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SPIVA[®] Japan Scorecard

SUMMARY

- S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since the first publication of the SPIVA U.S. Scorecard in 2002. Over the years, we have built on our experience publishing the report by expanding scorecard coverage into Australia, Canada, Europe, India, South Africa, Latin America, and Japan. While this report will not end the debate on active versus passive investing in Japan, we hope to make a meaningful contribution by examining market segments in which one strategy works better than the other.
- The SPIVA Japan Scorecard reports on the performance of actively managed Japanese mutual funds against their respective benchmark indices over 1-, 3-, 5-, and 10-year investment horizons.¹ In this scorecard, we evaluated returns of more than 798 Japanese large- and mid/small-cap equity funds, along with more than 656 international equity funds investing in global, international, and emerging markets, as well as U.S. equities.
- **Domestic Equity Funds:** In the 12-month period ending June 2018, the [S&P/TOPIX 150](#) and the S&P Japan MidSmallCap gained 8.4% and 11.1%, respectively. Over the same period, 71% and 83% of large- and mid/small-cap equity funds outperformed their respective benchmarks, with average returns of 11.7% and 21.3%, respectively.

Over the 10-year horizon, more than 50% and 60% of large- and mid/small-cap funds underperformed their benchmarks, respectively, on absolute and risk-adjusted bases. Nevertheless, the equal- and asset-weighted fund returns exceeded their respective benchmarks' returns over the same period.

The domestic equity funds' performance was better than the foreign equity funds' performance in comparison with their respective benchmark indices, and domestic equity funds also had higher survivorship rate than foreign equity funds across the different measured periods.

¹ The fund returns used are net of fees, excluding loads.

- **Foreign Equity Funds:** Over the 12-month period ending June 2018, foreign equity funds recorded worse performance compared with their respective benchmarks than domestic equity funds. The majority of foreign equity funds underperformed their respective benchmarks and posted lower equal- and asset-weighted returns than their respective benchmarks. Emerging market equity funds recorded the worst relative performance, with 99% of funds underperforming the [S&P Emerging BMI](#).

Over the 10-year period, the majority of funds underperformed their respective benchmarks across various foreign fund categories. More than 90% of global, international, and emerging equity funds did not survive or underperformed their respective benchmarks on absolute and risk-adjusted bases. More than 40% of foreign equity funds were merged or liquidated over the 10-year period, with international equity funds having the highest survivorship rate (72%).

Among various foreign fund categories, the U.S. and emerging equity funds had higher return spreads (over 100 bps) between equal- and asset-weighted returns in the 5- and 10-year periods, indicating that smaller funds in these two categories tended to perform better than larger funds. Over the 10-year period, asset- and equal-weighted average annualized fund returns were below their respective benchmarks' returns by more than 300 bps across all foreign fund categories.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

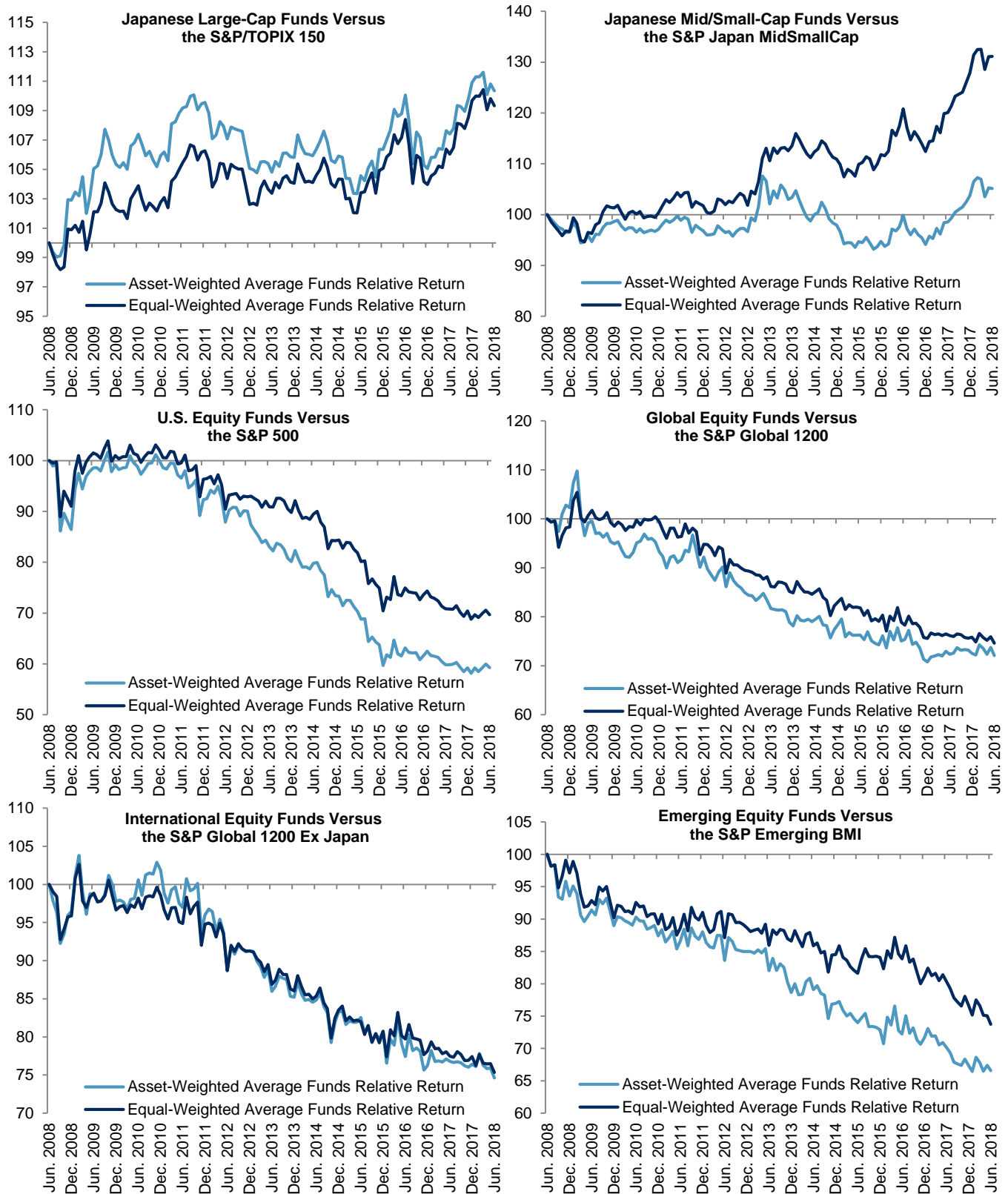
There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication 16 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

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

- **Survivorship Bias Correction:** Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.
- **Apples-to-Apples Comparison:** Fund returns are often compared with a popular benchmark regardless of their investment category. The SPIVA Japan Scorecard makes an appropriate comparison by measuring a fund's returns against the returns of a benchmark that reflects the fund's investment category.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which results in the returns of a JPY 10 billion fund affecting the average in the same manner as the returns of a JPY 10 million fund. However, the SPIVA Japan Scorecard shows both equal- and asset-weighted averages. Equal-weighted returns are a measure of average fund performance, while asset-weighted returns are a measure of the performance of the average invested dollar.
- **Data Cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations, using only the share class with greater assets. Since this is meant to be a scorecard for active managers, index funds, leveraged and inverse funds, and other index-linked products are excluded.

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CUMULATIVE AVERAGE FUND RETURN RELATIVE TO BENCHMARK



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. All returns in JPY. Charts are provided for illustrative purposes. Past performance is no guarantee of future results.

REPORTS

Report 1a: Percentage of Funds Outperformed by the Index (Based on Absolute Return)

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE-YEAR (%)	FIVE-YEAR (%)	TEN-YEAR (%)
Japanese Large-Cap Funds	S&P/TOPIX 150	28.83	30.64	44.97	56.52
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	16.56	27.63	40.85	60.00
All Japanese Equity Funds	S&P Japan 500	26.87	39.16	54.35	59.80
U.S. Equity Funds	S&P 500	60.16	87.63	89.09	84.62
Global Equity Funds	S&P Global 1200	68.06	91.39	90.54	92.56
International Equity Funds	S&P Global 1200 Ex Japan	74.19	94.34	92.00	96.30
Emerging Equity Funds	S&P Emerging BMI	98.75	90.24	92.50	98.04

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 1b: Percentage of Funds Outperformed by the Index (Based on Risk-Adjusted Return)

FUND CATEGORY	COMPARISON INDEX	ONE-YEAR (%)	THREE-YEAR (%)	FIVE-YEAR (%)	TEN-YEAR (%)
Japanese Large-Cap Funds	S&P/TOPIX 150	30.13	29.77	41.51	56.52
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	24.50	30.26	52.11	63.64
All Japanese Equity Funds	S&P Japan 500	30.60	38.76	52.61	60.00
U.S. Equity Funds	S&P 500	64.06	90.72	90.91	88.46
Global Equity Funds	S&P Global 1200	65.97	90.07	94.59	92.56
International Equity Funds	S&P Global 1200 Ex Japan	67.74	94.34	92.00	96.30
Emerging Equity Funds	S&P Emerging BMI	98.75	90.24	93.75	98.04

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the measured periods. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 2: Survivorship of Funds		
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
ONE-YEAR		
Japanese Large-Cap Funds	385	95.32
Japanese Mid/Small-Cap Funds	151	96.03
All Japanese Equity Funds	536	95.52
U.S. Equity Funds	128	99.22
Global Equity Funds	191	95.81
International Equity Funds	62	95.16
Emerging Equity Funds	80	83.75
All Foreign Equity Funds	461	94.58
THREE-YEAR		
Japanese Large-Cap Funds	346	89.31
Japanese Mid/Small-Cap Funds	152	86.84
All Japanese Equity Funds	498	88.55
U.S. Equity Funds	97	92.78
Global Equity Funds	151	85.43
International Equity Funds	53	86.79
Emerging Equity Funds	82	69.51
All Foreign Equity Funds	383	84.07
FIVE-YEAR		
Japanese Large-Cap Funds	318	80.82
Japanese Mid/Small-Cap Funds	142	77.46
All Japanese Equity Funds	460	79.78
U.S. Equity Funds	55	83.64
Global Equity Funds	148	69.59
International Equity Funds	50	86.00
Emerging Equity Funds	80	53.75
All Foreign Equity Funds	333	70.57
TEN-YEAR		
Japanese Large-Cap Funds	345	64.93
Japanese Mid/Small-Cap Funds	165	59.39
All Japanese Equity Funds	510	63.14
U.S. Equity Funds	26	53.85
Global Equity Funds	121	52.07
International Equity Funds	54	72.22
Emerging Equity Funds	51	56.86
All Foreign Equity Funds	252	57.54

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 3: Average Fund Performance (Equal-Weighted)

INDEX/PEER GROUP	ONE-YEAR (%)	THREE-YEAR ANNUALIZED (%)	FIVE-YEAR ANNUALIZED (%)	TEN-YEAR ANNUALIZED (%)
S&P/TOPIX 150	8.36	2.58	9.74	3.71
Japanese Large-Cap Funds	11.73	4.50	10.98	4.64
S&P Japan MidSmallCap	11.11	7.18	13.85	7.69
Japanese Mid/Small-Cap Funds	21.33	13.67	17.79	10.65
S&P Japan 500	8.92	3.51	10.61	4.49
All Japanese Equity Funds	14.40	7.14	12.98	6.48
S&P 500	10.89	7.68	15.53	10.47
U.S. Equity Funds	9.02	2.04	9.55	6.55
S&P Global 1200	8.85	5.34	12.73	7.20
Global Equity Funds	6.67	2.15	9.53	4.11
S&P Global 1200 Ex Japan	8.89	5.57	12.99	7.50
International Equity Funds	5.90	2.64	9.82	4.50
S&P Emerging BMI	9.05	2.71	8.29	3.52
Emerging Equity Funds	0.06	-0.71	5.02	0.42

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. All returns in JPY. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 4: Average Fund Performance (Asset-Weighted)

INDEX/PEER GROUP	ONE-YEAR (%)	THREE-YEAR ANNUALIZED (%)	FIVE-YEAR ANNUALIZED (%)	TEN-YEAR ANNUALIZED (%)
S&P/TOPIX 150	8.36	2.58	9.74	3.71
Japanese Large-Cap Funds	11.33	4.43	10.88	4.73
S&P Japan MidSmallCap	11.11	7.18	13.85	7.69
Japanese Mid/Small-Cap Funds	18.51	10.99	14.52	8.23
S&P Japan 500	8.92	3.51	10.61	4.49
All Japanese Equity Funds	13.44	6.11	11.84	5.51
S&P 500	10.89	7.68	15.53	10.47
U.S. Equity Funds	9.88	1.72	8.00	4.84
S&P Global 1200	8.85	5.34	12.73	7.20
Global Equity Funds	8.47	3.39	9.95	3.76
S&P Global 1200 Ex Japan	8.89	5.57	12.99	7.50
International Equity Funds	5.81	2.09	9.84	4.40
S&P Emerging BMI	9.05	2.71	8.29	3.52
Emerging Equity Funds	3.47	-0.84	3.87	-0.60

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. All returns in JPY. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

Report 5: Quartile Breakpoints of Fund Performance			
FUND CATEGORY	THIRD QUARTILE	SECOND QUARTILE	FIRST QUARTILE
ONE-YEAR			
Japanese Large-Cap Funds	8.33	11.12	14.20
Japanese Mid/Small-Cap Funds	15.63	19.64	27.06
All Japanese Equity Funds	9.13	12.55	17.57
U.S. Equity Funds	3.92	7.87	13.83
Global Equity Funds	0.86	5.76	10.45
International Equity Funds	2.71	6.17	9.04
Emerging Equity Funds	-3.84	0.81	4.24
THREE-YEAR			
Japanese Large-Cap Funds	2.73	3.98	5.46
Japanese Mid/Small-Cap Funds	8.82	11.83	17.22
All Japanese Equity Funds	3.07	4.92	9.13
U.S. Equity Funds	-2.41	3.17	5.56
Global Equity Funds	-1.06	1.21	2.90
International Equity Funds	0.89	2.29	3.59
Emerging Equity Funds	-2.86	-0.34	2.29
FIVE-YEAR			
Japanese Large-Cap Funds	9.47	10.44	11.67
Japanese Mid/Small-Cap Funds	13.98	16.35	21.98
All Japanese Equity Funds	9.80	11.15	14.55
U.S. Equity Funds	5.65	10.63	13.84
Global Equity Funds	7.50	9.44	11.32
International Equity Funds	8.19	10.16	11.23
Emerging Equity Funds	3.23	5.47	6.86
TEN-YEAR			
Japanese Large-Cap Funds	3.48	4.45	5.46
Japanese Mid/Small-Cap Funds	7.34	8.98	13.47
All Japanese Equity Funds	3.78	5.26	7.46
U.S. Equity Funds	7.04	8.94	10.61
Global Equity Funds	3.99	5.09	6.20
International Equity Funds	4.36	5.14	6.15
Emerging Equity Funds	0.12	0.74	1.95

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2018. All returns in JPY. Figures are computed from universe of funds survived for the entire measured periods. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

APPENDIX A: GLOSSARY

SPIVA Styles and Morningstar Fund Classifications

Data from Morningstar is obtained for all managed funds domiciled in Japan for which month-end data is available during the performance period. The data includes the most comprehensive Japanese fund data on active and finalized (merged or liquidated) funds over the chosen period. Funds are classified based on the Morningstar fund classification system, and the SPIVA Japan Scorecard covers Japanese and international equity categories.

Japanese Equity Funds

The SPIVA Japan Scorecard covers major capitalization levels including large-, mid-, and small-cap funds. S&P Dow Jones Indices uses the Morningstar fund categories, which determine a fund portfolio's capitalization assignments.

The Morningstar classification system produces narrow, style-based classifications for Japanese equities funds. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given value and growth style segments are not consistently discernible over the past five years.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

Exhibit 1: Japanese Equity Funds: SPIVA and Morningstar Categories	
SPIVA CATEGORY	MORNINGSTAR CATEGORY
Japanese Large-Cap Funds	Japan Fund Japan Large-Cap Value Equity
	Japan Fund Japan Large-Cap Growth Equity
	Japan Fund Japan Large-Cap Blend Equity
Japanese Mid/Small-Cap Funds	Japan Fund Japan Small/Mid-Cap Value Equity
	Japan Fund Japan Small/Mid-Cap Growth Equity
	Japan Fund Japan Small/Mid-Cap Blend Equity

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

International Equity Funds

For international equity, the SPIVA Japan Scorecard reports on four major categories (U.S., global, international, and emerging market funds) of interest to global asset allocators.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

Exhibit 2: International Equity Funds: SPIVA and Morningstar Categories	
SPIVA CATEGORY	MORNINGSTAR CATEGORY
U.S. Equity Funds	Japan Fund North America Equity
Global Equity Funds	Japan Fund World Equity
International Equity Funds	Japan Fund World ex-Japan Equity
Emerging Equity Funds	Japan Fund Emerging Multiple Country/Area Equity

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

Benchmarks

The chosen benchmarks are shown in Exhibit 3. All index returns are total returns (i.e., include dividend reinvestment) in Japanese yen. There has been no deduction from index returns to account for fund investment expenses. It is important to note that active fund returns are after expenses, but they do not include loads and entry fees.

The benchmarks chosen are the most commonly adopted benchmarks for funds that fall into the respective fund peer groups. In some instances, a fund may not adopt the benchmarks stipulated in Exhibit 3. However, a vast majority do set their performance hurdle based on the assigned benchmarks in this report, ensuring that the study is robust and fair.

SPIVA CATEGORY	BENCHMARK INDEX
Japanese Large-Cap Funds	S&P/TOPIX 150
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap
All Japanese Equity Funds	S&P Japan 500
U.S. Equity Funds	S&P 500
Global Equity Funds	S&P Global 1200
International Equity Funds	S&P Global 1200 Ex Japan
Emerging Equity Funds	S&P Emerging BMI

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

APPENDIX B: GLOSSARY

Percentage of Funds Outperformed by the Index

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

Survivorship (%)

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

Equal-Weighted Fund Performance

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

Asset-Weighted Fund Performance

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

Quartiles Breakpoints

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

Survivorship Bias

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

Fees

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

Indices

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

S&P/TOPIX 150

The [S&P/TOPIX 150](#) is designed to represent the large-cap universe for Japan. It includes 150 highly liquid securities as leading, blue-chip companies from each of the Global Industry Classification Standard (GICS®) sectors of the Japanese market.

S&P JAPAN MIDSMALLCAP

The S&P Japan MidSmallCap combines the S&P Japan MidCap and S&P SmallCap indices and comprises the stocks representing the lowest 30% of float-adjusted market cap in Japan. It is a subset of the [S&P Japan BMI](#), comprehensive, rules-based index measuring Japanese stock market performance.

S&P JAPAN 500

The [S&P Japan 500](#) is designed to represent the Japanese investable market. Index constituents are drawn from eligible companies listed on the Tokyo, Osaka, or JASDAQ exchanges. Data is sourced from the comprehensive Toyo Keizai database. Constituents represent the large-, mid-, and small-cap components of the Japanese equity markets.

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 the top 500 companies in the leading industries of the U.S. economy, and it provides over 80% coverage of U.S. equities.

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 GLOBAL 1200 EX JAPAN

The S&P Global 1200 Ex Japan is a composite of six 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/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 EMERGING BMI

The [S&P Emerging BMI](#) captures all companies domiciled in the emerging markets within the [S&P Global BMI](#) with a float-adjusted market capitalization of at least USD 100 million and a minimum annual trading liquidity of USD 50 million.

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