
International Small-Cap Funds	12.22	15.22	16.44	
Emerging Market Funds	1.55	3.36	6.07	
Five-Year				
Global Funds	10.38	12.63	14.01	
International Funds	8.06	9.37	10.41	
International Small-Cap Funds	10.57	11.97	13.72	
Emerging Market Funds	2.01	3.68	5.13	
Ten-Year				
Global Funds	5.96	6.52	7.83	
International Funds	4.43	5.43	6.33	
International Small-Cap Funds	6.36	7.69	8.55	
Emerging Market Funds	5.72	7.20	8.01	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 11: Percentage of Fixed Income Funds Outperformed by Benchmarks					
Fund Category	Comparison Index	One-Year (%)	Three-Year (%)	Five-Year (%)	Ten-Year (%)
Government Long Funds	Barclays Long Government	98.82	85.39	97.78	93.33
Government Intermediate Funds	Barclays Intermediate Government	88.89	82.86	70.00	75.56
Government Short Funds	Barclays 1-3 Year Government	86.67	80.00	59.09	75.61
Investment-Grade Long Funds	Barclays Long Government/Credit	82.93	40.60	91.91	92.93
Investment-Grade Intermediate Funds	Barclays Intermediate Government/Credit	79.62	34.92	40.70	52.57
Investment-Grade Short Funds	Barclays 1-3 Year Government/Credit	83.51	34.78	30.23	57.35
High-Yield Funds	Barclays High Yield	51.08	77.31	84.31	92.92
Mortgage-Backed Securities Funds	Barclays Mortgage-Backed Securities	58.73	65.63	58.06	77.55
Global Income Funds	Barclays Global Aggregate	30.67	35.16	46.43	56.52
Emerging Market Debt Funds	Barclays Emerging Markets	90.43	93.94	96.97	81.25
Loan Participation Funds ¹	S&P/LSTA U.S. Leveraged Loan 100 Index	12.77	50.00	70.00	N/A
General Municipal Debt Funds	S&P National AMT-Free Municipal Bond	34.62	32.63	41.11	69.62
California Municipal Debt Funds	S&P California AMT-Free Municipal Bond	28.95	45.71	44.74	87.50
New York Municipal Debt Funds	S&P New York AMT-Free Municipal Bond	41.94	61.29	66.67	94.29

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Outperformance is based upon equal-weighted fund counts. All index returns used are total returns. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

¹ Due to the limited sample size of loan participation funds 10 years ago, we have not calculated the outperformance and the related figures.

Report 12: Survivorship and Style Consistency of Fixed Income Funds			
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)
One-Year			
Government Long Funds	85	95.29	94.12
Government Intermediate Funds	27	100	100
Government Short Funds	45	91.11	91.11
Investment-Grade Long Funds	123	98.37	97.56
Investment-Grade Intermediate Funds	319	96.87	91.85
Investment-Grade Short Funds	97	98.97	97.94
High-Yield Funds	231	97.84	97.4
Mortgage-Backed Securities Funds	63	95.24	93.65
Global Income Funds	147	97.96	97.96
Emerging Market Debt Funds	89	100	100
Loan Participation Funds	47	100	100
General Municipal Debt Funds	104	100	100
California Municipal Debt Funds	38	100	100
New York Municipal Debt Funds	31	96.77	96.77
Three-Year			
Government Long Funds	89	91.01	85.39
Government Intermediate Funds	35	77.14	74.29
Government Short Funds	45	84.44	82.22
Investment-Grade Long Funds	133	93.23	78.95
Investment-Grade Intermediate Funds	295	87.80	82.71
Investment-Grade Short Funds	92	90.22	88.04
High-Yield Funds	216	91.20	90.28
Mortgage-Backed Securities Funds	64	87.50	82.81
Global Income Funds	128	88.28	87.50
Emerging Market Debt Funds	66	95.45	89.39
Loan Participation Funds	36	100	100
General Municipal Debt Funds	95	96.84	95.79
California Municipal Debt Funds	35	100.00	100.00
New York Municipal Debt Funds	31	93.55	93.55

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 12: Survivorship and Style Consistency of Fixed Income Funds (cont.)			
Fund Category	No. of Funds at Start	Survivorship (%)	Style Consistency (%)
Five-Year			
Government Long Funds	90	81.11	75.56
Government Intermediate Funds	40	75.00	65.00
Government Short Funds	44	77.27	70.45
Investment-Grade Long Funds	136	86.03	67.65
Investment-Grade Intermediate Funds	285	79.65	73.68
Investment-Grade Short Funds	86	80.23	77.91
High-Yield Funds	204	85.78	84.31
Mortgage-Backed Securities Funds	62	83.87	80.65
Global Income Funds	112	80.36	78.57
Emerging Market Debt Funds	33	96.97	96.97
Loan Participation Funds	20	95	95
General Municipal Debt Funds	90	88.89	88.89
California Municipal Debt Funds	38	89.47	89.47
New York Municipal Debt Funds	33	81.82	81.82
Ten-Year			
Government Long Funds	45	75.56	64.44
Government Intermediate Funds	45	73.33	55.56
Government Short Funds	41	73.17	68.29
Investment-Grade Long Funds	99	68.69	45.45
Investment-Grade Intermediate Funds	175	72.00	69.14
Investment-Grade Short Funds	68	75.00	72.06
High-Yield Funds	113	82.30	78.76
Mortgage-Backed Securities Funds	49	75.51	67.35
Global Income Funds	46	76.09	69.57
Emerging Market Debt Funds	16	100.00	93.75
Loan Participation Funds			
General Municipal Debt Funds	79	81.01	81.01
California Municipal Debt Funds	40	80.00	80.00
New York Municipal Debt Funds	35	74.29	74.29

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 13: Average Fixed Income Fund Performance (Equal-Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
Barclays Long Government	6.21	1.25	6.23	6.13
Government Long Funds	0.68	0.35	2.49	3.76
Barclays Intermediate Government	1.77	0.90	2.06	3.67
Government Intermediate Funds	1.10	0.80	1.96	3.38
Barclays 1-3 Year Government	0.91	0.67	0.85	2.60
Government Short Funds	0.27	0.27	0.82	2.30
Barclays Long Government/Credit	1.93	2.48	6.71	6.14
Investment-Grade Long Funds	1.02	3.35	4.86	4.85
Barclays Intermediate Government/Credit	1.66	1.59	2.78	4.01
Investment-Grade Intermediate Funds	1.13	2.18	3.33	4.00
Barclays 1-3 Year Government/Credit	0.92	0.93	1.15	2.83
Investment-Grade Short Funds	0.53	1.51	1.96	2.65
Barclays High Yield	-0.39	6.82	8.62	7.89
High-Yield Funds	-1.08	5.95	7.53	6.47
Barclays Mortgage-Backed Securities	2.29	1.92	2.89	4.55
Mortgage-Backed Securities Funds	2.20	1.88	3.00	3.92
Barclays Global Aggregate	-7.10	-0.81	2.07	3.54
Global Income Funds	-3.92	1.07	3.17	3.94
Barclays Emerging Markets	0.18	4.40	6.81	7.57
Emerging Market Debt Funds	-7.03	0.56	3.51	5.61
S&P/LSTA Leveraged Loan 100 Index	0.29	4.38	5.32	N/A
Loan Participation Funds	1.54	4.63	5.39	N/A
S&P National AMT-Free Municipal Bond	2.74	2.63	4.25	4.22
General Municipal Debt Funds	2.88	3.00	4.38	3.84
S&P California AMT-Free Municipal Bond	3.29	3.82	5.27	4.68
California Municipal Debt Funds	3.91	4.02	5.51	4.31
S&P New York AMT-Free Municipal Bond	3.07	3.00	4.32	4.34
New York Municipal Debt Funds	3.36	2.72	4.12	3.87

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Funds are equal-weighted, but indices are not. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 14: Average Fixed Income Fund Performance (Asset-Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
Barclays Long Government	6.21	1.25	6.23	6.13
Government Long Funds	0.91	0.43	2.75	3.85
Barclays Intermediate Government	1.77	0.9	2.06	3.67
Government Intermediate Funds	1.25	0.94	2.54	3.52
Barclays 1-3 Year Government	0.91	0.67	0.85	2.6
Government Short Funds	-0.31	0.06	1.73	3.0
Barclays Long Government/Credit	1.93	2.48	6.71	6.14
Investment-Grade Long Funds	0.2	3.62	5.18	4.8
Barclays Intermediate Government/Credit	1.66	1.59	2.78	4.01
Investment-Grade Intermediate Funds	1.24	2.39	3.8	4.70
Barclays 1-3 Year Government/Credit	0.92	0.93	1.15	2.83
Investment-Grade Short Funds	0.73	1.74	2.27	2.96
Barclays High Yield	-0.39	6.82	8.62	7.89
High-Yield Funds	-0.41	6.22	7.68	6.38
Barclays Mortgage-Backed Securities	2.29	1.92	2.89	4.55
Mortgage-Backed Securities Funds	2.49	2.41	3.54	4.54
Barclays Global Aggregate	-7.1	-0.81	2.07	3.54
Global Income Funds	-1.88	2.65	4.02	4.91
Barclays Emerging Markets	0.18	4.4	6.81	7.57
Emerging Market Debt Funds	-7.23	0.48	3.62	5.72
S&P/LSTA Leveraged Loan 100 Index	0.29	4.38	5.32	N/A
Loan Participation Funds	1.09	4.18	5.01	N/A
S&P National Municipal Bond	2.74	2.63	4.25	4.22
General Municipal Debt Funds	3.26	3.37	4.84	4.09
S&P California Municipal Bond	3.29	3.82	5.27	4.68
California Municipal Debt Funds	4.19	4.16	5.63	4.41
S&P New York Municipal Bond	3.07	3.00	4.32	4.34
New York Municipal Debt Funds	3.35	2.42	4.05	3.75

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. All index returns used are total returns. Funds are equal-weighted, but indices are not. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 15: Quartile Breakpoints of Fixed Income Funds			
Fund Category	Third Quartile	Second Quartile	First Quartile
One-Year			
Government Long Funds	-1.46	1.22	1.93
Government Intermediate Funds	0.94	1.35	1.57
Government Short Funds	0.08	0.49	0.76
Investment-Grade Long Funds	0.25	1.00	1.74
Investment-Grade Intermediate Funds	0.69	1.19	1.59
Investment-Grade Short Funds	0.30	0.53	0.75
High-Yield Funds	-1.60	-0.39	0.61
Mortgage-Backed Securities Funds	1.66	2.20	2.62
Global Income Funds	-7.29	-3.14	0.23
Emerging Market Debt Funds	-13.25	-6.15	-2.87
Loan Participation Funds	0.84	1.51	2.12
General Municipal Debt Funds	2.41	3.18	3.92
California Municipal Debt Funds	3.29	3.91	4.41
New York Municipal Debt Funds	2.89	3.52	3.92
Three-Year			
Government Long Funds	-0.45	0.63	1.07
Government Intermediate Funds	0.41	0.71	0.87
Government Short Funds	0.04	0.36	0.66
Investment-Grade Long Funds	2.06	2.97	3.96
Investment-Grade Intermediate Funds	1.56	2.20	2.84
Investment-Grade Short Funds	0.90	1.29	1.87
High-Yield Funds	5.60	6.25	6.81
Mortgage-Backed Securities Funds	1.27	1.75	2.17
Global Income Funds	-1.03	1.14	2.99
Emerging Market Debt Funds	-3.40	1.26	3.52
Loan Participation Funds	3.90	4.42	4.72
General Municipal Debt Funds	2.49	3.21	3.79
California Municipal Debt Funds	3.58	3.96	4.54
New York Municipal Debt Funds	2.24	2.68	3.25

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 15: Quartile Breakpoints of Fixed Income Funds (cont.)			
Fund Category	Third Quartile	Second Quartile	First Quartile
Five-Year			
Government Long Funds	1.86	2.52	3.18
Government Intermediate Funds	1.39	2.00	2.33
Government Short Funds	0.41	0.90	1.29
Investment-Grade Long Funds	3.45	4.22	5.66
Investment-Grade Intermediate Funds	2.75	3.70	4.37
Investment-Grade Short Funds	1.50	1.76	2.33
High-Yield Funds	7.33	7.92	8.39
Mortgage-Backed Securities Funds	2.43	2.89	3.29
Global Income Funds	1.64	2.75	4.66
Emerging Market Debt Funds	0.73	4.66	5.88
Loan Participation Funds	4.61	5.11	5.45
General Municipal Debt Funds	3.88	4.61	5.30
California Municipal Debt Funds	5.11	5.50	5.85
New York Municipal Debt Funds	3.72	4.23	4.68
Ten-Year			
Government Long Funds	3.34	3.79	4.66
Government Intermediate Funds	3.06	3.52	3.84
Government Short Funds	2.00	2.21	2.81
Investment-Grade Long Funds	3.52	4.62	5.34
Investment-Grade Intermediate Funds	3.80	4.36	4.90
Investment-Grade Short Funds	2.45	2.91	3.20
High-Yield Funds	6.13	6.74	7.27
Mortgage-Backed Securities Funds	3.84	4.08	4.66
Global Income Funds	2.86	3.91	4.91
Emerging Market Debt Funds	5.95	6.83	7.30
Loan Participation Funds	N/A	N/A	N/A
General Municipal Debt Funds	3.61	4.04	4.41
California Municipal Debt Funds	4.06	4.36	4.58
New York Municipal Debt Funds	3.71	3.88	4.18

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2015. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

APPENDIX A

SPIVA Styles and Lipper Fund Classifications

The CRSP Survivor-Bias-Free US Mutual Fund Database is the only complete database of both active and liquidated or 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 upon the Lipper fund classification system. The SPIVA Scorecard covers domestic equity, global equity, and global fixed income categories.

U.S. Equity

SPIVA covers major capitalization levels (large-, mid-, small-, and multi-cap funds) and investment styles (growth, core, and value). S&P Dow Jones Indices uses the Lipper fund classifications, which determine a fund portfolio's capitalization and investment style assignments.

Lipper assigns a market capitalization to each fund based on the percentages of a fund's three-year weighted equity assets that fall into each of Lipper's three defined market capitalization slices. The market capitalization breakpoints are calculated using all common stocks, excluding all non-U.S. domiciled stocks and ADRs, trading on the NYSE, AMEX, and NASDAQ. Funds are assigned to the capitalization level in which they have a 75% or higher weighting. Any fund that has less than 75% of its three-year weighted allocation in any of the three market capitalization ranges is classified as a multi-cap fund.

For investment style selection, the Lipper classification system uses three-year fundamental portfolio characteristics (price/earnings, price/book, and three-year sales-per-share growth) and, if necessary, confirming secondary characteristics (price-to-sales and price-to-operating cash flow). Fund statistics are compared to their relevant S&P Dow Jones Indices capitalization-level index to determine the growth, core, or value style.

In some cases, S&P Dow Jones Indices combines closely related Lipper fund classifications in one SPIVA category. Exhibit 2 maps the SPIVA U.S. Equity fund categories to Lipper classifications.

Exhibit 2: U.S. Equity Category Mappings	
SPIVA Category	Lipper Fund Classification
Large-Cap Growth Funds	Large-Cap Growth Funds
Large-Cap Core Funds	Large-Cap Core Funds
Large-Cap Value Funds	Large-Cap Value Funds
	Equity Income Funds
Mid-Cap Growth Funds	Mid-Cap Growth Funds
Mid-Cap Core Funds	Mid-Cap Core Funds
Mid-Cap Value Funds	Mid-Cap Value Funds
Small-Cap Growth Funds	Small-Cap Growth Funds
Small-Cap Core Funds	Small-Cap Core Funds
Small-Cap Value Funds	Small-Cap Value Funds
Multi-Cap Growth Funds	Multi-Cap Growth Funds
Multi-Cap Core Funds	Multi-Cap Core Funds
Multi-Cap Value Funds	Multi-Cap Value Funds
Real Estate Funds	Real Estate Funds

Source: S&P Dow Jones Indices LLC, Lipper. Table is provided for illustrative purposes.

International Equity

For international equity, SPIVA reports on four major categories (Global, International, International Small-Cap, and Emerging Market Funds) of interest to global asset allocators. These categories also include multiple Lipper capitalization and style classifications.

Exhibit 3: Global Equity Category Mappings	
SPIVA Category	Lipper Fund Classification
Global Funds	Global Large-Cap Growth Funds
	Global Large-Cap Core Funds
	Global Large-Cap Value Funds
	Global Multi-Cap Growth Funds
	Global Multi-Cap Core Funds
	Global Multi-Cap Value Funds
International Funds	International Large-Cap Growth Funds
	International Large-Cap Core Funds
	International Large-Cap Value Funds
	International Multi-Cap Growth Funds
	International Multi-Cap Core Funds
	International Multi-Cap Value Funds
International Small-Cap Funds	International Small-/Mid-Cap Growth Funds
	International Small-/Mid-Cap Core Funds
	International Small-/Mid-Cap Value Funds
Emerging Market Funds	Emerging Market Funds

Source: S&P Dow Jones Indices LLC, Lipper. Table is provided for illustrative purposes.

Fixed Income

SPIVA reports on nine domestic, two global, and three municipal fixed income categories. The Lipper domestic fixed income classifications are based on maturity and credit quality. For maturity, long is 10+ years, intermediate is 5-10 years, short/intermediate is 1-5 years, and short is 1-3.5 years. For credit quality, bonds are assigned to U.S. Treasury, U.S. Government (includes government and agency issues), A- or BBB-rated (according to Lipper fund rating methodology), Loan Participations and High Yield classifications. Lipper also includes U.S. Mortgages and GNMA classifications.

In global fixed income, Lipper differentiates between global (including the U.S.) and international (excluding the U.S.) objectives. For municipal debt funds, we include the general classification (invests in the top four credit ratings) plus two state funds (California and New York).

Exhibit 4: Fixed Income Category Mappings	
SPIVA Category	Lipper Fund Classification
Government Long Funds	General U.S. Government Funds
	General U.S. Treasury Funds
Government Intermediate Funds	Intermediate U.S. Government
	Short-Intermediate U.S. Government
Government Short Funds	Short U.S. Government Funds
	Short U.S. Treasury
Investment-Grade Long Funds	Corporate Debt Funds A-Rated
	Corporate Debt Funds BBB-Rated
Investment-Grade Intermediate Funds	Intermediate Investment-Grade Debt Funds
	Short-Intermediate Investment-Grade Debt Funds
Investment-Grade Short Funds	Short Investment-Grade Debt Funds
High-Yield Funds	High Current Yield Funds
Mortgage-Backed Securities Funds	U.S. Mortgage Funds
	GNMA Funds
Global Income Funds	Global Income Funds
	International Income Funds
Emerging Market Debt Funds	Emerging Market Debt Funds
Loan Participation Funds	Loan Participation Funds
General Municipal Debt Funds	General Municipal Debt Funds
California Municipal Debt Funds	California Municipal Debt Funds
New York Municipal Debt Funds	New York Municipal Debt Funds

Source: S&P Dow Jones Indices LLC, Lipper. Table is provided for illustrative purposes.

APPENDIX B: GLOSSARY

Percentage of Funds Outperformed by the Index

To correct for survivorship bias, we use the opportunity set available at the beginning of the period as the denominator. We determine the count of funds that have survived and beat the index. We then report the index outperformance percentage.

Survivorship (%)

This measure represents the percentage of funds in existence at the beginning of the time period that is still active at the end of the time period.

Style Consistency (%)

This calculation shows the percentage of funds that had the same style classification at the end of the time period as at the beginning of the time period.

Equal-Weighted Fund Performance

Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month.

Asset-Weighted Fund Performance

Asset-weighted returns for a particular style category are determined by calculating a weighted average return of all funds in that category in a particular month, with each fund's return weighted by its total net assets. Asset-weighted returns are a better indicator of fund category performance because they more accurately reflect the returns of the total money invested in that particular style category.

Quartiles Breakpoints

The p^{th} percentile for a set of data is the value that is greater than or equal to $p\%$ of the data, but is less than or equal to $(100 - p)\%$ of the data. In other words, it is a value that divides the data into two parts: the lower $p\%$ of the values and the upper $(100-p)\%$ of the values. The first quartile is the 75th percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest share class of the fund net of fees, excluding loads.

Survivorship Bias

Many funds might liquidate or merge during a period of study. This usually occurs due to continued poor performance by the fund. Therefore, if index returns were compared to fund returns using only surviving funds, the comparison would be biased in favor of the fund category. These reports remove this bias by (a) using the entire investment opportunity set, made up of all funds in that particular category at the outset of the period, as the denominator for outperformance calculations, (b) explicitly showing the survivorship rate in each category, and (c) constructing peer average return series for each category based on all available funds at the outset of the period.

Fees

The fund returns used are net of fees, excluding loads.

Indices²

A benchmark index provides an investment vehicle against which fund performance can be measured.

U.S. Equity

S&P 500[®]

Widely regarded as the best single gauge of the U.S. equities market, this market-capitalization-weighted index includes a representative sample of 500 leading companies in the foremost industries of the U.S. economy and provides over 80% coverage of U.S. equities.

S&P MidCap 400[®]

This index consists of 400 mid-sized companies and covers approximately 7% of the U.S. equities market.

S&P SmallCap 600[®]

This index consists of 600 small-cap stocks and covers approximately 3% of the U.S. equities market.

S&P Composite 1500[®]

This is a broad, market-capitalization-weighted index of 1500 stocks. This index is comprised of three size-based indices: the S&P 500, S&P MidCap 400, and S&P SmallCap 600, which measure the performance of large-, mid-, and small-cap stocks, respectively. This index represents 90% of U.S. equities.

² For more information on S&P Dow Jones Indices, please visit www.spindices.com.

S&P 500 Growth and Value Indices

These indices form an exhaustive, multi-factor style series covering the entire market capitalization of the S&P 500. Constituents, weighted according to market capitalization, are classified as growth, value, or a mix of growth and value.

S&P MidCap 400 Growth and Value Indices

These indices form an exhaustive, multi-factor style series covering the entire market capitalization of the S&P MidCap 400.

S&P SmallCap 600 Growth and Value Indices

These indices form an exhaustive, multi-factor style series covering the entire market capitalization of the S&P SmallCap 600.

S&P Composite 1500 Growth and Value Indices

These indices form an exhaustive, multi-factor style series covering the entire market capitalization of the S&P Composite 1500.

S&P United States REIT Index

This index measures the investable universe of publicly traded real estate investment trusts.

International Equity

S&P Global 1200

Capturing approximately 70% of the world's capital markets, the S&P Global 1200 is a composite of seven headline indices, many of which are accepted leaders in their regions. It includes the S&P 500 (U.S.), S&P Europe 350 (Europe), S&P/Topix 150 (Japan), S&P/TSX 60 (Canada), S&P/ASX All Australian 50 (Australia), S&P Asia 50 (Asia Ex-Japan), and S&P Latin America 40 (Latin America).

S&P 700

This index measures the non-U.S. component of the global equity markets, covering all the regions included in the S&P Global 1200, excluding the U.S. (S&P 500).

S&P World Ex-U.S. Small Cap

This index represents the small-cap segment—the bottom 15%—of the world's universe of institutionally investable securities, excluding the U.S.

S&P/IFCI Composite Index

This index is widely recognized as a comprehensive and reliable measure of the world's emerging markets. It measures the returns of stocks that are legally and practically available to foreign investors.

Fixed Income³

Barclays Capital Long Government Bond Index

This index consists of U.S. Treasury and U.S. Government agency bonds with maturities greater than 10 years.

³ Barclays Capital Fixed Income Indices were formerly the Lehman Brothers Indices.

Barclays Capital Intermediate Government Bond Index

This index consists of U.S. Treasury and U.S. Government agency bonds with maturities from 1 to 10 years.

Barclays Capital 1-3 Year Government Bond Index

This index consists of U.S. Treasury and U.S. Government agency bonds with maturities from one to three years.

Barclays Capital Long Government/Credit Bond Index

This index covers corporate and non-corporate fixed income securities that are rated investment grade and have maturities greater than 10 years.

Barclays Capital Intermediate Government/Credit Bond Index

This index covers corporate and non-corporate fixed income securities that are rated investment grade with maturities from 1 to 10 years.

Barclays Capital 1-3 Year Government/Credit Bond Index

This index covers corporate and non-corporate fixed income securities that are rated investment grade and have one to three years until their final maturity.

Barclays Capital High Yield Bond Index

This index includes all fixed income securities with a maximum quality rating of Ba1/BB+ (including defaulted issues), a minimum amount outstanding of USD 100 million, and at least one year to maturity.

Barclays Capital Brothers Mortgage-Backed Securities Index

This index includes 15- and 30-year fixed-rate securities backed by mortgage pools of the Government National Mortgage Association (GNMA), Federal Home Loan Mortgage Corporation (FHLMC), and Federal National Mortgage Association (FNMA)

Barclays Capital Global Aggregate Bond Index

This index covers the most-liquid portion of the global investment-grade, fixed-rate bond market, including government, credit, and collateralized securities.

Barclays Capital Emerging Markets Index

This index includes fixed- and floating-rate USD-denominated debt from emerging markets.

S&P/LSTA U.S. Leveraged Loan 100 Index

This index is designed to reflect the performance of the largest facilities in the floating-rate bank loan, or senior loan, market.

S&P National AMT-Free Municipal Bond Index

This index is a broad, comprehensive, market-value-weighted index designed to measure the performance of the investment-grade U.S. municipal bonds that are exempt from the Alternative Minimum Tax.

S&P California AMT-Free Municipal Bond Index

This index is designed to measure the performance of the investment-grade California municipal bonds that are exempt from the Alternative Minimum Tax.

S&P New York AMT-Free Municipal Bond Index

This index is designed to measure the performance of the investment-grade New York bonds that are exempt from the alternative minimum tax.

INDEX RESEARCH & DESIGN CONTACT INFORMATION

Global Head

Charles Mounts	charles.mounts@spdji.com
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New York

Phil Brzenk	phillip.brzenk@spdji.com
Qing Li	qing.li@spdji.com
Berlinda Liu	berlinda.liu@spdji.com
Aye Soe	aye.soe@spdji.com
Peter Tsui	peter.tsui@spdji.com
Hong Xie	hong.xie@spdji.com
Kelly Tang	kelly.tang@spdji.com

Beijing

Liyu Zeng	liyu.zeng@spdji.com
-----------	---------------------

Hong Kong

Priscilla Luk	priscilla.luk@spdji.com
---------------	-------------------------

London

Sunjiv Mainie	sunjiv.mainie@spdji.com
Daniel Ung	daniel.ung@spdji.com

Mexico City

Maria Sanchez	maria.sanchez@spdji.com
---------------	-------------------------

Mumbai

Utkarsh Agrawal	utkarsh.agrawal@spdji.com
-----------------	---------------------------

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