S&P Dow Jones Indices

A Division of S&P Global

SPIVA® Latin America Scorecard

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

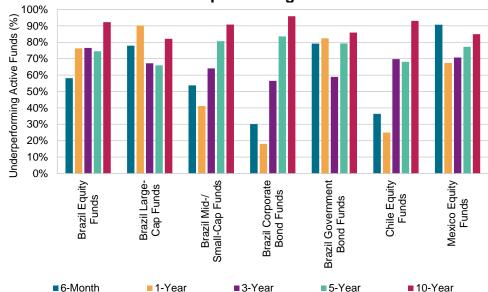
Summary

The S&P Indices Versus Active (SPIVA) Latin America Scorecard compares the performance of actively managed mutual funds in Brazil, Chile, and Mexico to their benchmarks over 1-, 3-, 5- and 10-year periods.

Mid-Year 2023 Highlights

In the first half of 2023, Latin American active managers produced mixed performance. The majority of active managers in most categories failed to outperform, especially over longer periods. Only in Brazil Corporate Bond and Chile Equity funds were underperformance rates below 50% over the first half of 2023.





Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Outperformance is based on equal-weighted fund counts. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Brazil

The <u>S&P Brazil BMI</u> increased 10.6% YTD. Funds in the Brazil Equity category climbed 9.8% and 10.9% on equal and asset-weighted bases, respectively. Of funds in this category, 58.1% underperformed the benchmark over the first half of the year, with underperformance rates rising to 76.6%, 74.5% and 92.3% over the 3-, 5- and 10-year horizons, respectively.

- Large-cap companies posted 10.0% in the first half of 2023, as measured by the S&P Brazil LargeCap. Funds in this category gained 7.1% on both equal and asset-weighted bases over the same period. In Brazil Large-Cap funds, 77.9% underperformed the index. Longer-term underperformance increased, with 82.4% of funds trailing over a 10-year period.
- In contrast, small- and mid-cap companies performed relatively better, with the S&P Brazil MidSmallCap up 11.9% YTD. Funds within this category gained 14.3% and 11.6% on equal and asset-weighted bases, respectively. Outperformance in this category was close to even, with 53.7% of active managers underperforming in H1 2023 and underperformance rates increasing over longer periods.
- Less than one-third of Brazil Corporate Bond funds underperformed, while 79.4% of Brazil
 Government Bond funds underperformed their benchmark over a six-month period.
 Consistent with their equity peers, rates of underperformance increased over longer periods.

Chile

- The <u>S&P Chile BMI</u> was up 7.2% YTD. However, only 35.6% of Chile Equity funds underperformed the index over the same period, with higher levels of underperformance over longer intervals.
- Larger funds performed relatively better than smaller funds over the 1-, 3-, 5- and 10-year periods on an asset-weighted basis versus an equal-weighted basis, while smaller funds outperformed over the first half of 2023. The greatest difference was the one-year period, at 186 bps, as asset-weighted performance of Chile Equity funds was 20.7%, while equal-weighted was 18.9%.

Mexico

The S&P/BMV IRT increased 12.4% over the first half of 2023. For Mexico Equity fund managers, success was particularly elusive in the first half of 2023, as 90.7% of active managers underperformed the S&P/BMV IRT. Although slightly below the H1 2023 level, underperformance rates increased over 3-, 5 and 10-year periods, to 70.7%, 77.3% and 85.0%, respectively.

- Despite the underperformance of most active managers in the first half of the year, the survival rates of active funds in Mexico were the highest of Latin America, at 100.0%, 100.0%, 90.9% and 72.5% over the 1-, 3-, 5- and 10-year periods, respectively.
- Smaller funds performed better than larger funds over all periods, especially over the sixmonth period, with asset-weighted Mexico Equity funds performance 180 bps below equalweighted performance.

Market Context

Latin American equities began 2023 on an upswing, with the <u>S&P Latin America BMI</u> increasing 21.4% in U.S. dollar terms over the first six months of the year (see Exhibit 2).

30.0% Cumulative Performance (%) 25.0% 20.0% 15.0% 10.0% 5.0% 0.0% -5.0% -10.0% December 2022 January 2023 February 2023 March 2023 April 2023 May 2023 June 2023

Exhibit 2: S&P Latin America BMI Cumulative Performance

Source: S&P Dow Jones Indices LLC, FactSet. Data as of June 30, 2023. Index performance based on total return in U.S. dollars. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Across observed regions and capitalization ranges, returns were all positive in H1 2023. Equity indices in Mexico and Brazil posted double-digit performance, while Brazil corporate and government bonds as well as Chile equities increased by single-digit percentages (see Exhibit 3 and Report 3).

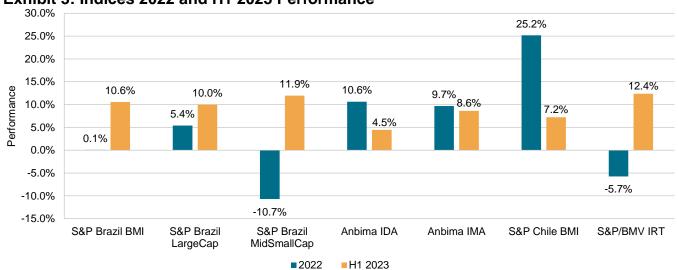


Exhibit 3: Indices 2022 and H1 2023 Performance

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2023. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

While distributions of index constituent returns are typically positively skewed, making selection of outperforming stocks statistically difficult, in some rare periods, the majority of stocks outperform their benchmark. During H1 2023, the majority of stocks (ranging from 51% to 74%) outperformed their benchmark in four out of five equity markets (see Exhibit 4). Mexico was the sole exception, with only 37% of constituents within the S&P/BMV IRT outperforming the benchmark over the first six months of 2023. Mexico Equity fund managers incidentally also exhibited the highest underperformance rate across all SPIVA Latin America categories, at 91% (see Exhibit 1). Despite the absence of positive skew in four Latin America indices, Chile was the only one of those four where fewer than half of active managers underperformed during H1 2023.

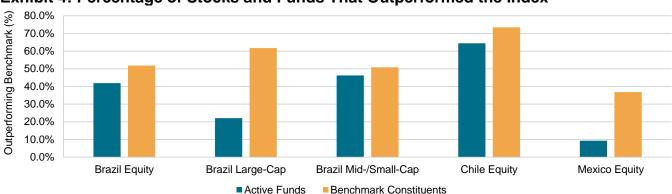


Exhibit 4: Percentage of Stocks and Funds That Outperformed the Index

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2023. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Across most Latin American equity markets, dispersion levels in H1 2023 fell slightly from the 2022's elevated levels, as shown in Exhibit 5. Higher dispersion, a measure of cross-sectional volatility expressing differences between stock returns within each index, has typically been associated not only with greater rewards from picking outperforming stocks, but also with greater penalties from selecting underperformers.

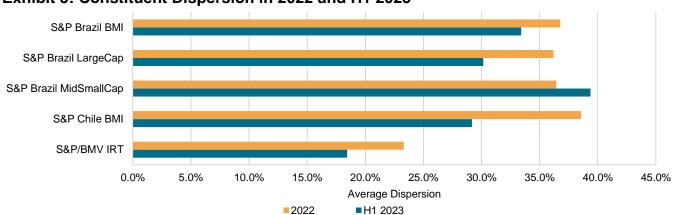


Exhibit 5: Constituent Dispersion in 2022 and H1 2023

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2023. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes

Differences in excess returns across fund quartiles often highlight the challenge that asset owners face when selecting active managers. In many categories, bottom-quartile funds underperformed their respective benchmarks to a greater degree than top-quartile funds outperformed (see Exhibit 6). Consequently, allocators selecting funds from these categories faced more severe underperformance penalties from picking bottom-quartile funds than the outperformance gained from picking those that finished in the top quartile. The three categories where top-quartile funds outperformed to a greater degree than bottom-quartile funds underperformed were also the ones with the lowest rates of active fund underperformance: Brazil Mid-/Small-Cap, Brazil Corporate Bond and Chile Equity (see Exhibit 6).

5.3% 5.1% 4.0% 3.2% 2.7% Excess Performance (%) 2.0% 0.0% -0.4% -0.2% -0.8% -1.0% -2.0% -2.1% -2.5% -2.8% -4.0% -4.2% -4.5% -5.8% -6.0% -8.0% Brazil Large-Cap Brazil Mid-/Small- Brazil Corporate Chile Equity **Brazil Equity** Brazil Mexico Equity Funds Cap Funds Bond Funds Goventment Funds Funds Bond Funds 3rd Quartile ◆ 2nd Quartile ◆ 1st Quartile

Exhibit 6: Excess Return versus Category Benchmark by Active Fund Quartile

Source: S&P Dow Jones Indices LLC. Data as of June 30, 2023. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

A Unique Scorecard for the Active versus Passive Debate

Since its first publication over 20 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For two decades, 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 much 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 Latin America 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 means the returns of a BRL, CLP or MXN 10 billion fund affect the average in the same manner as the returns of an BRL, CLP or MXN 10 million fund. An accurate representation of how market participants fared in a particular period can be ascertained by calculating weighted average returns where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- Data Cleaning: SPIVA Scorecards avoid double-counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

Reports

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

Fund Category	Comparison Index	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
Brazil Equity Funds	S&P Brazil BMI	58.10	76.05	76.56	74.55	92.31
Brazil Large-Cap Funds	S&P Brazil LargeCap	77.91	90.26	67.21	65.96	82.41
Brazil Mid-/Small-Cap Funds	S&P Brazil MidSmallCap	53.73	41.13	64.04	80.65	90.80
Brazil Corporate Bond Funds	Anbima Debentures Index (IDA)	30.71	17.86	56.48	83.58	95.89
Brazil Government Bond Funds	Anbima Market Index (IMA)	79.37	82.70	59.06	79.29	85.94
Chile Equity Funds	S&P Chile BMI	35.56	24.39	68.89	67.35	93.02
Mexico Equity Funds	S&P/BMV IRT	90.70	67.44	70.73	77.27	85.00

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Outperformance is based on equal-weighted fund counts. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Percentage of Funds Outperformed by the Index (Based on Risk-Adjusted Return)

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Fund Category	Comparison Index	3-Year (%)	5-Year (%)	10-Year (%)
Brazil Equity Funds	S&P Brazil BMI	75.78	74.09	91.07
Brazil Large-Cap Funds	S&P Brazil LargeCap	64.75	70.21	76.85
Brazil Mid-/Small-Cap Funds	S&P Brazil MidSmallCap	65.17	75.81	89.66
Brazil Corporate Bond Funds	Anbima Debentures Index (IDA)	40.74	67.91	75.34
Brazil Government Bond Funds	Anbima Market Index (IMA)	44.63	52.50	62.89
Chile Equity Funds	S&P Chile BMI	64.44	67.35	95.35
Mexico Equity Funds	S&P/BMV IRT	51.22	68.18	85.00

Source S&P Dow Jones Indices LLC, Morningstar. Results shown for all time horizons over which the comparison index total return was positive. Data for periods ending June 30, 2023. Risk-adjusted return is computed as the annualized average monthly return divided by the annualized standard deviation of the monthly return for the measured periods. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Survivorship of Funds

Fund Category	Number of Funds at Start	Survivorship (%)
YTD		
Brazil Equity Funds	315	93.97
Brazil Large-Cap Funds	163	94.48
Brazil Mid-/Small-Cap Funds	134	95.52
Brazil Corporate Bond Funds	127	96.06
Brazil Government Bond Funds	441	96.83
Chile Equity Funds	45	95.56
Mexico Equity Funds	43	100.00
1-Year		
Brazil Equity Funds	309	89.00
Brazil Large-Cap Funds	154	90.26
Brazil Mid-/Small-Cap Funds	124	89.52
Brazil Corporate Bond Funds	112	95.54
Brazil Government Bond Funds	393	93.89
Chile Equity Funds	41	92.68
Mexico Equity Funds	43	100.00
3-Year		
Brazil Equity Funds	256	85.94
Brazil Large-Cap Funds	122	84.43
Brazil Mid-/Small-Cap Funds	89	87.64
Brazil Corporate Bond Funds	108	78.70
Brazil Government Bond Funds	298	87.25
Chile Equity Funds	45	75.56
Mexico Equity Funds	41	100.00
5-Year		
Brazil Equity Funds	220	74.09
Brazil Large-Cap Funds	94	81.91
Brazil Mid-/Small-Cap Funds	62	77.42
Brazil Corporate Bond Funds	134	41.79
Brazil Government Bond Funds	280	77.14
Chile Equity Funds	49	61.22
Mexico Equity Funds	44	90.91

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Survivorship of Funds (cont.)

Fund Category	Number of Funds at Start	Survivorship (%)
10-Year		
Brazil Equity Funds	403	31.27
Brazil Large-Cap Funds	108	53.70
Brazil Mid-/Small-Cap Funds	87	39.08
Brazil Corporate Bond Funds	73	28.77
Brazil Government Bond Funds	256	58.59
Chile Equity Funds	43	34.88
Mexico Equity Funds	40	72.50

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average Fund Performance (Equal-Weighted)

Category	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P Brazil BMI	10.57	21.51	6.12	10.58	9.57
Brazil Equity Funds	9.77	17.72	2.75	9.01	6.98
S&P Brazil LargeCap	9.98	23.51	7.10	9.70	8.96
Brazil Large-Cap Funds	7.09	14.54	3.98	8.26	7.79
S&P Brazil MidSmallCap	11.94	16.94	3.73	12.27	10.76
Brazil Mid-/Small-Cap Funds	14.32	19.71	4.11	12.79	7.85
Anbima Debentures Index (IDA)	4.46	8.77	9.43	8.30	10.15
Brazil Corporate Bond Funds	5.65	11.86	9.17	6.88	7.88
Anbima Market Index (IMA)	8.64	14.01	7.54	8.95	10.32
Brazil Government Bond Funds	7.03	12.27	6.59	6.82	8.31
S&P Chile BMI	7.22	11.41	13.49	1.83	3.75
Chile Equity Funds	9.39	18.87	12.40	1.35	2.88
S&P/BMV IRT	12.38	16.76	16.03	5.37	5.29
Mexico Equity Funds	8.36	15.51	12.15	3.00	3.71

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Returns shown are annualized for periods greater than one year. Index performance based on total return in local country currency. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Average Fund Performance (Asset-Weighted)

Category	YTD (%)	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P Brazil BMI	10.57	21.51	6.12	10.58	9.57
Brazil Equity Funds	10.91	18.39	1.80	7.77	7.36
S&P Brazil LargeCap	9.98	23.51	7.10	9.70	8.96
Brazil Large-Cap Funds	7.13	14.93	3.64	8.49	8.30
S&P Brazil MidSmallCap	11.94	16.94	3.73	12.27	10.76
Brazil Mid-/Small-Cap Funds	11.57	18.01	3.00	10.08	7.33
Anbima Debentures Index (IDA)	4.46	8.77	9.43	8.30	10.15
Brazil Corporate Bond Funds	4.81	11.21	8.96	7.17	8.74
Anbima Market Index (IMA)	8.64	14.01	7.54	8.95	10.32
Brazil Government Bond Funds	6.63	12.93	7.58	7.00	8.71
S&P Chile BMI	7.22	11.41	13.49	1.83	3.75
Chile Equity Funds	8.99	20.72	12.78	1.78	3.54
S&P/BMV IRT	12.38	16.76	16.03	5.37	5.29
Mexico Equity Funds	6.56	13.83	11.58	1.99	3.36

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Returns shown are annualized for periods greater than one year. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 6: Quartile Breakpoints of Fund Performance

Fund Category	Third Quartile	Second Quartile	First Quartile
YTD			
Brazil Equity Funds	6.32	9.48	13.30
Brazil Large-Cap Funds	5.50	7.10	9.56
Brazil Mid-/Small-Cap Funds	9.10	11.80	17.01
Brazil Corporate Bond Funds	4.30	6.32	7.69
Brazil Government Bond Funds	6.13	6.53	7.83
Chile Equity Funds	6.22	9.16	12.48
Mexico Equity Funds	6.56	8.41	10.26
1-Year			
Brazil Equity Funds	13.76	17.49	22.11
Brazil Large-Cap Funds	13.58	17.65	19.86
Brazil Mid-/Small-Cap Funds	14.36	18.76	23.60
Brazil Corporate Bond Funds	10.05	11.79	14.14
Brazil Government Bond Funds	11.44	13.23	13.63
Chile Equity Funds	14.31	18.67	25.82
Mexico Equity Funds	10.94	14.74	18.50

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Returns shown are annualized for periods greater than one year. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 6: Quartile Breakpoints of Fund Performance (cont.)

Fund Category	Third Quartile	Second Quartile	First Quartile
3-Year			
Brazil Equity Funds	-0.63	3.31	6.31
Brazil Large-Cap Funds	2.95	6.24	8.06
Brazil Mid-/Small-Cap Funds	-0.47	2.66	6.52
Brazil Corporate Bond Funds	8.96	9.59	10.30
Brazil Government Bond Funds	6.42	7.39	7.96
Chile Equity Funds	11.08	13.27	15.90
Mexico Equity Funds	8.71	12.96	16.28
5-Year			
Brazil Equity Funds	6.46	8.56	11.42
Brazil Large-Cap Funds	7.52	9.12	11.32
Brazil Mid-/Small-Cap Funds	7.70	9.14	12.32
Brazil Corporate Bond Funds	7.02	7.65	9.16
Brazil Government Bond Funds	6.22	6.89	9.12
Chile Equity Funds	0.20	2.49	3.54
Mexico Equity Funds	0.04	3.66	5.38
10-Year			
Brazil Equity Funds	5.98	7.89	9.54
Brazil Large-Cap Funds	6.61	8.32	9.82
Brazil Mid-/Small-Cap Funds	5.72	8.32	10.57
Brazil Corporate Bond Funds	9.13	9.48	9.94
Brazil Government Bond Funds	8.10	8.97	10.21
Chile Equity Funds	1.37	1.69	3.36
Mexico Equity Funds	1.61	2.78	4.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of June 30, 2023. Returns shown are annualized for periods greater than one year. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Appendix A: SPIVA Styles and Morningstar Fund Classifications

Data are obtained from Morningstar for all managed funds for which month-end data are available during the performance period. The SPIVA Latin America Scorecard covers country-specific funds for Brazil, Chile and Mexico that are domiciled in the respective country markets and denominated in each country's local currency. The Morningstar classification system produces narrow, style-based classifications for funds.

Morningstar categories have been mapped to SPIVA peer groups as follows:

Exhibit 7: Fund Category Mapping

Morningstar Category	SPIVA Category
Brazil	
Brazil Fund Brazil All-Cap Equity	Brazil Equity Funds
Brazil Fund Brazil Large-Cap Equity	Brazil Large-Cap Funds
Brazil Fund Brazil Small-/Mid-Cap Equity	Brazil Mid-/Small-Cap Funds
Brazil Fund BRL Corporate Bond	Brazil Corporate Bond Funds
Brazil Fund BRL Government Bond	Brazil Government Bond Funds
Chile	
Chile Fund Chile Equity	Chile Equity Funds
Mexico	
Mexico Fund Mexico Equity	Mexico Equity Funds

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

Appendix B: Glossary – Reports

Percentage of Funds Outperformed by the Index

We use funds with returns available for the entire period as the denominator. We determine the count of funds that have survived and beat the index and then report the index outperformance percentage.

Survivorship (%)

The survivorship metric represents the percentage of funds in existence at the beginning of the time period that are 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 reflect the returns of the total money invested in that particular style category with more accuracy.

Quartile 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 border is the 75th percentile, which is the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile border is the 50th percentile, and the third quartile border is the 25th percentile. For fund category quartiles in a particular time period, the data used are the return of the largest share class of the fund net of fees, excluding loads.

Survivorship Bias

Some funds 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. The SPIVA reports remove this bias in three ways. The first method to remove the bias is to use 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. The second is to show explicitly the survivorship rate in each category. The final way is to construct a 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 reference against which fund performance can be measured.

S&P Brazil BMI

The S&P Brazil BMI, a subset of the S&P Global BMI, is designed to represent the Brazilian stock market.

S&P Brazil LargeCap

The S&P Brazil LargeCap, a subset of the S&P Global BMI, is designed to represent large-cap stocks in the Brazilian market.

S&P Brazil MidSmallCap

The S&P Brazil MidSmallCap, a subset of the S&P Global BMI, is designed to represent midand small-cap stocks in the Brazilian market.

S&P Chile BMI

The S&P Chile BMI, a subset of the S&P Global BMI, is designed to represent the Chilean stock market.

S&P/BMV IRT

The S&P/BMV IRT, the total return version of S&P/BMV IPC, measures the performance of the largest and most liquid stocks listed on the Bolsa Mexicana de Valores.

Anbima Debentures Index (IDA)

The IDA represents a portfolio of debentures at market prices and serves as a benchmark for the segment. The index consists of all debentures priced by the Association.

Anbima Market Index (IMA)

The IMA represents a portfolio of government securities at market prices, with an approximate range of 97% of the market segment.

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