

## Persistence Scorecard: Latin America

### Contributors

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

**Maria Sánchez**  
Associate Director  
Global Research & Design  
[maria.sanchez@spglobal.com](mailto:maria.sanchez@spglobal.com)

### INTRODUCTION

- When it comes to the active versus passive debate, one key dimension is the ability of a manager to deliver above-average returns over multiple periods. The ability to consistently outperform is one way to differentiate a manager's skill from pure luck.
- In this report, we measure the performance persistence of active funds in Brazil, Chile, and Mexico that outperformed their peers over consecutive three- and five-year periods. We also analyze their performance ranking transition matrices over subsequent periods. Due to increased data availability, the scorecard now contains five-year transition matrices, shown in Exhibits 5 and 6.

### SUMMARY OF RESULTS

#### Brazil

- Exhibit 2 highlights the inability for top-performing managers to replicate their success in the following years across all five categories. After four years, we observe that no managers remained in the top quartile for four of the five categories. Corporate bonds was the outlier, as 33% of managers remained in the top quartile by the end of 2018.
- The five-year transition matrix in Exhibit 5 shows a mixed bag of results. For the three equity categories, when taking into account the large percentage of funds that were merged or liquidated in the second period, most top quartile managers in the first period were unable to repeat their success in the second period. For the fixed income categories, top-performing funds from the first period generally did well in the second period, as most were placed in the first or second quartile. However, this success is diluted when considering that 50% of first quartile corporate bond funds and 27% of first quartile government funds were merged or liquidated between the first and second periods.

## Chile

- Exhibit 2 tracks the persistence of the top-performing funds in 2014 by counting how many remain in the top quartile over the subsequent four calendar years. After one year, 36% of funds remained in the top quartile, with that figure dropping to 9% (or one fund in total) by year two. By the third year, no funds remained in the top quartile, showing a clear lack of manager performance persistence when measured on a yearly basis.
- The five-year transition matrix in Exhibit 5 shows that funds that were in the first quartile after the first five-year period did relatively well in the second five-year period, with most ranked in the top two quartiles. However, we also see that in total, half of the first quartile funds from the first period were merged or liquidated in the second period, which paints quite a different picture of overall quartile performance.

## Mexico

- The first section of Exhibit 2 shows that just 3 out of the 11 funds that were ranked in the top quartile in 2014 remained in the top quartile in 2015. Beyond 2015, none of the funds remained in the top quartile. If we relax the testing to the top half of managers in 2014 (shown in the second section of Exhibit 2), about 50% of the funds sustained top half performance in 2015. As time progressed, the percentage of managers remaining in the top half dropped, eventually hitting 0% by 2018.
- For longer-term performance comparison, we look to the five-year transition matrix (see Exhibit 5). Of the managers ranked in the first quartile in the first five-year period, 75% remained in the top two quartiles in the second period. Similarly, 63% of the second quartile managers in the first period remained in the top two quartiles in the second period. Funds ranked in the third and fourth quartiles in the first period generally repeated their poor performance in the second period.

## 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, 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- and five-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 2016)</b>	<b>PERCENTAGE REMAINING IN TOP QUARTILE</b>	
		<b>DECEMBER 2017</b>	<b>DECEMBER 2018</b>
<b>TOP QUARTILE</b>			
Brazil Equity Funds	70	31.43	12.86
Brazil Large-Cap Funds	20	25.00	5.00
Brazil Mid-/Small-Cap Funds	16	43.75	25.00
Brazil Corporate Bond Funds	45	64.44	31.11
Brazil Government Bond Funds	77	66.23	55.84
Chile Equity Funds	10	40.00	20.00
Mexico Equity Funds	12	41.67	8.33
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2016)</b>	<b>PERCENTAGE REMAINING IN TOP HALF</b>	
		<b>DECEMBER 2017</b>	<b>DECEMBER 2018</b>
<b>TOP HALF</b>			
Brazil Equity Funds	140	52.86	32.86
Brazil Large-Cap Funds	41	53.66	29.27
Brazil Mid-/Small-Cap Funds	33	42.42	27.27
Brazil Corporate Bond Funds	91	57.14	20.88
Brazil Government Bond Funds	154	83.77	74.68
Chile Equity Funds	20	60.00	40.00
Mexico Equity Funds	24	66.67	20.83

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. 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 2014)</b>	<b>PERCENTAGE REMAINING IN TOP QUARTILE</b>				
		<b>DECEMBER 2015</b>	<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>	<b>DECEMBER 2018</b>	
<b>TOP QUARTILE</b>						
Brazil Equity Funds	93	50.54	2.15	0.00	0.00	
Brazil Large-Cap Funds	18	55.56	5.56	5.56	0.00	
Brazil Mid-/Small-Cap Funds	20	40.00	0.00	0.00	0.00	
Brazil Corporate Bond Funds	21	52.38	33.33	33.33	33.33	
Brazil Government Bond Funds	66	16.67	1.52	0.00	0.00	
Chile Equity Funds	11	36.36	9.09	0.00	0.00	
Mexico Equity Funds	11	27.27	0.00	0.00	0.00	
<b>FUND CATEGORY</b>	<b>FUND COUNT AT START (DECEMBER 2014)</b>	<b>PERCENTAGE REMAINING IN TOP HALF</b>				
		<b>DECEMBER 2015</b>	<b>DECEMBER 2016</b>	<b>DECEMBER 2017</b>	<b>DECEMBER 2018</b>	
<b>TOP HALF</b>						
Brazil Equity Funds	186	58.60	19.35	12.90	9.14	
Brazil Large-Cap Funds	36	69.44	41.67	36.11	19.44	
Brazil Mid-/Small-Cap Funds	41	68.29	29.27	9.76	7.32	
Brazil Corporate Bond Funds	42	73.81	38.10	35.71	23.81	
Brazil Government Bond Funds	132	48.48	22.73	18.18	15.91	
Chile Equity Funds	21	47.62	23.81	14.29	14.29	
Mexico Equity Funds	23	52.17	30.43	8.70	0.00	

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. 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 Quartiles)</b>							
<b>QUARTILE</b>	<b>FUND COUNT AT START (DECEMBER 2015)</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	68	10.29	22.06	8.82	20.59	38.24	
2nd Quartile	67	16.42	13.43	17.91	19.40	32.84	
3rd Quartile	68	16.18	17.65	17.65	11.76	36.76	
4th Quartile	67	20.90	11.94	19.40	11.94	35.82	
<b>BRAZIL LARGE-CAP FUNDS</b>							
1st Quartile	16	25.00	18.75	0.00	37.50	18.75	
2nd Quartile	17	17.65	17.65	41.18	11.76	11.76	
3rd Quartile	16	31.25	37.50	6.25	12.50	12.50	
4th Quartile	16	12.50	12.50	31.25	25.00	18.75	
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>							
1st Quartile	14	21.43	21.43	21.43	0.00	35.71	
2nd Quartile	15	13.33	6.67	20.00	40.00	20.00	
3rd Quartile	14	14.29	28.57	21.43	7.14	28.57	
4th Quartile	14	14.29	14.29	0.00	14.29	57.14	
<b>BRAZIL CORPORATE BOND FUNDS</b>							
1st Quartile	16	50.00	12.50	0.00	12.50	25.00	
2nd Quartile	15	6.67	20.00	20.00	6.67	46.67	
3rd Quartile	16	0.00	18.75	18.75	0.00	62.50	
4th Quartile	15	0.00	0.00	20.00	33.33	46.67	
<b>BRAZIL GOVERNMENT BOND FUNDS</b>							
1st Quartile	55	0.00	23.64	63.64	3.64	9.09	
2nd Quartile	56	0.00	32.14	25.00	32.14	10.71	
3rd Quartile	55	18.18	21.82	0.00	41.82	18.18	
4th Quartile	55	70.91	9.09	0.00	9.09	10.91	
<b>CHILE EQUITY FUNDS</b>							
1st Quartile	10	30.00	10.00	10.00	10.00	40.00	
2nd Quartile	10	20.00	10.00	30.00	10.00	30.00	
3rd Quartile	10	0.00	10.00	30.00	10.00	50.00	
4th Quartile	10	20.00	30.00	0.00	30.00	20.00	
<b>MEXICO EQUITY FUNDS</b>							
1st Quartile	11	27.27	18.18	27.27	27.27	0.00	
2nd Quartile	11	18.18	36.36	27.27	18.18	0.00	
3rd Quartile	10	30.00	30.00	10.00	10.00	20.00	
4th Quartile	11	18.18	18.18	27.27	36.36	0.00	

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. 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 2015)</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	135	31.11	33.33	35.56
Bottom Half	135	33.33	30.37	36.30
<b>BRAZIL LARGE-CAP FUNDS</b>				
Top Half	33	39.39	45.45	15.15
Bottom Half	32	46.88	37.50	15.63
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>				
Top Half	29	31.03	41.38	27.59
Bottom Half	28	35.71	21.43	42.86
<b>BRAZIL CORPORATE BOND FUNDS</b>				
Top Half	31	45.16	19.35	35.48
Bottom Half	31	9.68	35.48	54.84
<b>BRAZIL GOVERNMENT BOND FUNDS</b>				
Top Half	111	27.93	62.16	9.91
Bottom Half	110	60.00	25.45	14.55
<b>CHILE EQUITY FUNDS</b>				
Top Half	20	35.00	30.00	35.00
Bottom Half	20	30.00	35.00	35.00
<b>MEXICO EQUITY FUNDS</b>				
Top Half	22	50.00	50.00	0.00
Bottom Half	21	47.62	42.86	9.52

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>Exhibit 5: Five-Year Transition Matrix – Performance Over Two Non-Overlapping Five-Year Periods (Based on Quartiles)</b>							
<b>QUARTILE</b>	<b>FUND COUNT AT START (DECEMBER 2013)</b>	<b>FIVE-YEAR PERCENTAGE AT END</b>					<b>MERGED/ LIQUIDATED (%)</b>
		<b>1ST QUARTILE (%)</b>	<b>2ND QUARTILE (%)</b>	<b>3RD QUARTILE (%)</b>	<b>4TH QUARTILE (%)</b>		
<b>BRAZIL EQUITY FUNDS</b>							
1st Quartile	46	30.43	8.70	4.35	15.22	41.30	
2nd Quartile	47	6.38	21.28	12.77	19.15	40.43	
3rd Quartile	46	17.39	15.22	6.52	13.04	47.83	
4th Quartile	46	2.17	13.04	32.61	8.70	43.48	
<b>BRAZIL LARGE-CAP FUNDS</b>							
1st Quartile	16	25.00	12.50	25.00	6.25	31.25	
2nd Quartile	16	31.25	31.25	6.25	0.00	31.25	
3rd Quartile	15	13.33	13.33	13.33	33.33	26.67	
4th Quartile	16	0.00	12.50	18.75	31.25	37.50	
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>							
1st Quartile	8	12.50	25.00	25.00	0.00	37.50	
2nd Quartile	9	22.22	22.22	11.11	11.11	33.33	
3rd Quartile	8	12.50	12.50	0.00	0.00	75.00	
4th Quartile	8	12.50	0.00	25.00	50.00	12.50	
<b>BRAZIL CORPORATE BOND FUNDS</b>							
1st Quartile	4	25.00	25.00	0.00	0.00	50.00	
2nd Quartile	3	0.00	33.33	0.00	0.00	66.67	
3rd Quartile	4	25.00	0.00	25.00	0.00	50.00	
4th Quartile	3	0.00	0.00	0.00	66.67	33.33	
<b>BRAZIL GOVERNMENT BOND FUNDS</b>							
1st Quartile	33	54.55	12.12	3.03	3.03	27.27	
2nd Quartile	32	21.88	53.13	9.38	0.00	15.63	
3rd Quartile	33	0.00	18.18	63.64	0.00	18.18	
4th Quartile	32	3.13	0.00	3.13	78.13	15.63	
<b>CHILE EQUITY FUNDS</b>							
1st Quartile	8	25.00	12.50	0.00	12.50	50.00	
2nd Quartile	9	22.22	11.11	11.11	11.11	44.44	
3rd Quartile	8	0.00	25.00	25.00	0.00	50.00	
4th Quartile	8	12.50	0.00	25.00	25.00	37.50	
<b>MEXICO EQUITY FUNDS</b>							
1st Quartile	8	37.50	37.50	25.00	0.00	0.00	
2nd Quartile	8	25.00	37.50	0.00	25.00	12.50	
3rd Quartile	7	14.29	28.57	28.57	28.57	0.00	
4th Quartile	8	12.50	0.00	37.50	37.50	12.50	

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Table is provided for illustrative purposes. Past performance is no guarantee of future results.



<b>Exhibit 6: Five-Year Transition Matrix – Performance Over Two Non-Overlapping Five-Year Periods (Based on Halves)</b>				
<b>HALF</b>	<b>FUND COUNT AT START (DECEMBER 2013)</b>	<b>FIVE-YEAR PERCENTAGE AT END</b>		
		<b>TOP HALF (%)</b>	<b>BOTTOM HALF (%)</b>	<b>MERGED/LIQUIDATED (%)</b>
<b>BRAZIL EQUITY FUNDS</b>				
Top Half	93	33.33	25.81	40.86
Bottom Half	92	23.91	30.43	45.65
<b>BRAZIL LARGE-CAP FUNDS</b>				
Top Half	32	50.00	18.75	31.25
Bottom Half	31	19.35	48.39	32.26
<b>BRAZIL MID-/SMALL-CAP FUNDS</b>				
Top Half	17	41.18	23.53	35.29
Bottom Half	16	18.75	37.50	43.75
<b>BRAZIL CORPORATE BOND FUNDS</b>				
Top Half	7	42.86	0.00	57.14
Bottom Half	7	14.29	42.86	42.86
<b>BRAZIL GOVERNMENT BOND FUNDS</b>				
Top Half	65	70.77	7.69	21.54
Bottom Half	65	10.77	72.31	16.92
<b>CHILE EQUITY FUNDS</b>				
Top Half	17	35.29	17.65	47.06
Bottom Half	16	18.75	37.50	43.75
<b>MEXICO EQUITY FUNDS</b>				
Top Half	16	68.75	25.00	6.25
Bottom Half	15	26.67	66.67	6.67

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Table is provided for illustrative purposes. Past performance is no guarantee of future results.

<b>S&amp;P DJI RESEARCH CONTRIBUTORS</b>		
Sunjiv Mainie, CFA, CQF	Global Head	<a href="mailto:sunjiv.mainie@spglobal.com">sunjiv.mainie@spglobal.com</a>
Jake Vukelic	Business Manager	<a href="mailto:jake.vukelic@spglobal.com">jake.vukelic@spglobal.com</a>
<b>GLOBAL RESEARCH &amp; DESIGN</b>		
<b>AMERICAS</b>		
Aye M. Soe, CFA	Americas Head	<a href="mailto:aye.soe@spglobal.com">aye.soe@spglobal.com</a>
Cristopher Anguiano, FRM	Analyst	<a href="mailto:cristopher.anguiano@spglobal.com">cristopher.anguiano@spglobal.com</a>
Phillip Brzenk, CFA	Senior Director	<a href="mailto:phillip.brzenk@spglobal.com">phillip.brzenk@spglobal.com</a>
Smita Chirputkar	Director	<a href="mailto:smita.chirputkar@spglobal.com">smita.chirputkar@spglobal.com</a>
Rachel Du	Senior Analyst	<a href="mailto:rachel.du@spglobal.com">rachel.du@spglobal.com</a>
Bill Hao	Director	<a href="mailto:wenli.hao@spglobal.com">wenli.hao@spglobal.com</a>
Qing Li	Director	<a href="mailto:qing.li@spglobal.com">qing.li@spglobal.com</a>
Berlinda Liu, CFA	Director	<a href="mailto:berlinda.liu@spglobal.com">berlinda.liu@spglobal.com</a>
Hamish Preston	Associate Director	<a href="mailto:hamish.preston@spglobal.com">hamish.preston@spglobal.com</a>
Maria Sanchez	Associate Director	<a href="mailto:maria.sanchez@spglobal.com">maria.sanchez@spglobal.com</a>
Kunal Sharma	Senior Analyst	<a href="mailto:kunal.sharma@spglobal.com">kunal.sharma@spglobal.com</a>
Kelly Tang, CFA	Director	<a href="mailto:kelly.tang@spglobal.com">kelly.tang@spglobal.com</a>
Hong Xie, CFA	Senior Director	<a href="mailto:hong.xie@spglobal.com">hong.xie@spglobal.com</a>
<b>APAC</b>		
Priscilla Luk	APAC Head	<a href="mailto:priscilla.luk@spglobal.com">priscilla.luk@spglobal.com</a>
Arpit Gupta	Senior Analyst	<a href="mailto:arpit.gupta1@spglobal.com">arpit.gupta1@spglobal.com</a>
Akash Jain	Associate Director	<a href="mailto:akash.jain@spglobal.com">akash.jain@spglobal.com</a>
Anurag Kumar	Senior Analyst	<a href="mailto:anurag.kumar@spglobal.com">anurag.kumar@spglobal.com</a>
Xiaoya Qu	Senior Analyst	<a href="mailto:xiaoya.qu@spglobal.com">xiaoya.qu@spglobal.com</a>
Yan Sun	Senior Analyst	<a href="mailto:yan.sun@spglobal.com">yan.sun@spglobal.com</a>
Liyu Zeng, CFA	Director	<a href="mailto:liyu.zeng@spglobal.com">liyu.zeng@spglobal.com</a>
<b>EMEA</b>		
Sunjiv Mainie, CFA, CQF	EMEA Head	<a href="mailto:sunjiv.mainie@spglobal.com">sunjiv.mainie@spglobal.com</a>
Leonardo Cabrer, PhD	Senior Analyst	<a href="mailto:leonardo.cabrer@spglobal.com">leonardo.cabrer@spglobal.com</a>
Andrew Cairns	Senior Analyst	<a href="mailto:andrew.cairns@spglobal.com">andrew.cairns@spglobal.com</a>
Andrew Innes	Associate Director	<a href="mailto:andrew.innes@spglobal.com">andrew.innes@spglobal.com</a>
Jingwen Shi	Analyst	<a href="mailto:jingwen.shi@spglobal.com">jingwen.shi@spglobal.com</a>
<b>INDEX INVESTMENT STRATEGY</b>		
Craig J. Lazzara, CFA	Global Head	<a href="mailto:craig.lazzara@spglobal.com">craig.lazzara@spglobal.com</a>
Chris Bennett, CFA	Director	<a href="mailto:chris.bennett@spglobal.com">chris.bennett@spglobal.com</a>
Fei Mei Chan	Director	<a href="mailto:feimei.chan@spglobal.com">feimei.chan@spglobal.com</a>
Tim Edwards, PhD	Managing Director	<a href="mailto:tim.edwards@spglobal.com">tim.edwards@spglobal.com</a>
Anu R. Ganti, CFA	Director	<a href="mailto:anu.ganti@spglobal.com">anu.ganti@spglobal.com</a>
Sherifa Issifu	Analyst	<a href="mailto:sherifa.issifu@spglobal.com">sherifa.issifu@spglobal.com</a>
Howard Silverblatt	Senior Index Analyst	<a href="mailto:howard.silverblatt@spglobal.com">howard.silverblatt@spglobal.com</a>

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