Making the Case for Morningstar Brazil Equal-Weight, Defensive, and Cyclical Sector Indexes

Morningstar Inc.
February 2023

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Introduction

Brazil boasts one of the largest and most dynamic financial ecosystems amongst emerging economies, and the country continues to attract investment. The Morningstar Brazil Equal-Weighted index family consists of three indexes that facilitate performance benchmarking of, and portfolio construction within, the Brazilian Equity Market:

- Morningstar Brazil Equal Weighted Index: This index targets large-, mid-, and small-cap stocks in Brazil, representing the largest 97% of the market as measured by total market capitalization. Constituents in the index are equal weighted.

- Morningstar Brazil Defensive Sectors Equal Weighted Index: This index targets stocks from the Morningstar Brazil index (parent index) that reside under the Defensive Super Sector umbrella of the Morningstar Global Equity Classification Structure. Constituents in the index are equal weighted.

- Morningstar Brazil Cyclical Sectors Equal Weighted Select Index: This index targets stocks from the Morningstar Brazil index (parent index) that reside within one of eight cyclical sectors under the Morningstar Global Equity Classification Structure; the included sectors typically have betas that are equal to or greater than 1. Constituents in the index are equal weighted.

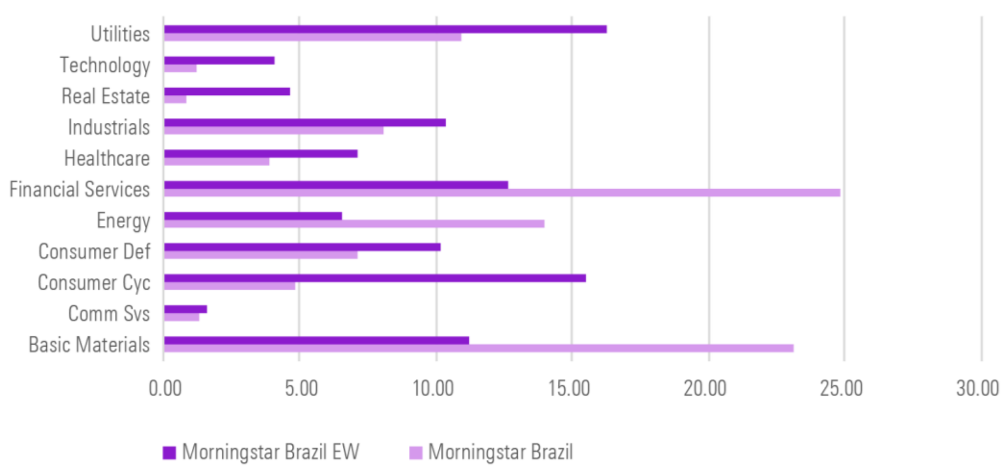
Each of these indexes affords a distinctive lens through which one can analyze, and gain investment exposure to, the Brazilian equity market. Throughout this piece, we substantiate this claim by exploring the portfolio attributes of each index with Morningstar data and analysis.

Why Equal Weighting?

In contrast to most broad-market indexes, which adhere to float-adjusted market capitalization weighting schemes, constituents of these indexes are weighted equally. While there are clear tradeoffs, the main benefits of this approach are 1) portfolio diversification and 2) risk mitigation.

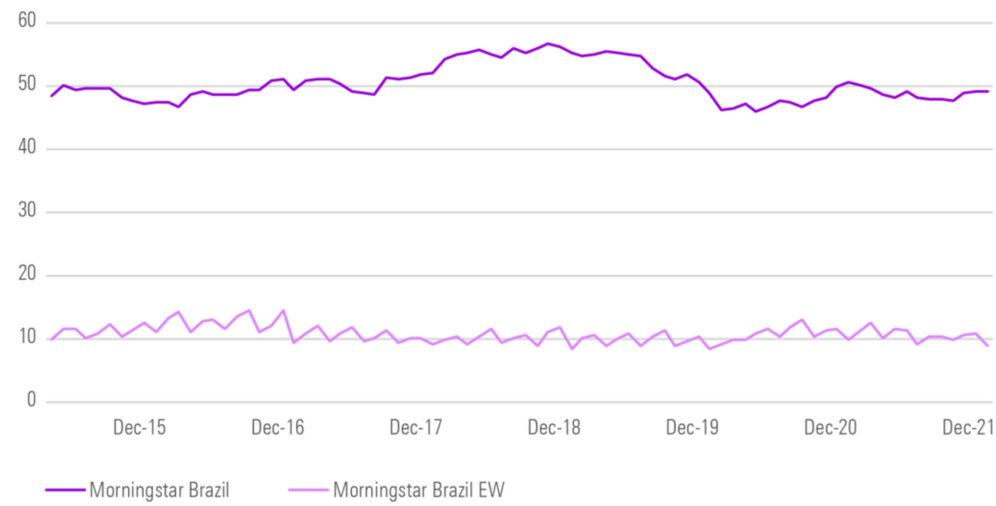
We can use the Morningstar Brazil Equal-Weighted index to illuminate these points. In the following two exhibits, we compare this index to its free-float market-capitalization weighted index counterpart, Morningstar Brazil. As demonstrated in exhibit 1, the distribution of sector weights is much more balanced for the Morningstar Brazil Equal-Weighted index relative to the market-cap weighted equivalent. The former has six sectors boasting weights above 10% (versus just four for the cap-weighted version), with no sector representing more than 20% of the portfolio (whereas Morningstar Brazil has two sectors clearing this threshold). In exhibit 2, for each index, we map the proportion of the portfolio represented by the top 10 holdings over time. Morningstar Brazil clearly has more concentration risk, with the top 10 holdings representing roughly 50% of the portfolio on average, versus 10% for the equal-weighted version.

Exhibit 1 Sector Composition (%)



Source: Morningstar Direct. Data as of Dec. 30, 2022.

Exhibit 2 Percent of Portfolio In Top 10 Holdings



Source: Morningstar Direct. Data as of Dec. 30, 2022.

Morningstar Global Equity Classification Structure (GECS)

Before delving into the Brazil Sector indexes, it's worth providing some background on the framework that underpins these indexes. Morningstar GECS is an exhaustive and mutually exclusive taxonomy. At the foundation of the framework are 145 industry classifications, which then map to 55 industry groups. These industry groupings are bucketed into 11 sectors, each of which falls into one of three super sectors.

Each equity security is mapped to the industry that best reflects its largest source of revenue and income, based on public filings and Morningstar equity analyst input. Morningstar also considers business descriptions, assets, and competitors when revenue does not paint a clear picture. If the company has more than three sources of revenue and income and there is no clear dominant revenue or income stream, the company is assigned to the Conglomerates industry (housed under the Industrials sector). Industry assignments are reviewed annually or whenever there is a major corporate action.

Why Sectors?

The Morningstar Brazil Defensive Sectors Equal Weighted index includes Brazilian equities from the following GECS sectors:

1. Consumer Defensive
2. Healthcare
3. Utilities

The Morningstar Brazil Cyclical Sectors Equal Weighted Select index includes Brazilian equities from the following sectors:

1. Basic Materials
2. Consumer Cyclical
3. Financial Services
4. Real Estate
5. Communication Services
6. Energy
7. Industrials
8. Technology

The sectors affiliated with the defensive index are relatively immune to economic cycles. These industries provide services that consumers require in both good and bad times, such as healthcare and utilities. In general, the stocks in these industries have betas of less than 1.

Conversely, the sectors constituting the cyclical index are much more tethered to the performance of the broader economy. They either ebb and flow in line with broader macroeconomic trends or, for certain industries, respond disproportionately to economic shocks (whether positive or negative). In general, the stocks in these industries have betas that are greater than or equal to 1.

Sector-based classification systems are some of the most widely used tools embraced by investors to evaluate investment options, and for good reason. Frameworks like GECS provide a prism through which one can dissect economic activity and, in turn, unearth investment opportunities. For example, even if an investor is bullish on the Brazilian economy, this sentiment may be primarily driven by developments in (or the prospects of) a particular industry or sector. Sector-based indexes, therefore, facilitate more targeted investment theses and efficient portfolio construction.

While the Morningstar Brazil Cyclical and Defensive Equal-Weighted indexes are fairly broad in scope, we reiterate that there are structurally different dynamics in terms of their susceptibility to economic shocks and fundamental business characteristics. Exhibit 3 underscores some of these differences.

Exhibit 3 Market Sensitivity and Fundamental Attributes – Brazil Defensive vs Cyclical

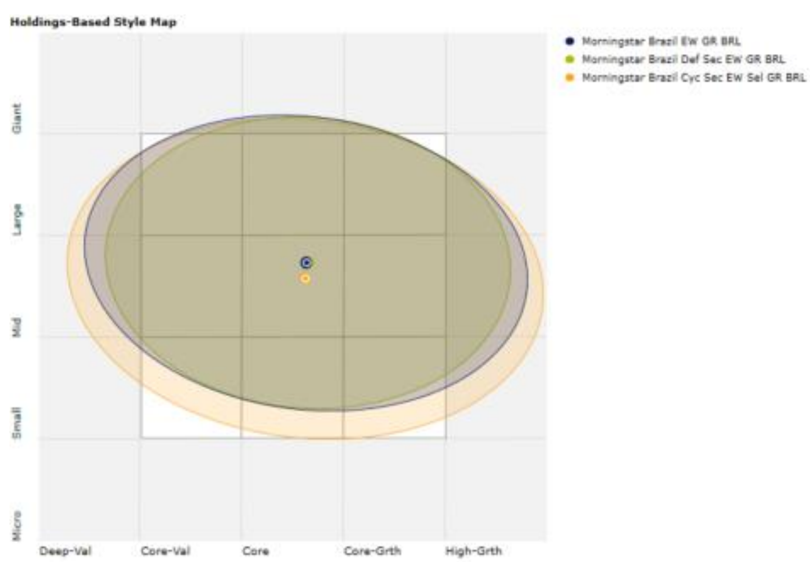
Fundamental Attributes	Brazil Cyclical EW	Brazil Defensive EW
Price/Earnings	7.42	11.10
Dividend Yield	11.11	6.54
Portfolio % Wide Moat	0.00	2.47
ROIC	14.03	10.15

Source: Morningstar Direct. Data as of Dec. 30, 2022.

As expected, the defensive index is less sensitive to market movements, as evidenced by its lower beta. The defensive index also has a greater proportion of wide-moat[1] companies, while companies in the cyclical index boast higher Returns on Invested Capital (ROIC), on average. Some may view the latter as inconsistent, since ROIC is a quantitative input to the economic moat assessment process (the higher, the better, all else equal). However, one can reconcile these findings by remembering that the Morningstar Economic Moat Rating measures the sustainability of a firm's ROIC and competitive position, not its ROIC in isolation.

Exhibit 4 shows the style orientation of the two sector indexes relative to the Morningstar Brazil Equal-Weighted index, plotting all three on the Morningstar Style Box. While both the defensive and cyclical indexes are situated in the core sector of the value – growth spectrum, it's worth noting that the cyclical index skews slightly smaller in terms of company size.

Exhibit 4 Style Orientation

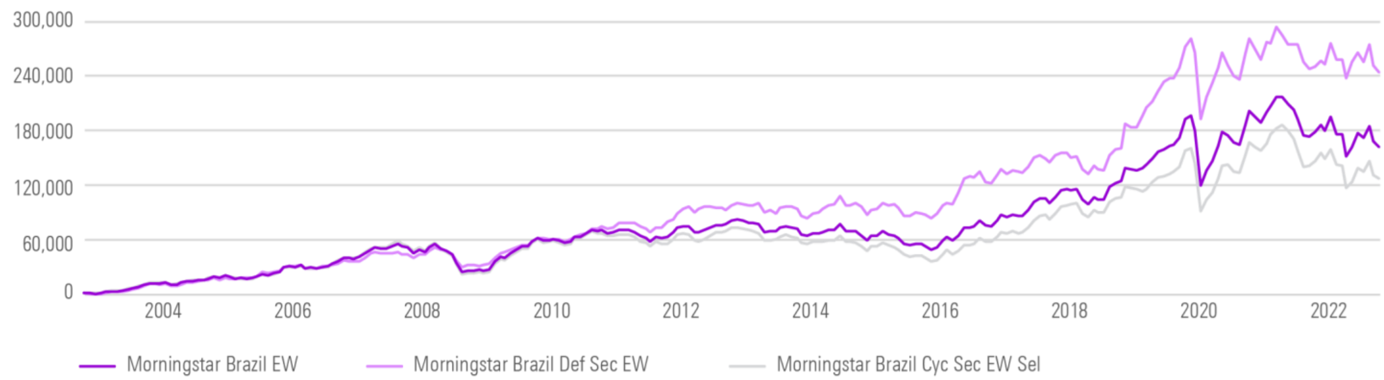


Source: Morningstar Direct. Data as of Dec. 30, 2022.

1 The Morningstar Economic Moat Rating is a proprietary assessment performed by the Morningstar Equity Research team, measuring the robustness of a firm's competitive position and how long this position is expected to persist.

From a performance perspective, we see in exhibit 5 that, over the past 20 years, Brazil's defensive sectors have exhibited superior performance, both on an absolute as well as risk-adjusted basis.

Exhibit 5 Brazil Sector Indexes Performance – 20 Year Time Horizon

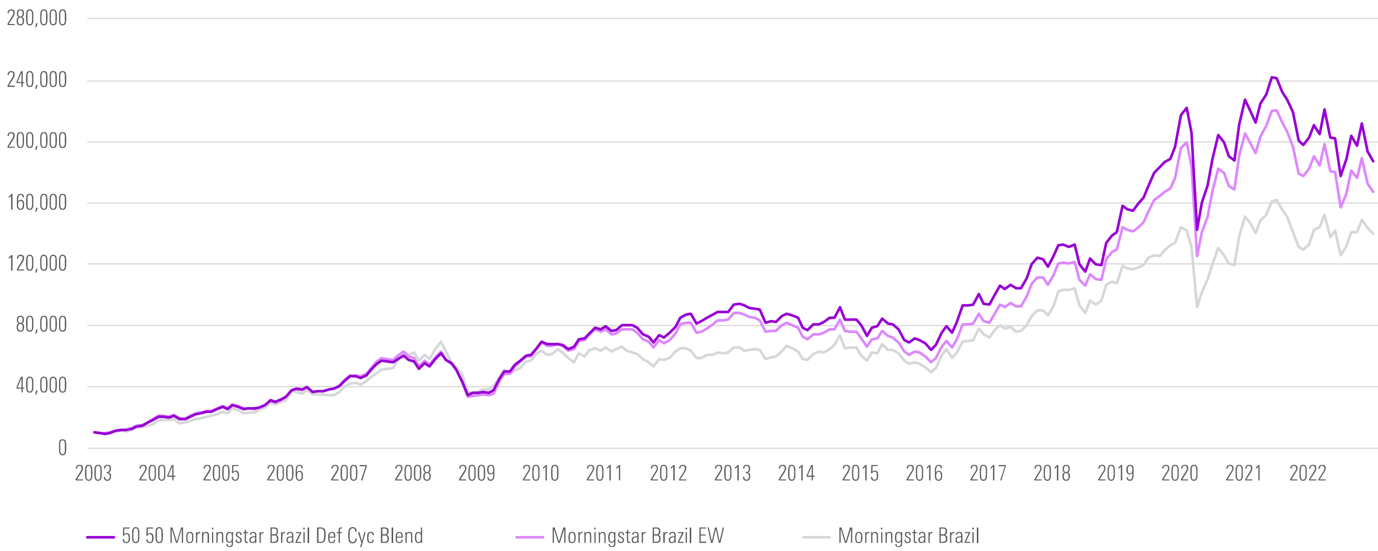


Index Name	Return	Excess Return	Tracking Error	Correlation	Beta	Standard Deviation	Sharpe Ratio	Max Drawdown	Down Capture Ratio	Up Capture Ratio
Morningstar Brazil Def Sec EW	17.39	2.27	8.21	0.97	0.91	20.07	0.43	-35.70	80.07	92.84
Morningstar Brazil Cyc Sec EW Sel	13.77	-1.34	3.82	1.00	1.05	23.83	0.32	-53.64	110.29	103.28
Morningstar Brazil EW	15.12	0.00	0.00	1.00	1.00	21.92	0.36	-47.64	100.00	100.00

Source: Morningstar Direct. Data as of Dec. 30, 2022.

What investors should pay more attention to, however, are the advantages that manifest when these broad sector indexes are combined in a portfolio construction context. In light of the divergent economic traits exhibited by defensive and cyclical companies, respectively, there are benefits that an investor can garner from using these exposures as building blocks for a portfolio. The Morningstar Brazil Defensive and Cyclical indexes, respectively, enable this portfolio construction to be done seamless and efficiently, and exhibit 6 illustrates some of the benefits. The exhibit displays the risk/return characteristics of a hypothetical portfolio comprised of the Morningstar Brazil Defensive index and the Morningstar Brazil Cyclical Select index, weighted in equal proportions and rebalanced monthly. Over a 20-year back-test horizon, this hypothetical portfolio outperforms the Morningstar Brazil Equal Weighted index, along with its market-cap-weighted counterpart, on both an absolute as well as risk-adjusted basis. The hypothetical portfolio also exhibits excellent downside protection, as demonstrated by its low downside capture ratio and max drawdown over the period.

Exhibit 6 Hypothetical 50/50 Defensive/Cyclical Portfolio – 20 Year Time Horizon



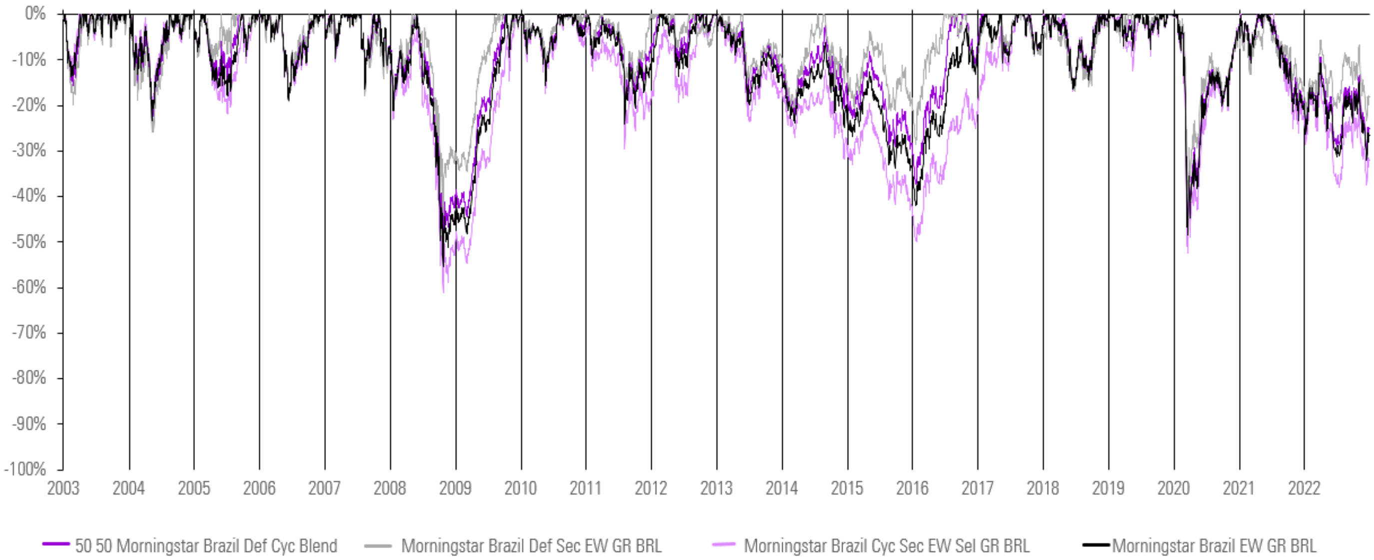
Index Name	Return	Excess Return	Tracking Error	Correlation	Beta	Standard Deviation	Sharpe Ratio	Max Drawdown	Down Capture Ratio	Up Capture Ratio
50 50 Morningstar Brazil Def Cyc Blend	15.78	1.68	8.68	0.97	0.95	21.20	0.38	-44.37	79.93	90.76
Morningstar Brazil EW	15.12	1.02	8.10	0.97	0.97	21.92	0.36	-47.64	86.26	93.34
Morningstar Brazil	14.10	0.00	0.00	1.00	1.00	22.03	0.33	-48.71	100.00	100.00

Source: Morningstar Direct. Data as of Dec. 30, 2022.

Given the different risk and fundamental profiles of the defensive and cyclical indexes, it's worth exploring how they fare in different market cycles. In exhibit 7, we plot a 20-year time series of drawdowns[2] for the two sector indexes, along with the hypothetical portfolio and the broad market index. While there are certainly exceptions, several of the patterns observed in this chart are consistent with economic intuition around the performance of defensive vs cyclical companies. For example, during the years 2014-2016, some of the structural weaknesses in Brazil's economy were laid bare, including it's reliance on commodity exports (non-energy commodity prices took a turn for the worst), fiscal mismanagement, and high tariff rates. The confluence of these (and other) factors caused a deep and painful recession. During this period, the drawdowns in the defensive index were less pronounced than those the cyclical index, reflecting their different levels of sensitivity to macroeconomic shocks. Similarly, during 2020-2022, as Brazil's economy has struggled to rebound from the onslaught of the COVID-19 pandemic and the attendant impacts on inflation, public debt, and employment, the defensive index has held up far better than the cyclical index and the broader market. Generally, we'd expect companies situated in defensive industries to be comparatively insulated from macroeconomic headwinds.

2 In this illustration, drawdown is computed as the percentage difference between the maximum index level attained over the 20-year time horizon, and the index level at each point in the time series.

Exhibit 7 Brazil Indexes Relative Drawdown: 2003-2022

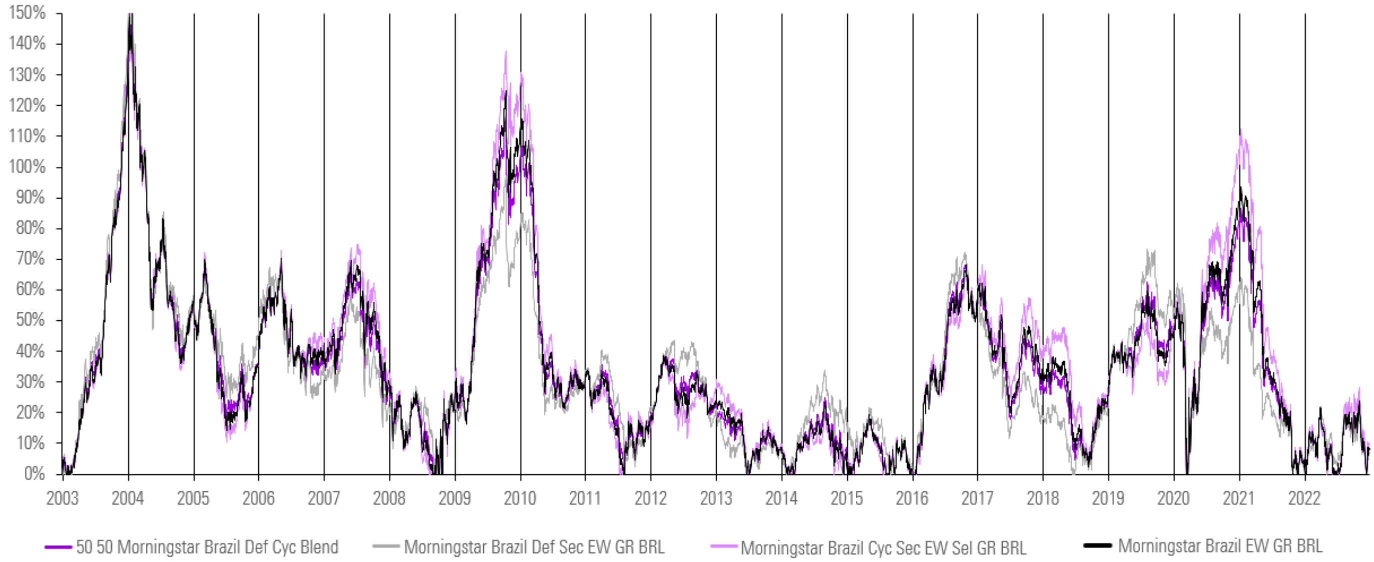


Source: Morningstar Direct. Data as of Dec. 30, 2022.

Conversely, in exhibit 8, we plot rallies[3] in the sector indexes, along with the hypothetical portfolio and broad market, over the same 20 year time horizon. Again, we see several patterns that align with conventional wisdom around the indexes' sensitivity to macroeconomic factors. For example, during 2009-2010, as the country emerged from the crucible of the global financial crisis and declining demand from trade partners, Brazil's economy exhibited resilient growth. This was due to copious amounts of government stimulus (tax cuts, increased social welfare, and infrastructure spending) and resulting political stability (as President Luiz Inácio Lula da Silva's government enjoyed widespread public support). Against this backdrop, while the entire stock market rallied, companies in the cyclical index reaped a disproportionate share of the benefits. Similarly, from mid-2017 to mid-2018, as the Brazilian economy reaped ongoing benefits from improved fiscal standing, a robust trade balance, and strong consumer spending, the upswing in the cyclical index was more pronounced than its defensive counterpart. While these patterns will not hold universally, economic logic suggests they should be generally true, as companies in the cyclical sector are a bellwether for consumer confidence.

3 In this illustration, rally is computed as the percentage difference between the index level at each point in the 20-year time series, and the minimum index level across a 250-day rolling interval.

Exhibit 8 Brazil Indexes Relative Rally: 2003-2022



Source: Morningstar Direct. Data as of Dec. 30, 2022.

About Morningstar Indexes

Morningstar Indexes was built to keep up with the evolving needs of investors—and to be a leading-edge advocate for them. Our rich heritage as a transparent, investor-focused leader in data and research uniquely equips us to support individuals, institutions, wealth managers and advisors in navigating investment opportunities across major asset classes, styles and strategies. From traditional benchmarks and unique IP-driven indexes, to index design, calculation and distribution services, our solutions span an investment landscape as diverse as investors themselves.

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