S&P Dow Jones Indices

A Division of S&P Global

SPIVA® India Scorecard

Contributors

Akash Jain

Associate Director Global Research & Design akash.jain@spglobal.com

Arpit Gupta

Senior Analyst Global Research & Design arpit.gupta1@spglobal.com

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

SUMMARY

- S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since the first publication of the S&P Indices Versus Active Funds (SPIVA) U.S. Scorecard in 2002. Over the years, we have built on our experience publishing the report by expanding scorecard coverage into Australia, Canada, Europe, India, Japan, Latin America, and South Africa.
- The SPIVA India Scorecard compares the performance of actively managed Indian mutual funds with their respective benchmark indices over 1-, 3-, 5-, and 10-year investment horizons. In this scorecard, we studied the performance of three categories of actively managed equity funds and two categories of actively managed bond funds over the 6-month and 1-, 3-, 5-, and 10-year periods ending in December 2020.
- The strong rebound that began in early Q2 of calendar year 2020 continued into H2 2020, with the <u>S&P BSE 100</u> finishing the six-month period up 36.48%. During this recovery period, the majority of the equity active funds in the Indian Equity Large-Cap and ELSS categories lagged their respective benchmarks (see Exhibit 1).
- In the second half of 2020, the asset-weighted returns were lower than their respective benchmark returns in each of the Indian Equity categories: large-cap funds (by 273 bps), ELSS funds (by 318 bps) and mid- and small-cap funds (by 230 bps).

Exhibit 1: Second Half 20	Exhibit 1: Second Half 2020 Average Fund and Index Performance					
		INDEX	AVERAGE FUND RETURN (%)		PERCENTAGE OF FUNDS	
FUND CATEGORY	COMPARISON INDEX	RETURN (%)	EQUAL- WEIGHTED	ASSET- WEIGHTED	OUTPERFORMED BY THE INDEX (%)	
Indian Equity Large-Cap	S&P BSE 100	36.48	32.46	33.75	100.00	
Indian ELSS	S&P BSE 200	36.59	33.96	33.41	80.49	
Indian Equity Mid-/Small- Cap	S&P BSE 400 MidSmallCap Index	42.51	42.27	40.21	53.06	
Indian Government Bond	S&P BSE India Government Bond Index	3.81	3.06	3.32	79.17	
Indian Composite Bond	S&P BSE India Bond Index	3.91	3.14	4.15	56.58	

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2020. Index performance based on total return in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

• Indian Equity Large-Cap Funds: Over the one-year period ending in December 2020, the S&P BSE 100 was up 16.84%, with 80.65% of funds underperforming the benchmark. Over the second half of 2020, 100% of the funds underperformed the S&P BSE 100. Over longer horizons, the majority of actively managed large-cap equity funds in India underperformed the large-cap benchmark, with 68.42% of large-cap funds underperforming over the 10-year period ending in December 2020. Over the same period, Indian large-cap funds witnessed a low survivorship rate of 70.68%. The asset-weighted fund return was 11 bps higher than the equal-weighted fund return over the 10-year period, and the return spread between the first and third quartile breakpoints of fund performance was 2.38% for the same period.

- Indian ELSS Funds: Over the one-year period ending in December 2020, the <u>S&P BSE 200</u> ended in the black, returning 17.92%, with 65.12% of funds underperforming the benchmark. During the second half of 2020, 80.49% of the funds underperformed the benchmark. Over the 3-, 5-, and 10-year periods ending in December 2020, 90.91%, 85.71%, and 51.43% of funds underperformed the benchmark, respectively. Over the 10-year horizon, the return spread between asset-weighted and equal-weighted returns was -63 bps. The return spread between the first and third quartile breakpoints of fund performance for the same period was 1.94%.
- Indian Equity Mid-/Small-Cap Funds: The benchmark for Indian Equity Mid-/Small-Cap funds, the S&P BSE 400 MidSmallCap Index, was up 26.76% over the one-year period ending in December 2020. Over the second half of 2020, 53.06% of the funds underperformed the benchmark. Among all the categories evaluated in the SPIVA India Scorecard, the Indian Equity Mid-/Small-Cap fund category fared the best, with the majority of them managing to beat the S&P BSE 400 MidSmallCap Index over the 10-year period ending in December 2020. Though over the same period, the survivorship rate was low, at 71.43%. For the same period, the asset-weighted fund return was 82 bps lower than the equal-weighted fund return, and the return spread between the first and third quartile breakpoints of fund performance was 3.45%, which was the highest among the equity categories.
- Indian Government Bond Funds: The <u>S&P BSE India Government Bond Index</u> returned 11.89% over the one-year period ending in December 2020. Over the 6-month, and 1-, 3-, 5-, and 10-year periods ending in December 2020, 79.17%, 50.00%, 74.36%, 76.74%, and 86.00% of the actively managed funds in this category lagged the benchmark, respectively. Over the 10-year period ending in December 2020, survivorship rate was only 40.00%. For the same period, the asset-weighted fund return was 110 bps higher than the equal-weighted fund return, and the return spread between the first and third quartile breakpoints of fund performance was 1.29%.
- Indian Composite Bond Funds: In the 12-month period ending in December 2020, the <u>S&P BSE</u> India Bond Index closed in the black, with a gain of 11.77%. Across all the observed periods, more than 90% of the funds underperformed the benchmark except for the 6-month period ending in December 2020. Over the 10-year period, survivorship rate was 78.21%. For the same period, the asset-weighted fund return was 135 bps higher than the equal-weighted fund return, and the return spread between the first and third quartile breakpoints of fund performance was 1.84%.

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 few strong believers on both sides, with the vast majority of market participants falling somewhere in between. The SPIVA India Scorecard provides a semiannual update on the active versus index debate in India. It shows the performance of actively managed Indian mutual funds compared with S&P DJI indices in their respective categories.

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 India 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 results in the returns of an INR 10 billion fund affecting the average in the same
 manner as the returns of an INR 10 million fund. However, the SPIVA India Scorecard shows both
 equal- and asset-weighted averages. Equal-weighted returns are a measure of average fund
 performance, while asset-weighted returns are a measure of the performance of the average
 invested dollar.
- Style Consistency: SPIVA Scorecards measure consistency for each style category across
 different time horizons. Style consistency is an important metric, because style drift (the tendency
 of funds to diverge from their initial investment categorization) can have an impact on asset
 allocation decisions.
- Data Cleaning: SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations, using only the share class with greater quarterly average assets at the start of the measurement period. Since this is meant to be a scorecard for active managers, index funds, leveraged and inverse funds, and other index-linked products are excluded.

Please note that neither S&P Dow Jones Indices nor any of its affiliates make any assurance or provide any investment recommendation on the appropriateness of investing in either index or active investing. S&P Dow Jones Indices does not sponsor, endorse, sell, or promote any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. The SPIVA India Scorecard simply provides semiannual statistics according to the SPIVA methodology and a brief analysis of those statistics. Further, S&P Dow Jones Indices does advise anyone reading this report to also read the SPIVA methodology in the report to understand how the data were derived.

REPORTS

Report 1a: Percentage of Funds Outperformed by the Index (Based on Absolute Return)					
FUND CATEGORY	COMPARISON INDEX	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)
Indian Equity Large-Cap	S&P BSE 100	80.65	88.14	87.95	68.42
Indian ELSS	S&P BSE 200	65.12	90.91	85.71	51.43
Indian Equity Mid-/Small-Cap	S&P BSE 400 MidSmallCap Index	66.67	34.88	54.35	35.71
Indian Government Bond	S&P BSE India Government Bond Index	50.00	74.36	76.74	86.00
Indian Composite Bond	S&P BSE India Bond Index	90.67	96.53	97.22	96.15

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1b: Percentage of Funds Outperformed by the Index (Based on Risk-Adjusted Return)					
FUND CATEGORY	COMPARISON INDEX	1-YEAR (%)	3-YEAR (%)	5-YEAR (%)	10-YEAR (%)
Indian Equity Large-Cap	S&P BSE 100	64.52	77.97	84.34	69.92
Indian ELSS	S&P BSE 200	62.79	90.91	85.71	54.29
Indian Equity Mid-/Small-Cap	S&P BSE 400 MidSmallCap Index	49.02	34.88	43.48	35.71
Indian Government Bond	S&P BSE India Government Bond Index	95.83	89.74	90.70	92.00
Indian Composite Bond	S&P BSE India Bond Index	77.33	68.75	62.50	70.51

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of Indian Equity Fur	nds	
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
1-YEAR		
Indian Equity Large-Cap	31	96.77
Indian ELSS	43	95.35
Indian Equity Mid-/Small-Cap	51	96.08
Indian Government Bond	24	100.00
Indian Composite Bond	150	97.33
3-YEAR		
Indian Equity Large-Cap	59	93.22
Indian ELSS	44	88.64
Indian Equity Mid-/Small-Cap	43	95.35
Indian Government Bond	39	66.67
Indian Composite Bond	144	88.89
5-YEAR		
Indian Equity Large-Cap	83	86.75
Indian ELSS	42	88.10
Indian Equity Mid-/Small-Cap	46	93.48
Indian Government Bond	43	60.47
Indian Composite Bond	144	84.03
10-YEAR		
Indian Equity Large-Cap	133	70.68
Indian ELSS	35	85.71
Indian Equity Mid-/Small-Cap	70	71.43
Indian Government Bond	50	40.00
Indian Composite Bond	78	78.21

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average Fund Performance (Equal Weighted)				
INDEX/PEER GROUP	1-YEAR (%)	3-YEAR ANNUALIZED (%)	5-YEAR ANNUALIZED (%)	10-YEAR ANNUALIZED (%)
S&P BSE 100	16.84	9.97	13.23	10.12
Indian Equity Large-Cap	13.67	7.08	11.31	9.77
S&P BSE 200	17.92	9.48	13.29	10.35
Indian ELSS	16.20	5.60	11.38	11.15
S&P BSE 400 MidSmallCap Index	26.76	0.93	10.84	9.90
Indian Equity Mid-/Small-Cap	27.43	3.26	11.31	13.13
S&P BSE India Government Bond Index	11.89	10.29	9.59	9.25
Indian Government Bond	10.75	8.64	8.16	7.73
S&P BSE India Bond Index	11.77	10.13	9.52	9.24
Indian Composite Bond	5.91	4.91	5.74	6.82

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

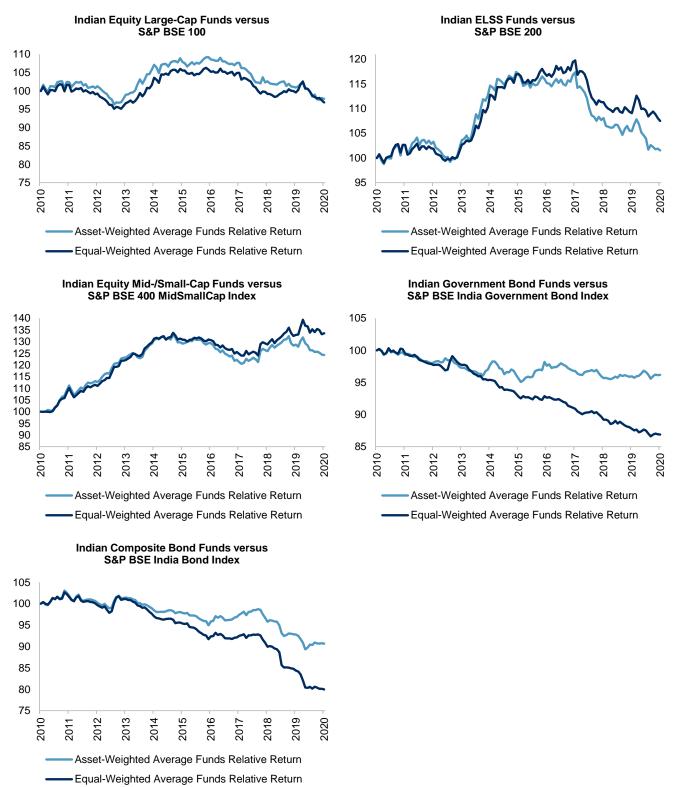
Report 4: Average Fund Performance (Asset Weighted)				
INDEX/PEER GROUP	1-YEAR (%)	3-YEAR ANNUALIZED (%)	5-YEAR ANNUALIZED (%)	10-YEAR ANNUALIZED (%)
S&P BSE 100	16.84	9.97	13.23	10.12
Indian Equity Large-Cap	13.28	6.53	11.05	9.88
S&P BSE 200	17.92	9.48	13.29	10.35
Indian ELSS	13.55	4.33	10.12	10.52
S&P BSE 400 MidSmallCap Index	26.76	0.93	10.84	9.90
Indian Equity Mid-/Small-Cap	22.36	1.76	9.99	12.31
S&P BSE India Government Bond Index	11.89	10.29	9.59	9.25
Indian Government Bond	12.13	10.06	9.72	8.83
S&P BSE India Bond Index	11.77	10.13	9.52	9.24
Indian Composite Bond	9.20	7.52	7.87	8.17

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of Fu	nd Performance		
FUND CATEGORY	THIRD QUARTILE	SECOND QUARTILE	FIRST QUARTILE
1-YEAR	·	·	
Indian Equity Large-Cap	12.17	13.93	16.41
Indian ELSS	11.90	14.95	18.87
Indian Equity Mid-/Small-Cap	19.79	24.28	31.81
Indian Government Bond	10.24	11.77	13.18
Indian Composite Bond	7.84	9.86	10.92
3-YEAR			
Indian Equity Large-Cap	5.17	7.28	8.51
Indian ELSS	3.40	4.25	7.48
Indian Equity Mid-/Small-Cap	-1.12	2.25	4.44
Indian Government Bond	8.39	9.95	11.43
Indian Composite Bond	5.23	8.31	9.12
5-YEAR			
Indian Equity Large-Cap	9.81	10.77	12.09
Indian ELSS	9.05	10.57	12.57
Indian Equity Mid-/Small-Cap	8.16	10.60	12.68
Indian Government Bond	8.51	9.47	10.51
Indian Composite Bond	6.11	7.82	8.67
10-YEAR			
Indian Equity Large-Cap	8.50	9.83	10.88
Indian ELSS	9.55	10.62	11.48
Indian Equity Mid-/Small-Cap	10.98	12.65	14.43
Indian Government Bond	8.26	8.93	9.55
Indian Composite Bond	6.64	7.63	8.49

Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

CUMULATIVE AVERAGE FUND RETURN RELATIVE TO BENCHMARK



Source: S&P Dow Jones Indices LLC, Morningstar, and Association of Mutual Funds in India. Data as of Dec. 31, 2020. Returns are shown in INR. Past performance is no guarantee of future results. Charts are provided for illustrative purposes and reflect hypothetical historical performance. Please see Performance Disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.

APPENDIX A: GLOSSARY

Data

Data from Morningstar is obtained for all managed funds domiciled in India for which month-end data are available during the performance period. The data include the most comprehensive Indian fund data on active and finalized (merged or liquidated) funds over the chosen period.

Quarterly average assets for all managed funds are sourced from the Association of Mutual Funds in India for every quarter-end during the performance period.

SPIVA Styles and Morningstar Fund Classifications

Funds are classified based on the Morningstar fund classification system, and the SPIVA India Scorecard covers Indian Equity Large-Cap, Indian ELSS, Indian Equity Mid-/Small-Cap, Indian Government Bond, and Indian Composite Bond categories.

The Morningstar classification system produces narrow, style-based classifications for Indian funds. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given that value and growth style segments are not consistently discernible over the previous five-year period.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

Exhibit 1a: Indian Funds – SPIVA and Current Morningstar Categories		
SPIVA CATEGORY	MORNINGSTAR CATEGORY	
Indian Equity Large-Cap	India Fund Large-Cap	
Indian ELSS	India Fund ELSS (Tax Savings)	
ladias Favita Mid (Carell Con	India Fund Mid-Cap	
Indian Equity Mid-/Small-Cap	India Fund Small-Cap	
Indian Government Bond	India Fund Government Bond	
	India Fund 10 yr Government Bond	
	India Fund Short Duration	
	India Fund Medium Duration	
	India Fund Medium to Long Duration	
	India Fund Long Duration	
Indian Composite Bond	India Fund Dynamic Bond	
	India Fund Banking & PSU	
	India Fund Corporate Bond	
	India Fund Credit Risk	

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

SPIVA CATEGORY	MORNINGSTAR CATEGORY		
	India CE Large Cap		
Indian Equity Large-Cap	India OE Large Cap		
	India OE Large-Cap		
Indian ELSS	India OE ELSS (Tax Saving)		
	India CE Small/Mid Cap		
	India OE Small/Mid Cap		
Indian Equity Mid-/Small-Cap	India OE Small/Mid-Cap		
	India Fund Small/Mid-Cap		
	India OE Long Government		
	India OE Long-Term Government Bond		
	India OE Intermediate Government Bond		
	India OE Intermediate Government		
Indian Government Bond	India OE Short Government		
	India OE Short-Term Government Bond		
	India Fund Long-Term Government Bond		
	India Fund Intermediate Government Bond		
	India Fund Short-Term Government Bond		
	India OE Intermediate Bond		
	India OE Short-term Bond		
	India OE Long-Term Bond		
	India OE Fixed Maturity Multisector Bond		
	India OE Fixed Maturity Short-term Bond		
Indian Composite Bond	India OE FMP Multisector Bond		
Indian Composite Bond	India OE Multisector Bond		
	India OE Corporate Credit		
	India Fund Long-Term Bond		
	India Fund Intermediate Bond		
	India Fund Short-Term Bond		
	India Fund Corporate Credit		

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

Benchmarks

The chosen benchmarks are shown in Exhibit 2. All index returns are total returns (i.e., include dividend reinvestment) in Indian rupees. There has been no deduction from index returns to account for fund investment expenses. It is important to note that active fund returns are after expenses, but they do not include loads and entry fees.

The benchmarks chosen are the most commonly adopted benchmarks for funds that fall into the respective fund peer groups. In some instances, a fund may not adopt the benchmarks stipulated in Exhibit 2. However, a vast majority do set their performance hurdle based on the assigned benchmarks in this report, ensuring that the study is robust and fair.

Exhibit 2: SPIVA Categories and Their Benchmarks		
SPIVA CATEGORY	BENCHMARK INDEX	
Indian Equity Large-Cap	S&P BSE 100	
Indian ELSS	S&P BSE 200	
Indian Equity Mid-/Small-Cap ¹	S&P BSE 400 MidSmallCap Index	
Indian Government Bond	S&P BSE India Government Bond Index	
Indian Composite Bond	S&P BSE India Bond Index	

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

The benchmark for the SPIVA category India Equity Mid-/Small-Cap in SPIVA India scorecards prior to the SPIVA India Mid-Year 2018 scorecard was the <u>S&P BSE MidCap</u>.

APPENDIX B: GLOSSARY

Percentage of Funds Outperformed by the Index

To correct for survivorship bias, we use the opportunity set available at the beginning of the period as the denominator. We determine the count of funds that have survived and beaten the index. We then report the index outperformance percentage.

Survivorship (%)

This measure represents the percentage of funds in existence at the beginning of the time period that is 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 latest quarterly average assets available as of that month from the Association of Mutual Funds in India. Asset-weighted returns are a better indicator of fund category performance because they more accurately reflect the returns of the total money invested in that particular style category.

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

Survivorship Bias

Many funds might 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. These reports remove this bias by (a) using 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, (b) explicitly showing the survivorship rate in each category, and (c) constructing 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 vehicle against which fund performance can be measured.

S&P BSE 100

The S&P BSE 100 is designed to measure the performance of the top 100 companies in India based on size and liquidity. It is a highly liquid and investable index that is designed to address investment managers' needs to benchmark against a large-cap equity portfolio.

S&P BSE 200

The S&P BSE 200 is designed to represent the top 200 large, liquid, well-established, and financially sound companies listed at BSE Ltd. across sectors.

S&P BSE 400 MIDSMALLCAP INDEX

The S&P BSE 400 MidSmallCap Index is designed to track the performance of the 400 companies within the S&P BSE 500 that are not part of S&P BSE 100.

S&P BSE INDIA GOVERNMENT BOND INDEX

The S&P BSE India Government Bond Index is designed to track the performance of local-currency-denominated government bonds from India.

S&P BSE INDIA BOND INDEX

The S&P BSE India Bond Index is designed to track the performance of local-currency-denominated government and corporate bonds from India.

Sunjiv Mainie, CFA, CQF	Global Head	sunjiv.mainie@spglobal.com
Jake Vukelic	Business Manager	jake.vukelic@spglobal.com
GLOBAL RESEARCH & DE	SIGN	
AMERICAS		
Gaurav Sinha	Americas Head	gaurav.sinha@spglobal.com
Laura Assis	Analyst	laura.assis@spglobal.com
Cristopher Anguiano, FRM	Analyst	cristopher.anguiano@spglobal.con
Nazerke Bakytzhan, PhD	Senior Analyst	nazerke.bakytzhan@spglobal.com
Smita Chirputkar	Director	smita.chirputkar@spglobal.com
Rachel Du	Senior Analyst	rachel.du@spglobal.com
Bill Hao	Director	wenli.hao@spglobal.com
Qing Li	Director	qing.li@spglobal.com
Berlinda Liu, CFA	Director	berlinda.liu@spglobal.com
Lalit Ponnala, PhD	Director	lalit.ponnala@spglobal.com
Maria Sanchez, CIPM	Associate Director	maria.sanchez@spglobal.com
Hong Xie, CFA	Senior Director	hong.xie@spglobal.com
APAC		
Priscilla Luk	APAC Head	priscilla.luk@spglobal.com
Arpit Gupta	Senior Analyst	arpit.gupta1@spglobal.com
Akash Jain	Associate Director	akash.jain@spglobal.com
Anurag Kumar	Senior Analyst	anurag.kumar@spglobal.com
Xiaoya Qu	Senior Analyst	xiaoya.qu@spglobal.com
Yan Sun	Senior Analyst	yan.sun@spglobal.com
Tim Wang	Senior Analyst	tim.wang@spglobal.com
Liyu Zeng, CFA	Director	liyu.zeng@spglobal.com
EMEA		
Andrew Innes	EMEA Head	andrew.innes@spglobal.com
Alberto Allegrucci, PhD	Senior Analyst	alberto.allegrucci@spglobal.com
Panos Brezas, PhD	Senior Analyst	panos.brezas@spglobal.com
Leonardo Cabrer, PhD	Associate Director	leonardo.cabrer@spglobal.com
Andrew Cairns, CFA	Associate Director	andrew.cairns@spglobal.com
Niall Gilbride, CFA	Senior Analyst	niall.gilbride@spglobal.com
Rui Li, ACA	Senior Analyst	rui.li@spglobal.com
Jingwen Shi, PhD	Senior Analyst	jingwen.shi@spglobal.com
INDEX INVESTMENT STRA	TEGY	
Craig J. Lazzara, CFA	Global Head	craig.lazzara@spglobal.com
Fei Mei Chan	Director	feimei.chan@spglobal.com
Tim Edwards, PhD	Managing Director	tim.edwards@spglobal.com
Anu R. Ganti, CFA	Senior Director	anu.ganti@spglobal.com

ABOUT ASIA INDEX PRIVATE LIMITED

Asia Index Pvt. Ltd is a 50-50 partnership between S&P Dow Jones Indices LLC, the world's largest provider of financial market indices, and BSE Ltd, Asia's oldest stock exchange and home to the iconic SENSEX index - a leading indicator of Indian equity market performance. Asia Index Pvt. Ltd, which combines the benchmarks, market intelligence, and insights of both parent companies, each established more than 115 years ago, aims to provide a full array of indices enabling global and domestic investors to participate in South Asia's vibrant economies. The Company is best known for calculating, publishing, and maintaining a diverse family of Asian indices under the umbrella brand, S&P BSE Indices. To learn more about our company, please visit www.asiaindex.co.in.

PERFORMANCE DISCLOSURE/BACK-TESTED DATA

The S&P BSE 400 MidSmallCap Index was launched November 30, 2017. The S&P BSE India Government Bond Index and the S&P BSE India Bond Index were launched December 31, 2013. All information presented prior to an index's Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. Complete index methodology details are available at www.spglobal.com/spdii. Past performance of the Index is not an indication of future results. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results. Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations. Back-tested performance is for use with institutions only; not for use with retail investors.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate S&P DJI's ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used.

Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices maintains the index and calculates the index levels and performance shown or discussed but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

GENERAL DISCLAIMER

Copyright © 2021 S&P Dow Jones Indices LLC. All rights reserved. S&P, S&P 500, S&P 500 LOW VOLATILITY INDEX, S&P 100, S&P COMPOSITE 1500, S&P MIDCAP 400, S&P SMALLCAP 600, SELECT SECTOR, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, S&P TARGET DATE INDICES, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR and INDEXOLOGY are registered trademarks of Standard & Poor's Financial Services LLC, a division of S&P Global ("S&P"). DOW JONES, DJ, DJIA, The Dow and DOW JONES INDUSTRIAL AVERAGE are registered trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P Dow Jones Indices LLC, S&P, Dow Jones or their respective affiliates (collectively "S&P Dow Jones Indices") do not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P Dow Jones Indices is impersonal and not tailored to the needs of any person, entity or group of persons. S&P Dow Jones Indices receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P Dow Jones Indices does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P Dow Jones Indices makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P Dow Jones Indices LLC is not an investment advisor, and S&P Dow Jones Indices makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other investment product or vehicle. S&P Dow Jones Indices LLC is not a tax advisor. A tax advisor should be consulted to evaluate the impact of any tax-exempt securities on portfolios and the tax consequences of making any particular investment decision. Inclusion of a security within an index is not a recommendation by S&P Dow Jones Indices to buy, sell, or hold such security, nor is it considered to be investment advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P Dow Jones Indices. The Content shall not be used for any unlawful or unauthorized purposes. S&P Dow Jones Indices and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

S&P Global keeps certain activities of its various divisions and business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate or otherwise address.