

WHITE PAPER SERIES #10

NIFTY100 ESG Indices

{ Capturing the intangible value of
sustainable and responsible
businesses }

March 2018

Introduction

The emphasis on sustainable and responsible investment (SRI) strategies have been steadily on the rise given the increasing awareness towards environmental stability, socio-economic development and adherence to ethical standards. Recently, the perceived lack of governance during global financial crisis, increasing threat from global warming, activism on social issues etc. have brought about a consensus towards importance of holistic growth and responsible investment. One such strategy that has gradually gained popularity among investors is environmental, social and governance (ESG) based investing. The underlying principle behind ESG based investing lies in identifying & quantifying the intangible value possessed by socially responsible, environmentally friendly firms with robust governance policies in place. These firms are believed to exhibit better risk management measures on ESG parameters which in turn creates value for investors with long-lasting sustainable business models.

ESG based investment philosophy has a rich history with its roots in United States and Europe set in 1960-70. In Europe, the first SRI fund was launched in Sweden in 1960s whereas socio-political movements in US led to start of socially responsible investments in 1970s. Globally, as of 2016, there were \$22.89 trillion worth of assets professionally managed under SRI theme. This represents a healthy rise ~11.9% CAGR since 2014.

Environmental, Social and Governance (ESG) theme is an effective portfolio selection strategy under the broader theme of sustainable and responsible investment (SRI). Fund managers and investors can focus upon firms with better ESG performance to generate higher returns with lower company specific risk. India Index Services & Products Ltd (IISL), an NSE group company, has launched 2 ESG indices: NIFTY100 Enhanced ESG Index and NIFTY100 ESG Index. These ESG indices are expected to appeal to the investment community looking to align their investment with ESG theme.

Global landscape

Assets managed under sustainable and responsible investment (SRI) theme have been on a steady rise, recording USD 22.9 trillion in AUM by 2016, a CAGR growth of 11.9% since 2014. Europe remains a dominant force in SRI theme based investing by contributing over 52% in total investment, followed by United States at 38%. Geographically, Japan is the fastest growing investment destination for SRI based themes by registering a huge jump from USD 7 bn in 2014 to USD 474 bn in 2016. Among SRI based investment strategies, ESG theme based investment had an AUM of USD 10.3 trillion in 2016, a robust CAGR growth of 17.4% since 2014. As of 2016, United States accounted for ~56% of AUM managed under ESG theme, followed by Europe (27.8%) and Canada (10.1%).

Exhibit 1: Growth in SRI assets by geographical region

Growth of SRI Assets by region from 2014-2016 (Assets in USD bn)					
Region	2014	Share (%)	2016	Share (%)	CAGR (%)*
Europe	10,775	59.0%	12,040	52.6%	5.7%
United States	6,572	36.0%	8,723	38.1%	15.2%
Canada	729	4.0%	1,086	4.7%	22.1%
Australia/New Zealand	148	0.8%	516	2.3%	86.7%
Asia ex Japan	45	0.2%	52	0.2%	7.5%
Japan	7	0.0%	474	2.1%	722.9%
Total	18,276	100.0%	22,891	100.0%	11.9%

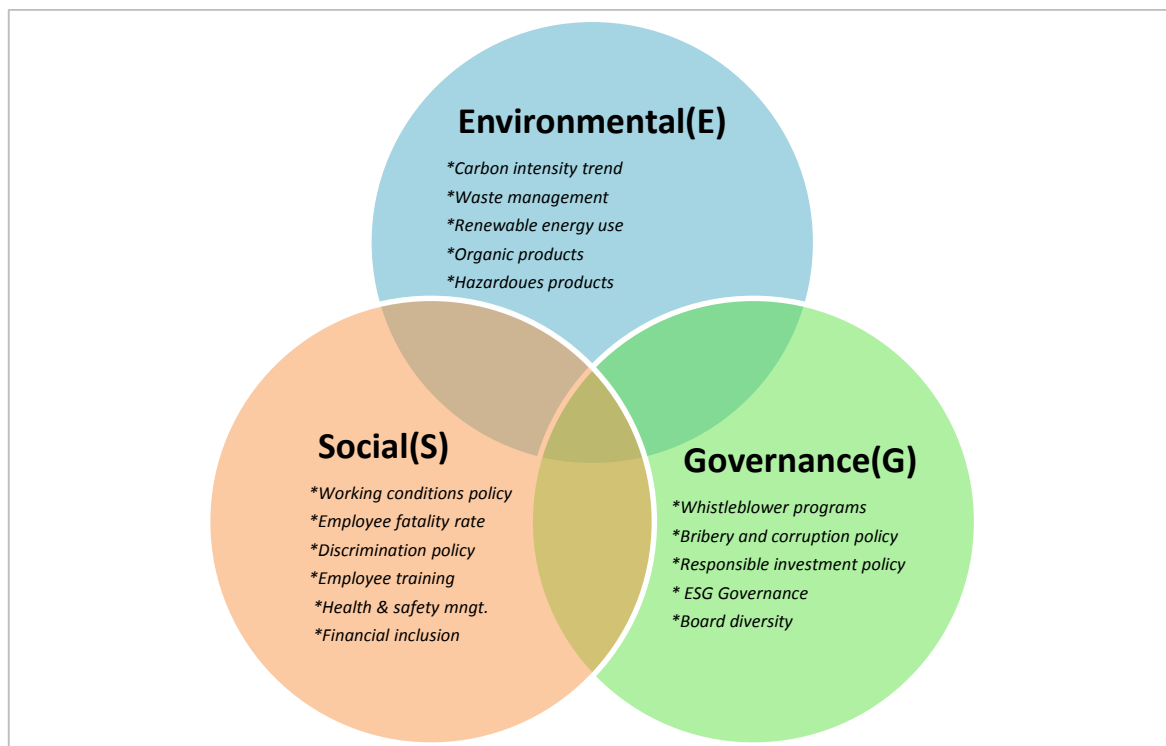
Source: Global Sustainable investment Review 2016, USSIF

NIFTY100 ESG indices uses robust ESG research framework

In NIFTY100 ESG indices, a company is broadly measured on 3 main pillars: **Environmental (E)**, **Social (S)** and **Governance (G)**. The research is conducted by Sustainalytics, one of the global leaders in ESG research.

Environmental: Environmental factor covers the impact of the firm's activity on environment which includes carbon intensity trend, recycling & waste management process, development of renewable energy etc. The environmental pillar consist of 52 indicators based on which a company is assessed upon.

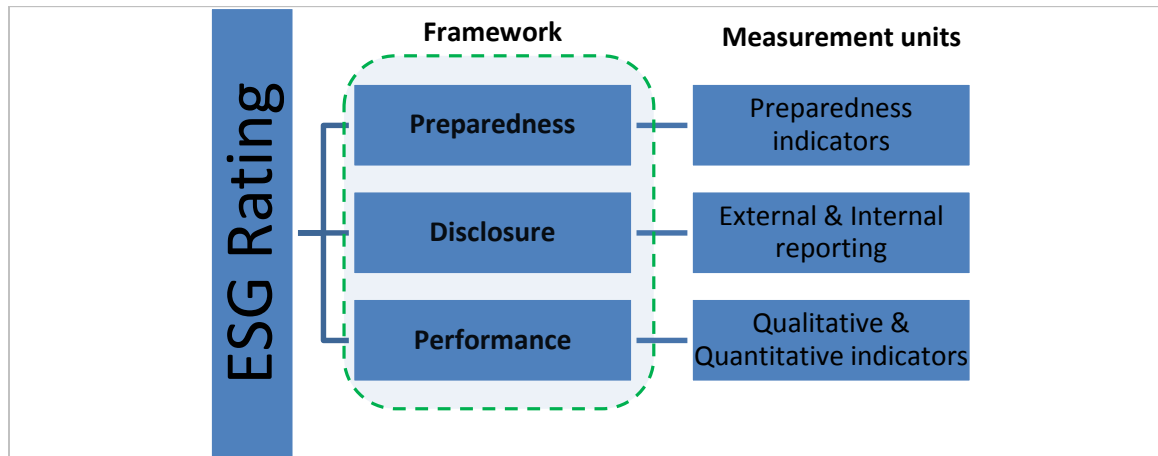
Exhibit 2: Broad ESG metrics



Social: Social factor covers the policies and impact of a firm's activity on working conditions, human rights, health and safety norms, financial inclusion etc. The social pillar consist of 52 indicators.

Governance: Governance factor measures the effectiveness of processes and policies pertaining to corporate governance, business ethics, fraud and anti-corruption measures, public policy etc. The governance pillar has 34 indicators which captures the various facet of governance.

Exhibit 3: Sustainalytics rating framework



Source: Sustainalytics

In Sustainalytics ESG rating framework, on each E, S, G pillar, a firm is rated based on 3 main areas: **Preparedness, Disclosure and Performance**. **Preparedness** indicators measure effectiveness of a firm's policy, programmes and structures, **Disclosure** indicators measure effectiveness of a firm's standard and reporting process and **Performance** indicators capture firm's controversies/incidents and its response.

On each applicable indicator, a company is assigned a score of 0 to 100. The weight of each indicator depends upon the relevance and importance of the indicator in the sector in which the company operates. Based on the raw score and weight of all applicable indicators across E, S and G pillar, a weighted average company level ESG score is determined, which ranges from 0 to 100.

ESG research process

Exhibit 4: ESG research process



Source: Sustainalytics

Sustainalytics assesses a company's ESG performance based on a defined process which include:

- Review of company reporting (annual reports, CSR reports, publicly available policies etc.)
- Review of external sources (newspapers, NGOs, publications etc.)
- Analysis by an experienced analyst
- Structural peer review
- Company feedback
- Research process underpinned by detailed and stringent Quality Management System

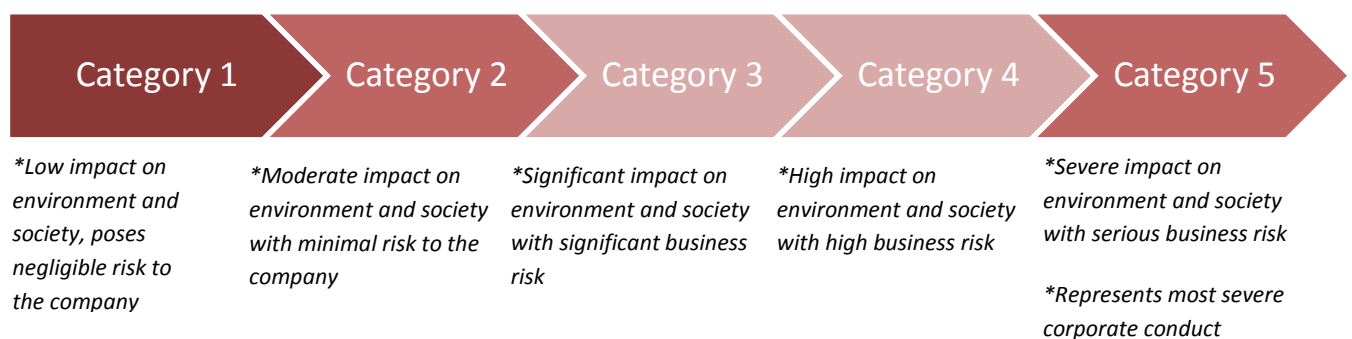
The company is assessed annually based on annual filings and other sources (as mentioned above) and on an ad-hoc basis in case of any controversy/incident pertaining to ESG.

Controversy analysis

A key component of ESG research focuses on assessing a company's involvement in incidents and controversies which can point to the lack of ESG compliance and imply potentially higher risk to investors. The controversy analysis allows for a nuanced understanding of the issues that are driving a company's ESG performance.

Controversy analysis highlights the incidents that have reputational risk and captures the severity of the event.

Exhibit 5: Controversy analysis process

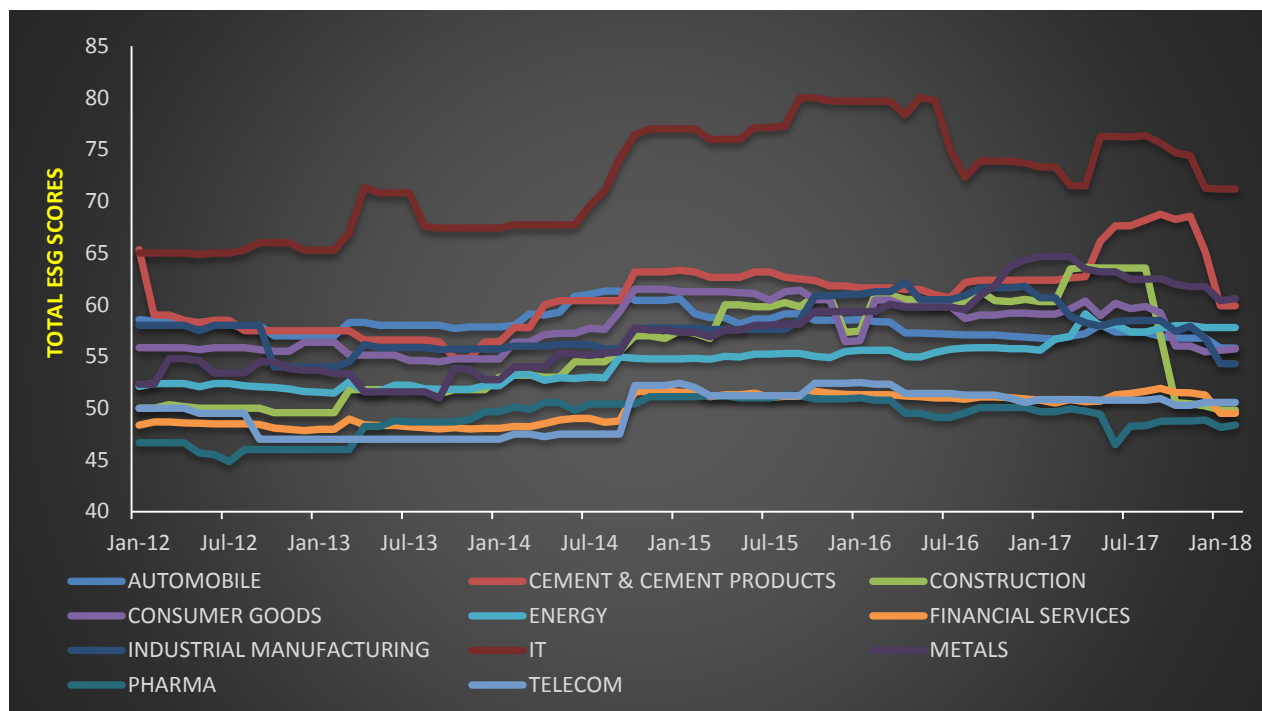


Source: Sustainalytics

Events are classified into 10 areas across E, S and G Pillars and are scored on a scale from one to five, depending on the reputational risk to the company and potential impact on stakeholders. "Category 1" controversy event has low impact whereas "Category 5" controversy event has the highest, indicating a severe impact on the involved stakeholders. Firms with controversy category 4 and 5 are excluded from the NIFTY100 ESG indices.

Average ESG scores of sectors in NIFTY 100 have remained range bound in previous 6 years

Exhibit 6: Trend in total ESG scores of sectors

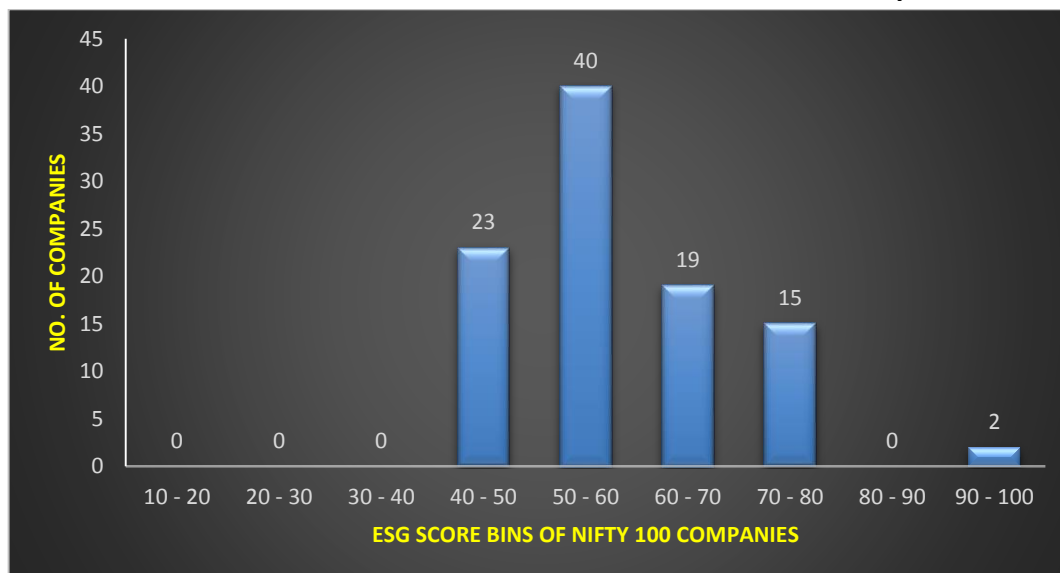


Source: Sustainalytics

Exhibit 6 captures the historical average ESG scores of major sectors based on companies present in NIFTY 100, from Jan 2012 till February 2018. Information technology (IT) sector has consistently remained the top performer and an outlier with an average ESG score of 72, followed by cement & cement products at 61 with automobile, consumer goods & industrial manufacturing at 58. Pharma fares the poorest with an average ESG score of 49, whereas telecom and financial services sector has modest average ESG score of 50.

ESG performance of Indian companies

Exhibit 7: Distribution of latest ESG scores of NIFTY 100 companies



As on February 28, 2018

As on February 2018, out of NIFTY 100 companies, 23 Indian companies had an ESG score of below 50, but then only 2 Indian companies had an ESG score of above 80. This highlights the fact that approx. 70% of Indian large cap companies lie in 3rd quartile on the basis of ESG score. The average ESG score of NIFTY 100 companies is ~58.

Further on analyzing the ESG score of all 250 Indian companies covered by Sustainalytics, it can be observed that 40% of companies lie in 2nd Quartile and 57% of companies lie in 3rd quartile on the basis of ESG score, as against 23% and 70% of NIFTY 100 companies respectively, which highlights the fact that comparatively, companies beyond large cap (NIFTY 100) fares poorly on ESG parameters. The average ESG score of companies covered by Sustainalytics globally is 53.36 whereas the average score of Indian companies is marginally higher at 53.6.

Exhibit 8: Distribution of latest ESG scores of companies covered by Sustainalytics

ESG performance of all Indian companies covered by Sustainalytics					
Particulars	Quartiles				All Companies
	Quartile 1	Quartile 2	Quartile 3	Quartile 4	
	(ESG Score 0-25)	(ESG Score 25-50)	(ESG Score 50-75)	(ESG Score 75-100)	
Number of companies	0	102	142	6	250
Median ESG Score	-	47.1	55.2	77.7	51.6
Average ESG Score	-	46.7	57.3	81.6	53.6

As on February 28, 2018

About NIFTY100 ESG indices

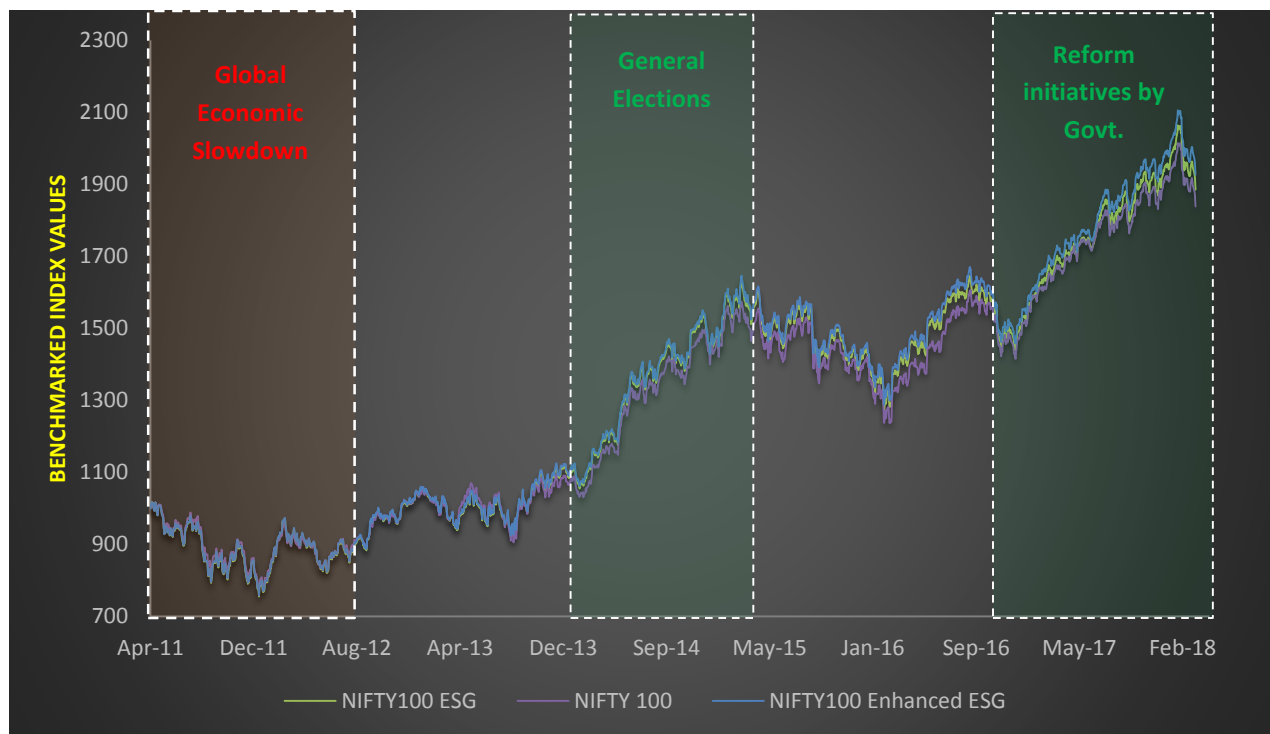
The NIFTY100 ESG indices are designed to reflect the performance of companies that are part of NIFTY 100 index based on Environmental, Social and Governance score. The weight of constituents in these indices is tilted based on ESG score assigned to the company, i.e. the constituent weight is derived from its free float market capitalization and ESG score.

These indices exclude companies engaged in the business of tobacco, alcohol, controversial weapons and gambling operations. The companies that are involved in any major Environmental, Social or Governance controversy are not considered for selection in the index. Additionally, the NIFTY100 Enhanced ESG Index includes only those companies that have a normalized ESG score of at least 50%.

NIFTY ESG indices have marginally outperformed NIFTY 100 index in long term horizon

Exhibit 9 and 10 given below shows the performance of NIFTY100 Enhanced ESG Index, NIFTY100 ESG Index and NIFTY 100 from April 2011 till February 2018.

Exhibit 9: Performance of NIFTY100 ESG indices and NIFTY 100



As on February 28, 2018

Exhibit 10: Calendar year performance of NIFTY100 Enhanced ESG, NIFTY100 ESG and NIFTY 100

Calendar year	Returns (%)			Volatility (%)			Returns-Risk Ratio		
	NIFTY100 ESG	NIFTY100 Enhanced ESG	NIFTY 100	NIFTY100 ESG	NIFTY100 Enhanced ESG	NIFTY 100	NIFTY100 ESG	NIFTY100 Enhanced ESG	NIFTY 100
2011	-23.2%	-23.0%	-21.6%	22.5%	22.5%	20.1%	-1.03	-1.02	-1.07
2012	33.4%	33.4%	30.6%	16.8%	16.8%	15.0%	1.99	1.99	2.04
2013	9.1%	9.4%	6.5%	17.8%	17.9%	17.7%	0.51	0.52	0.36
2014	32.0%	31.9%	33.2%	13.5%	13.5%	13.0%	2.36	2.36	2.56
2015	-2.2%	-1.7%	-2.4%	16.5%	16.4%	16.1%	-0.13	-0.10	-0.15
2016	3.2%	3.6%	3.6%	15.3%	15.2%	15.2%	0.21	0.23	0.24
2017	31.6%	32.3%	31.1%	9.2%	9.1%	9.3%	3.44	3.54	3.34
2018 YTD	-0.4%	-0.1%	-1.1%	12.0%	11.9%	11.6%	-0.03	-0.01	-0.10

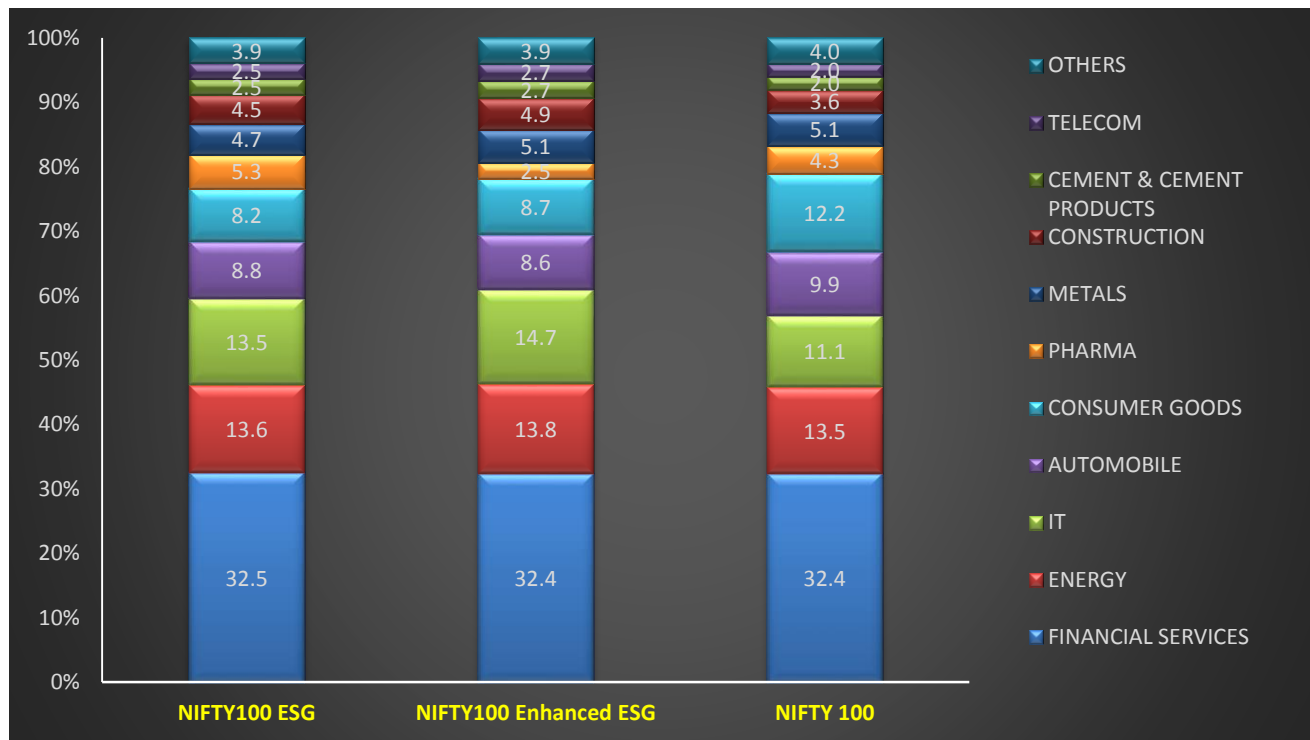
As on February 28, 2018

NIFTY100 ESG indices have given comparable returns vis-à-vis their parent NIFTY 100 index since 2011, though both NIFTY100 Enhanced ESG and NIFTY100 ESG indices have marginally outperformed NIFTY 100 Index in 4 out of the 6 full calendar years since April, 2011. The outperformance is comparatively high during 2012 and 2013 calendar years.

Since inception, NIFTY 100 has given CAGR of 9.7% whereas NIFTY100 ESG index and NIFTY100 Enhanced ESG Index has given CAGR of 10.1% and 10.5% respectively.

Sector level diversification of NIFTY100 ESG indices remains comparable with its parent NIFTY 100 index

Exhibit 11: Portfolio comparison of NIFTY100 ESG indices and NIFTY 100



As on February 28, 2018

NIFTY100 ESG indices target to achieve the same sector weights (distribution) as the parent NIFTY 100 index and thus the sector weight in NIFTY100 ESG indices remains comparable with NIFTY 100 index. Aggregate weight of top 5 sectors in NIFTY100 ESG and NIFTY100 Enhanced ESG indices is 76.7% and 78.2% respectively which is similar to the NIFTY 100 index, whose combined weight of same top 5 sectors stands at 79.0%. Both NIFTY100 ESG indices and NIFTY 100 index represents 15 sectors, where the individual weight of 12 sectors are less than 10%.

Stock level diversification of NIFTY100 ESG indices remains comparable with NIFTY 100

Exhibit 12: Weightage of top 10 stocks in indices

NIFTY100 ESG		NIFTY100 ESG Enhanced ESG		NIFTY 100	
Company Name	Weight	Company Name	Weight	Company Name	Weight
Reliance Industries Ltd.	10.3	Reliance Industries Ltd.	10.3	HDFC Bank Ltd.	8.1
HDFC Bank Ltd.	7.0	HDFC Bank Ltd.	7.1	Reliance Industries Ltd.	6.9
Infosys Ltd.	6.0	Infosys Ltd.	6.6	HDFC	6.1
HDFC Ltd.	5.3	HDFC	5.4	Infosys Ltd.	4.9
Larsen & Toubro Ltd.	4.4	Larsen & Toubro Ltd.	4.8	I T C Ltd.	4.7
Kotak Mahindra Bank Ltd.	4.0	Kotak Mahindra Bank Ltd.	4.1	ICICI Bank Ltd.	4.2
Mahindra & Mahindra Ltd.	3.9	Hindustan Unilever Ltd.	4.0	Larsen & Toubro Ltd.	3.4
Hindustan Unilever Ltd.	3.8	Mahindra & Mahindra Ltd.	3.9	Tata Consultancy Services	3.2
Yes Bank Ltd.	3.5	Tata Consultancy Services Ltd.	3.8	Kotak Mahindra Bank Ltd.	3.0
Tata Consultancy Services Ltd.	3.5	Yes Bank Ltd.	3.6	Maruti Suzuki India Ltd.	2.5
Weight of top 10 stocks	51.8	Weight of top 10 stocks	53.6	Weight of top 10 stocks	46.9
(HHI) ^{*1} value	365.1	(HHI) ^{*1} value	384.3	(HHI) ^{*1} Value	299.1

As on February 28, 2018

As on February 28, 2018, top 10 stocks in NIFTY100 ESG index contribute 51.8% of weight (with individual weights ranging between 3.5% to 10.3%) whereas those of NIFTY100 Enhanced ESG index contribute to 53.6% of weight (with individual weights ranging between 3.6% to 10.3%), which is comparable to NIFTY 100 index where top 10 stocks contribute 46.9% of weight (with individual weights ranging between 2.5% to 8.1%).

The Herfindahl - Hirschman Index (HHI)¹ value explains the degree of diversification in a portfolio, where a lower value signifies a more diversified portfolio. The HHI value of NIFTY100 ESG Index is 365.1 whereas that of NIFTY100 Enhanced ESG portfolio is 384.3, which is fairly comparable with that of NIFTY 100 Index (which has an HHI value of 299.1).

¹: Herfindahl Hirschman Index (HHI) measures of concentration. Calculated as sum of squares of percentage weight of each stock in the portfolio

Signing off...

ESG based investment strategy has gained popularity across global investors with emphasis on investment in companies which have sustainable and responsible business models. The underlying drive behind ESG theme based investing lies in generating returns from socially responsible, environment friendly and ethical firms by reducing the company specific risk associated with ESG controversies. The construct of NIFTY100 ESG indices results in portfolio with similar sector exposure vis-à-vis NIFTY 100 (parent index), but with stock level ESG tilt. This results in portfolio with higher weightage towards companies with better ESG performance. The NIFTY100 ESG indices have outperformed their parent NIFTY 100 over long term investment horizons. These indices will cater to the benchmarking needs of investors seeking to track the performance of portfolio of companies that have better ESG compliance. The indices are also expected to serve as reference indices, which can be tracked by passive funds in the form of Exchange Traded Funds (ETFs), index funds and structured products.

For information on Index methodology and factsheet, please visit us at www.niftyindices.com

About India Index Services & Products Ltd. (IISL):

India Index Services & Products Ltd. (IISL), a subsidiary of NSE, provides a variety of indices and index related services for the capital markets. IISL focuses on the index as a core product. IISL owns and manages a portfolio of indices under the NIFTY brand of NSE, including the flagship index, the NIFTY 50. IISL equity Indices comprises broad-based benchmark indices, sectoral indices, strategy indices, thematic indices and customised indices. IISL also maintains fixed income indices based on Government of India securities, corporate bonds, money market instruments and hybrid indices. Many investment products based on IISL indices have been developed within India and abroad. These include index based derivatives traded on NSE, Singapore Exchange Ltd. (SGX), Chicago Mercantile Exchange Inc. (CME), Osaka Exchange Inc. (OSE), Taiwan Futures Exchange (TAIFEX) and a number of index funds and exchange traded funds. The flagship 'NIFTY 50' index is widely tracked and traded as the benchmark for Indian Capital Markets.

For more information, please visit: www.niftyindices.com

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Contact Details

Analytical contact

Aman Singhania, CFA, FRM

Head – Products (IISL)

+91-22-26598214

asinghania@nse.co.in

Business Development contact

Rohit Kumar, FRM

Chief Manager – Business Development

+91-22- 26598386

rohitk@nse.co.in

Contact:

Email: iisl@nse.co.in

Tel: +91 22 26598386

Address: Exchange Plaza, Bandra Kurla Complex,
Bandra (East), Mumbai– 400 051(India)

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