SPIVA[®] Japan Scorecard

SUMMARY

- S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since we first published the SPIVA U.S. Scorecard in 2002. Over the years, we have expanded the scorecard coverage into Australia, Canada, Europe, India, South Africa, Latin America, and Japan.
- 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 the returns of more than 829 Japanese large- and mid-/small-cap equity funds, along with more than 703 international equity funds investing in global, international, and emerging markets, as well as U.S. equities.
- Benchmark indices for the domestic and foreign equity markets recovered in the first half of 2019; however, the Japanese large-cap funds and the majority of foreign equity fund categories recorded lower equal-weighted average returns than their respective benchmarks.
- There was no consistent trend in the yearly active versus index figures, but we have consistently observed underperformance for the majority of Japanese active funds in most categories over the 10-year period.

Exhibit 1: H1 2019 Average Fund and Index Performance

FUND CATEGORY	INDEX	INDEX RETURN (%)	EQUAL-WEIGHTED AVERAGE FUND RETURN (%)	ASSET-WEIGHTED AVERAGE FUND RETURN (%)
Japanese Large-Cap Funds	S&P/TOPIX 150	6.33	5.67	6.27
Japanese Mid-/Small-Cap Funds	S&P Japan MidSmallCap	4.02	7.18	7.71
All Japanese Equity Funds	S&P Japan 500	5.37	6.18	6.81
U.S. Equity Funds	S&P 500	16.41	14.74	16.55
Global Equity Funds	S&P Global 1200	14.91	14.01	16.29
International Equity Funds	S&P Global 1200 Ex Japan	15.64	14.03	13.97
Emerging Equity Funds	S&P Emerging BMI	10.04	10.31	16.16

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. All index returns based on total return in JPY. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

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

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Experience the active vs. passive debate on a global scale on INDEXOLOGY®.

S&P Dow Jones Indices

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- **Domestic Equity Funds:** In the 12-month period ending June 2019, the <u>S&P/TOPIX 150</u> and the S&P Japan MidSmallCap lost 5.6% and 11.7%, respectively. Over the same period, 93% and 69% of large- and mid-/small-cap equity funds underperformed their respective benchmarks, with average losses of 10.4% and 13.4%, respectively.
- Over the 10-year horizon, more than 70% and 50% 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 of the mid-/small-cap funds exceeded their respective benchmarks' returns over the same period.
- Compared with the benchmark indices, the domestic equity funds performed better than the foreign equity funds over the longer periods, and domestic equity funds also had a lower liquidation rate than foreign equity funds.
- Foreign Equity Funds: Over the 12-month period ending June 2019, emerging market equity funds recorded the best relative performance among all the foreign equity fund categories, with more than half of funds outperforming the <u>S&P Emerging BMI</u>. However, a majority of funds in the remaining foreign equity fund categories failed to beat the benchmark indices, and they recorded a lower average return than the benchmark.
- Over the 10-year period, the majority of funds underperformed their respective benchmarks across various foreign fund categories. Less than 15% of foreign equity funds survived and outperformed 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.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

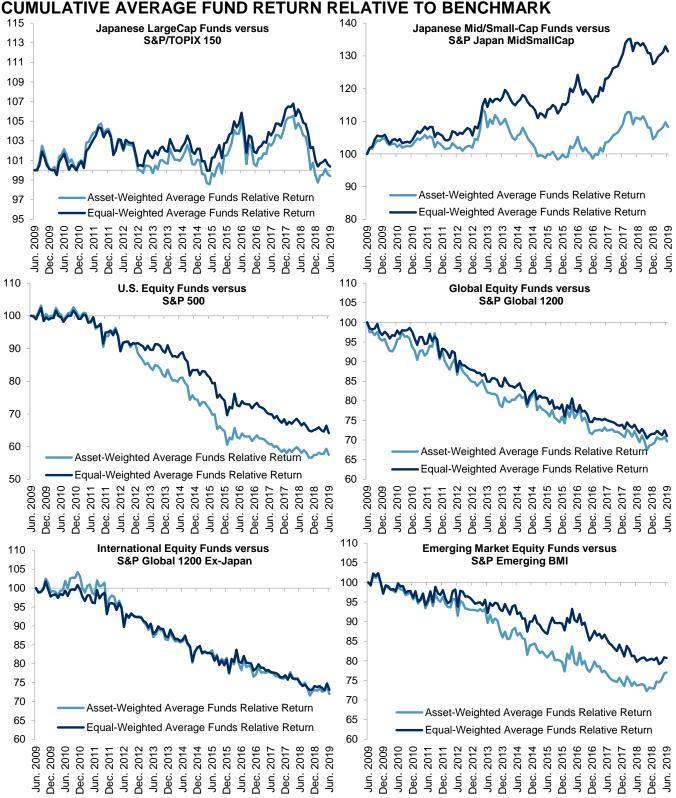
There is nothing novel about the index versus active debate. It has been a contentious subject for decades, and there are few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication 17 years ago, the SPIVA Scorecard has served 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 longer history. Since this is meant to be a scorecard for active managers, index funds, leveraged and inverse funds, and other index-linked products are excluded.

Please note that neither S&P Dow Jones Indices, nor any of its affiliates, make any assurance or provide any investment recommendation on the appropriateness of investing in either index or active investing. S&P Dow Jones Indices does not sponsor, endorse, sell, or promote any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. The SPIVA Japan Scorecard simply provides semiannual statistics according to the SPIVA methodology and a brief analysis of those statistics. Further, S&P Dow Jones Indices does advise that anyone reading this report also read the SPIVA methodology in the report in order to understand how the data was derived.



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. 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	93.3	84.5	75.2	73.3
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	69.3	48.0	42.9	57.0
All Japanese Equity Funds	S&P Japan 500	84.9	75.1	65.0	67.9
U.S. Equity Funds	S&P 500	83.3	76.6	93.6	87.5
Global Equity Funds	S&P Global 1200	67.9	84.6	92.2	96.6
International Equity Funds	S&P Global 1200 Ex Japan	71.4	91.1	94.2	96.5
Emerging Equity Funds	S&P Emerging BMI	48.2	90.1	91.4	96.6

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. 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	91.6	91.5	72.8	70.1
Japanese Mid/Small-Cap Funds	S&P Japan MidSmallCap	57.0	59.1	48.7	63.4
All Japanese Equity Funds	S&P Japan 500	82.1	81.5	65.4	68.1
U.S. Equity Funds	S&P 500	77.3	80.4	94.9	95.8
Global Equity Funds	S&P Global 1200	67.0	84.6	91.5	95.7
International Equity Funds	S&P Global 1200 Ex Japan	68.3	92.9	94.2	98.3
Emerging Equity Funds	S&P Emerging BMI	47.0	90.1	91.4	94.8

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. 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	357	95.52
Japanese Mid/Small-Cap Funds	179	97.77
All Japanese Equity Funds	536	96.27
U.S. Equity Funds	132	96.21
Global Equity Funds	212	94.81
International Equity Funds	63	96.83
Emerging Equity Funds	83	96.39
All Foreign Equity Funds	490	95.71
THREE-YEAR		
Japanese Large-Cap Funds	354	87.29
Japanese Mid/Small-Cap Funds	171	88.89
All Japanese Equity Funds	525	87.81
U.S. Equity Funds	107	92.52
Global Equity Funds	182	85.16
International Equity Funds	56	89.29
Emerging Equity Funds	81	77.78
All Foreign Equity Funds	426	86.15
FIVE-YEAR		
Japanese Large-Cap Funds	323	79.57
Japanese Mid/Small-Cap Funds	154	82.47
All Japanese Equity Funds	477	80.50
U.S. Equity Funds	78	82.05
Global Equity Funds	153	72.55
International Equity Funds	52	82.69
Emerging Equity Funds	81	59.26
All Foreign Equity Funds	364	73.08
TEN-YEAR		
Japanese Large-Cap Funds	345	62.90
Japanese Mid/Small-Cap Funds	172	59.88
All Japanese Equity Funds	517	61.90
U.S. Equity Funds	24	54.17
Global Equity Funds	117	57.26
International Equity Funds	57	64.91
Emerging Equity Funds	58	48.28
All Foreign Equity Funds	256	56.64

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

INDEX/PEER GROUP	ONE-YEAR (%)	THREE-YEAR ANNUALIZED (%)	FIVE-YEAR ANNUALIZED (%)	TEN-YEAR ANNUALIZED (%)
S&P/TOPIX 150	-5.59	10.66	6.24	7.20
Japanese Large-Cap Funds	-10.38	8.71	5.81	7.24
S&P Japan MidSmallCap	-11.72	8.91	7.21	8.75
Japanese Mid/Small-Cap Funds	-13.44	10.96	9.93	11.76
S&P Japan 500	-7.33	10.24	6.41	7.48
All Japanese Equity Funds	-11.38	9.47	7.16	8.72
S&P 500	7.40	16.07	12.08	15.97
U.S. Equity Funds	1.78	11.49	5.12	10.93
S&P Global 1200	4.11	14.40	8.60	12.53
Global Equity Funds	1.78	11.30	5.05	8.75
S&P Global 1200 Ex Japan	4.95	14.71	8.80	13.00
International Equity Funds	2.34	11.22	5.23	9.51
S&P Emerging BMI	0.32	13.11	4.73	7.63
Emerging Equity Funds	1.50	9.13	2.04	5.35

Source: S&P Dow Jones Indices LLC, Morningstar. Data as June 30, 2019. 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	-5.59	10.66	6.24	7.20
Japanese Large-Cap Funds	-10.05	8.66	5.83	7.14
S&P Japan MidSmallCap	-11.72	8.91	7.21	8.75
Japanese Mid/Small-Cap Funds	-13.84	9.93	7.73	9.62
S&P Japan 500	-7.33	10.24	6.41	7.48
All Japanese Equity Funds	-11.51	8.96	6.23	7.63
S&P 500	7.40	16.07	12.08	15.97
U.S. Equity Funds	4.34	12.89	4.66	9.73
S&P Global 1200	4.11	14.40	8.60	12.53
Global Equity Funds	2.51	10.86	5.36	8.54
S&P Global 1200 Ex Japan	4.95	14.71	8.80	13.00
International Equity Funds	1.22	11.54	5.02	9.34
S&P Emerging BMI	0.3	13.11	4.73	7.63
Emerging Equity Funds	4.9	12.19	2.34	4.85

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. All returns in JPY. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

FUND CATEGORY	THIRD QUARTILE	SECOND QUARTILE	FIRST QUARTILE
ONE-YEAR			
Japanese Large-Cap Funds	-12.71	-10.34	-8.29
Japanese Mid/Small-Cap Funds	-16.74	-13.96	-10.56
All Japanese Equity Funds	-14.11	-11.41	-8.52
U.S. Equity Funds	-0.33	2.82	6.61
Global Equity Funds	-0.45	2.60	5.46
International Equity Funds	0.03	2.71	5.40
Emerging Equity Funds	-1.51	0.90	4.13
THREE-YEAR			
Japanese Large-Cap Funds	7.30	8.75	9.95
Japanese Mid/Small-Cap Funds	7.43	9.59	13.64
All Japanese Equity Funds	7.35	8.93	10.69
U.S. Equity Funds	7.47	12.87	16.11
Global Equity Funds	7.85	11.03	13.32
International Equity Funds	9.01	12.28	13.53
Emerging Equity Funds	5.55	7.86	11.16
FIVE-YEAR			
Japanese Large-Cap Funds	4.53	5.45	6.55
Japanese Mid/Small-Cap Funds	6.31	8.82	12.18
All Japanese Equity Funds	4.77	6.04	8.32
U.S. Equity Funds	2.79	6.44	9.28
Global Equity Funds	3.06	4.89	6.84
International Equity Funds	3.60	5.62	6.74
Emerging Equity Funds	0.09	1.60	3.19
TEN-YEAR			
Japanese Large-Cap Funds	6.19	6.97	8.00
Japanese Mid/Small-Cap Funds	8.30	10.30	14.48
All Japanese Equity Funds	6.53	7.59	9.50
U.S. Equity Funds	13.03	13.61	15.66
Global Equity Funds	8.75	10.01	10.74
International Equity Funds	9.33	10.11	11.13
Emerging Equity Funds	4.73	6.02	6.29

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2019. 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	
	Japan Fund Japan Large-Cap Value Equity	
Japanese Large-Cap Funds	Japan Fund Japan Large-Cap Growth Equity	
	Japan Fund Japan Large-Cap Blend Equity	
	Japan Fund Japan Small/Mid-Cap Value Equity	
Japanese Mid/Small-Cap Funds	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.

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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.

Exhibit 3: SPIVA Categories and Their Benchmarks		
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 <u>S&P Japan BMI</u>, comprehensive, rules-based index measuring Japanese stock market performance.

S&P JAPAN 500

The <u>S&P Japan 500</u> 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-capitalizationweighted 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 <u>S&P Global 1200</u> is a composite of seven headline indices, many of which are accepted leaders in their regions. It includes the S&P 500 (U.S.), <u>S&P Europe 350</u> (Europe), S&P/TOPIX 150 (Japan), <u>S&P/TSX 60</u> (Canada), <u>S&P/ASX All</u> <u>Australian 50</u> (Australia), <u>S&P Asia 50</u> (Asia Ex-Japan), and <u>S&P Latin America 40</u> (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 <u>S&P</u> <u>Global BMI</u> 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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