

## CONTRIBUTORS

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

**Ryan Poirier, FRM**  
Senior Analyst  
Global Research & Design  
[ryan.poirier@spglobal.com](mailto:ryan.poirier@spglobal.com)

# SPIVA<sup>®</sup> U.S. Scorecard

## SUMMARY

- Global markets soared in the first half of 2017, largely due to the momentum gained from the November 2016 U.S. election results. The U.S. equity market posted strong gains across all cap ranges, with the [S&P SmallCap 600<sup>®</sup>](#) posting 22.47% over the 12-month period as of June 30, 2017. The [S&P MidCap 400<sup>®</sup>](#) and [S&P 500<sup>®</sup>](#) followed, reporting gains of 18.57% and 17.90%, respectively.
- During the one-year period, the percentage of managers outperforming their respective benchmarks noticeably increased, compared to results from six months prior. Over the one-year period, 56.56% of large-cap managers, 60.69% of mid-cap managers, and 59.55% of small-cap managers underperformed the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600, respectively.
- We also see similar results between managers' weighted fund returns and the benchmarks over the same period. The observation is consistent across all three market cap ranges. This is in contrast to six months prior when over 80% of funds underperformed and displayed large performance deviations from their cap-weighted benchmarks.
- While results over the short term were positive, the figures are more in line with historical results when viewed over longer-term investment horizons. Over the five-year period, 82.38% of large-cap managers, 87.21% of mid-cap managers, and 93.83% of small-cap managers lagged their respective benchmarks.
- Similarly, over the 15-year investment horizon, 93.18% of large-cap managers, 94.40% of mid-cap managers, and 94.43% of small-cap managers failed to outperform on a relative basis.
- Over the 12-month period ending June 30, 2017, growth managers across all three market cap ranges fared better than their core and value counterparts. The results highlight the cyclicity of style managers, as core managers fared the best six months prior with the exception of small caps, while value managers outperformed both core and growth one year prior.

- Across nine U.S. style categories, large-cap value managers continued to perform the best over the 10-year horizon, with 35.75% of managers outperforming the benchmark, the [S&P 500 Value](#).
- The headline international equity and emerging market equity indices experienced a similar rally starting in November 2016 and continuing through the first half of 2017. Over the one-year period ending June 30, 2017, the headline international and emerging market indices posted strong double-digit returns.
- During the same one-year period, with the exception of actively managed international small-cap equity funds, the majority of managers investing in global, international and emerging market funds underperformed their respective benchmarks.
- Over the 3-, 5-, 10-, and 15-year investment horizons, managers across all international equity categories underperformed their benchmarks.
- The U.S. Federal Reserve increased rates twice in during the first half of 2017. However, the 10-Year U.S. Treasury yield fell to 2.31%, resulting in a flatter yield curve. During the one-year period studied, the majority of active fixed income managers investing in government and corporate credit bonds substantially outperformed their benchmarks, with the exception of those investing in intermediate-term government bonds.
- High-yield bond spreads have tightened considerably compared with Treasuries, and default rates remain low, reflecting the health of issuing companies. During the one-year period, high-yield managers struggled compared with their benchmarks, with over 83% of actively managed high-yield bonds failing to deliver higher returns than the benchmark's 12.70% return.
- The majority of municipal funds underperformed over the 12-month period, despite promising results over the three- and five-year investment horizons. However, over the 10- and 15-year periods, most muni funds underperformed their benchmarks. While these funds underperformed over the long term, it should be noted that municipal categories have some of the best survivorship statistics.
- Funds disappear at a meaningful rate. Over the 15-year period, more than 58% of domestic equity funds, 55% of international equity funds, and approximately 47% of all fixed income funds were 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 market participants falling somewhere in between. Since its first publication 15 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a 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 market participants 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.

## REPORTS

Report 1: Percentage of U.S. Equity Funds Outperformed by Benchmarks						
FUND CATEGORY	COMPARISON INDEX	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)	15-YEAR (%)
All Domestic Funds	S&P Composite 1500	47.51	85.61	84.41	85.42	84.57
All Large-Cap Funds	S&P 500	56.56	81.85	82.38	85.08	93.18
All Mid-Cap Funds	S&P MidCap 400	60.69	87.21	87.21	95.16	94.40
All Small-Cap Funds	S&P SmallCap 600	59.55	88.74	93.83	94.06	94.43
All Multi-Cap Funds	S&P Composite 1500	50.09	85.93	84.81	87.79	87.38
Large-Cap Growth Funds	S&P 500 Growth	37.86	74.81	76.43	92.31	95.06
Large-Cap Core Funds	S&P 500	60.82	90.71	85.09	91.63	96.32
Large-Cap Value Funds	S&P 500 Value	52.29	87.19	88.63	64.25	83.06
Mid-Cap Growth Funds	S&P MidCap 400 Growth	49.28	85.37	85.16	98.29	96.11
Mid-Cap Core Funds	S&P MidCap 400	68.55	89.47	87.25	95.83	97.01
Mid-Cap Value Funds	S&P MidCap 400 Value	67.86	81.82	86.21	88.75	86.96
Small-Cap Growth Funds	S&P SmallCap 600 Growth	49.73	88.02	90.05	95.48	99.35
Small-Cap Core Funds	S&P SmallCap 600	65.98	91.49	95.43	93.63	96.15
Small-Cap Value Funds	S&P SmallCap 600 Value	62.73	92.45	95.20	93.33	79.66
Multi-Cap Growth Funds	S&P Composite 1500 Growth	54.31	86.03	81.77	91.50	88.61
Multi-Cap Core Funds	S&P Composite 1500	55.04	93.65	87.34	88.09	89.24
Multi-Cap Value Funds	S&P Composite 1500 Value	39.29	82.86	79.83	82.68	85.02
Real Estate Funds	S&P United States REIT	43.53	71.95	84.71	85.19	82.00

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 2: Survivorship and Style Consistency of U.S. Equity Funds</b>			
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>	<b>STYLE CONSISTENCY (%)</b>
<b>1-YEAR</b>			
All Domestic Funds	2284	95.05	95.10
All Large-Cap Funds	866	94.34	90.30
All Mid-Cap Funds	322	94.10	85.40
All Small-Cap Funds	543	97.61	97.05
All Multi-Cap Funds	553	94.21	86.08
Large-Cap Growth Funds	243	93.83	90.53
Large-Cap Core Funds	294	94.56	86.39
Large-Cap Value Funds	329	94.53	87.54
Mid-Cap Growth Funds	140	95.00	85.71
Mid-Cap Core Funds	126	94.44	74.60
Mid-Cap Value Funds	56	91.07	80.36
Small-Cap Growth Funds	187	96.26	90.37
Small-Cap Core Funds	245	98.78	95.92
Small-Cap Value Funds	111	97.30	83.78
Multi-Cap Growth Funds	199	93.47	81.91
Multi-Cap Core Funds	241	96.27	83.82
Multi-Cap Value Funds	113	91.15	79.65
Real Estate Funds	85	96.47	97.65
<b>3-YEAR</b>			
All Domestic Funds	2388	87.06	84.38
All Large-Cap Funds	915	86.01	76.50
All Mid-Cap Funds	347	85.30	68.30
All Small-Cap Funds	536	88.43	87.13
All Multi-Cap Funds	590	88.47	63.05
Large-Cap Growth Funds	266	84.59	73.68
Large-Cap Core Funds	326	86.20	69.33
Large-Cap Value Funds	323	87.00	76.16
Mid-Cap Growth Funds	166	84.34	63.86
Mid-Cap Core Funds	115	81.74	49.57
Mid-Cap Value Funds	66	93.94	56.06
Small-Cap Growth Funds	194	86.60	79.38
Small-Cap Core Funds	236	91.10	79.66
Small-Cap Value Funds	106	85.85	62.26
Multi-Cap Growth Funds	180	89.44	61.67
Multi-Cap Core Funds	304	89.14	50.99
Multi-Cap Value Funds	106	84.91	60.38
Real Estate Funds	82	93.90	92.68

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 2: Survivorship and Style Consistency of U.S. Equity Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>	<b>STYLE CONSISTENCY (%)</b>
<b>5-YEAR</b>			
All Domestic Funds	2486	78.84	75.54
All Large-Cap Funds	974	77.41	63.66
All Mid-Cap Funds	348	80.75	58.62
All Small-Cap Funds	539	81.45	79.04
All Multi-Cap Funds	625	77.76	46.88
Large-Cap Growth Funds	298	73.49	57.38
Large-Cap Core Funds	373	78.55	52.55
Large-Cap Value Funds	303	79.87	64.03
Mid-Cap Growth Funds	157	80.25	58.60
Mid-Cap Core Funds	103	73.79	38.83
Mid-Cap Value Funds	88	89.77	37.50
Small-Cap Growth Funds	193	75.65	66.84
Small-Cap Core Funds	221	86.88	66.06
Small-Cap Value Funds	125	80.80	43.20
Multi-Cap Growth Funds	194	80.93	42.27
Multi-Cap Core Funds	312	79.49	35.58
Multi-Cap Value Funds	119	68.07	31.09
Real Estate Funds	86	95.35	80.23
<b>10-YEAR</b>			
All Domestic Funds	1970	56.85	53.76
All Large-Cap Funds	590	57.80	46.10
All Mid-Cap Funds	351	56.41	34.19
All Small-Cap Funds	472	57.84	54.24
All Multi-Cap Funds	557	55.30	29.62
Large-Cap Growth Funds	182	50.55	37.36
Large-Cap Core Funds	215	57.67	35.81
Large-Cap Value Funds	193	64.77	49.74
Mid-Cap Growth Funds	175	46.86	26.29
Mid-Cap Core Funds	96	61.46	27.08
Mid-Cap Value Funds	80	71.25	22.50
Small-Cap Growth Funds	178	50.56	40.45
Small-Cap Core Funds	204	58.82	41.67
Small-Cap Value Funds	90	70.00	28.89
Multi-Cap Growth Funds	153	53.59	23.53
Multi-Cap Core Funds	277	55.60	17.33
Multi-Cap Value Funds	127	56.69	25.98
Real Estate Funds	81	70.37	46.91

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 2: Survivorship and Style Consistency of U.S. Equity Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>	<b>STYLE CONSISTENCY (%)</b>
<b>15-YEAR</b>			
All Domestic Funds	1961	41.71	39.42
All Large-Cap Funds	720	35.56	26.81
All Mid-Cap Funds	339	47.20	22.42
All Small-Cap Funds	378	51.32	44.97
All Multi-Cap Funds	524	39.69	18.13
Large-Cap Growth Funds	263	27.76	17.49
Large-Cap Core Funds	272	36.76	20.22
Large-Cap Value Funds	185	44.86	28.65
Mid-Cap Growth Funds	180	33.89	17.78
Mid-Cap Core Funds	67	52.24	13.43
Mid-Cap Value Funds	92	69.57	13.04
Small-Cap Growth Funds	156	39.10	29.49
Small-Cap Core Funds	104	55.77	35.58
Small-Cap Value Funds	118	63.56	20.34
Multi-Cap Growth Funds	158	28.48	13.29
Multi-Cap Core Funds	159	44.03	10.69
Multi-Cap Value Funds	207	44.93	9.18
Real Estate Funds	50	62.00	50.00

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 3: Average U.S. Equity Fund Performance (Equal-Weighted)</b>						
<b>CATEGORY</b>	<b>1-YEAR (ANNUALIZED %)</b>	<b>3-YEAR (ANNUALIZED %)</b>	<b>5-YEAR (ANNUALIZED %)</b>	<b>10-YEAR (ANNUALIZED %)</b>	<b>15-YEAR (ANNUALIZED %)</b>	
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
All Domestic Funds	18.72	6.60	12.62	5.80	7.49	
S&P 500	17.90	9.61	14.63	7.18	8.34	
All Large-Cap Funds	17.34	7.26	12.76	5.78	6.79	
S&P MidCap 400	18.57	8.53	14.92	8.56	10.40	
All Mid-Cap Funds	18.06	5.87	12.56	6.10	8.30	
S&P SmallCap 600	22.47	9.32	15.47	8.44	10.38	
All Small-Cap Funds	21.60	5.71	12.37	5.89	8.14	
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
All Multi-Cap Funds	18.42	6.44	12.42	5.39	7.25	
<b>LARGE-CAP</b>						
S&P 500 Growth	19.30	11.03	15.24	8.97	8.83	
Large-Cap Growth Funds	20.78	9.25	13.81	7.12	7.24	
S&P 500	17.90	9.61	14.63	7.18	8.34	
Large-Cap Core Funds	16.72	7.27	12.84	5.61	6.51	
S&P 500 Value	15.86	7.79	13.82	5.25	7.72	
Large-Cap Value Funds	15.35	5.69	11.85	4.70	6.68	
<b>MID-CAP</b>						
S&P MidCap 400 Growth	17.90	9.16	14.61	9.24	10.43	
Mid-Cap Growth Funds	19.20	6.39	12.18	6.20	8.01	
S&P MidCap 400	18.57	8.53	14.92	8.56	10.40	
Mid-Cap Core Funds	17.13	5.26	12.46	5.86	8.25	
S&P MidCap 400 Value	18.47	7.50	14.98	7.75	10.23	
Mid-Cap Value Funds	17.01	5.65	13.48	6.06	8.95	
<b>SMALL-CAP</b>						
S&P SmallCap 600 Growth	22.90	10.20	15.46	9.26	11.14	
Small-Cap Growth Funds	22.85	6.50	12.43	6.18	7.86	
S&P SmallCap 600	22.47	9.32	15.47	8.44	10.38	
Small-Cap Core Funds	20.67	5.25	12.25	5.64	8.26	
S&P SmallCap 600 Value	21.79	8.37	15.44	7.59	9.56	
Small-Cap Value Funds	21.35	5.15	12.45	5.64	8.41	
<b>MULTI-CAP</b>						
S&P Composite 1500 Growth	19.31	10.87	15.21	9.02	9.15	
Multi-Cap Growth Funds	19.88	7.78	13.07	6.43	7.80	
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
Multi-Cap Core Funds	17.48	5.77	11.93	5.11	6.90	
S&P Composite 1500 Value	16.24	7.77	13.97	5.53	8.12	
Multi-Cap Value Funds	17.53	5.59	12.48	4.49	6.98	
<b>REAL ESTATE</b>						
S&P United States REIT	-2.25	7.93	9.23	5.78	9.93	
Real Estate Funds	-0.70	7.48	8.57	4.64	9.07	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 4: Average U.S. Equity Fund Performance (Asset-Weighted)</b>						
<b>CATEGORY</b>	<b>1-YEAR (ANNUALIZED %)</b>	<b>3-YEAR (ANNUALIZED %)</b>	<b>5-YEAR (ANNUALIZED %)</b>	<b>10-YEAR (ANNUALIZED %)</b>	<b>15-YEAR (ANNUALIZED %)</b>	
<b>REAL ESTATE</b>						
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
All Domestic Funds	19.62	7.86	13.66	6.30	7.96	
S&P 500	17.90	9.61	14.63	7.18	8.34	
All Large-Cap Funds	19.43	8.52	13.96	6.19	7.35	
S&P MidCap 400	18.57	8.53	14.92	8.56	10.40	
All Mid-Cap Funds	18.81	6.92	13.39	6.58	9.13	
S&P SmallCap 600	22.47	9.32	15.47	8.44	10.38	
All Small-Cap Funds	21.78	6.25	12.78	6.52	8.84	
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
All Multi-Cap Funds	19.70	7.14	13.30	6.13	8.17	
<b>LARGE-CAP</b>						
S&P 500 Growth	19.30	11.03	15.24	8.97	8.83	
Large-Cap Growth Funds	23.03	10.39	15.02	7.62	7.77	
S&P 500	17.90	9.61	14.63	7.18	8.34	
Large-Cap Core Funds	18.47	8.42	13.96	5.87	6.90	
S&P 500 Value	15.86	7.79	13.82	5.25	7.72	
Large-Cap Value Funds	17.01	6.86	12.98	5.41	7.34	
<b>MID-CAP</b>						
S&P MidCap 400 Growth	17.90	9.16	14.61	9.24	10.43	
Mid-Cap Growth Funds	20.00	7.67	13.22	7.12	9.12	
S&P MidCap 400	18.57	8.53	14.92	8.56	10.40	
Mid-Cap Core Funds	18.71	6.30	13.49	6.46	9.24	
S&P MidCap 400 Value	18.47	7.50	14.98	7.75	10.23	
Mid-Cap Value Funds	15.67	5.79	13.54	6.10	9.11	
<b>SMALL-CAP</b>						
S&P SmallCap 600 Growth	22.90	10.20	15.46	9.26	11.14	
Small-Cap Growth Funds	22.88	7.45	13.42	7.39	8.90	
S&P SmallCap 600	22.47	9.32	15.47	8.44	10.38	
Small-Cap Core Funds	20.71	5.52	12.41	6.12	8.79	
S&P SmallCap 600 Value	21.79	8.37	15.44	7.59	9.56	
Small-Cap Value Funds	22.04	5.20	12.35	5.84	8.76	
<b>MULTI-CAP</b>						
S&P Composite 1500 Growth	19.31	10.87	15.21	9.02	9.15	
Multi-Cap Growth Funds	23.35	9.22	14.78	7.67	9.22	
S&P Composite 1500	18.09	9.51	14.68	7.34	8.59	
Multi-Cap Core Funds	17.05	6.09	12.30	5.64	7.76	
S&P Composite 1500 Value	16.24	7.77	13.97	5.53	8.12	
Multi-Cap Value Funds	17.52	5.21	12.72	4.24	6.99	
<b>REAL ESTATE</b>						
S&P United States REIT	-2.25	7.93	9.23	5.78	9.93	
Real Estate Funds	-0.33	7.82	8.85	5.00	9.42	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 5: Quartile Breakpoints of U.S. Equity Funds</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>1-YEAR</b>			
All Domestic Funds	15.52	18.81	22.08
All Large-Cap Funds	14.35	17.49	20.70
All Mid-Cap Funds	14.89	17.05	20.57
All Small-Cap Funds	19.33	21.71	24.55
All Multi-Cap Funds	15.38	18.35	21.28
Large-Cap Growth Funds	18.07	20.98	23.63
Large-Cap Core Funds	14.54	17.18	19.58
Large-Cap Value Funds	12.37	15.88	18.07
Mid-Cap Growth Funds	15.59	18.81	21.53
Mid-Cap Core Funds	13.83	16.08	19.45
Mid-Cap Value Funds	15.02	16.21	20.48
Small-Cap Growth Funds	20.67	23.24	26.27
Small-Cap Core Funds	18.76	21.12	23.61
Small-Cap Value Funds	18.94	21.37	23.25
Multi-Cap Growth Funds	16.75	19.22	22.25
Multi-Cap Core Funds	14.85	17.54	20.18
Multi-Cap Value Funds	15.29	17.98	21.12
Real Estate Funds	-3.05	-1.47	1.34
<b>3-YEAR</b>			
All Domestic Funds	5.23	6.85	8.64
All Large-Cap Funds	6.03	7.63	9.24
All Mid-Cap Funds	4.48	6.24	7.61
All Small-Cap Funds	4.55	6.32	7.98
All Multi-Cap Funds	4.97	6.57	8.36
Large-Cap Growth Funds	8.38	9.90	11.23
Large-Cap Core Funds	6.45	8.04	8.88
Large-Cap Value Funds	5.15	6.29	7.26
Mid-Cap Growth Funds	5.32	6.47	7.89
Mid-Cap Core Funds	3.56	5.80	7.57
Mid-Cap Value Funds	4.57	6.20	7.29
Small-Cap Growth Funds	5.23	7.31	9.16
Small-Cap Core Funds	4.38	6.19	7.54
Small-Cap Value Funds	3.82	5.60	7.04
Multi-Cap Growth Funds	6.42	8.06	10.00
Multi-Cap Core Funds	4.60	5.96	7.52
Multi-Cap Value Funds	4.85	6.29	7.45
Real Estate Funds	6.43	7.38	8.16

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 5: Quartile Breakpoints of U.S. Equity Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>5-YEAR</b>			
All Domestic Funds	11.59	13.10	14.37
All Large-Cap Funds	11.96	13.23	14.51
All Mid-Cap Funds	11.47	12.90	14.43
All Small-Cap Funds	11.51	13.07	14.26
All Multi-Cap Funds	10.97	12.87	14.31
Large-Cap Growth Funds	12.96	14.35	15.39
Large-Cap Core Funds	11.90	13.55	14.43
Large-Cap Value Funds	11.48	12.44	13.26
Mid-Cap Growth Funds	11.31	12.39	13.99
Mid-Cap Core Funds	11.27	12.96	14.26
Mid-Cap Value Funds	12.23	13.52	14.58
Small-Cap Growth Funds	11.34	12.94	14.39
Small-Cap Core Funds	11.76	13.09	14.18
Small-Cap Value Funds	11.19	13.35	14.30
Multi-Cap Growth Funds	11.38	13.27	14.96
Multi-Cap Core Funds	10.49	12.66	14.14
Multi-Cap Value Funds	11.85	13.08	14.19
Real Estate Funds	7.68	8.45	8.98
<b>10-YEAR</b>			
All Domestic Funds	4.98	6.21	7.39
All Large-Cap Funds	5.10	6.17	7.22
All Mid-Cap Funds	5.24	6.45	7.56
All Small-Cap Funds	5.49	6.53	7.70
All Multi-Cap Funds	4.51	5.65	7.17
Large-Cap Growth Funds	6.73	7.76	8.55
Large-Cap Core Funds	5.29	6.05	6.79
Large-Cap Value Funds	4.40	5.41	6.39
Mid-Cap Growth Funds	5.41	6.97	7.97
Mid-Cap Core Funds	5.54	6.35	6.94
Mid-Cap Value Funds	4.87	6.00	7.02
Small-Cap Growth Funds	6.17	7.23	7.96
Small-Cap Core Funds	5.30	6.35	7.56
Small-Cap Value Funds	4.76	6.07	6.87
Multi-Cap Growth Funds	5.28	6.97	7.91
Multi-Cap Core Funds	4.48	5.67	7.03
Multi-Cap Value Funds	3.95	4.73	5.84
Real Estate Funds	2.13	4.55	5.55

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 5: Quartile Breakpoints of U.S. Equity Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>15-YEAR</b>			
All Domestic Funds	7.20	8.11	9.08
All Large-Cap Funds	6.75	7.53	8.13
All Mid-Cap Funds	7.70	8.68	9.55
All Small-Cap Funds	8.18	8.91	9.65
All Multi-Cap Funds	6.66	7.90	8.79
Large-Cap Growth Funds	7.05	7.78	8.42
Large-Cap Core Funds	6.57	7.41	7.94
Large-Cap Value Funds	6.74	7.53	8.21
Mid-Cap Growth Funds	7.57	8.87	9.60
Mid-Cap Core Funds	7.99	8.83	9.19
Mid-Cap Value Funds	7.63	8.53	9.55
Small-Cap Growth Funds	8.35	8.93	9.55
Small-Cap Core Funds	8.20	8.98	9.48
Small-Cap Value Funds	7.98	8.85	9.79
Multi-Cap Growth Funds	8.11	8.80	9.73
Multi-Cap Core Funds	6.55	7.48	8.54
Multi-Cap Value Funds	6.53	7.66	8.57
Real Estate Funds	8.21	9.11	10.11

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 6: Percentage of International Equity Funds Outperformed by Benchmarks</b>						
<b>FUND CATEGORY</b>	<b>COMPARISON INDEX</b>	<b>1-YEAR</b>	<b>3-YEAR</b>	<b>5-YEAR</b>	<b>10-YEAR</b>	<b>15-YEAR</b>
Global Funds	S&P Global 1200	56.25	75.14	79.90	79.80	84.85
International Funds	S&P International 700	77.81	57.36	71.85	79.92	91.47
International Small-Cap Funds	S&P Developed Ex-U.S. Small Cap	46.15	67.80	70.91	64.29	83.33
Emerging Markets Funds	S&P/IFCI Composite	75.43	80.19	75.31	87.88	95.24

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. 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 (%)
<b>1-YEAR</b>			
Global Funds	242	94.21	91.32
International Funds	376	96.28	94.68
International Small-Cap Funds	78	98.72	94.87
Emerging Markets Funds	234	94.02	92.74
<b>3-YEAR</b>			
Global Funds	183	83.06	73.22
International Funds	258	87.60	84.50
International Small-Cap Funds	59	89.83	88.14
Emerging Markets Funds	213	84.98	83.10
<b>5-YEAR</b>			
Global Funds	200	72.50	52.50
International Funds	270	79.63	73.70
International Small-Cap Funds	55	90.91	83.64
Emerging Markets Funds	162	83.33	82.10
<b>10-YEAR</b>			
Global Funds	99	60.61	48.48
International Funds	244	63.93	59.84
International Small-Cap Funds	42	80.95	66.67
Emerging Markets Funds	66	69.70	63.64
<b>15-YEAR</b>			
Global Funds	99	41.41	30.30
International Funds	258	44.96	41.86
International Small-Cap Funds	30	63.33	56.67
Emerging Markets Funds	63	55.56	52.38

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**Report 8: Average International Equity Fund Performance (Equal-Weighted)**

CATEGORY	1-YEAR (ANNUALIZED %)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)	15-YEAR (ANNUALIZED %)
S&P Global 1200	19.47	5.97	11.89	4.59	7.84
Global Funds	18.81	4.51	10.28	3.32	6.61
S&P International 700	21.62	1.55	8.60	1.81	7.34
International Funds	18.76	1.15	7.56	0.50	5.33
S&P Developed Ex-U.S. Small Cap	21.83	4.86	12.17	3.35	10.06
International Small-Cap Funds	20.66	3.20	10.57	2.71	9.03
S&P/IFCI Composite	23.97	2.18	5.22	2.67	11.69
Emerging Markets Funds	20.00	0.02	3.58	0.46	9.16

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**Report 9: Average International Equity Fund Performance (Asset-Weighted)**

CATEGORY	1-YEAR (ANNUALIZED %)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)	15-YEAR (ANNUALIZED %)
S&P Global 1200	19.47	5.97	11.89	4.59	7.84
Global Funds	20.59	5.21	11.44	4.33	7.82
S&P International 700	21.62	1.55	8.60	1.81	7.34
International Funds	21.97	1.75	8.60	1.68	6.65
S&P Developed Ex-U.S. Small Cap	21.83	4.86	12.17	3.35	10.06
International Small-Cap Funds	21.61	4.15	10.89	3.76	9.81
S&P/IFCI Composite	23.97	2.18	5.22	2.67	11.69
Emerging Markets Funds	20.61	0.85	4.74	1.76	10.29

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. 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
<b>1-YEAR</b>			
Global Funds	15.94	19.17	22.20
International Funds	16.30	18.78	21.43
International Small-Cap Funds	17.74	22.09	24.03
Emerging Markets Funds	16.46	20.75	24.25
<b>3-YEAR</b>			
Global Funds	3.18	4.90	6.25
International Funds	0.08	1.48	2.92
International Small-Cap Funds	1.96	3.91	5.61
Emerging Markets Funds	-1.19	0.64	2.05
<b>5-YEAR</b>			
Global Funds	8.96	10.40	12.16
International Funds	6.88	7.95	9.14
International Small-Cap Funds	8.95	11.32	13.02
Emerging Markets Funds	2.75	3.74	5.56
<b>10-YEAR</b>			
Global Funds	3.07	3.86	4.88
International Funds	0.14	1.00	2.32
International Small-Cap Funds	1.51	3.18	4.02
Emerging Markets Funds	0.35	0.90	2.07
<b>15-YEAR</b>			
Global Funds	6.43	7.21	8.43
International Funds	5.19	6.23	6.97
International Small-Cap Funds	8.27	8.73	10.74
Emerging Markets Funds	8.61	9.81	10.59

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. 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	1-YEAR	3-YEAR	5-YEAR	10-YEAR	15-YEAR
Government Long Funds	Barclays US Government Long	10.71	96.55	100.00	95.35	98.21
Government Intermediate Funds	Barclays US Government Intermediate	57.89	76.19	88.89	83.72	87.69
Government Short Funds	Barclays US Government (1-3 Year)	50.00	70.37	83.87	79.41	91.67
Investment-Grade Long Funds	Barclays US Government/Credit Long	4.44	97.75	85.45	96.55	97.73
Investment-Grade Intermediate Funds	Barclays US Government/Credit Intermediate	24.88	50.23	40.56	57.30	75.93
Investment-Grade Short Funds	Barclays US Government/Credit (1-3 Year)	19.54	48.48	34.48	68.75	71.43
High Yield Funds	Barclays US Corporate High Yield	83.33	90.15	91.01	97.54	98.26
Mortgage-Backed Securities Funds	Barclays US Aggregate Securitized - MBS	54.72	66.04	70.18	76.74	90.00
Global Income Funds	Barclays Global Aggregate	13.51	45.30	43.81	64.44	70.00
Emerging Markets Debt Funds	Barclays Emerging Markets	23.33	84.62	90.20	76.47	66.67
General Municipal Debt Funds	S&P National AMT-Free Municipal Bond	71.60	50.00	34.25	68.35	86.73
California Municipal Debt Funds	S&P California AMT-Free Municipal Bond	69.44	25.00	33.33	80.00	83.72
New York Municipal Debt Funds	S&P New York AMT-Free Municipal Bond	81.48	42.86	55.17	90.91	92.31
Loan Participation Funds	S&P/LSTA U.S. Leveraged Loan 100	61.22	34.04	56.76	-	-

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

**Report 12: Survivorship and Style Consistency of Fixed Income Funds**

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)	STYLE CONSISTENCY (%)
<b>1-YEAR</b>			
Government Long Funds	57	100.00	100.00
Government Intermediate Funds	19	100.00	100.00
Government Short Funds	24	95.83	95.83
Investment-Grade Long Funds	98	98.98	94.90
Investment-Grade Intermediate Funds	202	97.52	95.05
Investment-Grade Short Funds	88	97.73	98.86
High Yield Funds	213	96.71	96.71
Mortgage-Backed Securities Funds	53	98.11	96.23
Global Income Funds	111	96.40	95.50
Emerging Markets Debt Funds	60	91.67	93.33
General Municipal Debt Funds	81	96.30	95.06
California Municipal Debt Funds	36	97.22	94.44
New York Municipal Debt Funds	27	100.00	96.30
Loan Participation Funds	49	97.96	95.92

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 12: Survivorship and Style Consistency of Fixed Income Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>	<b>STYLE CONSISTENCY (%)</b>
<b>3-YEAR</b>			
Government Long Funds	59	89.83	89.83
Government Intermediate Funds	21	85.71	85.71
Government Short Funds	27	85.19	81.48
Investment-Grade Long Funds	97	97.94	89.69
Investment-Grade Intermediate Funds	218	90.37	75.69
Investment-Grade Short Funds	67	91.04	85.07
High Yield Funds	207	90.82	89.37
Mortgage-Backed Securities Funds	54	96.30	85.19
Global Income Funds	117	86.32	81.20
Emerging Markets Debt Funds	52	88.46	86.54
General Municipal Debt Funds	80	95.00	88.75
California Municipal Debt Funds	36	97.22	94.44
New York Municipal Debt Funds	28	96.43	92.86
Loan Participation Funds	47	100.00	97.87
<b>5-YEAR</b>			
Government Long Funds	79	88.61	64.56
Government Intermediate Funds	27	66.67	62.96
Government Short Funds	31	74.19	64.52
Investment-Grade Long Funds	112	93.75	68.75
Investment-Grade Intermediate Funds	250	82.80	55.20
Investment-Grade Short Funds	59	86.44	79.66
High Yield Funds	192	83.33	80.73
Mortgage-Backed Securities Funds	58	89.66	74.14
Global Income Funds	105	85.71	76.19
Emerging Markets Debt Funds	51	84.31	54.90
General Municipal Debt Funds	73	94.52	84.93
California Municipal Debt Funds	33	100.00	96.97
New York Municipal Debt Funds	29	89.66	86.21
Loan Participation Funds	37	100.00	97.30
<b>10-YEAR</b>			
Government Long Funds	44	65.91	59.09
Government Intermediate Funds	43	55.81	39.53
Government Short Funds	34	61.76	47.06
Investment-Grade Long Funds	87	64.37	41.38
Investment-Grade Intermediate Funds	185	61.08	43.78
Investment-Grade Short Funds	64	60.94	56.25
High Yield Funds	122	71.31	66.39

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 12: Survivorship and Style Consistency of Fixed Income Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>	<b>STYLE CONSISTENCY (%)</b>
<b>10-YEAR</b>			
Mortgage-Backed Securities Funds	43	81.40	69.77
Global Income Funds	45	77.78	62.22
Emerging Markets Debt Funds	17	82.35	76.47
General Municipal Debt Funds	79	72.15	65.82
California Municipal Debt Funds	40	80.00	77.50
New York Municipal Debt Funds	33	72.73	69.70
Loan Participation Funds	-	-	-
<b>15-YEAR</b>			
Government Long Funds	57	43.86	35.09
Government Intermediate Funds	65	40.00	23.08
Government Short Funds	36	41.67	30.56
Investment-Grade Long Funds	133	45.11	21.80
Investment-Grade Intermediate Funds	162	43.83	31.48
Investment-Grade Short Funds	42	54.76	54.76
High Yield Funds	115	52.17	48.70
Mortgage-Backed Securities Funds	50	58.00	48.00
Global Income Funds	40	57.50	50.00
Emerging Markets Debt Funds	15	73.33	66.67
General Municipal Debt Funds	113	48.67	44.25
California Municipal Debt Funds	43	65.12	62.79
New York Municipal Debt Funds	39	58.97	51.28
Loan Participation Funds	-	-	-

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 13: Average Fixed Income Fund Performance (Equal-Weighted)</b>					
<b>CATEGORY</b>	<b>1-YEAR (ANNUALIZED %)</b>	<b>3-YEAR (ANNUALIZED %)</b>	<b>5-YEAR (ANNUALIZED %)</b>	<b>10-YEAR (ANNUALIZED %)</b>	<b>15-YEAR (ANNUALIZED %)</b>
Barclays US Government Long	-6.96	5.54	2.82	7.27	6.85
Government Long Funds	-2.00	1.53	0.94	3.46	3.31
Barclays US Government Intermediate	-1.25	1.47	1.07	3.39	3.43
Government Intermediate Funds	-1.29	0.87	0.54	2.56	2.61
Barclays US Government (1-3 Year)	-0.07	0.71	0.65	2.01	2.31
Government Short Funds	-0.02	0.33	0.20	1.46	1.72
Barclays US Government/Credit Long	-1.07	5.28	4.26	7.58	7.23
Investment-Grade Long Funds	1.91	2.76	3.19	4.65	4.59
Barclays US Government/Credit Intermediate	-0.21	1.92	1.77	3.87	3.96
Investment-Grade Intermediate Funds	0.54	1.79	1.91	3.47	3.51
Barclays US Government/Credit (1-3 Year)	0.35	0.95	0.95	2.30	2.60
Investment-Grade Short Funds	1.37	0.87	1.10	1.52	1.93
Barclays US Corporate High Yield	12.70	4.48	6.89	7.67	9.06
High Yield Funds	10.64	2.86	5.41	5.28	6.81
Barclays US Aggregate Securitized - MBS	-0.06	2.17	2.00	4.31	4.25
Mortgage-Backed Securities Funds	0.23	1.71	1.67	3.62	3.46
Barclays Global Aggregate	-2.18	-0.35	0.78	3.69	4.55
Global Income Funds	1.62	0.06	1.31	3.69	4.57
Barclays Emerging Markets	5.57	4.49	5.32	7.14	9.59
Emerging Markets Debt Funds	7.49	2.20	3.38	4.67	8.00
S&P National AMT-Free Municipal Bond	-0.71	3.21	2.95	4.33	4.50
General Municipal Debt Funds	-1.08	3.03	2.95	3.79	3.82
S&P California AMT-Free Municipal Bond	-1.06	3.34	3.64	4.76	4.77
California Municipal Debt Funds	-1.34	3.64	3.71	4.14	4.15
S&P New York AMT-Free Municipal Bond	-0.60	3.37	3.20	4.48	4.61
New York Municipal Debt Funds	-0.94	3.35	2.84	3.80	3.85
S&P/LSTA U.S. Leveraged Loan 100	6.74	2.53	4.09	-	-
Loan Participation Funds	6.28	2.36	3.71	3.27	3.74

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 14: Average Fixed Income Fund Performance (Asset-Weighted)</b>						
<b>CATEGORY</b>	<b>1-YEAR (ANNUALIZED %)</b>	<b>3-YEAR (ANNUALIZED %)</b>	<b>5-YEAR (ANNUALIZED %)</b>	<b>10-YEAR (ANNUALIZED %)</b>	<b>15-YEAR (ANNUALIZED %)</b>	
Barclays US Government Long	-6.96	5.54	2.82	7.27	6.85	
Government Long Funds	-2.40	1.97	1.28	4.00	3.85	
Barclays US Government Intermediate	-1.25	1.47	1.07	3.39	3.43	
Government Intermediate Funds	-0.98	1.19	0.98	3.19	3.12	
Barclays US Government (1-3 Year)	-0.07	0.71	0.65	2.01	2.31	
Government Short Funds	-0.05	0.80	0.67	2.07	2.26	
Barclays US Government/Credit Long	-1.07	5.28	4.26	7.58	7.23	
Investment-Grade Long Funds	1.74	3.31	3.79	4.78	4.98	
Barclays US Government/Credit Intermediate	-0.21	1.92	1.77	3.87	3.96	
Investment-Grade Intermediate Funds	1.24	2.41	2.54	4.38	4.33	
Barclays US Government/Credit (1-3 Year)	0.35	0.95	0.95	2.30	2.60	
Investment-Grade Short Funds	1.41	1.38	1.71	2.65	2.88	
Barclays US Corporate High Yield	12.70	4.48	6.89	7.67	9.06	
High Yield Funds	11.32	3.28	5.89	5.78	7.42	
Barclays US Aggregate Securitized - MBS	-0.06	2.17	2.00	4.31	4.25	
Mortgage-Backed Securities Funds	0.13	2.06	2.00	4.34	4.09	
Barclays Global Aggregate	-2.18	-0.35	0.78	3.69	4.55	
Global Income Funds	4.14	0.32	2.19	4.44	5.71	
Barclays Emerging Markets	5.57	4.49	5.32	7.14	9.59	
Emerging Markets Debt Funds	8.58	4.21	4.85	6.27	9.19	
S&P National AMT-Free Municipal Bond	-0.71	3.21	2.95	4.33	4.50	
General Municipal Debt Funds	-0.79	3.52	3.51	4.21	4.33	
S&P California AMT-Free Municipal Bond	-1.06	3.34	3.64	4.76	4.77	
California Municipal Debt Funds	-1.20	4.09	4.11	4.52	4.59	
S&P New York AMT-Free Municipal Bond	-0.60	3.37	3.20	4.48	4.61	
New York Municipal Debt Funds	0.29	3.98	3.16	3.83	4.21	
S&P/LSTA U.S. Leveraged Loan 100	6.74	2.53	4.09	-	-	
Loan Participation Funds	7.31	2.76	3.88	3.35	3.79	

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 15: Quartile Breakpoints of Fixed Income Funds</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>1-YEAR</b>			
Government Long Funds	-2.07	-1.47	-0.92
Government Intermediate Funds	-1.67	-1.26	-0.70
Government Short Funds	-0.40	-0.06	0.25
Investment-Grade Long Funds	0.64	1.82	3.28
Investment-Grade Intermediate Funds	-0.14	0.67	1.36
Investment-Grade Short Funds	0.68	1.03	1.80
High Yield Funds	9.14	10.84	12.28
Mortgage-Backed Securities Funds	-0.64	-0.09	0.81
Global Income Funds	-0.31	1.47	4.67
Emerging Markets Debt Funds	5.81	7.46	8.85
General Municipal Debt Funds	-1.26	-0.97	-0.67
California Municipal Debt Funds	-1.53	-1.26	-0.92
New York Municipal Debt Funds	-1.22	-0.86	-0.68
Loan Participation Funds	5.32	6.26	7.59
<b>3-YEAR</b>			
Government Long Funds	1.04	1.57	1.92
Government Intermediate Funds	0.68	0.87	1.44
Government Short Funds	0.34	0.56	0.76
Investment-Grade Long Funds	2.20	2.75	3.29
Investment-Grade Intermediate Funds	1.45	2.00	2.45
Investment-Grade Short Funds	0.64	0.99	1.24
High Yield Funds	2.56	3.26	3.95
Mortgage-Backed Securities Funds	1.58	1.91	2.34
Global Income Funds	-0.82	0.37	1.90
Emerging Markets Debt Funds	1.22	2.91	3.89
General Municipal Debt Funds	2.85	3.26	3.59
California Municipal Debt Funds	3.41	3.83	4.24
New York Municipal Debt Funds	3.22	3.48	3.83
Loan Participation Funds	2.37	2.73	3.17
<b>5-YEAR</b>			
Government Long Funds	0.45	0.98	1.36
Government Intermediate Funds	0.59	0.69	0.99
Government Short Funds	0.11	0.46	0.62
Investment-Grade Long Funds	2.30	3.04	3.88
Investment-Grade Intermediate Funds	1.66	2.32	2.90
Investment-Grade Short Funds	1.03	1.22	1.65
High Yield Funds	5.23	5.83	6.40
Mortgage-Backed Securities Funds	1.33	1.71	2.21
Global Income Funds	0.35	1.62	3.14
Emerging Markets Debt Funds	0.27	3.25	4.76
General Municipal Debt Funds	2.74	3.28	3.68
California Municipal Debt Funds	3.58	3.87	4.23
New York Municipal Debt Funds	2.86	3.17	3.44
Loan Participation Funds	3.57	3.94	4.38

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Report 15: Quartile Breakpoints of Fixed Income Funds (cont.)</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>10-YEAR</b>			
Government Long Funds	3.17	3.72	4.74
Government Intermediate Funds	2.71	3.06	3.42
Government Short Funds	1.36	1.84	2.28
Investment-Grade Long Funds	3.76	4.62	5.36
Investment-Grade Intermediate Funds	3.68	4.40	4.83
Investment-Grade Short Funds	1.69	2.33	2.65
High Yield Funds	5.53	6.04	6.57
Mortgage-Backed Securities Funds	3.62	3.84	4.34
Global Income Funds	2.74	3.65	4.78
Emerging Markets Debt Funds	6.02	6.54	7.21
General Municipal Debt Funds	3.75	4.27	4.48
California Municipal Debt Funds	4.33	4.50	4.72
New York Municipal Debt Funds	3.91	4.17	4.38
Loan Participation Funds	-	-	-
<b>15-YEAR</b>			
Government Long Funds	3.32	3.70	4.86
Government Intermediate Funds	2.64	3.06	3.69
Government Short Funds	1.78	1.95	2.25
Investment-Grade Long Funds	3.97	4.46	5.17
Investment-Grade Intermediate Funds	3.41	4.07	4.75
Investment-Grade Short Funds	2.29	2.63	2.98
High Yield Funds	6.95	7.39	7.74
Mortgage-Backed Securities Funds	3.41	3.75	4.20
Global Income Funds	4.03	4.61	5.60
Emerging Markets Debt Funds	8.83	9.46	9.85
General Municipal Debt Funds	3.90	4.19	4.50
California Municipal Debt Funds	4.39	4.49	4.72
New York Municipal Debt Funds	3.95	4.19	4.45
Loan Participation Funds	-	-	-

Source: S&P Dow Jones Indices LLC, CRSP. Data as of June 30, 2017. 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.

<b>Exhibit 1: U.S. Equity Category Mappings</b>	
<b>SPIVA CATEGORY</b>	<b>LIPPER FUND CLASSIFICATION</b>
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.

<b>Exhibit 2: Global Equity Category Mappings</b>	
<b>SPIVA CATEGORY</b>	<b>LIPPER FUND CLASSIFICATION</b>
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 Markets 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).

<b>Exhibit 3: Fixed Income Category Mappings</b>	
<b>SPIVA CATEGORY</b>	<b>LIPPER FUND CLASSIFICATION</b>
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  $p^{\text{th}}$  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 75<sup>th</sup> percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50<sup>th</sup> percentile and the third quartile is the 25<sup>th</sup> 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.

## Indices<sup>1</sup>

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.

<sup>1</sup> For more information on S&P Dow Jones Indices, please visit [www.spindices.com](http://www.spindices.com).

## 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.

## 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 market participants.

## Fixed Income<sup>2</sup>

### 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.

### 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.

<sup>2</sup> Barclays Capital Fixed Income Indices were formerly the Lehman Brothers Indices.

**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.

<b>S&amp;P DJI RESEARCH CONTRIBUTORS</b>		
Charles Mounts	Global Head	<a href="mailto:charles.mounts@spglobal.com">charles.mounts@spglobal.com</a>
Jake Vukelic	Business Manager	<a href="mailto:jake.vukelic@spglobal.com">jake.vukelic@spglobal.com</a>
<b>GLOBAL RESEARCH &amp; DESIGN</b>		
<b>AMERICAS</b>		
Aye M. Soe, CFA	Americas Head	<a href="mailto:aye.soe@spglobal.com">aye.soe@spglobal.com</a>
Dennis Badlyans	Associate Director	<a href="mailto:dennis.badlyans@spglobal.com">dennis.badlyans@spglobal.com</a>
Phillip Brzenk, CFA	Director	<a href="mailto:phillip.brzenk@spglobal.com">phillip.brzenk@spglobal.com</a>
Smita Chirputkar	Director	<a href="mailto:smita.chirputkar@spglobal.com">smita.chirputkar@spglobal.com</a>
Rachel Du	Senior Analyst	<a href="mailto:rachel.du@spglobal.com">rachel.du@spglobal.com</a>
Bill Hao	Director	<a href="mailto:wenli.hao@spglobal.com">wenli.hao@spglobal.com</a>
Qing Li	Associate Director	<a href="mailto:qing.li@spglobal.com">qing.li@spglobal.com</a>
Berlinda Liu, CFA	Director	<a href="mailto:berlinda.liu@spglobal.com">berlinda.liu@spglobal.com</a>
Ryan Poirier, FRM	Senior Analyst	<a href="mailto:ryan.poirier@spglobal.com">ryan.poirier@spglobal.com</a>
Maria Sanchez	Associate Director	<a href="mailto:maria.sanchez@spglobal.com">maria.sanchez@spglobal.com</a>
Kelly Tang, CFA	Director	<a href="mailto:kelly.tang@spglobal.com">kelly.tang@spglobal.com</a>
Peter Tsui	Director	<a href="mailto:peter.tsui@spglobal.com">peter.tsui@spglobal.com</a>
Hong Xie, CFA	Director	<a href="mailto:hong.xie@spglobal.com">hong.xie@spglobal.com</a>
<b>APAC</b>		
Priscilla Luk	APAC Head	<a href="mailto:priscilla.luk@spglobal.com">priscilla.luk@spglobal.com</a>
Utkarsh Agrawal, CFA	Associate Director	<a href="mailto:utkarsh.agrawal@spglobal.com">utkarsh.agrawal@spglobal.com</a>
Liyu Zeng, CFA	Director	<a href="mailto:liyu.zeng@spglobal.com">liyu.zeng@spglobal.com</a>
Akash Jain	Associate Director	<a href="mailto:akash.jain@spglobal.com">akash.jain@spglobal.com</a>
<b>EMEA</b>		
Sunjiv Mainie, CFA, CQF	EMEA Head	<a href="mailto:sunjiv.mainie@spglobal.com">sunjiv.mainie@spglobal.com</a>
Leonardo Cabrer	Senior Analyst	<a href="mailto:leonardo.cabrer@spglobal.com">leonardo.cabrer@spglobal.com</a>
Andrew Innes	Associate Director	<a href="mailto:andrew.innes@spglobal.com">andrew.innes@spglobal.com</a>
<b>INDEX INVESTMENT STRATEGY</b>		
Craig J. Lazzara, CFA	Global Head	<a href="mailto:craig.lazzara@spglobal.com">craig.lazzara@spglobal.com</a>
Fei Mei Chan	Director	<a href="mailto:feimei.chan@spglobal.com">feimei.chan@spglobal.com</a>
Tim Edwards, PhD	Senior Director	<a href="mailto:tim.edwards@spglobal.com">tim.edwards@spglobal.com</a>
Anu R. Ganti, CFA	Director	<a href="mailto:anu.ganti@spglobal.com">anu.ganti@spglobal.com</a>
Hamish Preston	Senior Associate	<a href="mailto:hamish.preston@spglobal.com">hamish.preston@spglobal.com</a>
Howard Silverblatt	Senior Index Analyst	<a href="mailto:howard.silverblatt@spglobal.com">howard.silverblatt@spglobal.com</a>

## GENERAL DISCLAIMER

Copyright © 2017 by S&P Dow Jones Indices LLC, a part of S&P Global. All rights reserved. Standard & Poor's®, S&P 500® and S&P® are registered trademarks of Standard & Poor's Financial Services LLC ("S&P"), a subsidiary of S&P Global. Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC ("Dow Jones"). Trademarks have been licensed to S&P Dow Jones Indices LLC. Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, Dow Jones, S&P or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. All information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties. Past performance of an index is not a guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Dow Jones Indices keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Dow Jones Indices may have information that is not available to other business units. S&P Dow Jones Indices has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.