

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

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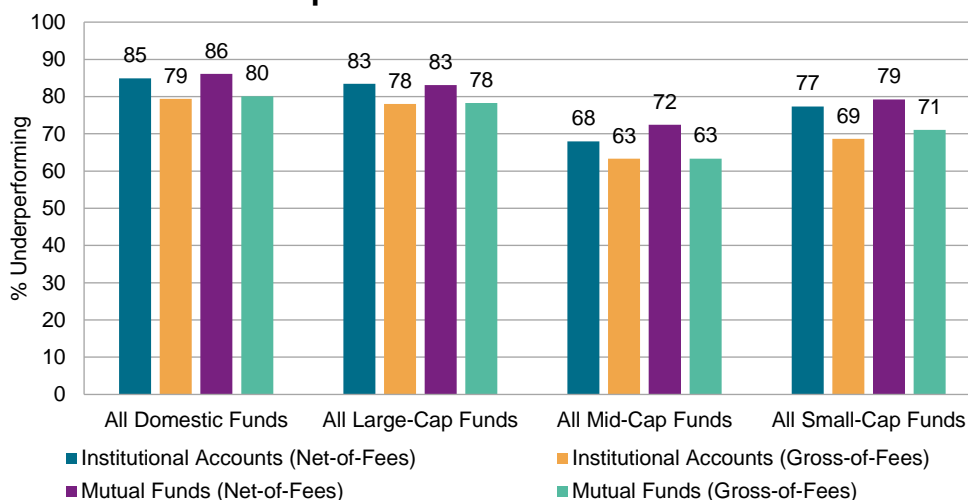
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### Summary

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 skill without the possible distortions that fees may create and illustrate the similarities and differences between the performances of open-end funds and segregated institutional accounts across categories.

Over the long term and gross-of-fees, underperformance among institutional domestic equity accounts was not meaningfully different from that of mutual funds. For example, **78% of both large-cap institutional accounts and large-cap mutual fund managers underperformed the S&P 500<sup>®</sup> over the 10-year period ending Dec. 31, 2021.** After deducting fees (see section "About the SPIVA Institutional Scorecard"), there was a similarly small distinction between their underperformance rates, which both increased to 83% (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, 2021. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

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Overall, 2021 continued to witness better performance from institutional accounts than from mutual funds, with lower 10-year underperformance rates (gross-of-fees) in 17 of the 21 reported equity segments. Nonetheless, **in 16 out of 17 domestic equity fund categories, and in 3 out of 4 international equity categories, a majority of institutional accounts underperformed over a 10-year period.** Underperformance rates ranged from 81% of large-cap core accounts to 46% of international small-cap equity accounts (see Exhibit 2).

Volatility remained muted in 2021 in comparison to the pandemic-induced turmoil of 2020, but there were still opportunities for active managers to add value through security, sector and style selection during the year, as well as a moderate tailwind from equal weighting (rather than capitalization weighting) in large-cap U.S. equities. These two facts suggest **conditions were not unfavorable for actively managed equity portfolios in 2021.**

Several other details illustrate the opportunity set: most infamously, unprecedented price disconnections arose in widely-publicized “meme stocks,” the extremes of which accompanied an all-time high in stock-level dispersion within the [S&P SmallCap 600®](#) in January 2021. But the opportunities for outperformance were not limited to smaller stocks, or just U.S. equities, with **above-average dispersion observed across U.S. and global equity benchmarks during 2021.**<sup>1</sup> There were cross-geographic opportunities, too, as the S&P 500 completed its third consecutive year of double-digit gains, rising 29%, while the [S&P/IFCI Composite](#) gained less than 1% and the large-cap developed [S&P International 700](#) rose 10% (see Reports 3 and 9). These returns created a tailwind for internationally benchmarked funds tempted by domestic allocations but a more challenging environment for domestic funds shopping abroad. Meanwhile, the [S&P 500 Equal Weight Index](#) outperformed the S&P 500 by 1% over the year, indicating that **weighting by market capitalization may have been—all else equal—slightly disadvantageous.**<sup>2</sup>

Of course, since we cannot *all* be above average, the potential for above-average performance requires a possibility for below-average performance. Offering confirmation that 2021's markets were bristling with opportunities for active managers to fall behind, **in 14 out of 17 domestic U.S. equity categories, a majority of institutional accounts underperformed, gross-of-fees, in 2021** (see Report 1). Chief among those categories was the large-cap U.S. growth category, within which **94% of actively managed institutional accounts underperformed the [S&P 500 Growth](#), gross-of-fees.** Conversely, the large-cap U.S. value category was a notable exception to the rule, where a creditable 26% underperformance rate was observed. The combination of the two statistics suggests that, in both categories, active managers may have been systematically allocating across the growth/value divide.<sup>3</sup>

<sup>1</sup> As reported in S&P Dow Jones Indices' monthly [Dispersion, Volatility & Correlation](#) dashboards (January 2021-December 2021).

<sup>2</sup> As reported in the December 2021 edition of S&P Dow Jones Indices' monthly [S&P 500 Factor Dashboard](#). See also Edwards, Tim and Craig Lazzara, “[Equal Weight Benchmarking: Raising the Monkey Bars](#),” S&P Dow Jones Indices LLC, 2014.

<sup>3</sup> Lazzara, Craig and Anu Ganti, “[Style Bias and Active Performance](#),” S&P Dow Jones Indices LLC, 2021.

As might be expected given the international benchmarks' returns, **much lower underperformance rates were observed in the international equity categories**, including underperformance rates of **25% and 28%, respectively, in the international and international small-cap categories** (see Report 6).

Conversely, **in 12 of 17 reported fixed income categories, a majority of actively managed institutional accounts outperformed, gross-of-fees, in 2021** (see Report 11). While the outperformance rate generally decreased in every category over longer time horizons, **a majority also outperformed in 9 out of the 17 categories over a 10-year horizon**. There were nonetheless some pockets in which outperformance was harder to find: intriguingly, given the surge in domestic inflation that has rocked the U.S. fixed income markets in the first half of 2022, **more than two-thirds of institutional accounts in the U.S. inflation-linked category underperformed in 2021**, with a similar proportion underperforming over the past decade.

# 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 typically costs less.<sup>4</sup> Within active management, it is widely understood that fees can vary meaningfully across client types,<sup>5</sup> with retail investors typically paying higher advisory and management fees than institutional investors.<sup>6</sup> Institutional investors have the scale to negotiate fees directly with asset managers; retail investors lack such bargaining power.

**S&P Dow Jones Indices has published 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>7</sup> using composite returns from eVestment Alliance,<sup>8</sup> a provider of investment data and analytics for the institutional asset management industry. Importantly, **unlike publicly traded mutual fund performance data, data from eVestment rely on self-reporting by managers.** Not all institutional account managers

<sup>4</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>5</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>6</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>7</sup> Institutional accounts include institutional separately managed accounts and commingled trusts.

<sup>8</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.

report both gross-of-fees and net-of-fees returns, so it is arithmetically possible, for example, that average net-of-fees returns might *appear* to be higher than their gross-of-fees counterpart.<sup>9</sup> 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 the detailed mapping of various investment strategies to their groups.

In addition, **we compare the relative performance of open-end 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.

This report aims to provide the institutional community with the ability to judge managers' true skill 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.

We also aim 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.

<sup>9</sup> For example, it's conceivable that high-fee managers would only report on a gross-of-fees basis. Since not all funds report both net- and gross-of-fees numbers, for institutional accounts, it's not possible to make a strictly apples-to-apples comparison.

# 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.**

### Exhibit 2: Equity – Percentage of Institutional Managers Underperforming over 10 Years

Category	Benchmark	Institutional Accounts (%)		Number of Funds at Start	
		Net-of-Fees	Gross-of-Fees	Net-of-Fees	Gross-of-Fees
All Domestic Funds	S&P Composite 1500®	84.93	79.38	2521	3254
All Large-Cap Funds	S&P 500	83.46	78.05	1052	1403
All Mid-Cap Funds	S&P MidCap 400®	68.00	63.30	300	376
All Small-Cap Funds	S&P SmallCap 600	77.33	68.64	838	1033
All Multi-Cap Funds	S&P Composite 1500	84.59	76.92	331	442
Large-Cap Growth Funds	S&P 500 Growth	87.74	78.21	359	436
Large-Cap Core Funds	S&P 500	93.73	80.50	287	441
Large-Cap Value Funds	S&P 500 Value	73.15	61.41	406	526
Mid-Cap Growth Funds	S&P MidCap 400 Growth	48.36	49.34	122	152
Mid-Cap Core Funds	S&P MidCap 400	73.33	66.67	60	78
Mid-Cap Value Funds	S&P MidCap 400 Value	80.51	65.07	118	146
Small-Cap Growth Funds	S&P SmallCap 600 Growth	62.95	58.40	305	363
Small-Cap Core Funds	S&P SmallCap 600	79.67	65.49	182	255
Small-Cap Value Funds	S&P SmallCap 600 Value	84.05	68.92	351	415
Multi-Cap Growth Funds	S&P Composite 1500 Growth	82.35	73.91	102	138
Multi-Cap Core Funds	S&P Composite 1500	89.36	80.28	94	142
Multi-Cap Value Funds	S&P Composite 1500 Value	74.07	67.28	135	162
Emerging Market Funds	S&P/IFCI Composite	77.78	56.92	117	318
Global Funds	S&P Global 1200	79.07	68.09	129	282
International Funds	S&P International 700	72.94	61.08	85	203
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	57.14	46.38	28	69

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. 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.**

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

Category	Benchmark	Mutual Funds (%)		Number of Funds at Start	
		Net-of-Fees	Gross-of-Fees	Net-of-Fees	Gross-of-Fees
All Domestic Funds	S&P Composite 1500	86.10	80.08	2611	2611
All Large-Cap Funds	S&P 500	83.07	78.32	1010	1010
All Mid-Cap Funds	S&P MidCap 400	72.45	63.36	363	363
All Small-Cap Funds	S&P SmallCap 600	79.23	71.04	549	549
All Multi-Cap Funds	S&P Composite 1500	87.25	81.52	698	698
Large-Cap Growth Funds	S&P 500 Growth	87.34	77.27	308	308
Large-Cap Core Funds	S&P 500	92.93	84.60	396	396
Large-Cap Value Funds	S&P 500 Value	88.96	76.62	308	308
Mid-Cap Growth Funds	S&P MidCap 400 Growth	54.07	50.00	172	172
Mid-Cap Core Funds	S&P MidCap 400	87.25	67.65	102	102
Mid-Cap Value Funds	S&P MidCap 400 Value	93.26	80.90	89	89
Small-Cap Growth Funds	S&P SmallCap 600 Growth	65.66	52.02	198	198
Small-Cap Core Funds	S&P SmallCap 600	93.13	83.69	233	233
Small-Cap Value Funds	S&P SmallCap 600 Value	90.83	75.83	120	120
Multi-Cap Growth Funds	S&P Composite 1500 Growth	88.73	81.69	213	213
Multi-Cap Core Funds	S&P Composite 1500	93.98	88.25	349	349
Multi-Cap Value Funds	S&P Composite 1500 Value	84.56	75.00	136	136
Emerging Market Funds	S&P/IFCI Composite	79.75	61.35	163	163
Global Funds	S&P Global 1200	84.78	76.09	184	184
International Funds	S&P International 700	78.08	60.62	292	292
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	60.38	43.40	53	53

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2021. 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 Funds (%)		Number 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	98.65	95.95	74	74
Government Intermediate Funds	Bloomberg Barclays Intermediate Government Bond Index	83.87	54.84	31	31
Government Short Funds	Bloomberg Barclays 1-3 Year Government Bond Index	75.86	34.48	29	29
Investment-Grade Long Funds	Bloomberg Barclays Long Government/Credit Bond Index	98.25	91.23	114	114
Investment-Grade Intermediate Funds	Bloomberg Barclays Intermediate Government/Credit Bond Index	49.21	35.71	252	252
Investment-Grade Short Funds	Bloomberg Barclays 1-3 Year US Government/Credit Bond Index	36.84	14.04	57	57
High-Yield Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	94.24	75.39	191	191
Mortgage-Backed Securities Funds	Bloomberg Barclays U.S. MBS Index	72.41	36.21	58	58
Global Income Funds	Bloomberg Barclays Global Aggregate Bond Index	55.10	39.80	98	98
Emerging Markets Debt Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	97.92	72.92	48	48
General Municipal Debt Funds	S&P National AMT-Free Municipal Bond Index	42.86	31.17	77	77
California Municipal Debt Funds	S&P California AMT-Free Municipal Bond Index	33.33	15.15	33	33
New York Municipal Debt Funds	S&P New York AMT-Free Municipal Bond Index	44.83	20.69	29	29
Loan Participation Funds	S&P/LSTA U.S. Leveraged Loan 100 Index	81.08	13.51	37	37

Source: S&P Dow Jones Indices LLC, CRSP. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



## Fixed Income – Institutional Accounts

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

Category	Benchmark	Institutional Accounts (%)		Number of Funds at Start	
		Net-of-Fees	Gross-of-Fees	Net-of-Fees	Gross-of-Fees
U.S. Aggregate / (Government + Credit) Funds	Bloomberg Barclays U.S. Aggregate Index	63.07	55.32	417	949
Core Funds	Bloomberg Barclays U.S. Aggregate Index	71.52	61.15	309	762
Core Plus Funds	Bloomberg Barclays U.S. Aggregate Index	33.72	32.65	86	196
Cash Funds	Bloomberg Barclays U.S. Short Treasury Index	59.70	41.92	67	167
Government Funds	Bloomberg Barclays U.S. Government Index	86.84	71.26	38	87
Inflation-Linked Funds	Bloomberg Barclays U.S. Treasury Inflation Notes Index	86.96	63.49	23	63
Investment-Grade Corporate Funds	Bloomberg Barclays U.S. Corporate Index	47.83	46.53	46	101
High-Yield Corporate Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	80.46	62.65	87	166
Agency MBS Funds	Bloomberg Barclays U.S. MBS Index	40.00	35.38	25	65
Municipal Funds	S&P National AMT-Free Municipal Bond Index	76.26	69.92	139	266
Emerging Market Hard Currency Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	82.14	40.79	28	76
Emerging Market Blended Currency Funds	50% Barclays EM USD Aggregate + 50% Barclays EM Local Government	76.47	54.00	17	50
Emerging Market Local Currency Funds	Bloomberg Barclays Emerging Markets Local Currency Government Index	94.12	95.31	17	64
Global Government Funds	Bloomberg Barclays Global Treasury Index	38.46	43.86	13	57
Global Aggregate Funds	Bloomberg Barclays Global Aggregate Bond Index	53.66	36.36	41	99
Global Corporate Investment Grade Funds	Bloomberg Barclays Global Aggregate Corporate Index	14.29	12.00	7	25
Global Corporate High-Yield Funds	Bloomberg Barclays Global High Yield Index	75.00	36.84	20	38

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. 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 Institutional Accounts Underperforming Benchmarks

Fund Category	Comparison Index	1-Year	3-Year	5-Year	10-Year
All Domestic Funds	S&P Composite 1500	67.18	68.30	72.45	79.38
All Large-Cap Funds	S&P 500	67.09	66.70	69.66	78.05
All Mid-Cap Funds	S&P MidCap 400	51.63	42.91	52.19	63.30
All Small-Cap Funds	S&P SmallCap 600	60.12	39.40	52.57	68.64
All Multi-Cap Funds	S&P Composite 1500	75.07	64.19	70.24	76.92
Large-Cap Growth Funds	S&P 500 Growth	94.27	66.67	64.93	78.21
Large-Cap Core Funds	S&P 500	62.62	68.22	70.20	80.50
Large-Cap Value Funds	S&P 500 Value	26.22	51.87	46.95	61.41
Mid-Cap Growth Funds	S&P MidCap 400 Growth	71.29	20.00	29.46	49.34
Mid-Cap Core Funds	S&P MidCap 400	30.95	45.61	47.69	66.67
Mid-Cap Value Funds	S&P MidCap 400 Value	60.19	49.57	46.03	65.07
Small-Cap Growth Funds	S&P SmallCap 600 Growth	80.77	22.97	30.92	58.40
Small-Cap Core Funds	S&P SmallCap 600	61.67	30.62	43.77	65.49
Small-Cap Value Funds	S&P SmallCap 600 Value	58.64	44.27	53.83	68.92
Multi-Cap Growth Funds	S&P Composite 1500 Growth	95.37	64.35	65.29	73.91
Multi-Cap Core Funds	S&P Composite 1500	67.83	58.73	70.00	80.28
Multi-Cap Value Funds	S&P Composite 1500 Value	43.65	51.33	56.60	67.28

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 2: Survivorship of U.S. Equity Institutional Accounts**

Fund Category	Number at Start	Survivorship (%)
<b>1-Year</b>		
All Domestic Funds	2459	97.36
All Large-Cap Funds	1024	98.05
All Mid-Cap Funds	246	96.75
All Small-Cap Funds	840	96.67
All Multi-Cap Funds	349	97.42
Large-Cap Growth Funds	314	98.41
Large-Cap Core Funds	321	97.20
Large-Cap Value Funds	389	98.46
Mid-Cap Growth Funds	101	97.03
Mid-Cap Core Funds	42	100.00
Mid-Cap Value Funds	103	95.15
Small-Cap Growth Funds	260	96.92
Small-Cap Core Funds	227	97.80
Small-Cap Value Funds	353	95.75
Multi-Cap Growth Funds	108	98.15
Multi-Cap Core Funds	115	96.52
Multi-Cap Value Funds	126	97.62
<b>3-Year</b>		
All Domestic Funds	2782	84.36
All Large-Cap Funds	1168	84.93
All Mid-Cap Funds	289	81.66
All Small-Cap Funds	934	84.37
All Multi-Cap Funds	391	84.65
Large-Cap Growth Funds	348	87.93
Large-Cap Core Funds	365	83.84
Large-Cap Value Funds	455	83.52
Mid-Cap Growth Funds	115	83.48
Mid-Cap Core Funds	57	73.68
Mid-Cap Value Funds	117	83.76
Small-Cap Growth Funds	283	85.51
Small-Cap Core Funds	258	84.88
Small-Cap Value Funds	393	83.21
Multi-Cap Growth Funds	115	90.43
Multi-Cap Core Funds	126	83.33
Multi-Cap Value Funds	150	81.33

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 2: Survivorship of U.S. Equity Institutional Accounts (cont.)**

Fund Category	Number at Start	Survivorship (%)
<b>5-Year</b>		
All Domestic Funds	2940	74.76
All Large-Cap Funds	1236	75.57
All Mid-Cap Funds	320	71.25
All Small-Cap Funds	974	75.15
All Multi-Cap Funds	410	74.15
Large-Cap Growth Funds	365	78.63
Large-Cap Core Funds	396	70.96
Large-Cap Value Funds	475	77.05
Mid-Cap Growth Funds	129	72.09
Mid-Cap Core Funds	65	61.54
Mid-Cap Value Funds	126	75.40
Small-Cap Growth Funds	304	74.01
Small-Cap Core Funds	265	73.58
Small-Cap Value Funds	405	77.04
Multi-Cap Growth Funds	121	79.34
Multi-Cap Core Funds	130	70.77
Multi-Cap Value Funds	159	72.96
<b>10-Year</b>		
All Domestic Funds	3254	56.67
All Large-Cap Funds	1403	56.66
All Mid-Cap Funds	376	51.86
All Small-Cap Funds	1033	57.50
All Multi-Cap Funds	442	58.82
Large-Cap Growth Funds	436	57.57
Large-Cap Core Funds	441	50.11
Large-Cap Value Funds	526	61.41
Mid-Cap Growth Funds	152	51.97
Mid-Cap Core Funds	78	42.31
Mid-Cap Value Funds	146	56.85
Small-Cap Growth Funds	363	50.96
Small-Cap Core Funds	255	56.47
Small-Cap Value Funds	415	63.86
Multi-Cap Growth Funds	138	63.77
Multi-Cap Core Funds	142	51.41
Multi-Cap Value Funds	162	61.11

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 3: Average U.S. Equity Fund Performance (Equal-Weighted)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
S&P Composite 1500	28.45	25.63	17.95	16.35
All Domestic Funds	24.30	23.91	16.19	15.14
S&P 500	28.71	26.07	18.47	16.55
All Large-Cap Funds	25.93	24.28	17.34	15.63
S&P MidCap 400	24.76	21.41	13.09	14.20
All Mid-Cap Funds	22.18	24.08	15.96	14.82
S&P SmallCap 600	26.82	20.11	12.42	14.50
All Small-Cap Funds	23.21	23.19	14.57	14.63
S&P Composite 1500	28.45	25.63	17.95	16.35
All Multi-Cap Funds	23.58	24.14	16.71	15.09
<b>Large-Cap</b>				
S&P 500 Growth	32.01	32.20	24.11	19.23
Large-Cap Growth Funds	23.42	30.23	22.80	18.25
S&P 500	28.71	26.07	18.47	16.55
Large-Cap Core Funds	26.80	24.13	17.32	15.57
S&P 500 Value	24.90	18.65	11.90	13.29
Large-Cap Value Funds	27.19	19.76	13.13	13.62
<b>Mid-Cap</b>				
S&P MidCap 400 Growth	18.90	22.62	14.66	14.54
Mid-Cap Growth Funds	14.38	28.70	20.78	16.53
S&P MidCap 400	24.76	21.41	13.09	14.20
Mid-Cap Core Funds	25.41	22.71	15.09	14.27
S&P MidCap 400 Value	30.65	19.55	11.08	13.55
Mid-Cap Value Funds	28.81	20.07	11.73	13.38
<b>Small-Cap</b>				
S&P SmallCap 600 Growth	22.62	21.11	14.37	15.35
Small-Cap Growth Funds	13.79	28.11	20.10	16.77
S&P SmallCap 600	26.82	20.11	12.42	14.50
Small-Cap Core Funds	24.62	22.94	14.08	14.62
S&P SmallCap 600 Value	30.95	18.69	10.25	13.52
Small-Cap Value Funds	29.61	19.93	10.94	13.08

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 3: Average U.S. Equity Fund Performance (Equal-Weighted) (cont.)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
<b>Multi-Cap</b>				
S&P Composite 1500 Growth	31.16	31.38	23.26	18.85
Multi-Cap Growth Funds	18.01	29.71	22.52	17.85
S&P Composite 1500	28.45	25.63	17.95	16.35
Multi-Cap Core Funds	25.58	24.83	16.87	15.25
S&P Composite 1500 Value	25.39	18.71	11.78	13.31
Multi-Cap Value Funds	26.53	19.58	12.40	12.91

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 4: Average U.S. Equity Fund Performance (Asset-Weighted)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
S&P Composite 1500	28.45	25.63	17.95	16.35
All Domestic Funds	22.86	24.69	17.42	15.74
S&P 500	28.71	26.07	18.47	16.55
All Large-Cap Funds	23.90	25.04	18.22	16.11
S&P MidCap 400	24.76	21.41	13.09	14.20
All Mid-Cap Funds	18.98	23.62	15.75	15.02
S&P SmallCap 600	26.82	20.11	12.42	14.50
All Small-Cap Funds	18.65	22.33	14.18	14.47
S&P Composite 1500	28.45	25.63	17.95	16.35
All Multi-Cap Funds	22.12	24.99	17.63	15.62
<b>Large-Cap</b>				
S&P 500 Growth	32.01	32.20	24.11	19.23
Large-Cap Growth Funds	20.69	30.85	24.06	19.06
S&P 500	28.71	26.07	18.47	16.55
Large-Cap Core Funds	25.80	24.01	17.29	15.55
S&P 500 Value	24.90	18.65	11.90	13.29
Large-Cap Value Funds	27.53	19.75	13.33	13.83

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 4: Average U.S. Equity Fund Performance (Asset-Weighted) (cont.)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
<b>Mid-Cap</b>				
S&P MidCap 400 Growth	18.90	22.62	14.66	14.54
Mid-Cap Growth Funds	13.94	27.61	20.52	16.66
S&P MidCap 400	24.76	21.41	13.09	14.20
Mid-Cap Core Funds	18.81	22.89	16.17	16.02
S&P MidCap 400 Value	30.65	19.55	11.08	13.55
Mid-Cap Value Funds	27.04	19.63	11.45	13.19
<b>Small-Cap</b>				
S&P SmallCap 600 Growth	22.62	21.11	14.37	15.35
Small-Cap Growth Funds	8.41	26.54	19.56	16.61
S&P SmallCap 600	26.82	20.11	12.42	14.50
Small-Cap Core Funds	20.52	21.33	13.27	14.17
S&P SmallCap 600 Value	30.95	18.69	10.25	13.52
Small-Cap Value Funds	29.81	19.94	10.77	12.73
<b>Multi-Cap</b>				
S&P Composite 1500 Growth	31.16	31.38	23.26	18.85
Multi-Cap Growth Funds	18.71	28.15	20.94	17.21
S&P Composite 1500	28.45	25.63	17.95	16.35
Multi-Cap Core Funds	24.71	24.69	17.05	15.67
S&P Composite 1500 Value	25.39	18.71	11.78	13.31
Multi-Cap Value Funds	26.79	20.13	13.00	13.16

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 5: Quartile Breakpoints of U.S. Institutional Accounts**

Fund Category	Third Quartile	Second Quartile	First Quartile
<b>1-Year</b>			
All Domestic Funds	20.63	26.08	29.89
All Large-Cap Funds	23.67	27.06	29.66
All Mid-Cap Funds	15.83	24.79	29.57
All Small-Cap Funds	17.03	24.93	31.47
All Multi-Cap Funds	19.51	25.01	28.59
Large-Cap Growth Funds	20.54	24.61	28.46
Large-Cap Core Funds	24.35	27.89	30.22
Large-Cap Value Funds	24.80	27.67	30.04
Mid-Cap Growth Funds	10.90	15.58	20.23
Mid-Cap Core Funds	24.21	26.91	28.05
Mid-Cap Value Funds	26.86	29.57	32.88
Small-Cap Growth Funds	7.87	13.57	20.85
Small-Cap Core Funds	20.41	25.00	30.32
Small-Cap Value Funds	25.51	29.51	34.49
Multi-Cap Growth Funds	12.41	19.26	24.49
Multi-Cap Core Funds	22.53	26.68	30.04
Multi-Cap Value Funds	22.76	26.75	30.12
<b>3-Year</b>			
All Domestic Funds	19.96	23.72	28.11
All Large-Cap Funds	19.96	24.29	29.19
All Mid-Cap Funds	20.82	23.96	28.41
All Small-Cap Funds	19.81	22.65	26.97
All Multi-Cap Funds	19.86	24.73	28.76
Large-Cap Growth Funds	27.99	31.14	33.63
Large-Cap Core Funds	22.57	25.16	27.28
Large-Cap Value Funds	17.57	19.55	22.27
Mid-Cap Growth Funds	26.51	29.14	32.16
Mid-Cap Core Funds	21.80	23.36	25.43
Mid-Cap Value Funds	18.43	20.70	22.56
Small-Cap Growth Funds	23.79	27.69	31.93
Small-Cap Core Funds	20.95	22.79	25.84
Small-Cap Value Funds	18.01	20.11	22.67
Multi-Cap Growth Funds	26.12	30.40	33.86
Multi-Cap Core Funds	22.71	25.63	27.69
Multi-Cap Value Funds	17.16	19.96	23.12

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



**Report 5: Quartile Breakpoints of U.S. Institutional Accounts (cont.)**

Fund Category	Third Quartile	Second Quartile	First Quartile
<b>5-Year</b>			
All Domestic Funds	12.32	16.04	20.30
All Large-Cap Funds	13.36	17.21	21.31
All Mid-Cap Funds	12.20	16.25	20.58
All Small-Cap Funds	11.15	13.97	18.07
All Multi-Cap Funds	12.85	17.13	20.60
Large-Cap Growth Funds	21.25	23.79	25.72
Large-Cap Core Funds	16.08	18.03	19.71
Large-Cap Value Funds	11.60	13.06	15.14
Mid-Cap Growth Funds	19.16	21.15	23.53
Mid-Cap Core Funds	13.79	15.57	17.07
Mid-Cap Value Funds	10.78	11.91	13.34
Small-Cap Growth Funds	17.06	20.21	23.64
Small-Cap Core Funds	12.58	14.26	16.01
Small-Cap Value Funds	9.17	11.06	12.77
Multi-Cap Growth Funds	19.23	22.92	25.85
Multi-Cap Core Funds	15.68	17.55	19.29
Multi-Cap Value Funds	10.94	12.74	15.11
<b>10-Year</b>			
All Domestic Funds	20.63	26.08	29.89
All Large-Cap Funds	23.67	27.06	29.66
All Mid-Cap Funds	15.83	24.79	29.57
All Small-Cap Funds	17.03	24.93	31.47
All Multi-Cap Funds	19.51	25.01	28.59
Large-Cap Growth Funds	20.54	24.61	28.46
Large-Cap Core Funds	24.35	27.89	30.22
Large-Cap Value Funds	24.80	27.67	30.04
Mid-Cap Growth Funds	10.90	15.58	20.23
Mid-Cap Core Funds	24.21	26.91	28.05
Mid-Cap Value Funds	26.86	29.57	32.88
Small-Cap Growth Funds	7.87	13.57	20.85
Small-Cap Core Funds	20.41	25.00	30.32
Small-Cap Value Funds	25.51	29.51	34.49
Multi-Cap Growth Funds	12.41	19.26	24.49
Multi-Cap Core Funds	22.53	26.68	30.04
Multi-Cap Value Funds	22.76	26.75	30.12

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## Report 6: Percentage of International Institutional Accounts Underperforming Benchmarks

Fund Category	Comparison Index	1-Year	3-Year	5-Year	10-Year
Emerging Market Funds	S&P/IFCI Composite	48.32	45.64	55.68	56.92
Global Funds	S&P Global 1200	66.30	58.73	65.37	68.09
International Funds	S&P International 700	25.27	56.91	65.33	61.08
International Small-Cap Funds	S&P Developed Ex-U.S. SmallCap	27.91	58.95	53.68	46.38

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

## Report 7: Survivorship of International Institutional Accounts

Fund Category	Number of Funds at Start	Survivorship (%)
<b>1-Year</b>		
Emerging Market Funds	416	96.88
Global Funds	362	97.51
International Funds	182	96.15
International Small-Cap Funds	86	93.02
<b>3-Year</b>		
Emerging Market Funds	447	83.67
Global Funds	361	87.26
International Funds	188	87.77
International Small-Cap Funds	95	77.89
<b>5-Year</b>		
Emerging Market Funds	440	74.32
Global Funds	361	75.90
International Funds	199	78.39
International Small-Cap Funds	95	70.53
<b>10-Year</b>		
Emerging Market Funds	318	65.09
Global Funds	282	59.57
International Funds	203	59.11
International Small-Cap Funds	69	59.42

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. 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 (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
S&P/IFCI Composite	0.43	11.73	10.53	6.47
Emerging Market Funds	1.80	13.21	11.15	7.11
S&P Global 1200	21.55	21.67	15.42	13.11
Global Funds	18.88	21.27	15.49	13.20
S&P International 700	9.90	14.70	10.65	8.48
International Funds	12.22	15.12	10.52	8.95
S&P Developed Ex-U.S. Small-Cap	9.56	15.99	11.01	10.34
International Small-Cap Funds	12.73	16.98	11.96	12.03

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

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

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
S&P/IFCI Composite	0.43	11.73	10.53	6.47
Emerging Market Funds	-0.39	13.20	11.12	6.83
S&P Global 1200	21.55	21.67	15.42	13.11
Global Funds	18.75	21.75	15.60	13.36
S&P International 700	9.90	14.70	10.65	8.48
International Funds	11.76	14.96	10.22	8.72
S&P Developed Ex-U.S. Small-Cap	9.56	15.99	11.01	10.34
International Small-Cap Funds	12.09	16.23	10.72	11.02

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 10: Quartile Breakpoints of International Equity Institutional Accounts**

Fund Category	Third Quartile	Second Quartile	First Quartile
<b>1-Year</b>			
Emerging Market Funds	-4.25	1.06	7.11
Global Funds	16.14	19.68	23.24
International Funds	10.37	12.86	14.83
International Small-Cap Funds	9.64	13.53	16.59
<b>3-Year</b>			
Emerging Market Funds	10.72	13.26	16.65
Global Funds	17.30	21.52	24.75
International Funds	12.26	14.70	17.92
International Small-Cap Funds	14.78	16.23	19.31

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 10: Quartile Breakpoints of International Equity Institutional Accounts (cont.)**

Fund Category	Third Quartile	Second Quartile	First Quartile
<b>5-Year</b>			
Emerging Market Funds	9.57	11.00	13.31
Global Funds	12.44	15.19	18.72
International Funds	8.18	10.16	12.79
International Small-Cap Funds	10.47	11.66	13.83
<b>10-Year</b>			
Emerging Market Funds	5.79	7.12	8.59
Global Funds	11.36	13.28	14.90
International Funds	8.10	9.10	10.09
International Small-Cap Funds	10.95	11.84	13.21

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 11: Percentage of Fixed Income Institutional Accounts Underperforming Benchmarks**

Fund Category	Comparison Index	1-Year	3-Year	5-Year	10-Year
U.S. Aggregate / (Government + Credit) Funds	Bloomberg Barclays U.S. Aggregate Index	16.54	53.18	53.59	55.32
Core Funds	Bloomberg Barclays U.S. Aggregate Index	18.07	60.83	61.31	61.15
Core Plus Funds	Bloomberg Barclays U.S. Aggregate Index	10.99	26.96	26.24	32.65
Cash Funds	Bloomberg Barclays U.S. Short Treasury Index	22.45	32.90	25.00	41.92
Government Funds	Bloomberg Barclays U.S. Government Index	27.63	65.38	68.75	71.26
Inflation-Linked Funds	Bloomberg Barclays U.S. Treasury Inflation Notes Index	67.44	60.42	53.85	63.49
Investment-Grade Corporate Funds	Bloomberg Barclays U.S. Corporate Index	25.42	44.63	48.03	46.53
High-Yield Corporate Funds	Bloomberg Barclays U.S. Corporate High Yield Bond Index	46.63	58.19	58.99	62.65
Agency MBS Funds	Bloomberg Barclays U.S. MBS Index	22.22	28.33	30.77	35.38
Municipal Funds	S&P National AMT-Free Municipal Bond Index	61.33	63.74	64.71	69.92
Emerging Market Hard Currency Funds	Bloomberg Barclays Emerging Markets USD Aggregate Index	56.78	31.82	32.41	40.79
Emerging Market Blended Currency Funds	50% Barclays EM USD Agg + 50% Barclays EM Local Government	74.47	44.21	57.30	54.00
Emerging Market Local Currency Funds	Bloomberg Barclays Emerging Markets Local Currency Government Index	100.00	94.59	94.74	95.31
Global Government Funds	Bloomberg Barclays Global Treasury Index	46.81	34.69	49.06	43.86
Global Aggregate Funds	Bloomberg Barclays Global Aggregate Bond Index	31.73	24.77	26.21	36.36
Global Corporate Investment-Grade Funds	Bloomberg Barclays Global Aggregate Corporate Index	14.63	17.95	23.81	12.00
Global Corporate High-Yield Funds	Bloomberg Barclays Global High Yield Index	4.48	13.64	20.29	36.84

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 12: Survivorship of Fixed Income Institutional Accounts**

<b>Fund Category</b>	<b>Number of Funds at Start</b>	<b>Survivorship (%)</b>
<b>1-Year</b>		
U.S. Aggregate / (Government + Credit) Funds	810	99.01
Core Funds	631	99.21
Core Plus Funds	191	97.91
Cash Funds	147	97.28
Government Funds	76	97.37
Inflation-Linked Funds	43	100.00
Investment-Grade Corporate Funds	118	98.31
High-Yield Corporate Funds	163	96.93
Agency MBS Funds	54	100.00
Municipal Funds	256	99.22
Emerging Market Hard Currency Funds	118	98.31
Emerging Market Blended Currency Funds	94	100.00
Emerging Market Local Currency Funds	71	98.59
Global Government Funds	47	100.00
Global Aggregate Funds	104	100.00
Global Corporate Investment-Grade Funds	41	95.12
Global Corporate High-Yield Funds	67	97.01
<b>3-Year</b>		
U.S. Aggregate / (Government + Credit) Funds	865	91.56
Core Funds	674	91.99
Core Plus Funds	204	89.22
Cash Funds	155	91.61
Government Funds	78	93.59
Inflation-Linked Funds	48	85.42
Investment-Grade Corporate Funds	121	89.26
High-Yield Corporate Funds	177	89.27
Agency MBS Funds	60	90.00
Municipal Funds	262	94.27
Emerging Market Hard Currency Funds	110	93.64
Emerging Market Blended Currency Funds	95	89.47
Emerging Market Local Currency Funds	74	90.54
Global Government Funds	49	93.88
Global Aggregate Funds	109	93.58
Global Corporate Investment-Grade Funds	39	94.87
Global Corporate High-Yield Funds	66	92.42

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 12: Survivorship of Fixed Income Institutional Accounts (cont.)**

Fund Category	Number of Funds at Start	Survivorship (%)
<b>5-Year</b>		
U.S. Aggregate / (Government + Credit) Funds	892	86.43
Core Funds	703	86.63
Core Plus Funds	202	84.65
Cash Funds	152	90.13
Government Funds	80	85.00
Inflation-Linked Funds	52	78.85
Investment-Grade Corp Funds	127	81.10
High-Yield Corp Funds	178	84.83
Agency MBS Funds	65	81.54
Municipal Funds	272	88.97
Emerging Market Hard Currency Funds	108	87.96
Emerging Market Blended Currency Funds	89	82.02
Emerging Market Local Currency Funds	76	84.21
Global Government Funds	53	83.02
Global Aggregate Funds	103	88.35
Global Corporate IG Funds	42	83.33
Global Corporate High-Yield Funds	69	82.61
<b>10-Year</b>		
U.S. Aggregate / (Government + Credit) Funds	865	91.56
Core Funds	674	91.99
Core Plus Funds	204	89.22
Cash Funds	155	91.61
Government Funds	78	93.59
Inflation-Linked Funds	48	85.42
Investment-Grade Corporate Funds	121	89.26
High-Yield Corporate Funds	177	89.27
Agency MBS Funds	60	90.00
Municipal Funds	262	94.27
Emerging Market Hard Currency Funds	110	93.64
Emerging Market Blended Currency Funds	95	89.47
Emerging Market Local Currency Funds	74	90.54
Global Government Funds	49	93.88
Global Aggregate Funds	109	93.58
Global Corporate Investment-Grade Funds	39	94.87
Global Corporate High-Yield Funds	66	92.42

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 13: Average Fixed Income Fund Performance (Equal-Weighted)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
U.S. Aggregate / (Government + Credit) Funds	-0.62	5.01	3.81	3.32
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
Core Funds	-0.79	4.70	3.59	3.09
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
Core Plus Funds	0.06	6.17	4.64	4.21
Bloomberg Barclays U.S. Short Treasury Index	0.04	1.14	1.22	0.71
Cash Funds	0.21	1.58	1.62	1.20
Bloomberg Barclays U.S. Government Index	-2.28	4.06	3.07	2.14
Government Funds	-1.68	4.55	3.47	2.53
Bloomberg Barclays U.S. Treasury Inflation Notes Index	5.96	8.44	5.34	3.09
Inflation-Linked Funds	5.87	8.37	5.38	3.20
Bloomberg Barclays U.S. Corporate Index	-1.04	7.59	5.26	4.70
Investment-Grade Corporate Funds	-0.38	8.33	5.82	5.41
Bloomberg Barclays U.S. Corporate High Yield Bond Index	5.28	8.83	6.30	6.83
High-Yield Corporate Funds	5.76	8.45	6.17	6.66
Bloomberg Barclays U.S. MBS Index	-1.04	3.01	2.50	2.28
Agency MBS Funds	-0.01	3.40	3.11	3.31
S&P National AMT-Free Municipal Bond Index	1.59	4.62	3.98	3.52
Municipal Funds	1.72	4.16	3.69	3.28
Bloomberg Barclays Emerging Markets USD Aggregate Index	-1.65	5.82	4.57	5.12
Emerging Market Hard Currency Funds	-1.72	6.62	5.25	5.63
50% Barclays EM USD Aggregate + 50% Barclays EM Local Government	-1.62	5.09	4.62	3.86
Emerging Market Blended Currency Funds	-3.28	5.41	4.51	4.27
Bloomberg Barclays Emerging Markets Local Currency Government Index	-1.59	4.30	4.61	2.53
Emerging Market Local Currency Funds	-7.52	2.86	3.18	1.31
Bloomberg Barclays Global Treasury Index	-6.60	2.59	2.91	0.93
Global Government Funds	-5.36	3.12	3.04	1.92
Bloomberg Barclays Global Aggregate Bond Index	-4.71	3.59	3.36	1.77
Global Aggregate Funds	-2.98	4.68	4.03	3.11
Bloomberg Barclays Global Aggregate Corporate Index	-2.89	6.12	4.68	3.82
Global Corporate Investment-Grade Funds	-1.05	7.53	5.58	5.48
Bloomberg Barclays Global High Yield Index	0.99	6.75	5.21	6.29
Global Corporate High-Yield Funds	4.13	8.37	6.17	6.90

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 14: Average Fixed Income Fund Performance (Asset-Weighted)**

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
U.S. Aggregate / (Government + Credit) Funds	-0.52	5.48	4.17	3.63
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
Core Funds	-0.58	5.18	3.94	3.38
Bloomberg Barclays U.S. Aggregate Index	-1.54	4.79	3.57	2.90
Core Plus Funds	-0.36	6.14	4.65	4.06
Bloomberg Barclays U.S. Short Treasury Index	0.04	1.14	1.22	0.71
Cash Funds	0.16	1.18	1.36	0.91
Bloomberg Barclays U.S. Government Index	-2.28	4.06	3.07	2.14
Government Funds	-2.55	6.61	4.82	3.12
Bloomberg Barclays U.S. Treasury Inflation Notes Index	5.96	8.44	5.34	3.09
Inflation-Linked Funds	5.70	8.25	5.32	3.17
Bloomberg Barclays U.S. Corporate Index	-1.04	7.59	5.26	4.70
Investment-Grade Corporate Funds	-0.66	9.46	6.48	5.74
Bloomberg Barclays U.S. Corporate High Yield Bond Index	5.28	8.83	6.30	6.83
High-Yield Corporate Funds	5.98	8.90	6.36	6.89
Bloomberg Barclays U.S. MBS Index	-1.04	3.01	2.50	2.28
Agency MBS Funds	-0.43	3.60	3.06	2.92
S&P National AMT-Free Municipal Bond Index	1.59	4.62	3.98	3.52
Municipal Funds	3.24	5.07	4.41	3.70
Bloomberg Barclays Emerging Markets USD Aggregate Index	-1.65	5.82	4.57	5.12
Emerging Market Hard Currency Funds	-1.75	6.55	5.16	5.63
50% Barclays EM USD Aggregate + 50% Barclays EM Local Government	-1.62	5.09	4.62	3.86
Emerging Market Blended Currency Funds	-3.50	5.04	4.30	3.82
Bloomberg Barclays Emerging Markets Local Currency Government Index	-1.59	4.30	4.61	2.53
Emerging Market Local Currency Funds	-7.84	2.89	3.24	1.09
Bloomberg Barclays Global Treasury Index	-6.60	2.59	2.91	0.93
Global Government Funds	-5.03	2.10	2.40	2.16
Bloomberg Barclays Global Aggregate Bond Index	-4.71	3.59	3.36	1.77
Global Aggregate Funds	-2.98	4.33	3.88	3.11
Bloomberg Barclays Global Aggregate Corporate Index	-2.89	6.12	4.68	3.82
Global Corporate Investment-Grade Funds	-0.79	7.26	5.47	5.30
Bloomberg Barclays Global High Yield Index	0.99	6.75	5.21	6.29
Global Corporate High-Yield Funds	4.16	7.99	5.80	6.58

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.



**Report 15: Quartile Breakpoints of Fixed Income Institutional Accounts**

<b>Fund Category</b>	<b>Third Quartile</b>	<b>Second Quartile</b>	<b>First Quartile</b>
<b>1-Year</b>			
U.S. Aggregate / (Government + Credit) Funds	-1.28	-0.75	-0.18
Core Funds	-1.34	-0.87	-0.35
Core Plus Funds	-0.75	-0.09	0.59
Cash Funds	0.05	0.15	0.25
Government Funds	-2.09	-1.41	-0.54
Inflation-Linked Funds	5.52	5.77	5.98
Investment-Grade Corporate Funds	-0.95	-0.48	-0.06
High-Yield Corporate Funds	4.71	5.49	6.50
Agency MBS Funds	-1.00	-0.65	0.27
Municipal Funds	0.23	0.90	2.46
Emerging Market Hard Currency Funds	-2.34	-1.74	-0.71
Emerging Market Blended Currency Funds	-5.00	-3.74	-1.66
Emerging Market Local Currency Funds	-8.78	-7.46	-6.59
Global Government Funds	-7.27	-6.41	-2.55
Global Aggregate Funds	-4.89	-3.66	-0.78
Global Corporate Investment-Grade Funds	-2.22	-0.68	-0.24
Global Corporate High-Yield Funds	2.87	4.09	5.44
<b>3-Year</b>			
U.S. Aggregate / (Government + Credit) Funds	3.66	4.87	5.90
Core Funds	3.29	4.44	5.53
Core Plus Funds	5.48	6.06	6.89
Cash Funds	1.15	1.49	1.88
Government Funds	2.58	3.34	4.38
Inflation-Linked Funds	7.61	8.41	8.77
Investment-Grade Corporate Funds	6.43	8.23	9.11
High-Yield Corporate Funds	7.97	8.74	9.44
Agency MBS Funds	3.11	3.42	3.82
Municipal Funds	3.00	4.15	5.35
Emerging Market Hard Currency Funds	5.99	6.65	7.15
Emerging Market Blended Currency Funds	4.45	5.69	6.53
Emerging Market Local Currency Funds	2.24	2.80	3.33
Global Government Funds	2.45	3.43	3.99
Global Aggregate Funds	4.12	4.72	5.40
Global Corporate Investment-Grade Funds	6.81	7.52	7.98
Global Corporate High-Yield Funds	8.01	8.37	8.92

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

**Report 15: Quartile Breakpoints of Fixed Income Institutional Accounts (cont.)**

<b>Fund Category</b>	<b>Third Quartile</b>	<b>Second Quartile</b>	<b>First Quartile</b>
<b>5-Year</b>			
U.S. Aggregate / (Government + Credit) Funds	2.92	3.71	4.42
Core Funds	2.68	3.42	4.14
Core Plus Funds	4.17	4.62	5.13
Cash Funds	1.33	1.58	1.77
Government Funds	2.10	2.58	3.31
Inflation-Linked Funds	4.95	5.37	5.64
Investment-Grade Corporate Funds	4.65	5.85	6.41
High-Yield Corporate Funds	5.85	6.30	6.79
Agency MBS Funds	2.64	2.85	3.50
Municipal Funds	2.68	3.67	4.73
Emerging Market Hard Currency Funds	4.71	5.14	5.60
Emerging Market Blended Currency Funds	3.98	4.67	5.22
Emerging Market Local Currency Funds	2.73	3.26	3.72
Global Government Funds	2.73	3.35	3.76
Global Aggregate Funds	3.67	4.05	4.51
Global Corporate Investment-Grade Funds	5.21	5.47	5.83
Global Corporate High-Yield Funds	5.91	6.20	6.58
<b>10-Year</b>			
U.S. Aggregate / (Government + Credit) Funds	2.54	3.29	3.93
Core Funds	2.36	3.02	3.60
Core Plus Funds	3.75	4.24	4.77
Cash Funds	0.82	1.07	1.37
Government Funds	1.56	2.01	2.48
Inflation-Linked Funds	3.00	3.20	3.35
Investment-Grade Corporate Funds	4.68	5.41	6.03
High-Yield Corporate Funds	6.45	6.95	7.31
Agency MBS Funds	2.56	2.82	3.77
Municipal Funds	2.06	3.09	4.46
Emerging Market Hard Currency Funds	5.10	5.48	5.76
Emerging Market Blended Currency Funds	3.27	4.18	4.93
Emerging Market Local Currency Funds	1.00	1.25	1.66
Global Government Funds	1.52	1.81	2.39
Global Aggregate Funds	2.17	2.93	3.88
Global Corporate Investment-Grade Funds	4.69	5.38	5.80
Global Corporate High-Yield Funds	6.51	6.98	7.42

Source: S&P Dow Jones Indices LLC, eVestment Alliance. Data as of Dec. 31, 2021. 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 and 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, eVestment Alliance. 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 Emerging Markets Small-Cap Value	Global Emerging Markets	Small-Mid Cap Small Cap	Value Relative Value Deep Value
	Global Emerging Markets Small-Cap Growth	Global Emerging Markets	Small-Mid Cap Small Cap	Growth GARP
	Global Emerging Markets Small-Cap Core	Global Emerging Markets	Small-Mid Cap Small Cap	Core
	Global Emerging Markets Mid-Cap Value	Global Emerging Markets	Mid Cap	Value Relative Value Deep Value
	Global Emerging Markets Mid-Cap Growth	Global Emerging Markets	Mid Cap	Growth GARP
	Global Emerging Markets Mid-Cap Core	Global Emerging Markets	Mid Cap	Core
	Global Emerging Markets Large-Cap Value	Global Emerging Markets	Mega Cap Large Cap Mid-Large Cap	Value Relative Value Deep Value
	Global Emerging Markets Large-Cap Growth	Global Emerging Markets	Mega Cap Large Cap Mid-Large Cap	Growth GARP
	Global Emerging Markets Large-Cap Core	Global Emerging Markets	Mega Cap Large Cap Mid-Large Cap	Core
	Global Emerging Markets All-Cap Value	Global Emerging Markets	All Cap	Value Relative Value Deep Value
	Global Emerging Markets All-Cap Growth	Global Emerging Markets	All Cap	Growth GARP
	Global Emerging Markets All-Cap Core	Global Emerging Markets	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 institutional accounts are split into emerging and global markets.

### Exhibit A3: 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. Aggregate/(Government + Credit) Funds	U.S.	Aggregate	Aggregate Government/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 Corporate 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 Government/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, eVestment Alliance. 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  $p$ th percentile for a set of data is the value that is greater than or equal to  $p\%$  of the data but is less than or equal to  $(100-p)\%$  of the data. In other words, it is a value that divides the data into two parts: the lower  $p\%$  of the values and the upper  $(100-p)\%$  of the values. The first quartile is the 75th percentile, the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile and the third quartile is the 25th percentile.

## 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<sup>®</sup>](#) (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. SmallCap

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

### Bloomberg Barclays U.S. Treasury Inflation Notes Index

This index measures the performance of the U.S. Treasury Inflation Protected Securities (TIPS) market. Federal Reserve holdings of U.S. 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 U.S. dollar-denominated securities publicly issued by U.S. and non-U.S. industrial, utility and financial issuers.

### Bloomberg Barclays U.S. Corporate High Yield Bond Index

This index measures the U.S. dollar-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 Global Ratings 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.

### Morningstar 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 U.S. dollar-denominated debt from sovereign, quasi-sovereign and corporate emerging market issuers.

### Bloomberg Barclays Emerging Markets Local Currency Government Index

This index provides a broad measure of the performance of local currency emerging market government debt.

### Bloomberg Barclays Global Treasury Index

This index tracks fixed-rate, local currency government debt of investment grade countries, including 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 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, Pan-European High Yield and Emerging Markets Hard Currency High Yield Indices.

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