

## CONTRIBUTOR

Phillip Brzenk, CFA  
Director  
Global Research & Design  
[phillip.brzenk@spglobal.com](mailto:phillip.brzenk@spglobal.com)

# Persistence Scorecard: Latin America

## INTRODUCTION

Following similar studies performed by S&P Dow Jones Indices on active funds in the U.S.<sup>1</sup> and Australia,<sup>2</sup> this report marks the introduction of the Persistence Scorecard to the Latin America region. The two aforementioned studies demonstrate that top-performing funds have little chance in repeating that success in subsequent years. Similarly, the Latin American Persistence Scorecard tracks the consistency of top-performing active mutual funds in Brazil, Chile, and Mexico.

We introduce two key statistics. First, we measure the performance persistence of top-performing active funds that remained in the top-quartile or top-half rankings over consecutive three- and five-year periods. Second, transition matrices in Exhibits 3 and 4 show the movements between quartiles and halves over two non-overlapping, three-year periods. These exhibits also track the percentage of funds that were merged or liquidated.

## SUMMARY OF RESULTS

### Brazil

- Only a select number of top-performing active funds were able to maintain their top performance in subsequent years. For the 98 Brazil Equity funds in the top quartile in 2015, 5% remained in the top quartile in 2016, which then dropped to 3% in 2017 (see Exhibit 1). Similar figures were seen for the other categories, including zero funds maintaining top-quartile performance in the Brazil Mid-/Small-Cap and Brazil Government Bond groups. When analysis was expanded to track the top half of funds, it again showed that the majority of top-performing funds in 2015 were unable to replicate their top performance in subsequent years.

<sup>1</sup> See [Does Past Performance Matter? The Persistence Scorecard](#).

<sup>2</sup> See [Persistence of Australian Active Funds: March 2018](#).

- Expanding the time horizon to five years, Exhibit 2 shows similar results as Exhibit 1. In fact, none of the Brazil Equity funds in the top quartile in 2013 remained in the top quartile by the end of 2017. Meanwhile, just 12% of funds that were in the top half in 2013 remained in the top half by the end of the five-year period (2017).
- Exhibit 3—which tracks the subsequent performance of funds in the second three-year period (2015-2017) that were grouped into quartiles based on the returns of the first three-year period (2012-2014)—shows a general lack of consistency. The first quartile in both the Brazil Equity and Brazil Government Bond categories showed somewhat more of a tilt toward consistency than the other categories. For the Brazil Equity category, 32% of funds in the top quartile at the end of the first three-year period remained there at the end of 2017, while 28% moved to the second quartile, 25% were in the third and fourth quartile, and 15% were liquidated or merged (see Exhibit 3). Another notable observation is that for the second, third, and fourth quartiles, the amount of funds that were merged or liquidated was significantly higher in the second three-year period compared with the first quartile.

## Chile

- Of the 11 top-performing funds in 2015, just two were in the top quartile after one year, while none remained after two years (see Exhibit 1). The same result of zero top-fund persistence occurred by the third year (see Exhibit 2).
- As seen in Exhibit 3, funds that were in the top quartile for the first period and survived the second period generally performed well. Three-fourths of surviving funds stayed in the top quartile, while the remaining 25% moved to the second quartile. However, the transition matrix really highlights the outsized number of funds that became obsolete; 60% of the funds that were in the first quartile for the first three-year period ended up becoming obsolete during the second three-year period.

## Mexico

- The majority of funds in Mexico did not show consistency in being top performers, as only 2 out of the original 12 funds (16.7%) remained in the top quartile after two years. For the five-year period shown in Exhibit 2, no funds remained in the top quartile by the end of the third year.
- The transition matrix in Exhibit 4 demonstrates that whether a fund remained in the top or bottom half in the second period was essentially a coin flip. For the funds in the top half at the end of the first three-year period, 55% remained in the top half and 45% moved to the bottom half by the end of 2017.

## ABOUT THE PERSISTENCE SCORECARD

The phrase “past performance is not an indicator of future results” (or some variation thereof) can be found in the fine print of most mutual fund literature. Yet, due to either force of habit or conviction, investors and advisors consider past performance and related metrics to be important factors in fund selection. So does past performance really matter?

To answer this question, this scorecard tracks the consistency of top performers over yearly consecutive periods and measures performance persistence through transition matrices. Key features of the scorecard include the following.

- **Same Universe as SPIVA®:** The scorecard follows the fund categories defined in the [SPIVA Latin America Scorecard](#), a semiannual report that tracks the number of active funds in Brazil, Chile, and Mexico that beat their respective benchmarks over different time horizons.
- **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, The S&P Persistence Scorecards account for the entire opportunity set, not just the survivors, thereby eliminating survivorship bias.
- **Data Cleaning:** The S&P Persistence Scorecards avoid double counting multiple share classes in all count-based calculations by using only the share class with greatest assets. Index, leveraged, and inverse funds, along with other index-linked products, are excluded from the results, as this is meant to be a scorecard for active managers.
- **Tracking Reports of Top Performers:** The tracking reports show the percentages of funds that remain in the top-quartile or top-half rankings over consecutive three- and five-year periods.
- **Transition Matrices:** Transition matrices show the movements between quartiles and halves over two non-overlapping, three-year periods. They also track the percentage of funds that have merged or liquidated.

**EXHIBITS**

<b>Exhibit 1: Performance Persistence of Funds Over Three Consecutive 12-Month Periods</b>			
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2015)</b>	<b>PERCENTAGE REMAINING IN TOP QUARTILE</b>	
		<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>
<b>TOP QUARTILE</b>			
Brazil Equity Funds	98	5.10	3.06
Brazil Large-Cap Funds	21	9.52	4.76
Brazil Mid-/Small-Cap Funds	18	11.11	0.00
Brazil Corporate Bond Funds	37	62.16	24.32
Brazil Government Bond Funds	72	4.17	0.00
Chile Equity Funds	11	18.18	0.00
Mexico Equity Funds	12	25.00	16.67
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2015)</b>	<b>PERCENTAGE REMAINING IN TOP HALF</b>	
		<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>
<b>TOP HALF</b>			
Brazil Equity Funds	197	32.99	20.81
Brazil Large-Cap Funds	43	41.86	32.56
Brazil Mid-/Small-Cap Funds	36	41.67	11.11
Brazil Corporate Bond Funds	73	68.49	28.77
Brazil Government Bond Funds	143	38.46	30.77
Chile Equity Funds	21	42.86	23.81
Mexico Equity Funds	24	58.33	37.50

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Exhibit 2: Performance Persistence of Funds Over Five Consecutive 12-Month Periods</b>						
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2013)</b>	<b>PERCENTAGE REMAINING IN TOP QUARTILE</b>				
		<b>DECEMBER 2014</b>	<b>DECEMBER 2015</b>	<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>	
<b>TOP QUARTILE</b>						
Brazil Equity Funds	101	56.44	40.59	0.99	0.00	
Brazil Large-Cap Funds	24	54.17	37.50	8.33	8.33	
Brazil Mid-/Small-Cap Funds	19	31.58	10.53	0.00	0.00	
Brazil Corporate Bond Funds	19	52.63	26.32	15.79	15.79	
Brazil Government Bond Funds	62	3.23	3.23	1.61	0.00	
Chile Equity Funds	11	9.09	9.09	0.00	0.00	
Mexico Equity Funds	11	54.55	9.09	0.00	0.00	
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2013)</b>	<b>PERCENTAGE REMAINING IN TOP HALF</b>				
		<b>DECEMBER 2014</b>	<b>DECEMBER 2015</b>	<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>	
<b>TOP HALF</b>						
Brazil Equity Funds	202	66.34	44.06	15.84	11.88	
Brazil Large-Cap Funds	48	62.50	41.67	18.75	12.50	
Brazil Mid-/Small-Cap Funds	38	52.63	36.84	21.05	2.63	
Brazil Corporate Bond Funds	38	50.00	31.58	23.68	23.68	
Brazil Government Bond Funds	124	37.10	33.87	12.10	4.03	
Chile Equity Funds	21	52.38	28.57	14.29	4.76	
Mexico Equity Funds	22	68.18	31.82	13.64	4.55	

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Exhibit 3: Three-Year Transition Matrix – Performance Over Two Non-Overlapping Three-Year Periods (Based on Quartile)</b>							
<b>QUARTILE</b>	<b>FUND COUNT AT START (DECEMBER 2014)</b>	<b>THREE-YEAR PERCENTAGE AT END</b>					
		<b>1ST QUARTILE (%)</b>	<b>2ND QUARTILE (%)</b>	<b>3RD QUARTILE (%)</b>	<b>4TH QUARTILE (%)</b>	<b>MERGED/ LIQUIDATED (%)</b>	
<b>BRAZIL EQUITY FUNDS</b>							
1st Quartile	74	32.43	28.38	8.11	16.22	14.86	
2nd Quartile	75	14.67	14.67	14.67	20.00	36.00	
3rd Quartile	74	9.46	14.86	25.68	17.57	32.43	
4th Quartile	74	13.51	10.81	21.62	14.86	39.19	
<b>BRAZIL LARGE-CAP FUNDS</b>							
1st Quartile	16	25.00	18.75	31.25	12.50	12.50	
2nd Quartile	16	18.75	37.50	25.00	18.75	0.00	
3rd Quartile	16	37.50	0.00	6.25	31.25	25.00	
4th Quartile	16	6.25	25.00	25.00	18.75	25.00	
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>							
1st Quartile	15	20.00	20.00	13.33	13.33	33.33	
2nd Quartile	14	21.43	21.43	0.00	21.43	35.71	
3rd Quartile	15	6.67	13.33	26.67	6.67	46.67	
4th Quartile	14	14.29	7.14	14.29	21.43	42.86	
<b>BRAZIL CORPORATE BOND FUNDS</b>							
1st Quartile	14	7.14	0.00	7.14	0.00	85.71	
2nd Quartile	14	28.57	7.14	21.43	7.14	35.71	
3rd Quartile	13	23.08	46.15	0.00	0.00	30.77	
4th Quartile	14	0.00	0.00	28.57	42.86	28.57	
<b>BRAZIL GOVERNMENT BOND FUNDS</b>							
1st Quartile	50	28.00	38.00	10.00	4.00	20.00	
2nd Quartile	51	21.57	21.57	47.06	0.00	9.80	
3rd Quartile	50	30.00	10.00	28.00	18.00	14.00	
4th Quartile	50	6.00	16.00	0.00	64.00	14.00	
<b>CHILE EQUITY FUNDS</b>							
1st Quartile	10	30.00	10.00	0.00	0.00	60.00	
2nd Quartile	10	20.00	20.00	0.00	20.00	40.00	
3rd Quartile	10	0.00	10.00	20.00	30.00	40.00	
4th Quartile	10	10.00	20.00	30.00	10.00	30.00	
<b>MEXICO EQUITY FUNDS</b>							
1st Quartile	10	10.00	20.00	30.00	40.00	0.00	
2nd Quartile	10	50.00	30.00	0.00	20.00	0.00	
3rd Quartile	10	30.00	30.00	20.00	10.00	10.00	
4th Quartile	10	10.00	20.00	40.00	30.00	0.00	

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Exhibit 4: Three-Year Transition Matrix – Performance Over Two Non-Overlapping Three-Year Periods (Based on Halves)</b>				
<b>HALF</b>	<b>FUND COUNT AT START (DECEMBER 2014)</b>	<b>THREE-YEAR PERCENTAGE AT END</b>		
		<b>TOP HALF (%)</b>	<b>BOTTOM HALF (%)</b>	<b>MERGED/LIQUIDATED (%)</b>
<b>BRAZIL EQUITY FUNDS</b>				
Top Half	149	44.97	29.53	25.50
Bottom Half	148	24.32	39.86	35.81
<b>BRAZIL LARGE-CAP FUNDS</b>				
Top Half	32	50.00	43.75	6.25
Bottom Half	32	34.38	40.63	25.00
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>				
Top Half	29	41.38	24.14	34.48
Bottom Half	29	20.69	34.48	44.83
<b>BRAZIL CORPORATE BOND FUNDS</b>				
Top Half	28	21.43	17.86	60.71
Bottom Half	27	33.33	37.04	29.63
<b>BRAZIL GOVERNMENT BOND FUNDS</b>				
Top Half	101	54.46	30.69	14.85
Bottom Half	100	31.00	55.00	14.00
<b>CHILE EQUITY FUNDS</b>				
Top Half	20	40.00	10.00	50.00
Bottom Half	20	20.00	45.00	35.00
<b>MEXICO EQUITY FUNDS</b>				
Top Half	20	55.00	45.00	0.00
Bottom Half	20	45.00	50.00	5.00

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

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