

## SPIVA<sup>®</sup> Institutional Scorecard

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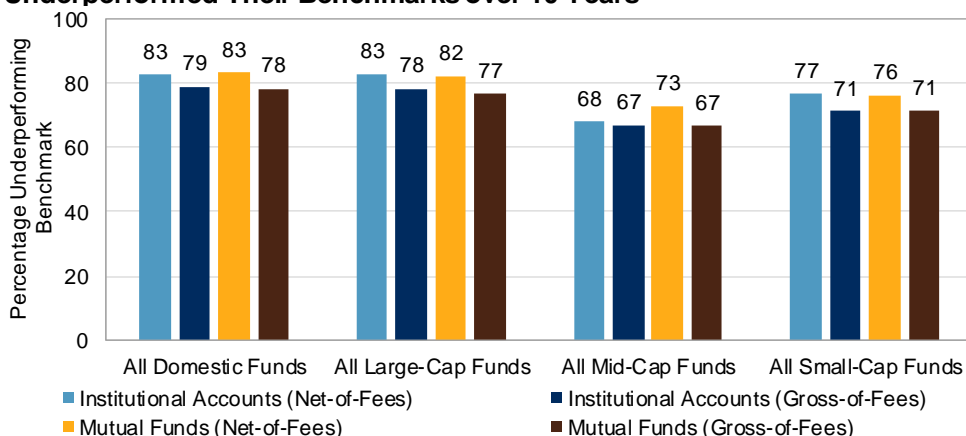
[Experience](#) the active vs. passive debate on a global scale.

### SUMMARY

In this report, we add institutional accounts to the mutual funds analyzed in the [S&P Indices versus Active \(SPIVA\) U.S. Scorecard](#). We aim to provide the institutional community with the ability to judge managers' true skills without the possible distortions that fees may create on performance comparisons. We also examine the impact of fees on both account types. By comparing retail mutual funds and institutional accounts on a gross-of-fees basis against their respective benchmarks, we eliminate the possibility that fees are the sole contributor to a given manager's underperformance.

Overall, underperformance among institutional equity accounts was not meaningfully different from that reported for mutual funds. For example, **78% of large-cap institutional accounts and 77% of large-cap mutual fund managers underperformed the S&P 500<sup>®</sup> on a gross-of-fees basis over the past 10 years.** Net-of-fees, of course, results were even worse, with an additional 5% of large-cap institutional and mutual fund managers underperforming the benchmark (see Exhibit 1).

**Exhibit 1: Similar Percentages of Institutional Accounts and Mutual Funds Underperformed Their Benchmarks over 10 Years**



Source: S&P Dow Jones Indices LLC, eVestment Alliance, CRSP. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Institutional accounts had a better chance than their mutual fund counterparts of outperforming their benchmarks (gross-of-fees) in 12 of the 17 domestic equity fund categories tracked. Nonetheless, **the majority of institutional accounts across all equity fund categories underperformed over the 10-year period, ranging from a high of 85% of multi-cap core funds to a low of 50% of mid-cap growth funds** (see Report 1).

The volatility in financial markets in 2020 provided ample opportunity for fund managers to show their stock-picking skills. Growth managers in particular were well positioned to benefit from the accelerated lifestyle changes as a result of the pandemic. A stellar 86% of small-cap growth and mid-cap growth institutional funds were able to beat the [S&P MidCap 400® Growth](#) and [S&P SmallCap 600® Growth](#), respectively, in 2021. A less impressive 53% of large-cap growth funds beat the [S&P 500 Growth](#). However, the longer-term statistics remained sobering, as just 23%, 50%, and 43% of large-, mid-, and small-cap growth funds, respectively, were able to stay ahead of their benchmarks for the 10-year horizon. This might be explained by the remarkable outperformance of the S&P 500 Growth (33.5%) over the S&P MidCap 400 Growth (22.8%) and the S&P SmallCap 600 Growth (19.6%) in 2020. Tilting toward larger-cap stocks no longer helped these active funds when the performance gap narrowed over longer time periods (see Report 1).

The story was broadly similar for value fund managers. Although value indices continued to trail growth indices as they did for much of the previous decade, value managers joined the 2020 outperformance party: 71%, 54%, and 66% of large-cap, mid-cap, and small-cap value funds beat their benchmarks, respectively. The 10-year tale was somewhat less celebratory, as just 38%, 39%, and 29% managed the feat over the longer period (see Report 1).

International funds were a notable exception to 2020's equity exuberance. In all four categories across all four time periods analyzed, the majority of funds fell short of their benchmarks (see Report 6).

Fixed income results were mixed, as a majority of funds in 8 of the 17 categories underperformed their benchmarks over the 1- and 10-year horizons (see Report 11).

As a fourth round of quantitative easing took place in the U.S., lower interest rates and a rush to the suburbs soon followed, buoying home prices (and prompting refinancings). MBS funds took full advantage, as 75% beat the Bloomberg Barclays U.S. MBS Index in 2020, the best of any fixed income category. A respectable 62% also did so over the previous 10 years (see Report 11).

Government funds did not come along for the fixed income ride. While the Bloomberg Barclays U.S. Government Index posted a healthy 7.94% return in 2020, actively managed government funds only squeezed out a 6.69% return on an equal-weighted basis and 5.71% on an asset-weighted basis. This led to a worst-in-class 24% of active managers that managed to surpass their benchmarks in 2020, while a woeful 11% did so over the previous 10 years (see Reports 11, 13, and 14).

Among mutual funds, active international equity managers showed greater differences between the gross- and net-of-fees relative performance figures than did their domestic fund peers. No such notable difference between categories was observed among institutional accounts (see Exhibits 2 and 3).

For fixed income funds, relative performance chances suffered the greatest impact from fees in the emerging markets debt space. While 37% of institutional emerging markets hard currency funds failed to clear the benchmark over the past 10 years, gross-of-fees, 100% failed to do so net-of-fees (see Exhibit 5).

## ABOUT THE SPIVA INSTITUTIONAL SCORECARD

Fees play a major role in the active versus passive debate. After subtracting fees, returns from active management tend to be less than those from passive management, as the latter costs less.<sup>1</sup> Within active management, it is widely understood and has been documented that fees can vary meaningfully depending on the type of investor.<sup>2</sup> Retail investors typically pay higher advisory and management fees than institutional investors.<sup>3</sup> Institutional investors have the option to negotiate fees directly with asset managers based on the size of the mandate and how many strategies may already exist with one manager. Retail investors lack such bargaining power.

**S&P Dow Jones Indices has been publishing the SPIVA U.S. Scorecard since 2002.** The scorecard measures the performance of actively managed equity funds investing in domestic and international equity, as well as fixed income funds, against their respective benchmarks. The University of Chicago's Center for Research in Security Prices (CRSP) Survivor-Bias-Free US Mutual Fund Database serves as the underlying data source for the scorecard. As the CRSP database consists of publicly traded open-ended mutual funds, the fee structure primarily reflects retail products rather than institutional accounts.

This report attempts to answer three questions that are pertinent to the active versus passive debate.

1. When measured on a net- and gross-of-fees basis, do institutional asset managers outperform their respective benchmarks?
2. Similarly, do mutual funds outperform their respective benchmarks when measured on a net- and gross-of-fees basis?
3. For particular asset classes and sub-asset classes, do institutional managers fare better than their retail fund counterparts when measured on a gross-of-fees basis?

To answer these questions, **we report the relative performance of U.S. equity and fixed income asset managers** for institutional accounts<sup>4</sup> using composite returns from eVestment Alliance,<sup>5</sup> a provider of investment data and analytics for the institutional asset management industry. It should be noted that, unlike the publicly traded mutual fund performance data, the data from eVestment relies on self-reporting by managers. Since our study shows that there are more funds reporting gross returns than net returns, there may be times when net-of-fees returns are higher than gross-of-fees returns. This is because of differences in the fund universes used for performance comparisons on a gross- and net-of-fees basis. Relative performance for retail funds on a gross-of-fees basis is computed by adding back the annual expense ratio to the net-of-fees returns. Appendix A contains detailed mapping of various investment strategies to their groups.

<sup>1</sup> Sharpe, William F., "[The Arithmetic of Active Management](#)," *Financial Analysts Journal*, January/February 1991, Volume 47 Issue 1. "Properly measured, the average actively managed dollar must underperform the average passively managed dollar, net of costs."

<sup>2</sup> For example, research by the Investment Company Institute in "[Mutual Funds and Institutional Accounts: A Comparison](#)," (2006) showed that the average mutual fund advisory fee for large-cap domestic equity funds is around 70 bps, whereas the same category for a separate institutional account averages 53 bps. Similarly, the average mutual fund advisory fee for a domestic fixed income fund ranges around 48 bps, while that for a separate institutional account is 30 bps.

<sup>3</sup> Fee differentials between mutual funds and separate accounts may stem from a number of factors. It is beyond the scope of our paper to cover those factors. For a more detailed write up on the key differences between the two structures, please refer to the Investment Company Institute's "[Mutual Funds and Institutional Accounts: A Comparison](#)," (2006).

<sup>4</sup> Institutional accounts include institutional separately managed accounts and commingled trusts.

<sup>5</sup> Composite returns can be measured as the equal-weighted or asset-weighted averages of the returns of all individual constituent portfolios, depending on the manager's discretion.

In addition, **we compare the relative performance of open-ended mutual funds, using net- and gross-of-fees returns, against similar peer groupings composed of institutional accounts.** We report the figures for domestic equity, international equity, and fixed income categories.

By producing this report, we aim to provide the institutional community with the ability to judge managers' true skills without the possible distortions that fees may create on performance comparisons. Including mutual funds—on both net- and gross-of-fees performance bases—with institutional accounts also allows readers to see if fees make any meaningful difference in a particular asset class for a certain type of market participant.

This report also aims to address the notion that benchmarks are not directly investable and do not incur costs, thereby making any performance comparison of active funds against their benchmarks not “apples-to-apples.” **By comparing retail mutual funds and institutional accounts on a gross-of-fees basis against their respective benchmarks, we eliminate any possibility that fees are the sole contributor to a given manager's underperformance.**

**This report is organized as follows:** In Section I, we highlight the relative performance of retail funds and institutional accounts against their respective benchmarks for the equity and fixed income categories. Section II replicates the headline SPIVA U.S. Scorecard using only institutional accounts, detailing related metrics such as survivorship, asset-weighted versus equal-weighted performance figures, and quartile breakpoints.

## SECTION I: PERCENTAGE OF MUTUAL FUNDS AND INSTITUTIONAL ACCOUNTS UNDERPERFORMING THEIR BENCHMARKS

### Equity – Institutional Accounts

Institutional account data rely on self-reporting by active managers and, typically, fewer institutional managers report net-of-fees returns compared with gross-of-fees returns. Although the underlying universes of institutional accounts differ on a net- and gross-of-fees basis, **overall findings suggest that U.S. equities pose meaningful challenges for active managers to overcome.** Exhibit 2 shows that the majority of domestically focused institutional equity managers lagged in each category.

**We find similar challenges for institutional equity managers focused on the non-U.S. equity space.** Only international small-cap funds, gross-of-fees, were able to outperform over the 10-year horizon. **Unsurprisingly, relative performance among institutional equity managers was always worse on a net-of-fees return basis.**

CATEGORY	BENCHMARK	INSTITUTIONAL ACCOUNTS (%)		NO. OF FUNDS AT START	
		NET-OF-FEES	GROSS-OF-FEES	NET-OF-FEES	GROSS-OF-FEES
All Domestic Funds	S&P Composite 1500 <sup>®</sup>	82.65	78.99	2472	3251
All Large-Cap Funds	S&P 500	82.75	78.40	1026	1412
All Mid-Cap Funds	S&P MidCap 400	67.87	66.84	305	374
All Small-Cap Funds	S&P SmallCap 600	76.72	71.15	816	1040
All Multi-Cap Funds	S&P Composite 1500	83.08	79.76	325	425
Large-Cap Growth Funds	S&P 500 Growth	86.46	76.65	362	454
Large-Cap Core Funds	S&P 500	93.14	80.68	277	440
Large-Cap Value Funds	S&P 500 Value	73.13	62.36	387	518
Mid-Cap Growth Funds	S&P MidCap 400 Growth	47.01	50.00	134	154
Mid-Cap Core Funds	S&P MidCap 400	78.69	71.95	61	82
Mid-Cap Value Funds	S&P MidCap 400 Value	74.55	60.87	110	138
Small-Cap Growth Funds	S&P SmallCap 600 Growth	63.61	56.84	305	373
Small-Cap Core Funds	S&P SmallCap 600	78.11	70.40	169	250
Small-Cap Value Funds	S&P SmallCap 600 Value	85.38	71.22	342	417
Multi-Cap Growth Funds	S&P Composite 1500 Growth	77.88	76.12	104	134
Multi-Cap Core Funds	S&P Composite 1500	89.01	84.96	91	133
Multi-Cap Value Funds	S&P Composite 1500 Value	71.54	70.89	130	158
Emerging Market Funds	S&P/IFCI Composite	69.29	59.85	127	264
Global Funds	S&P Global 1200	76.23	71.57	122	299
International Funds	S&P International 700	75.00	66.51	100	218
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	62.50	52.17	32	69

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## Equity – Mutual Funds

Mutual fund analysis is based on CRSP data, so the same fund universe is used for net-of-fees and gross-of-fees comparisons. Exhibit 3 shows that **the majority of active U.S. equity mutual funds underperformed their benchmarks over the 10-year period, even before accounting for fees.** This underperformance included those areas that are perceived to be more suited to active management, such as emerging markets and international small caps. In other words, **Exhibit 3 highlights how challenging it can be to outperform benchmarks, especially over longer horizons.**

**Exhibit 3: Equity – Percentage of Mutual Funds Underperforming over 10 Years**

CATEGORY	BENCHMARK	MUTUAL FUNDS (%)		NO. OF FUNDS AT START	
		NET-OF-FEES	GROSS-OF-FEES	NET-OF-FEES	GROSS-OF-FEES
All Domestic Funds	S&P Composite 1500	83.22	78.36	2634	2634
All Large-Cap Funds	S&P 500	82.32	76.72	1001	1001
All Mid-Cap Funds	S&P MidCap 400	72.80	66.75	397	397
All Small-Cap Funds	S&P SmallCap 600	76.31	71.43	553	553
All Multi-Cap Funds	S&P Composite 1500	86.57	82.04	685	685
Large-Cap Growth Funds	S&P 500 Growth	81.31	71.51	337	337
Large-Cap Core Funds	S&P 500	94.47	85.26	380	380
Large-Cap Value Funds	S&P 500 Value	85.96	77.89	285	285
Mid-Cap Growth Funds	S&P MidCap 400 Growth	56.74	53.37	178	178
Mid-Cap Core Funds	S&P MidCap 400	84.31	78.43	153	153
Mid-Cap Value Funds	S&P MidCap 400 Value	87.88	74.24	66	66
Small-Cap Growth Funds	S&P SmallCap 600 Growth	56.78	49.25	199	199
Small-Cap Core Funds	S&P SmallCap 600	90.35	83.78	259	259
Small-Cap Value Funds	S&P SmallCap 600 Value	96.88	85.42	96	96
Multi-Cap Growth Funds	S&P Composite 1500 Growth	87.76	81.12	196	196
Multi-Cap Core Funds	S&P Composite 1500	92.88	87.95	365	365
Multi-Cap Value Funds	S&P Composite 1500 Value	86.29	79.84	124	124
Emerging Market Funds	S&P/IFCI Composite	71.43	57.89	133	133
Global Funds	S&P Global 1200	82.63	72.46	167	167
International Funds	S&P International 700	79.51	60.07	288	288
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	62.22	44.44	45	45

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## Fixed Income – Mutual Funds

For fixed income, we present the performance of retail funds separately from institutional accounts due to classification nuances. Our source for mutual fund data, the CRSP Survivor-Bias-Free US Mutual Funds Database, adopted style and objective codes from the Lipper objective codes after 1998. Lipper objective codes classify funds by sector, maturity, and credit quality. Our source for institutional SMA data, the eVestment Universe, groups fixed income strategies mostly by sector.

While it is reasonably straightforward to map sector funds between CRSP and eVestment, a degree of subjectivity is required in mapping them for composites and composites with various maturity slices. In some sectors, such as government and investment grade, it is challenging to make a direct comparison between the performance of mutual funds and institutional accounts due to maturity slices.

**Exhibit 4: Fixed Income – Percentage of Mutual Fund Managers Underperforming over 10 Years**

CATEGORY	BENCHMARK	MUTUAL FUND (%)		NO. OF FUNDS AT START	
		NET-OF-FEES	GROSS-OF-FEES	NET-OF-FEES	GROSS-OF-FEES
Government Long Funds	Bloomberg Barclays Long Government Bond Index	98.73	96.20	79	79
Government Intermediate Funds	Bloomberg Barclays Intermediate Government Bond Index	81.82	66.67	33	33
Government Short Funds	Bloomberg Barclays 1-3 Year Government Bond Index	75.00	40.63	32	32
Investment-Grade Long Funds	Bloomberg Barclays Long Government/Credit Bond Index	98.37	96.75	123	123
Investment-Grade Intermediate Funds	Bloomberg Barclays Intermediate Government/Credit Bond Index	50.20	41.63	245	245
Investment-Grade Short Funds	Bloomberg Barclays 1-3 Year US Government/Credit Bond Index	43.33	21.67	60	60
High-Yield Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	97.22	81.67	180	180
Mortgage-Backed Securities Funds	Bloomberg Barclays U.S. MBS Index	72.73	38.18	55	55
Global Income Funds	Bloomberg Barclays Global Aggregate Bond Index	63.33	47.78	90	90
Emerging Markets Debt Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	100.00	69.23	26	26
General Municipal Debt Funds	S&P National AMT-Free Municipal Bond Index	48.05	31.17	77	77
California Municipal Debt Funds	S&P California AMT-Free Municipal Bond Index	44.44	22.22	36	36
New York Municipal Debt Funds	S&P New York AMT-Free Municipal Bond Index	62.50	25.00	32	32
Loan Participation Funds	S&P/LSTA U.S. Leveraged Loan 100 Index	96.00	20.00	25	25

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## Fixed Income – Institutional Accounts

We report only gross-of-fees returns for institutional fixed income funds in the global corporate categories since fewer than five funds posted a complete history of net returns and assets under management over the past 10 years.

**Exhibit 5: Fixed Income – Percentage of Institutional Managers Underperforming over 10 Years**

CATEGORY	BENCHMARK	INSTITUTIONAL ACCOUNTS (%)		NO. OF FUNDS AT START	
		NET-OF-FEES	GROSS-OF-FEES	NET-OF-FEES	GROSS-OF-FEES
U.S. Agg. / (Gov't + Credit) Funds	Bloomberg Barclays U.S. Aggregate Index	64.08	60.46	348	956
Core Funds	Bloomberg Barclays U.S. Aggregate Index	74.32	67.14	296	770
Core Plus Funds	Bloomberg Barclays U.S. Aggregate Index	35.71	33.51	112	194
Cash Funds	Bloomberg Barclays U.S. Short Treasury Index	58.33	38.55	60	166
Government Funds	Bloomberg Barclays U.S. Government Index	84.21	80.90	38	89
Inflation-Linked Funds	Bloomberg Barclays U.S. Treasury Inflation Notes Index	91.30	67.69	23	65
Investment-Grade Corp Funds	Bloomberg Barclays U.S. Corporate Index	54.84	44.79	31	96
High-Yield Corp Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	92.31	62.82	78	156
Agency MBS Funds	Bloomberg Barclays U.S. MBS Index	61.90	38.10	21	63
Municipal Funds	S&P National AMT-Free Municipal Bond Index	69.72	70.87	109	254
Emerging Market Hard Currency Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	100.00	37.04	11	27
Emerging Market Blended Currency Funds	50% Barclays EM USD Agg + 50% Barclays EM Local Gov	66.67	36.36	12	11
Emerging Market Local Currency Funds	Bloomberg Barclays Emerging Markets Local Currency Government Index	100.00	100.00	11	21
Global Government Funds	Bloomberg Barclays Global Treasury Index	50.00	54.55	8	11
Global Aggregate Funds	Bloomberg Barclays Global Aggregate Bond Index	57.89	37.04	19	27
Global Corporate Investment Grade Funds	Bloomberg Barclays Global Aggregate Corporate Index	-	33.33	2	6
Global Corporate High-Yield Funds	Bloomberg Barclays Global High Yield Index	-	30.00	4	10

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



## SECTION II: INSTITUTIONAL ACCOUNTS – SPIVA U.S. SCORECARD (GROSS-OF-FEES)

### Report 1: Percentage of U.S. Equity Funds Underperforming Benchmarks

FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
All Domestic Funds	S&P Composite 1500	56.99	65.95	71.30	78.99
All Large-Cap Funds	S&P 500	59.13	65.83	71.60	78.40
All Mid-Cap Funds	S&P MidCap 400	49.22	49.66	59.57	66.84
All Small-Cap Funds	S&P SmallCap 600	42.93	50.65	60.12	71.15
All Multi-Cap Funds	S&P Composite 1500	52.23	60.81	71.19	79.76
Large-Cap Growth Funds	S&P 500 Growth	47.28	49.85	59.62	76.65
Large-Cap Core Funds	S&P 500	59.87	68.83	75.06	80.68
Large-Cap Value Funds	S&P 500 Value	29.28	54.65	59.22	62.36
Mid-Cap Growth Funds	S&P MidCap 400 Growth	14.02	18.64	34.78	50.00
Mid-Cap Core Funds	S&P MidCap 400	53.19	49.15	62.12	71.95
Mid-Cap Value Funds	S&P MidCap 400 Value	46.08	54.62	68.00	60.87
Small-Cap Growth Funds	S&P SmallCap 600 Growth	14.07	23.00	37.50	56.84
Small-Cap Core Funds	S&P SmallCap 600	31.28	43.27	58.61	70.40
Small-Cap Value Funds	S&P SmallCap 600 Value	34.33	47.70	65.53	71.22
Multi-Cap Growth Funds	S&P Composite 1500 Growth	47.57	49.53	58.06	76.12
Multi-Cap Core Funds	S&P Composite 1500	42.31	56.78	74.60	84.96
Multi-Cap Value Funds	S&P Composite 1500 Value	29.23	53.10	58.90	70.89

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

### Report 2: Survivorship of U.S. Equity Funds

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
<b>1-YEAR</b>		
All Domestic Funds	2,469	96.60
All Large-Cap Funds	1,035	96.62
All Mid-Cap Funds	256	96.09
All Small-Cap Funds	841	96.91
All Multi-Cap Funds	337	96.14
Large-Cap Growth Funds	313	97.76
Large-Cap Core Funds	319	95.61
Large-Cap Value Funds	403	96.53
Mid-Cap Growth Funds	107	94.39
Mid-Cap Core Funds	47	93.62
Mid-Cap Value Funds	102	99.02
Small-Cap Growth Funds	263	95.44
Small-Cap Core Funds	211	97.16
Small-Cap Value Funds	367	97.82
Multi-Cap Growth Funds	103	97.09
Multi-Cap Core Funds	104	95.19
Multi-Cap Value Funds	130	96.15

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 2: Survivorship of U.S. Equity Funds (cont.)</b>		
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>
<b>3-YEAR</b>		
All Domestic Funds	2,752	84.41
All Large-Cap Funds	1,162	83.99
All Mid-Cap Funds	296	82.09
All Small-Cap Funds	924	85.39
All Multi-Cap Funds	370	85.14
Large-Cap Growth Funds	341	86.80
Large-Cap Core Funds	369	80.49
Large-Cap Value Funds	452	84.73
Mid-Cap Growth Funds	118	83.05
Mid-Cap Core Funds	59	74.58
Mid-Cap Value Funds	119	84.87
Small-Cap Growth Funds	287	85.02
Small-Cap Core Funds	245	82.04
Small-Cap Value Funds	392	87.76
Multi-Cap Growth Funds	107	91.59
Multi-Cap Core Funds	118	79.66
Multi-Cap Value Funds	145	84.83
<b>5-YEAR</b>		
All Domestic Funds	2,965	73.05
All Large-Cap Funds	1,250	72.96
All Mid-Cap Funds	329	71.12
All Small-Cap Funds	973	74.51
All Multi-Cap Funds	413	71.43
Large-Cap Growth Funds	369	74.80
Large-Cap Core Funds	393	68.96
Large-Cap Value Funds	488	74.80
Mid-Cap Growth Funds	138	68.84
Mid-Cap Core Funds	66	62.12
Mid-Cap Value Funds	125	78.40
Small-Cap Growth Funds	320	70.63
Small-Cap Core Funds	244	70.08
Small-Cap Value Funds	409	80.20
Multi-Cap Growth Funds	124	75.81
Multi-Cap Core Funds	126	66.67
Multi-Cap Value Funds	163	71.78

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 2: Survivorship of U.S. Equity Funds (cont.)</b>		
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>
<b>10-YEAR</b>		
All Domestic Funds	3,251	55.31
All Large-Cap Funds	1,412	53.54
All Mid-Cap Funds	374	53.21
All Small-Cap Funds	1,040	58.08
All Multi-Cap Funds	425	56.24
Large-Cap Growth Funds	454	53.96
Large-Cap Core Funds	440	45.68
Large-Cap Value Funds	518	59.85
Mid-Cap Growth Funds	154	51.95
Mid-Cap Core Funds	82	40.24
Mid-Cap Value Funds	138	62.32
Small-Cap Growth Funds	373	51.47
Small-Cap Core Funds	250	53.20
Small-Cap Value Funds	417	66.91
Multi-Cap Growth Funds	134	61.19
Multi-Cap Core Funds	133	47.37
Multi-Cap Value Funds	158	59.49

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 3: Average U.S. Equity Fund Performance (Equal-Weighted)</b>				
<b>CATEGORY</b>	<b>1-YEAR (%)</b>	<b>3-YEAR (ANNUALIZED, %)</b>	<b>5-YEAR (ANNUALIZED, %)</b>	<b>10-YEAR (ANNUALIZED, %)</b>
S&P Composite 1500	17.92	13.63	14.97	13.67
All Domestic Funds	18.90	12.38	14.02	12.57
S&P 500	18.40	14.18	15.22	13.88
All Large-Cap Funds	17.38	13.10	14.24	13.10
S&P MidCap 400	13.66	8.45	12.35	11.51
All Mid-Cap Funds	20.42	12.73	14.04	12.36
S&P SmallCap 600	11.29	7.74	12.37	11.92
All Small-Cap Funds	19.72	11.09	13.69	12.02
S&P Composite 1500	17.92	13.63	14.97	13.67
All Multi-Cap Funds	19.63	12.92	14.10	12.46
<b>LARGE-CAP</b>				
S&P 500 Growth	33.47	20.51	18.98	16.49
Large-Cap Growth Funds	33.91	20.84	18.89	15.77
S&P 500	18.40	14.18	15.22	13.88
Large-Cap Core Funds	16.42	12.89	14.06	13.04
S&P 500 Value	1.36	6.78	10.52	10.74
Large-Cap Value Funds	6.36	7.49	10.84	11.07

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 3: Average U.S. Equity Fund Performance (Equal-Weighted) (cont.)</b>				
<b>CATEGORY</b>	<b>1-YEAR (%)</b>	<b>3-YEAR (ANNUALIZED, %)</b>	<b>5-YEAR (ANNUALIZED, %)</b>	<b>10-YEAR (ANNUALIZED, %)</b>
<b>MID-CAP</b>				
S&P MidCap 400 Growth	22.77	11.60	13.86	12.47
Mid-Cap Growth Funds	38.52	21.13	18.68	14.67
S&P MidCap 400	13.66	8.45	12.35	11.51
Mid-Cap Core Funds	14.73	10.31	12.74	11.50
S&P MidCap 400 Value	3.73	4.85	10.37	10.28
Mid-Cap Value Funds	5.64	5.50	9.95	10.39
<b>SMALL-CAP</b>				
S&P SmallCap 600 Growth	19.60	11.60	14.28	13.43
Small-Cap Growth Funds	42.24	20.88	19.35	15.04
S&P SmallCap 600	11.29	7.74	12.37	11.92
Small-Cap Core Funds	17.31	10.07	12.98	11.88
S&P SmallCap 600 Value	2.53	3.71	10.31	10.34
Small-Cap Value Funds	6.87	4.96	10.12	9.90
<b>MULTI-CAP</b>				
S&P Composite 1500 Growth	32.43	19.70	18.54	16.14
Multi-Cap Growth Funds	37.19	21.26	19.18	15.42
S&P Composite 1500	17.92	13.63	14.97	13.67
Multi-Cap Core Funds	19.53	13.07	13.89	12.52
S&P Composite 1500 Value	1.60	6.57	10.52	10.70
Multi-Cap Value Funds	7.73	6.98	10.65	10.26

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 4: Average U.S. Equity Fund Performance (Asset-Weighted)</b>				
<b>CATEGORY</b>	<b>1-YEAR (%)</b>	<b>3-YEAR (ANNUALIZED, %)</b>	<b>5-YEAR (ANNUALIZED, %)</b>	<b>10-YEAR (ANNUALIZED, %)</b>
S&P Composite 1500	17.92	13.63	14.97	13.67
All Domestic Funds	21.21	14.09	14.91	13.15
S&P 500	18.40	14.18	15.22	13.88
All Large-Cap Funds	21.65	14.90	15.27	13.58
S&P MidCap 400	13.66	8.45	12.35	11.51
All Mid-Cap Funds	20.91	13.25	14.15	12.50
S&P SmallCap 600	11.29	7.74	12.37	11.92
All Small-Cap Funds	20.95	11.96	14.25	12.42
S&P Composite 1500	17.92	13.63	14.97	13.67
All Multi-Cap Funds	20.96	13.73	14.50	12.54

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 4: Average U.S. Equity Fund Performance (Asset-Weighted) (cont.)</b>				
<b>CATEGORY</b>	<b>1-YEAR (%)</b>	<b>3-YEAR (ANNUALIZED, %)</b>	<b>5-YEAR (ANNUALIZED, %)</b>	<b>10-YEAR (ANNUALIZED, %)</b>
<b>LARGE-CAP</b>				
S&P 500 Growth	33.47	20.51	18.98	16.49
Large-Cap Growth Funds	39.54	23.13	20.26	16.78
S&P 500	18.40	14.18	15.22	13.88
Large-Cap Core Funds	17.31	13.49	13.99	12.89
S&P 500 Value	1.36	6.78	10.52	10.74
Large-Cap Value Funds	5.80	7.38	10.98	11.02
<b>MID-CAP</b>				
S&P MidCap 400 Growth	22.77	11.60	13.86	12.47
Mid-Cap Growth Funds	38.18	22.04	19.05	14.76
S&P MidCap 400	13.66	8.45	12.35	11.51
Mid-Cap Core Funds	19.32	12.82	14.89	13.46
S&P MidCap 400 Value	3.73	4.85	10.37	10.28
Mid-Cap Value Funds	4.35	5.16	9.50	10.21
<b>SMALL-CAP</b>				
S&P SmallCap 600 Growth	19.60	11.60	14.28	13.43
Small-Cap Growth Funds	41.57	21.58	19.67	15.54
S&P SmallCap 600	11.29	7.74	12.37	11.92
Small-Cap Core Funds	15.97	9.91	13.13	12.17
S&P SmallCap 600 Value	2.53	3.71	10.31	10.34
Small-Cap Value Funds	6.47	4.57	9.87	9.47
<b>MULTI-CAP</b>				
S&P Composite 1500 Growth	32.43	19.70	18.54	16.14
Multi-Cap Growth Funds	36.17	20.35	18.27	14.94
S&P Composite 1500	17.92	13.63	14.97	13.67
Multi-Cap Core Funds	18.37	12.57	13.88	12.07
S&P Composite 1500 Value	1.60	6.57	10.52	10.70
Multi-Cap Value Funds	7.36	7.50	11.00	10.34

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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	6.77	15.84	29.87
All Large-Cap Funds	6.88	15.55	26.80
All Mid-Cap Funds	5.52	15.96	33.99
All Small-Cap Funds	6.71	15.49	31.92
All Multi-Cap Funds	8.14	18.25	29.50
Large-Cap Growth Funds	24.52	34.53	40.78
Large-Cap Core Funds	11.93	16.46	21.81
Large-Cap Value Funds	1.49	4.91	10.80
Mid-Cap Growth Funds	29.88	35.79	45.91
Mid-Cap Core Funds	10.11	14.21	18.76
Mid-Cap Value Funds	0.98	4.62	8.90
Small-Cap Growth Funds	29.63	40.32	55.10
Small-Cap Core Funds	10.83	16.80	23.14
Small-Cap Value Funds	1.74	6.46	11.91
Multi-Cap Growth Funds	23.93	34.68	45.66
Multi-Cap Core Funds	12.68	19.62	25.51
Multi-Cap Value Funds	2.49	8.14	14.28
<b>3-YEAR</b>			
All Domestic Funds	6.41	11.55	17.93
All Large-Cap Funds	7.63	12.60	18.04
All Mid-Cap Funds	5.74	11.61	20.79
All Small-Cap Funds	4.76	9.37	17.15
All Multi-Cap Funds	7.79	12.89	17.80
Large-Cap Growth Funds	17.41	21.65	24.80
Large-Cap Core Funds	10.91	13.46	15.65
Large-Cap Value Funds	5.08	7.16	9.88
Mid-Cap Growth Funds	18.19	21.71	24.60
Mid-Cap Core Funds	8.42	10.63	13.02
Mid-Cap Value Funds	3.53	5.29	7.93
Small-Cap Growth Funds	15.88	20.52	26.81
Small-Cap Core Funds	7.36	10.15	13.16
Small-Cap Value Funds	2.44	4.58	7.45
Multi-Cap Growth Funds	15.99	21.71	25.28
Multi-Cap Core Funds	10.38	13.82	16.27
Multi-Cap Value Funds	4.73	7.52	10.30

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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	10.51	13.66	17.42
All Large-Cap Funds	11.01	14.09	17.29
All Mid-Cap Funds	10.26	13.62	18.34
All Small-Cap Funds	9.71	12.90	17.22
All Multi-Cap Funds	10.87	13.97	17.35
Large-Cap Growth Funds	16.91	19.24	20.98
Large-Cap Core Funds	12.90	14.64	16.05
Large-Cap Value Funds	9.35	10.74	12.45
Mid-Cap Growth Funds	17.21	19.11	21.24
Mid-Cap Core Funds	11.08	13.15	15.27
Mid-Cap Value Funds	8.73	10.19	11.22
Small-Cap Growth Funds	15.87	19.13	22.92
Small-Cap Core Funds	11.21	13.22	14.91
Small-Cap Value Funds	8.45	9.83	11.82
Multi-Cap Growth Funds	15.25	19.64	21.82
Multi-Cap Core Funds	12.15	14.16	16.04
Multi-Cap Value Funds	9.21	11.14	12.73
<b>10-YEAR</b>			
All Domestic Funds	10.78	12.70	14.92
All Large-Cap Funds	11.42	13.21	15.23
All Mid-Cap Funds	10.85	12.63	15.17
All Small-Cap Funds	10.11	11.82	14.37
All Multi-Cap Funds	10.68	12.75	14.80
Large-Cap Growth Funds	14.67	16.28	17.17
Large-Cap Core Funds	12.79	13.71	14.39
Large-Cap Value Funds	10.22	11.23	12.35
Mid-Cap Growth Funds	14.21	15.51	16.44
Mid-Cap Core Funds	11.49	12.34	13.71
Mid-Cap Value Funds	9.85	10.75	11.50
Small-Cap Growth Funds	13.87	15.37	17.09
Small-Cap Core Funds	11.14	12.06	13.45
Small-Cap Value Funds	9.23	10.10	11.23
Multi-Cap Growth Funds	13.62	15.36	17.28
Multi-Cap Core Funds	11.26	13.16	14.19
Multi-Cap Value Funds	9.40	10.88	12.19

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 6: Percentage of International Equity Funds Underperforming Benchmarks**

FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
Emerging Market Funds	S&P/IFCI Composite	50.23	54.06	58.64	59.85
Global Funds	S&P Global 1200	50.14	60.32	69.62	71.57
International Funds	S&P International 700	65.03	70.77	79.23	66.51
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	67.42	64.21	70.00	52.17

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 7: Survivorship of International Equity Funds**

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
<b>1-YEAR</b>		
Emerging Market Funds	428	93.22
Global Funds	361	96.40
International Funds	183	96.17
International Small-Cap Funds	89	97.75
<b>3-YEAR</b>		
Emerging Market Funds	431	83.99
Global Funds	378	83.60
International Funds	195	84.62
International Small-Cap Funds	95	83.16
<b>5-YEAR</b>		
Emerging Market Funds	428	76.40
Global Funds	372	74.19
International Funds	207	74.88
International Small-Cap Funds	90	72.22
<b>10-YEAR</b>		
Emerging Market Funds	264	64.02
Global Funds	299	54.52
International Funds	218	55.50
International Small-Cap Funds	69	57.97

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

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

CATEGORY	1-YEAR (ANNUALIZED, %)	3-YEAR (ANNUALIZED, %)	5-YEAR (ANNUALIZED, %)	10-YEAR (ANNUALIZED, %)
S&P/IFCI Composite	17.62	6.01	12.72	4.20
Emerging Market Funds	18.02	6.69	13.06	4.80
S&P Global 1200	15.58	10.82	12.91	10.34
Global Funds	16.22	10.80	12.61	10.49
S&P International 700	11.21	6.02	9.60	6.12
International Funds	9.78	4.92	8.21	6.36
S&P Developed Ex-U.S. Small-Cap	14.27	5.14	9.81	7.64
International Small-Cap Funds	12.23	4.47	9.58	8.92

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



<b>Report 9: Average International 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>
S&P/IFCI Composite	17.62	6.01	12.72	4.20
Emerging Market Funds	19.77	7.49	13.80	4.77
S&P Global 1200	15.58	10.82	12.91	10.34
Global Funds	16.29	10.69	12.59	10.39
S&P International 700	11.21	6.02	9.60	6.12
International Funds	9.51	4.67	8.14	6.16
S&P Developed Ex-U.S. Small-Cap	14.27	5.14	9.81	7.64
International Small-Cap Funds	10.94	3.48	8.75	7.86

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 10: Quartile Breakpoints of International Equity Funds</b>			
<b>FUND CATEGORY</b>	<b>THIRD QUARTILE</b>	<b>SECOND QUARTILE</b>	<b>FIRST QUARTILE</b>
<b>1-YEAR</b>			
Emerging Market Funds	11.96	18.52	25.76
Global Funds	7.92	16.11	23.53
International Funds	4.58	8.20	14.99
International Small-Cap Funds	6.31	10.57	16.25
<b>3-YEAR</b>			
Emerging Market Funds	3.85	6.53	9.38
Global Funds	6.98	10.65	15.07
International Funds	2.00	4.05	7.55
International Small-Cap Funds	1.97	4.49	7.34
<b>5-YEAR</b>			
Emerging Market Funds	11.04	12.97	15.71
Global Funds	10.13	12.17	14.99
International Funds	6.26	7.94	10.03
International Small-Cap Funds	7.95	9.33	10.99
<b>10-YEAR</b>			
Emerging Market Funds	3.56	4.75	6.36
Global Funds	9.36	10.59	12.37
International Funds	5.64	6.56	7.51
International Small-Cap Funds	7.87	8.99	9.98

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 11: Percentage of Fixed Income Funds Underperforming 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>
U.S. Agg. / (Gov't + Credit) Funds	Bloomberg Barclays U.S. Aggregate Index	49.75	55.35	54.38	60.46
Core Funds	Bloomberg Barclays U.S. Aggregate Index	56.24	62.59	62.68	67.14
Core Plus Funds	Bloomberg Barclays U.S. Aggregate Index	28.27	30.20	24.75	33.51
Cash Funds	Bloomberg Barclays U.S. Short Treasury Index	33.33	26.49	22.37	38.55
Government Funds	Bloomberg Barclays U.S. Government Index	75.76	76.71	73.08	80.90
Inflation-Linked Funds	Bloomberg Barclays U.S. Treasury Inflation Notes Index	52.38	55.32	51.92	67.69
Investment-Grade Corp Funds	Bloomberg Barclays U.S. Corporate Index	41.59	46.34	43.80	44.79
High-Yield Corp Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	68.60	60.67	79.01	62.82
Agency MBS Funds	Bloomberg Barclays U.S. MBS Index	25.00	35.00	34.43	38.10
Municipal Funds	S&P National AMT-Free Municipal Bond Index	64.00	63.98	67.05	70.87
Emerging Market Hard Currency Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	26.32	54.29	28.95	37.04
Emerging Market Blended Currency Funds	50% Barclays EM USD Agg + 50% Barclays EM Local Gov	50.00	62.16	39.29	36.36
Emerging Market Local Currency Funds	Bloomberg Barclays Emerging Markets Local Currency Government Index	73.33	65.63	36.67	100.00
Global Government Funds	Bloomberg Barclays Global Treasury Index	66.67	56.25	52.94	54.55
Global Aggregate Funds	Bloomberg Barclays Global Aggregate Bond Index	37.93	38.71	33.33	37.04
Global Corporate Investment-Grade Funds	Bloomberg Barclays Global Aggregate Corporate Index	35.71	31.25	35.71	33.33
Global Corporate High-Yield Funds	Bloomberg Barclays Global High Yield Index	63.64	21.74	47.83	30.00

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 12: Survivorship of Fixed Income Funds</b>		
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>
<b>1-YEAR</b>		
U.S. Agg. / (Gov't + Credit) Funds	814	98.40
Core Funds	633	98.58
Core Plus Funds	191	97.38
Cash Funds	147	97.96
Government Funds	66	100.00
Inflation-Linked Funds	42	97.62
Investment-Grade Corp Funds	113	99.12
High-Yield Corp Funds	172	96.51
Agency MBS Funds	52	98.08
Municipal Funds	250	98.40
Emerging Market Hard Currency Funds	38	100.00
Emerging Market Blended Currency Funds	38	97.37
Emerging Market Local Currency Funds	30	100.00
Global Government Funds	15	100.00
Global Aggregate Funds	29	100.00
Global Corporate Investment-Grade Funds	14	100.00
Global Corporate High-Yield Funds	22	100.00
<b>3-YEAR</b>		
U.S. Agg. / (Gov't + Credit) Funds	878	89.41
Core Funds	687	89.52
Core Plus Funds	202	88.12
Cash Funds	151	92.72
Government Funds	73	89.04
Inflation-Linked Funds	47	85.11
Investment-Grade Corp Funds	123	86.99
High-Yield Corp Funds	178	91.57
Agency MBS Funds	60	83.33
Municipal Funds	261	92.72
Emerging Market Hard Currency Funds	35	100.00
Emerging Market Blended Currency Funds	37	91.89
Emerging Market Local Currency Funds	32	93.75
Global Government Funds	16	100.00
Global Aggregate Funds	31	100.00
Global Corporate Investment-Grade Funds	16	81.25
Global Corporate High-Yield Funds	23	100.00

Source: S&P Dow Jones Indices LLC, eVestmentAlliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<b>Report 12: Survivorship of Fixed Income Funds (cont.)</b>		
<b>FUND CATEGORY</b>	<b>NO. OF FUNDS AT START</b>	<b>SURVIVORSHIP (%)</b>
<b>5-YEAR</b>		
U.S. Agg. / (Gov't + Credit) Funds	890	85.84
Core Funds	702	85.75
Core Plus Funds	198	85.35
Cash Funds	152	88.82
Government Funds	78	82.05
Inflation-Linked Funds	52	75.00
Investment-Grade Corp Funds	121	84.30
High-Yield Corp Funds	181	82.32
Agency MBS Funds	61	77.05
Municipal Funds	264	87.50
Emerging Market Hard Currency Funds	38	94.74
Emerging Market Blended Currency Funds	28	89.29
Emerging Market Local Currency Funds	30	93.33
Global Government Funds	17	82.35
Global Aggregate Funds	30	100.00
Global Corporate IG Funds	14	71.43
Global Corporate High-Yield Funds	23	86.96
<b>10-YEAR</b>		
U.S. Agg. / (Gov't + Credit) Funds	956	69.87
Core Funds	770	69.48
Core Plus Funds	194	70.62
Cash Funds	166	69.88
Government Funds	89	64.04
Inflation-Linked Funds	65	55.38
Investment-Grade Corp Funds	96	77.08
High-Yield Corp Funds	156	71.79
Agency MBS Funds	63	66.67
Municipal Funds	254	76.77
Emerging Market Hard Currency Funds	27	92.59
Emerging Market Blended Currency Funds	11	90.91
Emerging Market Local Currency Funds	21	85.71
Global Government Funds	11	72.73
Global Aggregate Funds	27	85.19
Global Corporate Investment-Grade Funds	6	83.33
Global Corporate High-Yield Funds	10	90.00

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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>
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
U.S. Agg. / (Gov't + Credit) Funds	7.60	5.34	4.62	4.08
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
Core Funds	7.25	5.13	4.37	3.86
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
Core Plus Funds	8.85	6.08	5.58	4.95
Bloomberg Barclays U.S. Short Treasury Index	0.95	1.76	1.32	0.73
Cash Funds	1.55	2.19	1.81	1.24
Bloomberg Barclays U.S. Government Index	7.94	5.17	3.76	3.26
Government Funds	6.69	4.66	3.55	3.05
Bloomberg Barclays U.S. Treasury Inflation Notes Index	10.99	5.92	5.08	3.81
Inflation-Linked Funds	10.84	5.93	5.16	3.78
Bloomberg Barclays U.S. Corporate Index	9.89	7.06	6.74	5.63
Investment-Grade Corp Funds	10.87	7.50	7.40	6.50
Bloomberg Barclays U.S. Corporate High Yield Bond Index	7.11	6.24	8.59	6.80
High-Yield Corp Funds	6.10	5.86	7.80	6.56
Bloomberg Barclays U.S. MBS Index	3.87	3.71	3.05	3.01
Agency MBS Funds	4.36	4.04	3.69	3.87
S&P National AMT-Free Municipal Bond Index	4.95	4.43	3.73	4.46
Municipal Funds	4.37	4.09	3.44	3.90
Bloomberg Barclays Emerging Markets USD Aggregate Index	6.52	5.53	6.91	6.01
Emerging Market Hard Currency Funds	7.99	5.43	7.86	6.42
50% Barclays EM USD Agg + 50% Barclays EM Local Gov	6.00	4.64	6.58	4.41
Emerging Market Blended Currency Funds	7.72	4.33	6.97	4.31
Bloomberg Barclays Emerging Markets Local Currency Government Index	5.34	3.66	6.15	2.73
Emerging Market Local Currency Funds	3.97	2.94	6.68	1.65
Bloomberg Barclays Global Treasury Index	9.50	4.82	4.67	2.25
Global Government Funds	9.13	4.49	4.81	3.20
Bloomberg Barclays Global Aggregate Bond Index	9.20	4.85	4.79	2.83
Global Aggregate Funds	9.44	5.32	5.52	3.98
Bloomberg Barclays Global Aggregate Corporate Index	10.37	5.88	6.19	4.57
Global Corporate Investment-Grade Funds	11.17	6.67	6.92	5.71
Bloomberg Barclays Global High Yield Index	7.03	4.95	7.84	6.51
Global Corporate High-Yield Funds	6.47	5.57	7.63	6.68

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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>
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
U.S. Agg. / (Gov't + Credit) Funds	8.41	5.80	5.03	4.36
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
Core Funds	7.94	5.54	4.73	4.14
Bloomberg Barclays U.S. Aggregate Index	7.51	5.34	4.44	3.84
Core Plus Funds	9.43	6.38	5.68	4.77
Bloomberg Barclays U.S. Short Treasury Index	0.95	1.76	1.32	0.73
Cash Funds	0.85	1.81	1.50	0.94
Bloomberg Barclays U.S. Government Index	7.94	5.17	3.76	3.26
Government Funds	5.71	4.19	3.56	2.86
Bloomberg Barclays U.S. Treasury Inflation Notes Index	10.99	5.92	5.08	3.81
Inflation-Linked Funds	10.74	5.85	5.13	3.83
Bloomberg Barclays U.S. Corporate Index	9.89	7.06	6.74	5.63
Investment-Grade Corp Funds	12.24	8.38	8.18	6.89
Bloomberg Barclays U.S. Corporate High Yield Bond Index	7.11	6.24	8.59	6.80
High-Yield Corp Funds	6.24	6.03	8.04	6.75
Bloomberg Barclays U.S. MBS Index	3.87	3.71	3.05	3.01
Agency MBS Funds	4.90	4.22	3.64	3.63
S&P National AMT-Free Municipal Bond Index	4.95	4.43	3.73	4.46
Municipal Funds	4.48	4.62	3.84	4.21
Bloomberg Barclays Emerging Markets USD Aggregate Index	6.52	5.53	6.91	6.01
Emerging Market Hard Currency Funds	6.54	4.63	7.75	5.99
50% Barclays EM USD Agg + 50% Barclays EM Local Gov	6.00	4.64	6.58	4.41
Emerging Market Blended Currency Funds	5.79	2.89	6.14	3.43
Bloomberg Barclays Emerging Markets Local Currency Government Index	5.34	3.66	6.15	2.73
Emerging Market Local Currency Funds	3.12	2.78	7.02	1.50
Bloomberg Barclays Global Treasury Index	9.50	4.82	4.67	2.25
Global Government Funds	6.16	0.81	2.67	1.13
Bloomberg Barclays Global Aggregate Bond Index	9.20	4.85	4.79	2.83
Global Aggregate Funds	9.12	4.61	4.99	3.92
Bloomberg Barclays Global Aggregate Corporate Index	10.37	5.88	6.19	4.57
Global Corporate Investment-Grade Funds	10.90	5.61	5.80	4.59
Bloomberg Barclays Global High Yield Index	7.03	4.95	7.84	6.51
Global Corporate High-Yield Funds	5.74	3.71	7.73	5.43

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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>			
U.S. Agg. / (Gov't + Credit) Funds	5.36	7.57	9.07
Core Funds	4.99	7.15	8.64
Core Plus Funds	7.31	8.79	9.94
Cash Funds	0.81	1.33	2.06
Government Funds	3.80	5.71	7.69
Inflation-Linked Funds	8.94	10.93	11.63
Investment-Grade Corp Funds	8.59	10.87	12.91
High-Yield Corp Funds	4.93	6.31	7.69
Agency MBS Funds	3.90	4.50	4.90
Municipal Funds	3.62	4.54	5.27
Emerging Market Hard Currency Funds	6.52	7.71	9.02
Emerging Market Blended Currency Funds	5.59	6.70	9.11
Emerging Market Local Currency Funds	2.83	3.45	5.46
Global Government Funds	6.88	8.71	10.74
Global Aggregate Funds	7.25	10.38	11.71
Global Corporate Investment-Grade Funds	8.30	10.84	11.47
Global Corporate High-Yield Funds	5.06	5.95	7.64
<b>3-YEAR</b>			
U.S. Agg. / (Gov't + Credit) Funds	4.23	5.36	6.13
Core Funds	3.96	5.11	5.89
Core Plus Funds	5.58	6.14	6.61
Cash Funds	1.80	2.08	2.44
Government Funds	3.20	4.20	5.26
Inflation-Linked Funds	5.18	5.94	6.26
Investment-Grade Corp Funds	6.27	7.58	8.33
High-Yield Corp Funds	5.52	6.09	6.55
Agency MBS Funds	3.83	4.05	4.35
Municipal Funds	3.30	4.25	4.87
Emerging Market Hard Currency Funds	4.57	5.48	6.27
Emerging Market Blended Currency Funds	3.73	4.47	5.55
Emerging Market Local Currency Funds	2.21	3.46	4.15
Global Government Funds	3.33	4.88	6.20
Global Aggregate Funds	4.83	5.53	6.59
Global Corporate Investment-Grade Funds	6.13	6.34	7.23
Global Corporate High-Yield Funds	5.28	5.79	6.35

Source: S&P Dow Jones Indices LLC, eVestmentAlliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

<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>5-YEAR</b>			
U.S. Agg. / (Gov't + Credit) Funds	3.55	4.59	5.32
Core Funds	3.22	4.14	5.04
Core Plus Funds	5.07	5.57	6.12
Cash Funds	1.44	1.74	2.03
Government Funds	2.36	3.06	3.91
Inflation-Linked Funds	4.58	5.16	5.55
Investment-Grade Corp Funds	5.81	7.32	8.07
High-Yield Corp Funds	7.34	8.11	8.59
Agency MBS Funds	3.18	3.46	4.02
Municipal Funds	2.47	3.49	4.25
Emerging Market Hard Currency Funds	7.38	7.83	8.36
Emerging Market Blended Currency Funds	7.12	7.79	8.19
Emerging Market Local Currency Funds	6.50	7.09	7.70
Global Government Funds	3.70	5.24	5.62
Global Aggregate Funds	5.26	5.98	6.56
Global Corporate Investment-Grade Funds	6.66	7.05	7.60
Global Corporate High-Yield Funds	7.20	8.07	8.35
<b>10-YEAR</b>			
U.S. Agg. / (Gov't + Credit) Funds	3.20	4.09	4.73
Core Funds	2.84	3.73	4.45
Core Plus Funds	4.59	4.98	5.48
Cash Funds	0.84	1.10	1.46
Government Funds	1.88	2.64	3.47
Inflation-Linked Funds	3.61	3.88	4.07
Investment-Grade Corp Funds	5.40	6.25	6.79
High-Yield Corp Funds	6.45	6.86	7.18
Agency MBS Funds	3.26	3.57	4.34
Municipal Funds	2.54	3.96	5.28
Emerging Market Hard Currency Funds	6.13	6.49	6.79
Emerging Market Blended Currency Funds	4.03	5.29	5.93
Emerging Market Local Currency Funds	1.11	1.60	1.88
Global Government Funds	2.61	3.54	4.29
Global Aggregate Funds	3.72	4.07	4.50
Global Corporate Investment-Grade Funds	4.93	5.39	5.63
Global Corporate High-Yield Funds	6.94	7.01	7.13

Source: S&P Dow Jones Indices LLC, eVestmentAlliance. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



## APPENDIX A: MAPPING

### U.S. Equity

The SPIVA U.S. Scorecard for the U.S. equity markets reports on the nine traditional style boxes, as well as multi-cap core, growth, and value funds. Style classifications are based on fundamental characteristics such as the P/E ratio, return on equity (ROE), and earnings growth expectation. Growth and value characteristics are assigned based on a subjective method, with a large weighting on the median of the three statistics as well as the preferred benchmark. Market capitalization is subjective and based on the distribution of holdings as well as the preferred benchmark.

Exhibit A1: U.S. Equity Category Mappings		
SPIVA INSTITUTIONAL CATEGORY	eVESTMENT CLASSIFICATION	
	MARKET CAPITALIZATION	STYLE EMPHASIS
Large-Cap Growth Equity	Mega Cap Large Cap Mid-Large Cap	Growth GARP
Large-Cap Core Equity	Mega Cap Large Cap Mid-Large Cap	Core
Large-Cap Value Equity	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
Mid-Cap Growth Equity	Mid Cap	Growth GARP
Mid-Cap Core Equity	Mid Cap	Core
Mid-Cap Value Equity	Mid Cap	Value Relative Value Deep Value
Small-Cap Growth Equity	Small-Mid Cap Small Cap	Growth GARP
Small-Cap Core Equity	Small-Mid Cap Small Cap	Core
Small-Cap Value Equity	Small-Mid Cap Small Cap	Value Relative Value Deep Value
Multi-Cap Growth Equity	All Cap	Growth GARP
Multi-Cap Core Equity	All Cap	Core
Multi-Cap Value Equity	All Cap	Value Relative Value Deep Value

Source: S&P Dow Jones Indices LLC, eVestment Alliance. 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 eVestment market capitalization and style classifications.

Exhibit A2: International Equity Category Mappings				
SPIVA INSTITUTIONAL CATEGORY	eVESTMENT CLASSIFICATION			
	eVESTMENT CATEGORY	REGION	MARKET CAPITALIZATION	STYLE EMPHASIS
Global Equity	Global Large Cap Value	Global	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
	Global Large Cap Growth	Global	Mega Cap Large Cap Mid-Large Cap	Growth GARP
	Global Large Cap Core	Global	Mega Cap Large Cap Mid-Large Cap	Core
International Equity	EAFE Large Cap Value	EAFA	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
	EAFE Large Cap Growth	EAFA	Mega Cap Large Cap Mid-Large Cap	Growth GARP
	EAFE Large Cap Core	EAFA	Mega Cap Large Cap Mid-Large Cap	Core
International Small-Cap Equity	EAFE Small Cap Value	EAFA	Small-Mid Cap Small Cap	Value Relative Value Deep Value
	EAFE Small Cap Growth	EAFA	Small-Mid Cap Small Cap	Growth GARP
	EAFE Small Cap Core	EAFA	Small-Mid Cap Small Cap	Core

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

Exhibit A2: International Equity Category Mappings (cont.)				
SPIVA INSTITUTIONAL CATEGORY	eVESTMENT CLASSIFICATION			
	eVESTMENT CATEGORY	REGION	MARKET CAPITALIZATION	STYLE EMPHASIS
Emerging Market Equity	Brazil Large Cap Value	Brazil	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
	Brazil All Cap Value	Brazil	All Cap	Value Relative Value Deep Value
	Brazil All Cap Growth	Brazil	All Cap	Growth GARP
	Brazil All Cap Core	Brazil	All Cap	Core
	Mexico All Cap Value	Mexico	All Cap	Value Relative Value Deep Value
	Mexico All Cap Growth	Mexico	All Cap	Growth GARP
	Latin America Small Cap Value	Latin America	Small-Mid Cap Small Cap	Value Relative Value Deep Value
	Latin America Mid Cap Value	Latin America	Mid Cap	Value Relative Value Deep Value
	Latin America Large Cap Growth	Latin America	Mega Cap Large Cap Mid-Large Cap	Growth GARP
	Latin America Large Cap Core	Latin America	Mega Cap Large Cap Mid-Large Cap	Core
	Latin America All Cap Value	Latin America	All Cap	Value Relative Value Deep Value
	Latin America All Cap Growth	Latin America	All Cap	Growth GARP
	Latin America All Cap Core	Latin America	All Cap	Core
	Global Emg Mkts Small Cap Value	Global Emg Mkts	Small-Mid Cap Small Cap	Value Relative Value Deep Value
	Global Emg Mkts Small Cap Growth	Global Emg Mkts	Small-Mid Cap Small Cap	Growth GARP
	Global Emg Mkts Small Cap Core	Global Emg Mkts	Small-Mid Cap Small Cap	Core
	Global Emg Mkts Mid Cap Value	Global Emg Mkts	Mid Cap	Value Relative Value Deep Value
	Global Emg Mkts Mid Cap Growth	Global Emg Mkts	Mid Cap	Growth GARP
	Global Emg Mkts Mid Cap Core	Global Emg Mkts	Mid Cap	Core
	Global Emg Mkts Large Cap Value	Global Emg Mkts	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
	Global Emg Mkts Large Cap Growth	Global Emg Mkts	Mega Cap Large Cap Mid-Large Cap	Growth GARP
	Global Emg Mkts Large Cap Core	Global Emg Mkts	Mega Cap Large Cap Mid-Large Cap	Core
	Global Emg Mkts All Cap Value	Global Emg Mkts	All Cap	Value Relative Value Deep Value
	Global Emg Mkts All Cap Growth	Global Emg Mkts	All Cap	Growth GARP
	Global Emg Mkts All Cap Core	Global Emg Mkts	All Cap	Core

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

## Fixed Income

SPIVA reports include 10 domestic and 8 global fixed income classifications. Global fixed income funds are split into emerging and global markets.

Exhibit A3: U.S. Fixed Income Category Mappings				
SPIVA INSTITUTIONAL CATEGORY	eVESTMENT ALLIANCE CLASSIFICATION			
	REGION	INVESTMENT FOCUS	STYLE EMPHASIS	CREDIT QUALITY/APPROACH
<b>U.S. FUNDS</b>				
U.S. Agg. / (Gov't + Credit) Funds	U.S.	Aggregate	Aggregate Gov/Credit	-
Core	U.S.	-	-	Core
Core Plus	U.S.	-	-	Core Plus
Cash Funds	U.S.	Cash Management	Cash Pure Cash Enhanced	-
Government Funds	U.S.	Government	-	-
Inflation-Linked Funds	U.S.	Inflation Linked	-	-
Investment-Grade Corp Funds	U.S.	Credit	Corporate	Investment Grade
High-Yield Corp Funds	U.S.	Credit	Corporate	High Yield
Agency MBS Funds	U.S.	Securitized/Collateralized	Agency Mortgage Backed Securities (MBS)	-
Municipal Funds	U.S.	Municipals	Tax Exempt Municipals	-
<b>GLOBAL/EMERGING MARKET FUNDS</b>				
Emerging Market Hard Currency	Global	Emerging Markets Debts	Hard Currency	-
Emerging Market Blended Currency	Global	Emerging Markets Debts	Blended Currency	-
Emerging Market Local Currency	Global	Emerging Markets Debts	Local Currency	-
Global Cash Funds	Global	Cash Management	Cash Pure Cash Enhanced	-
Global Government Funds	Global	Government	-	-
Global Aggregate Funds	Global	Aggregate	Aggregate Gov/Credit	-
Global Corporate Investment-Grade Funds	Global	Credit	Corporate	Investment Grade
Global Corporate High-Yield Funds	Global	Credit	Corporate	High Yield

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

## APPENDIX B: GLOSSARY

### Percentage of Managers Underperforming 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 products that have survived and beat the index. We then report the index outperformance percentage.

### Survivorship (%)

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

### Equal-Weighted Performance

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

### Asset-Weighted Performance

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

### Quartile 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.

### Indices

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 coverage of over 80% 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. The index is comprised of three size-based indices: the S&P 500, [S&P MidCap 400](#), and [S&P SmallCap 600](#), which are designed to measure the performance of large-, mid-, and small-cap stocks, respectively. The index represents approximately 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.

## **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 INTERNATIONAL 700

This index is designed to measure 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 DEVELOPED 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

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

### **Fixed Income**

#### BLOOMBERG BARCLAYS LONG GOVERNMENT BOND INDEX

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

#### BLOOMBERG BARCLAYS INTERMEDIATE GOVERNMENT BOND INDEX

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

#### BLOOMBERG BARCLAYS 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.

#### BLOOMBERG BARCLAYS 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.

#### BLOOMBERG BARCLAYS INTERMEDIATE GOVERNMENT/CREDIT BOND INDEX

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

#### BLOOMBERG BARCLAYS 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.

#### BLOOMBERG BARCLAYS U.S. AGGREGATE INDEX

This index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market.

#### BLOOMBERG BARCLAYS U.S. SHORT TREASURY INDEX

This index tracks the market for treasury bills issued by the US government. US Treasury bills are issued in fixed maturity terms of 4-, 13-, 26-, and 52-weeks.

**BLOOMBERG BARCLAYS U.S. GOVERNMENT INDEX**

This index is comprised of the US Treasury and US Agency Indices. The index includes US dollar-denominated, fixed-rate, nominal US Treasuries and US agency debentures (securities issued by US government owned or government sponsored entities, and debt explicitly guaranteed by the US government).

**BLOOMBERG BARCLAYS U.S. TREASURY INFLATION NOTES INDEX**

This index measures the performance of the US Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of US TIPS are not index eligible and are excluded from the face amount outstanding of each bond in the index.

**BLOOMBERG BARCLAYS U.S. CORPORATE INDEX**

This index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility, and financial issuers.

**BLOOMBERG BARCLAYS U.S. CORPORATE HIGH YIELD BOND INDEX**

This index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below.

**BLOOMBERG BARCLAYS U.S. MBS INDEX**

This index tracks agency mortgage pass-through securities (no longer incorporates hybrid ARM) guaranteed by Ginnie Mae (GNMA), Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon, and vintage.

**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 NATIONAL AMT-FREE MUNICIPAL BOND INDEX**

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

**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.



**BLOOMBERG BARCLAYS EMERGING MARKETS USD AGGREGATE INDEX**

This index is a flagship hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.

**BLOOMBERG BARCLAYS EMERGING MARKETS LOCAL CURRENCY GOVERNMENT INDEX**

This index provides a broad measure of the performance of local currency emerging markets (EM) government debt.

**BLOOMBERG BARCLAYS GLOBAL TREASURY INDEX**

This index tracks fixed-rate, local currency government debt of investment grade countries, including both developed and emerging markets.

**BLOOMBERG BARCLAYS GLOBAL AGGREGATE BOND INDEX**

This index is a flagship measure of global investment grade debt from 24 local currency markets. This multi-currency benchmark includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers.

**BLOOMBERG BARCLAYS GLOBAL AGGREGATE CORPORATE INDEX**

This index is a flagship measure of global investment grade, fixed-rate corporate debt. This multi-currency benchmark includes bonds from developed and emerging markets issuers within the industrial, utility, and financial sectors.

**BLOOMBERG BARCLAYS GLOBAL HIGH YIELD INDEX**

This index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices.

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