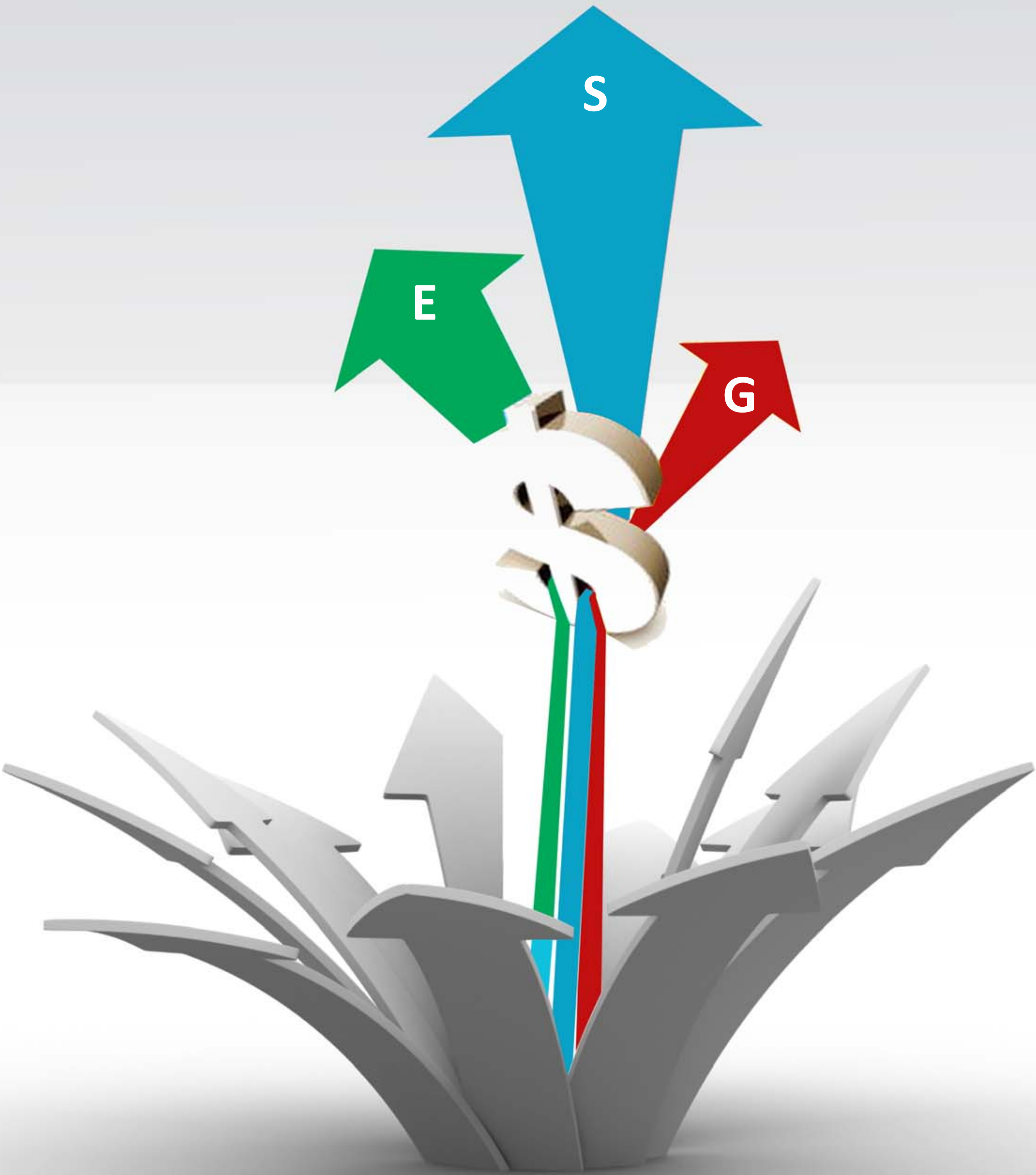
Thematic | June 2017

Sustainability

NEW MANTRA OF INTEGRATED INVESTING



Expanding horizons

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Expanding horizons

Applying sustainability metrics to investment decisions

- **Investors are increasingly integrating 'sustainability' into their investment decisions. Global sustainable and responsible investment (SRI) assets have grown at a CAGR (FY12-16) of 15% to reach USD23t, accounting for 26% of total professionally managed assets.**
- **What began as a risk management tool – measured in terms of environment, social, and governance (ESG) parameters – has also proved to be a sound investment strategy. The S&P 500 ESG Index has outperformed the S&P 500 by 500bp over the past seven years. In emerging markets, the MSCI EM ESG Index has outperformed the MSCI EM Index by over 4,500bp.**
- **In India, sustainable investing is at a nascent stage; however, 62% of the Nifty 50 companies voluntarily release their sustainability reports. Against this backdrop, we believe that SRI-based investing in India should pick up over the medium term.**
- **Our analysis based on ESG materiality matrix-centered KPI highlights that in the Indian context, companies in cement, oil and gas, power and metals are more exposed to sustainability-related risks, while those in banks, IT, and FMCG sectors are relatively well placed.**

Evolving trend of integrating sustainability in investing

- Success of a business depends on multiple forms of capital, such as human capital, intellectual capital, natural capital and financial capital. However, historically, investors have measured returns based only on financial capital.
- However, more recently, there has been an increasing investor focus toward 'sustainability,' an evolving risk management tool that seeks to integrate regular financial aspects with E, S, and G criteria to obtain a holistic view of a company's performance.
  - The "E" – **Environment** criterion looks at how a company performs with respect to its natural capital.
  - The "S" – **Social** criterion examines how a company manages its relationships with employees, customers and communities.
  - The "G" – **Corporate Governance** criterion evaluates rules, practices and processes by which a company is directed and controlled, essentially involving balancing the interests of all stakeholders.

Sustainability is evolving globally; India is ESG-positive, but at nascent stage

- Over last four years, sustainable investing has increased globally in both absolute and relative terms. Global SRI assets exhibited a CAGR (CY12-16) of 15% to reach USD23t (26% of professionally managed assets), outpacing growth of total professionally managed assets (CAGR of 9% to USD87t).
- Europe and the US, the two major global investment hubs, account for 53% and 22%, respectively, of the total global SRI assets.

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Please click here for Video Link

- In India, sustainable investing is at a nascent stage. We believe that with rising investor interest, SRI is likely to pick up in India over the medium term.
- The significance of integrating sustainability analysis is reinstated when we look at the recent case of BHEL. In May 2017, Norway's USD940b sovereign wealth fund reported that it had excluded BHEL from its portfolio on environmental grounds.

Sustainability risk is divergent across sectors

- Our analysis of sustainability-based ESG parameters highlights that the materiality varies across sectors and is primarily dependent on the nature of the business and the country in which it operates. Also, within each sector, company-level performance is dependent on efforts taken by the company to mitigate risks.
- We believe that manufacturing sectors are more prone to the environment and social risks. On the other hand, the services sector, which largely involves human capital, is more exposed to the social risk. Governance risk predominantly applies almost evenly across sectors.

A few challenges remain in fully integrating ESG

- With the rising investor focus, many companies have started releasing their sustainability reports. However, due to the lack of globally accepted standards, data disclosed are not standardized across companies in multiple sectors.
- Also, since quantifying the sustainability risk is challenging, at times, it may be difficult to assess the valuation impact until the event has actually happened.

Indian context - Materiality of ESG measures varies across sectors

	Cement	Capital goods	Auto	Banks	Telecom	Pharma	IT	FMCG	Oil & Gas	Metals	Power
Environment											
CO2 emissions	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Toxic emissions	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Waste disposal	✗	✗	✓	✗	✗	✓	✗	✗	✓	✓	✓
Opportunities in renewable sources of energy	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓	✗
Opportunities in clean technology	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓
Energy conservation/efficiency	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓	✓
Financing environmental impact	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
Biodiversity and land use	✓	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓
Water conservation	✗	✗	✗	✗	✗	✓	✗	✓	✓	✗	✓
Product emissions	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
Social											
Industrial Relations	✓	✓	✓	✗	✗	✓	✗	✓	✓	✓	✓
Attrition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Diversity at workplace	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗
Training and skill development	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health & Safety	✓	✓	✓	✗	✗	✓	✓	✗	✓	✓	✓
Corruption/Marketing malpractices	✓	✓	✗	✓	✓	✓	✗	✓	✗	✓	✓
Privacy and data security	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗	✗
Product safety	✗	✓	✓	✗	✗	✓	✗	✓	✗	✗	✗
Customer satisfaction	✗	✓	✓	✓	✓	✗	✓	✓	✗	✗	✗
Providing access to healthcare	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗
Providing access to finance	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
Providing access to communication	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Governance											
Related party transactions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alignment of interests	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accounting practices	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Executive Compensation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Board Independence	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of independent directors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of auditors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Board members attendance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Product profile concentration	✗	✗	✓	✓	✗	✓	✓	✓	✗	✗	✗
Geographical concentration	✓	✓	✓	✓	✗	✓	✓	✓	✗	✗	✗
Customer concentration	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗
Vendor concentration	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗
Regulatory risk	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Investment in technology/ R&D	✗	✓	✓	✗	✓	✓	✓	✗	✗	✗	✗
Execution and financial risk	✗	✓	✗	✓	✓	✗	✓	✗	✗	✓	✓

Note: The above matrix is indicative and not exhaustive Source: MOSL

A Historic Metamorphosis – Evolution of Sustainability

- **The concept of integrated investing has been evolving over time. So far, investors were keenly looking at companies' earnings growth to gauge the return prospects. The increasing focus on quality of earnings (QoE) brings rationalization to future estimates and correspondingly the present value of stocks.**
- **Meanwhile, the need for corporate governance too gained prominence to balance stakeholder interests. The Clause 49 of the listing agreement made corporate governance practices mandatory for all listed entities. Thus Institutional investors migrated to a more rounded approach toward investing, factoring in QoE and corporate governance practices.**
- **Notably, the western world has evolved further to integrate a more comprehensive and far-reaching tool in investing – sustainability – which is measured from an environment, social and governance perspective.**
- **ESG is the catch-all term for integrated investing. It is a risk management tool that seeks to integrate regular financial aspects with Environment (E), Social (S) and Governance (G) criteria.**

ESG has been evolving over time; it completes the story on integrated investing

QoE brings rationalization to earnings estimates

QoE denotes the degree to which earnings growth of a company is sustainable. It considers earnings generated from the core business activities

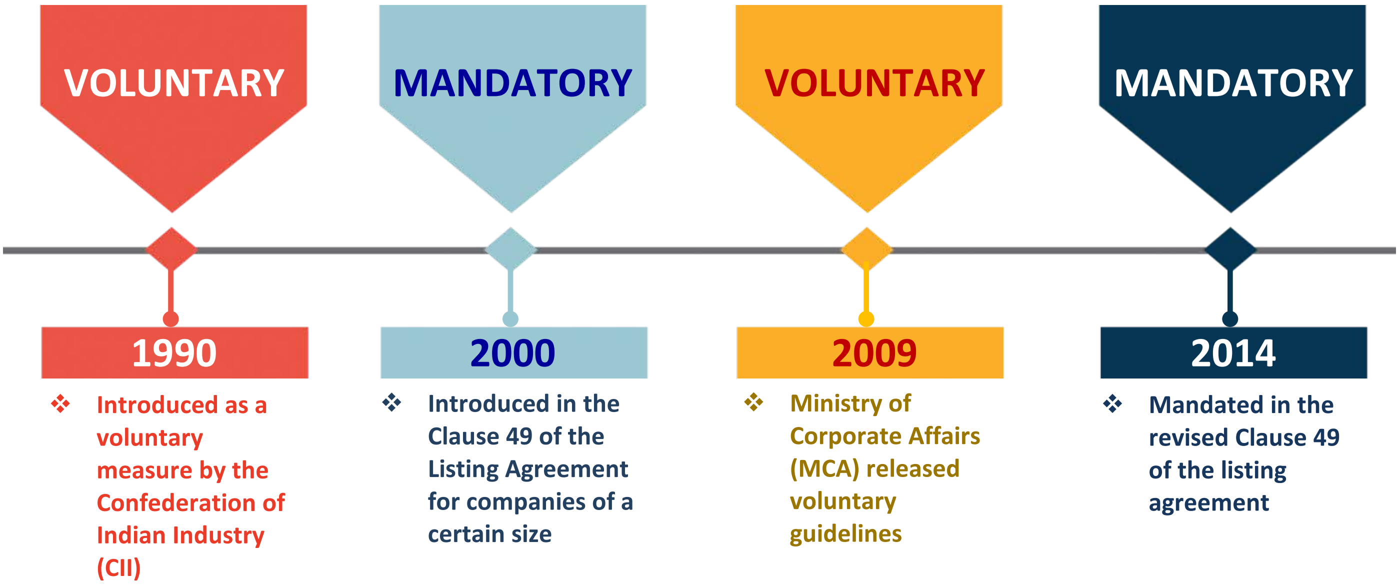
- Investors have been keenly looking at companies' earnings growth to gauge the return prospects. Evidently, every percentage point increase in earnings brings cheer in the markets. So long as the accretion to earnings is sustainable, it is only positive. Therefore, a new focus area – quality of earnings (QoE) – has emerged as investors began to emphasize on the sustainability of earnings.
- QoE denotes the degree to which earnings growth of a company is sustainable. It considers earnings generated from the core business activities (generally due to higher growth in the business, increasing efficiencies, etc.). In other words, it seeks to exclude any non-core, non-recurring income/expenses to determine the real value generated from the core business.
- The increasing focus on QoE brings rationalization to future estimates and thus the present value of the stock.

Corporate governance framework balances stakeholder interests

Corporate governance and QoE together provided a more rounded approach to investing

- Corporate governance in India gained prominence following the economic liberalization in 1990s. By 2000, it went from being a voluntary activity to becoming a compulsory requirement backed by laws. However, it turned back to a voluntary activity in 2009 and again became mandatory in 2014 as prescribed by the revised Clause 49.
- Corporate governance is a soft issue, whose essence cannot be captured by quantitative factors. However, we note that good corporate governance is the backbone for balancing stakeholder interests.
- Therefore, the focus migrated to a more holistic investment approach, factoring in QoE and corporate governance practices.
- This ensured that money flowed into sustainable and quality businesses, where established frameworks for attaining company objectives are predetermined and stakeholder interests are balanced.

Corporate governance measures made mandatory; ESG likely to follow



Source: MOSL, Media articles, Report - Study on state of corporate governance in India by IICA, Thought Arbitrage and IIM-C

ESG is the catch-all term for integrated investing

The environment criterion looks at how a company performs with respect to its natural capital

- The western world has further evolved to integrate sustainability as another important criterion to evaluate investments.
- Sustainability is a risk management tool that looks at businesses from an environment, social and corporate governance perspective. It seeks to integrate regular financial aspects with E, S, and G criteria to obtain a holistic view.
  - The **"E"** – environment criterion looks at how a company performs with respect to its natural capital.
  - The **"S"** – social criterion examines how a company manages its relationships with employees, customers and communities.
  - The **"G"** – corporate governance criterion evaluates rules, practices and processes by which a company is directed and controlled. Corporate governance essentially involves balancing the interests of all stakeholders (e.g., shareholders, management, customers, suppliers, financiers and the government).

Integrating ESG – Critical for Investment Sustainability

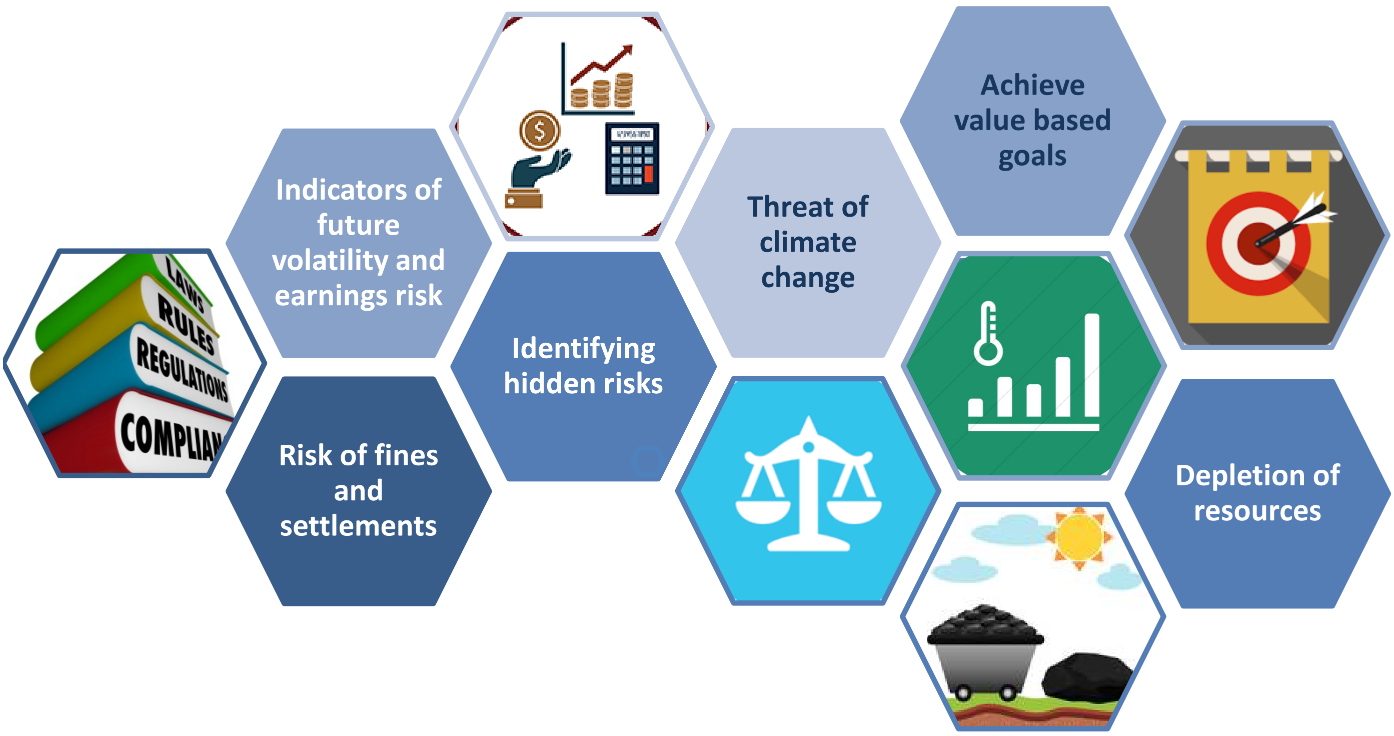
- **ESG is a risk management tool that manages exposures related to environment, social and governance risk.**
- **ESG metrics have been strong indicators of future volatility and earnings risks – it is not just a hygiene factor.**
- **Overlooking ESG issues has resulted in some of the largest fines and settlements, externalities such as unpriced natural capital assets, and hindrances in the form of operational/reputational risk.**

ESG metrics thus are strong indicators of future volatility and earnings risk

ESG - The new risk barometer

- Known risks can be weighed against known benefits; however, unknown risks cannot be factored in for any potential benefits/losses. Therefore, integrating ESG is important as it is a new source of identifying underlying risks associated with E, S, and G metrics.
- To corroborate the importance of ESG in investment decisions, consider the recent situation in Aurangabad, where breweries such as Carlsberg and SABMiller had to shut down plants entirely in May 2016 due to water shortage.
- ESG metrics thus are strong indicators of future volatility and earnings risk. ESG integration is important, as picking future winners requires identifying hidden risks that can have a substantial impact on stock price movement.

Exhibit 1: Reasons for integrating ESG in investment decisions



Source: MOSL

Avoiding ESG can result losses of millions of dollars

Success of a business depends on multiple forms of capital, such as human capital, intellectual capital, natural capital and financial capital

- Success of a business depends on multiple forms of capital, such as human capital, intellectual capital, natural capital and financial capital. However, investors mostly measure the returns prospects based only on financial capital. Thus, this system seems to be intuitively faulty.
- Overlooking ESG issues can result in some of the largest fines and settlements (refer exhibit 2). Also, externalities such as unpriced natural capital assets (comprising climate, soil and biodiversity) are severely affected. This brings us to a key question: Whether we have we been asking the wrong questions?
- The newer system with ESG incorporated instead looks at whether the business model enhances or depletes each form of capital. One must evaluate whether financial capital has increased in harmony with or at the expense of natural capital and human capital.

Exhibit 2: Few cases of ESG related issues leading to fine and settlements

Industry	Company	Period and Status	Penalty	Issue
Power	NTPC	Mar-16 (Ongoing)	-	■ Forced to shut down its 1,600MW Farakka thermal power plant due to water shortage ■ This also led to higher power prices on India energy exchange
Power	Power companies with thermal power plants	Feb-17 (Ongoing)	-	■ MoEFCC laid down strict standards for controlling emissions of particulate matter (PM), sulphur dioxide, nitrogen oxide and mercury, and for reducing water usage by coal-fuelled thermal power plants. These standards are to be met by December 2017, though the deadline may be extended to 2019 ■ Media articles suggest that some power plants may have to incur heavy expenditure to meet regulatory requirements on emissions, and ~20% of power plants in India will have to be replaced to achieve this norm
Infrastructure - Logistics and energy	Adani Mining (part of Adani Group)	Mar-17 (Ongoing)	-	■ Australian delegation asks Adani to drop the USD21.7b Carmichael coal mine project near the Great Barrier Reef due to environment concerns
Pharmaceuticals	Novartis India	Mar-16	USD2 m	■ Found to have bribed the Chinese doctors to prescribe Novartis drugs ■ The Company agreed to pay the penalty without any disagreement of the allegation that the China-based subsidiaries gave gifts and other payments worth hundreds of thousands of dollars to Chinese health care professionals to increase sales of Novartis
Pharmaceuticals	Pfizer Global	Sep-09	£867m	■ Found guilty of mis-selling and offering kickbacks to US doctors. The sanction is the largest healthcare fraud penalty ever meted out by the US Department of Justice (DOJ)
Cement	ACC, ACL, Binani, Century, India Cement, J K Cement, Lafarge, Ramco, Ultratech, Jaiprakash Associates		INR11.4b (ACC) INR11.6b (ACL) INR1.7b (Binani) INR2.7b (Century) INR1.8b (India Cements) INR1.3b (J K Cements) INR4.9b (Lafarge) INR2.6b (Ramco) INR11.75b (UltraTech) INR13.2b (Jaiprakash Associates Limited)	■ CCI imposed penalties on cement companies for cartelization ■ Currently, the penalty amount has been contested by the companies and the matter is subjudice.
Energy	BP	2012	USD 4500m	■ 11 people killed; Oil spill in the Gulf of Mexico; misstatement of the amount of oil being discharged into the Gulf
Infrastructure - Ports	Adani Port and SEZ Ltd	Apr-13	INR2b	■ Environment and Forests imposed fine for environmental damage caused by construction of port project in Mundra, Gujarat

Source: Media articles, MOSL

Concerns about impending environmental risk

A World Bank report highlights that rising global temperatures will result in increased poverty, health risks and inflation

- 2016 was the hottest year since record-keeping began, and in November 2016, the United Nations (UN) announced that global temperatures have risen 1.2 degrees Celsius above pre-industrial levels, as per a World Bank report. The report further states that climate change could result in:
  - More than 100 million additional people living in poverty by 2030.
  - Crop yield losses reaching as high as 5% in 2030 and 30% in 2080, resulting in food price increases and inflationary pressures.
  - Warming of 2-3 degree C could increase the number of people at risk for malaria up to 5% and diarrhea up to 10% by 2030.
- Due to these and multiple other causes of climate change, several new regulations may crop up. This may expose the companies to additional risks. Therefore, investors must factor in sustainability measures undertaken by companies before making investment decisions.
- To understand and authenticate the impact on stock prices due to environment-related risks, let us consider the following case study:

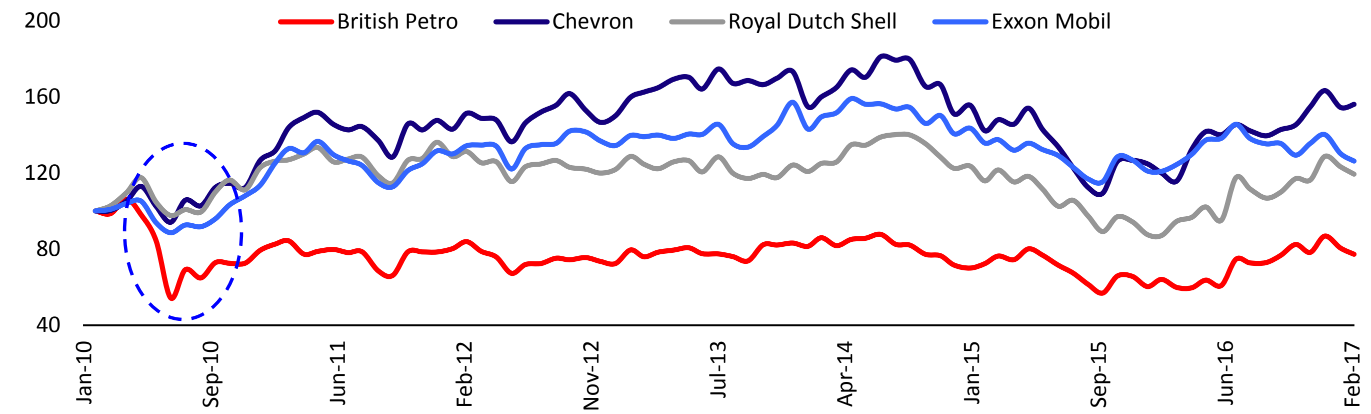
CASE STUDY: The debate on environment – case of BP oil spill

- British Petroleum's (BP) Deepwater Horizon oil spill in the Gulf of Mexico in 2010 was one of the most prominent examples of how environmental risks can have a meaningful impact on the stock prices.
- The incident killed 11 men and released millions of gallons of crude oil into the water. Clean-up costs of ~USD61.6b were incurred by BP, as per The Washington post.
- BP lost 55% shareholder value between April 2010 and June 2010. The entire peer group value was eroded, and the company's stock has continued to underperform the peers.

Exhibit 3: BP lost 55% shareholder value post the 2010 deepwater horizon oil spill

Source: Company, MOSL

Exhibit 4: BP oil spill led to derating of the entire pack; BP has continued to underperform peers since then

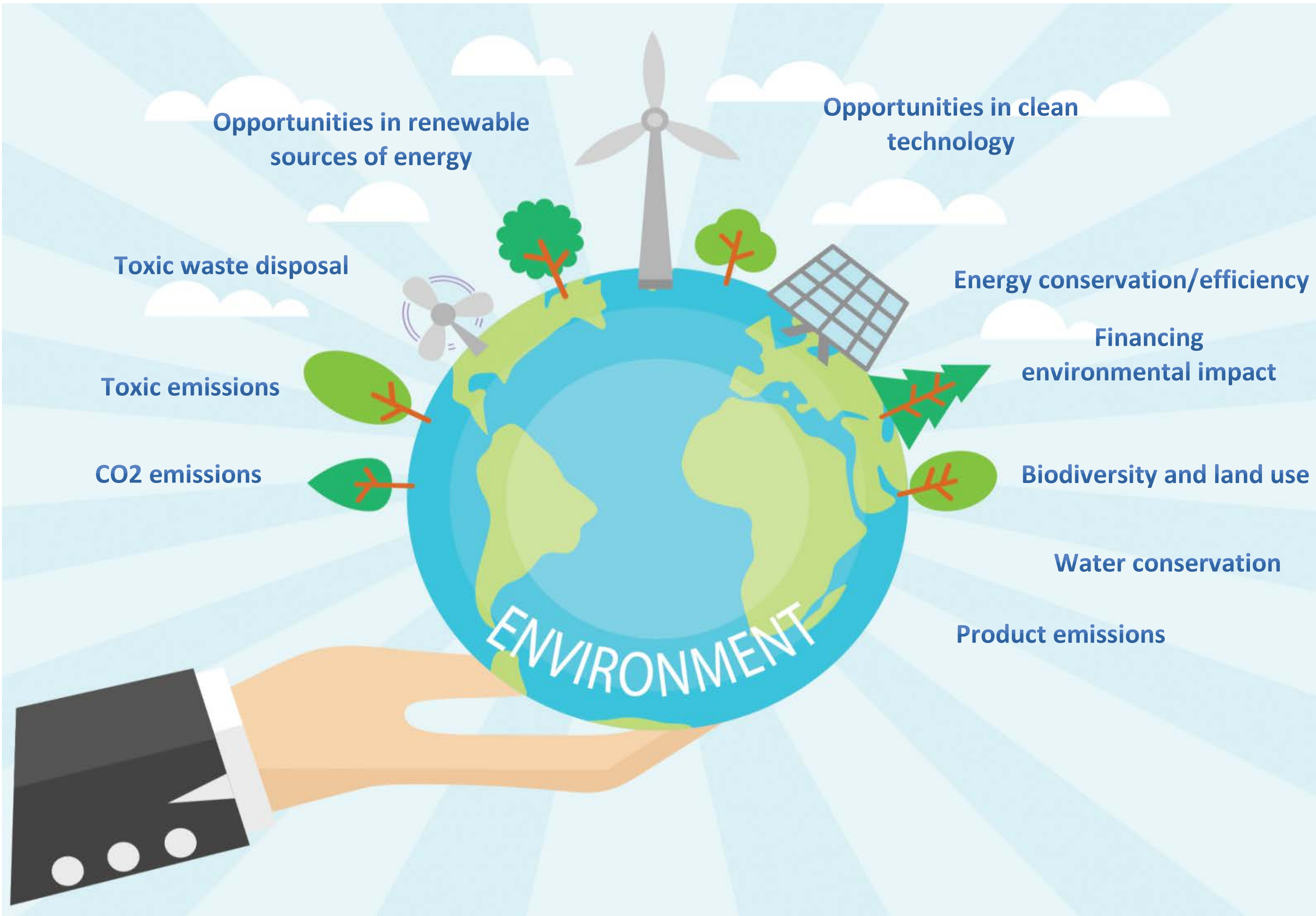


Source: Company, MOSL

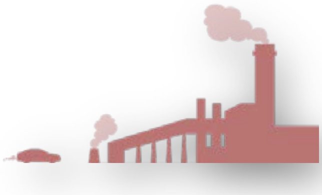
ENVIRONMENT RISK CAN BE VARIED ACROSS COMPANIES

- The environment risks for corporates vary primarily depending on the industry they operate in. However, the processes that each company follows may alter the level of risk that they are exposed to.
- Some of the key metrics which are material and monitorable from the environment risk perspective have been summarized below.

Key measures under Environment risk in the ESG framework

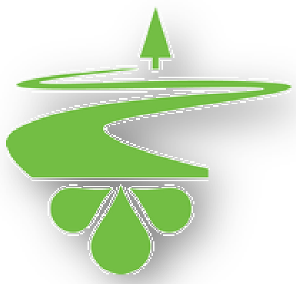


Source: MOSL



- **CO2 emissions:** Evaluates the extent to which companies face the risks associated with regulations on levels of CO2, SOX, NOX emissions and the intensity.
  - For example, some cement companies use high proportion of pet coke as fuel at their power plants as it is cost effective compared to coal. However, it is highly polluting. It is important to note that China has banned the use of petcoke.
- **Toxic emissions (SOX, NOX, PM) and waste:** Evaluates the extent to which companies face the risk associated with contamination, toxic waste disposal and emission of toxic air pollutants (such as SOX, NOX and particulate matter) that are harmful for the existence of living beings, targets and strategies thereof.
  - For example, the CEA has recently changed regulations for SOX/NOX emissions for power companies, wherein it has preliminarily identified 72GW of thermal generation capacity that cannot meet revised SOX norms and would therefore be closed.

- **Opportunities in renewable sources of energy:** Evaluates the extent to which companies take advantage of opportunities related to development of renewable source of power production and utilization of renewables as a % of total requirement.
- **Opportunities in clean technology:** Evaluates the extent to which companies take advantage of opportunities in environment-friendly technologies.
  - For example, Thermax manufactures air pollution control, waste and water treatment solutions, among others. Such companies naturally perform better on ESG than peers that do not produce any clean energy-focused products.
- **Energy conservation/efficiency:** Evaluates the extent to which companies take initiatives to improve energy efficiency, explore opportunities to recycle waste heat/energy generated during the production process, etc.



- **Financing environmental impact:** Evaluation of the extent to which banks and non-banking financial institutions face the indirect risk of financing environmentally intensive businesses and their approach toward financing green businesses.
  - For example, Axis Bank is one of the few banks which make separate disclosures on green projects financed by them. The list of such projects financed includes wind, solar power, biomass, and waste processing, which account for INR36.68b (1.1%) of total outstanding loans.
- **Bio diversity and land use:** Evaluating the extent to which companies face loss of access or reclamation costs or litigations by nature of conducting operations that damage the natural ecosystem.
  - For example, tobacco farming requires intensive use of soil and results in water pollution problems in the surrounding areas due to pesticide usage.
- **Water conservation:** Evaluates the risk of operational disruptions and compliance costs associated with water shortage.
- **Product emissions:** Evaluates emissions released by the company's products into the environment and initiatives taken to reduce these emissions.

Social risk can cause serious disruptions in operations

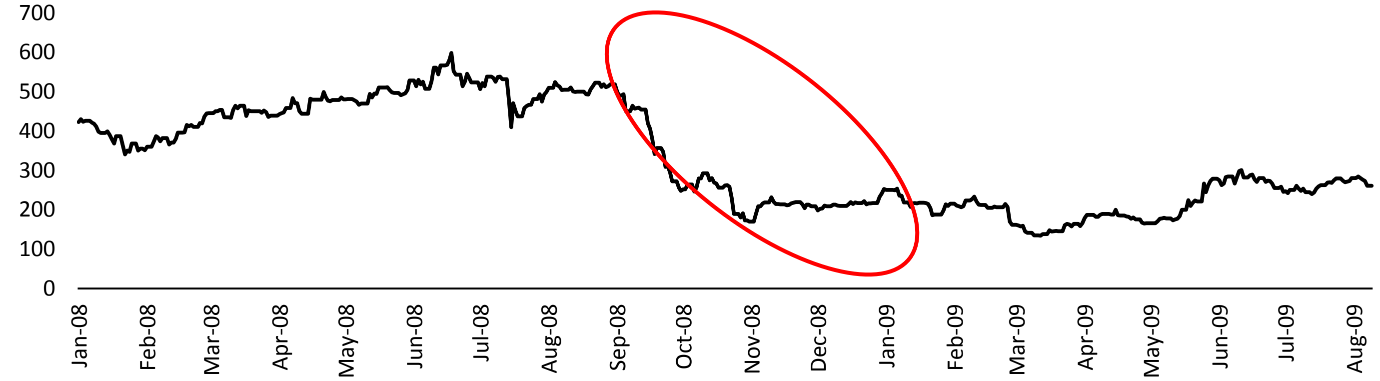
Healthy relationship with internal and external stakeholders is necessary to contain social risk for corporates

- Social risk under the ESG framework particularly refers to the risks that companies are exposed to when dealing with (a) internal stakeholders – such as labor force operating ecosystem and diversity at management level and (b) external stakeholders – consumers, society etc.
- We believe that good relationship with internal stakeholders is essential for smooth operations. Companies also need to maintain healthy relationships with external stakeholders to manage reputational risk and discharge their corporate social responsibility.
- To understand the impact on stock prices due to social risks, let us consider the following case study:

CASE STUDY: Product quality & safety concerns erodes Ranbaxy's shareholder value

- In September 2008, the US Food and Drug Administration (FDA) issued warning letters and import alerts, covering 30 generic drugs manufactured at Ranbaxy's Dewas and Paonta Sahib plants in India. The issues raised were related to Current Good Manufacturing Practice (cGMP) / quality systems followed at the said plants. The issues identified were so severe that it led to the issuance of an import alert, which bars any imports from the facility into the US.
- Further, in January 2009, an unprecedented Application Integrity Policy (AIP) was invoked on the Paonta Sahib facility of Ranbaxy. The AIP focuses on the integrity of data and information in applications submitted for agency review and drug approval. Since the identified issues were related to data integrity (implying product quality was suspect), these products could have raised risk of health hazards.
- The impact of these events led to erosion in the shareholder value by ~60% in 2008 (refer exhibit 5).

Exhibit 5: Product quality and safety related concerns resulted in ~60% erosion of shareholder value

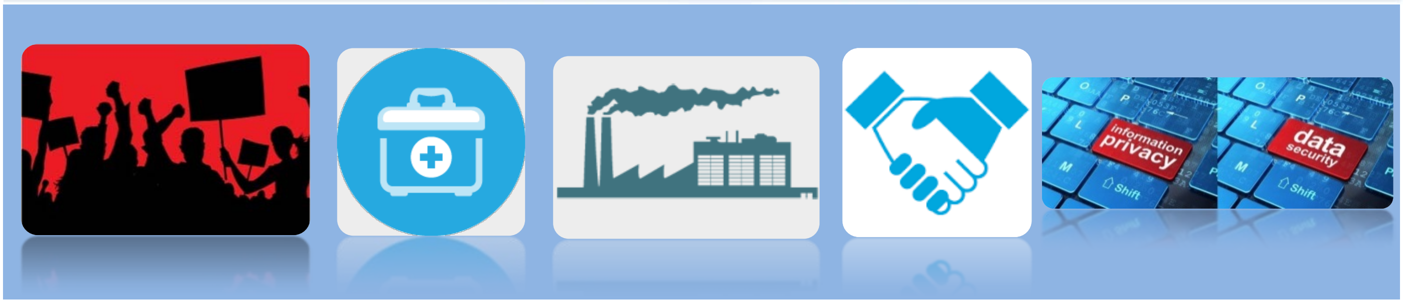


Source: MOSL

SOCIAL RISK HAS DIVERSE FACETS

- Social risk can be quite diversified for companies – some key ones have been summarized below:

Key measures under 'Social' risk in the ESG framework



Source: MOSL

- **Industrial relations:** Evaluates the relationship between management and labour/labor unions. It evaluates the risk of potential conflicts that may lead to operational disruptions.
- **Attrition:** Evaluates risks associated with white collar workers' high churn rate and resultant replacement costs and work disruption.
- **Diversity at workplace:** Evaluates the diversity of representation from various groups - age, gender, geography etc in the company.
- **Training and skill development:** Evaluates the ability to attract, retain and motivate employees, and conduct training/skill development programs to

improve employee performance and morale. Key measures for this include training programs per employee, workplace complaints and controversies.

- **Health & safety:** It evaluates the extent to which companies invest to ensure proper health & safety conditions for employees. Inadequate measures may lead to employee accidents and, in turn, cause production disruptions, litigations and injuries/fatalities.
- **Corruption and marketing malpractices:** Evaluates the exposure to risks associated with undertaking malpractices to derive disproportionate benefits in the form of amplified revenues or market share. For example, some pharma companies bribe doctors to recommend their brand of pharma products to boost sales, while infrastructure companies bribe individuals to secure work contracts.

- **Privacy and data security:** Evaluates the exposure to risks associated with handling large amount of sensitive personal/financial information of customers, and security practices adopted to mitigate the risks.
  - For example, IT companies usually render outsourcing services and thus have an access to personal data of clients. The key risk for such companies lies in terms of how they ensure privacy/security of client data.
- **Product safety:** It evaluates whether (1) product produced/service rendered is safe to consume/use and (2) the quality of the product is desirable to the user and the environment.
  - Let us take the example of the ongoing Nutella controversy, where the European Food Safety Authority (EFSA) has raised potential health concerns due to sufficient evidence of contaminants (which are carcinogenic) in palm oil used to make Nutella.
  - This has caused a stir in the European markets, concerning consumption of Nutella (palm oil is used for create smooth texture and increase shelf life). As per media articles, Nutella’s profits have taken a 3% hit since then.

- **Customer satisfaction:** Evaluates whether the products and services supplied by a company meet or surpass customers’ expectations.
- **Providing access to healthcare:** Evaluates the opportunities for long-term growth through expansion of healthcare access in the underserved areas. For example, pharmaceutical companies in developing countries are well positioned to take advantage from providing access to healthcare in rural areas.
- **Providing access to finance:** Evaluates the ability to capitalize on opportunities in under-banked regions through innovation, technology and distribution channels.
  - For example, microfinance companies such as Bharat Financial (BFIL) provide unsecured loans to women under a joint liability model. These women are part of the population which has never used banking services.
- **Providing access to communication:** Evaluates the ability to take advantage of opportunities arising from underserved markets.

Governance – paramount from investment perspective

Corporate governance essentially involves balancing the interests of various stakeholders, such as shareholders, management, customers, suppliers, financiers, government and the community

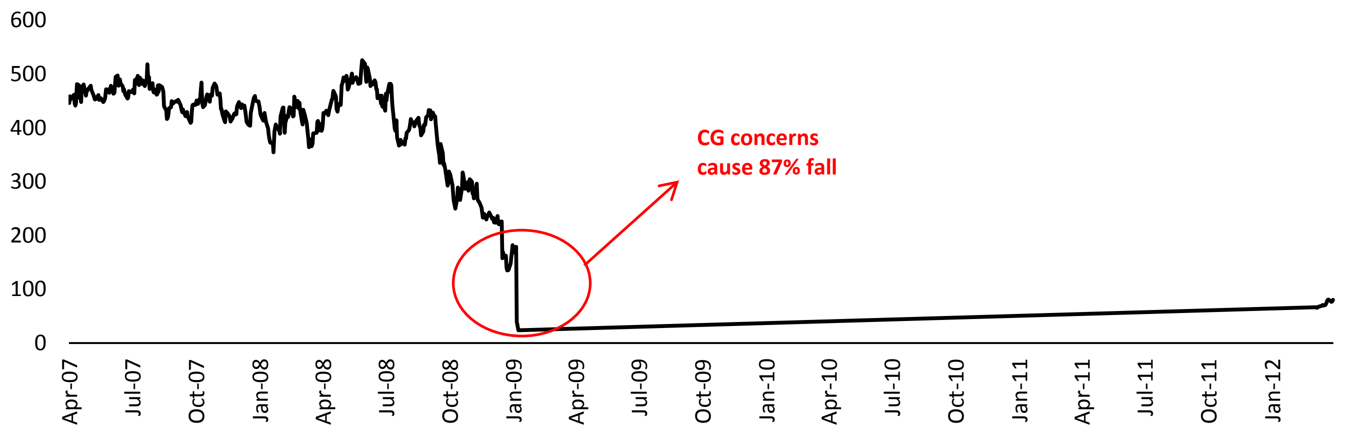
- Corporate governance is the system of rules, practices and processes by which a company is directed and controlled. Corporate governance essentially involves balancing the interests of various stakeholders, such as shareholders, management, customers, suppliers, financiers, government and the community.
- Since corporate governance also provides the framework for attaining company objectives, it encompasses practically every sphere of management, from action plans and internal controls to performance measurement and corporate disclosure.
- The importance of corporate governance can be best understood from the case study of Satyam Computers.

CASE STUDY: Corporate governance failure at Satyam Computers

Investors must be conscious of transparency and accountability of companies that they invest in

- In January 2009, the founder of Satyam Computer Systems, a renowned Indian IT company that attracted huge amounts of foreign investment, confessed to committing fraud. He also admitted that he had been cooking the books for seven long years in order to keep control of the company.
- Investors and regulators, alike, were surprised by the incident. This led to erosion of shareholder value by a whopping ~87% at the time of the incident.

Exhibit 6: Corporate governance issues led to ~87% decline in Satyam's shareholder value

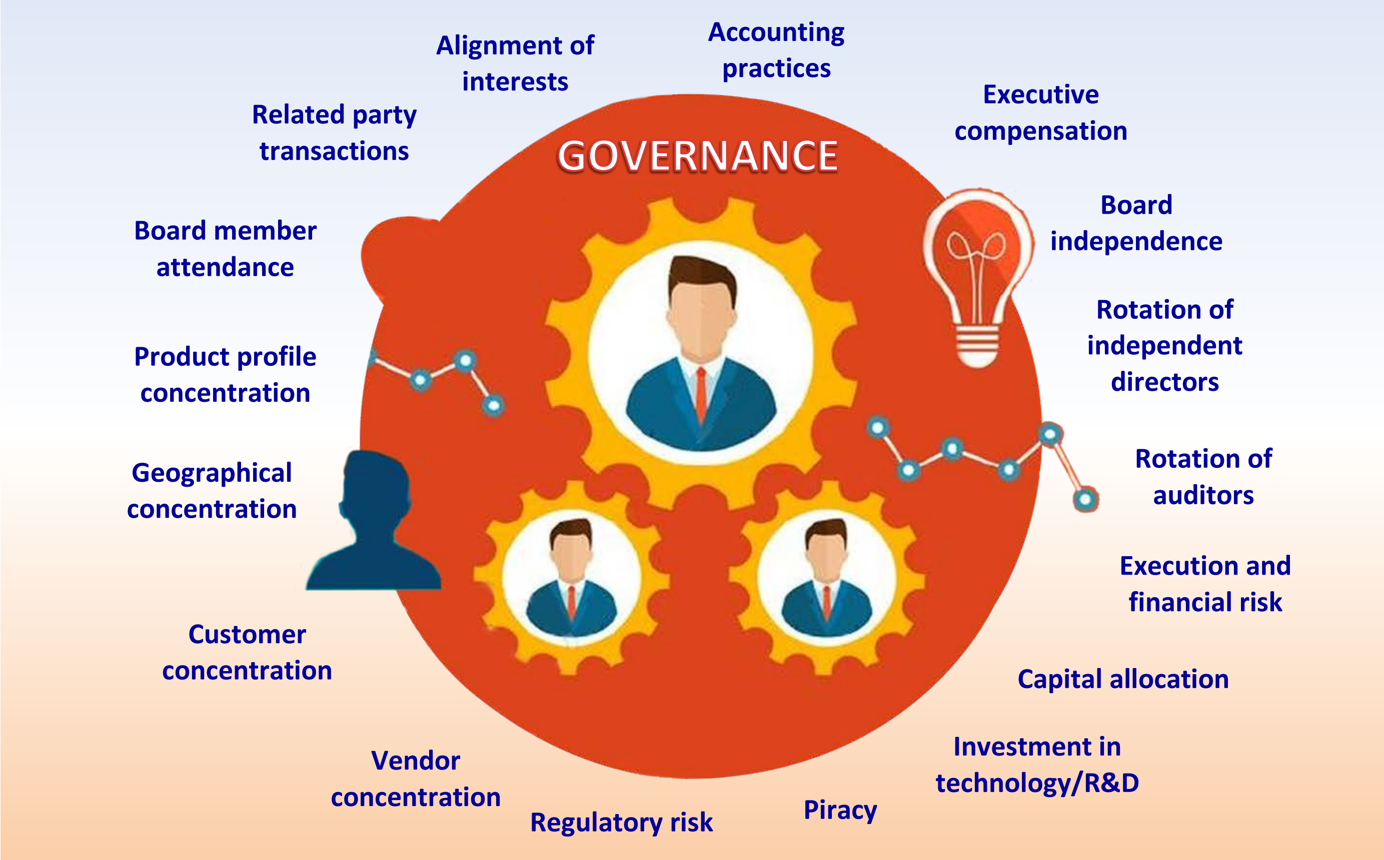


Source: Company, MOSL

Governance has multiple parameters to measure

- As discussed earlier, corporate governance comprises system of rules, practices and processes by which a company is directed and controlled. Thus, the measurement of governance parameters can be comprehensive. These parameters are certainly common across sectors. Some key parameters have been summarized in the exhibit below.

Key measures under 'Governance' in the ESG framework

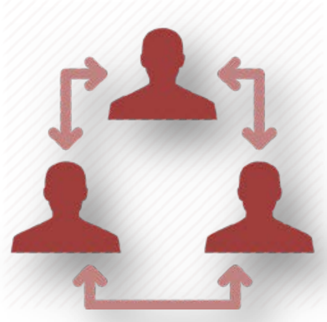


Source: MOSL

- **Related party transactions (RPT):** Evaluates the transactions between the company and its "related entities," such as associates, JVs and substantial shareholders. RPTs may lead to shifting of profit out of the company to other entities, which could be detrimental to minority shareholders. However, we note that RPTs are not always abusive in nature; at times, they can be undertaken to create operational synergies and save costs.
- **Alignment of interest:** Evaluates whether management or promoter group have competing businesses in unlisted/listed entities promoted by them, thereby questioning vested interests of the promoters.
- **Accounting practices:** Evaluates accounting and reporting practices in order to raise concerns around overall effectiveness.
- **Executive compensation:** Evaluates the rationality in executive compensation. The highest paid executives are now being questioned on the level of remuneration, bonus paid, etc., by various investors.

- **Board Independence:** Evaluates independence of the board in decision making without personal bias. In India, there are regulatory requirements (as per Clause 49), where if the Chairman of the Board is a non-executive director, at least one-third of the Board should comprise independent directors, and in case s/he is an executive director, at least half of the Board should comprise independent directors.
- **Rotation of independent directors:** Evaluates whether the independent directors are regularly rotated in order to preserve board independence. As per the Companies Act 2013, independent directors need to be mandatorily

rotated after a term of 10 years of being on the board. This is also a good practice followed globally.



- **Rotation of auditors:** Evaluates whether the auditors are regularly rotated in order to preserve auditor independence.
- **Board member attendance:** Evaluates whether the board members are regularly attending board meetings and AGMs in order to resolve critical issues in the regular course of operations.
- **Business concentration risks:** Evaluates risks associated with concentration of product profile, geography, customers, and vendors.
  - For example, Eicher Motors' manufacturing facilities are concentrated only at one location for each of its two business segments. This could lead to significant geographical risks, as seen in the past.

- **Regulatory risk:** Evaluates risks associated with regulatory changes that may have an adverse impact on the operations of a company.
- **Investment in technology/R&D:** Evaluates the extent to which companies are investing in R&D, when compared to peers, in order to stay ahead of the curve.
- **Execution and financial risk:** Evaluates the execution (project completion, managing multiple projects simultaneously, etc.) and financial risks (financial closure, potential delays in repayment, etc.) associated with projects under implementation.

Approaches to sustainable investing

- Globally, there are multiple ways to invest based on sustainability parameters which are summarized below:

Multiple approaches to sustainable investing

EXCLUSIONARY SCREENING	Involves avoiding certain exposures based on specific criteria
THEMATIC INVESTING	Involves adopting strategies based on trends such as clean energy, water and agriculture
IMPACT INVESTING	Investment in companies that intentionally create a measurable social and environmental impact
ESG INVESTING	Proactively considers ESG criteria, along with financial aspects, to identify risks/opportunities during the investment process.

Source: MS Institute for Sustainable Investing & Bloomberg L P, MOSL

ESG – Making investors wealthy globally

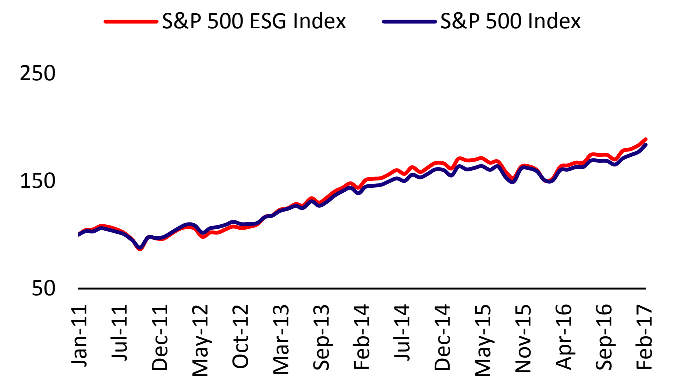
- **Sustainable investments grew in both absolute and relative terms in the four years post 2012. SRI assets grew 72% to USD23t in 2016 from USD13.3t in 2012 (CAGR 15%), outpacing growth of 40% in total professionally managed assets (CAGR 9%).**
- **Europe alone accounts for 53% of global SRI assets as of 2016. However, Australia/New Zealand recorded the highest growth rate of more than 100% over 2012-16 (30% CAGR).**
- **The S&P 500 ESG index has outperformed the benchmark S&P 500 index by 500 bps over the past seven years. In the emerging markets, the MSCI EM ESG index has significantly outperformed the MSCI EM index by over 4500 bps.**

ESG investing has created shareholder wealth for investors globally

- We observed the region-specific benchmark indices to understand how ESG-conscious companies perform relative to other companies. The S&P 500 ESG index has outperformed the benchmark S&P 500 index by 500 bps over the past seven years. In the emerging markets, the MSCI EM ESG index has significantly outperformed the MSCI EM index by over 4500 bps.
- In India, however, when we compare MSCI ESG India index with Sensex or Nifty, the trend is not replicated. This can be ascribed to the lack of awareness about ESG-related risks and disclosures thereon.
- However, the increasing focus of institutional investors on this subject is creating awareness among corporates, resulting in an increasing number of corporates publishing their sustainability reports, despite it is not mandatory to do so. We believe this trend will lead to better transparency and judgment on ESG criteria for these companies.

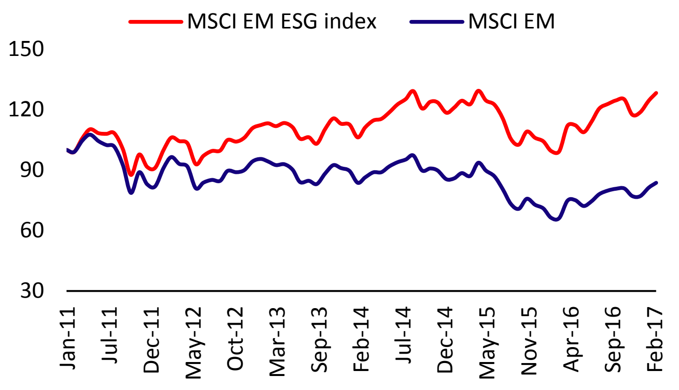
S&P 500 ESG index & MSCI EM ESG index have outperformed the S&P 500 & MSCI EM indexes over the past 7 years

Exhibit 7: Outperformance of ESG index v/s S&P 500 index



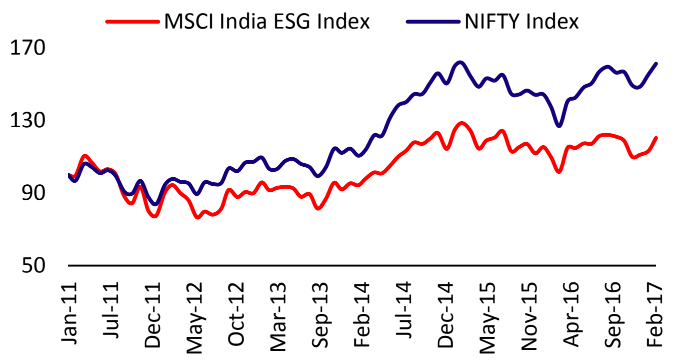
Source: Bloomberg, MOSL

Exhibit 8: Outperformance of EM ESG v/s EM index



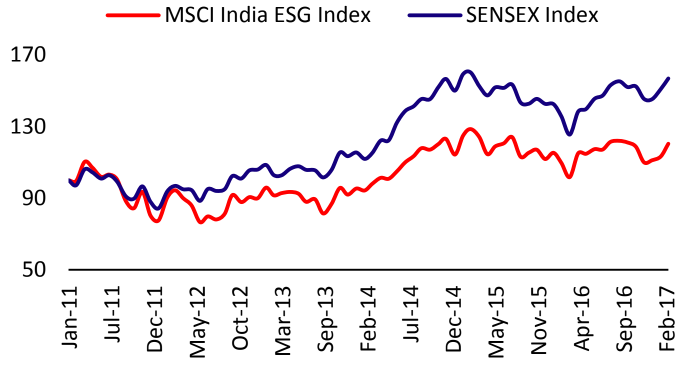
Source: Bloomberg, MOSL

Exhibit 9: Underperformance of India ESG index v/s Nifty



Source: Bloomberg, MOSL

Exhibit 10: Underperformance of India ESG index v/s Sensex



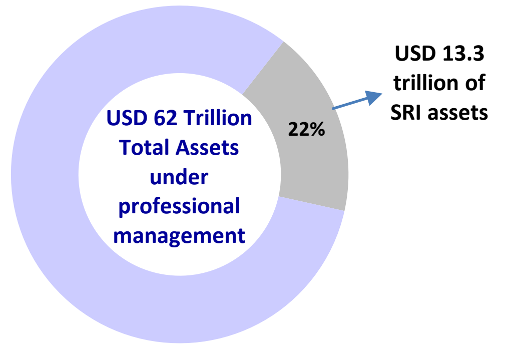
Source: Bloomberg, MOSL

SRI assets expanded exponentially in four years

SRI assets account for USD23t (26%) of total AUM globally

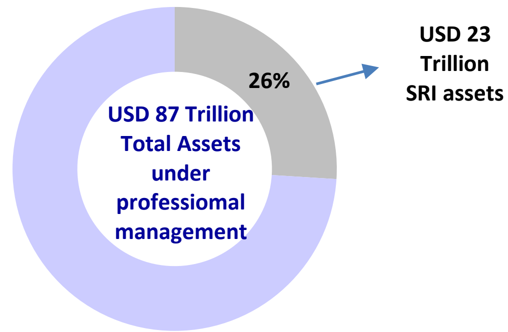
- Sustainable investing grew in both absolute and relative terms in the four years post 2012. SRI assets grew 72% to USD23t in 2016 from USD13.3t in 2012, (CAGR 15%), outpacing growth of 40% in total professionally managed assets (CAGR 9%) (refer exhibit 11, 12, 13 and 14).
- As of 2016, SRI assets accounted for 26% of total assets under management globally, with the highest increase seen in Australia and New Zealand (refer exhibit 15).
- This represents an increase in the number of socially conscious investors and thrust on sustainability across regions. The regions covered include Europe, Canada, the US, Australia/New Zealand and Asia.

Exhibit 11: 22% of global AUM in 2012 was under SRI assets



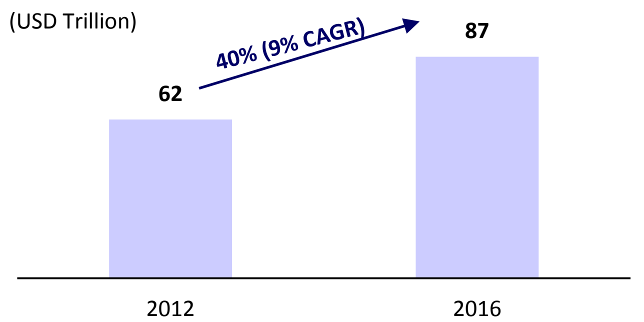
Source: 2016 Global Sustainable Investment Review, MOSL

Exhibit 12: 26% of global AUM in 2016 was under SRI assets



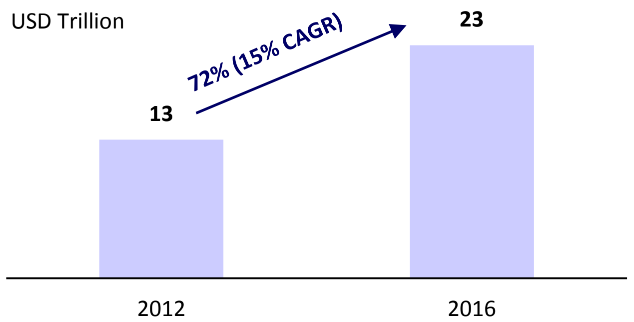
Source: 2016 Global Sustainable Investment Review, MOSL

Exhibit 13: Global AUM grew at 9% CAGR during 2012-16



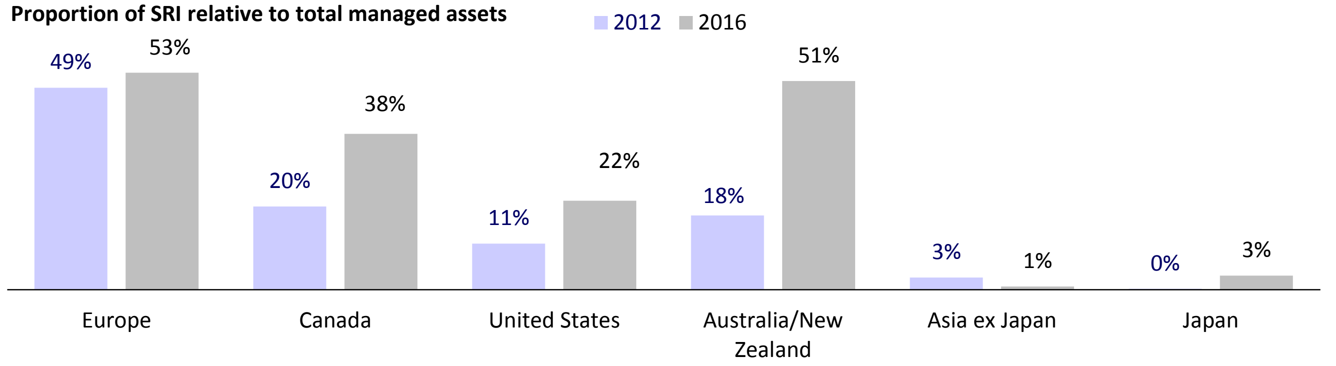
Source: 2016 Global Sustainable Investment Review, MOSL

Exhibit 14: SRI assets grew at 15% CAGR during 2012-16



Source: 2016 Global Sustainable Investment Review, MOSL

Exhibit 15: Australia/New Zealand had the steepest growth in SRI managed assets



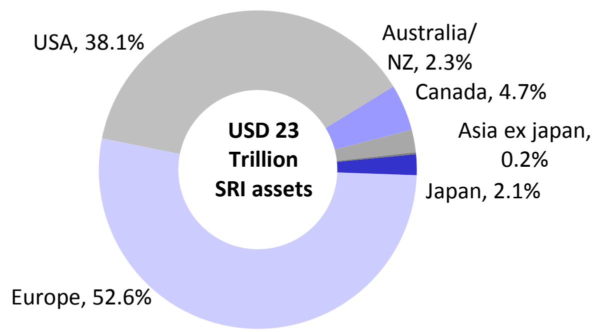
Source: 2016 Global Sustainable Investment Review

Australia and New Zealand accounted for largest increase in SRI assets

Australia/New Zealand recorded the highest CAGR of 30%

- Europe alone accounted for 53% of global SRI assets as of 2016. However, Australia/New Zealand recorded the highest growth rate at over 100% (30% CAGR) over 2012-16.
- While the European market has matured with respect to growth in SRI assets, the US and Canada continue to grow at over 15% CAGR.
- Over 2012-16, Japan has been one of the fastest growing regions, as per the new surveys by the Japan Sustainable Investment Forum (JSIF) that provided information for the first time on numerous large asset owners.
- While sustainable investing is not largely practiced in Asia, investor interest in such investment products is likely to continue increasing.

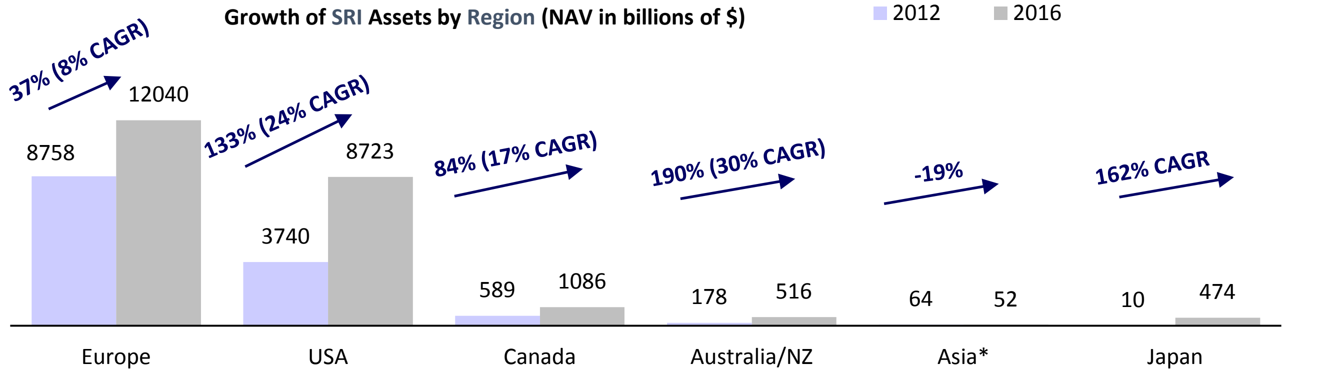
Exhibit 16: At 53%, Europe has the largest share of global SRI assets



Source: 2016 Global Sustainable Investment Review

- Most of the SRI assets referred to are in Europe (53%) and the US (38.1%), but the proportion of such assets has increased faster (24% CAGR) in the US than in Europe (8% CAGR) over 2012-16.

Exhibit 17: Europe has the largest SRI assets globally



Source: 2012 and 2016 Global Sustainable Investment Review, MOSL

Notes:
- All 2016 assets are converted to USD based on exchange rates at year-end 2015.
- Australia/NZ assets under management data is up to June 30, 2011 (for 2012 data).
- The total assets under professional management for the regions—whether engaged in sustainable investment or not—were reported by the members of GSIA at USD62t in 2012. In comparison, TheCityUK estimates global managed assets at USD79.8t, which excludes alternative funds and private wealth funds, but covers more of the globe. See: **http://www.thecityuk.com/assets/Uploads/Fund-Management-2012.pdf**

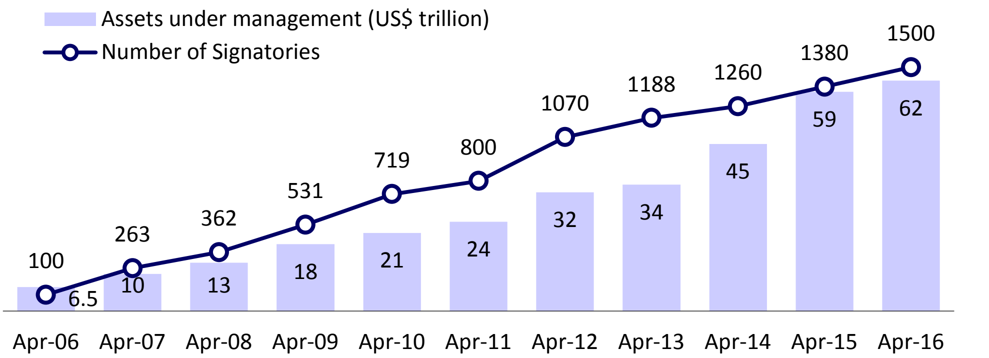
Rising trend of funds that integrate ESG into investment consideration

- The United Nations-supported Principles for Responsible Investment (PRI) is a global body working to understand the investment implications of ESG factors and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions.
- The organization prescribes investment principles that offer possible actions for incorporating ESG issues into investment practice. The Principles are 'voluntary and aspirational' and they do not have minimum entry requirements or absolute performance standards for responsible investment.
- However, signatories have an obligation to report on the extent to which they implement the Principles through the annual Reporting and Assessment process. There are nearly 1,500 signatories, from over 50 countries, representing USD62t in AUM (refer exhibit 18).

UN PRI has 1500 signatories from over 50 countries

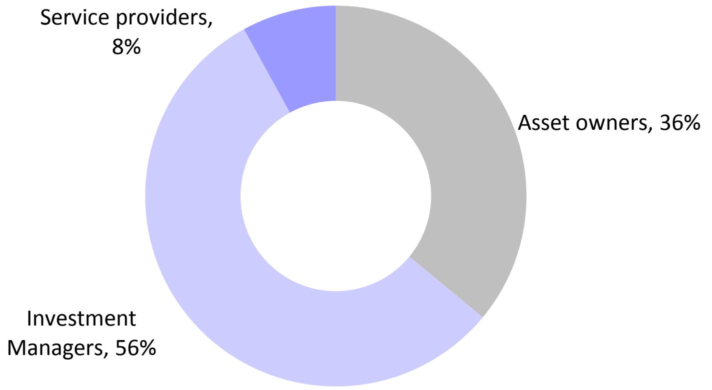
- The signatories to the UN-PRI comprise asset owners, investment managers and service providers (refer exhibit 19). Some of the largest funds in the world are listed as the most active signatories to the UN-PRI (refer exhibit 20).

Exhibit 18: UN-PRI has nearly 1,500 signatories from over 50 countries



Source: UN PRI

Exhibit 19: Of the 1,500 signatories, 92% are IMs and asset owners



Source: UN PRI

Exhibit 20: 2015-16 UN-PRI list of most active signatories

PRI signatory
ACTIAM
Aviva Investors
Bâtirente
BMO Global Asset Management
Boston Common Asset Management
Boston Trust & Investment Management Company
California Public Employees' Retirement System
CalPERS
Calvert Investments
CCLA
Domini Social Investments
Hermes Fund Managers Limited
Interfaith Center on Corporate Responsibility
Miller Howard Investments
MN
NEI Investments
Pax World
PGGM Investments
Rathbone Brothers Plc
Robeco
Trillium Asset Management

Source: UN PRI AR 2016

India is ESG-positive, but at a nascent stage

67% of BSE Sensex companies and 62% of NSE Nifty companies disclose sustainability reports voluntarily

- **While India is at a nascent stage of integrating sustainability investing, we note that business responsibility reporting (BRR) is mandatory for the top 500 companies by market cap listed on the NSE and the BSE. Sustainability reporting, however, is not mandatory.**
- **BRR requires the companies to answer to a list of standardized questions, sometimes in a yes/no format. This kind of disclosure on ESG is insufficient, in our view.**
- **Thus, sustainability reporting is necessary as it helps obtain detailed information on material ESG issues relevant to industry/company with suitable explanations.**
- **Although disclosures are at a nascent stage in India, 67% of BSE Sensex companies and 62% of NSE Nifty companies disclose sustainability reports voluntarily. This indicates that the companies want to perform well on sustainability.**

BRRs is mandatory for most listed corporates …

- BRR is mandatory for the top 500 companies by market cap listed on the Indian exchanges. Releasing sustainability report, however, is not mandatory.
- From what we have seen, BRR requires the companies to answer to a list of standardized questions, sometimes in a yes/no format. This kind of disclosure on ESG is insufficient, in our view.

…however, sustainability reports (SRs) are vital for evaluation

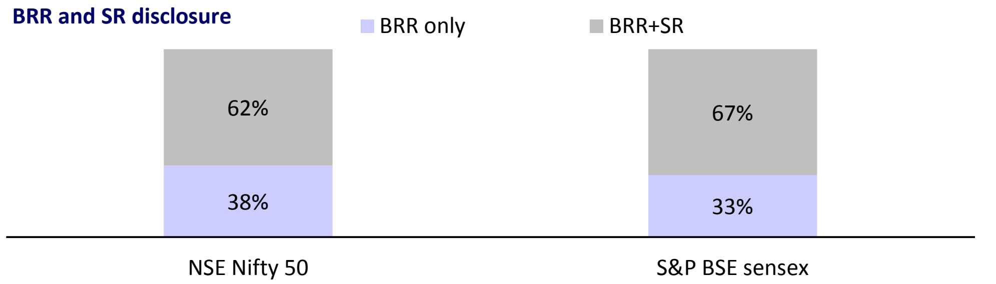
- We believe separate sustainability reports will be very helpful, as they disclose detailed information on (i) material ESG issues relevant to industry/company with suitable explanations, (ii) targets to be achieved and (ii) roadmap to achieve targets, among others. Sustainability reports provide a more holistic view of the company' ESG activities.
- We believe that the trend of reporting SRs will continue gaining steam due to rising investor thrust – companies are likely to become more conscious about ESG-related issues over the coming few years.

India is embracing 'sustainability' actively

Companies such as Mahindra and Mahindra are toying with the idea of utilizing newer metrics (emission reduced/PBP) in order to determine preference

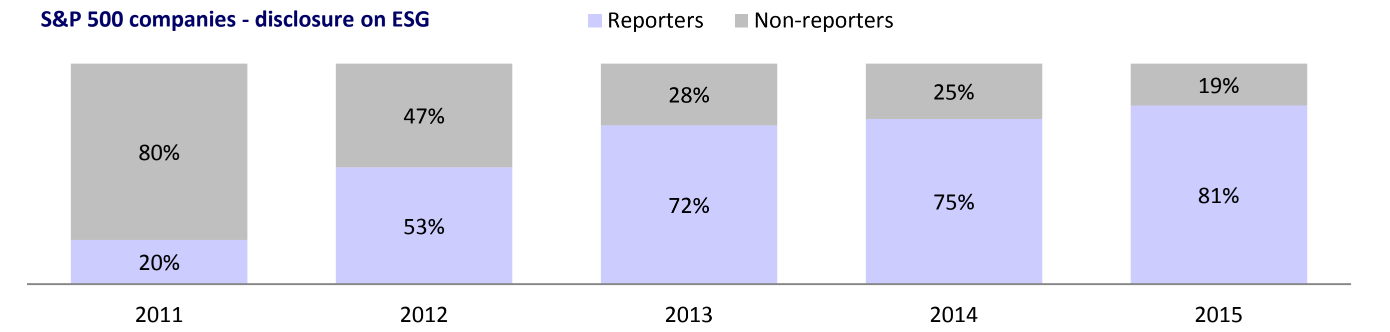
- We believe that corporates are actively embracing 'sustainability'. Although sustainability disclosures are at a nascent stage in India, we note that 67% of BSE Sensex 30 companies and 62% of NSE Nifty 50 companies are disclosing sustainability reports. Globally, the number is higher in both number and percentage: S&P 500 companies reporting data on ESG increased to 81% in 2015, from 20% in 2011 (refer exhibit 22).
- These 31 NSE Nifty 50 companies disclosing SRs account for a market cap of USD641b (as on June 9, 2017), representing almost 59% (Nifty MCap) of total market cap of companies listed on the NSE.
- Moreover, these companies have been publishing sustainability reports, even though it is not mandatory to do so. This indicates that the companies want to perform well on sustainability.
- Some companies such as Mahindra & Mahindra have started conducting ESG concalls. The company highlighted during the call in March 2017 that it was toying with the idea of utilizing a new ESG-acquiescent metric (viz. emission reduced/PBP) to determine project preferences.

Exhibit 21: 62% of Nifty 50 companies disclose sustainability reports



Source: Sustainability Outlook's report by India Responsible Investment Working Group 2014, MOSL

Exhibit 22: 81% of S&P 500 companies disclose information on ESG



Source: Governance and Accountability Institute

Exhibit 23: 62% of the Nifty 50 companies disclose sustainability reports and BRR

Sr. No.	NSE Nifty 50	Sr. No.	NSE Nifty 50
1	ACC Ltd.	17	IndusInd Bank Ltd.
2	Adani Ports and Special Economic Zone Ltd.	18	Infosys Ltd.
3	Ambuja Cements Ltd.	19	Larsen & Toubro Ltd.
4	Asian Paints Ltd.	20	Maruti Suzuki India Ltd.
5	Axis Bank Ltd.	21	NTPC Ltd.
6	Bharat Petroleum Corporation Ltd.	22	Oil & Natural Gas Corporation Ltd.
7	Bharti Airtel Ltd.	23	Reliance Industries Ltd.
8	Bharti Infratel Ltd.	24	Tata Consultancy Services Ltd.
9	Coal India Ltd.	25	Tata Motors Ltd.
10	Dr. Reddy's Laboratories Ltd.	26	Tata Power Co. Ltd.
11	GAIL (India) Ltd.	27	Tata Steel Ltd.
12	HCL Technologies Ltd.	28	Tech Mahindra Ltd.
13	HDFC Bank Ltd.	29	UltraTech Cement Ltd.
14	Hindalco Industries Ltd.	30	Wipro Ltd.
15	Hindustan Unilever Ltd.	31	Yes Bank Ltd.
16	I T C Ltd.		

Source: MOSL, Company

Exhibit 24: 67% of S&P BSE Sensex companies disclose both SR and BRR

Sr. No.	S&P BSE Sensex	Sr. No.	S&P BSE Sensex
1	Adani Ports and Special Economic Zone Ltd.	11	Infosys Ltd.
2	Asian Paints Ltd.	12	Larsen & Toubro Ltd.
3	Axis Bank Ltd.	13	Maruti Suzuki India Ltd.
4	Bharti Airtel Ltd.	14	NTPC Ltd.
5	Coal India Ltd.	15	Oil & Natural Gas Corporation Ltd.
6	Dr. Reddy's Laboratories Ltd.	16	Reliance Industries Ltd.
7	GAIL (India) Ltd.	17	Tata Consultancy Services Ltd.
8	HDFC Bank Ltd.	18	Tata Motors Ltd.
9	Hindustan Unilever Ltd.	19	Tata Steel Ltd.
10	I T C Ltd.	20	Wipro Ltd.

Source: Company, MOSL

Some challenges on integrating ESG measures still remain

- The emphasis of integrating sustainability in investment decision has increased demand for greater disclosure and reporting of E&S-related information by corporates in India. However, we note that E&S information is both limited and dispersed. Further, what is perceived as acceptable set of ESG criteria is subjective.
- There are also other key challenges that obstruct full integration of ESG:
  - Awareness of ESG investing and its integration
  - Lack of standardization of data across companies in a sector, therefore, comparability is a challenge
  - Availability and consistency of data
  - Quantification difficulty
  - Lack of globally accepted framework for reporting
  - Valuations may not reflect ESG risks until the event has actually occurred
  - Lack of existing benchmarks to establish an adverse or better performance on ESG principles. Therefore, performance is measured in comparison with peers and its own past performance.

Sustainability – the way forward for India

- The 'Sustainability' ecosystem is currently driven by investor ambition to support sustainable investments and comply with global organizations such as the UN-PRI to which they are signatories.
- The significance of integrating sustainability analysis is reinstated when we look at the recent case of BHEL. In May 2017, Norway's $940 billion sovereign wealth fund excluded Bharat Heavy Electricals Ltd on environmental grounds.
  - The company is building a coal-fired power plant close to areas with "universally unique environmental qualities in the Sundarbans, the world's largest mangrove forest, in southern Bangladesh'. The fund believes that "there's an unacceptable risk of the company contributing to or being responsible for severe environmental damage"
  - The world's largest wealth fund takes into account ethical rules encompassing human rights, some weapons production, corruption, the environment, coal and tobacco when deciding on its investments.
- Sustainability analysis is critical for investment analysis to evaluate returns on unpriced capital other than financial capital such as natural capital, human capital, and intellectual capital in order to attune the valuations accordingly.
- While globally, sustainability has evolved at a much faster rate, in India - the uptick on sustainability has been rather slow, as sometimes the benefits of sustainability reporting/analysis are not clearly understood.

Materiality of ESG measures varies across sectors

- We note that the materiality varies across sectors and is primarily dependent on the nature of the business and the country in which it operates. Also, within each sector, company-level performance is dependent on efforts taken by the company to mitigate risks.
- We believe that manufacturing sectors are more prone to the environment and social risks. On the other hand, the services sector, which largely involves human capital, is more exposed to the social risk. Governance risk predominantly applies almost evenly across sectors.

- We have created a thought process and set it in a framework to evaluate sustainability from the Indian context.

Indian context - Materiality of ESG measures varies across sectors

	Cement	Capital goods	Auto	Banks	Telecom	Pharma	IT	FMCG	Oil & Gas	Metals	Power
Environment											
CO_2 emissions	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Toxic emissions	✓	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Waste disposal	✗	✗	✓	✗	✗	✓	✗	✗	✓	✓	✓
Opportunities in renewable sources of energy	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓	✗
Opportunities in clean technology	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓
Energy conservation/efficiency	✓	✗	✗	✗	✓	✗	✗	✗	✓	✓	✓
Financing environmental impact	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
Biodiversity and land use	✓	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓
Water conservation	✗	✗	✗	✗	✗	✓	✗	✓	✓	✗	✓
Product emissions	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗
Social											
Industrial Relations	✓	✓	✓	✗	✗	✓	✗	✓	✓	✓	✓
Attrition	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Diversity at workplace	✗	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗
Training and skill development	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Health & Safety	✓	✓	✓	✗	✗	✓	✓	✗	✓	✓	✓
Corruption/Marketing malpractices	✓	✓	✗	✓	✓	✓	✗	✓	✗	✓	✓
Privacy and data security	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗	✗
Product safety	✗	✓	✓	✗	✗	✓	✗	✓	✗	✗	✗
Customer satisfaction	✗	✓	✓	✓	✓	✗	✓	✓	✗	✗	✗
Providing access to healthcare	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗
Providing access to finance	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗
Providing access to communication	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Governance											
Related party transactions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alignment of interests	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Accounting practices	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Executive Compensation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Board Independence	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of independent directors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rotation of auditors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Board members attendance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Product profile concentration	✗	✗	✓	✓	✗	✓	✓	✓	✗	✗	✗
Geographical concentration	✓	✓	✓	✓	✗	✓	✓	✓	✗	✗	✗
Customer concentration	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗
Vendor concentration	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗
Regulatory risk	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Investment in technology/ R&D	✗	✓	✓	✗	✓	✓	✓	✗	✗	✗	✗
Execution and financial risk	✗	✓	✗	✓	✓	✗	✓	✗	✗	✓	✓

Note: The above matrix is indicative and not exhaustive

Source: MOSL

Gallery

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