

CONTRIBUTOR

Priscilla Luk
Managing Director
Global Research & Design
priscilla.luk@spglobal.com

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. In this scorecard, we evaluated returns of more than 780 Japanese large- and mid/small-cap equity funds, along with more than 624 international equity funds investing in global, international, and emerging markets, as well as U.S. equities.
- **Domestic Equity Funds:** In 2017, the [S&P/TOPIX 150](#) and the S&P Japan MidSmallCap gained 20.1% and 25.6%, respectively. Over the same period, the majority of large- and mid/small-cap equity funds outperformed their respective benchmarks, with average returns of 26.0% and 42.6%, respectively, which is more favorable than the observations over longer periods.

Over the 10-year horizon, 44.0% and 36.5% of large- and mid/small-cap funds outperformed their benchmarks, respectively, on an absolute basis. The large-cap funds were merged or liquidated at a rate of 31.8%, while the mid/small-cap funds disappeared at a higher rate of 39.0% in the 10-year period.

The mid/small-cap equity funds outperformed the benchmark by 2.3% per year in their equal-weighted return for the 10-year period, but the premium disappeared in their asset-weighted return. This implies alpha from active selection in mid/small-cap stocks was restricted for the larger funds due to the low investment capacity of small-cap stocks.

- **Foreign Equity Funds:** In contrast to the outstanding performance of domestic equity funds, foreign equity funds in Japan delivered disappointing performance compared to their benchmarks in 2017. Despite various foreign equity indices recording double-digit returns for the year, more than 70% of U.S. and emerging equity funds and more than 60% of global and international equity funds underperformed their respective benchmarks.

Over the 10-year period, the vast majority of funds underperformed their respective benchmarks across various foreign fund categories. Less than 5% of the international and emerging equity funds managed to survive and outperform their respective benchmarks on both an absolute and risk-adjusted basis. Furthermore, 38.2% of funds across all foreign equity fund categories were merged or liquidated over the 10-year horizon, with U.S. equity funds disappearing at the fastest rate (44.0%).

Average relative performance of foreign equity funds were mostly in downward trends compared to their benchmarks over the past 10 years. U.S. equity funds recorded the worst relative return, with annualized underperformance of 4.3% and 5.8% on equal- and asset-weighted bases, respectively. Among the U.S. and emerging equity funds, average returns were higher when equally weighted than when asset weighted, indicating smaller funds tended to perform better than the larger funds in these two categories.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

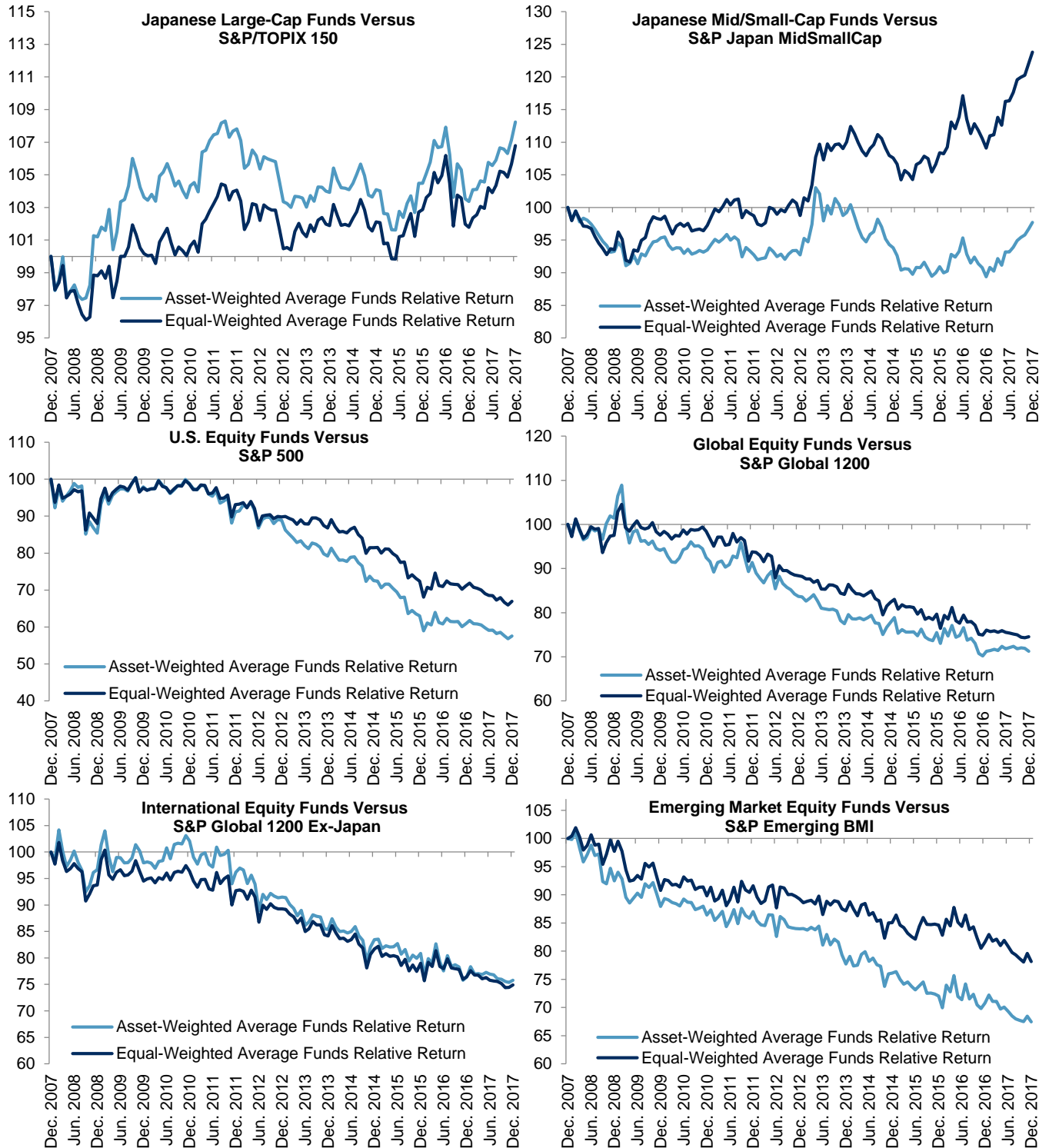
There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication 16 years ago, the SPIVA Scorecard has served 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 Dec. 29, 2017. All returns in AUD. 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	15.28	34.04	44.31	55.96
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	13.07	30.41	41.10	63.52
All Japanese Equity Funds	S&P Japan 500	19.67	38.78	52.44	61.11
U.S. Equity Funds	S&P 500	74.77	94.44	84.38	88.00
Global Equity Funds	S&P Global 1200	64.55	90.91	90.41	95.19
International Equity Funds	S&P Global 1200 Ex Japan	62.30	96.08	92.45	98.08
Emerging Equity Funds	S&P Emerging BMI	75.00	86.08	92.59	95.45

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 29, 2017. 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	23.06	26.14	40.00	55.66
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	42.48	38.51	59.59	66.04
All Japanese Equity Funds	S&P Japan 500	25.23	38.78	55.20	60.29
U.S. Equity Funds	S&P 500	73.87	92.22	96.88	96.00
Global Equity Funds	S&P Global 1200	70.90	90.26	94.52	93.27
International Equity Funds	S&P Global 1200 Ex Japan	65.57	96.08	94.34	98.08
Emerging Equity Funds	S&P Emerging BMI	61.84	84.81	93.83	95.45

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 29, 2017. 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	386	96.63
Japanese Mid/Small-Cap Funds	153	93.46
All Japanese Equity Funds	539	95.73
U.S. Equity Funds	111	99.10
Global Equity Funds	189	93.65
International Equity Funds	61	98.36
Emerging Equity Funds	76	96.05
THREE-YEAR		
Japanese Large-Cap Funds	329	90.58
Japanese Mid/Small-Cap Funds	148	86.49
All Japanese Equity Funds	477	89.31
U.S. Equity Funds	90	91.11
Global Equity Funds	154	79.87
International Equity Funds	51	90.20
Emerging Equity Funds	79	78.48
FIVE-YEAR		
Japanese Large-Cap Funds	325	79.08
Japanese Mid/Small-Cap Funds	146	74.66
All Japanese Equity Funds	471	77.71
U.S. Equity Funds	32	75.00
Global Equity Funds	146	69.18
International Equity Funds	53	84.91
Emerging Equity Funds	81	62.96
TEN-YEAR		
Japanese Large-Cap Funds	327	68.20
Japanese Mid/Small-Cap Funds	159	61.01
All Japanese Equity Funds	486	65.84
U.S. Equity Funds	25	56.00
Global Equity Funds	104	55.77
International Equity Funds	52	75.00
Emerging Equity Funds	44	63.64

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 29, 2017. 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	20.13	9.76	17.28	3.15
Japanese Large-Cap Funds	26.04	11.41	18.72	3.83
S&P Japan MidSmallCap	25.65	13.88	21.15	6.87
Japanese Mid/Small-Cap Funds	42.59	19.32	26.75	9.17
S&P Japan 500	21.49	10.61	18.33	3.88
All Japanese Equity Funds	30.47	13.66	21.08	5.47
S&P 500	17.67	9.12	22.08	8.59
U.S. Equity Funds	10.70	2.22	15.12	4.32
S&P Global 1200	19.54	7.91	18.24	5.75
Global Equity Funds	18.91	4.39	14.28	2.69
S&P Global 1200 Ex Japan	19.49	7.76	18.32	5.97
International Equity Funds	17.12	4.70	14.25	2.95
S&P Emerging BMI	30.98	7.04	11.06	2.43
Emerging Equity Funds	25.42	4.07	8.15	-0.07

Source: S&P Dow Jones Indices LLC, Morningstar. Data as Dec. 29, 2017. 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	20.13	9.76	17.28	3.15
Japanese Large-Cap Funds	25.80	11.20	18.37	3.97
S&P Japan MidSmallCap	25.65	13.88	21.15	6.87
Japanese Mid/Small-Cap Funds	37.40	15.43	22.43	6.62
S&P Japan 500	21.49	10.61	18.33	3.88
All Japanese Equity Funds	29.08	12.37	19.37	4.61
S&P 500	17.67	9.12	22.08	8.59
U.S. Equity Funds	11.23	1.01	11.89	2.75
S&P Global 1200	19.54	7.91	18.24	5.75
Global Equity Funds	21.36	4.79	14.50	2.23
S&P Global 1200 Ex Japan	19.49	7.76	18.32	5.97
International Equity Funds	18.52	4.35	13.94	3.07
S&P Emerging BMI	30.98	7.04	11.06	2.43
Emerging Equity Funds	24.79	2.83	6.29	-1.53

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 29, 2017. 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	22.36	25.21	29.60
Japanese Mid/Small-Cap Funds	32.35	40.84	50.52
All Japanese Equity Funds	23.24	27.82	35.04
U.S. Equity Funds	2.92	12.39	18.29
Global Equity Funds	13.70	17.73	22.17
International Equity Funds	14.01	18.27	20.71
Emerging Equity Funds	21.34	26.61	31.20
THREE-YEAR			
Japanese Large-Cap Funds	9.70	10.79	12.63
Japanese Mid/Small-Cap Funds	14.46	17.93	22.38
All Japanese Equity Funds	10.07	11.92	15.54
U.S. Equity Funds	-2.81	3.27	5.70
Global Equity Funds	1.61	3.69	6.55
International Equity Funds	3.37	4.56	5.49
Emerging Equity Funds	1.47	4.19	6.63
FIVE-YEAR			
Japanese Large-Cap Funds	17.12	18.21	19.56
Japanese Mid/Small-Cap Funds	21.32	24.79	31.31
All Japanese Equity Funds	17.45	19.03	23.03
U.S. Equity Funds	17.52	18.81	20.59
Global Equity Funds	12.80	15.20	16.85
International Equity Funds	12.95	15.69	16.40
Emerging Equity Funds	7.03	9.11	9.80
TEN-YEAR			
Japanese Large-Cap Funds	2.59	3.72	4.70
Japanese Mid/Small-Cap Funds	5.79	8.31	12.26
All Japanese Equity Funds	3.06	4.39	6.15
U.S. Equity Funds	5.35	6.49	8.10
Global Equity Funds	2.84	3.55	4.61
International Equity Funds	2.79	3.24	4.00
Emerging Equity Funds	-0.82	0.28	1.64

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 29, 2017. All returns in JPY. 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 pth 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.

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

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