
SPIVA[®] U.S. Scorecard

CONTRIBUTOR

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SUMMARY

- Starting with this scorecard, S&P Dow Jones Indices has begun reporting the relative outperformance or underperformance of actively managed funds against their respective benchmarks over a 10-year investment horizon.
- The S&P 500[®] had its third straight year of double-digit gains in 2014, returning 13.69% (returns were 32.39% in 2013 and 16% in 2012). Based on data as of Dec. 31, 2014, 86.44% of large-cap fund managers underperformed the benchmark over a one-year period. This figure is equally unfavorable when viewed over longer-term investment horizons. Over 5- and 10-year periods, respectively, 88.65% and 82.07% of large-cap managers failed to deliver incremental returns over the benchmark.
- The returns of 66.23% of mid-cap managers and 72.92% of small-cap managers lagged those of the S&P MidCap 400[®] and the S&P SmallCap 600[®], respectively, on a one-year basis. Similar to the results in the large-cap space, the overwhelming majority of mid- and small-cap fund managers underperformed their benchmarks over the longer-term horizons as well.
- It is commonly believed that active management works best in inefficient environments, such as small-cap or emerging markets. This argument is disputed by the findings of this SPIVA Scorecard. The majority of small-cap active managers have been consistently underperforming the benchmark over the full 10-year period as well as each rolling 5-year period, with data starting in 2002.
- Interestingly, the lowest percentage of outperformance by active managers has tended to occur in the best-performing asset classes. Among the nine U.S. style categories, mid-cap growth was the best-performing asset class over the past 10 years, with the S&P MidCap 400 Growth returning 10.03%. However, it is also the category where the highest percentages of managers (91.81%) have underperformed. While large-cap value was the worst-performing asset class over the same period (6.74%), it was the category where the lowest percentage of managers (58.76%) lagged the benchmark.
- The headline international and emerging market equity indices posted negative returns in 2014. During the same period, the majority of the active managers investing in international, international small-cap, and emerging markets equities fared worse than their benchmark indices.

- In 2014, the U.S. fixed income market saw a strong rally on the long end of the curve, with longer-term Treasury yields moving lower and shorter-term yields inching higher as the market priced in a possible interest rate hike. This resulted in a sharp reversal of fortunes for the longer-term government and investment-grade bond funds from 12 months prior. A significant majority of the actively managed funds in the longer-term government bond and longer-term, investment-grade corporate bond categories underperformed their benchmarks, while these same categories had shown the largest percentage of outperformance over the one-year period that ended in December 2013.
- 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 and flexibility to deal with credit risk. Nevertheless, the 10-year results for the actively managed high-yield funds category showed that over 90% of the funds underperformed the broad-based benchmark.
- While the one- and three-year performance figures favor actively managed municipal funds, the majority of managers underperformed their respective municipal indices over a 10-year period.
- The past decade has witnessed significant growth in the size of the floating-rate bank loan, or senior loan, market. The number of new loan participation funds continues to increase, and there are 45 funds as of year-end 2014, compared with 18 funds five years ago. This is a testament to the growing popularity of the asset class. Only 40% of actively managed leveraged loan funds outperformed the S&P/LSTA Leveraged Loan 100 Index in the past one-year period.
- Funds disappear at a meaningful rate. Over the past five years, nearly 24% of domestic equity funds, 24% of global and 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 [®]	87.23	76.77	80.82	76.54
All Large-Cap Funds	S&P 500	86.44	76.25	88.65	82.07
All Mid-Cap Funds	S&P MidCap 400	66.23	70.48	85.37	89.71
All Small-Cap Funds	S&P SmallCap 600	72.92	80.40	86.55	87.75
All Multi-Cap Funds	S&P Composite 1500	83.74	76.31	84.02	84.03
Large-Cap Growth Funds	S&P 500 Growth	96.01	71.08	91.50	89.52
Large-Cap Core Funds	S&P 500	79.28	77.32	88.77	84.30
Large-Cap Value Funds	S&P 500 Value	78.59	80.98	86.67	58.76
Mid-Cap Growth Funds	S&P MidCap 400 Growth	56.25	66.48	89.42	91.81
Mid-Cap Core Funds	S&P MidCap 400	58.39	70.43	85.62	88.42
Mid-Cap Value Funds	S&P MidCap 400 Value	73.61	72.73	78.35	85.71
Small-Cap Growth Funds	S&P SmallCap 600 Growth	64.49	71.50	85.95	91.71
Small-Cap Core Funds	S&P SmallCap 600	67.92	82.13	89.25	88.14
Small-Cap Value Funds	S&P SmallCap 600 Value	94.31	90.00	89.68	86.59
Multi-Cap Growth Funds	S&P Composite 1500 Growth	87.85	72.20	84.51	83.33
Multi-Cap Core Funds	S&P Composite 1500	86.60	81.62	85.94	85.20
Multi-Cap Value Funds	S&P Composite 1500 Value	69.42	68.35	82.47	79.64
Real Estate Funds	S&P US Real Estate Investment Trust	80.14	86.23	91.49	78.08

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	2772	96.28	87.99
All Large-Cap Funds	1047	95.32	89.40
All Mid-Cap Funds	385	96.88	84.68
All Small-Cap Funds	602	96.84	89.04
All Multi-Cap Funds	738	96.88	86.86
Large-Cap Growth Funds	301	93.36	86.71
Large-Cap Blend Funds	391	95.40	86.45
Large-Cap Value Funds	355	96.90	94.93
Mid-Cap Growth Funds	176	96.02	90.91
Mid-Cap Blend Funds	137	96.35	80.29
Mid-Cap Value Funds	72	100.00	77.78
Small-Cap Growth Funds	214	96.26	92.52
Small-Cap Blend Funds	265	97.74	89.81
Small-Cap Value Funds	123	95.93	81.30

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	214	95.33	82.24	
Multi-Cap Core Funds	403	97.77	91.32	
Multi-Cap Value Funds	121	96.69	80.17	
Real Estate Funds	146	95.89	95.89	
Three-Year				
All Domestic Funds	2880	84.93	63.78	
All Large-Cap Funds	1099	83.26	66.79	
All Mid-Cap Funds	393	86.01	57.25	
All Small-Cap Funds	607	87.81	68.70	
All Multi-Cap Funds	781	84.51	59.03	
Large-Cap Growth Funds	332	80.42	67.17	
Large-Cap Blend Funds	441	82.54	61.90	
Large-Cap Value Funds	326	87.12	73.01	
Mid-Cap Growth Funds	179	84.92	70.39	
Mid-Cap Blend Funds	115	82.61	51.30	
Mid-Cap Value Funds	99	91.92	40.40	
Small-Cap Growth Funds	214	85.05	77.57	
Small-Cap Blend Funds	263	87.83	67.30	
Small-Cap Value Funds	130	92.31	56.92	
Multi-Cap Growth Funds	223	85.20	56.50	
Multi-Cap Core Funds	419	85.44	66.59	
Multi-Cap Value Funds	139	80.58	40.29	
Real Estate Funds	138	94.20	94.20	
Five-Year				
All Domestic Funds	2972	75.98	51.68	
All Large-Cap Funds	1066	73.36	56.10	
All Mid-Cap Funds	458	75.33	43.45	
All Small-Cap Funds	647	79.44	59.04	
All Multi-Cap Funds	801	77.03	44.57	
Large-Cap Growth Funds	353	73.94	58.07	
Large-Cap Blend Funds	383	71.54	52.48	
Large-Cap Value Funds	330	74.85	58.18	
Mid-Cap Growth Funds	208	71.63	56.25	
Mid-Cap Blend Funds	153	76.47	35.95	
Mid-Cap Value Funds	97	81.44	27.84	
Small-Cap Growth Funds	242	76.86	65.29	
Small-Cap Blend Funds	279	79.21	58.78	
Small-Cap Value Funds	126	84.92	47.62	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	213	74.65	42.72
Multi-Cap Core Funds	434	77.42	51.38
Multi-Cap Value Funds	154	79.22	27.92
Real Estate Funds	141	86.52	86.52
Ten-Year			
All Domestic Funds	2080	58.08	33.70
All Large-Cap Funds	697	52.22	35.72
All Mid-Cap Funds	350	62.86	31.43
All Small-Cap Funds	457	62.58	39.82
All Multi-Cap Funds	576	58.68	27.78
Large-Cap Growth Funds	210	44.76	34.29
Large-Cap Core Funds	293	48.46	29.69
Large-Cap Value Funds	194	65.98	46.39
Mid-Cap Growth Funds	171	52.63	36.84
Mid-Cap Core Funds	95	70.53	30.53
Mid-Cap Value Funds	84	75.00	21.43
Small-Cap Growth Funds	181	53.04	40.88
Small-Cap Core Funds	194	65.46	41.24
Small-Cap Value Funds	82	76.83	34.15
Multi-Cap Growth Funds	132	53.03	27.27
Multi-Cap Core Funds	277	61.01	33.21
Multi-Cap Value Funds	167	59.28	19.16
Real Estate Funds	73	72.60	71.23

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	13.08	20.38	15.62	7.89
All Domestic Funds	7.84	18.16	13.78	7.15
S&P 500	13.69	20.41	15.45	7.67
All Large-Cap Funds	10.27	18.43	13.37	6.81
S&P MidCap 400	9.77	19.99	16.54	9.71
All Mid-Cap Funds	7.55	18.53	14.67	8.16
S&P SmallCap 600	5.76	20.24	17.27	9.02
All Small-Cap Funds	2.99	17.88	14.70	7.37
S&P Composite 1500	13.08	20.38	15.62	7.89
All Multi-Cap Funds	8.44	17.66	12.94	6.71

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	14.89	20.46	16.05	8.55	
Large-Cap Growth Funds	9.97	19.36	13.87	7.18	
S&P 500	13.69	20.41	15.45	7.67	
Large-Cap Core Funds	11.08	18.57	13.31	6.63	
S&P 500 Value	12.36	20.40	14.86	6.74	
Large-Cap Value Funds	9.62	17.45	12.94	6.63	
Mid-Cap					
S&P MidCap 400 Growth	7.57	18.76	16.72	10.03	
Mid-Cap Growth Funds	6.42	17.87	14.60	8.18	
S&P MidCap 400	9.77	19.99	16.54	9.71	
Mid-Cap Core Funds	7.84	18.58	14.53	7.70	
S&P MidCap 400 Value	12.10	21.28	16.40	9.33	
Mid-Cap Value Funds	9.36	19.71	14.88	8.42	
Small-Cap					
S&P SmallCap 600 Growth	3.87	19.30	17.63	9.47	
Small-Cap Growth Funds	2.18	18.10	15.02	7.36	
S&P SmallCap 600	5.76	20.24	17.27	9.02	
Small-Cap Core Funds	3.70	17.78	14.60	7.32	
S&P SmallCap 600 Value	7.54	21.18	16.96	8.56	
Small-Cap Value Funds	2.84	17.77	14.19	7.38	
Multi-Cap					
S&P Composite 1500 Growth	13.94	20.31	16.19	8.46	
Multi-Cap Growth Funds	9.15	18.68	13.76	7.35	
S&P Composite 1500	13.08	20.38	15.62	7.89	
Multi-Cap Core Funds	7.97	16.89	12.44	6.47	
S&P Composite 1500 Value	12.14	20.50	15.06	7.27	
Multi-Cap Value Funds	8.79	18.37	13.14	6.32	
Real Estate					
S&P U.S. REIT	30.26	16.32	17.01	8.26	
Real Estate Funds	20.78	14.96	13.59	6.53	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	13.08	20.38	15.62	7.89
All Domestic Funds	9.42	18.83	13.88	7.49
S&P 500	13.69	20.41	15.45	7.67
All Large-Cap Funds	10.65	18.99	13.71	7.03
S&P MidCap 400	9.77	19.99	16.54	9.71
All Mid-Cap Funds	8.40	19.23	14.97	8.66
S&P SmallCap 600	5.76	20.24	17.27	9.02
All Small-Cap Funds	3.37	17.80	14.84	7.97
S&P Composite 1500	13.08	20.38	15.62	7.89
All Multi-Cap Funds	9.36	18.58	13.23	7.44
Large-Cap				
S&P 500 Growth	14.89	20.46	16.05	8.55
Large-Cap Growth Funds	9.85	20.06	14.20	7.10
S&P 500	13.69	20.41	15.45	7.67
Large-Cap Core Funds	11.60	19.57	13.64	6.59
S&P 500 Value	12.36	20.40	14.86	6.74
Large-Cap Value Funds	10.23	17.46	13.04	6.86
Mid-Cap				
S&P MidCap 400 Growth	7.57	18.76	16.72	10.03
Mid-Cap Growth Funds	7.57	18.48	14.91	8.98
S&P MidCap 400	9.77	19.99	16.54	9.71
Mid-Cap Core Funds	8.98	19.62	15.10	8.65
S&P MidCap 400 Value	12.10	21.28	16.40	9.33
Mid-Cap Value Funds	8.69	19.84	14.66	8.22
Small-Cap				
S&P SmallCap 600 Growth	3.87	19.30	17.63	9.47
Small-Cap Growth Funds	2.77	18.85	15.93	8.37
S&P SmallCap 600	5.76	20.24	17.27	9.02
Small-Cap Core Funds	3.71	17.23	14.37	7.76
S&P SmallCap 600 Value	7.54	21.18	16.96	8.56
Small-Cap Value Funds	3.10	17.14	13.85	7.55
Multi-Cap				
S&P Composite 1500 Growth	13.94	20.31	16.19	8.46
Multi-Cap Growth Funds	11.17	20.86	15.50	8.87
S&P Composite 1500	13.08	20.38	15.62	7.89
Multi-Cap Core Funds	8.42	16.95	12.38	6.93
S&P Composite 1500 Value	12.14	20.50	15.06	7.27
Multi-Cap Value Funds	9.44	19.27	12.75	6.24
Real Estate				
S&P U.S. REIT	30.26	16.32	17.01	8.26
Real Estate Funds	22.38	15.38	14.07	7.19

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Charts and tables are 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	8.45	9.98	11.86
Large-Cap Core Funds	9.95	11.35	13.24
Large-Cap Value Funds	8.45	10.31	12.02
Mid-Cap Growth Funds	3.93	7.28	9.48
Mid-Cap Core Funds	5.21	8.84	11.60
Mid-Cap Value Funds	6.72	9.65	12.19
Small-Cap Growth Funds	-0.17	2.83	5.55
Small-Cap Core Funds	1.58	4.44	6.58
Small-Cap Value Funds	0.83	3.45	5.74
Multi-Cap Growth Funds	6.07	9.38	12.32
Multi-Cap Core Funds	5.17	7.43	11.08
Multi-Cap Value Funds	6.36	9.32	12.66
Real Estate Funds	14.05	22.91	30.05
Three-Year			
Large-Cap Growth Funds	18.24	19.69	21.02
Large-Cap Core Funds	17.40	19.27	20.58
Large-Cap Value Funds	16.79	18.48	20.14
Mid-Cap Growth Funds	16.25	18.00	19.98
Mid-Cap Core Funds	16.50	18.80	20.65
Mid-Cap Value Funds	17.81	19.73	21.42
Small-Cap Growth Funds	16.26	18.24	20.70
Small-Cap Core Funds	16.12	18.13	20.04
Small-Cap Value Funds	16.31	17.96	19.59
Multi-Cap Growth Funds	16.78	19.39	20.81
Multi-Cap Core Funds	14.07	16.98	20.00
Multi-Cap Value Funds	17.33	19.80	21.38
Real Estate Funds	14.39	15.35	15.93
Five-Year			
Large-Cap Growth Funds	13.07	14.16	15.22
Large-Cap Core Funds	12.60	13.77	14.85
Large-Cap Value Funds	12.57	13.60	14.54

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Charts and tables are 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	13.56	15.00	16.11
Mid-Cap Core Funds	14.15	15.33	16.09
Mid-Cap Value Funds	13.37	15.31	16.45
Small-Cap Growth Funds	14.23	15.61	17.20
Small-Cap Core Funds	13.43	15.15	16.47
Small-Cap Value Funds	13.42	14.80	15.67
Multi-Cap Growth Funds	12.60	14.55	15.83
Multi-Cap Core Funds	10.13	12.56	14.94
Multi-Cap Value Funds	11.68	13.30	14.81
Real Estate Funds	10.75	14.88	16.53
Ten-Year			
Large-Cap Growth Funds	6.70	7.54	8.42
Large-Cap Core Funds	6.55	7.16	7.92
Large-Cap Value Funds	6.18	7.06	8.00
Mid-Cap Growth Funds	7.34	8.49	9.60
Mid-Cap Core Funds	6.91	8.31	9.26
Mid-Cap Value Funds	6.95	8.11	9.18
Small-Cap Growth Funds	6.82	8.24	9.06
Small-Cap Core Funds	7.14	7.97	8.72
Small-Cap Value Funds	6.90	7.75	8.22
Multi-Cap Growth Funds	6.69	7.67	9.01
Multi-Cap Core Funds	5.37	6.67	7.80
Multi-Cap Value Funds	5.87	6.73	7.64
Real Estate Funds	5.93	7.26	8.38

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Charts and tables are 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	76.89	73.64	75.46	79.17
International Funds	S&P 700	68.90	58.50	62.54	84.09
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	69.44	50.82	51.92	58.14
Emerging Markets Funds	S&P/IFCI Composite	68.70	65.97	72.19	89.71

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Outperformance is based upon equal weighted fund counts. All index returns used are total returns. Charts and tables are 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	264	94.70	92.80	
International Funds	344	95.93	95.35	
International Small-Cap Funds	72	98.61	97.22	
Emerging Markets Funds	230	96.52	96.52	
Three-Year				
Global Funds	220	82.27	80.45	
International Funds	347	84.15	82.71	
International Small-Cap Funds	61	95.08	93.44	
Emerging Markets Funds	191	86.39	85.86	
Five-Year				
Global Funds	163	68.10	66.87	
International Funds	347	75.22	73.49	
International Small-Cap Funds	52	92.31	90.38	
Emerging Markets Funds	151	81.46	80.79	
Ten-Year				
Global Funds	96	58.33	55.21	
International Funds	264	60.61	59.09	
International Small-Cap Funds	43	81.40	65.12	
Emerging Markets Funds	68	75.00	73.53	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	5.40	15.72	10.49	6.72	
Global Funds	2.46	13.57	9.06	6.12	
S&P 700	-3.84	10.48	5.40	5.65	
International Funds	-5.07	10.20	5.24	4.58	
S&P World Ex-U.S. SmallCap	-3.42	13.01	8.52	6.84	
International Small-Cap Funds	-5.37	13.21	8.67	7.31	
S&P/IFCI Composite	-1.12	5.34	2.69	9.37	
Emerging Markets Funds	-2.35	5.29	2.09	7.61	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Funds are equal-weighted, but indices are not. Charts and tables are 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	5.40	15.72	10.49	6.72	
Global Funds	3.51	14.40	9.38	7.05	
S&P 700	-3.84	10.48	5.40	5.65	
International Funds	-4.16	11.40	5.91	5.41	
S&P Developed Ex-U.S. SmallCap	-3.42	13.01	8.52	6.84	
International Small-Cap Funds	-4.73	13.59	8.93	7.96	
S&P/IFCI Composite	-1.12	5.34	2.69	9.37	
Emerging Markets Funds	-2.87	5.68	3.16	8.44	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	0.04	2.83	5.35
International Funds	-6.99	-5.08	-3.20
International Small-Cap Funds	-8.13	-5.40	-2.81
Emerging Markets Funds	-5.91	-3.27	-0.15
Three-Year			
Global Funds	11.98	14.02	16.42
International Funds	8.79	10.43	11.98
International Small-Cap Funds	10.61	13.34	15.20
Emerging Markets Funds	2.36	4.68	6.53
Five-Year			
Global Funds	8.17	9.75	11.18
International Funds	4.27	5.39	6.48
International Small-Cap Funds	7.04	9.00	10.04
Emerging Markets Funds	0.31	1.94	3.52
Ten-Year			
Global Funds	5.50	6.19	7.58
International Funds	3.77	4.68	5.68
International Small-Cap Funds	5.44	6.85	8.27
Emerging Markets Funds	6.35	7.33	8.46

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	97.67	96.67	97.67	95.45
Government Intermediate Funds	Barclays Intermediate Government	53.33	61.54	65.85	70.83
Government Short Funds	Barclays 1-3 Year Government	56.82	55.81	56.82	67.50
Investment-Grade Long Funds	Barclays Long Government/Credit	98.31	75.94	95.59	97.06
Investment-Grade Intermediate Funds	Barclays Intermediate Government/Credit	30.29	31.01	41.09	49.12
Investment-Grade Short Funds	Barclays 1-3 Year Government/Credit	53.93	23.17	33.75	58.06
High-Yield Funds	Barclays High Yield	73.09	77.03	88.83	92.98
Mortgage-Backed Securities Funds	Barclays Mortgage-Backed Securities	76.56	69.84	55.00	76.00
Global Income Funds	Barclays Global Aggregate	36.05	36.67	45.79	46.81
Emerging Markets Debt Funds	Barclays Emerging Markets	84.27	93.22	89.66	75.00
Loan Participation Funds ¹	S&P/LSTA U.S. Leveraged Loan 100 Index	60.00	69.44	66.67	N/A
General Municipal Debt Funds	S&P National AMT-Free Municipal Bond	39.42	38.71	45.05	70.51
California Municipal Debt Funds	S&P California AMT-Free Municipal Bond	18.42	25.71	47.37	85.00
New York Municipal Debt Funds	S&P New York AMT-Free Municipal Bond	19.35	48.39	63.64	94.29

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

¹ Due to the limited sample size of loan participation funds ten 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	86	97.67	94.19
Government Intermediate Funds	30	90.00	90.00
Government Short Funds	44	93.18	90.91
Investment-Grade Long Funds	118	97.46	94.92
Investment-Grade Intermediate Funds	307	96.09	91.53
Investment-Grade Short Funds	89	95.51	95.51
High-Yield Funds	223	98.65	98.21
Mortgage-Backed Securities Funds	64	89.06	89.06
Global Income Funds	147	97.96	97.96
Emerging Markets Debt Funds	89	100.00	100.00
Loan Participation Funds	45	100.00	97.78
General Municipal Debt Funds	104	99.04	98.08
California Municipal Debt Funds	38	100.00	100.00
New York Municipal Debt Funds	31	100.00	100.00
Three-Year			
Government Long Funds	90	91.11	85.56
Government Intermediate Funds	39	76.92	66.67
Government Short Funds	43	86.05	81.40
Investment-Grade Long Funds	133	91.73	74.44
Investment-Grade Intermediate Funds	287	86.41	79.79
Investment-Grade Short Funds	82	89.02	87.80
High-Yield Funds	209	92.34	91.39
Mortgage-Backed Securities Funds	63	87.30	84.13
Global Income Funds	120	89.17	88.33
Emerging Markets Debt Funds	59	96.61	96.61
Loan Participation Funds	36	100.00	100.00
General Municipal Debt Funds	93	93.55	92.47
California Municipal Debt Funds	35	97.14	97.14
New York Municipal Debt Funds	31	93.55	93.55

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	86	86.05	79.07
Government Intermediate Funds	41	73.17	63.41
Government Short Funds	44	79.55	72.73
Investment-Grade Long Funds	136	84.56	65.44
Investment-Grade Intermediate Funds	275	78.55	71.64
Investment-Grade Short Funds	80	78.75	76.25
High-Yield Funds	197	86.29	84.77
Mortgage-Backed Securities Funds	60	83.33	80.00
Global Income Funds	107	81.31	78.50
Emerging Markets Debt Funds	29	96.55	96.55
Loan Participation Funds	18	94.44	94.44
General Municipal Debt Funds	91	83.52	83.52
California Municipal Debt Funds	38	89.47	89.47
New York Municipal Debt Funds	33	81.82	81.82
Ten-Year			
Government Long Funds	44	79.55	68.18
Government Intermediate Funds	48	70.83	52.08
Government Short Funds	40	75.00	70.00
Investment-Grade Long Funds	102	69.61	44.12
Investment-Grade Intermediate Funds	171	72.51	68.42
Investment-Grade Short Funds	62	75.81	72.58
High-Yield Funds	114	84.21	80.70
Mortgage-Backed Securities Funds	50	80.00	72.00
Global Income Funds	47	78.72	72.34
Emerging Markets Debt Funds	16	100.00	93.75
Loan Participation Funds	N/A	N/A	N/A
General Municipal Debt Funds	78	80.77	80.77
California Municipal Debt Funds	40	80.00	80.00
New York Municipal Debt Funds	35	77.14	77.14

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	24.66	4.23	9.86	7.48
Government Long Funds	5.32	1.30	3.70	4.16
Barclays Intermediate Government	2.52	0.99	2.78	3.76
Government Intermediate Funds	2.85	1.18	2.66	3.53
Barclays 1-3 Year Government	0.64	0.51	1.09	2.62
Government Short Funds	0.75	0.41	1.15	2.47
Barclays Long Government/Credit	19.31	5.77	9.81	7.37
Investment-Grade Long Funds	7.49	5.03	6.14	5.14
Barclays Intermediate Government/Credit	3.13	2.03	3.54	4.10
Investment-Grade Intermediate Funds	4.40	3.14	4.28	4.19
Barclays 1-3 Year Government/Credit	0.77	0.89	1.41	2.85
Investment-Grade Short Funds	0.92	1.93	2.31	2.70
Barclays High Yield	2.45	8.43	9.03	7.74
High-Yield Funds	1.29	7.42	7.84	6.30
Barclays Mortgage-Backed Securities	6.08	2.37	3.73	4.75
Mortgage-Backed Securities Funds	5.33	2.39	3.94	4.10
Barclays Global Aggregate	0.59	0.73	2.65	3.60
Global Income Funds	2.09	2.60	3.83	3.94
Barclays Emerging Markets	4.76	5.81	7.41	7.82
Emerging Markets Debt Funds	-0.34	3.16	4.72	6.37
S&P/LSTA Leveraged Loan 100 Index	0.99	5.43	5.28	N/A
Loan Participation Funds	0.90	5.23	5.37	N/A
S&P National AMT-Free Municipal Bond	8.92	3.92	4.94	4.56
General Municipal Debt Funds	9.41	4.57	4.99	4.14
S&P California AMT-Free Municipal Bond	10.21	5.21	6.14	5.03
California Municipal Debt Funds	11.61	5.92	6.28	4.62
S&P New York AMT-Free Municipal Bond	8.87	4.16	4.96	4.66
New York Municipal Debt Funds	9.92	4.14	4.80	4.15

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Funds are equal-weighted, but indices are not. Charts and tables are 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	24.66	4.23	9.86	7.48
Government Long Funds	4.68	1.30	3.82	4.26
Barclays Intermediate Government	2.52	0.99	2.78	3.76
Government Intermediate Funds	2.59	1.57	3.37	3.95
Barclays 1-3 Year Government	0.64	0.51	1.09	2.62
Government Short Funds	1.55	0.69	2.27	3.20
Barclays Long Government/Credit	19.31	5.77	9.81	7.37
Investment-Grade Long Funds	7.75	5.58	6.54	5.15
Barclays Intermediate Government/Credit	3.13	2.03	3.54	4.10
Investment-Grade Intermediate Funds	4.84	3.82	4.88	4.94
Barclays 1-3 Year Government/Credit	0.77	0.89	1.41	2.85
Investment-Grade Short Funds	1.23	2.22	2.67	2.98
Barclays High Yield	2.45	8.43	9.03	7.74
High-Yield Funds	1.97	7.66	7.93	6.24
Barclays Mortgage-Backed Securities	6.08	2.37	3.73	4.75
Mortgage-Backed Securities Funds	5.91	3.01	4.55	4.76
Barclays Global Aggregate	0.59	0.73	2.65	3.60
Global Income Funds	2.15	4.24	4.54	4.89
Barclays Emerging Markets	4.76	5.81	7.41	7.82
Emerging Markets Debt Funds	-0.45	2.90	4.62	6.46
S&P/LSTA Leveraged Loan 100 Index	0.99	5.43	5.28	N/A
Loan Participation Funds	0.56	4.73	5.02	N/A
S&P National Municipal Bond	8.92	3.92	4.94	4.56
General Municipal Debt Funds	10.37	5.07	5.47	4.41
S&P California Municipal Bond	10.21	5.21	6.14	5.03
California Municipal Debt Funds	12.57	6.23	6.47	4.78
S&P New York Municipal Bond	8.87	4.16	4.96	4.66
New York Municipal Debt Funds	10.63	4.13	4.92	4.18

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. All index returns used are total returns. Funds are equal-weighted, but indices are not. Charts and tables are 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	2.85	4.09	5.25
Government Intermediate Funds	1.63	2.59	4.00
Government Short Funds	0.23	0.60	1.16
Investment-Grade Long Funds	4.92	5.85	7.23
Investment-Grade Intermediate Funds	2.83	5.09	5.93
Investment-Grade Short Funds	0.51	0.76	1.25
High-Yield Funds	0.36	1.67	2.57
Mortgage-Backed Securities Funds	4.88	5.54	6.17
Global Income Funds	0.13	1.76	3.96
Emerging Markets Debt Funds	-4.71	-0.76	3.21
Loan Participation Funds	0.42	0.84	1.41
General Municipal Debt Funds	7.49	10.24	11.54
California Municipal Debt Funds	10.59	11.83	12.90
New York Municipal Debt Funds	9.12	9.81	11.11
Three-Year			
Government Long Funds	0.50	1.18	1.92
Government Intermediate Funds	0.50	1.00	1.29
Government Short Funds	0.08	0.54	0.81
Investment-Grade Long Funds	3.15	4.18	5.87
Investment-Grade Intermediate Funds	2.36	3.37	4.13
Investment-Grade Short Funds	1.29	1.82	2.44
High-Yield Funds	6.91	7.77	8.41
Mortgage-Backed Securities Funds	1.71	2.20	2.69
Global Income Funds	0.57	2.44	4.77
Emerging Markets Debt Funds	0.31	3.03	5.28
Loan Participation Funds	4.39	4.94	5.54
General Municipal Debt Funds	3.52	4.74	5.71
California Municipal Debt Funds	5.31	5.95	6.52
New York Municipal Debt Funds	3.60	4.25	4.85

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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	2.91	3.57	4.27
Government Intermediate Funds	1.82	2.72	3.32
Government Short Funds	0.72	1.12	1.59
Investment-Grade Long Funds	4.57	5.30	6.96
Investment-Grade Intermediate Funds	3.53	4.80	5.35
Investment-Grade Short Funds	1.80	2.12	2.75
High-Yield Funds	7.60	8.20	8.63
Mortgage-Backed Securities Funds	3.35	3.81	4.44
Global Income Funds	2.13	3.42	5.40
Emerging Markets Debt Funds	3.25	5.96	6.81
Loan Participation Funds	0.31	1.94	3.52
General Municipal Debt Funds	4.49	5.39	5.93
California Municipal Debt Funds	5.78	6.28	6.59
New York Municipal Debt Funds	4.43	4.87	5.46
Ten-Year			
Government Long Funds	6.70	7.54	8.42
Government Intermediate Funds	6.55	7.16	7.92
Government Short Funds	6.18	7.06	8.00
Investment-Grade Long Funds	7.34	8.49	9.60
Investment-Grade Intermediate Funds	6.91	8.31	9.26
Investment-Grade Short Funds	6.95	8.11	9.18
High-Yield Funds	6.82	8.24	9.06
Mortgage-Backed Securities Funds	7.14	7.97	8.72
Global Income Funds	6.90	7.75	8.22
Emerging Markets Debt Funds	6.69	7.67	9.01
Loan Participation Funds	N/A	N/A	N/A
General Municipal Debt Funds	5.37	6.67	7.80
California Municipal Debt Funds	5.87	6.73	7.64
New York Municipal Debt Funds	5.93	7.26	8.38

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2014. Charts and tables are 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.

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. Charts and tables are provided for illustrative purposes.

International Equity

For international equity, SPIVA reports on four major categories (Global, International, International Small-Cap, and Emerging Markets 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 Markets Funds	Emerging Markets Funds

Source: S&P Dow Jones Indices LLC, Lipper. Charts and tables are 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 Markets 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. Charts and tables are 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.

ABOUT S&P DOW JONES INDICES

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