

SPIVA[®] Latin America Scorecard

Contributors

Joseph Nelesen, PhD
Senior Director
Index Investment Strategy
joseph.nelesen@spglobal.com

Anu R. Ganti, CFA
Senior Director
Index Investment Strategy
anu.ganti@spglobal.com

Davide Di Gioia
Chief SPIVA Engineer
Index Investment Strategy
davide.di.gioia@spglobal.com

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

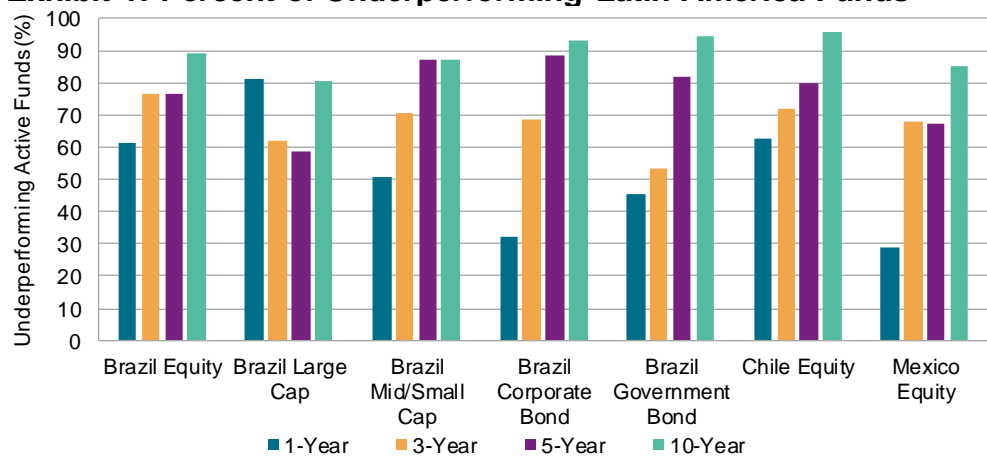
Summary

The SPIVA Latin America Scorecard measures the performance of actively managed funds across Brazil, Chile and Mexico against their respective benchmarks over various time horizons, providing statistics on outperformance rates, survivorship rates and fund performance dispersion.

Year-End Highlights

In a year when the spread between best- and worst-performing Latin American benchmarks spanned more than 35%, underperformance rates among active managers significantly varied by country and asset class. Managers of equities in Mexico and bonds in Brazil fared better than most, with less than half of funds underperforming their benchmarks. In all other categories, the majority of active funds underperformed in 2022 and over longer periods (see Exhibit 1).

Exhibit 1: Percent of Underperforming Latin America Funds



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. 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.

Mexico

- The [S&P/BMV IRT](#) lost 5.74% during calendar year 2022. The majority of active Mexico Equity fund managers fared well for the year, with less than one-third (28.89%) underperforming the benchmark. Over longer periods, outperformance was more fleeting, with 68.18%, 67.39% and 85.37% of managers underperforming the benchmark over 3-, 5- and 10-year periods, respectively (see Report 1a).
- Median active fund outperformance was 2.48% in 2022, but turned negative over longer time horizons, with median funds underperforming by 2.47%, 2.17% and 2.21% for the 3-, 5- and 10-year periods, respectively (see Report 5). Over the 10-year period, even the threshold for top-quartile managers lagged the benchmark by 0.56%.
- The survival rates of active funds in Mexico remained the highest in Latin America, at 100%, 97.73%, 89.13% and 75.61% over the 1-, 3-, 5- and 10-year periods, respectively (see Report 2); this marked six scorecards in a row that Mexico Equity funds had the highest three- and five-year period survivorship rates.
- Funds with greater assets performed relatively better than smaller funds in 2022, with average returns for Mexico Equity funds 2.77% higher on an asset-weighted basis than on an equal-weighted basis (see Reports 3 and 4).

Brazil

- Brazil's equity market ended 2022 nearly flat for the year, with the [S&P Brazil BMI](#) up 0.07% (see Report 3). Large caps, as measured by the S&P Brazil LargeCap, fell 5.38%, outperforming mid- and small-cap companies, as measured by the S&P Brazil MidSmallCap, which finished the year down 10.70%.
- In 2022, 50.40% of active Brazil Mid-/Small-Cap funds underperformed their benchmark, while a larger majority of active equity funds underperformed their benchmarks in other categories. Meanwhile, 81.21% of Brazil Large-Cap funds and 61.06% of Brazil Equity funds underperformed their benchmarks. Active managers from all categories, with the exception of Brazil Large-Cap funds, fared poorly relative to their respective benchmarks over the longer 10-year period ending in 2022, with underperformance rates of 89.22%, 80.56% and 87.06% in the Brazil Equity, Brazil Large-Cap and Brazil Mid-/Small-Cap fund categories respectively (see Report 1a).

Chile

- Chile’s equity market stood out among global peers, with the [S&P Chile BMI](#) rising 25.17% for the 12-month period ending Dec. 31, 2022 (see Report 3).
- The majority of active Chile Equity fund managers underperformed the S&P Chile BMI over all periods studied, but the underperformance rate was especially high over longer time periods, with 80.00% and 95.45% of active funds underperforming the benchmark over the 5- and 10-year periods, respectively (see Report 1a). Funds underperformed the benchmark by medians of 1.83% and 2.70% over the 1- and 10-year periods, respectively (see Report 5).
- Over the one-year period, fund size was inconsequential to returns, with active Chile Equity funds rising 22.59% and 22.61% on equal-weighted and asset-weighted bases, respectively. Over the 10-year period ending in 2022, however, asset-weighted returns for Chile Equity funds averaged 0.44% while equal-weighted returns averaged 1.01%, indicating a relatively rare case where funds with higher assets generated slightly lower performance than their smaller peers (see Reports 3 and 4).
- Over the 10-year period, the threshold for top-quartile active fund managers trailed the benchmark by 1.22% (see Reports 3 and 5).

Fixed Income

- Among active fixed income managers, fewer than half of Brazil Corporate Bond funds and Brazil Government Bond funds underperformed their benchmarks in 2022 (see Report 1a). Brazil Corporate Bond funds and Brazil Government Bond funds outperformed their benchmarks by 1.75% and 1.84%, respectively, on an asset-weighted basis in 2022 (see Reports 3 and 4). Over longer periods, underperformance rates rose significantly, with 92.75% of Brazil Corporate Bond funds and 94.21% of Brazil Government Bond funds failing to beat their benchmarks for the 10-year period ending in 2022.

Market Context

Latin American equities followed a tumultuous path in 2022, with the [S&P Latin America BMI](#) rising 29.2% at its peak in April and falling to -9.3% at its nadir in July before finishing the year up 4.9% in U.S. dollar terms (see Exhibit 2).

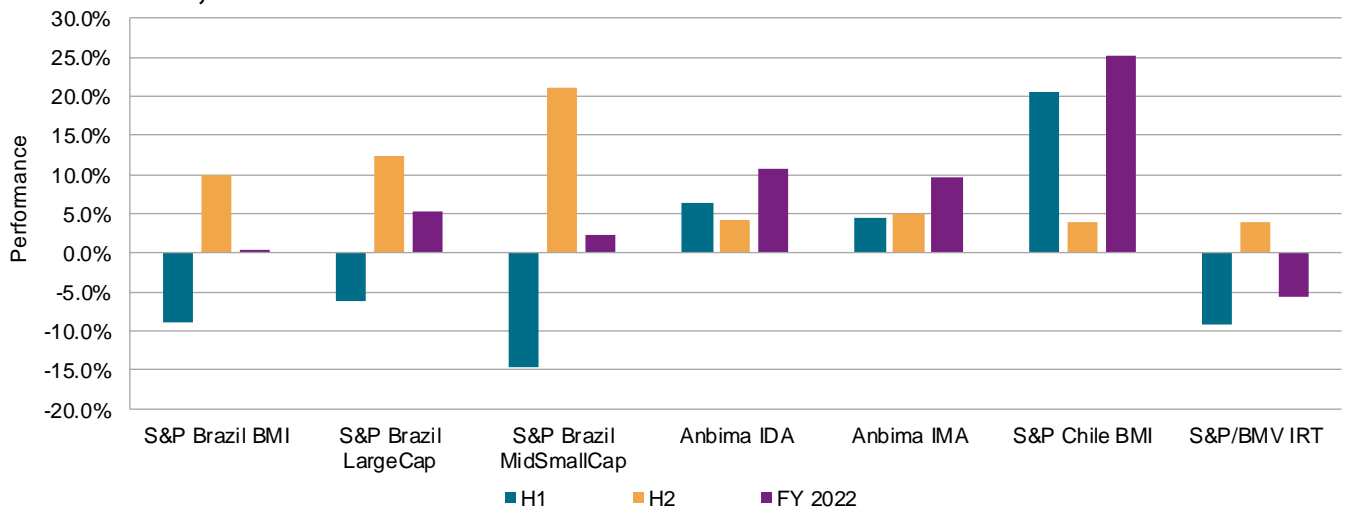
Exhibit 2: S&P Latin America BMI 2022 Cumulative Performance



Source: S&P Dow Jones Indices LLC. Data as of Dec.31, 2022. 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 different regions and capitalization ranges, returns were mixed and often volatile, as equities in Mexico and mid- and small-cap stocks in Brazil declined, while large-cap Brazil stocks, Brazil bonds, and Chile equities gained ground (see Exhibit 3 and Report 3). The two categories with the highest underperformance rates, Chile Equity funds and Brazil Large-Cap funds, also had the highest benchmark returns.

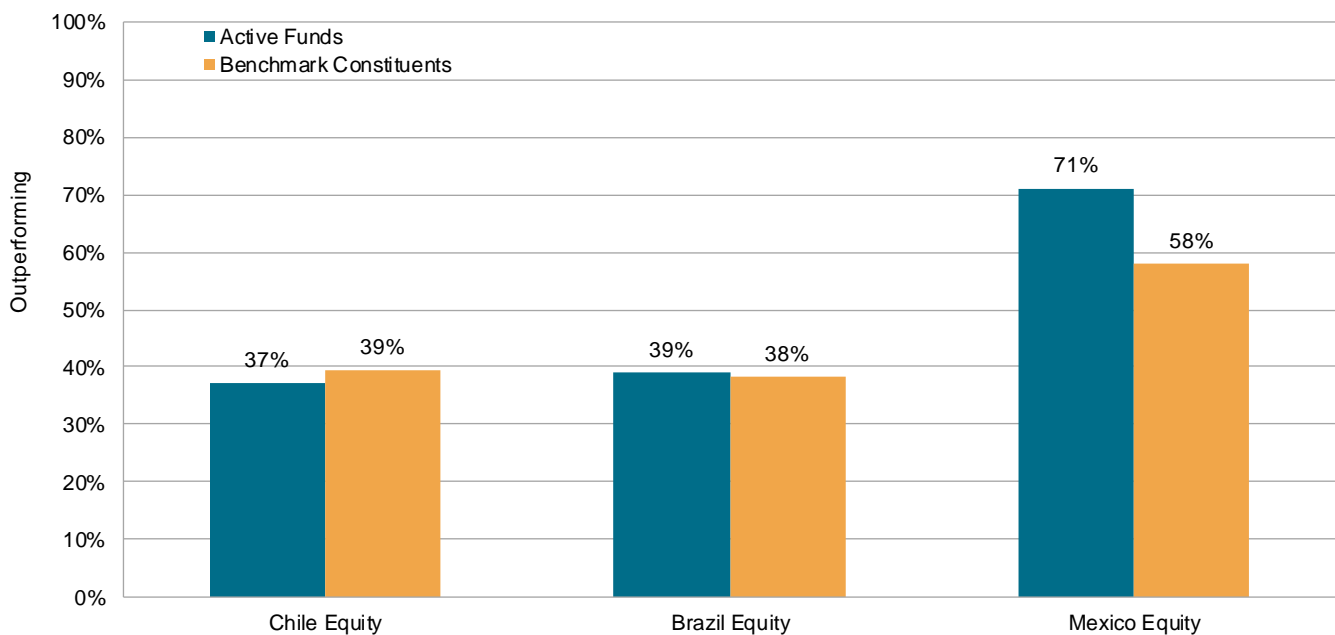
Exhibit 3: H1, H2 and 2022 Cumulative Performance



Source: S&P Dow Jones Indices LLC. Data as of Dec.31, 2022. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Picking outperforming stocks was statistically more difficult in some markets than in others. In Chile, for example, only 39% of constituents within the S&P Chile BMI outperformed the index. In Brazil, only 38% of stocks outperformed the overall S&P Brazil BMI. In Mexico, however, we observed the opposite, as 58% of benchmark constituents outperformed the S&P/BMV IRT. This uncommon absence of positive skew was noteworthy in 2022 S&P/BMV IRT stock returns, as the average constituent return of 1.62% was slightly below the median return of 1.67%. Mexico also happened to be the only major Latin American equity market covered by SPIVA where more than half of active managers outperformed the benchmark in 2022 (see Exhibit 4).

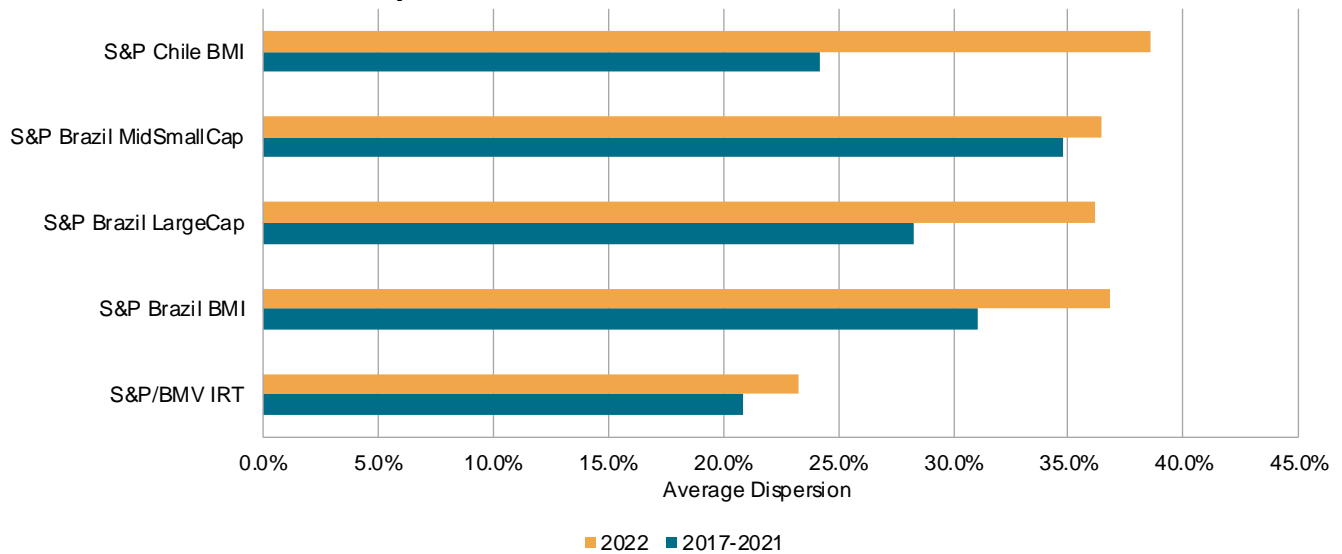
Exhibit 4: Percentage of Stocks and Funds That Outperformed the Index



Source: S&P Dow Jones Indices LLC, FactSet. Data as of Dec.31, 2022. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Across major Latin American equity markets, dispersion levels in 2022 were elevated relative to previous five-year averages, 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.

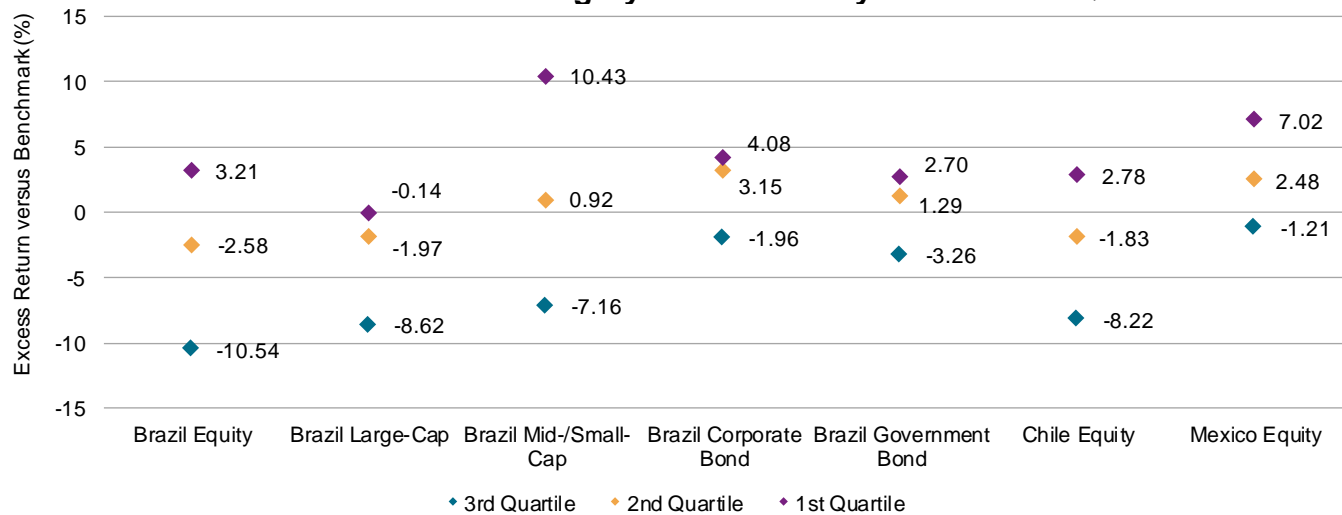
Exhibit 5: Constituent Dispersion in 2022 and Previous Five Years



Source: S&P Dow Jones Indices LLC. Data as of Dec.31, 2022. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The differences in excess returns between fund quartiles often underscore the challenge facing asset owners when choosing active managers. In many categories, bottom-quartile funds underperformed their respective benchmarks to a greater degree than top-quartile funds outperformed (see Exhibit 4). 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 only categories where top-quartile funds outperformed to a greater degree than bottom-quartile funds underperformed were also the only categories where the majority of active funds outperformed: Brazil Mid-/Small-Cap, Brazil Corporate Bond and Mexico Equity (see Exhibit 6).

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



Source: S&P Dow Jones Indices LLC. Data as of Dec.31, 2022. Index performance based on total return in local country currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Pulling back the curtain even further on Mexico Equity funds revealed a final interesting observation. For managers of Mexico Equity funds in 2022, a below-average rate of underperformance (28.8%) may not only have been a function of capitalizing upon negative skew and higher dispersion, but also of additional factors as well. After reviewing the holdings of the outperforming Mexico Equity funds of 2022, it became clear that non-benchmark securities played a major role in outperformance. In fact, **among 2022 top-quartile Mexico Equity funds, an average portfolio weight of over 60% was allocated to securities outside of the benchmark S&P/BMV IRT.** These non-benchmark holdings included other stocks, fixed income securities and other funds such as Exchange Traded Funds (ETFs) that significantly contributed to outperformance.

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 a few strong believers on both sides, with the vast majority of market participants falling somewhere in between. Since its first publication in 2002, the SPIVA Scorecard has served as the de facto scorekeeper. When headline numbers have deviated from their beliefs, we have heard passionate arguments from both camps.

Beyond the SPIVA Scorecard's widely cited headline numbers is a rich data set that addresses issues—often far more fascinating though far less discussed—about measurement techniques, universe composition and fund survivorship. 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 a 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 1a: Percentage of Funds Underperforming Their Benchmarks (Based on Absolute Return)

Fund Category	Comparison Index	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
Brazil Equity Funds	S&P Brazil BMI	61.06	76.74	76.29	89.22
Brazil Large-Cap Funds	S&P Brazil LargeCap	81.21	61.86	58.43	80.56
Brazil Mid-/Small-Cap Funds	S&P Brazil MidSmallCap	50.40	70.73	87.30	87.06
Brazil Corporate Bond Funds	Anbima Debentures Index (IDA)	31.86	68.47	88.61	92.75
Brazil Government Bond Funds	Anbima Market Index (IMA)	45.45	53.57	81.85	94.21
Chile Equity Funds	S&P Chile BMI	62.86	71.79	80.00	95.45
Mexico Equity Funds	S&P/BMV IRT	28.89	68.18	67.39	85.37

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. 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 1b: Percentage of Funds Underperforming Their Benchmarks (Based on Risk-Adjusted Return)

Fund Category	Comparison Index	3-Year (%)	5-Year (%)	10-Year (%)
Brazil Equity Funds	S&P Brazil BMI	-	75.43	87.97
Brazil Large-Cap Funds	S&P Brazil LargeCap	-	58.43	79.63
Brazil Mid-/Small-Cap Funds	S&P Brazil MidSmallCap	-	85.71	85.88
Brazil Corporate Bond Funds	Anbima Debentures Index (IDA)	42.34	76.58	75.36
Brazil Government Bond Funds	Anbima Market Index (IMA)	46.10	54.11	60.74
Chile Equity Funds	S&P Chile BMI	71.79	-	95.45
Mexico Equity Funds	S&P/BMV IRT	61.36	65.22	87.80

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 Dec. 31, 2022. 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 2: Survivorship of Funds

Fund Category	Number of Funds at Start	Survivorship (%)
1-Year		
Brazil Equity Funds	321	94.39
Brazil Large-Cap Funds	149	88.59
Brazil Mid-/Small-Cap Funds	125	92.00
Brazil Corporate Bond Funds	113	95.58
Brazil Government Bond Funds	363	96.42
Chile Equity Funds	35	94.29
Mexico Equity Funds	45	100.00
3-Year		
Brazil Equity Funds	258	88.76
Brazil Large-Cap Funds	118	84.75
Brazil Mid-/Small-Cap Funds	82	87.80
Brazil Corporate Bond Funds	111	74.77
Brazil Government Bond Funds	308	85.71
Chile Equity Funds	39	71.79
Mexico Equity Funds	44	97.73
5-Year		
Brazil Equity Funds	232	74.57
Brazil Large-Cap Funds	89	79.78
Brazil Mid-/Small-Cap Funds	63	74.60
Brazil Corporate Bond Funds	158	34.81
Brazil Government Bond Funds	292	76.03
Chile Equity Funds	40	57.50
Mexico Equity Funds	46	89.13
10-Year		
Brazil Equity Funds	399	32.58
Brazil Large-Cap Funds	108	53.70
Brazil Mid-/Small-Cap Funds	85	42.35
Brazil Corporate Bond Funds	69	28.99
Brazil Government Bond Funds	242	62.81
Chile Equity Funds	44	34.09
Mexico Equity Funds	41	75.61

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal-Weighted)

Index/Fund Category	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P Brazil BMI	0.07	-3.02	7.37	7.17
Brazil Equity Funds	-3.76	-6.09	5.56	4.69
S&P Brazil LargeCap	5.38	-2.03	6.46	6.67
Brazil Large-Cap Funds	-1.48	-4.64	6.09	5.40
S&P Brazil MidSmallCap	-10.70	-5.44	9.06	8.12
Brazil Mid-/Small-Cap Funds	2.38	1.32	11.42	6.94
Anbima Debentures Index (IDA)	10.64	7.59	8.08	9.92
Brazil Corporate Bond Funds	9.41	6.78	5.80	7.62
Anbima Market Index (IMA)	9.66	5.26	7.68	9.12
Brazil Government Bond Funds	9.12	4.26	5.84	7.65
S&P Chile BMI	25.17	5.18	-0.48	2.58
Chile Equity Funds	22.59	4.08	-1.54	1.01
S&P/BMV IRT	-5.74	6.61	2.47	3.40
Mexico Equity Funds	-3.46	2.99	0.30	2.13

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. 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 4: Average Fund Performance (Asset-Weighted)

Index/Fund Category	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
S&P Brazil BMI	0.07	-3.02	7.37	7.17
Brazil Equity Funds	-6.36	-7.99	4.27	5.43
S&P Brazil LargeCap	5.38	-2.03	6.46	6.67
Brazil Large-Cap Funds	-0.38	-5.36	6.25	6.01
S&P Brazil MidSmallCap	-10.70	-5.44	9.06	8.12
Brazil Mid-/Small-Cap Funds	-9.07	-6.42	6.07	5.13
Anbima Debentures Index (IDA)	10.64	7.59	8.08	9.92
Brazil Corporate Bond Funds	12.39	7.13	6.89	8.73
Anbima Market Index (IMA)	9.66	5.26	7.68	9.12
Brazil Government Bond Funds	11.50	5.71	6.16	8.11
S&P Chile BMI	25.17	5.18	-0.48	2.58
Chile Equity Funds	22.61	4.71	-1.77	0.44
S&P/BMV IRT	-5.74	6.61	2.47	3.40
Mexico Equity Funds	-0.69	2.65	0.12	2.32

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. 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 5: Quartile Breakpoints of Fund Performance

Fund Category	Third Quartile	Second Quartile	First Quartile
1-Year			
Brazil Equity Funds	-10.47	-2.50	3.29
Brazil Large-Cap Funds	-3.24	3.41	5.25
Brazil Mid-/Small-Cap Funds	-17.85	-9.77	-0.27
Brazil Corporate Bond Funds	8.68	13.79	14.72
Brazil Government Bond Funds	6.40	10.95	12.36
Chile Equity Funds	16.95	23.34	27.95
Mexico Equity Funds	-6.95	-3.25	1.28
3-Year			
Brazil Equity Funds	-8.77	-5.54	-2.49
Brazil Large-Cap Funds	-6.15	-2.35	-0.95
Brazil Mid-/Small-Cap Funds	-11.45	-7.91	-3.11
Brazil Corporate Bond Funds	6.75	7.38	8.47
Brazil Government Bond Funds	3.43	5.47	6.32
Chile Equity Funds	2.80	4.17	6.50
Mexico Equity Funds	0.04	4.14	7.24
5-Year			
Brazil Equity Funds	3.91	5.71	8.13
Brazil Large-Cap Funds	5.57	6.49	8.68
Brazil Mid-/Small-Cap Funds	2.23	4.95	7.68
Brazil Corporate Bond Funds	6.69	7.11	8.46
Brazil Government Bond Funds	5.43	6.18	7.62
Chile Equity Funds	-3.22	-1.21	-0.27
Mexico Equity Funds	-1.48	0.30	3.48
10-Year			
Brazil Equity Funds	3.92	5.77	7.77
Brazil Large-Cap Funds	4.39	5.95	7.54
Brazil Mid-/Small-Cap Funds	2.81	5.44	9.29
Brazil Corporate Bond Funds	9.02	9.44	9.77
Brazil Government Bond Funds	7.67	8.42	8.69
Chile Equity Funds	-0.83	-0.12	1.36
Mexico Equity Funds	0.15	1.19	2.84

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. 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 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 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 mid- and 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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