Research

CRISIL
An S&P Global Company

CRISIL Sustainability Yearbook, 2022

- 575+ companies from 53 sectors analysed and scored
- Disclosures improving, but there's a long way to go
- Climate risk not being sufficiently factored in

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Foreword

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When we came up with the first ESG scores on Indian companies in 2021, the impact was positive and gratifying.

The numbers persuaded companies to ponder over how to improve their disclosures and performance relative to peers.

A year on, those changes promise to be a gathering wave.

The quality and quantity of disclosures have improved materially, as you can read in this *CRISIL Sustainability Yearbook, 2022.*

This comes amid worrying trends globally.

Extreme weather events have become commonplace, inequality is widening, and ESG is still not as actively discussed in corporate boardrooms as it should be.

According to S&P Global, India is likely to have over 52% of its gross domestic product (GDP) exposed to physical risks like wildfire, flood, sea-level rise, or storms by 2050.

Land surface temperatures have topped 60 degrees Celsius in some parts of the country this summer, and heat waves have arrived earlier than usual. In some parts, floods are causing havoc.

Given our agriculture dependence, such climate risks bode ill, especially for the less privileged, and the economy and businesses at large.

There are some steps being taken in the right direction, too. Employee well-being and community impact have come to the front and centre of corporate discussions after the Covid-19 pandemic.

Gender diversity is increasingly being discussed and implemented at the highest corporate echelons.

While efforts are on to address related challenges, they have been inadequate. More action on the ground, and collaboration among stakeholders, are indispensable to make a material difference to our future.

The facilitations necessary

The government has been leading the way with steps such as the 2070 Net Zero goal, a sovereign green bond issuance, and ambitious renewable energy plans. A lot more needs to be done to create a favourable environment for ESG investing in India.

Potential steps include bringing down the cost of green technologies, incentivising ESG compliance, making India attractive to global ESG investors with the development of a sustainable taxonomy — anchored to our nationally determined contributions under the Paris Accord and the Net Zero goal.

While the government has provided significant impetus to the renewables and automobiles sectors, the transition to a more ESG-aligned world needs to be viewed from a wider, pan-sectoral level.

That means sharper focus on lowering the impact of hard-to-abate sectors such as thermal, cement, chemicals, oil and gas, and steel, and incentivising their accelerated transition to a greener model.

Tax incentives and priority status to some technologies can help move the needle only so far.

The clarion call, therefore, is a collaborative approach between the public and private sectors, such as blended finance, or engagements by industry bodies that could pool resources and collectively push their respective sectors to adopt greener technologies.

Regulator addressing data issues

On their part, regulators have taken a proactive stance by improving ESG-related disclosures and aligning them with some global reporting frameworks.

Our analysis of the new Business Responsibility and Sustainability Report disclosures suggests as much as 91% of the indicators are aligned with the Global Reporting Initiative (GRI).

Many Indian companies reporting on sustainability already predominantly adopt GRI standards, so migration should be smooth.

However, gaps persist in terms of ESG data.

While we cover some of those in this report, it is clear that standardisation, materiality, credibility and quality of data reported by companies are crucial.

Decarbonisation by India Inc

On their part, companies have a crucial role to play in India's decarbonisation story, but they are coming up short on the near- to medium-term impact.

Only a fifth of them in our coverage have a good level of sustainability disclosures. Most don't have a roadmap to achieve Net Zero, and those that do, lack short- or medium-term targets and tracking.

Decentralised ESG implementation

Decentralised ESG implementation is the key to driving essential changes in a consistent manner. Setting the tone at the top is crucial to infusing the sustainability culture across organisations and value chains.

Focus on capacity building and awareness

In companies, capacity-building can be done through appropriate training and on-the-job learning.

At the societal level, the structural impetus should begin at the school stage. Curricula need to be bolstered with courses that enable the younger generations to imbue sustainability in their daily lives, seek more accountability from companies they are buying from, demand improvements, and develop a more values-driven approach to incomes and careers.

Globally, we are already seeing millennials spurring ESG investing as well as voicing their views on where their money is being invested, or how their products are being sourced.

They are using social media platforms to seek a more equal and inclusive society.

Increasing calls to action

As for financial institutions, they need to look at ESG factors more holistically.

Today, the uptake of sustainability in decision-making is very piecemeal in India Inc because of a lack of stewardship, and fiduciary persuasion to improve the ESG quotient.

For example, a majority of the financial institutions in our coverage did not track their own Scope 3 emissions. The level of unpreparedness with regard to mitigating some of the biggest climate and social-related risks we are facing, or will face in the not-so-distant future, is perturbing.

Companies and investors need to crest these fundamental shifts than get submerged by them.

Indications today are that the next few years will shape ESG in India, driven by policy and regulatory suasion, stakeholder activism, and rising public awareness of the deleterious impact of the looming risks.

Sustainability, therefore, must become a 360-degree, 24x7 imperative.

CRISIL is committed and well-poised to support the sustainability demand of all stakeholders.

So, together with the CRISIL ESG team, I welcome you to peruse this comprehensive 2022 edition of the *CRISIL Sustainability Yearbook, 2022.*

I hope it enriches you, provides you useful data, makes you ask the right questions and gives you real-world insights for a shift to a more sustainable, resilient and inclusive society.

Hope, after all, is the thing with feathers, as Emily Dickinson versified so eloquently over 150 years ago.

Contents

Factoids

Warming up

One-fifith of the **586** companies in our coverage published sustainability reports in fiscal 2021

One year later

Compared with our last year's coverage, **12** companies published detailed sustainability reports for the first time

Of those that did earlier, **9** are yet to publish for fiscal 2021

Dark matter

Only **21%** of all companies provided disclosures on Scope 1 and 2 greenhouse gas (GHG) emissions[1]

Airlines
None of the companies in our coverage disclosed the absolute percentage of sustainable aviation fuel (SAF) in their overall fuel consumption

Auto ancillary
None of the auto ancillary companies disclosed number of product recalls, either voluntary or involuntary

Food retail
No company in our pack had material disclosures on environmental considerations in their supply chain

Logistics
None disclosed alternative fuel consumed, the number of electric vehicles in their portfolio, or usage of eco-friendly packaging materials

Multi-brand retail
None disclosed initiatives on product quality and safety, healthy products, or animal welfare policies

Batteries
None of the companies disclosed whether they source rare earth metals from any conflict-ridden countries

Glimmer of hope

Auto OEM
Two-thirds of the companies analysed in this sector had EVs in their portfolio. The rest are actively pursuing its development

Lending
Negative sector exposure (as % of total gross credit exposure) declined two percentage points on-year to **~10%** in fiscal 2021

Cement
Almost half of the companies in the sector disclosed clinker ratio. A lower ratio indicates increased blending of fly ash, slag and waste, which reduces energy consumption on account of clinker production

High on disclosures

FMCG
~79% of companies disclosed initiatives on packaging such as reduction in laminate based/paper packaging, elimination of single use plastic, and usage of recyclable packing material

Hotels
3 out of 4 companies have disclosed the percentage of their portfolio with green building certification, averaging **28.5%**

[1]Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions include all other emissions emerging from activities in the organisation's value chain.

No good news

Media

Only **1 out of 8** companies have a data privacy policy which governs the approach towards data protection. None had a policy on responsible marketing or advertising

Pharma

20 companies out of the **33** analysed reported **41** drug recalls in all in fiscal 2021

Room for more

3 of 4 AMCs in our coverage said they had incorporated ESG factors into investment decision making. Only one has a dedicated ESG fund

Nothing to hide

100% of **REITs** made quantitative disclosure on green building certifications in their portfolio. Over half the area in these REITs were disclosed as green-certified, compared with only around one-fourth in real estate

Net negative

Average net negative sector exposure of lending sector (as % of total gross credit exposure) in fiscal 2021: **9.7%**

Average net negative sector exposure of DFIs (as % of total gross credit exposure): **7.6%**

Class apart

CEO-pay-to-median-employee-pay ratio (586 cos, average): **~130x**

CEO-pay-to-median-employee-pay ratio (only PSUs): **4.8x**

CEO-pay-to-median-employee-pay ratio (global average): **250-350x**

Loose ends

3 out of 5 textile companies disclosed the usage of recycled or sustainably sourced materials. But only one has adopted the Sustainable Apparel Coalition (SAC) HIGG Index, an industry standard to measure sustainability

It's controversial

Totally, **303** controversies were found among the **586** companies analysed. Of these, **67%** were governance-related, **18%** social and **15%** environmental

45% of the total social-related controversies were in the pharma sector

Under-represented

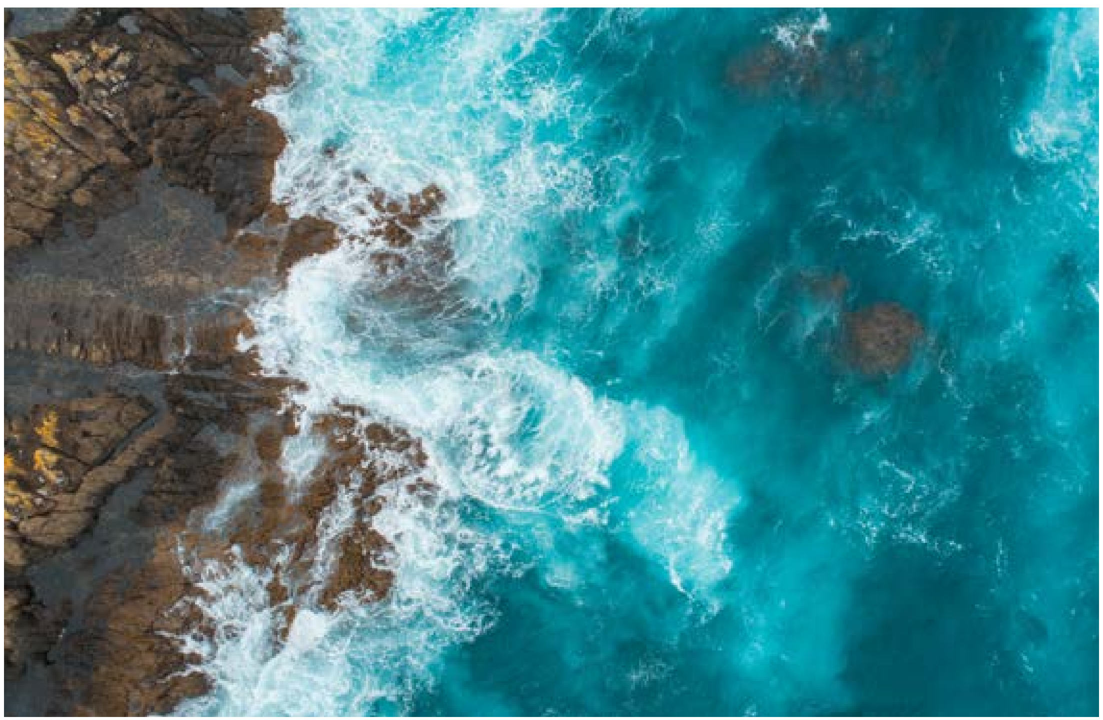
Proportion of women in the workforce in fiscal 2021 (586 cos): **~14%**

Proportion of women in the workforce in fiscal 2020 (225 cos): **~13%**

Global gender diversity at the workplace*: **39%**

**S&P Global estimates*

Harmonising disclosures, addressing climate risk central to global ESG efforts



Convergence of reporting frameworks takes centre stage

Mitigating climate change impact and transitioning to sustainable development have emerged as major issues globally. Investor focus on sustainability investing is increasing, reflected in a rise in total assets and inflows in sustainable funds and green/sustainable bond issuances.

As ESG investing becomes more mainstream, both in developed and emerging markets, various stakeholders — from regulators to industry bodies, financial institutions and corporates — are coming together to move the needle on ESG.

Here are some of the latest developments on this front:

- **IFRS Foundation:** The International Financial Reporting Standards Foundation (IFRS Foundation) was established in late 2021 for setting global accounting standards and creating a new International Sustainability Standards Board (ISSB). The ISSB, which was established at the COP26 to develop a comprehensive global baseline of sustainability disclosures for the capital markets, will guide companies on what sustainability disclosures ought to be made to investors to supplement financial statements. It launched a consultation on its first two proposed standards on March 31, 2022.
- **Sustainable Finance Disclosure Regulation (SFDR):** Under the European Union's (EU) SFDR, asset managers, pension funds and insurers will have to disclose ESG risks in their portfolios, marking the first step in a vast EU plan towards driving capital to meet sustainable goals. Some parts of the SFDR became effective on March 10, 2021; however, the regulation is expected to evolve over the years. From July 2022 onwards, disclosure requirements will become more onerous. A recent analysis[3] by S&P Global indicates

[3] *https://www.spglobal.com/marketintelligence/en/news-insights/blog/what-is-the-impact-of-the-eu-sustainable-finance-disclosure-regulation-sfdr*

that companies outside the EU with more than $3 trillion in market capitalisation could be subject to the SFDR.

- **Mandatory climate-related disclosures:** The US Securities and Exchange Commission has also recently announced its intention to enhance its focus on climate-related disclosures, and published a consultation paper on it. It is far-reaching because it also calls for a phased implementation of emissions verification on a 'reasonable assurance' basis, which is not a common practice today. New Zealand has announced mandatory climate-related disclosures, based on the Task Force on Climate-Related Financial Disclosures (TCFD) framework and issued by the External Reporting Board (XRB), for all listed equity and debt issuers by 2023. Additionally, the United Kingdom (UK) has mandated TCFD-aligned climate-related financial disclosures. The regulations came into force from April 6, 2022, and are applicable for accounting periods starting on or after that date.
- **Strengthening disclosures in Asia:** Hong Kong has mandated disclosures on Board statements and significant climate issues that impact the issuers, while key performance indicators (KPIs) can be disclosed on a comply-or-explain basis. Other countries such as Indonesia, Malaysia and Philippines are following suit. Further, Taiwan has mandated sustainability disclosures for TWSE/TPEx-listed companies with a paid-up capital threshold above NT$2 billion. Starting 2023, these companies will be required to prepare and file sustainability reports, and expand the application scope of third-party assurance for sustainability reporting.
- **Global reporting frameworks introduced:** In March 2022, the Taskforce on Nature-related Financial Disclosures (TNFD) released its nature-related risk management and disclosure framework called the 'TNFD Framework'. This framework will allow organisations and financial institutions to report and act on evolving nature-related risks and opportunities. It is the first integrated approach to incorporating nature-related risk and opportunity analysis into the core of corporate and financial decision-making. Further, the International Integrated Reporting Council (IIRC) and the Sustainability Accounting Standards Board (SASB) announced their merger to form the Value Reporting Foundation (VRF). The VRF supports business and investor decision-making with three key resources: Integrated Thinking Principles, Integrated Reporting Framework and SASB Standards. The IFRS Foundation will complete the consolidation of the Climate Disclosure Standards Board (CDSB) and the VRF, which houses the Integrated Reporting Framework and SASB Standards, by June 2022.
- **Taxonomy:** Globally, there is a flurry of activity in taxonomy development and revision. The EU taxonomy criterion was recently updated for natural gas and nuclear power (subject to select criteria). The ASEAN region has published its taxonomy. Singapore already has one, while the Australian taxonomy is under development.
- **Global stock exchanges have also revised disclosure requirements for listed companies:** In July 2020, the United Nations Sustainable Stock Exchanges Initiative set up a Climate Disclosure Advisory Group and launched a new work stream to assist stock exchanges in developing TCFD-aligned reporting for issuers. Following this, some large stock exchanges have introduced TCFD-aligned disclosures in their listing requirements:
  - In August 2021, the Singapore Stock Exchange proposed a roadmap for TCFD-aligned disclosure for listed companies, wherein from 2022 all issuers are required to adopt TCFD-aligned reporting on a comply-or-explain basis. Disclosures will become mandatory from 2023 for companies in key industries, such as finance and transportation, and in most industries in 2024
  - In June 2021, the Tokyo Stock Exchange revised its corporate governance code, which requires certain listed companies to enhance the quality and quantity of climate-related financial disclosures

Climate risk becomes critical in global discussions

Regulators intensify efforts across countries

Central banks and regulators across the world acknowledge climate risk as a major stumbling block to financial stability and have intensified their focus on tackling them, expediting changes in governance, risk management and disclosure requirements.

The Prudential Regulation Authority (PRA) in the UK was among the earliest to set guidelines to address climate risk, quickly followed by the European Central Bank (ECB), the European Banking Authority (EBA), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), and the Australian Prudential Regulation Authority (APRA).

EBA and BSP (Philippines) are the only regulators to issue guidelines for ESG and E&S risks, respectively, while all others have focused on climate- and environment-related risks. There is increasing consensus among regulators on the escalating financial risks due to climate risks.

Comparing global sustainability standards

Regulatory guidelines	OCC	ECB	PRA	MAS	HKMA	APRA
Board and management's oversight on climate-related risk	✔	✔	✔	✔	✔	✔
Incorporate climate-risk factors in the internal governance framework	✔	✔	✔	✔	✔	✔
Assess potential current and future impacts arising from both, physical and transition climate risk factors	✔	✔	✔	✔	✔	✔
Assess strategic response to climate-related financial risk via scenario analysis/stress tests	✔	✔	✔	✔	✔	✔
Embed climate-related and environmental risks into the existing risk management framework	✔	✔	✔	✔	✔	✔
Quantify exposures and develop risk metrics that indicate potential future losses	✔	✔	✔	✔	✔	✔
Integrate climate change risk into the internal capital adequacy assessment process	✔	✔	✔	✖	✖	✔
Factor in climate-risk at the counterparty level starting with customer onboarding or exposure origination	✔	✔	✔	✔	✔	✔
Mandate for external communication of scenario analysis outcomes	✖	✖	✖	✖	✖	✖
Develop an appropriate approach to climate disclosure in line with the TCFD framework	✖	✔	✔	✔	✔	✔

*Source: Regulatory websites, guidelines and policy manuals; OCC - Principles for Climate-Related Financial Risk Management, dated December 2021; ECB - Guide on Climate-Related and Environmental Risks, dated November 2020; MAS - Guidelines on Environmental Risk Management, dated December 2020; HKMA – Supervisory Policy Manual on Climate Risk Management, dated December 2021; APRA – CPG 229 Climate Change Financial Risks, dated November 2021; PRA - Climate-Related Financial Risk Management and the Role of Capital Requirements, dated October 2021 and Supervisory Statement, SS 3/19 published in 2019; * OCC's guidelines are still in consultation stage; CRISIL Research*

TCFD endorsed as an important tool to capture climate risks

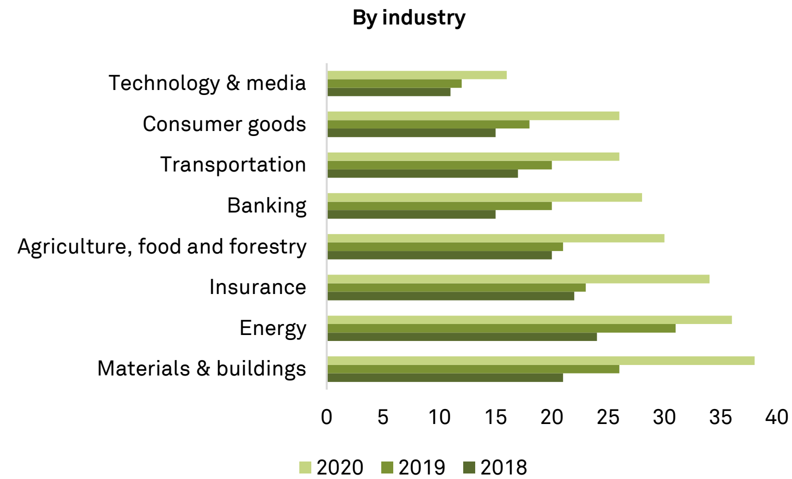
The TCFD, created by the Financial Stability Board (FSB), provides recommendations/standardised guidelines on the information that companies should disclose to help investors, lenders, and insurance underwriters to appropriately assess, and price risk related to climate change. In this regard, TCFD has suggested 11 guidelines, which can be broadly bucketed into four categories (governance, strategy, risk management, metrics and targets).

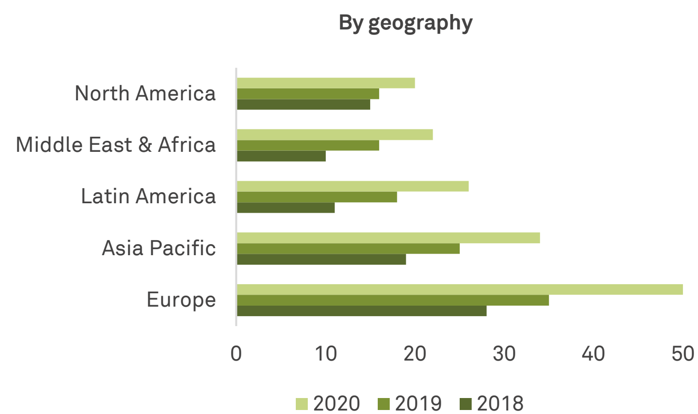
These recommendations are now well-accepted by G7 and G20 finance ministers and central bank governors, FSB, IFRS, International Organization of Securities Commissions (IOSCO), and EC, among others. In fact, regulators from Brazil, the EU, Hong Kong, Japan, New Zealand, Singapore, Switzerland, and the UK have already directed domestic companies to provide climate-risk disclosures in alignment with the TCFD recommendations.

However, climate-related financial disclosures are still evolving

Climate-related reporting has been on an upswing since 2020, although considerable progress is still required. As of October 2021, TCFD had over 2,600 supporters, including 120+ regulators and government entities across 89 countries and jurisdictions, and nearly all sectors, with a combined market capitalisation of $25 trillion. Of these 1,651 entities were reviewed from eight sectors – banking, insurance, energy, materials and buildings, transportation, agriculture food and forest products, technology and media, and consumer goods. Only 50% of the companies reviewed by TCFD were aligned with the TCFD recommendation on at least three disclosures.

Average % of disclosures by TCFD reviewed companies aligned across 11 TCFD recommended disclosures by industry and geography (2018-2020)





Source: TCFD Status Report, October 2021

Geographically, Europe remained the leading region for climate-related disclosures since 2018, followed by Asia-Pacific. This is attributable to European regulators' intensive climate-risk requirements, in contrast to North American regulators, whose climate-risk policies are still under consultation (North America accounts for the lowest level of disclosures).

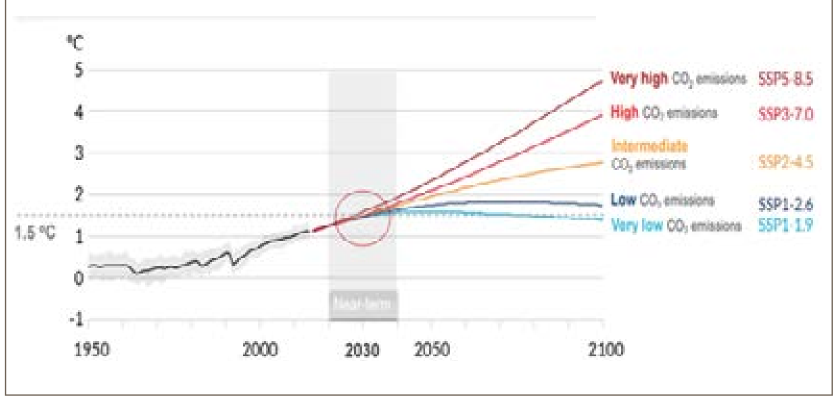
Sector-wise, of the 1,651 companies reviewed by TCFD, 282 companies were from the banking sector, 132 from insurance, 267 from energy, 404 from materials and buildings,158 from transportation, 142 from agriculture, food, and forest products, 106 from technology and media, and 160 from consumer goods.

Tragedy of the horizon

The World Economic Forum's Global Risks Report 2021 identified climate action failure as the most impactful and the second-most likely long-term risk facing the world. However, unlike many risks that companies manage and manoeuvre, the impact of climate risk is not clearly visible in current times. Instead, it will be felt by future generations beyond the horizon of business.

As a result, the current players have little to no incentive to act towards mitigation, making it what the economist and banker Mark Carney famously called 'tragedy of the horizon'. The term indicates the stark disparity between the short-term thinking of financial markets and the long-term nature of climate change. In tandem with the phenomenon, any intervention to reduce emissions today will only have an effect decades later.

Climate science-based scenarios from IPCC



Source: Intergovernmental Panel on Climate Change (IPCC)

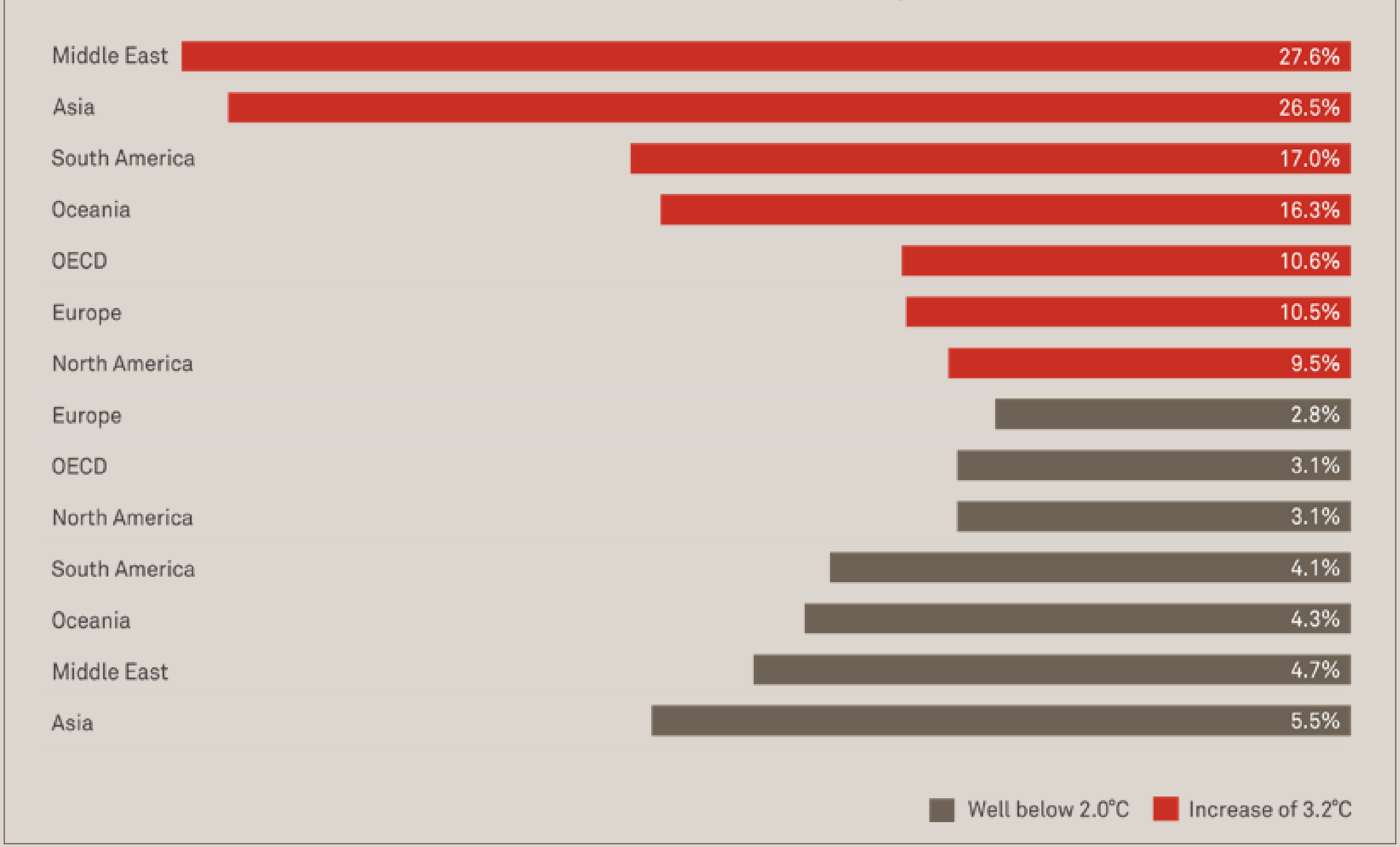
Financial impact will be more pronounced after 2030

As seen above, the steps taken toward lowering emissions today will only start affecting the temperature many years after 2030. The image also indicates a rapidly narrowing window of opportunity to enable climate-resilient development. Although the degree of positive impact from the world achieving very low emission (shared socio-economic pathways, or SSP of 1-1.9) is much smaller than the degree of deep-seated negative impact from temperature increases staying on the current trajectory, inaction is not an option. While the ramifications of status quo are multiple-faceted, be it the human or survival cost, research on the financial impact indicates measures need to be taken at the root level, especially within financial institutions and corporates.

As per forecasts done by a large Swiss insurer, an increase of 3.2°C in temperature by 2050 could wipe off the world's GDP by as much as 18%, making it one of the most prominent effects of climate change. Notably, economic damage will occur, even with fulfilment of pledges and targets on climate change, though a cognizant approach could reduce the damage. As per their estimates, Asian economies are predicted to see GDP losses of 5.5% in case of a below 2.0°C rise and 26.5% in a severe scenario (increase of 3.2°C).

The following infographic, prepared based the aforementioned insurer's estimates, indicates the high financial costs and makes a point on the importance of action by the major actors (including financial institutions and corporates). The economic cost highlighted below shows how imperative it is to tackle climate change, especially for the business world to continue being financially stable.

Reduction in GDP due to climate change



Source: Swiss Re's estimates in its report 'The economics of climate change', April 2021

How will this space evolve?

While a lot of progress has been made on climate risk analysis and reporting, especially in the EU and the developed Asia Pacific (APAC) economies, there is still a long way to go. Going ahead, we expect to see a lot of action from the global regulators to address specific climate risk-related challenges, including data gaps, lack of a comprehensive reference framework to model transmission channels, global harmonisation of reporting standards and taxonomy, and to provide enhanced guidance on stress testing and scenario analysis requirements.

We also expect firms, especially the small and medium-sized ones, to step up their climate risk management framework and focus on integrating climate risk consideration into transaction pricing and credit decisioning process.

Specifically, we expect climate risk management to evolve along the following key themes:

1. **Regulators to facilitate climate risk assessments:** We are likely to see increasing regulatory convergence across the globe to identify and address the existing methodological challenges in climate risk assessment and reporting. One such course of action is climate risk stress testing initiative for banks undertaken by the regulators in the UK, the Netherlands, Canada, France and Hong Kong. The outcome of stress-testing activities is likely to provide guidance to firms on the climate risk assessment framework, supplement their understanding of identifying and computing risk exposures, and accordingly facilitate in prioritising the next steps.

2. **Rise in demand for sustainable products to present significant revenue opportunity:** The growing regulatory and investor push to integrate climate risk in business strategy has urged banks to play a crucial role in facilitating firms' transition to greener forms of energy. We foresee a significant rise in sustainable product offerings such as green/social bonds, sustainability-linked corporate loans and green mortgages.

3. **Firms to strengthen the internal climate risk management and governance framework:** We expect banks and non-financial firms to continue bolstering their climate risk management and governance framework, including integrating climate risk within the scope of broader enterprise risk management, developing climate risk scenario analysis and stress testing framework, and drawing up comprehensive plans to meet their Net Zero targets.

4. **Consulting firms, rating agencies and third-party data providers to fill methodological and skillset gaps:** Smaller firms generally lag the large, well-established firms in terms of in-house modelling expertise and availability of historical data points for climate risk assessments. As such, these data and skill gaps are bridged by international organisations that offer 'off the shelf' paths of future carbon prices under various transition risk scenarios. Further, ESG rating providers and third-party data providers offer climate risk scoring and physical and transition risk drivers and exposure data, respectively.

Next big themes in India are standardisation of disclosures and decarbonisation

Government and regulators lead the way

India is slowly, but surely, taking bold steps to foster the ESG ecosystem. Some of the recent measures are highlighted below.

Budget 2022: The budget for fiscal 2023 proposed to issue the first sovereign green bond of Rs 24,000 crore to fund public sector projects, with a view to transforming India to a low-carbon economy. This would also provide a fillip to the development of the sustainable finance market in India.

Business Responsibility and Sustainability Report (BRSR): The Securities and Exchange Board of India (SEBI) has introduced the BRSR and mandated disclosure of non-financial information for the top 1,000 listed corporates from this fiscal onwards. Even so, corporates have already been voluntarily adopting it and disclosing ESG-related data to adhere to market requirements. SEBI also released a consultation paper on October 26, 2021, to introduce disclosure norms for ESG mutual fund schemes, including transparency on the schemes' ESG-related investment objectives, periodic portfolio disclosures, and the need to monitor and evaluate investments. Recently, SEBI came up with a consultation paper on ESG rating providers, to ensure regulatory oversight for the assessments that have a potential to impact the flow of funds.

Central bank's climate thrust: The Reserve Bank of India (RBI), in its statement on developmental and regulatory policies, has highlighted the need for all financial institutions, including banks and non-banking financial companies, to develop and implement processes to understand and assess the potential impact of climate-related financial risks.

Clean energy targets: The central government has announced a 300 GW target for solar by 2030. To promote clean energy, domestic module manufacturers have been incentivised under the Production-Linked Incentive (PLI) scheme. The same is also in the works for hydrogen electrolysers. The budget also gave infrastructure status to battery storage. Further, the strong push for EV adoption, infrastructure development, standardisation and interoperability of batteries supports the overall EV ecosystem.

Life Insurance Corporation (LIC), India's biggest initial public offer (IPO), also factors in ESG in its draft offer documents.

Key ESG factors addressed by LIC:

Underwriting and investment management

- LIC mentions that it reviews its underwriting guidelines while taking various environmental and regulatory factors into account to ensure that it makes informed decisions on its investment portfolio
- It mentions that it incorporates fundamental, quantitative and qualitative ESG parameters to analyse the sustainability of the companies it invests in

Risk management policy

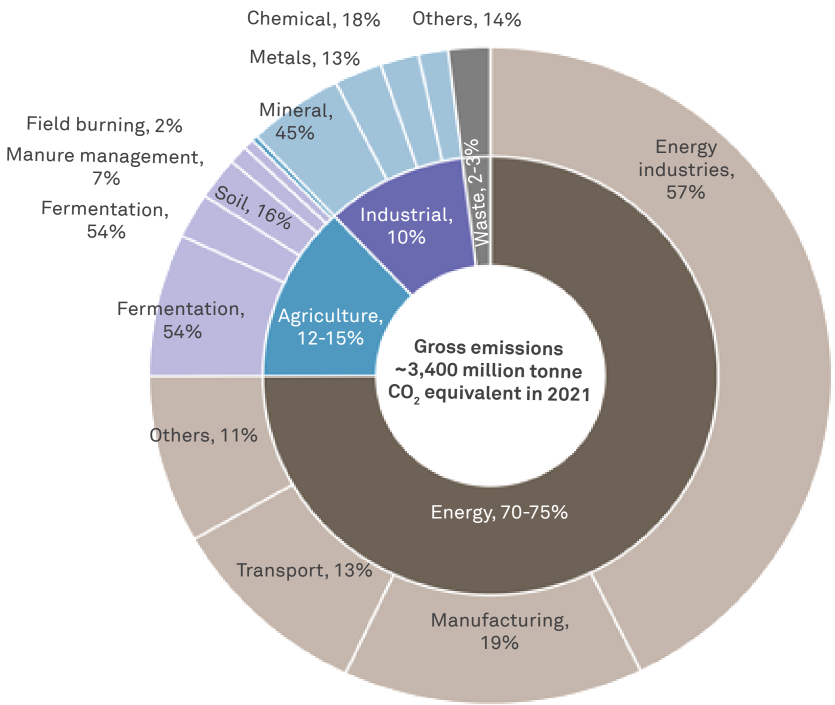
- ESG risks will be included in its risk management policy to be formulated by the risk management committee

Cognisance of public health trends

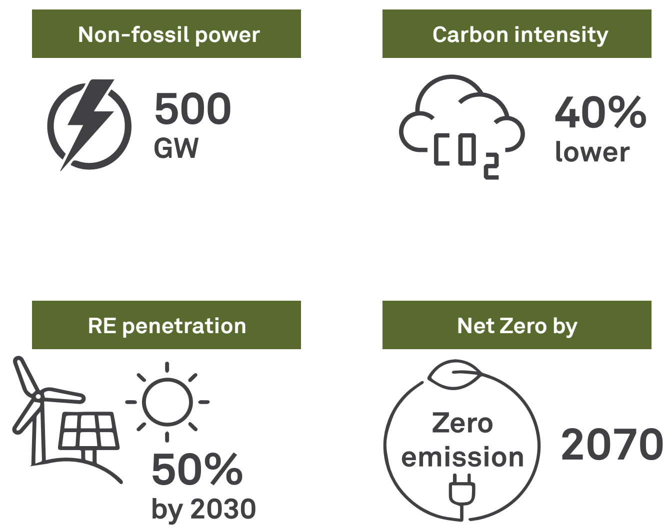
- It recognises that apart from climate change, there are emerging risks associated with public health trends, such as increase in obesity-related disorders, and demographic changes such as urbanisation and ageing of population. These structural changes impact the industry in terms of growth, mortality, persistency and solvency
- As insurers, it notes that it must assess each of these factors impacting its profitability and solvency, evaluate the potential impacts of these factors on its business and implement requisite measures to mitigate these risks

Decarbonisation of hard-to-abate sectors in India: spotlight on four critical sectors

India on the global emission landscape



COP26 targets for India



Source: Industry, CRISIL Research

At 3,400 million tonne CO_2 equivalent, India was the third-largest polluting country in 2021, just behind China and the US. While 50% of emissions are energy-linked globally, it is even higher at 57% in India. What makes matters worse is that captive power plants have a higher share in India vis-a-vis globally.

Until now, most regulations and government efforts have focused on the power and transportation sectors. However, attention is shifting to the manufacturing sector. To be sure, a large number of industrial players have announced emission targets. A number of oil and gas majors have planned investments in green hydrogen and renewables. But, we need a leap in innovation to complete industrial decarbonisation.

Mitigating industrial emissions requires significant scale of investments and planning

Industrial emissions are unique because:

1. They are concentrated in fewer sectors – a handful contribute to 90% of total industrial emissions
2. They emit a higher intensity of non-CO_2 gases, accounting for a larger proportion of SOx, NOx, mercury and methane emissions. These gases are hard to abate, and hence, need large investments

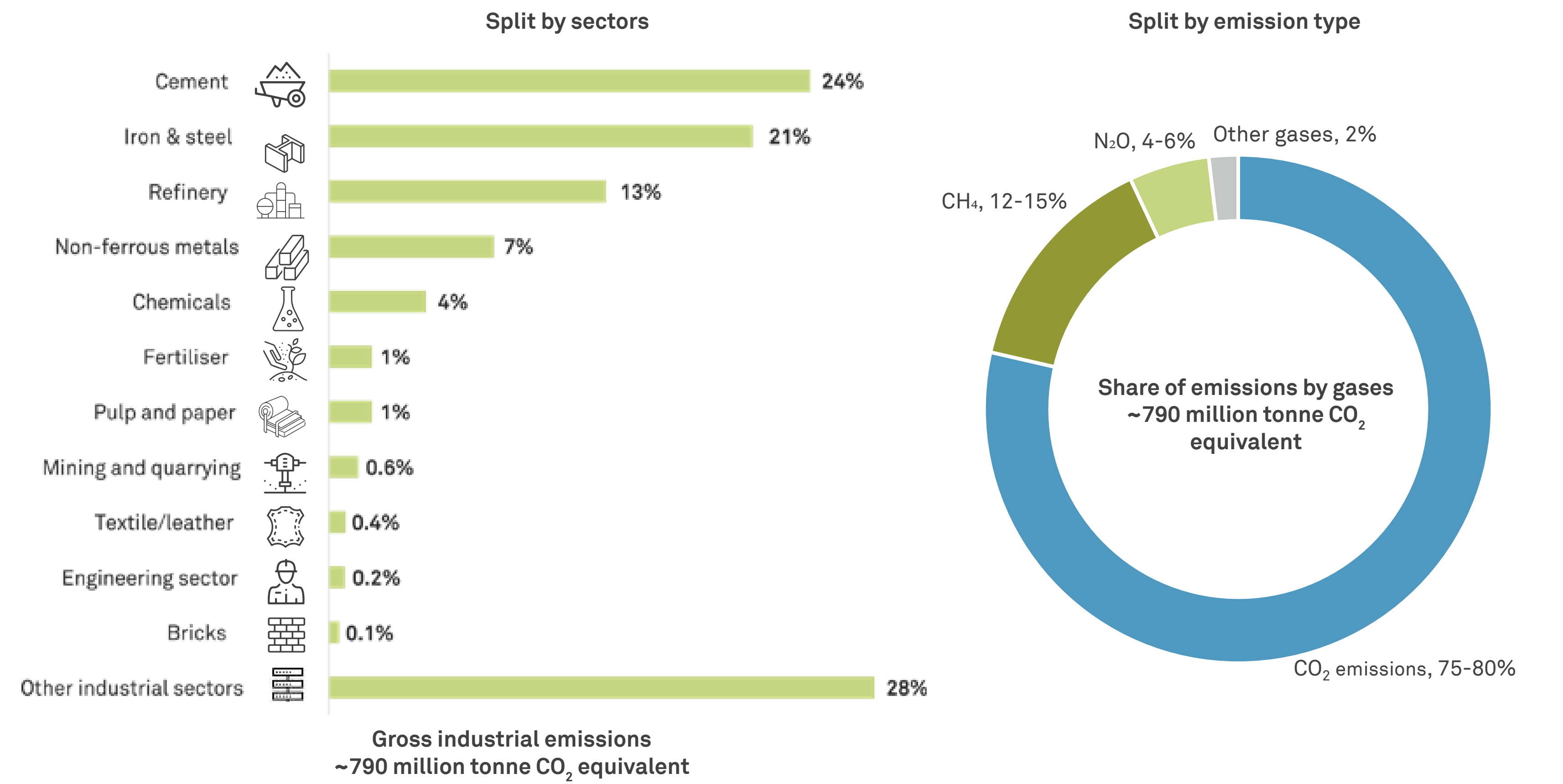
Moreover, significant investments are needed to achieve scalability. For instance, if 111 million tonne per annum of India's crude steel production has to be moved to green hydrogen, ~50% of the targeted 500 GW of 2030 renewable energy (RE) capacity would need to be dedicated to green hydrogen production.

All this also calls for rationalisation of technologies and use of other critical resources. For example, 86% of global thermal power plants use wet flue-gas desulfurisation (FGD), a process that needs relatively more water. Hence, India may need to opt for semi-dry FGD for its thermal power plants.

Large players will play a crucial role in driving scale for lower GHG and particulate matter emissions in India.

Here, we look at a few sectors to understand how India aims to traverse the next 7-8 years in its efforts in energy optimisation. From a regulatory standpoint, while there are guidelines focusing mainly on improving efficiency levels across sectors using the Perform Achieve and Trade (PAT) scheme, the government may soon make transition to green hydrogen compulsory for a certain share in production for key industrial sectors. The quantum and kind of incentives for this transition will be crucial to enable break-even at matching cost of existing technologies.

Industrial emissions: CO_2 dominates; five sectors crucial to transition



Source: Industry, CRISIL Research

Industrial emissions demand attention as India targets higher share of manufacturing in GDP

Industrial emission has logged a CAGR of over 8% since 2005 and could shoot up as the PLI scheme and sharper government focus lift the share of manufacturing sector in GDP to 25% by 2030 — as per the government target — from ~17% currently.

The share of industrial segments in power consumption is currently estimated at 20% and its contribution to emissions at 19% — excluding grid power supplied for industrial purposes. Including industrial grid power, the number would be close to 30%.

The top two sectors — steel and cement alone — are estimated to account for ~45% of the total industrial emissions (excluding grid-supplied power). A further deep dive indicates that with rising consolidation in both these sectors larger players contribute to a bulk share. This implies commitments from a few players can make a difference.

Regulations must focus on stringent monitoring of early stages so that apt benchmarks can be enabled

The Central Pollution Control Board (CPCB) continues to be the central nodal agency under the Ministry of Environment for notifying regulations in the sector. Emission control involves: a) tracking pollution data at the unit level online, b) assessing the percentage of current compliance standards met, and c) mapping intensities and efficiencies across sectors with global benchmarks to provide a quicker solution by resource efficiency techniques at the optimisation stage.

However, implementation of stage 1 remains poor. Equipment for continuous monitoring of unit-level GHG emissions are not certified by Indian entities and data collection remains opaque. Until appropriate benchmarks are established using online continuous emission monitoring (OCEMS) equipment, monitoring and implementation will remain weak. In an April 2021 order, the National Green Tribunal mandated data from OCEMS to be made available. This was on the back of evidence that out of 32 state pollution control boards, more than half did not have online portals disclosing emission data of industrial units in their jurisdiction. Of the 16 states that have complied with the Supreme Court judgement on industrial emissions data, only 38% allow users to access and assess historical data.

Improving efficiency to gain significant traction

The second stage of resource efficiency also remains weak, given that the right benchmarks for Indian plants are not yet available. Further, to assess sectors where emissions are hard-to-abate, incentives for R&D would be needed for setting up Net Zero pathways. Sectors that are consolidated with larger players are better off than smaller unorganised units. That said, in areas such as thermal power, where the emission intensity of Indian plants as well as coal efficiency are below international standards, implementation of even preliminary technologies such as FGD can make a huge difference.

While overall CO_2 emission remains in focus, a large percentage of other gases released are concentrated in industrial units. To be sure, over 50% of SO2, NOx and mercury emissions come from thermal power plants. Effective retrofit processes such as FGD can reduce these emissions substantially with better efficiency and conversion of SO2 into calcium sulphate using limestone remains the area with the highest focus on optimisation in the second stage.

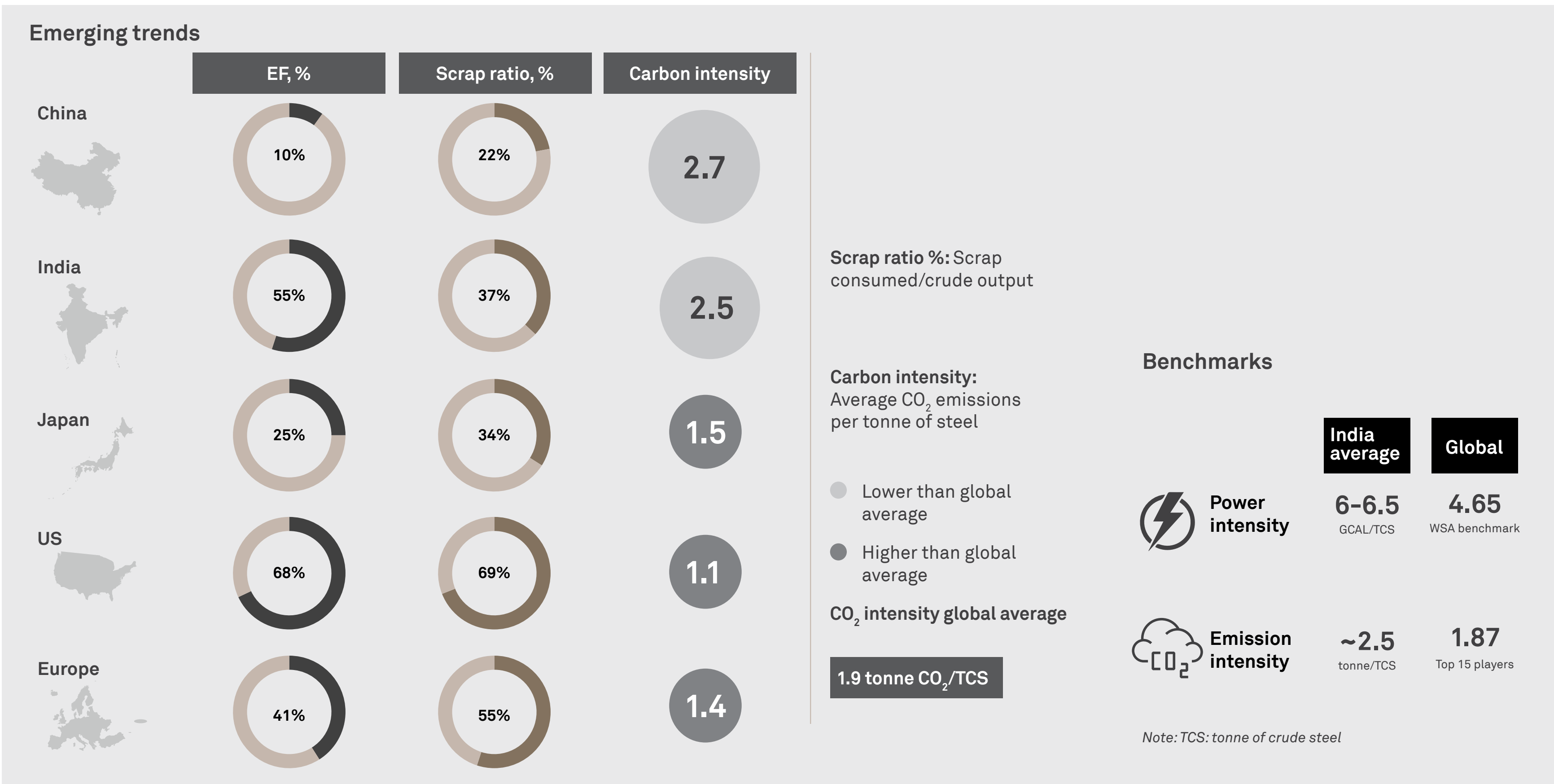
Commitments of larger players amid ESG focus to drive investments for deep decarbonisation

The third stage involves investment in new technologies for deep decarbonisation for hard-to-abate sectors. This will be a gradual process and may become relevant once the first two stages have been completed. However, investments and R&D will enable testing newer areas to improve the chances of shortlisting the right technology from an Indian perspective and drive focus on lowering the cost for faster adoption.

ESG commitments of corporates are thus empowering emission control for the overall industrial community. An assessment of the top 100 industrial corporates by CRISIL indicated that nearly 40% of them have specific emission reduction commitments and almost 25% have already announced their Net Zero dates, much earlier than India's commitment of Net Zero by 2070 under COP26.

Steel: To ensure younger capacities, watch efficiencies closely when investing in breakthrough technologies

Emerging trends and benchmarks in steel



Source: Industry, CRISIL Research

Emission profile

The steel industry accounts for ~10% of India's overall emissions, which is higher than the global standard of 7%. While India has seen significant improvement in recent years, its average emissions remain at ~2.5 tonne of CO_2/tonne of crude steel, well above the global benchmark of 1.87 (top 15 players).

A large part of the emissions in the entire process takes place in the iron making value chain (iron ore to sponge iron/hot metal), where coal (thermal or coking coal) is used. Over the years, abundance of iron ore and thermal coal have driven the addition of such capacities. This has led to higher emissions for India vis-à-vis the leading nations. On the other hand, economies such as US and Japan have largely shifted towards the less energy-intensive electric arc furnace (EAF) route.

Compared with the World Steel Association's benchmark of 4.6, the power intensity of the domestic steel sector is way higher at 6-6.5 Gcal/TCS (giga calories/tonne of crude steel). This can be attributed to higher production through the blast furnace/basic oxygen furnace (BF/BOF) route. In fact, globally, though ~73% of total production is through the BF/BoF route, it accounts for ~80% of the total emissions. Further, Indian EAF mills use thermal coal instead of natural gas in the DRI-EAF, which, along with the lack of emission control measures, leads to higher emissions in India.

Technology focus

Indian steel players that account for 6% of global steel production have set decarbonisation goals. Large players are undertaking measures to reduce power intensity as well as emissions through the use of best available technology in existing plants. Players have set up coke dry quencher, pulverised coal injection, and top pressure recovery turbine along with converter gas recovery in BF. Clearly, investment focus in the current scenario is on using existing technology optimally.

With the majority of the capacities being commissioned by the larger steel mills, average emission as well as power intensity is likely to reduce going forward. Further, higher scrap usage will limit the production of hot metal/DRI which will have a favourable impact on emissions, even as overall emissions continue to climb with rising production.

Player actions

The top three players have announced capex worth Rs 22,000 crore over the next five years. JSW Steel has earmarked Rs 10,000 crore over the next few years to cut its carbon emissions. Tata Steel has committed close to Rs 5,000 crore for decarbonisation targets to reduce CO_2 emissions to <2 tonne/TCS by 2025 and to <1.8 tonne/TCS by 2030 from 2.52 tonne/TCS in 2021. Even government-owned SAIL has set aside Rs 7,000 crore for the same. Given that these players account for 43% of production, the planned investment would make a meaningful difference. Further, given that the average age of plants in India is still low at under 15 years, adoption of transition technologies would be crucial for Indian players. Players are also meaningfully investing in the proof of concept stage for testing use of green hydrogen as a reductant replacing coke/coal to test the viability of reducing its cost by nearly four times for large-scale implementation as at current prices it can more than double the cost of crude steel production.

Gameplan Net Zero

Use of green hydrogen as a key reductant and the shift in Indian crude steel production towards more DRI-based plants will be imperative to sharply reducing emissions from the steel sector. The journey will be a combination of adopting technologies to reduce emissions and improving efficiency in a relatively younger BF/BOF fleet while new capacities are planned, envisaging cost dynamics and choosing appropriate locations for use of green hydrogen.

Players such as Tata Steel, JSW, Vedanta and SAIL are already testing the viability of implementing new technologies by entering into technical tie-ups with other players in the industrial value chain, to enable faster implementation of cost-effective green hydrogen for the Indian steel industry. How these measures pan out over the next decade will be crucial for achieving Net Zero emissions for the sector.

Cement: Thrust on heat recovery, renewables key to overall emission reduction

Emerging trends and benchmarks in cement

Emerging trends

Process	Share in emissions	Corrective measures
Mining	2%	Usage of limestone tailings and low-grade limestone
RM processing	23-28%	Renewable energy usage for crushers and grinders
Clinkerisation	50-60%	WHRS, usage of alternative fuels
Grinding	15-20%	Renewable energy usage and higher alternate material blending

Benchmarks

	India average	Global
Power intensity Kcal/kg of clinker	~700	~650 WSA benchmark
Emission intensity tonne CO_2e/tonne of cement	0.56-0.58	0.63

Source: CRISIL Research, IEA, TERI

Emission profile

The cement industry accounts for ~6% of India's overall emissions against ~7% globally. Average emissions of Indian cement industry are, in fact, lower than the global benchmarks. Despite this, the industry is the largest contributor of emissions within India's industrial pool.

About 80-90% of the emissions in a cement plant takes place in the clinker manufacturing process.

While the average power intensity for the sector per tonne of clinker produced is higher than the global benchmark of ~650 Kcal/kg of cement (India's energy intensity is lower than the global average), overall emissions and emission intensity remain lower due to higher blending of waste materials such as fly ash and slag.

India still runs largely on coal-fired power plants, leading to ample fly-ash production, which is mostly used as a feedstock in cement. Similarly, higher share of BF/BoF steel plants ensures steady supply of iron slag as well. In fact, India uses only 65-70% clinker for production of cement, while slag, flyash and gypsum account for the rest. This leads to lower requirement of clinker, leading to lower emissions vis-à-vis its global peers.

Technology focus

Despite having lower-than-global emissions, Indian cement manufacturers are taking several steps to lower emissions further. The top six players in India that account for over 50% of the installed capacity are aggressively adding waste heat recovery units to limit usage of coal-based power. Further, players are adding renewable power sources to meet auxiliary power requirements in the plant.

Unlike steel, the cement industry is yet to see a major thrust to changes in the production process. Rather, players are focused on reducing the carbon footprint through usage of available technology. Cement players are adding solar and wind power generating capacities along with utilising every potential of waste heat recovery system (WHRS) in the plant. Further, they have set a thermal substitution rate target of 30-35% by 2030 against 4-5% now. While that may not reduce CO_2 emissions significantly, it will lower fossil fuel usage. Players are also pushing for blended cement in order to reduce clinker ratio even further, that would help reduce emissions.

Player actions

Three of the top five players have announced green capex of Rs 3,000 crore to be undertaken over the next 3-5 years. Industry leader UltraTech Cement has planned to meet 100% of its electricity requirement for its entire global operations through renewables sources by 2050. It has already added 400 MW of renewable and WHRS capacity (including ~160 MW in fiscal 2022) and is on course to add another 100 MW over the next 2 years. Its total RE capacity requirement for meeting its power needs at current capacity would be 18-20 GW.

Gameplan Net Zero

Net Zero goals for the cement sector are way tougher to meet than for most other manufacturing sectors. While a continued increase in blending factor using alternative materials such as slag and fly ash would help in achieving short-term targets, it is a shift towards hydrogen-based DRI in the steel industry and replacement of coal-fired power plants by renewable energy that would ultimately eliminate the production of blast furnace slag and flyash.

While most European players are planning to reach Net Zero through investments in carbon capture utilisation and storage (CCUS), the same remains a very challenging proposition for India due to substantially high capex requirements and unavailability of sedimentary rocks for storage. Thus, Indian cement players would look at alternative ways such as afforestation to reach the mandated targets, in the absence of any viable technology.

However, on the power side, a complete shift towards renewable energy is very much achievable and Indian cement players are on course to replace all coal-based power plants through renewable power and WHRS in the longer run.

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Refining: Planned green investments crucial

Emerging trends and benchmarks in refining

Emerging trends

Process	Share in emissions	Emerging technologies
Power	21%	Investment in and larger allocation to renewable sources
Hydrogen	22%	Investment in green H2 technologies
Steam	8%	Improved waste heat recycling techniques in process stream

Benchmarks

	India average	Global
Power intensity Kcal/bbl crude oil	17.2	~16.6 WSA benchmark
Emission intensity tonne CO_2e/tonne of crude oil	0.16	0.1

Source: CRISIL Research, IEA, TERI

Emission profile

The refining sector in India is responsible for ~10% of the overall annual industrial emissions, as compared with a global average of only 5-7%.

India's position as one of the largest growing economies, coupled with its status as one of the largest producers of petroleum products, makes for a higher share of refineries in the industrial emissions pie. With a large share of the current refining capacity commissioned in the past couple of decades, the average emissions from Indian refineries, at 0.15-0.17 tonne CO_2e/tonne crude oil, could be considered to be on a par or slightly better than the global benchmark constituting companies such as BP and Shell.

The direct emissions from the refining sector could be attributed to heat generation as well as hydrogenation for the process streams, constituting over 96% of the overall emissions. The average energy intensity for the Indian refineries stands at about 17.2 Kcal/barrel of crude oil, which is roughly equal to the global average. While a recent shift to larger production of BS VI grade fuel has increased the energy demands, it has been counterbalanced by the deployment of process-heat recycling technologies.

Technology focus

Considering the necessity of CO_2 in multiple process loops in the crude-to-chemical value chain, majority of the decarbonisation investments in the industry have focused on carbon capture, storage, and reintroduction into a process at a later stage in the cycle.

Recent technology adoption for lowering emissions has involved flare gas recovery, which consists of treating and storage of CO_2, as well as steam trap management, which focuses on reusability of heat to reduce the need for steam generation. Additionally, refineries have discovered multiple sustainable ways of monetising the stored CO_2. A prime example has been the agreement signed between Indian Oil Corporation Ltd and Oil and Natural Gas Corporation in 2019. This agreement focuses on the transportation of the CO_2 recovered from the Koyali Refinery to the Gandhar fields for further utilisation in the enhanced oil recovery process.

Player actions

The other focus area, given the large demand of hydrogen in the process streams, has been the investment in green hydrogen production capacities. With the OMCs targeting Net Zero status by 2040, we have already seen major investments planned by the companies. In fiscal 2021, Indian Oil Corporation Limited invested over Rs 340 crore to increase its renewable energy portfolio, generating 329 GWh of electricity for use in its own network and for supply to the grid. This is expected to support in transitioning faster to a larger share of green hydrogen in the Indian refining sector.

Commitments by Reliance Industries Ltd (RIL) of Rs 7,500 crore towards achieving Net Zero status, majority of which is focused on green hydrogen production for its oil to chemicals integrated business would also prove pathbreaking for India and the world if targeted cost reductions are achieved.

Gameplan Net Zero

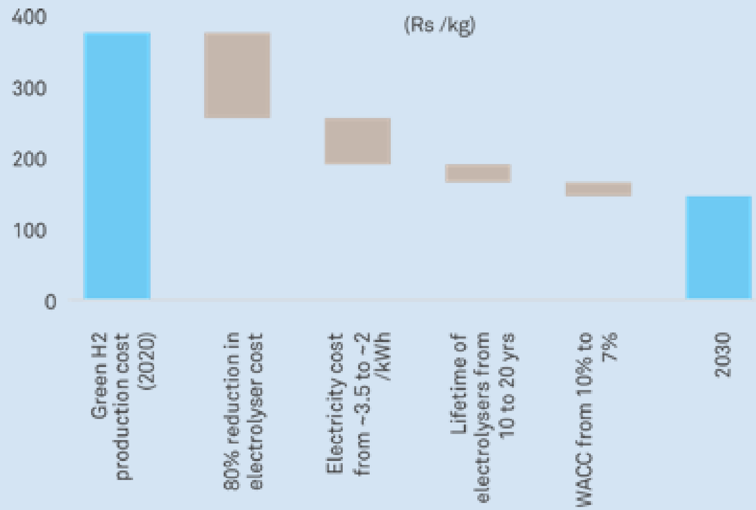
Globally, the decarbonisation of the refining sector has hinged on replacing grey hydrogen with that from blue/green process streams and focussing on capture of the emitted carbon dioxide, given the intrinsic nature of process.

Given the monetisation opportunities associated, widespread implementation of more such projects could result in substantial reduction in emissions from the refining segment while also reducing cost of producing crude oil for the upstream companies, although the cost of implementing CCS technologies at the older refineries and the availability of CO_2 transportation infrastructure remains a key monitorable.

Chemicals: In search of low-cost decarbonisation technologies

Lowering hydrogen production cost will require a reduction in capex cost

Emerging trends



Benchmarks

	India average	Global
Power intensity Kcal/kg	~1,638	~1,465 WSA benchmark
Emission intensity tonne CO_2e/tonne	~0.9	~0.89

Source: CRISIL Research, IEA

Emission profile

The chemicals sector in India is responsible for ~5% of the overall annual industrial emissions, as compared with a global average of ~15%. However, India's evolving position as an alternative chemical hub to China means that the share of emissions from the chemicals sector is expected to grow significantly over the next decade. A number of forward integrated petchem capacities planned by most refiners over next 3-5 years is an indication to this.

Multiple parameters are considered for calculating emission intensity of chemicals, such as levels of integration with the refinery, process, feedstock and more. For instance, ethylene production has an emission intensity of ~0.88 tonne CO_2e/tonne if one considers natural gas/ ethane as feedstock, while it is much higher at ~1.1 tonne CO_2e/tonne, if naphtha is used.

While the overall emission intensity of the Indian chemicals sector, at 0.90-0.95 tonne CO_2e/tonne of product is similar to the global average, it largely omits the role of MSMEs.

One of the biggest consumers of hydrocarbon, the chemicals industry uses almost half of the total consumption of hydrocarbons for heat generation, and the other half is consumed as feedstock, making it a very energy-intensive industry. About 60-80% of the total emissions from the sector can be attributed to the first stage of processing, which involves the generation of hydrogen from hydrocarbons, called steam methane reforming (SMR). The SMR stage is also responsible for ~65% of the total process energy, yielding the most used petrochemical, i.e., ethylene.

While there are numerous permutations and combinations to produce a large variety of specialty chemicals, ammonia and chlorine are some of the key chemicals which form the basis for numerous end-use chemicals. Between these chemicals, they account for ~75% of all chemical process streams.

Ammonia has an energy intensity of ~399.1 Kcal/kg while chlorine has an energy intensity of ~1,142.4 Kcal/kg. While the energy intensity of chemicals produced through integrated petrochemical complex is much lower than the global average, the large share of standalone manufacturers in the Indian specialty chemicals domain with less efficient equipment means the average energy intensity of the Indian chemical sector is higher than the global average.

Technology focus

The decarbonisation of the chemical sector is expected to focus on three key factors: process and energy optimisation, renewable energy supply, and the reduction of total CO_2 emitted through improved capture and storage techniques. With evolving electrolysis technology, a larger shift to green hydrogen can effectively reduce emissions by ~25-30%, across the entire value chain over the next decade. With carbon capture, one of the major challenges in the chemicals sector has been the relatively low pressure and high dilution of the process CO_2 emissions, thus restricting capture and recyclability. Advanced reforming, using gas heated reforming (GHR) and autothermal reforming (ATR), is a proven technology which can significantly reduce the cost of carbon capture from the SMR process chain.

Additionally, direct usage of the captured carbon in the production of suitable fuels is a segment attracting significant investments over the past few years. The captured carbon and green hydrogen can be directly converted into sustainable aviation fuel (SAF) by using specific technologies, for instance, significantly aiding the bio-fuel industry. Finally, recycling forms a key component of the entire process, especially in the plastic value chain. RIL, a key player in the Indian petrochemicals market, has already started adopting the circular economy model — it is currently the largest recycler of PET bottles processing over 2 million bottles annually.

While many investments have been committed by refiners in promising technologies, the sector has complex manufacturing processes with different levels of integration across the value chain. Further, Indian refiners are today investing in new capacities for forward integrating into petchem and linked segments which, in turn, would mean the need to innovate the newly conceptualised supply chains. The fragmented nature of the industry at the end-product stage amid multiple combinations of product profiles, long gestation period, capital intensity, and low focus on recycling with a weak supply chain would imply the sector could find the road to Net Zero arduous.

Player action

Players such as RIL and Tata Chemicals are already testing the viability of implementing new technologies to enable faster implementation of cost-effective green hydrogen for Indian chemicals industry. As part of its Rs 3,000 crore investment in four giga-factories in Jamnagar, RIL is focused on setting up of an electrolysis plant for large-scale production of green hydrogen to be integrated into its petrochemical value chain. Tata Chemicals has already adopted the broader climate change policy by the Tata Group, focused on achieving Net Zero emissions by 2030. It has drawn a three-pronged strategy, which includes identifying opportunities for carbon abatement, investing in low carbon growth, and tapping into opportunities presented by the emerging low carbon technologies. Additionally, BASF India has also increased its focus on larger use of bio-based feedstock and implementation of low carbon technologies to achieve Net Zero emission status by 2050.

Gameplan Net Zero

A larger integration of green hydrogen for production of base chemicals (especially ammonia) is a key factor in achieving decarbonisation in the Indian chemicals sector. With the SMR process (used to produce hydrogen) being a major contributor to the overall emissions from the chemical sector, replacing the blue hydrogen process stream with green hydrogen is expected to significantly reduce emissions.

2030 is the first goalpost for the 2070 target

India is among 80% of the world's countries that have made Net Zero commitments. It means giving up in the next 50 years what has grown at 4x in the past 20 years. The investment to make this happen is obviously going to be high. We estimate India would need to spend Rs 22-25 lakh crore on decarbonisation only over the next 7 years. This includes large renewable asset creation and investment in battery technologies. Beyond 2030, investments will increase multifold in hydrogen, CCUS, pump hydro, geo thermal and biomass linked technologies where India's potential remains immense but mostly untested.

We see the Net Zero transition being achieved in three stages. In stage 1, the focus would need to be on efficiency and using established technologies for asset creation. Stage 2 would need testing new horizons with newer technologies. Stage 3 of 'deep decarbonisation' would entail the use of significant investments to relinquish the last 10% hard-to-shake-off emissions.

2030 is the first, crucial goalpost that will be keenly watched.

The Science Based Target initiative, a tool to shape India's decarbonisation journey

Many in India Inc are already looking to become Net Zero by 2030-40. Alongside, a growing number of Indian companies are committing to the Science Based Targets initiative (SBTi), which has become a powerful tool for them to help transition towards a low-carbon economy. The SBTi is a partnership between CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). The SBTi's call to action is one of the We Mean Business Coalition commitments[4].

As of March 2022, 82 companies have pledged to abide by it, a 50% jump from 2019[5].

This significant transition has established India as a leader among emerging economies for having the maximum number of companies committing to the SBTi. According to non-profit Climate Disclosure Project (CDP), India ranks fifth globally on this count.

Given SBTi's utility, commitment to the initiative is set to become a standard business practice.

All about SBTi

What is it? Organisations first need to develop a carbon reduction target corresponding with the scale necessary to limit global warming to 1.5°C or well below 2°C, known as a science-based target (SBT). Achieving such targets is streamlined through a robust approach for managing emissions in the short- and long-term horizons. Additionally, setting interim targets is crucial to progress and keeping track of performance.

How does it work? - Companies need to consider the nature of their operations, review historic carbon data, develop a baseline, and identify the importance of different elements of GHG emissions ranging from Scope 1 to 3 (explained below). This is followed by a review of the assumptions, advantages, and disadvantages of widely-used SBT methods.

The GHG Protocol, the most widely used standard for establishing emission reduction targets, splits an organisation's scope of activities into three groups:

- **Scope 1** emissions arise from activities owned by the organisation

[4] *https://sciencebasedtargets.org/about-us#who-we-are*
[5] *https://sciencebasedtargets.org/resources/legacy/2020/04/GSMA_IP_SBT-report_WEB-SINGLE.pdf*

- **Scope 2** emissions arise from the production of electricity, heat and steam purchased by the organisation
- **Scope 3** emissions include all other emissions emerging from activities in the organisation's value chain

The key initiatives to deliver on carbon reduction targets in line with the SBT are:

- Replacing ageing buildings with energy-efficient infrastructure designed with low energy demand at all locations
- Continuing to invest in renewable energy technology where possible
- Investigating large-scale renewable energy generation and storage systems to completely decarbonise operations
- Setting up smart grid infrastructure to ensure efficient energy and load management for the reliable supply of electricity and reduced vulnerability
- Adopting low-emission business travel strategy to support SBT reduction and influence behaviour change

Why should organisations go for it?

Setting an SBT can help firms:

1. **Strengthen reputation -** Organisations get to partner with businesses, governments, civil society, the public, and the wider research community to shape ground-breaking research and innovation. It is crucial for a company to maintain its reputation across partnerships and the science community
2. **Increase operational efficiency -** It leads to greater operational efficiency, which promotes innovation, pushes down costs and enhances competitiveness
3. **Improve resilience -** Setting short- and long-term targets will ensure agility when faced with any shift in public policy and regulations

Internal carbon pricing as a powerful tool

One way to meet the targets is to institute internal prices on carbon. This price essentially places a monetary value on GHG emissions, which businesses can then factor into investment decisions and business operations.

In India, some companies are already reaping its benefits. For example, Tech Mahindra says[6] internal carbon pricing provides it with an incentive to invest in low-carbon alternatives. It also helps it achieve GHG targets, address shareholder concerns, build resilient supply chains, gain a competitive edge, and showcase corporate stewardship.

Internal carbon pricing generally takes one of three forms discussed below. However, many companies use a hybrid model that combines these different attributes.

1. **An internal carbon** fee or price is a financial value given to each tonne of carbon emissions. The fee generates a revenue or investment stream to fund a company's emissions reduction efforts. The observed price range is usually from $5-20 per metric tonne
2. **A shadow price** is a conceptual price on carbon. This helps a company prioritise low-carbon investments and prepare

[6]*https://www.cdp.net/en/articles/companies/tech-mahindra-uses-icp-as-a-tool-for-rapid-decarbonization*

for future regulation. Most companies use a shadow price higher than the current government levels of $10 per tonne

3. **An implicit price** is based on how much an organisation spends on GHG emission reductions and/or cost of compliance. An implicit carbon price can set a benchmark for the organisation before formally launching an internal carbon pricing programme

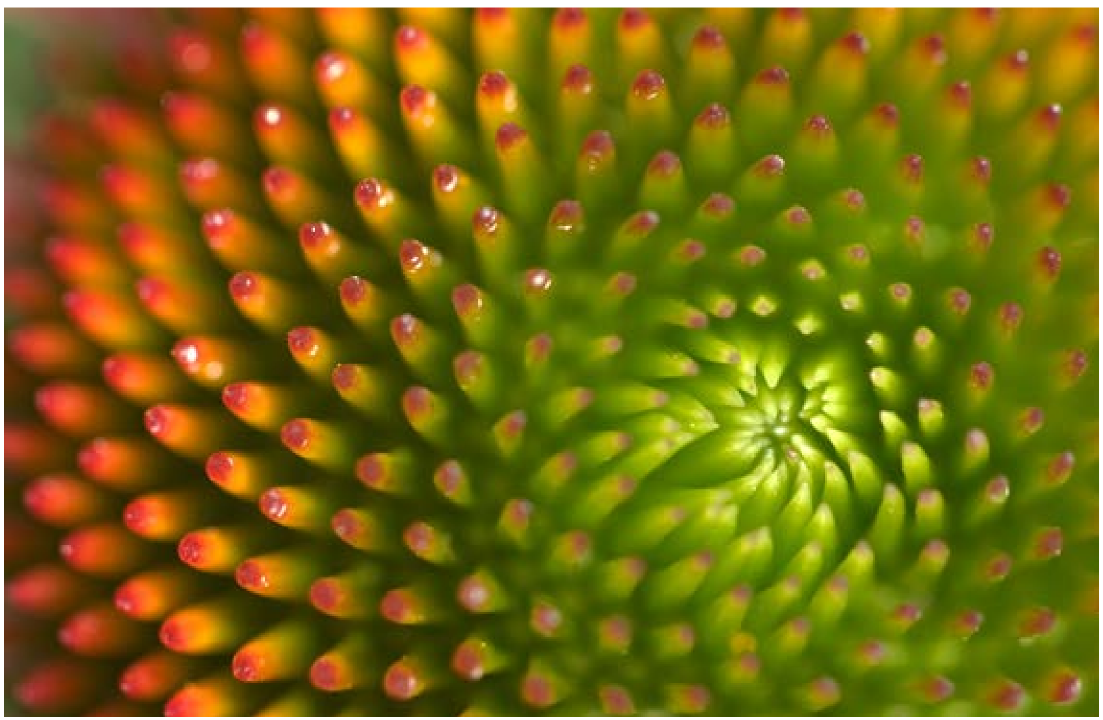
Internal carbon pricing is most meaningful when embedded in a company's business strategy. Take, for example, Microsoft, which uses revenue from its internal carbon fee to fund renewable energy, energy-efficiency and other projects needed to reduce emissions. The revenue helps pump investments into research and development for emissions reduction technology and raise employee awareness regarding climate risks and opportunities. Shell, BHP and BP apply a shadow price in their business strategy by investing in low-carbon assets or even halting projects with high-carbon intensity.

A report[7] published by the CDP in 2022 found that Indian companies stand to collectively lose over Rs 7.14 lakh crore if they do nothing to mitigate climate risk in the next five years. On the flip side, if immediate action is undertaken and all necessary tools utilised, an opportunity of Rs 2.9 lakh crore could emerge.

Thus, apart from delivering on the SBTs and driving a low carbon transition, internal carbon pricing can serve as an important risk-mitigation tool with benefits that extend beyond the company's ecosystem.

[7]*https://m-timesofindia-com.cdn.ampproject.org/c/s/m.timesofindia.com/how-india-inc-uses-carbon-pricing-science-based-targets-to-achieve-high-ambition-targets/amp_articleshow/91152563.cms*

BRSR heralds the new reporting era for holistic ESG implementation



Sustainability reporting is rapidly evolving across the globe, with the UN Sustainable Development Goals (SDG) sharply in focus and the climate action movement becoming a force to reckon with. This has also given impetus to ESG reporting in India — which has come a long way from the introduction of the Business Responsibility Report (BRR) in 2012 to the Business Responsibility and Sustainability Report (BRSR) in 2022.

The BRSR will act as a one-stop source for ESG/non-financial information to all stakeholders. It is applicable to the top 1,000 listed entities by capitalisation. These companies were to report on a voluntary basis in fiscal 2022 and on mandatory basis from this fiscal onwards. The BRR was applicable only to the top 100 listed companies by market capitalisation in 2012, which was then expanded to the top 500 in 2017 and further, to the top 1,000 companies in 2019. Reporting under BRSR framework needs to be done on MCA21 portal preferably in eXtensible Business Reporting Language, or XRBL format.

While we note that the BRSR is currently applicable only to listed companies, it also mentioned a 'Lite' version that could be adopted by unlisted companies. However, the details on this version have not been released yet.

Some key features of BRSR are:

- **Demands more granular and quantitative data:** While both BRSR and BRR have questions on the nine National Guidelines for Responsible Business Conduct (NGRBC) principles, BRSR seeks granular information under each principle. It also ensures consistency as it seeks disclosure of the reporting boundary — whether the reporting is done for the entity on a stand-alone or consolidated basis. To elaborate:

  - It asks for quantifiable metrics for easy measurability and comparability. The disclosures required under the BRR were qualitative in nature, whereas the BRSR emphasises quantifiable metrics and has specific data points across all areas. This enables measurement and comparability across companies, sectors and time periods. For example, under environment-related disclosures, the BRSR asks for disclosure on total energy consumption, water consumption, withdrawal by source, GHG emissions, waste recovery and quantity of waste disposed, which are essential indicators. Further, it seeks more information on break-up of the total energy consumed from renewable and non-renewable source, water consumption, withdrawal and discharge in areas of water stress and Scope 3 emission in its leadership indicators
  - Disclosures on climate and social parameters under the BRSR are more granular and significantly enhanced
  - BRSR provides interoperability in reporting with global reporting standards such as GRI, SASB, TCFD and integrated reporting

- **Classifies indicators into essential and leadership:** The information sought is categorised into these two categories. While essential indicators are mandatory, the latter are voluntary, and expected from businesses which aspire to progress to higher levels in their quest to be socially, environmentally and ethically responsible.
  - Essential indicators include data on R&D and capital expenditure investment to improve environmental and social impacts, employee and worker wellbeing, health and safety metrics, human rights, training programmes conducted, details of remuneration, environmental data on energy, emissions, water and waste, disclosure on non-compliance, social impact assessments (SIA) and rehabilitation and resettlement (R&R)
  - Leadership indicators seek disclosures related to the value chain of the listed entities. Some of the KPIs under leadership indicators include deeper disclosure of data such as breakup of energy consumption, water withdrawal, consumption and discharge in areas of water stress, Scope 3 emissions, life cycle assessments (LCAs) carried out for products/services, additional data and impact of entity on biodiversity, and value chain partner assessments on human rights, environmental impacts, health and safety.

- **Expands list of indicators:** The number of indicators has been expanded from merely 28 indicators across nine principles of reporting under BRR to 112 under BRSR. The BRSR adds 49 new indicators under the essential category alone, especially in the domain of environment, value chain and human rights protection.

Additionally, leadership indicators that are best-in-class were limited to only eight in BRR. These have been increased to 35. Although the new leadership indicators are well spread across multiple domains, the highest additions are across environment, value chains and inclusive growth.

How BRSR incorporates NGRBC's nine principles

Principle	Description	Essential indicators		Leadership indicators		New indicators added (as % of total indicators)
		Old indicators (part of BRR)	New indicators	Old indicators (part of BRR)	New indicators	
Principle 1	Businesses should conduct and govern themselves with integrity, and in a manner that is ethical, transparent and accountable	2	5	0	2	78%
Principle 2	Businesses should provide goods and services in a manner that is sustainable and safe	2	2	2	3	56%
Principle 3	Businesses should respect and promote the well-being of all employees, including those in their value chains	2	14	0	6	91%
Principle 4	Businesses should respect the interests of and be responsive to all its stakeholders	2	0	0	3	60%
Principle 5	Businesses should respect and promote human rights	1	9	2	3	80%
Principle 6	Businesses should respect and make efforts to protect and restore the environment	2	13	1	8	88%
Principle 7	Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent	2	1	0	1	50%
Principle 8	Businesses should promote inclusive growth and equitable development	3	2	2	5	58%
Principle 9	Businesses should engage with and provide value to their consumers in a responsible manner	4	3	1	4	58%

Source: CRISIL Research

BRSR has some overlaps with global frameworks, but still a long way to go

Like the BRR, the BRSR framework is based on the nine principles of the NGRBC, covering various environmental, social and governance aspects. However, the similarity ends there.

Unlike the BRR, which was predominantly a yes/no questionnaire with very little meaningful data for investors, the BRSR framework includes detailed ESG data (both quantitative and qualitative) for each of the nine principles by drawing references from international reporting frameworks such as GRI, SASB, CDP and TCFD. Furthermore, drawing references from evolving global regulations (such as EU SFDR), BRSR further divided the metrics as essential (mandatory) and leadership (voluntary) to enable smooth adoption for companies.

Our assessment of BRSR based on key characteristics (scope, materiality, end-user and industry relevance) of ESG reporting frameworks and standards indicates that it largely aligns with GRI.

- **Scope of information covers all the key pillars of sustainability,** viz., economic, environmental, social, and governance, in line with frameworks such as GRI and SASB. However, frameworks such as CDP and TCFD cover only the environmental pillar of sustainability
- **Adopts materiality in the context of significant impact on the economy, environment and people,** in line with GRI. This approach, termed as double materiality enables users understand both the company's impact on the environment and people and vice versa – for instance BRSR requires a company to (i) report if it has adopted mechanism for zero liquid discharge in addition to water withdrawal, consumption and discharge in areas of water stress, and (ii) disclose social impact assessment of the projects undertaken based on applicable laws. SASB, on its part, focuses only on sustainable topics that are relevant in the context of enterprise

value creation – for instance, under water management, companies are recommended to report only total water withdrawn and the percentage of water withdrawn from regions with high or extremely high baseline water stress

- **Primary audience is a broad range of stakeholders** including investors, employees and NGOs as it focuses on the impact across economy, environment and people and not just enterprise value creation.
- **Industry-agnostic framework,** in line with GRI

Comparing BRSR with global sustainability standards

	BRSR	GRI	SASB	TCFD	CDP
Scope of information	Environmental, social, operational governance, economic and organisational factual details	Environmental, social, operational governance and economic	Environmental, social, operational governance	Climate	Environmental
Type of guidance	Framework	Standards	Standards	Framework	De facto standards
Industry agnostic/ Industry specific	Industry agnostic	Industry agnostic and select sector supplements	Industry specific	Industry agnostic and industry supplements	Industry agnostic and industry supplements
Target audience	All stakeholders	All stakeholders	Providers of capital	Providers of capital	All stakeholders
Approach to materiality	Significant impacts on the economy, environment and people	Significant impacts on the economy, environment and people	Enterprise value creation	Enterprise value creation	Significant impacts on the economy, environment and people
Time horizon	Short, medium and long term				

Source: CRISIL Research

From a regional perspective,

- The rollout of BRSR indicates India is also aligning with the trend of moving towards mandatory sustainability disclosure from a 'comply or explain' regime. China, Malaysia and Indonesia also require their largest listed companies to provide mandatory ESG disclosure.
- BRSR's broader alignment with GRI framework seems to be in line with regional trends – countries like Vietnam and the Philippines have issued ESG guidelines based on GRI standards.

BRSR has high overlap with GRI, but limited overlap with SASB

Though BRSR has drawn from various reporting standards and frameworks, it has significant overlap only with GRI. Overall, BRSR has ~91% overlap considering both the essential and leadership metrics. Indian companies reporting on sustainability predominantly adopt GRI standards, hence migration should be smooth given the high overlap. Overlap with SASB is relatively low at ~57%, as BRSR does not include sector-specific requirements.

Metrics overlap*	Sustainability pillars			Overlap with existing framework (%)
	E	S	G	
Essential metrics	**15**	**36**	**11**	**62**
GRI	14	34	11	59 (95.2%)
SASB	09	22	08	39 (62.9%)
TCFD	02	-	05	07 (11.3%)
WEF IBC	06	08	01	15 (24.2%)
Overall overlap (essential + leadership)	**29**	**61**	**13**	**103**
GRI	25	56	13	94 (91.3%)
SASB	17	33	09	59 (57.3%)
TCFD	03	-	05	08 (7.8%)
WEF IBC	10	11	01	22 (21.4%)

**Compares only section C (principle-wise performance disclosure – essential and leadership indicators) of BRSR*
Source: CRISIL Research

Will BRSR gain global investor confidence?

BRSR is expected to be a key milestone in ESG disclosure in India. With the first year of reporting just six months away, it remains to be seen if BRSR will gain the confidence of global sustainable investors.

- The quality of reporting is expected to be a key driver as companies will have to balance the trade-off between tangible benefits from disclosure and compliance burden. The role of external assurance is likely to play a critical role in the initial years to enhance credibility of reporting
- To enhance its applicability, BRSR should: (i) gradually be supplemented with sector-specific standards to improve comparability both within and across sectors, (ii) expand to include other asset classes such as real estate (EU SFDR, for instance, has identified specific metrics for real estate assets).

Gleanings from our roundtable

In April this year, CRISIL hosted investors and lenders for a roundtable to discuss the value of ESG, practical issues around its implementation, their role in moving the ESG needle in India, and potential recommendations for regulators.

The CXOs who attended represent a significant proportion of the financial institution community, and are torchbearers in the ESG and sustainability space in India:

Name	Designation	Organisation
Navneet Munot	MD & CEO	HDFC AMC
Satish Mandhana	Senior MD & CIO	Eversource
G Srinivas	Chief Risk Officer	ICICI Bank
Chetan Savla	President, Financial Inclusion and ESG	Kotak Bank
Raunak Onkar	Head, Research	PPFAS
Alipt Sharma	MD	GEF Capital
Shibani Kurian	Head, Equity Research	Kotak AMC
Govind Sankarana-rayanan	Director	Accretive Cleantech

Key insights from CRISIL's roundtable discussion

- **ESG must demonstrate commercial benefits, value-add by risk mitigation, and sustainability outcomes:** While ESG's benefits have been known to the 'converted' for some time now, it is important to ensure these are well-demonstrated and communicated to other stakeholders as well. Its commercial benefits for companies, value relating to risk mitigation and opportunity generation, and real-world impact in terms of environmental and social outcomes need to be showcased. This would ensure ESG implementation goes beyond just a tick-box exercise and help address claims around greenwashing. It was also highlighted that, at present, green bonds are priced higher than vanilla bonds, limiting the market considerably.

- **ESG impacts play out in the mid-to-long term, so it is important to have a line of sight:** As most ESG concerns are mid-to-long term in nature, companies and financial institutions should have the right technical expertise, top-down conviction, and decentralised implementation. That would ensure ESG risks are considered systematically. Factors such as scenario analysis, forward-looking analysis, materiality of issues specific to the company, sector and geographies, and appropriate capital allocations, are key to appropriately considering ESG risks and impact. It was highlighted that while one could make commercial returns by investing in ESG, non-compliance could lead to risks.

- **Climate targets not as common as they should be; government's Net Zero 2070 goal must serve as the reference point:** Very few companies have disclosed or are working in line with a commitment towards Net Zero. The participants felt all Indian companies (or at least the largest polluters) should mandatorily publish a Net Zero target in line with India's 2070 target (preferably earlier than that year), publicly announce short- and medium-term targets, and annually disclose how they are performing on those targets. They also believed disclosures around physical climate risks were very weak among Indian companies, and clear transition roadmaps were not forthcoming. More work is needed to build the right infrastructure to get suitable data and track and monitor those diligently.

- **In the Indian context, investors must play a collaborative role as stewards and active owners in companies:** Given that many Indian companies are family-owned businesses and promoters are executives, stewardship and engagement in ESG needed a collaborative approach. It is harder to get promoters on the table on ESG, especially since its positive impact takes 2-3 years to kick in. Unlike some hostile engagements as witnessed in the West, the Indian context warrants a more nuanced engagement for fruitful outcomes, the participants felt. Promoters must first be made to understand the importance of ESG and investors could support the companies in co-creating an ESG roadmap with the promoters. Voting against some resolutions at annual general meetings was cited as an important way to get the attention of the company on ESG issues (if regular engagement did not work).

- **Companies need to disclose more useful and credible data; fact-checking a must:** The participants felt investors, lenders and credit rating agencies should put more pressure on corporates to disclose granular and decision-useful data. It was highlighted that most corporates are seriously under-prepared for BRSR disclosures, which makes it difficult for financial institutions to get comparable and quantifiable data. The issue of credibility of data was also brought to light. Third-party assurance of data as well as fact-checking by financial institutions through site visits, for example, are crucial steps to avoid greenwashing by companies.

- **Capacity building and training of resources across hierarchies are key to rigorous ESG implementation:** The participants felt that all Boards of Directors, CEOs, key management personnel (KMP), and senior management should be mandatorily trained on ESG, similar to IT and cybersecurity certifications by the National Stock Exchange. Dedicated ESG board committees should also be set up in all listed companies so that ESG risks, opportunities and capital allocations are discussed at the highest level, with accountability given to an appropriate director. The participants felt the skillset for undertaking detailed ESG risk assessment was limited and capacity needed to be created across levels.

- **Regulations should factor in ease of implementation and local specificities:** Alongside aligning India with global best practices, it is crucial to ensure that aspects such as taxonomy, disclosure expectations, and transition plans are not just lifted from the West and transposed on Indian companies. Given the evolution of ESG in India and the country's challenges in economic development and unavailability of low-cost technology, regulations should be set keeping in mind ease-of-implementation at the ground level. The participants highlighted that while the BRSR was a step in the right direction in terms of framing questions, it is equally important that the quality of data emanating from these disclosures be robust. The regulator needs to consider hiring an external consultant to evaluate the quality of reporting.

- **Government incentives have an important role to play:** The participants reiterated that the government needs to facilitate investments in green and other innovative technologies with the right incentives. If a technology does not make commercial sense, it will not find adoption. Therefore, it would be wrong to penalise a company for not adopting the latest technologies if it does not make business sense in the current environment.

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Trends and insights from CRISIL's ESG analysis of Indian companies

Number of companies	**586**
Number of listed companies	**518**
Number of unlisted companies	**68**
Number of sectors	**53**
Total market cap	**Rs 22.83 lakh crore**
Total debt	**Rs 5.98 lakh crore** (excluding BFSI)
% of mutual fund equity AUM	**95%**
% of debt AUM covered	**94%**

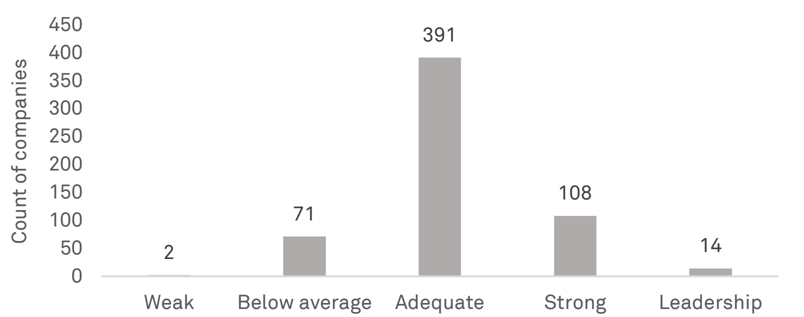
Source: CRISIL Research

Improved disclosures a key determinant in positive deviations in scores from last year

CRISIL's latest ESG risk assessment of 586 Indian companies across 53 sectors based on fiscal 2021 data places only 14 in the 'leadership' category, and as many as 73 in the 'below average' and 'weak' categories (see Annexure for detailed scores).

Companies in the leadership category are characterised by better disclosures, quantitative data, annual improvement in their ESG performance and compare significantly better than their peers on various parameters. In contrast, companies in the weak and below average categories have poor disclosures, inadequate ESG risk management policies and a high component of adverse news or compliance lapses.

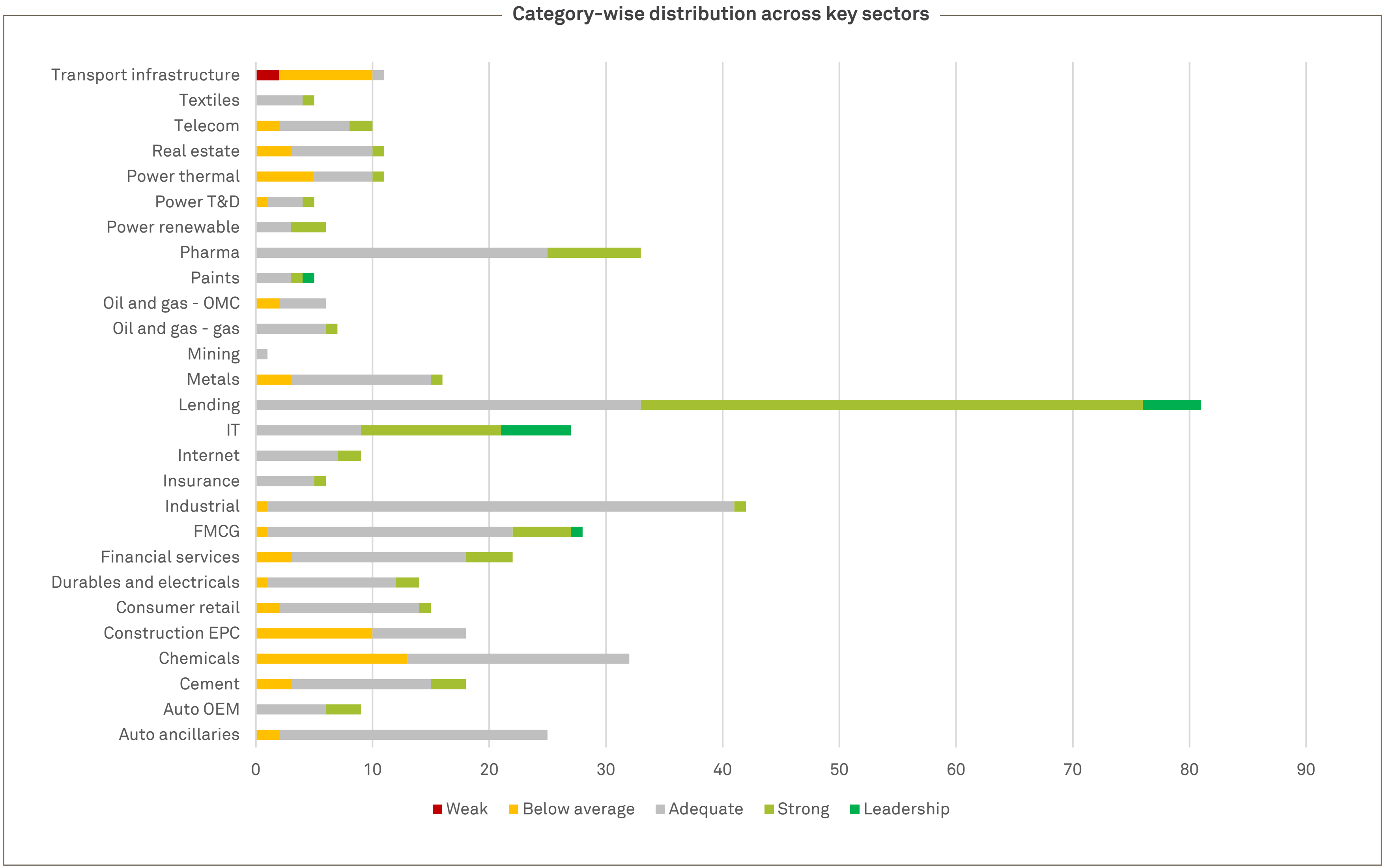
Category-wise break-down



Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership
Source: CRISIL Research

Listed companies tend to perform better than their unlisted counterparts, partly due to better disclosures. Over 30% of the unlisted companies were in the below average and weak categories compared with 10% listed ones.

Within listed companies, 50% of large-cap were in the leadership and strong categories, as against 25% of mid-cap. About 10% of small-cap were in the strong category (none in leadership) and ~90% in the adequate and below average categories.



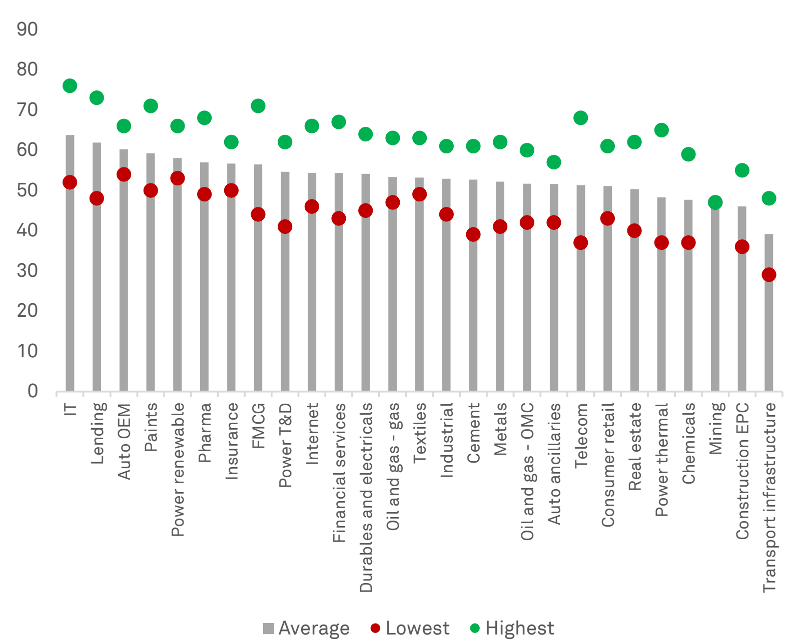
Source: Company reports, CRISIL

Sector-wise, the information technology (IT) sector dominated the leadership category, while the transport infrastructure sector led the weak category.

In general, service sector companies continued to perform well on ESG parameters due to better disclosures and lower negative E and S impact. It also had the largest number of companies in the leadership and strong categories.

Sector leaders significantly outperformed the sector average. The highest delta in terms of sector leaders and average scores was in the thermal and telecom sectors, where the sector leader outperformed the average score by 35% and 33%, respectively.

Average, highest and lowest scores

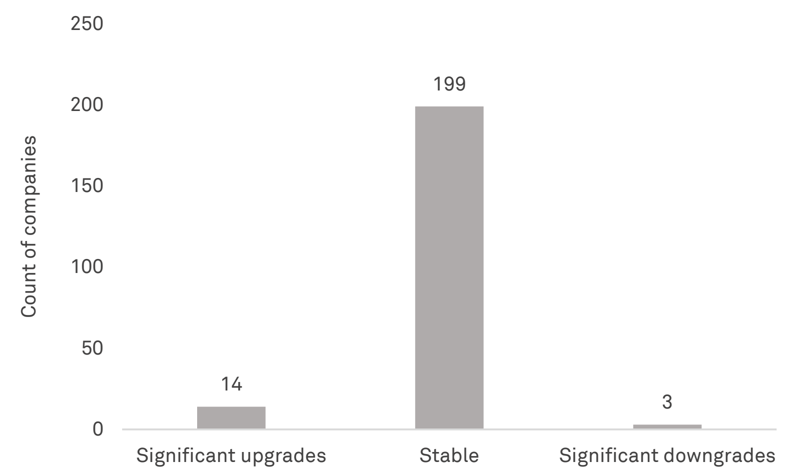


Source: CRISIL Research

Significant[8] upgrades and downgrades: On comparing the same set of companies analysed last year, it was found that 14 companies showed a significant positive deviation and three saw a notable negative deviation. The remaining 199 were relatively stable.

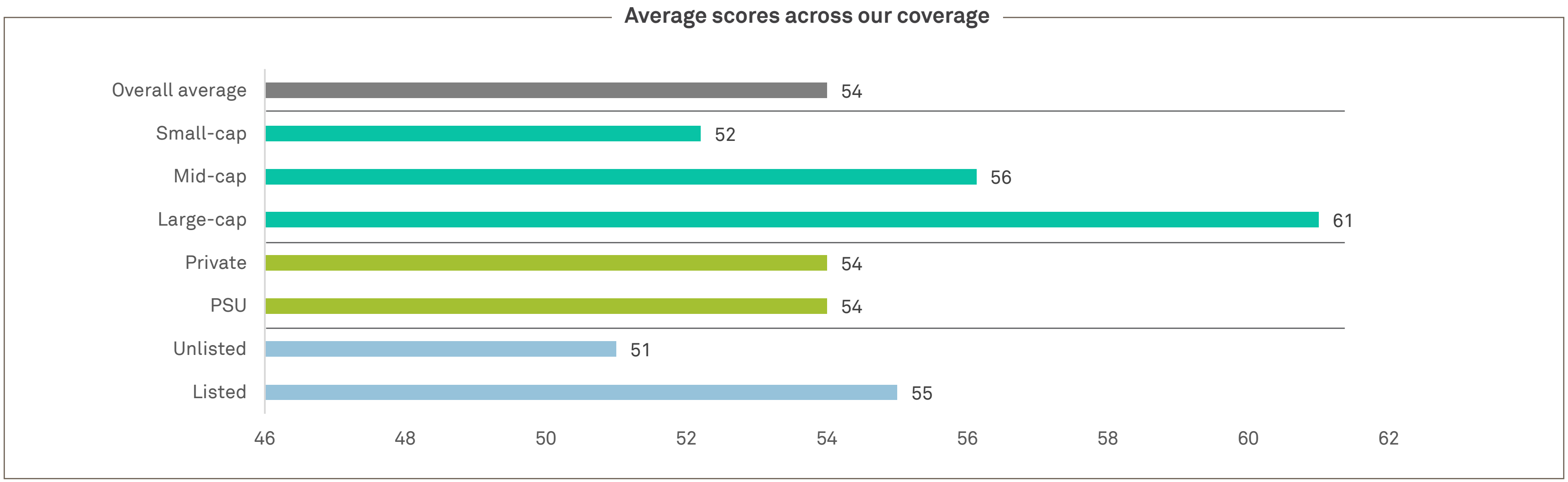
Reasons for positive deviations include availability of sustainability reports by companies and, therefore, more disclosures and better relative performance on key parameters such as gender diversity and increase in the share of independent directors. Negative deviations were observed because of relatively poor performance on key parameters and change in benchmarks due to expansion of our coverage.

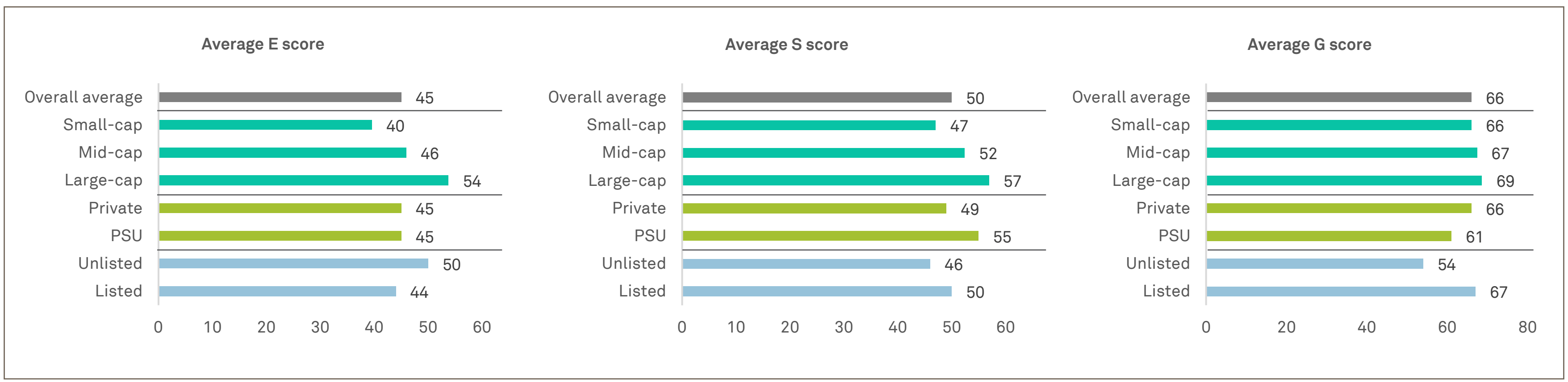
Basis ESG scores



Source: CRISIL Research

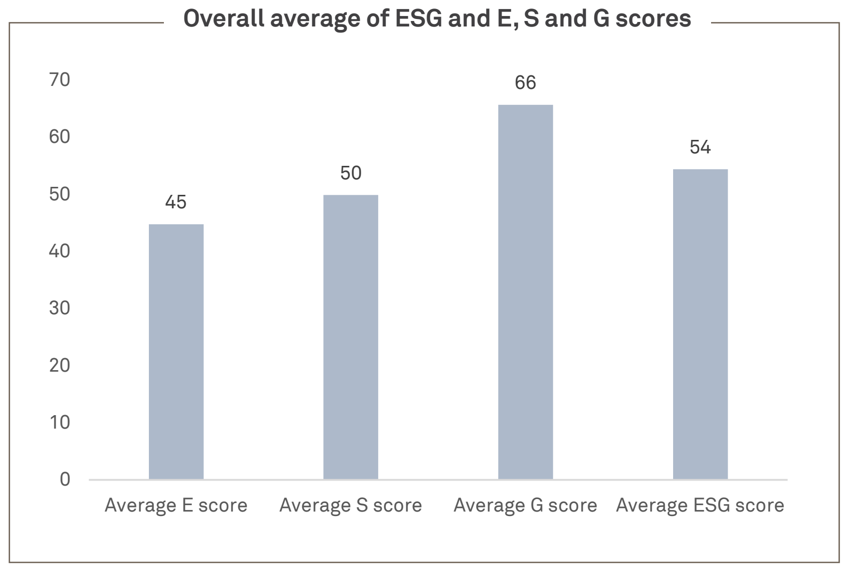
[8]*Significant is defined as more than five points change in score either negatively or positively*





Source: CRISIL Research

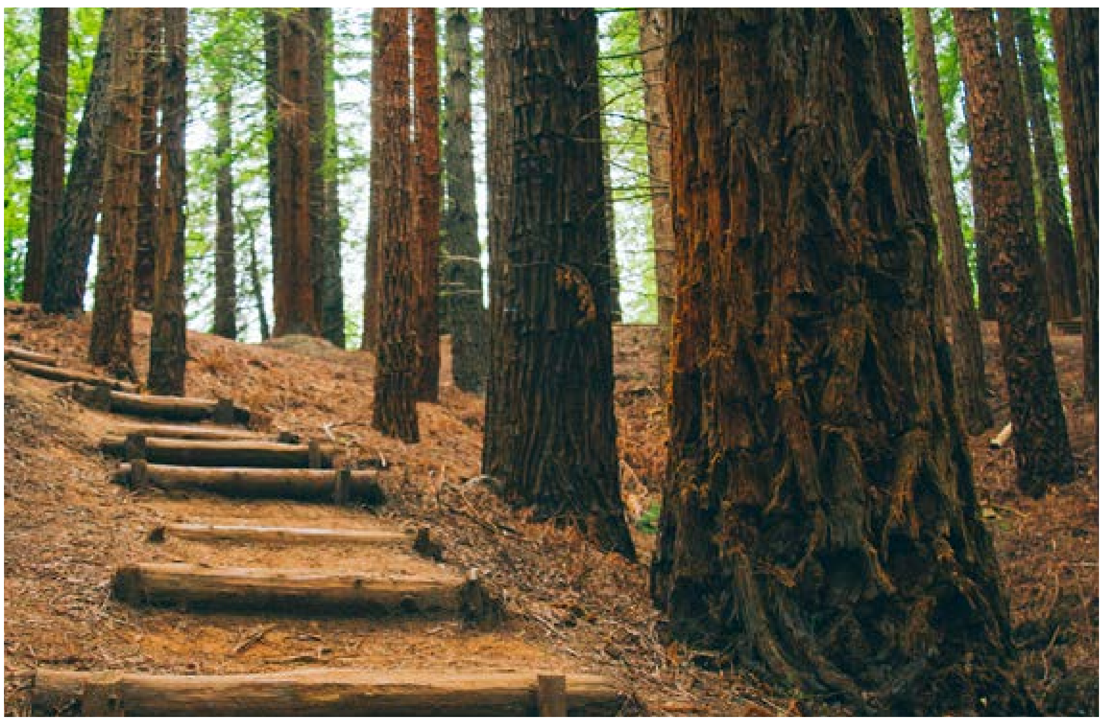
Large-cap companies outperformed on all three pillars, of E, S and G, as they had better disclosures and performed relatively better on various parameters. Public sector undertakings (PSUs) fared relatively better on S parameters, while private companies performed better on G — this is because PSU companies have frequent appointment of directors and lower number of independent directors. Listed companies performed better on S and G due to better disclosure and more requirements from the regulators.



Source: CRISIL Research

In general, E disclosures remained weak, especially because we assess companies in small and mid-cap as well as in the unlisted space. However, S scores are relatively better due to good disclosures on parameters such as gender diversity and employee training in annual reports. The average G score is significantly higher due to more evolved regulatory obligations in terms of disclosures and governance practices.

The environmental dimension



Disclosures on environment still weak across all company sizes; unpreparedness on climate risk glaring

Average E scores

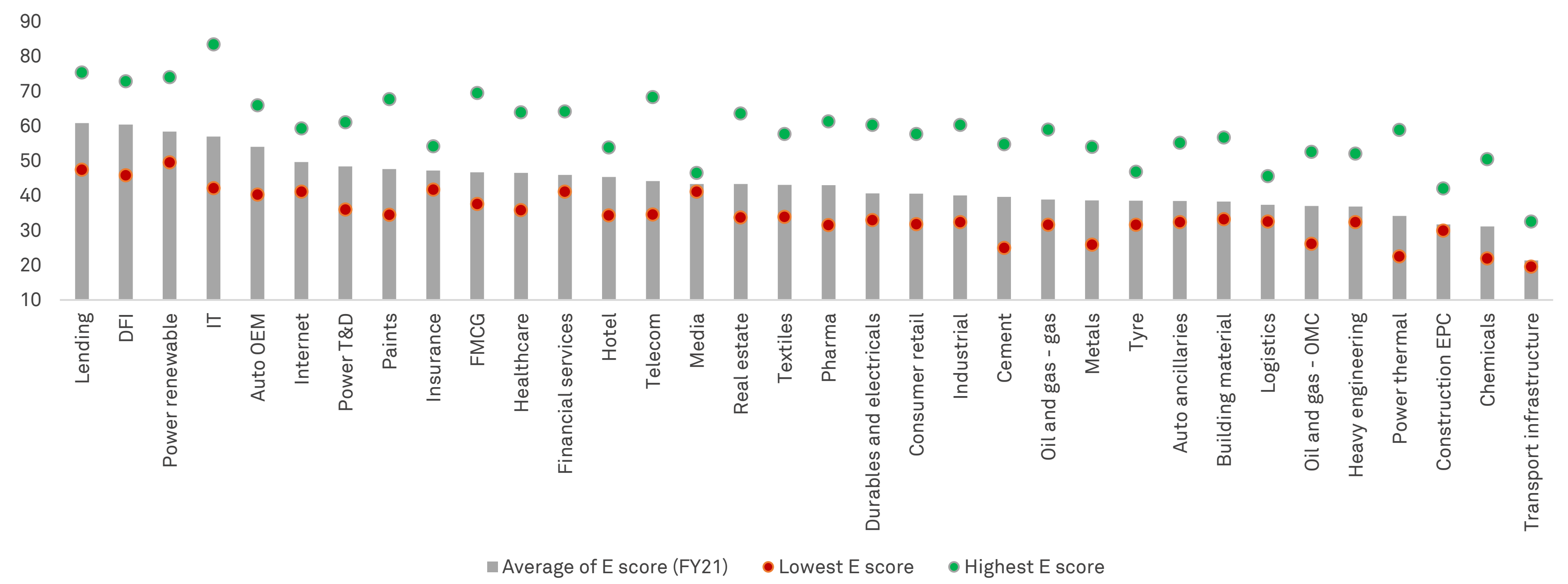
Our assessment of environmental risks shows that sectors such as lending, IT, DFIs and renewable energy scored significantly better than the rest.

That could be attributed to better disclosures and the nature of their business, which innately have lower emissions, lower hazardous waste generation, and lower water consumption. While DFI disclosures were not up to the mark, the relatively low exposure of their lending book towards polluting sectors made up for this shortcoming.

On the other hand, thermal power, construction EPC, chemicals and transport infra were among the most polluting sectors. Not just that, the relatively poor disclosures and the presence of unlisted companies further dragged down their E scores.

Interestingly, the average scores of the leaders in sectors typically considered negative from an environment perspective – thermal power, pharma, textiles and cement – are almost on a par with those of the top three performing sectors. This signifies that some of the hard-to-abate sector companies can override the negative bias if their disclosures and performance relative to their peers are significantly better.

Highest, average and lowest E scores



Source: CRISIL Research

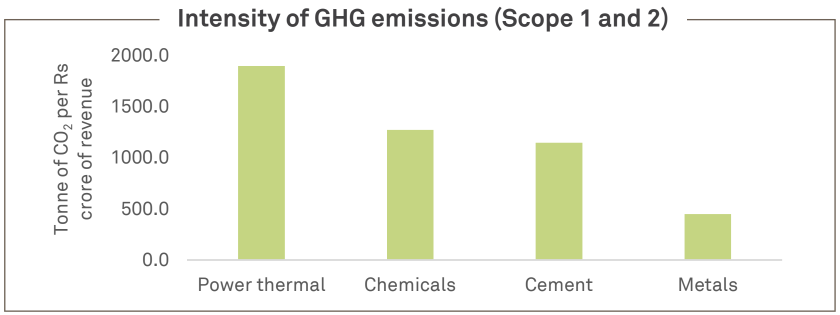
Emissions

Globally, most of the discourses on the environment have revolved around emissions, and rightly so. One of the key climate risks we are battling is the rise in average temperatures, or global warming, a significant proportion of which could be attributed to GHG emissions. Naturally then, it is also one of the most critical parameters while evaluating the environmental risk profile of a company.

For fiscal 2021, the thermal sector had the highest emission intensity (Scope 1 and 2 in terms of tonne per Rs crore of revenue) in our coverage — for a perspective, 1,056 times more than for the IT sector. It was followed by chemicals (706 times) and cement (638 times).

While one could put this down to the inherent nature of their business, we note that sectors such as cement have actually reduced their emission intensity on a compound annual growth rate (CAGR) basis, indicating that they are taking large strides towards Net Zero. But thermal sector companies continue to indicate an increased emission trend on a CAGR basis, implying that initiatives around FGD installations and engagements with CA100+ have not yet fructified.

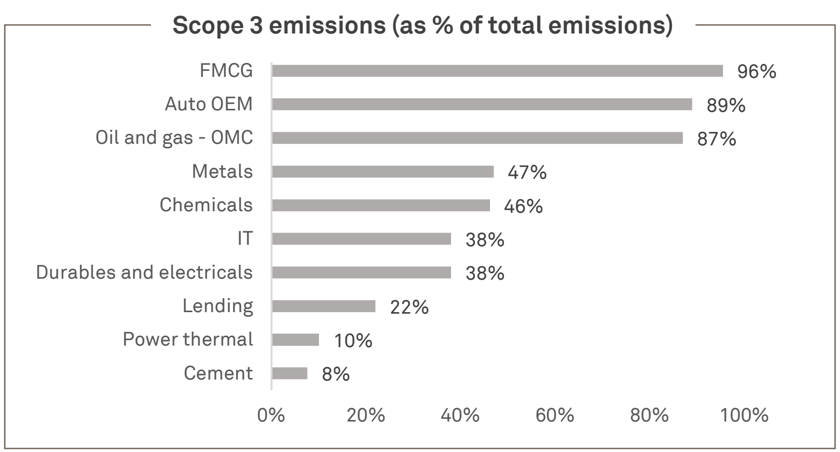
Lack of quantitative disclosures on emissions by other carbon-intensive sectors such as power transmission and distribution (T&D), oil and gas - exploration and production (E&P), airlines, and textiles makes it difficult to assess their performance on this parameter. Only 25% of the companies in these four sectors disclosed Scope 1 and 2 emissions.



Source: CRISIL Research

The disclosure on Scope 3 emissions is even worse — only 63 out of 586 companies published this data. Key sectors such as oil and gas (E&P), mining, and retail (food, consumer and multi-brand) sectors have no disclosures on this parameter. We also note that the lending sector continues to exclude Scope 3 emissions of its portfolio, which we consider a significant omission given the nature of its operations. While we observe similar trends globally as well, large global banks are using proxy methodologies such as Partnership for Carbon Accounting Financials (PCAF) to address this gap.

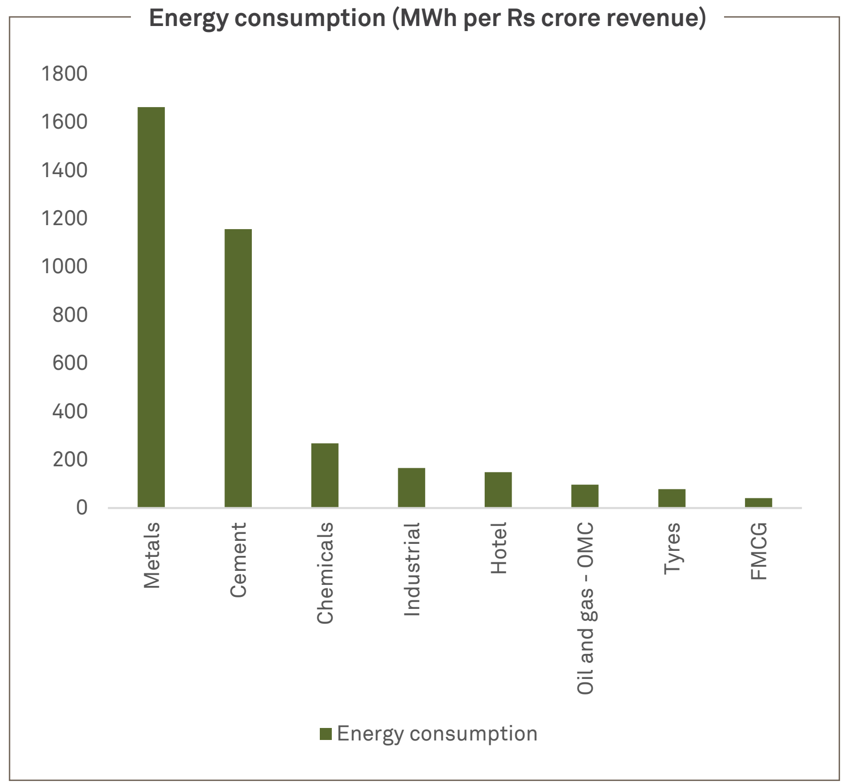
Where disclosures were made, Scope 3 emissions of FMCG, and oil and gas (oil marketing companies, OMC) sectors were over 85% of their overall emissions.



Source: CRISIL Research

Energy

Energy consumption was the highest for the metals sector, followed by cement and chemicals, given the nature of the industries they operate in. However, for sectors such as oil and gas (E&P and gas), and textiles, where the energy consumption is also typically high, disclosures are limited.

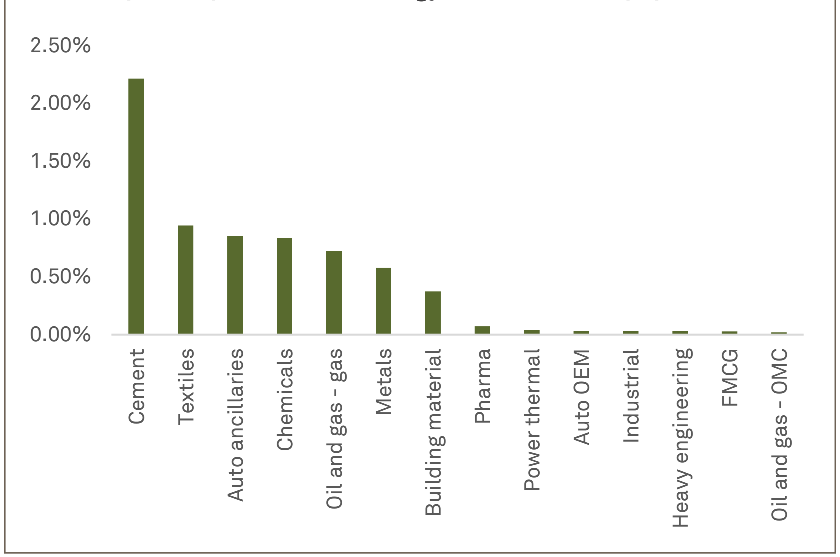


Source: CRISIL Research

Capex on energy conservation equipment as a proportion of revenue was significantly high for the cement sector, followed by textile and auto ancillary sectors. Organisations such as the Global Cement and Concrete Association[9] have substantially improved the performance of cement companies in India, especially on environmental parameters.

[9] *https://gccassociation.org/*

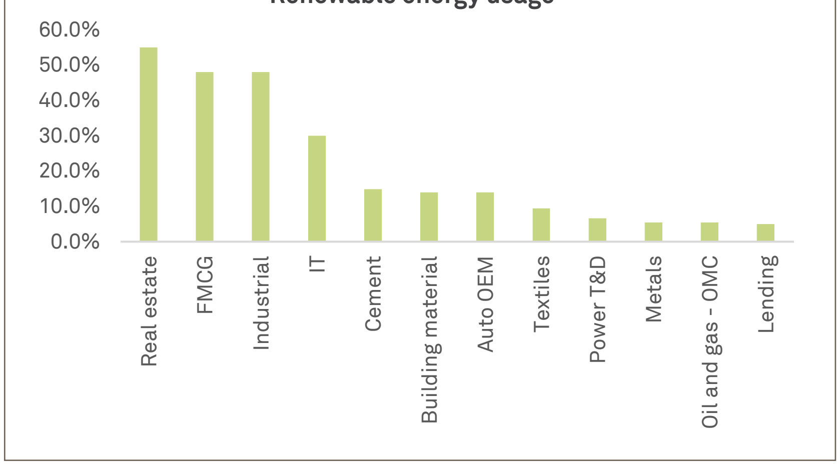
Capital expenditure on energy conservation equipment



Source: CRISIL Research

Within total energy consumption, the average share of renewable energy was 21.8% across our coverage. The real estate sector significantly outperformed this average. However, services-based sectors did not perform well on this parameter.

Renewable energy usage

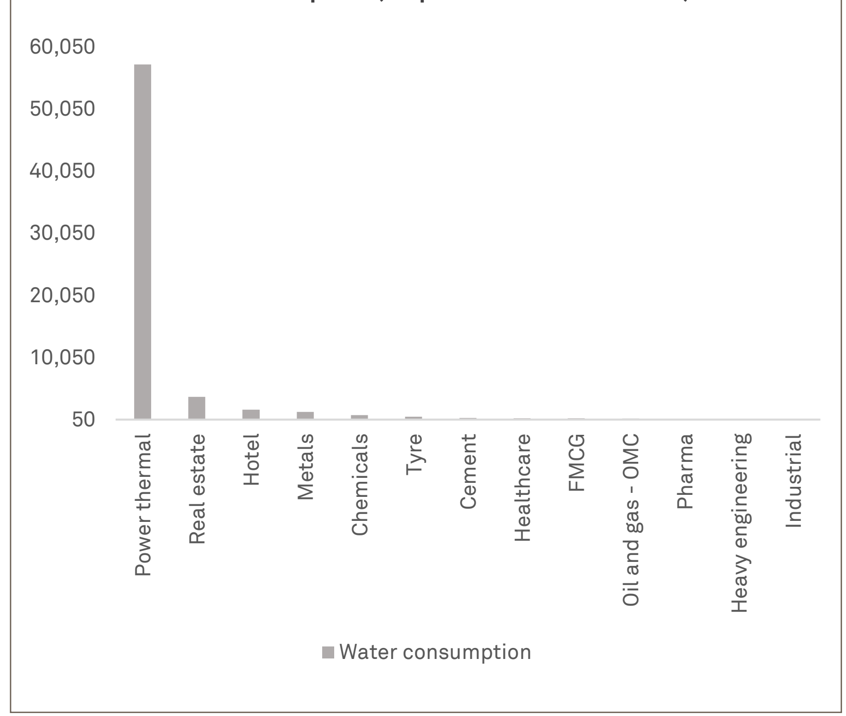


Source: CRISIL Research

Water

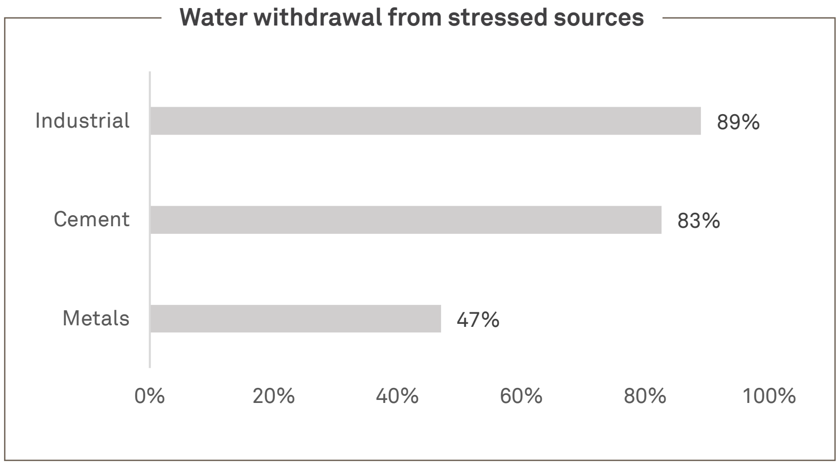
Only 21% of the companies provided disclosures on water consumption. The thermal sector had the highest water consumption level. However, companies in sectors such as textiles did not adequately report these numbers, despite the significant materiality of this issue and their dependence on the same.

Water consumption (m^3 per Rs crore of revenue)

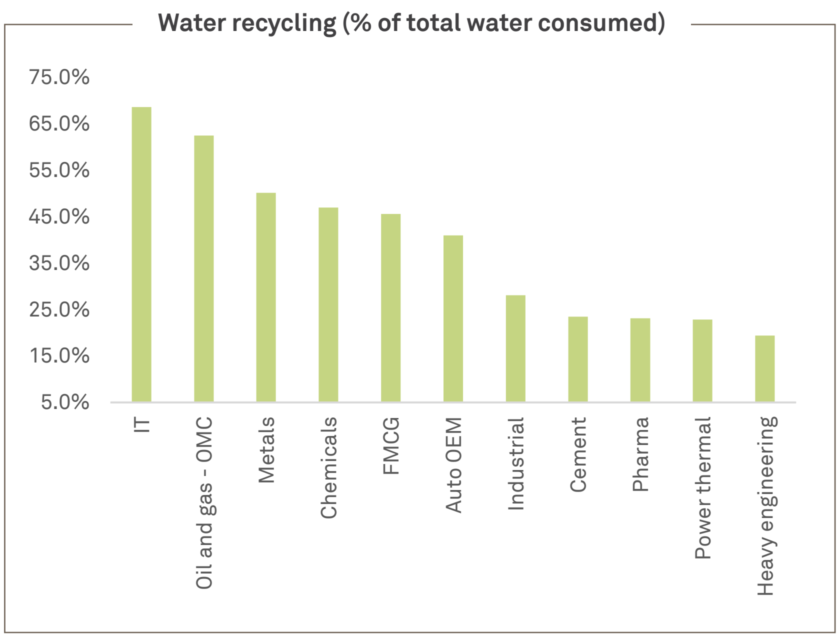


Source: CRISIL Research

In terms of exposure* to water-stressed zones, the industrial, cement and metals sectors were most dependent on fresh and ground water sources. However, the water-recycling level in sectors such as metals and industrial was moderately good, while the cement sector performed surprisingly well.



Stressed sources include ground water and freshwater withdrawal



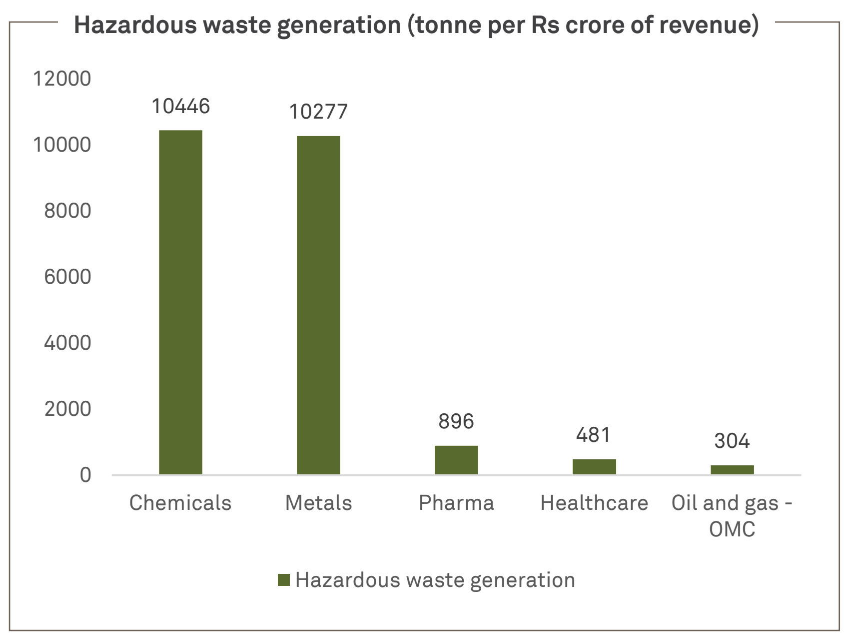
Source: CRISIL Research

Though the highest water-consuming, the thermal sector had a very low recycling rate at ~25%, with only a few companies disclosing specific information. Similarly, for sectors where water is crucial from a raw materials perspective such as textiles and consumer retail, disclosures were abysmally low.

Waste

Hazardous waste generation in the chemicals sector was the highest, followed by metals and pharma. However, sectors such as textiles and industrial had only one company disclosing the numbers despite significant materiality of this issue.

Further, high waste-producing sectors such as cement, thermal power, paints and textiles had a very low number of companies disclosing any quantitative detail on waste recycling.

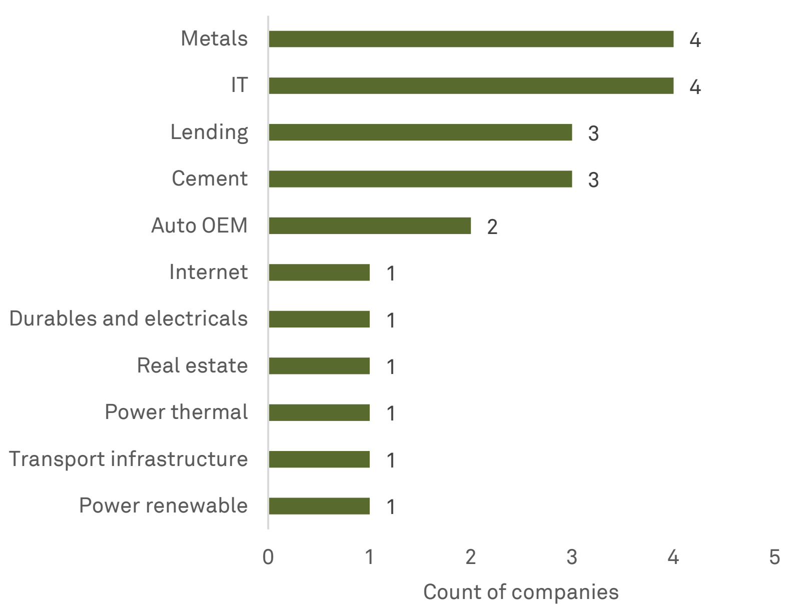


Source: CRISIL Research

Climate risk and targets

Only 22 companies disclosed their exposure to physical climate risks. This could be due to lack of technical expertise and internal capability to conduct exercises such as scenario analyses. We also note that very few companies in India have begun to make disclosures as per the TCFD framework.

Companies disclosing exposure to physical climate risk

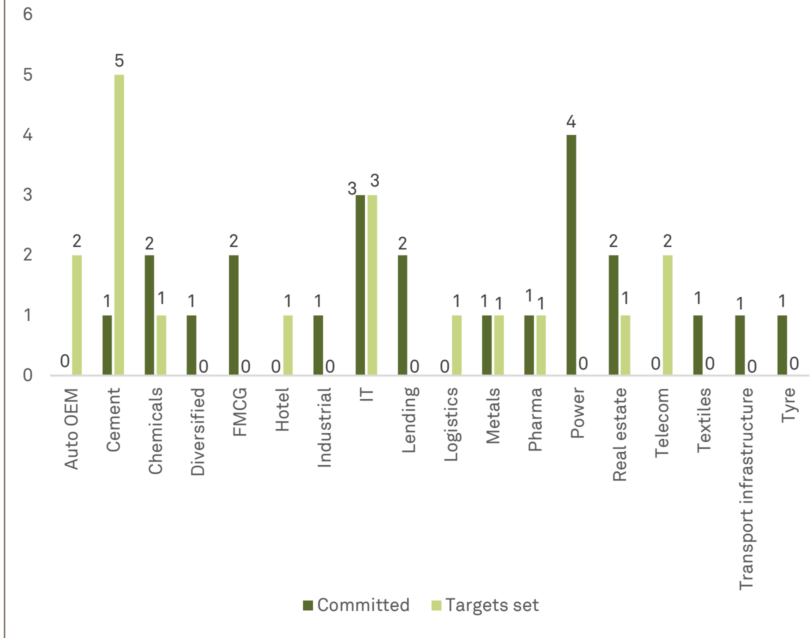


Source: CRISIL Research

Within CRISIL's universe of scored companies, only 18 companies have set Net Zero targets for over the near term till 2035 and have had their targets independently validated by the SBTi.

Additionally, over 23 companies have committed to set Net Zero targets

Sector-wise target status of Net Zero



Source: CRISIL Research

Negative sector exposure of financial institutions

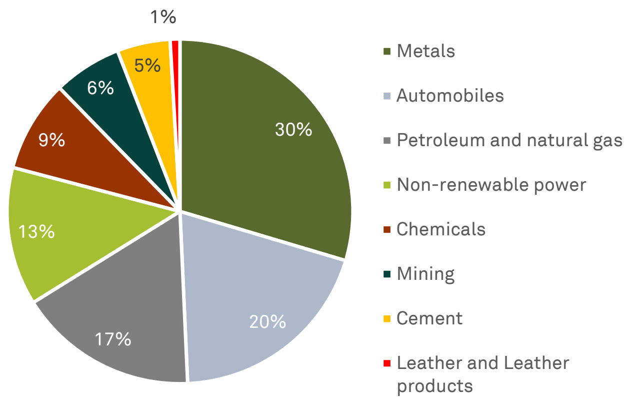
Average negative sector exposure of asset management companies (AMCs) was 15% in fiscal 2021.

For the lending sector, it was 9.86%, though it signified a decline by two percentage points over fiscal 2020. Its positive sector exposure (in renewables), however, remained very low at 0.16%.

Thus, average net negative sector exposure of the lending sector was 9.70%.

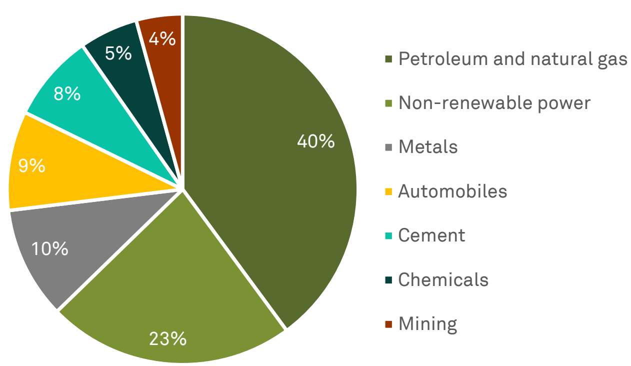
The DFIs analysed had an average negative sector exposure of 18.2% and positive sector exposure (includes renewable power, smart agriculture, green buildings, and energy efficiency and conservation) of 10.5%. Thus, the average net negative sector exposure of DFIs was 7.6%.

Negative sector exposure of banks



Note: Shows the proportionate break-up of the overall negative sector exposure, which is 9.86%
Source: CRISIL Research

Negative sector exposure of AMCs

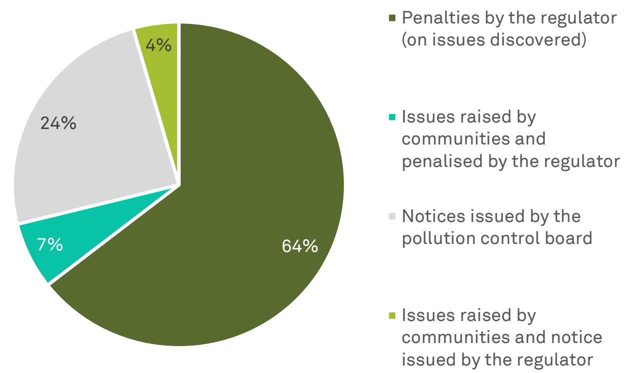


Note: Shows the proportionate break-up of the overall negative sector exposure, which is 15%
Source: CRISIL Research

Environmentally adverse news, regulatory actions or compliance lapses

CRISIL monitors companies on various environmental-related adverse news involving them, or any compliances lapses or regulatory actions against them. Based on the fiscal 2021 coverage, we found the following major issues that companies were involved in.

Environment-related controversies



Note: Total number of environment related controversies = 45
Source: CRISIL Research

Challenges around environment-related data disclosures

- **Limited reporting boundaries:** Many companies report environmental data with a very limited boundary, restricting reporting to certain plants or divisions within the company. This affects comparability of data
- **Units not consistent across sectors and companies:** Companies within the same sector use different units to report various parameters, and in some cases, units reported by the same company are also different across two years. Additionally, companies directly report intensity metrics (without giving the absolute numbers – both numerator and denominator) which makes data comparison difficult
- **Reported parameters differ between companies in the same sector:** Companies in the same sector report on different parameters, signifying there is no consensus on what is considered material and what is not to that sector. For example: some companies in the consumer electricals sector report SOx and NOx, while others report SOx and ozone depleting substances (ODS)
- **Quantitative disclosures very limited:** While we have seen improvements in qualitative disclosures, it remains limited to some of the larger companies. Crucial parameters such as Scope 3 emissions and certain material sector-specific indicators are missing from the reports
  - For example, in the airlines sector, none of the companies in our coverage disclosed the absolute percentage of SAF in their overall fuel consumption. Given that these airline companies have ambitious Net Zero targets by 2050, SAF will prove to be an important factor supporting the fulfilment of these targets.
  - Similarly, none of the companies in the logistics sector have disclosed alternative fuel consumed or the number of electric vehicles (EVs) in their portfolio
  - Similarly, auto ancillary, consumer durables and consumer electrical sector companies have not disclosed the number of product recalls (either voluntary or involuntary) — a material issue in these sectors
- **Small and mid-cap companies as well as unlisted ones have poor environmental disclosures:** We expect environmental disclosures (at least of the smaller listed companies) to improve, with BRSR becoming mandatory from this fiscal for the top 1,000 listed companies
- **Reporting cycles differ:** The majority of companies follow a fiscal year-end reporting cycle. However, some have a calendar-end reporting cycle, and are thus at a disadvantage as their latest data is unavailable at the time of scoring. Further, companies do not give out the date on which the reports were published, which makes it harder to track when the data will be updated next.

The social dimension

PSUs fare relatively better on social parameters; disclosures on the rise

Average S scores

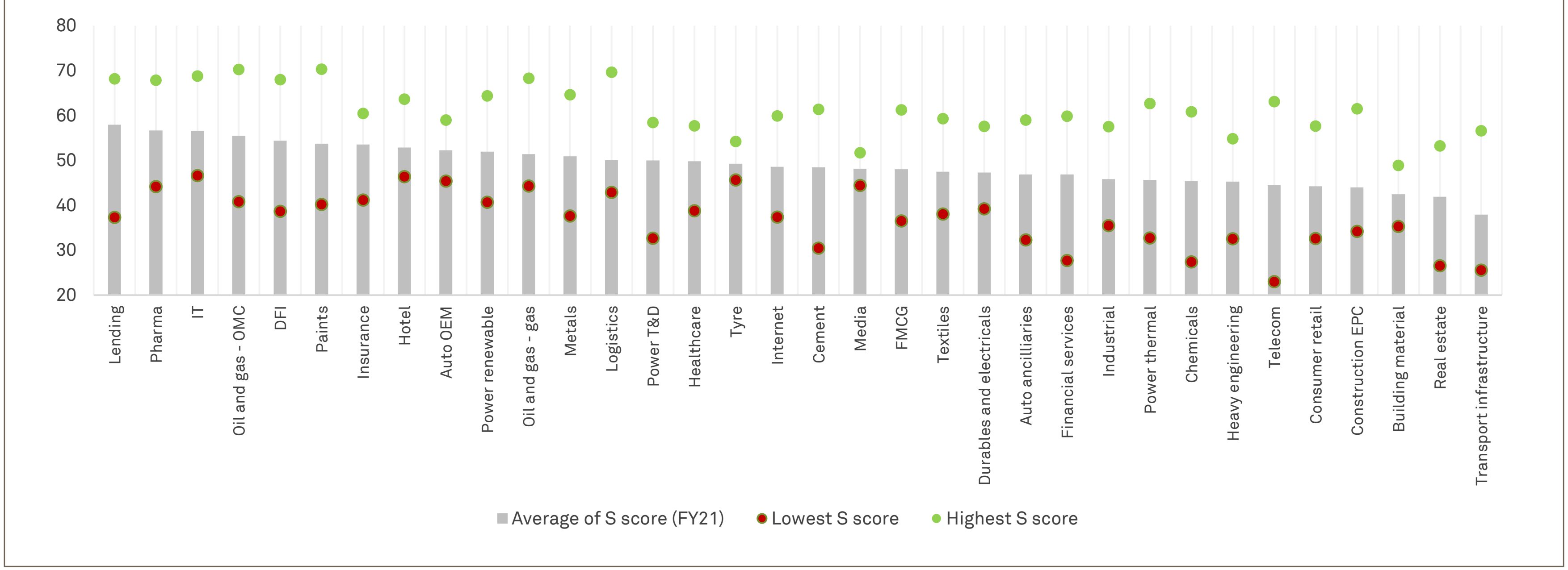
Our assessment of S parameters shows that the lending, pharma, and IT sectors, on average, performed better compared with other sectors.

Their performance could be attributed to better disclosures and the fact that they are largely services-based, with high dependence on permanent employees. On the other hand, sectors such as construction EPC, building materials, real estate, and transport infrastructure performed poorly. This could be attributed to weak disclosures and a higher proportion of temporary employees, leading to weaker rights.

Variations between listed and unlisted companies existed in the S pillar, too. The average standalone S score of unlisted companies was seven points lower than that for listed companies. This is because unlisted companies are not obligated to provide disclosures on social parameters as per the BRR norms. Under BRR, listed companies have to disclose S parameters such as gender diversity, permanent employees, and training.

On a standalone basis, we observe that PSUs had better S scores, on average (55), than private companies (49).

Highest, average, and lowest S scores



Source: CRISIL Research

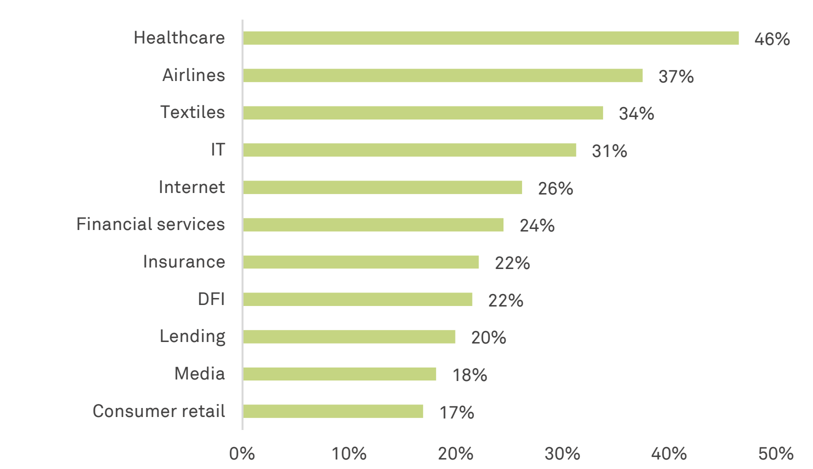
We examine below how the sectors have fared on some of the key S metrics.

Employee and worker management

- **Gender diversity:** The proportion of women in the workforce — captured by our gender diversity metric across the 586 companies — was ~14% in fiscal 2021. This was far below the global gender diversity at the workplace of 39%, according to S&P Global[10]. Sectors such as healthcare and airlines had the highest gender diversity, while cement and tyres had the lowest. Interestingly, sectors such as hotels and lending had a relatively lower proportion of women in their workforce compared with other sectors. Sectors such as industrial and capital goods, construction EPC, and heavy engineering could have more contractual women workers than permanent, but contractual workers are not counted in the total women employee base in these companies
- For private and PSU companies, gender diversity was nearly the same, at 12.7% and 15.3%, respectively

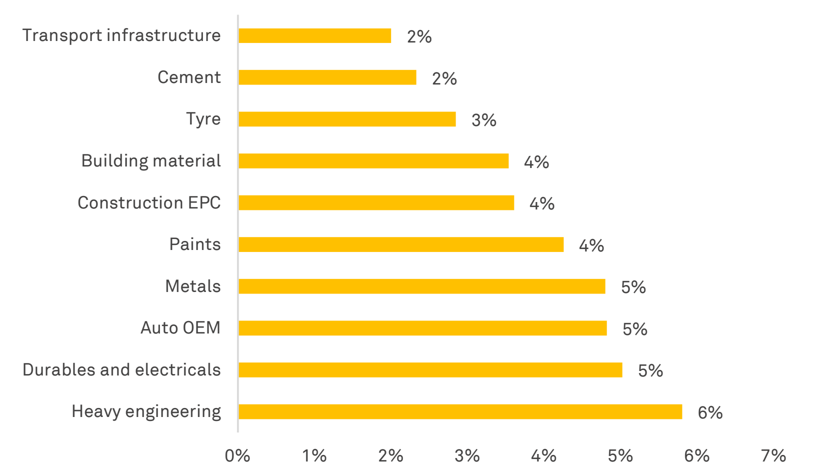
[10]*https://www.spglobal.com/esg/csa/yearbook/articles/gender-equality-workplace-going-beyond-women-on-the-board*

Sectors with the highest gender diversity



Source: CRISIL Research

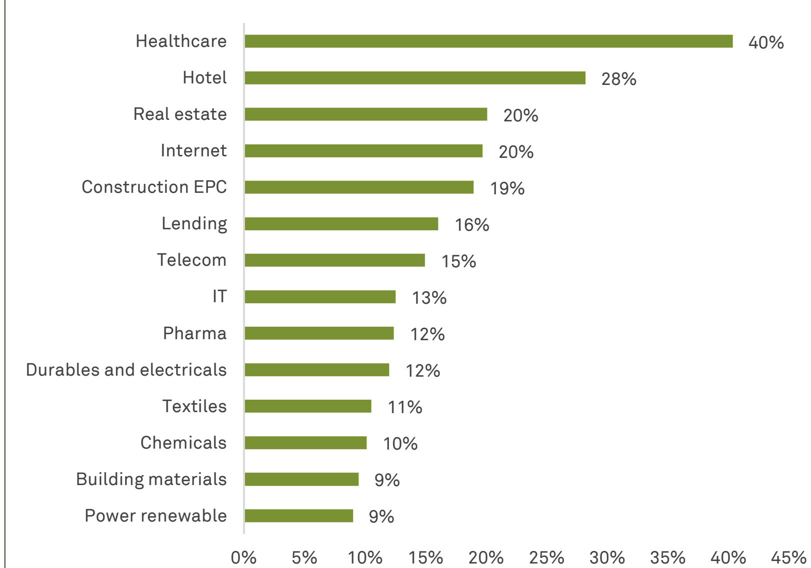
Sectors with the lowest gender diveristy



Source: CRISIL Research

- **Attrition:** In fiscal 2021, attrition rate across the 586 companies analysed was ~10%. Sectors such as healthcare and hotels had the highest attrition rate, while heavy engineering and power-thermal had the lowest. Given the pandemic, the high attrition rate in the healthcare sector (40%) comes as a surprise. However, this could be because healthcare companies include contractual staff in their calculations, while other sectors may not[11]. The high attrition rate in the hotels sector was on expected lines, as hotels were largely closed and jobs were impacted. The lending and IT sectors continued to have relatively high attrition rates. The churn in private companies was higher at ~22% than for PSUs at 2%

Sectors with the highest attrition rate



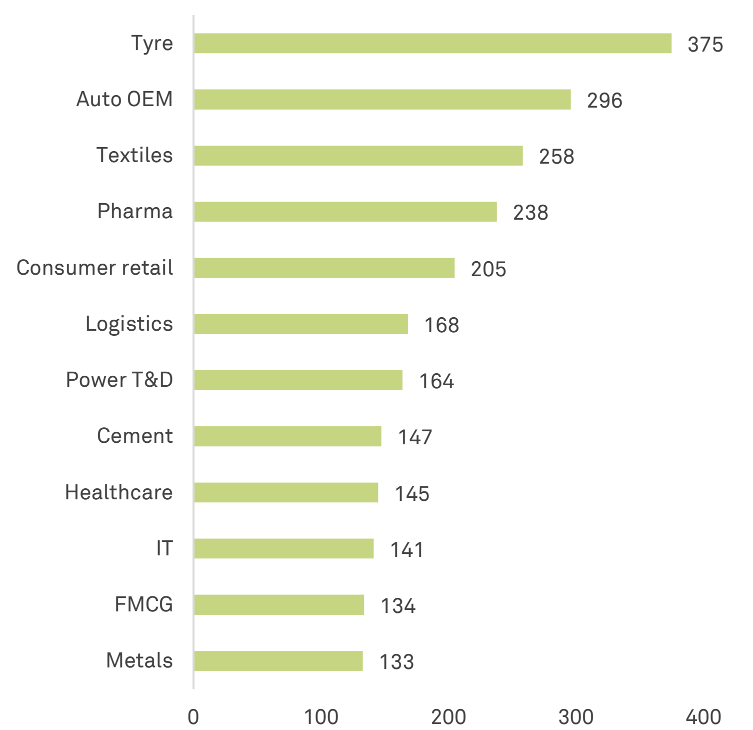
Source: CRISIL Research

[11]*CRISIL accounts for this type of limited reporting boundary issues by lowering the scores of the companies that do not report according to 100% of their operations/employee base*

- **Pay disparity:** In fiscal 2021, the CEO-pay-to-median-employee-pay ratio was ~130x, on average. This compares with ~250-350x globally, on average[12]. Sectors such as Auto OEM and tyres had the highest ratio, while DFI and power renewables had the lowest. The pay disparity was extremely low in the case of PSUs, at 4.8x. In contrast, it was ~137x for private companies, on average

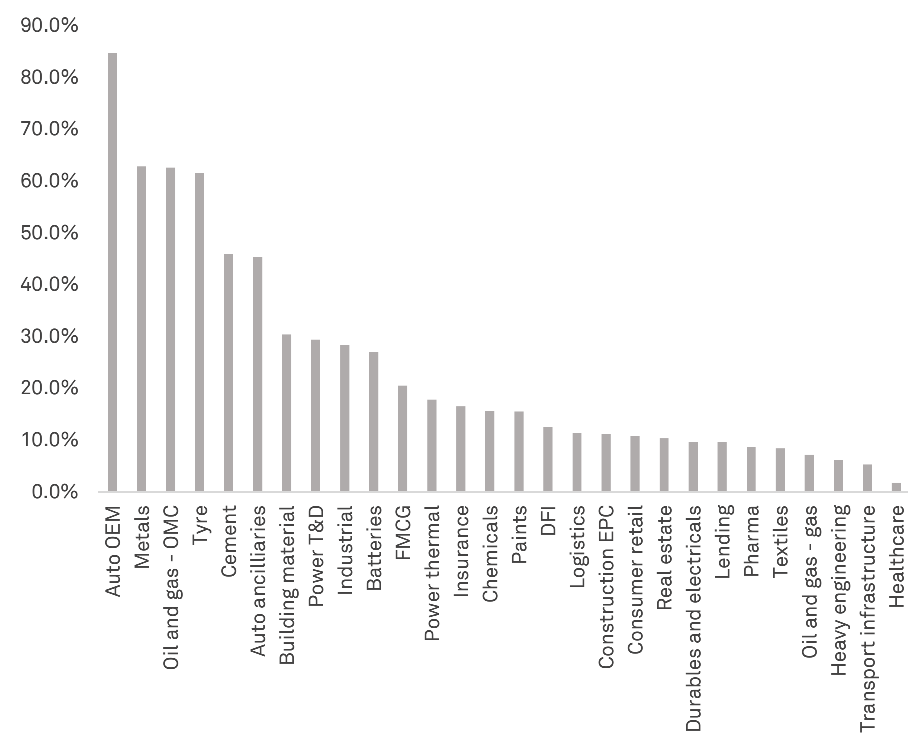
- **Unionisation:** A high share of employees were part of management-recognised unions among auto OEMs, metals, oil marketing, and cement companies. Service-based sectors such as airlines, food and multi-brand retail, IT, and telecom did not disclose unionisation at all

Sectors with high CEO-pay-to-median-employee-pay ratio



Source: CRISIL Research

Average unionisation

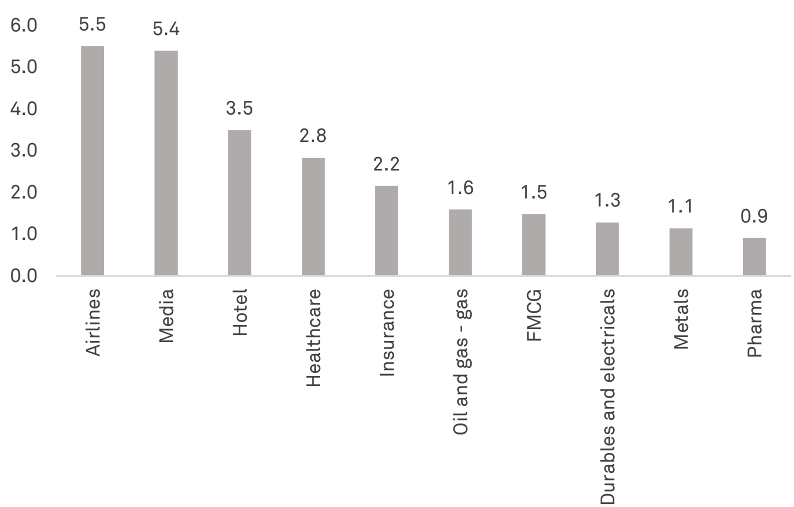


Source: CRISIL Research

[12] *https://www.equilar.com/reports/90-highest-paid-ceos-2022-equilar-100.html*

- **Sexual harassment:** Complaints of harassment were higher in service sectors such as airlines, media, hotels, and healthcare. They were lower in manufacturing sectors such as metals and pharma. Sexual harassment complaints per 5,000 employees in private companies was 2.18 times higher than in PSUs. About 55% of PSUs and 69% of private companies in our total coverage reported zero sexual harassment complaints in fiscal 2021. Further, 80% of small-cap and only 34% of large-cap companies reported zero complaints. This could also be a factor of poor complaint capturing mechanisms in these companies

Sexual harassment complaints per 5,000 employees

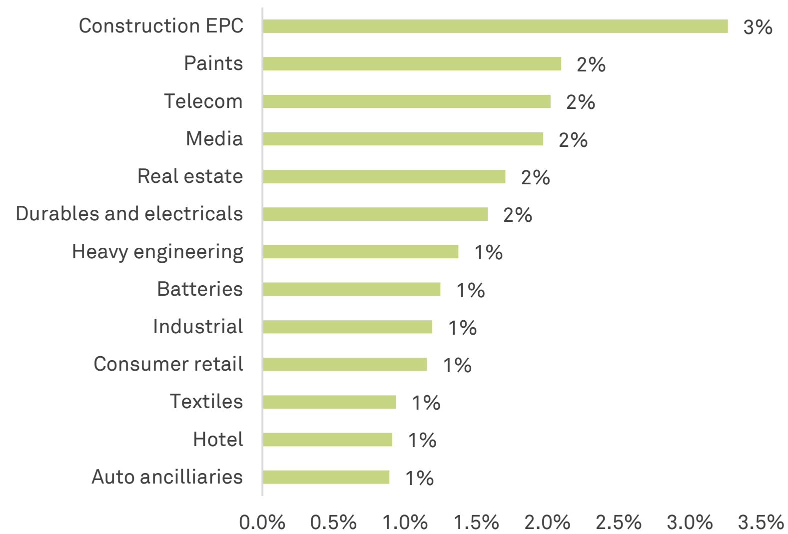


Source: CRISIL Research

Supply chain management

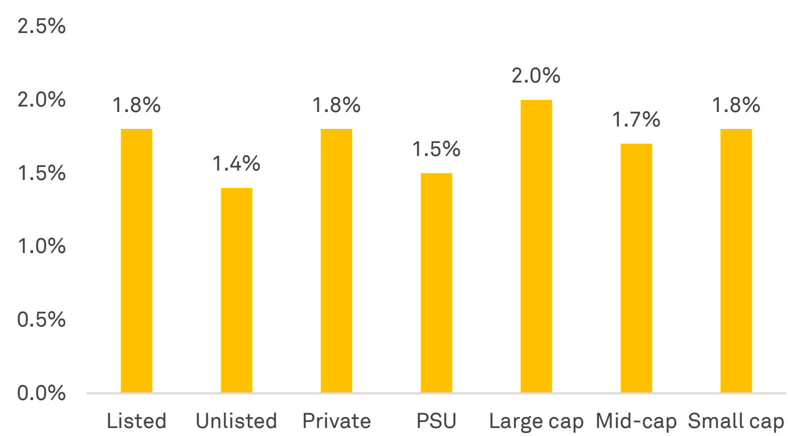
- Dues to micro, medium and small enterprises (MSMEs) as a percentage of revenue was the highest for the construction EPC sector, while it was the lowest for the oil and gas – OMC and IT sectors

Sectors with high dues to MSMEs (as % of revenue)



Source: CRISIL Research

CSR spend



Source: CRISIL Research

- Listed companies fared better on corporate social responsibility (CSR) spending compared with unlisted companies, owing to the regulatory mandate for the former. However, they were still not aligned with the 2% mandate (CSR spend as a percentage of average net profit for past 3 years)
- PSUs reported lower spends than private companies
- Large-cap companies largely adhered to the 2% mandate, whereas the small- and mid-cap companies' spent marginally less
- About 9% of listed companies did not spend on CSR activities as they have been incurring losses

Customer metrics

Only 7% of the companies disclosed metrics such as customer satisfaction index or net promoter score

None of the unlisted companies and only 3% of PSUs disclosed these numbers

R&D

The pharma sector spent the highest on R&D, as a percentage of revenue

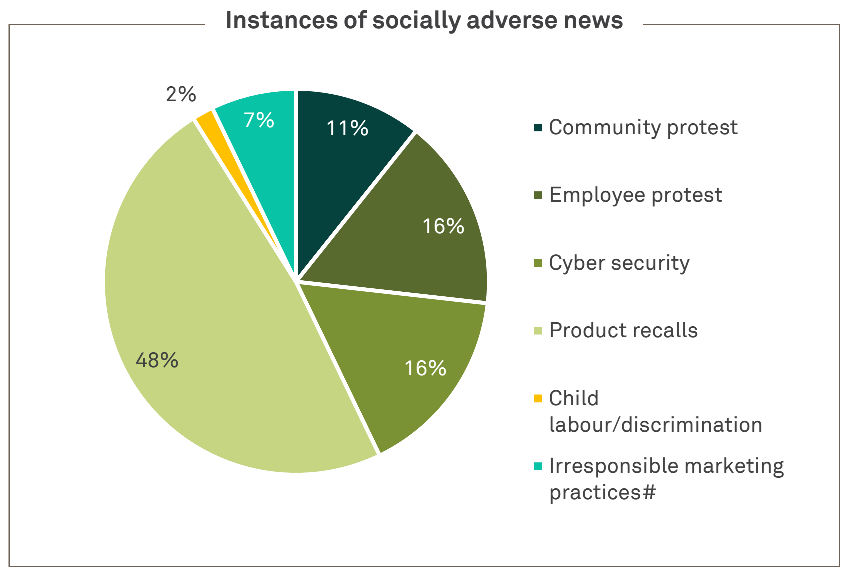
Controversies

45% of the total controversies were in the pharma sector

Product recalls in pharma was the most common type of social controversies in our coverage, at 48%

Socially adverse news, compliance lapses and regulatory actions

CRISIL monitors companies on various socially-adverse news that they might be involved in, compliances lapses or regulatory actions against it. Based on the fiscal 2021 coverage, we found the following major issues that companies were involved in.



**Multiple recalls under the same company have been considered as one instance; # as recorded by the Advertising Standards Council of India; % out of a total of 56 instances of adverse news in fiscal 2021 gathered from various sources*
Note: Total number of social controversies = 56
Source: CRISIL Research

The governance dimension

Governance practices are more evolved but unlisted and PSU companies trail

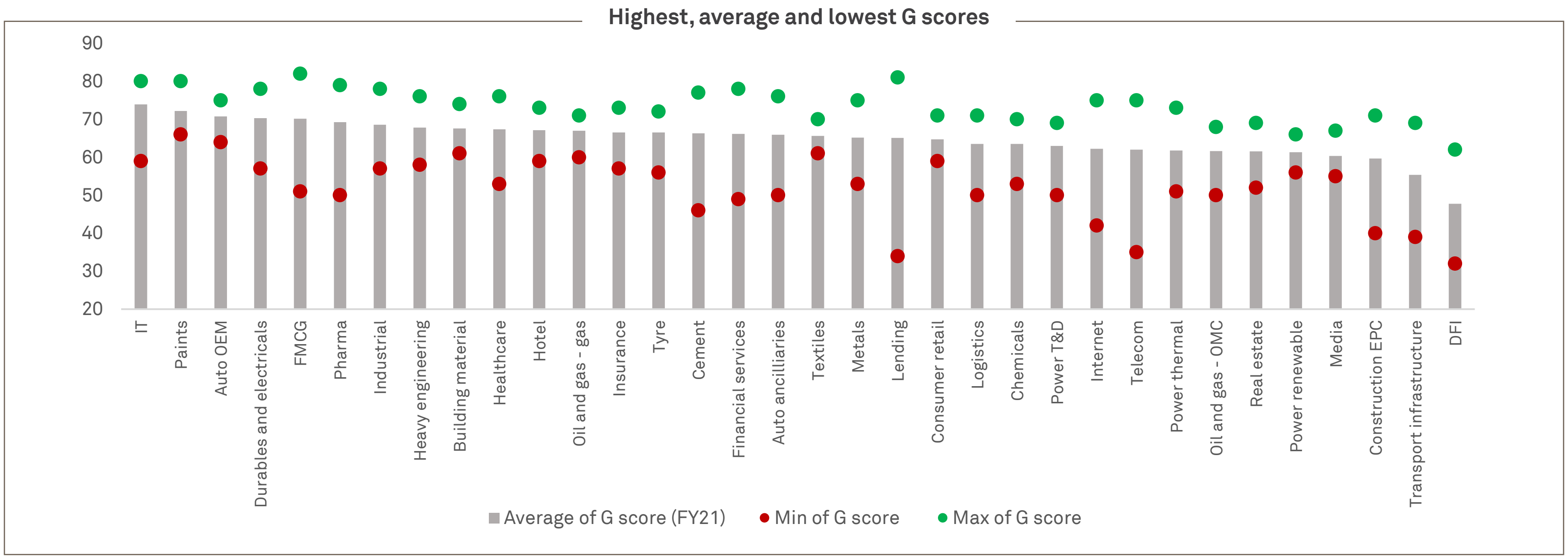
Average G scores

Our assessment of the corporate governance parameters across all 586 companies shows, on average, that the IT and paints sectors had leading G scores in fiscal 2021. This could be attributed to better disclosures, good management track record, i.e., financial performance vis-à-vis CEO and KMP remuneration trajectory, better gender diversity on the Board, and high share of independent directors for companies in these sectors.

Though leaders in the lending space scored very high as well, poorer scores for PSU lenders weighed down the sector average.

Averages for lending and financial services sectors were significantly stymied by unlisted companies, which formed 41% and 8%, respectively in these two sectors. These companies are characterised by fewer disclosures on account of lower regulatory obligations, underperformance of operating net profit vis-à-vis the industry, and poor corporate governance practices.

Note that, disclosure-related governance parameters were under-weighted for unlisted companies, as compared with the same for listed companies. All other parameters were assessed in a similar manner for both.



Source: CRISIL Research

Disadvantage, unlisted

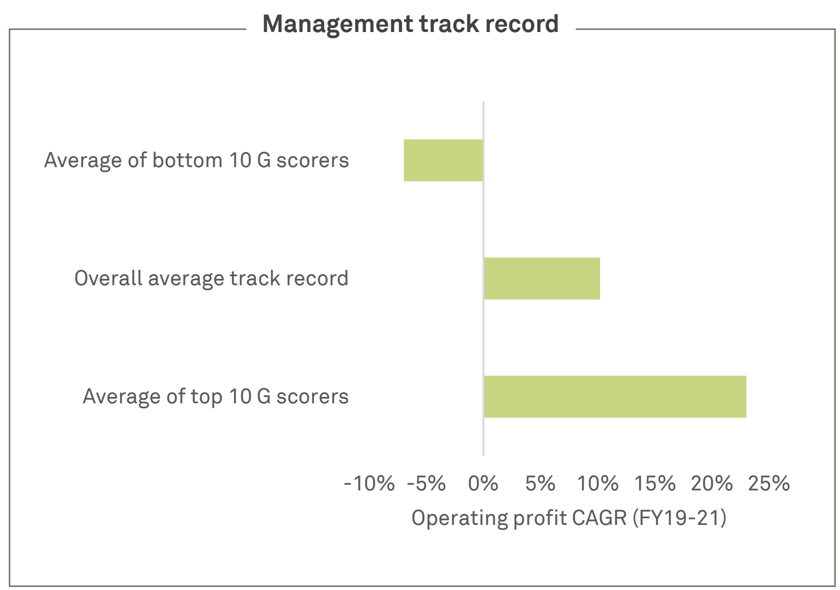
It turned out that the average governance score of unlisted companies was 13 points lower than that for listed companies.

This was on expected lines.

- Only 5% unlisted companies disclosed investor presentations
- Unlisted companies in nine of the 13 sectors had a lower share of independent directors as compared with their sector average
- Unlisted companies in eight of the 13 sectors underperformed at the operating profit level as compared with their sector average

Top 10 G scorers also had high profit growth

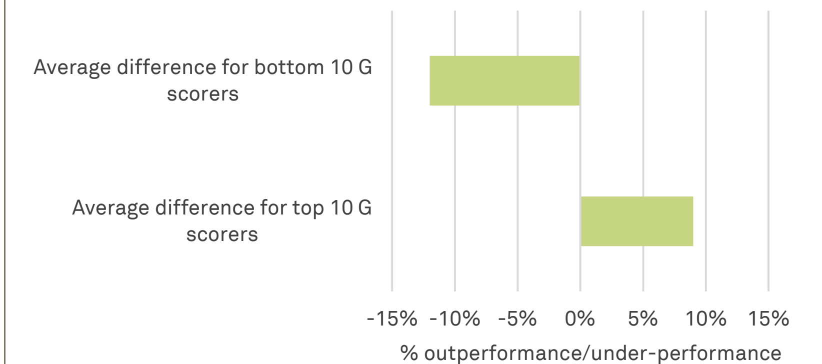
Interestingly, the absolute operating profit of the top 10 companies on the G parameter grew at 23% CAGR between fiscals 2019 and 2021, whereas that of the bottom 10 logged a negative CAGR of 7%.



Source: CRISIL Research

These companies also outperformed their own sector averages. The top 10 G scorers outperformed by 900 basis points (bps), with six out of 10 companies outperforming their respective industry averages. Conversely, the bottom 10 G scorers underperformed by negative 1,200 bps, with seven out of 10 companies trailing their respective industry averages.

Operating profit growth of top/bottom 10 scorers vs respective sector averages



Source: CRISIL Research

Is CEO pay in sync with profits?

For 53% of companies, CEO remuneration growth was aligned with their respective operating profit growth. Of these, the operating profit of 59% companies outperformed the industry on CAGR basis, and for 11%, was in line with the industry average.

Board independence

Independent directors are the bulwark of effective corporate governance in companies. Hence, a high share of independent directors on a company's Board augurs well for the G score.

- Independent directors comprised ~50% of the Board, on average, across the 586 companies in fiscal 2021. Sectors such as media and hotel had the highest share of independent directors, whereas oil and gas (OMC) and telecom had the least share. Most DFIs did not have independent directors on the Board, and instead had mostly government nominee directors, as required by regulation

- In terms of listed and unlisted companies, the proportion of independent directors was ~52% and ~38%, respectively. While unlisted companies are not mandated by regulation to have independent directors, they could benefit from following best practices in corporate governance

- For PSUs and private companies, the average proportion of independent directors was ~40% and ~51%, respectively. Calendar year 2021 saw sharp focus on compliance with governance-related regulatory requirements by PSUs. For example, the average proportion of independent directors on PSU Boards was 21% in calendar 2020. This jumped to 41% in 2021 (for the same set of companies)

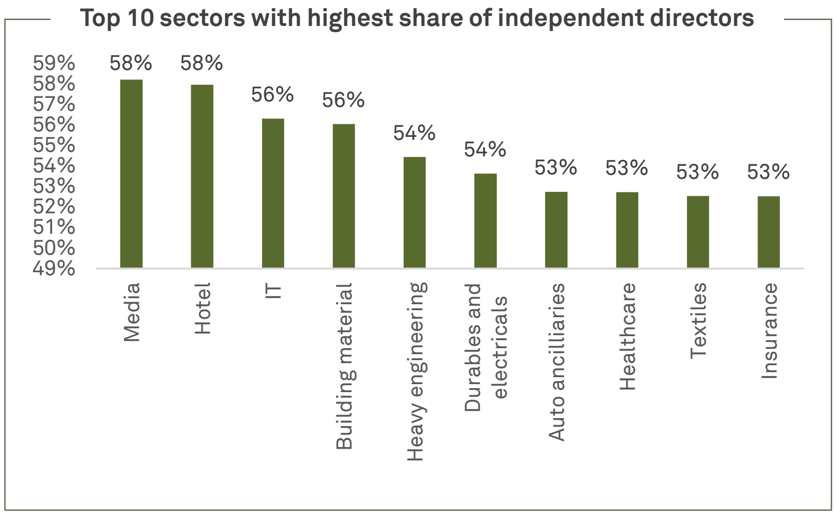
- Only 41 companies had lead independent directors; none of these were PSUs

- Only 8% companies had two-thirds or more independent directors on the Board

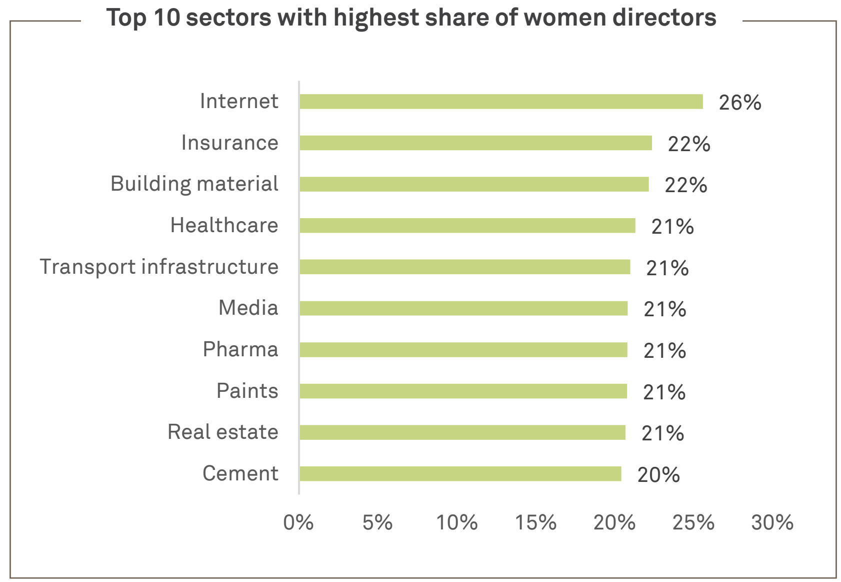
- As many as 2% of the 518 listed companies evaluated did not meet the statutory criterion of one-third independent directors, as required as per the Companies Act, for listed companies

- Independent directors constituted only about half of the audit committees in PSUs, whereas in private companies, they formed three-fourths

- Average tenure of independent directors in private companies was 7.43 years, which is higher than the overall average of 6.79 years, and for PSUs, it was 1.3 years which is significantly lower, owing to frequent appointments



Source: CRISIL Research



Source: CRISIL Research

Gender diversity on the Board

- Average representation of women directors in fiscal 2021 across the 586 companies was ~18%. Sectors such as internet and insurance had the highest share of women directors, while DFI and batteries had the least share
- Further, 8% of unlisted companies and 10% of listed companies had a minimum of one-third women representation
- For private companies and PSUs, women directors constituted 19% and 13% share, respectively

Good governance practices

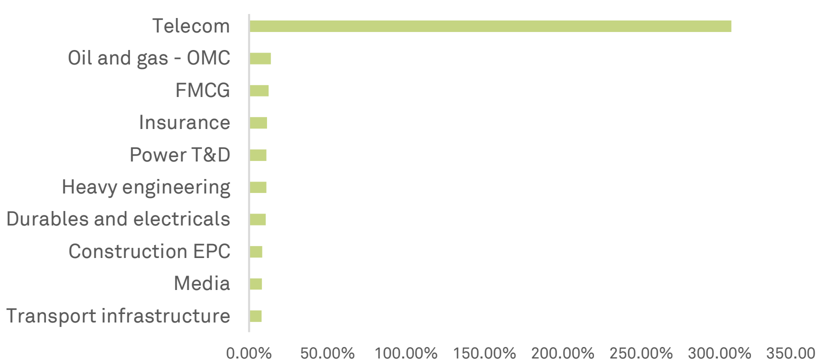
- 22% of companies had an independent chairman and 26%, a common chairman and managing director (CMD). In 74%, the positions of chairman and CEO were separate. Such separation provides an important oversight mechanism and reduces excessive concentration of authority
- Sectors with average CEO tenure of over 10 years posted operating profit growth of 6% CAGR between fiscals 2019 and 2021, while sectors with CEO tenure of 10 years or less, had average operating profit growth of 18%, highlighting the benefit of shorter, more efficient CEO tenures

- Tenures of directors on the Board (on average) and of CEO in unlisted companies were lower than those for listed companies. Further, average tenures of CEOs and the directors in private companies were higher than for PSUs

Company type	Average tenure of CEO (years)	Average tenure of directors on Board (years)
Listed	10.86	7.10
Unlisted	2.80	4.21
Private	10.92	7.43
PSU	2.13	1.30

- Average amount of tax disputes as a percentage of net worth in fiscal 2021 across the 586 companies was ~19%. Telecom had the highest amount of tax disputes, owing to adjusted gross revenue dues levied on telecom companies

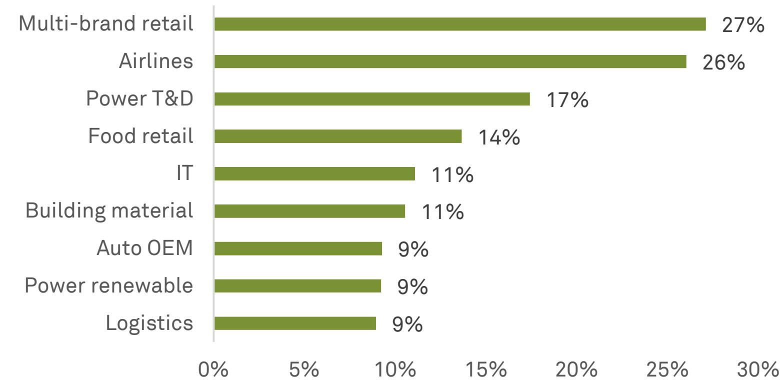
Sectors with high amount of tax disputes (as % of net worth)



Source: CRISIL Research

- Average non-audit fees as a percentage of total fees in fiscal 2021 was ~7%. Multi-brand retail and airlines had the highest amount of non-audit fees as a percentage of total fees, while textiles and healthcare had the least. Most companies did not disclose the nature of non-audit services

Sectors with high amount of non-audit fees (as % of total fees)



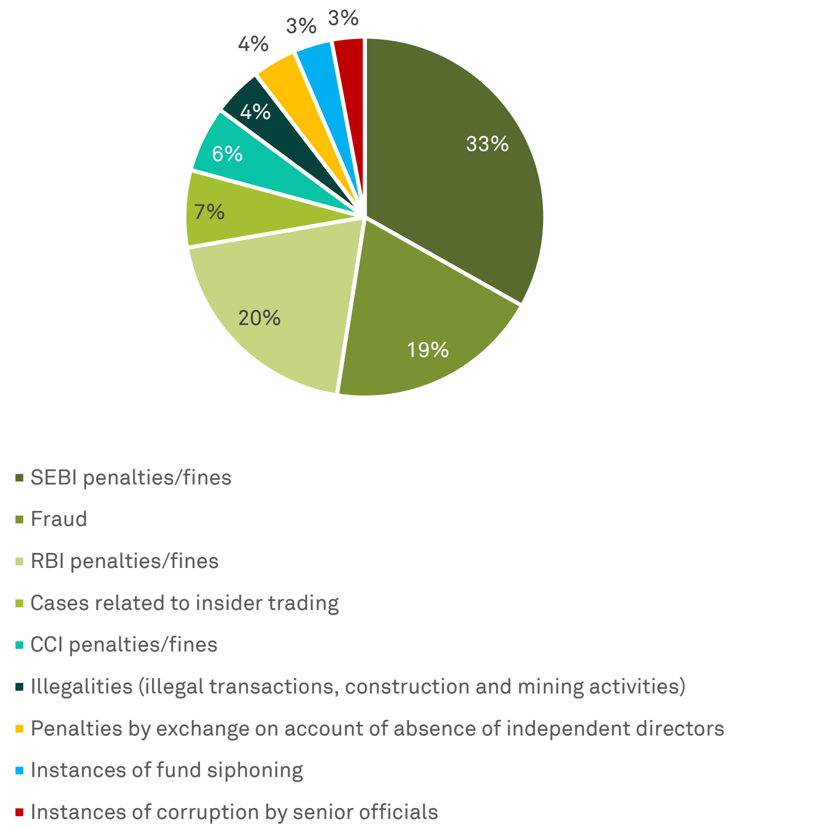
Source: CRISIL Research

Governance-related controversies

- 59% of adverse news on governance was on account of regulatory action on the companies
- 18% of the controversies were in the lending sector

CRISIL monitors companies for any governance-related adverse news involving them, any compliance lapses, or any regulatory action against them. Based on the fiscal 2021 coverage, we found the following major issues involving companies.

Governance controversies



Note: Total number of governance controversies = 202
Source: CRISIL Research

Does your company have an ESG strategy?

ESG is fast achieving an equal standing with financial factors for investors, lenders and corporates alike. It is no longer considered a box-ticking exercise to meet regulatory requirements. Stakeholders are actively demanding enhanced accountability and transparent disclosures.

This demands that organisations armour up against ESG risks. The first step is to identify material risks at the sector and organisation level. The next is to examine the operational cracks within, against the backdrop sectoral and global best practices. Finally, companies need to formulate strategies to repair these cracks over time.

In the short term, initiatives could take the form of:

- **Providing deeper disclosures** on areas linked to environmental and social parameters, as many initiatives are undertaken but are not necessarily communicated to the stakeholders. Additionally, many quantitative metrics are not captured and recorded internally
- **Establishing a governance structure** to proactively track ESG issues and related plans, and fixing accountability. The role of the Board and management should be clearly stated
- **Aligning incentives** across levels within the organisation
- **Capacity building** to help the rank and file to understand, implement and appreciate sustainability issues
- **Assessing effectiveness of social spends** through third-party independent evaluators to enhance effectiveness
- **Diversity and inclusion** for incremental hiring

In the medium term, initiatives could take the form of:

- **Moving towards renewable energy,** especially in sectors such as metals, cement and commercial real estate
- **Driving ESG across the supply chain** by reducing the carbon footprint, lowering logistics and energy costs, and dealing with social issues such as lack of inclusion and child labour
- **Tracking and improving the level of Scope 3 emissions** across the value chain. Organisations need to develop plans to ensure appropriate awareness, capacity building, incentive structures, use of technology and financial support to ensure emission reduction
- **Building circularity and recyclability in operations,** with a focus on low-carbon substitutes for operations and new projects
- **Limiting employee carbon footprint** by avoiding travel, encouraging ridesharing, car-pooling and web meetings
- **Implementing greater wage equality,** which is a challenge most private sector organisations face. Positioning and targeting sector leadership is important

Know thy ESG hurdles and how to overcome them

Implementing ESG is easier said than done.

Be aware of these common hurdles that could come in the way and how they might be surmounted:

- **Limited awareness of ESG:** Lack of awareness across cross-departmental employee pools, partners, franchisees and the value chain hinders a company's long-term growth.

  Both internal and external stakeholders need to understand the company's vision and the criticality of sustainability in its effort to help drive the ESG agenda. Awareness could be imparted on varied issues such as business ethics, corporate governance, risks and interlinkage of enviro-social factors with overall performance.

- **Lack of senior management buy-in:** In some companies, senior management may lack the vision and appropriate understanding to identify the form and manner of redirecting investments towards potential actionable areas that will drive change.

  Nurturing an ESG culture within the organisation should not be restricted to implementation of policies within, it has to be etched into the mindset of employees and the value chain. The senior management must lead by example in setting clear ESG policies and vision, and transparency towards the progress on company targets. Linking the top rung's KRA to sustainability and safety performance of the company could be a step in the right direction, as some large Indian companies have done.

- **Poor sustainability tracking across the supply chain:** The UN Global Compact considers supply chain practices as one of the prime challenges to improving sustainable supply chains. Complex supply chains with different products, escalating costs and compliance with a sustainable framework throughout the chain may pose hurdles in an organisation's ESG journey.

  Successful monitoring of parameters could start from manual, Excel-driven formats to integrated data collection interfaces implemented through software management platforms. Such advanced tools help gain insights and better manage risks via improved disclosures. Sustainable supply chain practices are evident in some multinational electronics and FMCG companies, where due consideration is given to supplier operations, partnerships and conflict management. General strategies could cover annual supplier evaluation processes, code of conduct, responsible sourcing, zero deforestation policies, water abstraction reductions and a large support system for funds or capacity building.

- **Low perceived returns on ESG initiatives:** Typically, ESG investments are turned down as these are a big drag on the company's bottomline, even though good returns are likely in the near to long term.

  A healthy mix of inexpensive near-term ESG initiatives and large upfront investments for long-term benefits can yield improved buy-in overall. The short-term achievements could act as a morale booster to the ESG exercise, while the organisation evolves into the next stage. For instance, the shift to reduction in plastic waste-based packaging material in the FMCG sector may necessitate reformatting the existing operational set-up to incorporate machinery, entailing upfront costs in the near term with medium to long-term environmental benefits. Moreover, a robust ESG plan may boost returns to investment by assigning the capital to more sustainable and lucrative prospects (waste reduction, renewable energy, etc).

- **Non-availability of cost-effective technologies:** With increasing number of companies offloading their ESG data on a cloud platform, the cost effectiveness of such an approach is debatable. Smart technologies (such as artificial intelligence and blockchain) have immense benefits, but at the cost of big bucks.

  Technology solutions have to be flexible enough for organisations to respond quickly, smoothly and cost-effectively. A collaborative approach – embracing resource pooling to meet stakeholder requirements and achieving ESG goals in an efficient, cost-effective manner – may be worth exploring.

Trends across Indian companies

While some market leaders may have voluntarily taken up carbon neutrality targets almost a decade ago, the BRSR reporting mandate comes as wake-up call to all companies to transition to a more transparent and tenable business scenario.

India has mandated the BRSR framework for the top 1,000 listed companies (as per market capitalisation), along with committing to Net Zero target by 2070.

A glance at where companies stand in this inevitable transition:

Financial sector

- Early stages of assessment of materiality and impact assessment for climate risk are underway. However, precise climate risk assessment guidelines are yet to be issued. Analysis from a few reports suggest an unpreparedness in the Indian banking sector to climate response. Most banks are way behind on long-term Net Zero goals, while only a handful have presented an exclusion policy towards fossil fuel-based projects
- Portfolio impact assessment is still in a nascent stage. However, recent international guidelines specific to the sector may have encouraged a few banks and non-banks to contemplate improved financed emissions disclosures from their lending portfolios
- Integration of sustainability and ESG in credit frameworks and pricing is on the drawing board. The Indian Banks' Association plans to develop a common platform for ESG aspects, factoring in climate risk along with credit assessment issues
- Organisations are working on enhancing sustainability and climate initiatives through training/ workshops or creating in-house ESG expert teams
- Banks have started issuing green bonds/loans/deposits to promote responsible and sustainable green financing. State Bank of India in the public sector space; and IndusInd Bank, DBS Bank, HDFC and HSBC are a few private players with such offerings. Some NBFCs in microfinance and consumer vehicle segment, too, have raised sustainable finance
- Social and governance facets are not being ignored. Human rights, employee diversity, consumer protection, anti-bribery and anti-corruption policies feature in the list

Non-financial sector

- Companies have started aligning with global reporting standards and building internal capacity to track sustainability parameters
- Mid-sized and small companies are concentrating on complying with BRSR norms first. Preliminary adjustments may be required to fall in line with this comprehensive ESG reporting format. However, this will ensure a sustainable business landscape, resilient to untoward long-term repercussions

- A few IT companies have set clear GHG emission reduction targets as a part of their decarbonisation strategy, covering at least Scope 1 and 2 emissions
- Indian cement manufacturers are increasingly integrating low carbon strategies within their operations by increasing green energy consumption, using calciner modification, improving the thermal substitution rates and enhancing the green building footprint
- The sector is also giving due weightage to social aspects such as enhanced community participation and harmony, dedicated health and safety practices, and employee wellbeing. The workforce no longer prefers to associate with a purely economics-driven organisations, but rather those that display a congenial environment with a holistic sustainable business perspective
- There is a growing concurrence on governance issues through ethical and effective governance standards, diversity and independence across the Board, and commitments towards ESG and risk management aligned to global best practices

ESG in credit ratings

Sustainability factors have always been part of credit rating assessments

Credit rating evaluations have traditionally included sustainability factors which are material in arriving at credit decisions. Credit analysis involves assessment of all those parameters that may influence the ability of an entity to meet its debt obligations in a timely manner.

Such factors, which impact business continuity and sustainability — including ESG parameters — have always been critically analysed as a part of the credit rating methodology of CRISIL Ratings. Some of the instances are covered below.

Assessment of management risk, or 'G' from ESG factors, has always been the cornerstone of credit rating assessments. Only a strong governance structure can help organisations get through turbulent times and ensure business sustainability by executing the strategies put in place and delivering on their commitments. An organisation plagued by corporate governance issues will see its business unravel, eventually impacting its business prospects as well as credit metrics.

For sectors that can impact the environment, adherence to pollution control norms is important. Non-adherence to regulations can lead to direct costs in terms of punitive action and even closure of facilities, which can further impair the ability to meet debt obligations. Therefore, continued investment in emission reduction and deployment of efficient methods of effluent treatment are looked into as part of the credit rating exercise for relevant sectors.

Moreover, effective management of vendors ensures a strong distribution network and helps corporates maintain market position in a competitive business environment. Efforts towards maintaining cordial labour relations translates into long-term sustainable and efficient operations, and hence, can have a bearing on the credit profile of an issuer.

Given that global economies, specifically the developed ones, have been early adopters of ESG, global credit rating agencies have been highlighting the impact of ESG in credit rating analysis for some time now.

However, as investor awareness of ESG issues grows, it is critical to provide greater transparency of the impact of material ESG factors in credit rating analysis. Apart from analysing the ESG profile of the issuer with respect to future ESG risks and opportunities, CRISIL Ratings also provides specific analysis on ESG-related parameters in issuer-specific reports.

Not all ESG factors are material from a credit rating perspective

It may be noted that while some ESG factors can materially impact the creditworthiness of corporates (as highlighted above), not all ESG factors may be relevant or material from a credit rating perspective. It is possible that an entity with a moderate ESG profile could have a very strong credit risk profile driven by robust parent support.

Likewise, an entity with strong ESG credentials need not necessarily exhibit a strong credit profile on account of certain factors such as high reliance on debt relative to its ability to generate cash flows. Therefore, ESG factors that impact credit ratings are a subset of the wider spectrum of parameters which are considered for standalone ESG rating evaluation.

To be sure, ESG ratings is a relative assessment of an entity's exposure and its ability to manage ESG-related risks and opportunities through analysing various E, S and G parameters. Investors with an ESG focus look for such independent ESG rating evaluation. On the other hand, credit rating is carried out for the purpose of assessing an issuer's ability and willingness to honour its financial obligations on the rated debt instrument on time. It is based on relative analysis of the business and financial risks associated with the rated firm, and of the firm's management.

Thus, depending on their need, investors may want to distinguish between credit ratings, ESG in credit ratings, and ESG ratings/scores based on an only-ESG evaluation.

How CRISIL Ratings views ESG

Sustainability parameters are expected to increasingly have a bearing on the cost and availability of funds for corporates.

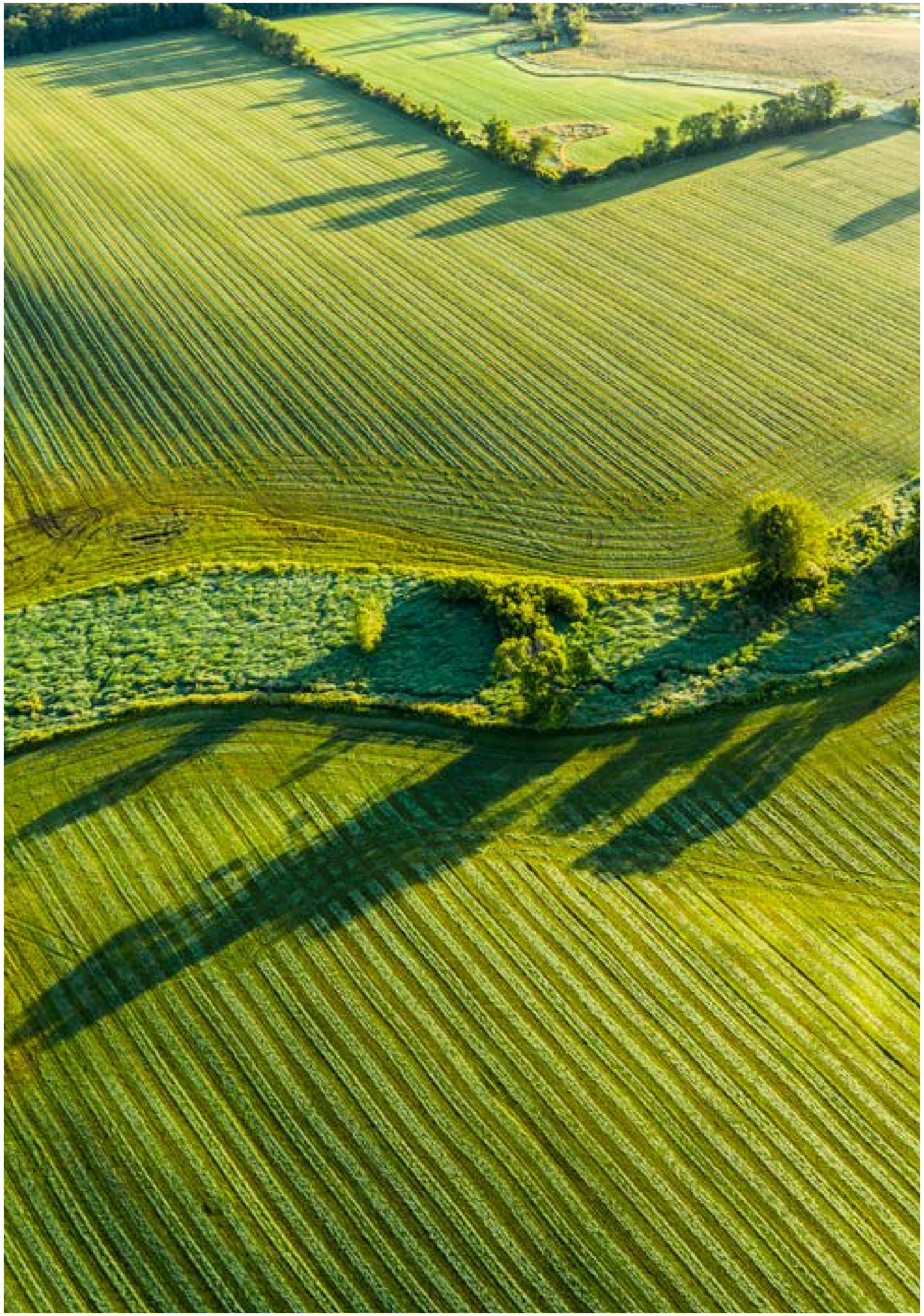
CRISIL Ratings has, therefore, begun to assess and disclose the impact of the ESG aspects on the credit profiles of companies. This will underscore their ability to raise funds and, in turn, affect financial flexibility.

The assessment is based on a proprietary framework that weighs the sectoral impact on E and S factors, and the relative performance of a company on ESG aspects. The ESG performance of the entity is assessed under three heads:

a) Extent of tracking and disclosure of critical ESG factors

b) Performance of the corporate on the ESG factors compared with peers

c) Articulation of goals and strategies and achievability of the same



Inclusion of any meaningful ESG assessment as a part of credit ratings hinges on the quality of disclosures. Large Indian corporates have begun disclosing ESG-related data, with some of them even having adopted global standards such as the GRI.

CRISIL Ratings assesses the disclosure levels of a corporate to understand its focus on ESG. Comprehensive disclosure of key ESG parameters entails identification and tracking of the parameters — the first step in developing an ESG strategy.

Benchmarking performance of the corporate with its relevant peer-set forms the second step. This helps determine the company's performance levels and where it stands within the industry.

Since awareness of ESG parameters is still at a nascent stage in India, it is important to assess if corporates have identified certain ESG-related goals for themselves and put in place meaningful strategies to achieve them. The quantification of goals and their attainability in a time period needs to be evaluated. Analysis of corporates on these aspects helps determine the company's commitment, current performance, and future preparedness on ESG.

However, the ESG focus of corporates is getting sharper according to trends observed among the top 100 BSE-listed companies

For now, CRISIL Ratings will assess and highlight ESG factors for listed corporates that publish ESG data and lean on the capital markets and foreign investors for their funding requirements. This is because the initial impact of ESG factors on financial flexibility and, in turn, on their credit profile, is expected to be visible for these corporates over the medium term.

With improving information availability, integration of ESG in credit ratings is bound to see large-scale adoption.

CRISIL's ESG scoring of mutual funds

As sustainability increasingly becomes part of day-to-day conversations, ESG investing is gaining prominence among the investor community. In order to help mutual fund (MF) investors take informed decisions keeping sustainability in mind, CRISIL has generated asset-weighted ESG scores at the MF level.

Our in-house methodology considered only those funds with at least 75% of their February 2022 eligible portfolio[13] and at least 50% of their total assets under management (AUM) in companies covered by CRISIL ESG scores.

At the category level, we have analysed only those categories with at least 65% of their funds satisfying the above criteria. In all, we considered 16 MF categories – 10 equity and six debt – for calculation of the ESG scores.

CRISIL's ESG scoring at the MF level thus covers 354 schemes, or Rs 17.69 lakh crore of assets as of February 28, 2022.

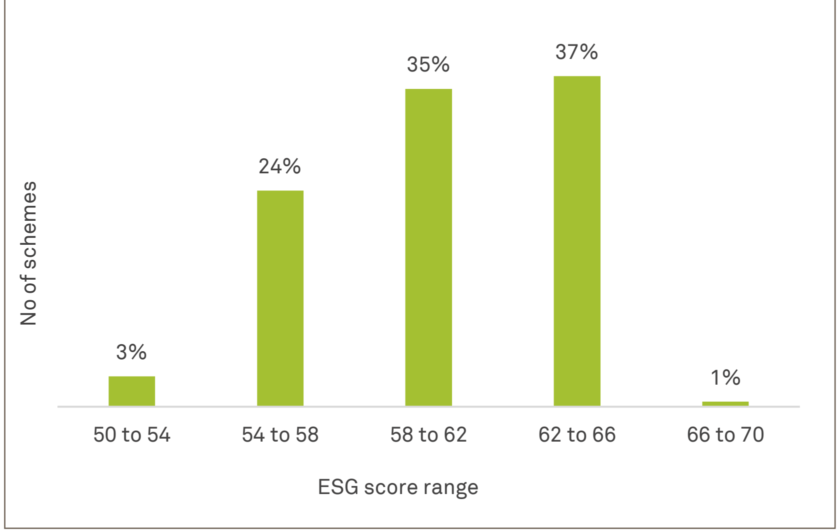
A quick perusal of these scores tells us:

Equity scores better than debt; large-cap funds lead

- The ESG scores at the scheme level across the 16 categories vary in a band of 51 to 67

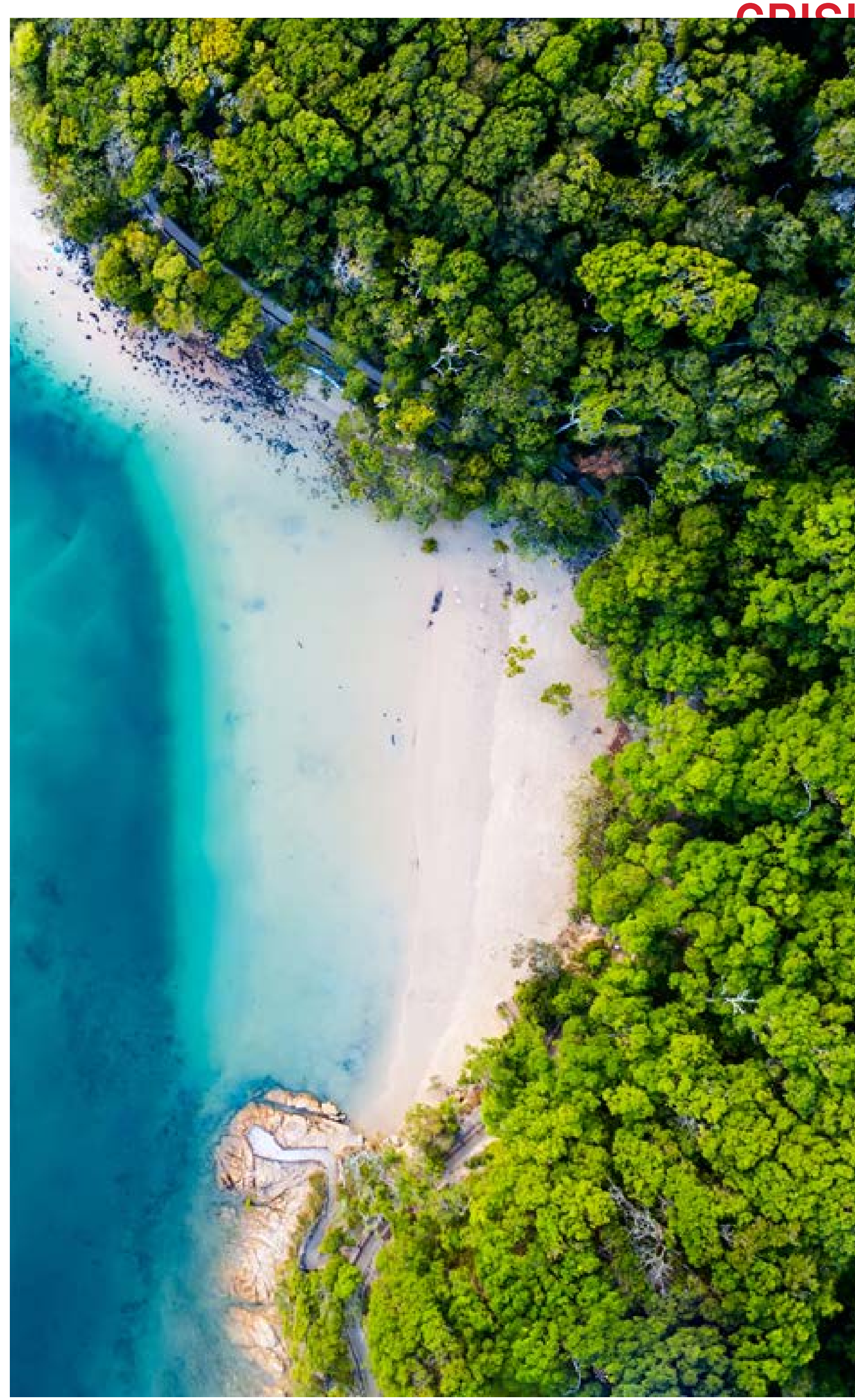
[13]Eligible portfolio excludes G-secs, T-bills, MF units, commodity, foreign equity, stock options, interest rate swaps, derivatives, and cash and equivalents, which do not qualify for an ESG score

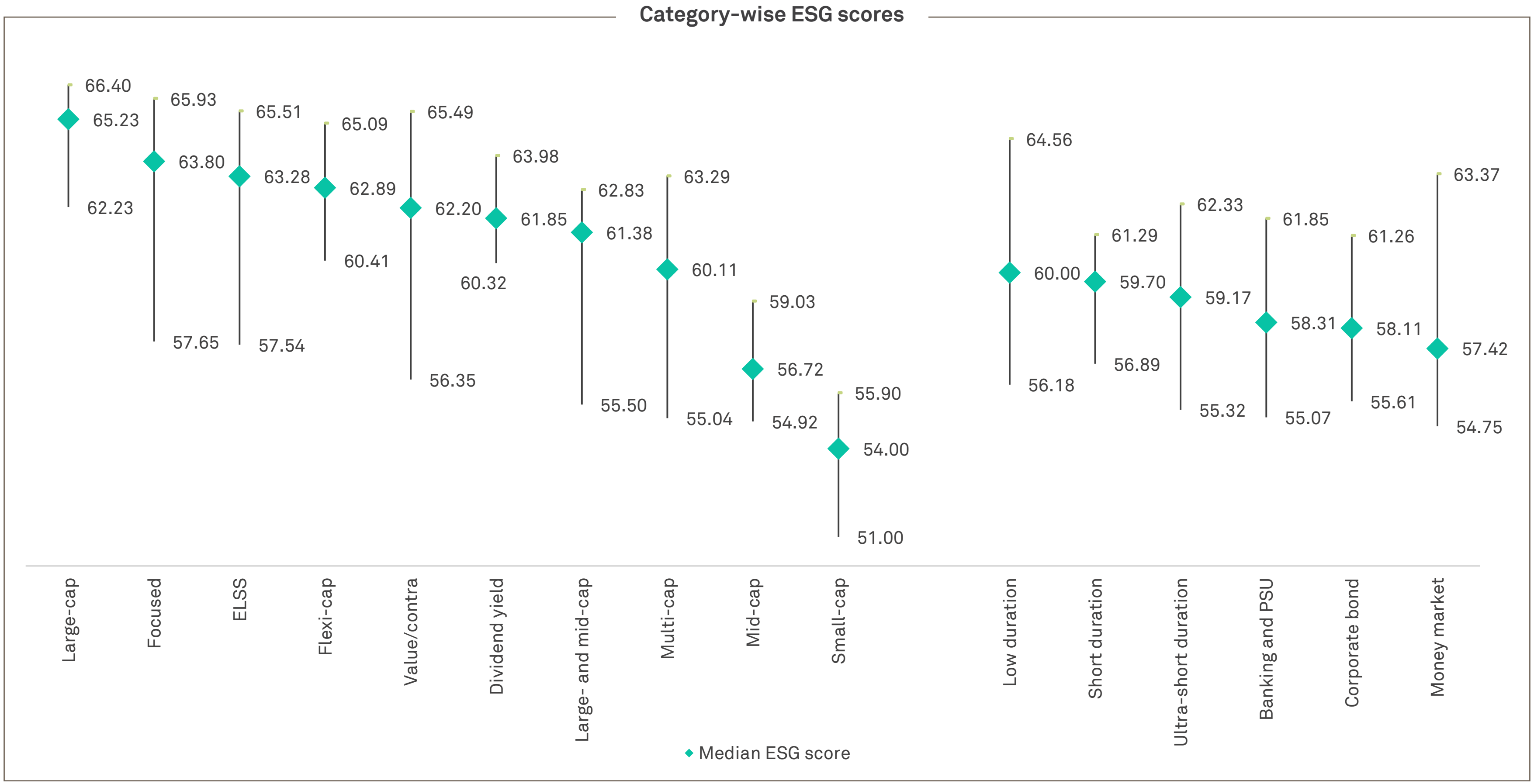
Frequency distribution of ESG scores



Source: CRISIL Research

- All equity categories, except small-cap and mid-cap, have higher median scores than the debt categories
- The large-cap category has the highest median ESG score (65.23) among all the 16 categories — having benefited from exposure to sectors with high ESG scores, such as banks and computer software
- The small-cap category has the lowest median ESG score (54.00). It also has the lowest median score on the E (41.44) and S (48.57) parameters, owing to exposure to sectors with low ESG scores such as specialty chemicals and auto ancillaries





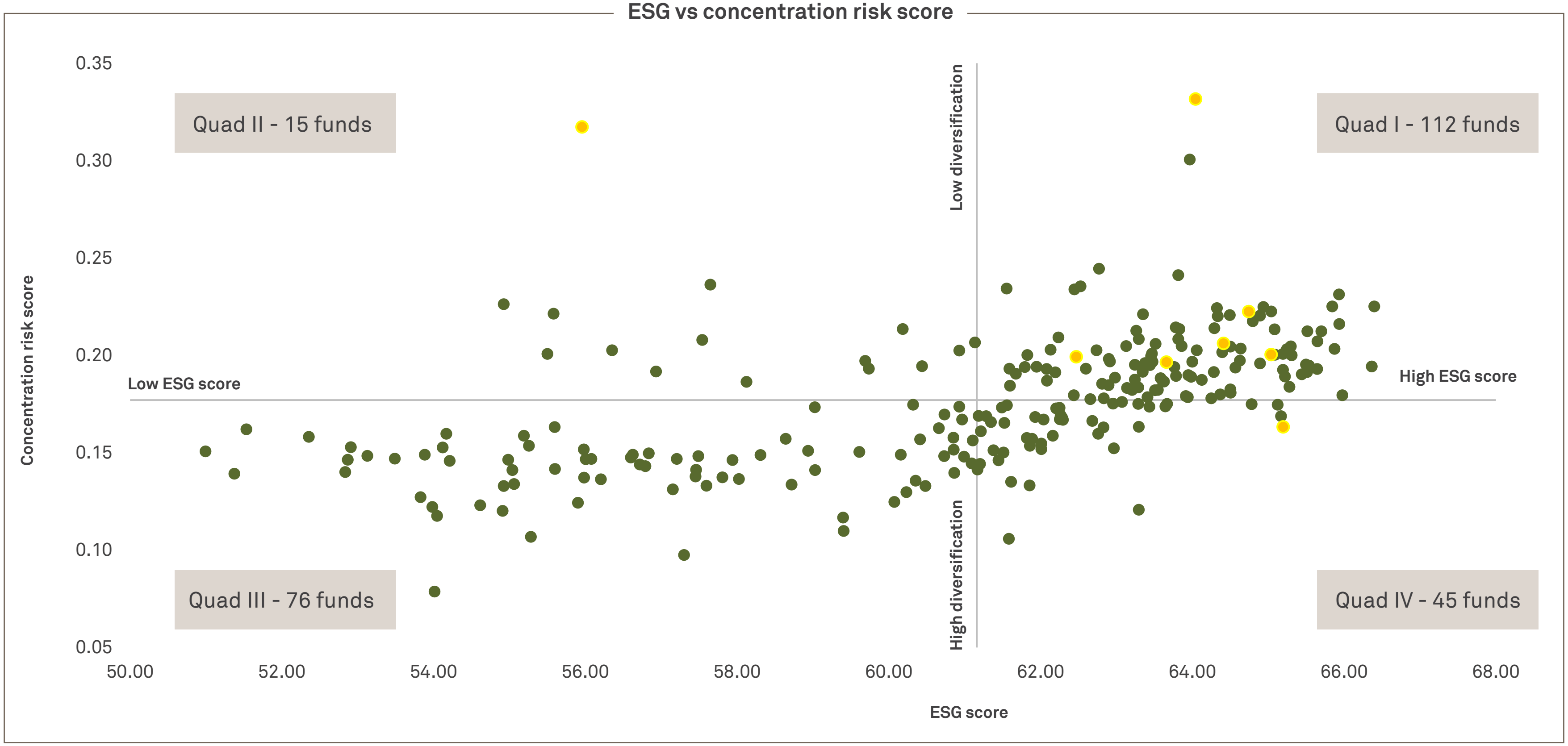
Note: Refer to Annexure 2 for parameter level (E, S and G) scores of all the 16 categories
Source: CRISIL Research

Schemes perform better on 'G'

- G parameter scores are higher than those of the E and S parameters for 97% of the schemes; scores of the E parameter are the lowest for 86% of the schemes
- The E parameter has the largest variation between the minimum and maximum scores, while the S parameter has the smallest

Higher ESG score trades off with diversification

- Equity schemes with higher-than-average ESG scores generally exhibited lower diversification with 112 of the 248 (45%) funds considered, falling in the first quadrant. On the other hand, 76 funds (31%) with lower-than-average ESG score exhibit better-than-average diversification



Notes: 1. Concentration risk score measures the concentration of portfolio. Higher the score, lower the fund diversification, and vice versa. 2. The quadrants are identified based on the average of ESG scores and concentration risk scores across categories. 3. Yellow dots indicate actively managed ESG-themed funds
Source: CRISIL Research

- Large-cap, equity-linked savings schemes (ELSS), flexi-cap, focused and value/contra categories dominate quadrant I. Large-cap and focused categories have 97% and 92% funds, respectively, that have higher ESG scores but less-than-average diversification
- Mid-cap, multi-cap and small-cap categories have majority funds in the third quadrant, indicating lower ESG scores, but better diversification. Small-cap category has 100% funds in the third quadrant, while mid-cap and multi-cap categories have 93% and 79% respectively
- An analysis of actively managed ESG-themed funds shows that all but one have higher ESG scores than the average score across the equity categories considered, but lower diversification

Significant portion of money in companies with high ESG scores

- MFs' exposure to companies in the 'leadership' category across schemes considered stood at Rs 2.29 lakh crore

- The schemes' exposure to companies in the 'strong' and 'adequate' categories were Rs 5.22 lakh crore and Rs 6.46 lakh crore, respectively
- Exposure to companies in the 'weak' and 'below average' categories totalled Rs 66,777 crore
- The 'leadership' companies were also among the major ESG contributors across most of the equity and debt categories

ESG funds in India have come a long way

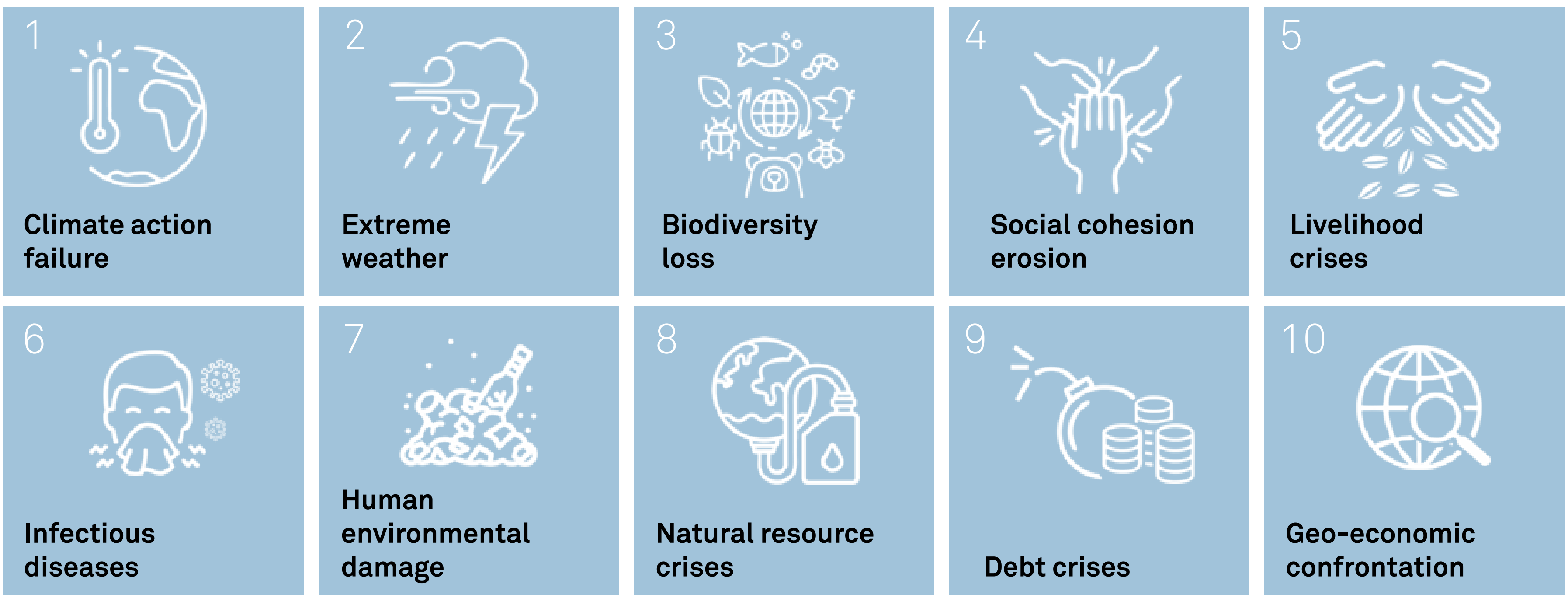
India's first ESG fund was launched in 1991. But it is only recently that such funds gained currency. Seven of the 10 currently operational ESG funds[14] were incepted in fiscal 2021. However, if the global trend is any indication, ESG asset growth in India should accelerate.

The combined AUM of the 10 ESG funds (including a fund of fund) was Rs 11,818 crore as on March 31, 2022, rising five-fold over the past three years. SBI Magnum Equity ESG Fund had the highest AUM (Rs 4,583 crore), followed by Axis ESG Equity Fund (Rs 1,897 crore) and Kotak ESG Opportunities Fund (Rs 1,619 crore).

In addition to special investment vehicles in the ESG segment, we also expect that adoption of a sustainable long-term approach to growth by the underlying companies would add to the share of sustainable assets managed by MFs.

Escalating E risks will further drive global sustainable flows

World over, environmental risks that predated the pandemic also continue to rise. In fact, the Global Risks Report 2022 of the World Economic Forum (WEF) predicts that environmental risks would hurt the global economy the most over the next 10 years.



Source: WEF Global Risks Perception Survey 2021-2022

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[14]Include exchange-traded funds and funds of funds

Rising environmental risks world over is translating to greater inflows into sustainable finance and investments. According to the Global Sustainable Investment Review 2020 (the latest available), global sustainable investments increased 15% to $35.3 trillion in 2020 in the five major markets – the US, Europe, Canada, Japan and Australia/ New Zealand – over 2018 levels. The share of sustainable investments in the total MF AUM grew to 35.9% from 33.4%

Global sustainable investing assets ($ billion)

Region	2016	2018	2020
Europe	12,040	14,075	12,017
US	8,723	11,995	17,081
Canada	1,086	1,699	2,423
Australasia	516	734	906
Japan	474	2,180	2,874
Total	22,839	30,683	35,301
Share of sustainable investments in AUM	27.9%	33.4%	35.9%

Source: Global Sustainable Investment Review 2020

CRISIL ESG fixed-income indices

CRISIL has just launched CRISIL IBX ESG Index - March 2026, which will track issuers with top ESG scores and thereby encourage sustainable investing in India.

As things stand, investors are increasingly applying ESG criteria to analyse and identify material risks and growth opportunities while making investment decisions.

CRISIL's ESG research, data, insights, assessments and solutions empower customers and stakeholders to make these decisions with conviction and contribute to sustainable progress globally.

CRISIL IBX ESG Index - March 2026 — the first in a series of ESG fixed-income indices CRISIL aims to roll out — is a 'roll-down target date maturity' index with a maturity of five years. Target date roll-down is a popular concept in the market today, as it offers visibility of likely yield for the given time horizon to the investors. It isolates the risk due to ESG and also offers a strategic product to the market.

A well-researched ESG-based index strategy offers investors an innovative product at a time when the market is on the lookout for diverse product offerings. The CRISIL ESG index gives investors an opportunity to bet on companies that handle their ESG responsibilities better.

Eleven equi-weighted issuers constitute the index. The constituents will be rebalanced annually on the basis of ESG scores.

CRISIL
An S&P Global Company

CRISIL IBX ESG Index - March 2026 portfolio

Issuer	ISIN	Final maturity date	Portfolio YTM as on May 13, 2022
Aditya Birla Finance Ltd	INE860H07CS9	20-Mar-26	7.97%
Bajaj Finance Ltd	INE296A07KU0	30-Mar-26	
Cholamandalam Investment & Finance Co. Ltd	INE121A07PL8	8-Jul-25	
Housing Development Finance Corporation Ltd	INE001A07ST9	25-Nov-25	
Indian Renewable Energy Development Agency Ltd	INE202E07062	24-Sep-25	
LIC Housing Finance Ltd	INE115A07IX0	3-Mar-26	
Mahindra & Mahindra Financial Services Ltd	INE774D08LO9	27-Oct-25	
Muthoot Finance Ltd	INE414G07ET1	18-Jun-25	
PNB Housing Finance Ltd	INE572E09320	17-Jan-26	
Shriram Transport Finance Co. Ltd	INE721A07KB7	27-Mar-26	
Sundaram Finance Ltd	INE660A07QP4	27-Nov-25	
Larsen & Toubro Ltd	INE018A08BA7	28-Apr-25	

Note: The inception date of the index is March 31, 2021
Source: CRISIL Research

Comparative yields

	CRISIL IBX ESG Index - March 2026	Edelweiss NIFTY PSU Bond Plus SDL Index Fund 2026 - Regular Plan - Growth	Nippon India ETF Nifty SDL - 2026 Maturity
Yield as on March 31, 2021	7.33%	6.08%	6.26%

Source: CRISIL Research

CRISIL 1Academy

CRISIL Certified
ESG Risk Analyst

Demand for ESG experts is booming across professional services.

These include finance and investment firms, and at companies that are required to compile and report their ESG data for a broad range of stakeholders, and align their strategies, relationships and operations accordingly.

For stakeholders, the arc of ESG obligations is expanding. As a result, investing continuously in internal capacity-building to conform to the evolving order has become vital.

Skilled ESG analysts and decision-makers are necessary to achieve the sustainability goals expected to be set, and met, by companies.

CRISIL understands this rising need, and has created a comprehensive, deep-domain training-cum-certification programme on ESG.

Learning outcomes

- Understand and appreciate the importance of ESG from a business/investor lens
- Develop knowledge of how ESG has evolved both globally and in India
- Ability to relate to ESG terminologies
- Understand key reporting frameworks
- Identify and analyse ESG material issues
- Create ESG risk assessment frameworks

Topics covered

- Introduction to ESG in business
- Evolution of ESG in India and worldwide
- Global ESG reporting frameworks
- Environment factors, including climate risk
- Social factors
- Governance factors
- ESG analysis and risk assessment frameworks

Format
Online self-paced interactive content

Duration
25 hours

Examination
2 hour online proctored exam

Certification
Certificate and Digital Badge awarded by CRISIL 1Academy

CRISIL's ESG risk assessment methodology

CRISIL's ESG scores are designed to support financial institutions and corporates to measure and monitor inherent ESG risks across their financial exposures – both equity and debt. They also provide standardised and sanitised ESG information, including benchmarks that can easily integrate into analysis and risk management processes.

We have used our proprietary ESG methodology to score 586 companies across 53 sectors. This evaluation is based on publicly available information released by the companies through their websites, exchange filings, annual reports, investor presentations, sustainability reports, CDP filings, etc. It also factors in other material ESG information available in the public domain through reliable sources, such as data reported by industry associations, regulators and various government agencies. The assessment is based on quantitative as well as qualitative disclosures.

Since this is an objective evaluation based on publicly available information, the quality of disclosures provided in the public domain is an important determinant of the ESG score. We strongly recommend and encourage all companies under our coverage to report maximum possible ESG-related information in the public domain. This is in sync with good governance principles and best practices around transparency – an important pillar of our ESG assessments.

Each company under our coverage is monitored on a continuous surveillance basis for ESG material events that could potentially lead to a change in scores.

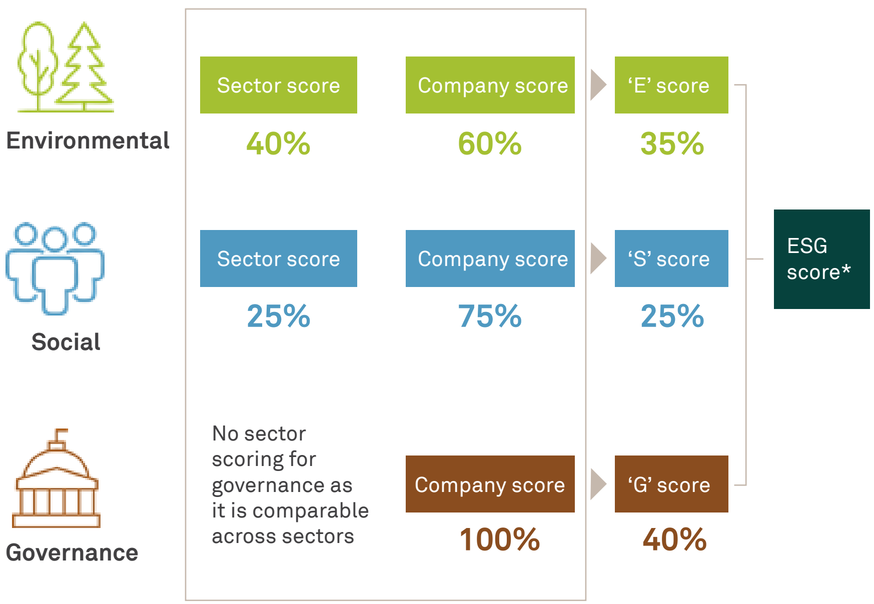
Scoring framework

To arrive at the overall company ESG score, relevant weights are assigned to E (35%), S (25%) and G (40%) attributes, to reflect the relative importance of factors.

Governance has been assigned the highest weightage as we believe the governance of a company is what drives E&S at companies. Companies are scored on a scale of 0-100, where 100 is the highest.

In case of E and S assessment, the final score is a combination of the company and the sector scores. For instance, the final E score for a company is arrived at by applying the sector E score overlay on the company E score. The company E score assesses its material environment parameters in relation to its peers within the sector. The sector E score is an indicator of how the sector fares relative to other sectors on various environment issues. This approach allows us the flexibility to bring sector-specific parameters into our assessment and make it extremely nuanced, while at the same time retaining the cross-sector comparability of the final scores.

Company assessment framework



CRISIL integrates over 100 parameters and 350+ data points across E, S and G components for evaluation.

Key E parameters assessed

Energy and emissions
- Intensity of CO_2 emission (Scope 1+2+3; kg CO_2 sector-specific metric)
- Intensity of air pollutants (includes SOx, NOx, SPM, and ODS)
- Emission trend (% reduction over past 3 years)
- Energy consumption (MWh per sector-specific metric)
- Share of renewable energy as % of total energy consumption
- Trend in capital investment in energy conservation equipment (for energy conservation equipment per sector-specific metric)

Waste generation and recycling
- Hazardous waste generation
- Waste recycling level
- Non-hazardous waste generation, eco-friendly materials used, and other waste management initiatives undertaken

Water use
- Water recycling as a proportion of overall water consumption
- Water consumption trend
- Water withdrawal trend (fresh water, groundwater, and saline water)

Resource use and biodiversity
- Raw material use efficiency (per sector-specific metric)
- Diversity in raw material sourcing
- Land use (forest, arable land) and natural resources use
- Biodiversity (operations at hotspots, presence of rare species, and impact due to operations)

Compliance/controversy checks – deflators
- Instances of emission-related show cause notices issued by regulatory authority
- Compliance with discharge/dumping of effluent/sludge as per norms prescribed by regulators, which includes safe disposal and sale to CPCB certified recyclers
- Instances of waste-related show cause notices issued by regulatory authorities
- Violation of environmental laws/notices issued by CRZ, NGT, etc.

Weightage for parameters varies depending on nature of sectors/business mix

Key S parameters assessed

Employee and worker management
- Gender diversity and attrition rate
- Sexual harassment (incidence and redressal rates)
- Safety (lost time injury frequency rate)
- Wage equality (CEO-to-median pay ratio)
- Training to employees – skill and safety (training hours per employee and % of employees trained)
- Permanent vs temporary employees
- Unionisation (employee participation in management-recognised employee unions)

Supply chain management
- Customer satisfaction – NPS, CSI, and feedback
- Customer complaint and redressal rates
- Product innovation (% of R&D expenditure)
- Vendor management – procurement from locals/MSMEs, fairness, ESG screening, and pending dues to MSMEs
- Ease of access – network and inclusion

Communities
- Employment generation
- Corporate social responsibility spend and taxes paid
- Grievance/complaint redressal, families affected because of company's projects, and compensation offered to the affected families

Compliance/controversy checks – deflators
- Child labour, discrimination, strikes, product recalls, irresponsible marketing (banned substance, minimum wages, and sale of sin goods), and non-compliance

Weightage for parameters varies depending on the nature of sectors/business mix

Key G parameters assessed

Board structure and functioning

1. Board composition
- Board skill matrix – competency evaluation and skill / functionality mapping
- % of non-executive directors on Board and committees
- Integrity – investigations or indictment by law enforcement agencies; debarring/suspension by authorities

2. Board independence
- Conflict of interest/segregated roles of chairman and CEO
- Degree of independence – background of independent directors – association with the company (ex-employee, independent consultant, executive at a parent/sister company, tenure)
- Independent chairman or lead independent director in case of executive chairman
- Role allocated to independent directors

3. Board functioning and experience
- No of Board/committee meetings held and attendance
- Independent directors' meeting without management
- Average Board tenure; directors with 10+ years tenure

Management track record and disclosures

1. Management track record and control
- Operating and net profit, market cap growth, sector outperformance
- Financial support to group/associate entity
- CEO tenure and number of Boards served on in past 1 year
- Shares pledged by promoter and remuneration

2. Disclosures (quality and timeliness)
- Key financial disclosures, quality of investor PPT, subsidiary reporting and disclosure, BRR/sustainability reporting, and endorsement of ESG principles and policies
- Tax disputes – longevity and quantum of dispute
- Involvement of auditors on non-audit assignments; fees paid and rationale for auditor resignation (if any)
- Complaints (customer, employee, whistle-blower, etc.)

3. Shareholder relations
- Disclosure of cross holdings, beneficial ownership details, investor complaints, resolution and outstanding, special rights
- Clearly articulated policies – dividend payout

Factoring in sector-specific nuances and materiality

The ESG risk assessment framework for each sector includes sector-specific parameters that have been developed based on our multi-decade experience in industry research as well as global reporting frameworks such as SASB, GRI and CDP. For a parameter to be considered material, CRISIL applies filters both from a risk perspective (how it may negatively impact a company's financial risk and return profile) as well as an impact perspective (how the issue may impact the country's ESG landscape). Weightages of individual parameters vary across sectors, depending on the materiality and relevance.

Examples of key sector-specific E metrics

Sectors	Parameters
Airlines	• Share of sustainable aviation fuel in overall fuel mix • Initiatives to use materials to make airplanes lighter
Cement	• Thermal substitution rate • Clinker ratio
Consumer retail	• Number of stores with green building certification • Product end-of-life

Examples of key sector-specific S metrics

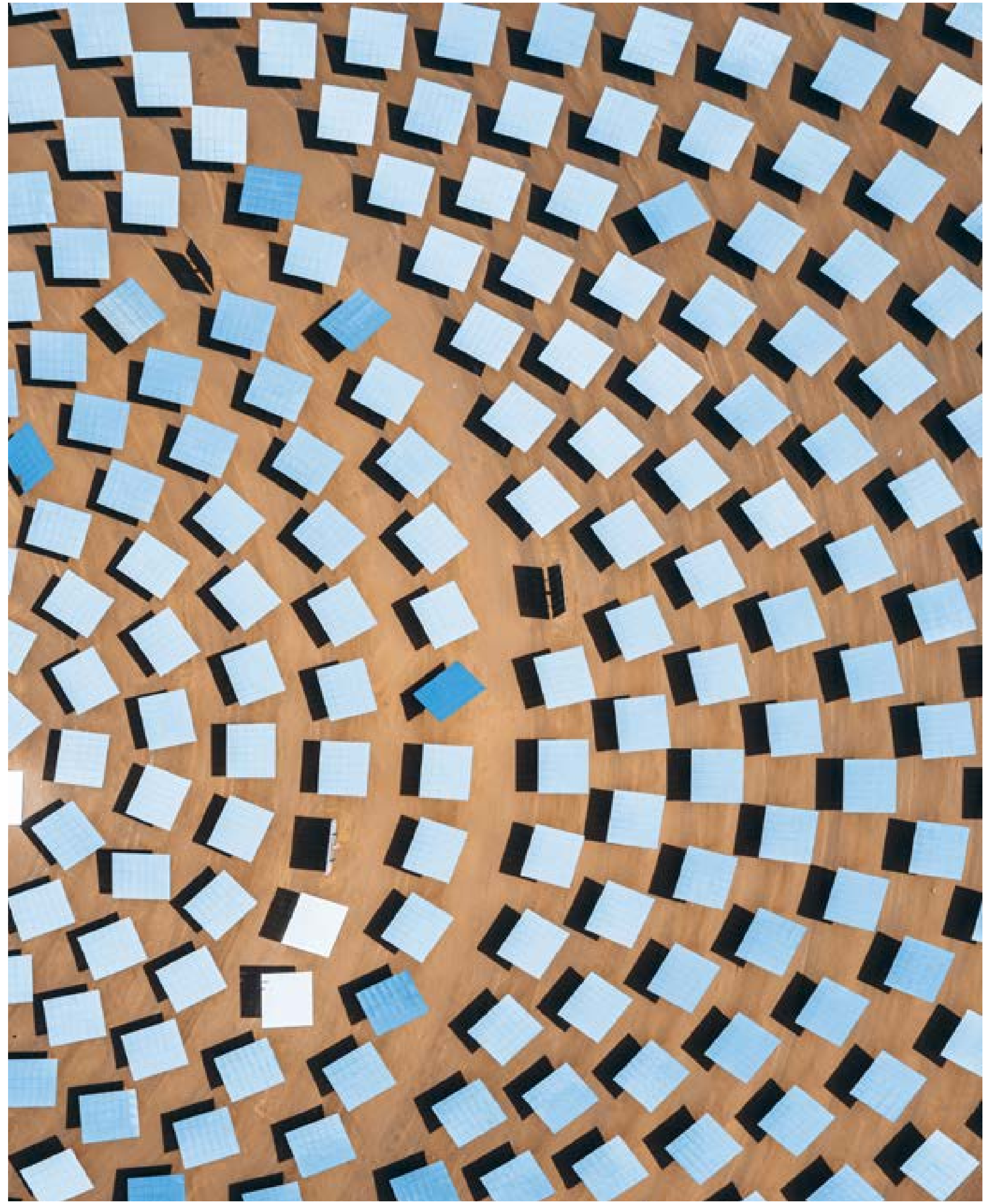
Sectors	Parameters
Airlines	• On-time performance (Bengaluru, Delhi, Hyderabad, and Mumbai) • % of passenger affected (of total pax carried) due to denial of boarding • % of passenger affected (of total pax carried) due to cancellation • Safety rating by independent authority • Aviation accidents/incidents reported (as % of total departure)
Pharma	• Adverse regulatory actions (number of warning letters and import alerts) • Number of Abbreviated New Drug Application (ANDAs) filed • Access to affordable healthcare
Lending	• % of rural branches • % of semi-urban branches • Advances given in India • Priority sector lending (%)

Handling non-availability or non-disclosure of quantitative information

Non-disclosure of quantitative information by a company for a specific parameter is assigned a default non-disclosure score, which is the lowest score possible for any parameter. In case there is some qualitative disclosure or material information available, CRISIL will notch up the score for that parameter depending on the specificity, level of depth, and action-oriented nature of the information.

Negative scores or deflators for compliance lapse, regulatory actions, controversies, or similar events

A negative score or a deflator is assigned to the overall E, S or G company score, where the company has been involved in any controversies, or there have been any compliance lapses or regulatory actions against it. Depending on the severity of the incident, the potential impact from an ESG risk perspective and recency of the event (3-5 years in most cases; 10 years in extremely controversial incidents with an overhang), appropriate deflators are assigned to the company's score. For instance, in case a company has been fined by the pollution control board for non-compliance with effluent treatment norms, we will assign a deflator to its E score, while any involvement in insider trading by the promoters or management would trigger a deflator to its G score.



Key negative parameters assessed for E, S and G

E

Compliance/controversy checks – deflators

- Penalties by regulator (or company discovered issue)
- Issues brought up by communities and notice issued by the regulator
- Issues brought up by communities and penalised by the regulator
- Notice issued by pollution control board

S

Compliance/controversy checks – deflators

- Sale of sin goods
- Community protest
- Employee protest
- Cyber security issues
- Product recalls
- Child labour
- Instances of irresponsible marketing as recorded by Advertising Standards Council of India

G

Compliance/controversy checks – deflators

- Regulatory action on directors
- Regulatory action on company
- Compliance lapse
- Fraud by employees or promoters
- Legal battle between promoters
- Adverse publicity/accusations by clients or other companies

Handling unique corporate structures

- **Holding companies and diversified companies:** Such companies are assessed on the basis of a 'sum of the parts' approach, considering the underlying companies or businesses to which they have exposures. The weights are assigned to specific subsidiaries or businesses considering their contribution to assets as well as revenue. In cases where the holding or diversified company has its own disclosures and the reporting boundary includes all its underlying companies or businesses, the overall score is calculated based on the parent company's disclosures.
- **Unlisted companies:** On environmental and social parameters, unlisted companies are scored the same way as listed companies. On governance, disclosure-related parameters have a lower weightage, since unlisted companies are not mandated by regulations to disclose them. However, all other governance parameters such as Board independence, gender diversity and attendance are scored in the same manner as listed companies. This is because governance best practices are equally important from an unlisted company perspective, especially keeping in mind the interests of debt investors and other stakeholders.
- **DFIs:** Since DFIs are government organisations and mandated by certain government legislations in terms of appointment of independent directors, we have considered government-nominee directors as independent directors in arriving at the governance scores. Most DFIs are not encouraged to appoint non-government-linked directors.

Output

The output of our scoring is a rationale report on each company which details the underlying reasons for the scores. It shows where the company leads or lags on certain parameters vis-à-vis its peers in the sector and gives insights on potential areas for improvement.

The ESG scores, along with the detailed rationale report, underlying data reported by the company, and benchmarks is available through CRISIL's online data and analytics platform, Quantix.

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CRISIL's ESG services

CRISIL's online ESG research platform powered by Quantix

B Underlying ESG data
- ESG-related data reported by companies
- Audit trail on ESG data of companies

A Deep-dive ESG Research
- Access to ESG scores
- Analysis and company-wise ESG rationale reports

C Benchmarks
- Comparison of companies based on ESG data

D Advanced search and alerts
- Pick companies based on ESG and financial criteria
- Receive alerts on changes in scores

Why CRISIL's ESG risk assessment framework is unique

- **Considers Indian specificities:** CRISIL's ESG framework has been thoughtfully designed contextualising India-specific nuances, including regulations, availability of information, and materiality of issues. The framework compares companies with their domestic peers; hence, the benchmarks and scale are India-specific in nature. Global benchmarks and best practices are tracked, but only as a guide to indicate the potential to improve from the current levels.
- **Uses relevant third-party data sources:** A significant number of ESG material data points are available through third-party sources but not necessarily reported by the company. We look for and weave them into our assessment framework. For instance, in case of the pharma sector, we look at information available through the United States Food and Drug Administration website for warning letters, import alerts, etc.
- **Assesses reporting boundaries:** In India, it is common for companies to report E and S data for only a part of their business operations. Hence, it becomes extremely critical to assess the reporting boundaries. In case the company does not report information for 100% of its operations, we notch down the score on the basis of the significance of the information reported.
- **Faces a rigorous committee process:** Given the substantial amount of subjective judgement required in ESG analysis, CRISIL prides itself on the in-house sectoral capabilities and rich databases we have collected over decades of research on Indian companies and sectors. To aid our assessment, every company goes through a rigorous committee process where sector leaders from the Industry Research team help strengthen the analysis, sector frameworks and parameters, and give additional insights based on their understanding of the companies/sectors.

Limitations of our framework

Disclosure bias: The ESG scores are based on publicly available information only. Therefore, they are subject to disclosure bias, i.e., companies that have better disclosures will potentially get higher scores as opposed to companies with no/poor disclosures, irrespective of their actual impact on E,S and G parameters. We do not work with any ESG information shared by companies on a bilateral basis. In order to uphold one of the key governance pillars of transparency for all stakeholders, we encourage companies to improve their public disclosures on ESG, which is also in line with SEBI's approach of implementing the BRSR.

Listed company bias: Listed companies are mandated by regulations to disclose more information in the public domain, especially for governance related parameters. This could result in unlisted companies receiving lower scores owing to limited disclosures. We expect unlisted companies to follow best practices when it comes to governance and disclosures. Within listed companies, we recognise that large-cap companies tend to get higher scores as they have access to more resources to both, make better disclosures and perform better. We expect the BRSR to resolve some of the disclosure-related limitations with regard to smaller companies.

Coverage bias: Our ESG benchmarks are a function of the number of companies covered in a particular sector and the quality and quantity of disclosures within the sector. Hence, a material change in the coverage or the disclosure of ESG information within a sector can lead to a deviation in scores on a year-on-year basis. However, over a period, as the coverage increases significantly and companies improve their disclosures, this bias is expected to fade. Companies are chosen mainly based on, but not limited to, three factors: market cap, occurrence in mutual funds, and debt issued.

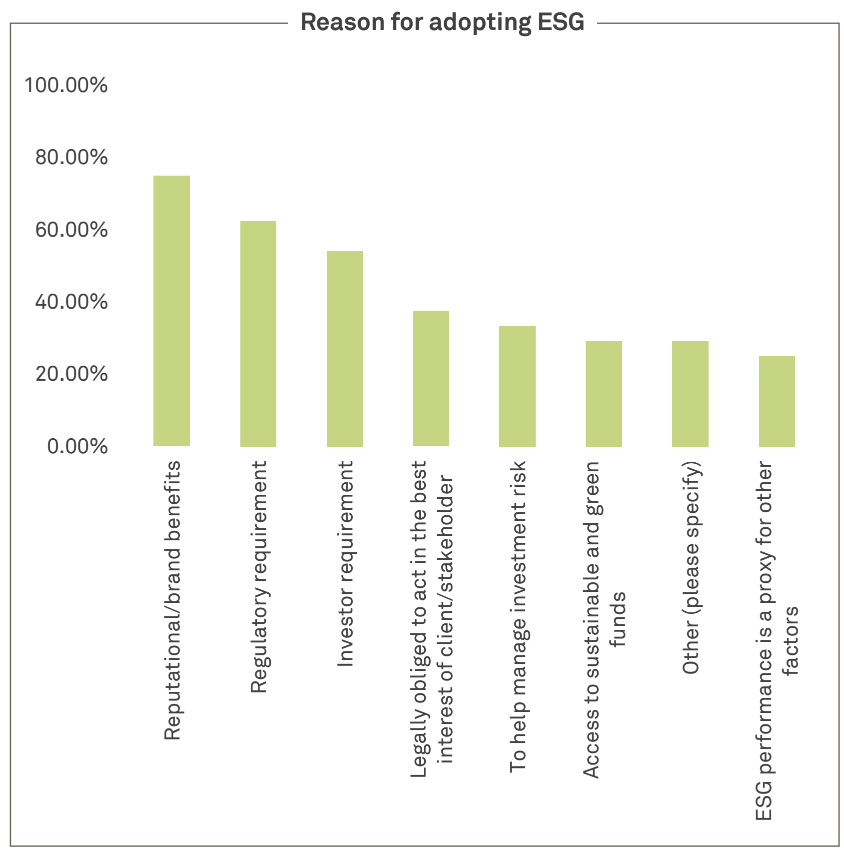
We will continue to fine-tune our approach and methodology keeping in mind availability of data as well as global best practices in the dynamic field of ESG.

Market voices

Takeaways from CRISIL's ESG corporate survey

Why do you consider ESG issues in your business decisions?

Nearly 75% of respondents believe ESG can yield reputational benefit; less than 25% see ESG performance as a proxy for sustainable growth.

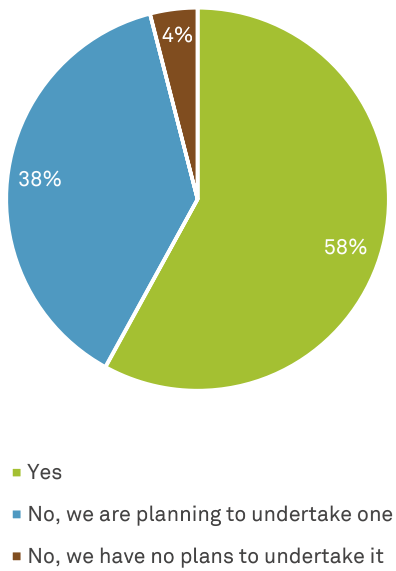


**Based on a survey of 24 corporates*
Source: CRISIL Research

In the past 12–24 months, has your business undertaken an assessment of its ESG risk?

Nearly 60% respondents have conducted some form of ESG risk assessments (materiality surveys, external audits, risk mapping).

ESG risk assessment (in the past 12-24 months)

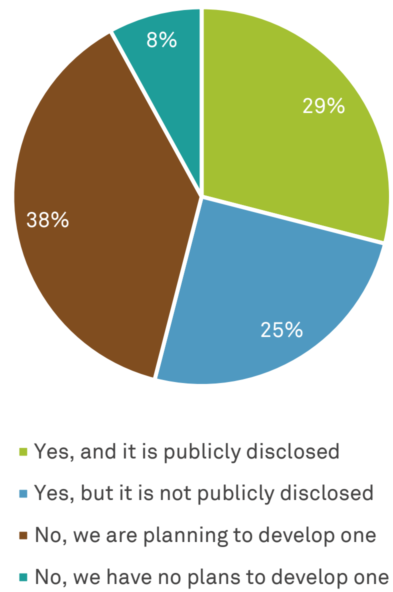


Source: CRISIL Research

Does your business currently have a climate risk plan and strategy?

Nearly 55% of corporates already have some form of climate risk plan and strategy and another 38% are planning to formulate one.

Climate risk plan and strategy

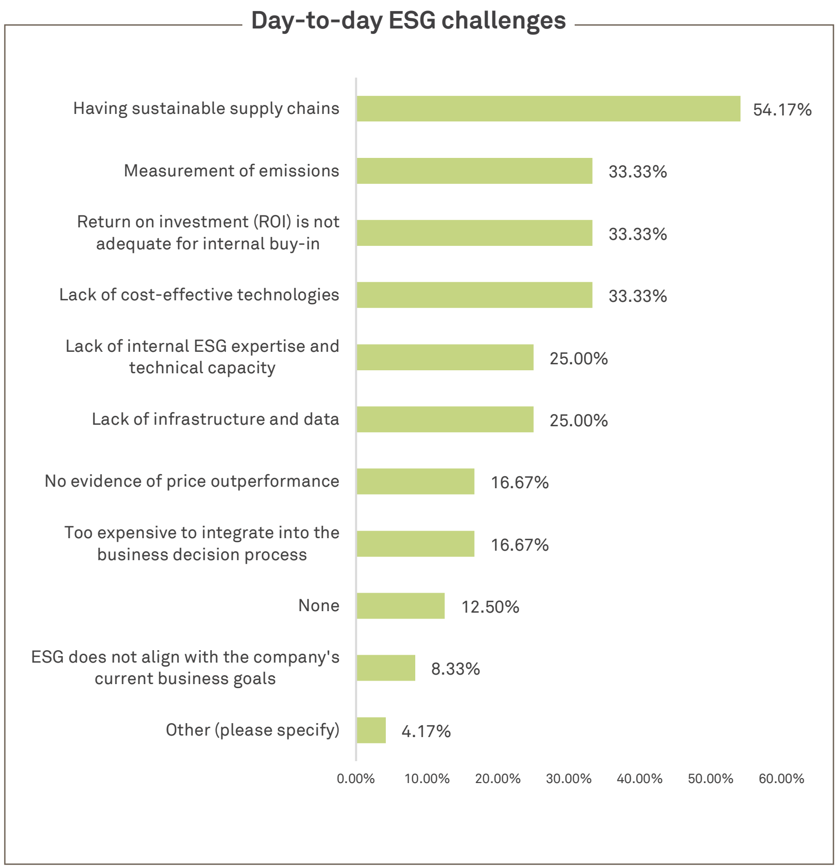


Source: CRISIL Research

CRISIL
An S&P Global Company

What are the challenges you face while implementing ESG in day-to-day operations and decision making?

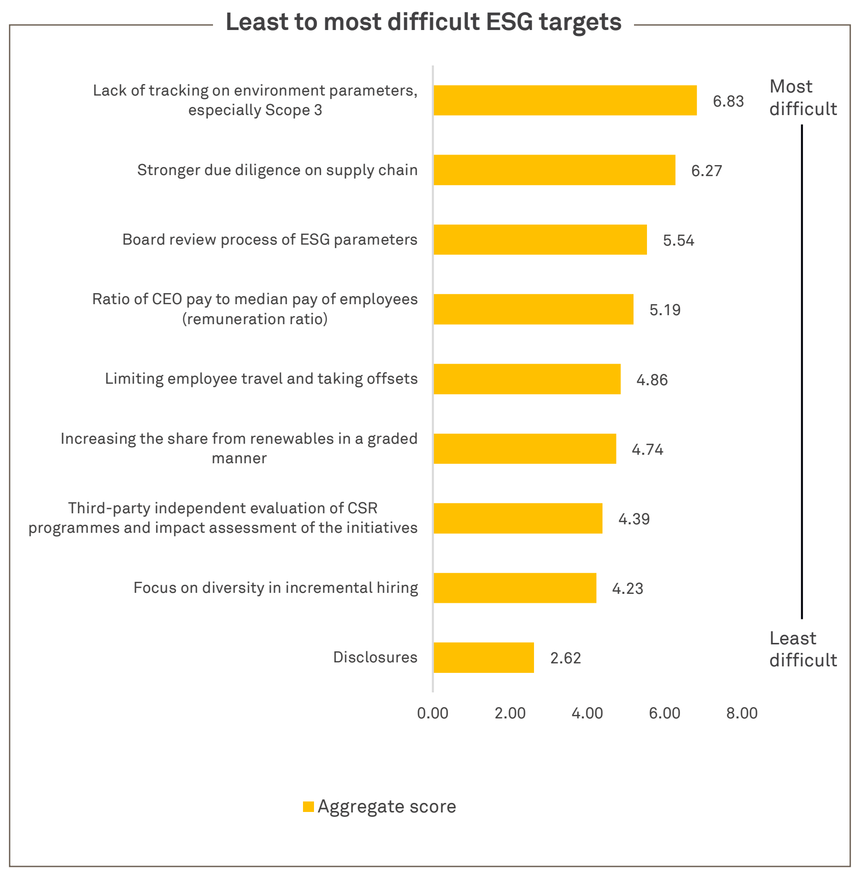
Sustainable supply chain, measurement of emission, and inadequate ROI for an internal buy-in among key ESG-related challenges.



Source: CRISIL Research

Rank the following ESG targets on a scale of 1 to 10, going from least difficult to most difficult

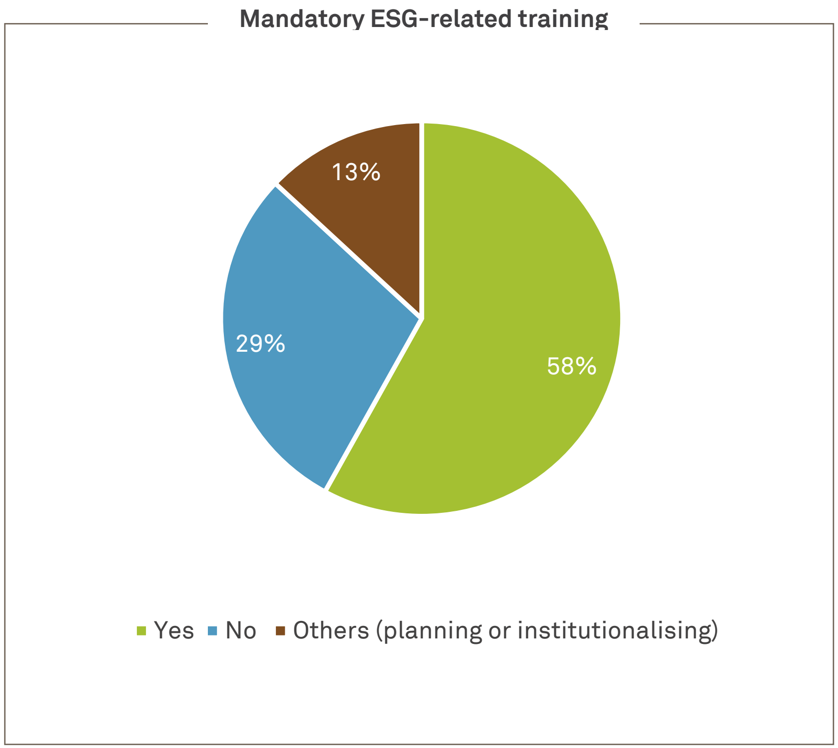
Tracking environmental parameters, supply chain due diligence most difficult; diversity focus in new hiring, disclosures least difficult.



Source: CRISIL Research

Does your organisation's training calendar include mandatory ESG-related topics for employees?

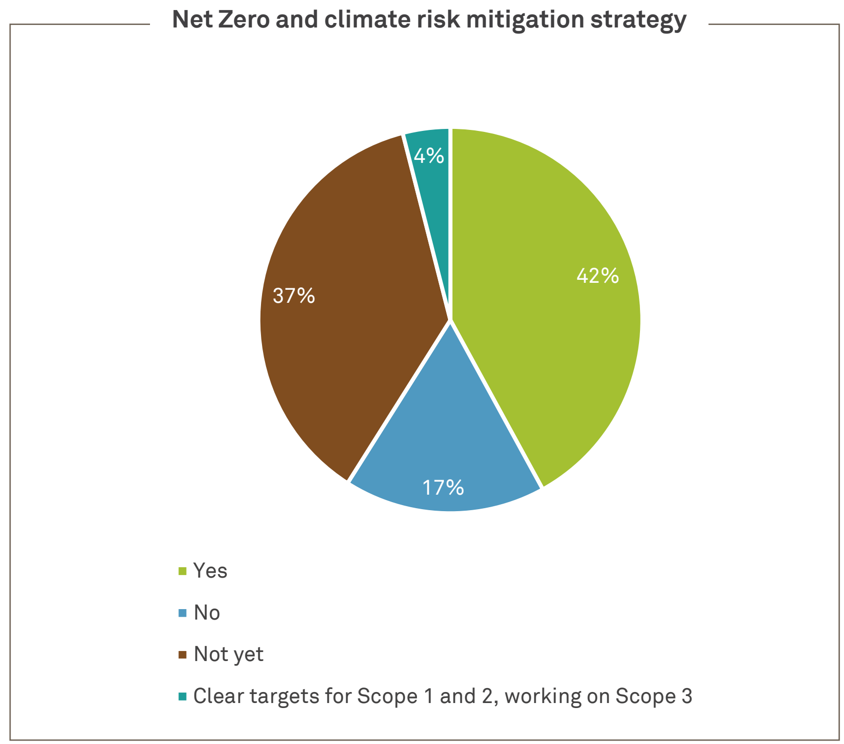
About 60% of respondents included mandatory ESG-related training on their agenda.



Source: CRISIL Research

Have you made your Net Zero and climate risk mitigation strategy?

Only 40% respondents have set an organization-wide strategy for Net Zero.

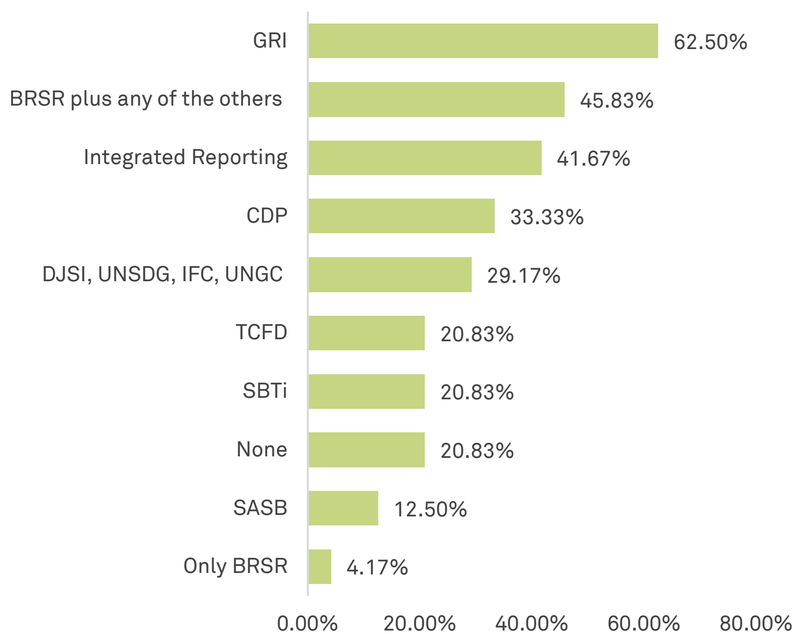


Source: CRISIL Research

Which of the following ESG/sustainability reporting standards do you follow?

Nearly half the respondents are likely to go beyond BRSR; GRI and Integrated Reporting most popular among respondents.

Reporting standard preferred

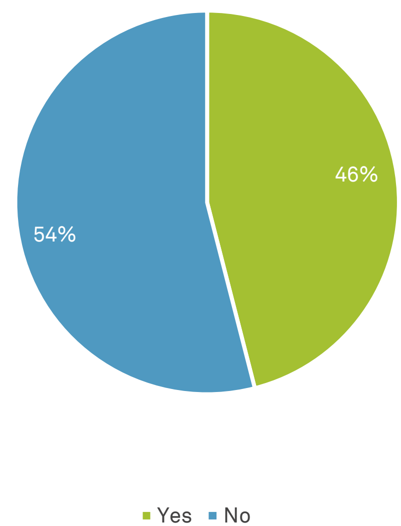


Source: CRISIL Research

Do you report for all subsidiary companies in which you have operating control?

More than half the respondents are not yet fully reporting for all their subsidiaries.

Reporting for subsidiaries in which company has operating control

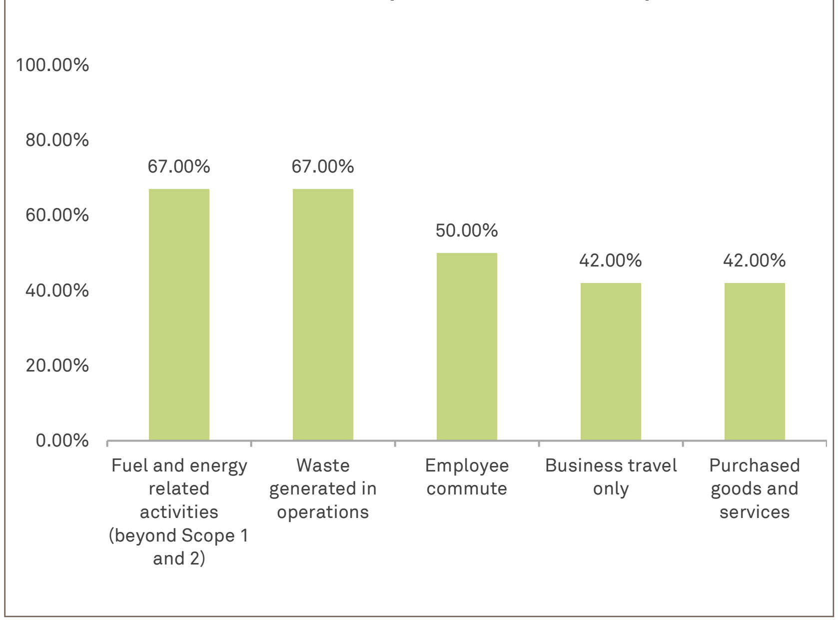


Source: CRISIL Research

Which of the following parameters are you tracking and reporting on for your Scope 3 emissions?

Purchased goods and services continues to have a low share in Scope 3 emissions tracking.

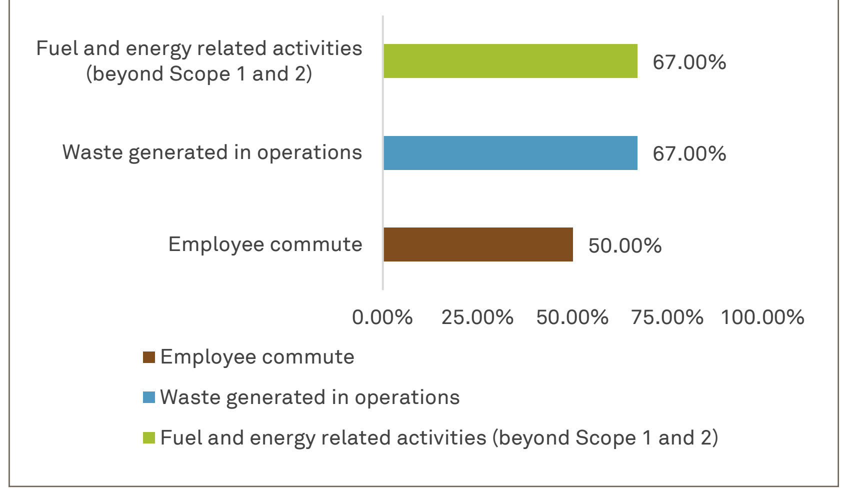
The five most monitored parameters under Scope 3 (%)



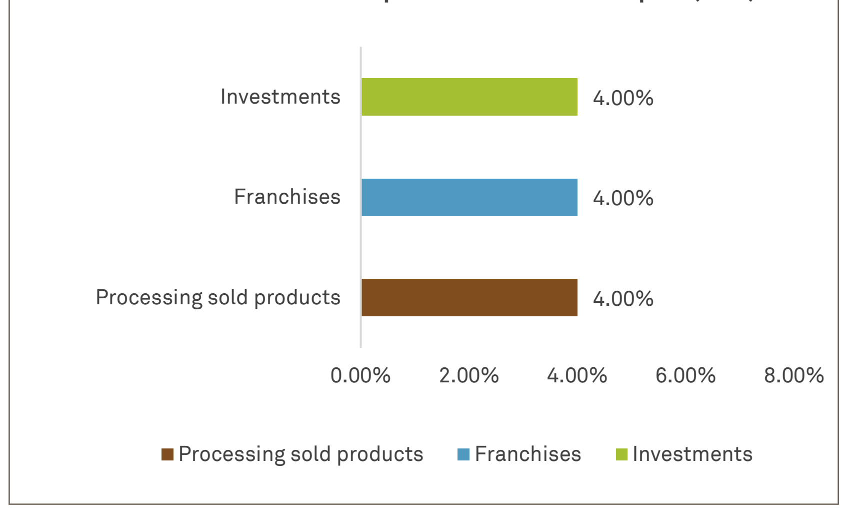
Source: CRISIL Research

Investments and sold products processing continues to have a low share in Scope 3 emissions tracking

Top-3 most monitored parameters under Scope 3 (in %)



Bottom-3 least monitored parameters under Scope 3 (in %)

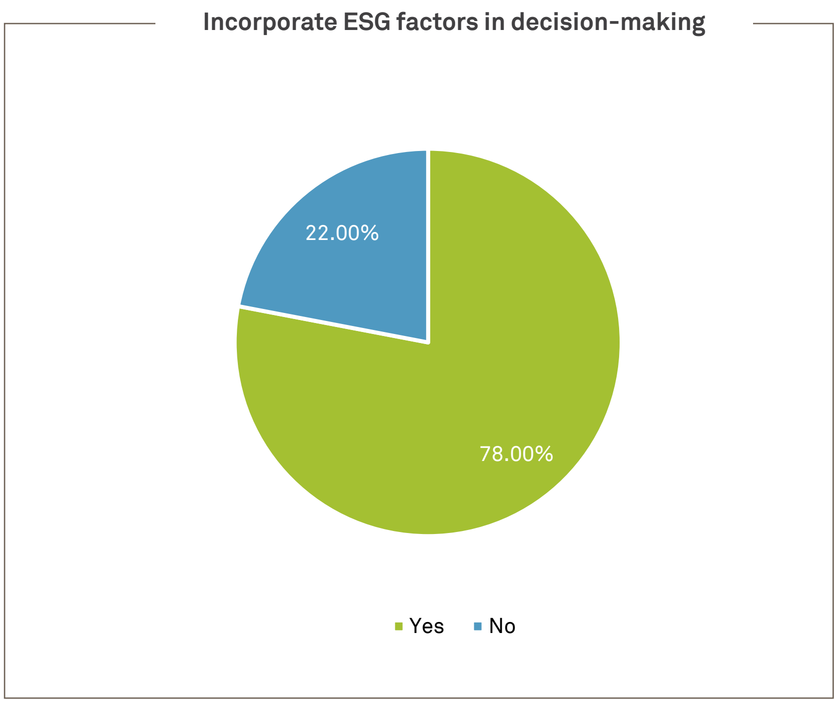


Source: CRISIL Research

Takeaways from CRISIL's ESG investor survey

Do you consider ESG factors in decision-making?

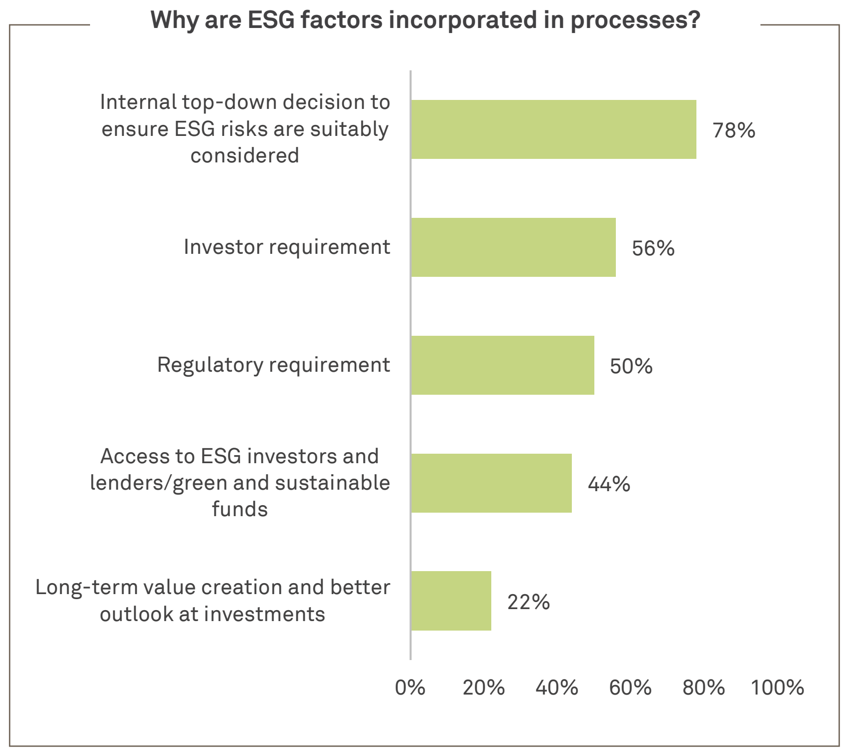
Nearly 80% of Indian investors have started to consider ESG aspects in their decision-making processes.



**Based on a survey of 18 investors*
Source: CRISIL Research

What are the reasons for incorporating ESG in your processes?

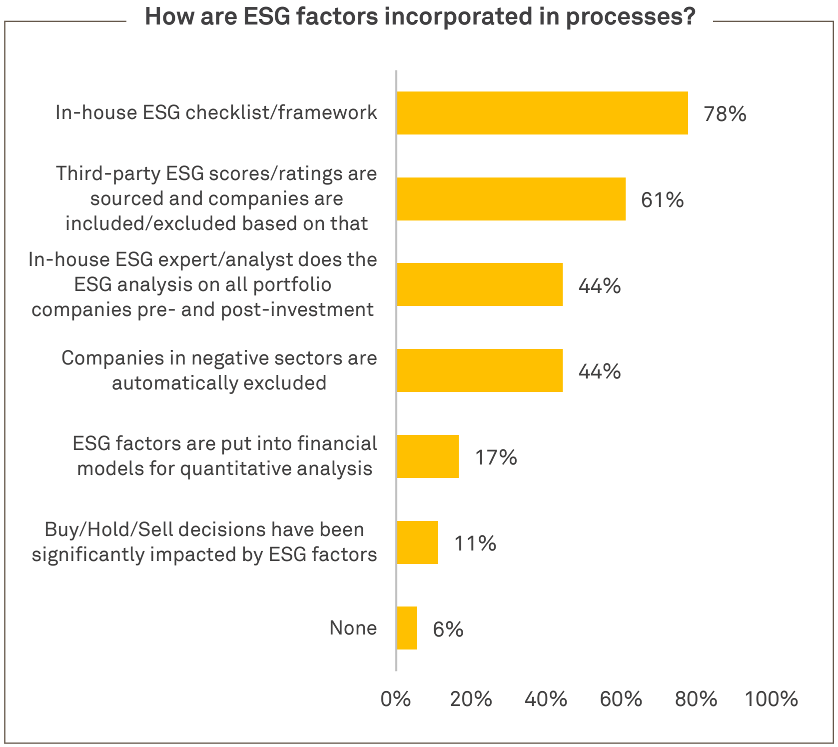
Around 80% of investors in India consider ESG for top-down risk management. About 22% associate it with long-term value creation and better investment outlook.



Source: CRISIL Research

How are ESG factors incorporated in your processes?

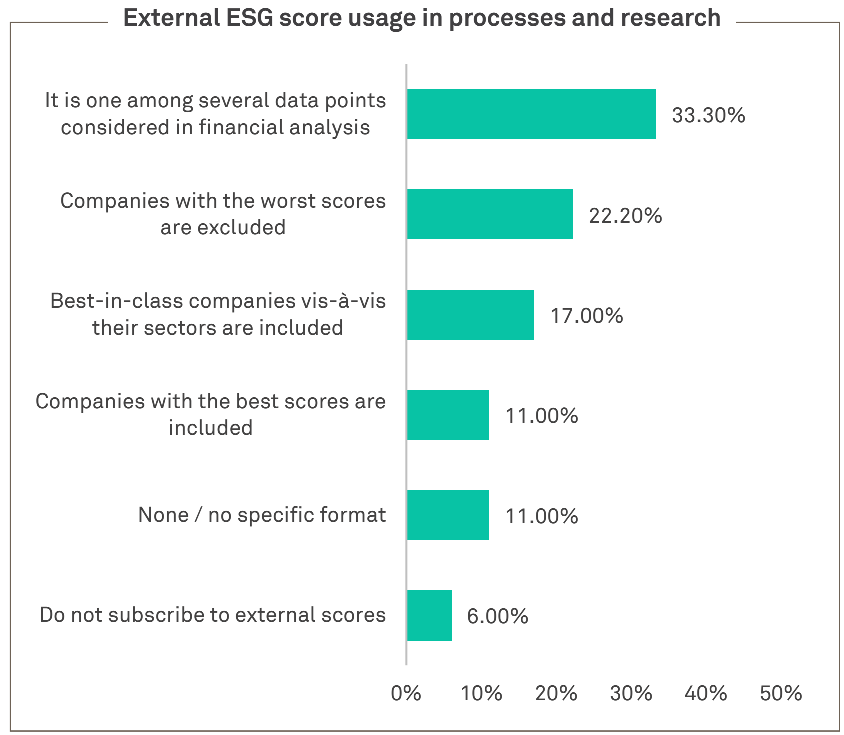
Around 80% of investors use an ESG framework for assessments. A fair majority also use third-party scoring for inclusion/exclusion criteria.



Source: CRISIL Research

How are external ESG scores used in your processes and research?

Around 33% of investors use external ESG scores for financial analysis. A few also use the worst-score exclusion criteria among others.

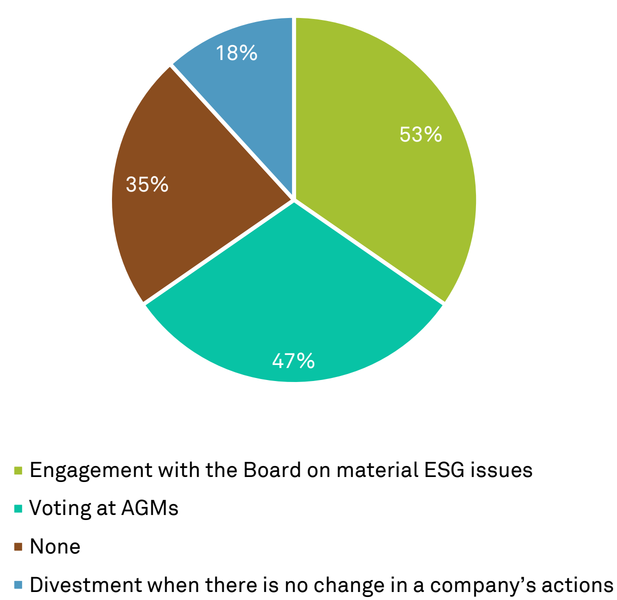


Source: CRISIL Research

What type of active ownership strategies do you implement with your portfolio companies?

Around 53% of investors aim for Board engagement on material ESG topics. A fair majority also use voting during AGMs as a form of active ownership.

Active ownership strategies in portfolio companies

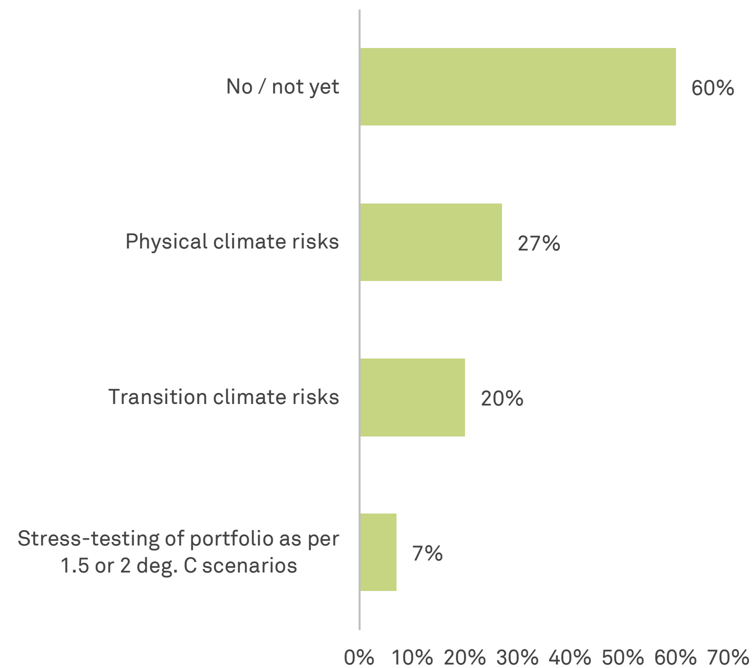


Source: CRISIL Research

Have you analysed the risks in, or stress-tested, your portfolio?

Indian investors are yet to acclimatise themselves on risk assessment, or stress-testing, for their portfolios.

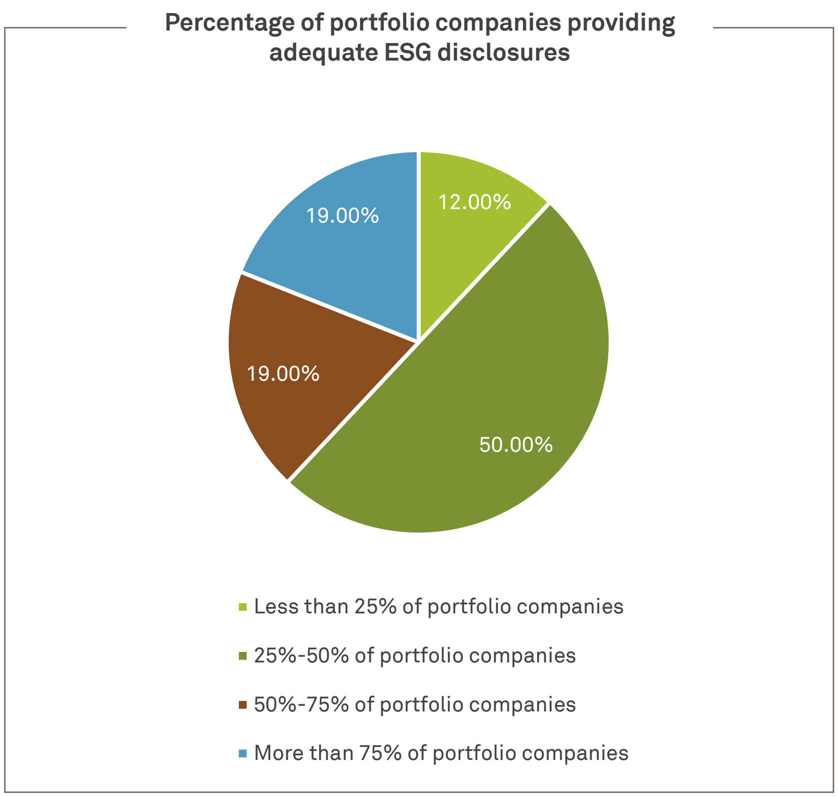
Risk assessment / stress-testing of portfolio



Source: CRISIL Research

What proportion of the companies in your portfolio provides adequate ESG disclosures?

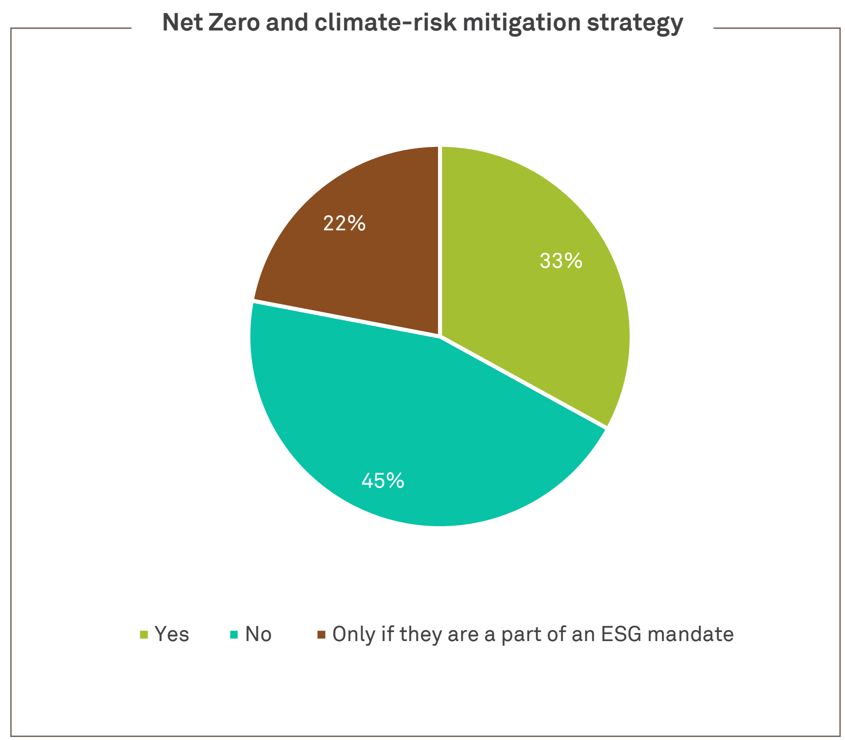
Portfolio companies have hit the mid-range mark in terms of satisfactory ESG disclosures.



Source: CRISIL Research

Would you sacrifice returns in the short term for a more ESG-compliant portfolio or in pursuit of ESG targets?

Majority of investors are unwilling to sacrifice short-term returns to achieve a more compliant portfolio – unless linked to an ESG mandate.



Source: CRISIL Research

When it comes to ESG reporting, what kind of disclosures are you seeking from the company?

Investors look for material business issues, and short- to long-term strategies from companies in their ESG disclosures.

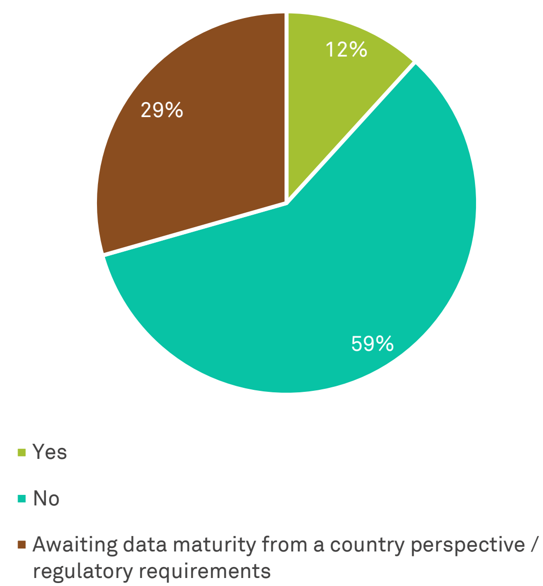
Investor requirements from companies in their ESG disclosures

Source: CRISIL Research

Do you report your portfolio's emissions as a part of your Scope 3? If not, what are the reasons?

Majority of investors are yet to evolve disclosures for Scope 3-financed emissions from their portfolio.

Disclosures on Scope-3-financed emissions from portfolio

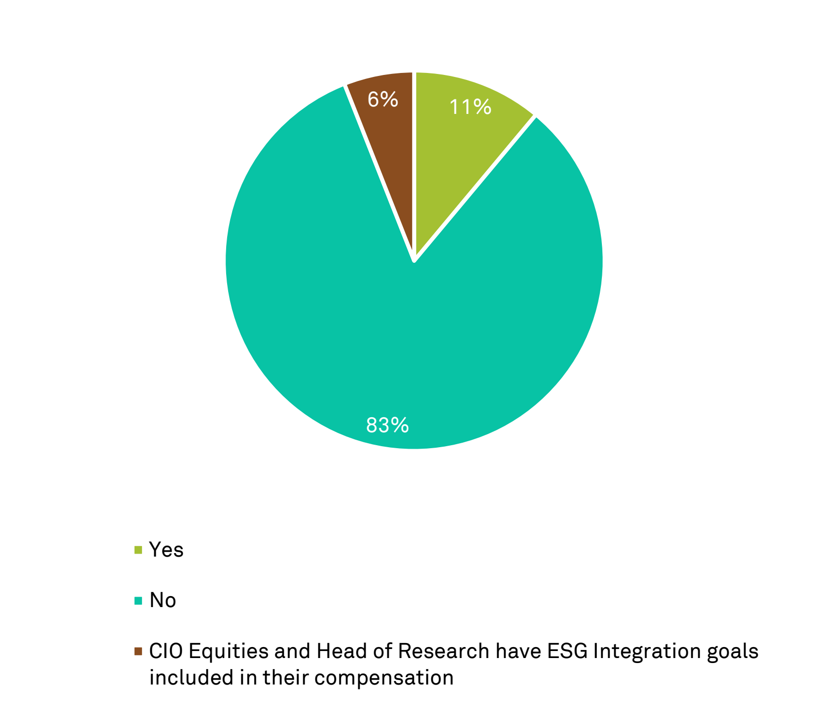


Source: CRISIL Research

Are ESG factors considered in executive compensation for the CEO/KMPs in your company?

ESG factors in India are yet to be linked to CEO/KMP compensation.

ESG factors linked to executive compensation for CEO/KMP



Source: CRISIL Research

Annexure 1

ESG scores (based on fiscal 2021 data)

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
3M India Ltd	Industrial	Listed	41	46	69	54	Adequate
Aadhar Housing Finance Ltd	Lending	Unlisted	62	53	64	61	Strong
Aarti Industries Ltd	Chemicals	Listed	42	60	59	53	Adequate
Aavas Financiers Ltd	Lending	Listed	62	59	72	66	Strong
ABB India Ltd	Industrial	Listed	48	51	70	58	Adequate
Abbott India Ltd	Pharma	Listed	60	62	70	65	Strong
ACC Ltd	Cement	Listed	53	52	71	60	Adequate
Action Construction Equipment Ltd	Industrial	Listed	36	38	74	52	Adequate
Adani Enterprises Ltd	Logistics	Listed	33	52	50	44	Below average
Adani Green Energy Ltd	Power - renewable	Listed	74	57	64	66	Strong
Adani Ports and Special Economic Zone Ltd	Transport infrastructure	Listed	33	57	57	48	Adequate
Adani Power Ltd	Power - thermal	Listed	47	51	62	54	Adequate
Adani Total Gas Ltd	Oil and gas - gas	Listed	45	51	70	57	Adequate
Adani Transmission Ltd	Power - T&D	Listed	61	57	65	62	Strong
Aditya Birla Capital	Holding	Listed	69	56	69	66	Strong
Aditya Birla Fashion and Retail Ltd	Consumer retail	Listed	57	56	68	61	Strong
Aditya Birla Finance Ltd	Lending	Unlisted	62	59	62	61	Strong
Aditya Birla Housing Finance Ltd	Lending	Unlisted	62	56	69	63	Strong
Aditya Birla Sun Life AMC Ltd	Financial services	Listed	48	48	68	56	Adequate
Advanced Enzyme Technologies Ltd	Pharma	Listed	32	54	70	53	Adequate
Affle India Ltd	IT	Listed	43	52	73	57	Adequate
Ahluwalia Contracts (India) Ltd	Construction EPC	Listed	30	45	56	44	Below average
AIA Engineering Ltd	Heavy engineering	Listed	52	46	76	60	Adequate

*Companies that have not been scored as compared to last year's coverage, owing to unavailability of sustainability reports as of April 2022: Bharat Heavy Electricals Ltd, Apollo Hospitals Enterprises Ltd, Godrej Properties Ltd, National Aluminium Co. Ltd, NMDC Ltd, Oil And Natural Gas Corporation Ltd, Oil India Ltd, Pidilite Industries Ltd, SRF Ltd
Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Ajanta Pharma Ltd	Pharma	Listed	33	58	72	55	Adequate
Akzo Nobel India Ltd	Paints	Listed	37	52	66	52	Adequate
Alembic Ltd	Real estate	Listed	34	32	63	45	Below average
Alembic Pharmaceuticals Ltd	Pharma	Listed	36	56	71	55	Adequate
Alkem Laboratories Ltd	Pharma	Listed	46	54	74	59	Adequate
Amara Raja Batteries	Batteries	Listed	32	45	70	50	Adequate
Amber Enterprises India Ltd	Durables and electricals	Listed	46	41	71	55	Adequate
Ambuja Cement Ltd	Cement	Listed	50	58	71	61	Strong
Angel One Ltd	Financial services	Listed	43	49	74	57	Adequate
Apar Industries Ltd	Industrial	Listed	56	48	68	59	Adequate
APL Apollo Tubes Ltd	Metals	Listed	40	43	72	54	Adequate
Apollo Tyres	Tyre	Listed	43	50	66	54	Adequate
Arvind Fashion Ltd	Consumer retail	Listed	39	47	62	50	Adequate
Ashok Leyland Ltd	Auto OEM	Listed	51	49	74	60	Adequate
Ashoka Buildcon Ltd	Transport infrastructure	Listed	21	42	58	41	Below average
Asian Paints Ltd	Paints	Listed	61	59	80	68	Strong
Aster DM Healthcare Ltd	Healthcare	Listed	64	56	69	64	Strong
Astral Poly Technik Ltd	Building material	Listed	57	49	72	61	Strong
AstraZeneca Pharma India Ltd	Pharma	Listed	39	60	77	59	Adequate
Atul Ltd	Chemicals	Listed	25	45	57	43	Below average
AU Small Finance Bank Ltd	Lending	Listed	60	60	77	67	Strong
Aurobindo Pharma Ltd	Pharma	Listed	54	60	69	61	Strong
Avenue Supermarts Ltd	Multi-brand retail	Listed	38	39	69	50	Adequate
Axis Bank Ltd	Lending	Listed	68	63	79	71	Leadership
Axis Finance Ltd	Lending	Unlisted	59	48	57	55	Adequate
Bahadur Chand Investments Pvt Ltd	Holding	Unlisted	60	57	34	49	Adequate
Bajaj Auto Ltd	Auto OEM	Listed	40	47	70	54	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Bajaj Consumer Care Ltd	FMCG	Listed	40	51	71	55	Adequate
Bajaj Electricals Ltd	Durables and electricals	Listed	38	42	61	48	Adequate
Bajaj Finance Ltd	Lending	Listed	63	64	71	67	Strong
Bajaj Finserv Ltd	Holding	Listed	60	61	69	64	Strong
Bajaj Holdings & Investment Ltd	Holding	Listed	43	48	69	55	Adequate
Bajaj Housing Finance Ltd	Lending	Unlisted	64	55	64	62	Strong
Balkirshna Industries	Tyre	Listed	32	46	72	51	Adequate
Balrampur Chini Mills Ltd	Sugar	Listed	43	47	76	57	Adequate
Bandhan Bank Ltd	Lending	Listed	64	64	75	68	Strong
Bank of Baroda	Lending	Listed	54	64	66	61	Strong
Bank of India	Lending	Listed	60	67	65	64	Strong
Bank of Maharashtra	Lending	Listed	59	60	60	60	Adequate
BASF Ltd	Chemicals	Listed	27	43	68	48	Adequate
Bata India Ltd	Consumer retail	Listed	36	50	69	53	Adequate
Bayer Cropscience Ltd	Chemicals	Listed	33	44	70	51	Adequate
BEML LTD	Industrial	Listed	37	51	67	53	Adequate
Berger Paints India Ltd	Paints	Listed	39	47	73	55	Adequate
Bharat Dynamics Ltd	Industrial	Listed	39	56	57	51	Adequate
Bharat Electronics Ltd	Industrial	Listed	46	54	69	57	Adequate
Bharat Forge Ltd	Auto ancillaries	Listed	55	54	55	55	Adequate
Bharat Oman Refinery Ltd	Oil and gas - OMC	Unlisted	26	41	56	42	Below average
Bharat Petroleum Corporation Ltd	Oil and gas - OMC	Listed	46	59	68	58	Adequate
Bharat Sanchar Nigam Ltd	Telecom	Unlisted	38	45	58	48	Adequate
Bharti Airtel Ltd	Telecom	Listed	60	52	73	63	Strong
Bharti Telecom Ltd	Holding	Unlisted	60	52	52	55	Adequate
Bhopal Dhule Transmission Company Ltd	Power - T&D	Unlisted	36	33	50	41	Below average
Biocon Ltd	Pharma	Listed	49	63	73	62	Strong

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Birla Corporation Ltd	Cement	Listed	30	40	66	47	Adequate
Birla Group Holdings Pvt Ltd	Holding	Unlisted	50	56	30	43	Below average
Birlasoft Ltd	IT	Listed	51	54	77	62	Strong
Blue Dart Express Ltd	Logistics	Listed	38	52	71	55	Adequate
Blue Star Ltd	Durables and electricals	Listed	38	48	71	54	Adequate
Bosch Ltd	Auto ancillaries	Listed	48	47	66	55	Adequate
Brigade Enterprises Ltd	Real estate	Listed	53	47	66	56	Adequate
Britannia Industries Ltd	FMCG	Listed	62	59	74	66	Strong
Brookfield India Real Estate Trust	REIT	Listed	39	25	56	42	Below average
Burger King India Ltd	Food retail	Listed	33	42	74	52	Adequate
Cadila Healthcare Ltd	Pharma	Listed	33	60	69	54	Adequate
Camlin Fine Sciences Ltd	Chemicals	Listed	25	43	66	46	Adequate
Can Fin Homes Ltd	Lending	Listed	63	63	72	66	Strong
Canara Bank	Lending	Listed	48	68	67	61	Strong
Capacite Infraprojects Ltd	Construction EPC	Listed	32	44	57	45	Below average
Carborundum Universal Ltd	Industrial	Listed	36	48	75	55	Adequate
Cartrade Tech Ltd	Internet	Listed	41	37	56	46	Adequate
Castrol India Ltd	Lubricants	Listed	38	52	71	55	Adequate
CCL Products (India) Ltd	FMCG	Listed	40	48	70	54	Adequate
CEAT Tyres	Tyre	Listed	47	54	72	59	Adequate
Central Bank Of India	Lending	Listed	56	63	59	59	Adequate
Central Depository Services (India) Ltd	Financial services	Listed	44	46	74	56	Adequate
Centum Electronics Ltd	Heavy engineering	Listed	34	48	65	50	Adequate
Century Plyboards India Ltd	Building material	Listed	36	44	61	48	Adequate
Century Textiles & Industries Ltd	Textiles	Listed	37	38	67	49	Adequate
Cera Sanitaryware Ltd	Building material	Listed	34	47	63	49	Adequate
CESC Ltd	Power - T&D	Listed	46	47	69	55	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
CG Power and Industrial Solutions Ltd	Industrial	Listed	34	42	64	48	Adequate
Chalet Hotels	Hotel	Listed	54	46	69	58	Adequate
Chambal Fertilisers and Chemicals Ltd	Chemicals	Listed	38	52	62	51	Adequate
Chemplast Sanmar Ltd	Chemicals	Listed	22	31	53	37	Below average
Chennai Petroleum Corporation Ltd	Oil and gas - OMC	Listed	28	49	64	48	Adequate
Cholamandalam Financial Holdings Ltd	Holding	Listed	53	59	67	60	Adequate
Cholamandalam Investment and Finance Company Ltd	Lending	Listed	56	65	68	63	Strong
Cipla Ltd	Pharma	Listed	60	67	75	68	Strong
City Union Bank Ltd	Lending	Listed	60	63	75	67	Strong
Clean Science & Technology Ltd	Chemicals	Listed	23	27	57	38	Below average
Coal India Ltd	Mining	Listed	33	53	55	47	Adequate
Coastal Gujarat Power Ltd	Power - thermal	Unlisted	27	45	58	44	Below average
Coforge Ltd	IT	Listed	44	56	73	59	Adequate
Colgate Palmolive India Ltd	FMCG	Listed	45	51	76	59	Adequate
Computer Age Management Services Pvt Ltd	Financial services	Listed	46	52	73	58	Adequate
Container Corporation of India Ltd	Logistics	Listed	37	53	53	47	Adequate
Coromandel International Ltd	Chemicals	Listed	48	51	63	55	Adequate
CreditAccess Grameen Ltd	Lending	Listed	62	64	73	67	Strong
Crompton Greaves Consumer Electricals Ltd	Durables and electricals	Listed	38	47	78	56	Adequate
CSB Bank Ltd	Lending	Listed	63	59	76	67	Strong
Cummins India Ltd	Industrial	Listed	60	58	64	61	Strong
Cyient Ltd	IT	Listed	62	50	71	63	Strong
D B Corp Ltd	Media	Listed	44	49	58	51	Adequate
Dabur India Ltd	FMCG	Listed	49	52	72	59	Adequate
Dalmia Bharat Ltd	Cement	Listed	55	56	66	60	Adequate
DCB Bank Ltd	Lending	Listed	62	48	72	63	Strong

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Deepak Nitrite Ltd	Chemicals	Listed	23	48	65	46	Adequate
Delta Corp Ltd	Hotel	Listed	34	50	71	53	Adequate
Dhanuka Agritech Ltd	Chemicals	Listed	24	39	62	43	Below average
Dilip Buildcon Ltd	Construction EPC	Listed	31	46	69	50	Adequate
Divis Laboratories Ltd	Pharma	Listed	44	58	65	56	Adequate
Dixon Technologies (India) Ltd	Durables and electricals	Listed	36	47	75	54	Adequate
DLF Ltd	Real estate	Listed	64	53	65	62	Strong
Dr. Lal Pathlabs Ltd	Healthcare	Listed	49	58	76	62	Strong
Dr. Reddys Laboratories Ltd	Pharma	Listed	61	58	76	66	Strong
Dynamatic Technologies Ltd	Industrial	Listed	36	44	69	51	Adequate
eClerx Services Ltd	IT	Listed	62	51	77	65	Strong
Edelweiss Financial Services Ltd	Financial services	Listed	57	48	57	55	Adequate
Edelweiss Rural & Corporate Services Ltd	Financial services	Unlisted	41	38	49	44	Below average
Eicher Motors Ltd	Auto OEM	Listed	56	52	64	58	Adequate
EIH	Hotel	Listed	43	64	59	54	Adequate
Elecon Engineering Company Ltd	Industrial	Listed	39	42	64	50	Adequate
Elgi Equipments Ltd	Industrial	Listed	36	44	69	51	Adequate
Emami Ltd	FMCG	Listed	42	61	64	56	Adequate
Embassy Office Parks Reit	REIT	Listed	64	42	50	53	Adequate
Endurance Technologies Ltd	Auto ancillaries	Listed	36	49	72	54	Adequate
Engineers India Ltd	Construction EPC	Listed	34	62	70	55	Adequate
EPL Ltd	Industrial	Listed	54	46	74	60	Adequate
Equitas Holdings Ltd	Holding	Listed	56	65	76	66	Strong
Equitas Small Finance Bank Ltd	Lending	Listed	56	65	79	68	Strong
ERIS Lifesciences Ltd	Pharma	Listed	33	51	65	50	Adequate
ESAB India Ltd	Industrial	Listed	34	49	69	51	Adequate
Escorts Ltd	Auto OEM	Listed	51	45	75	59	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Exide Industries	Batteries	Listed	41	49	70	55	Adequate
EXIM Bank	DFI	Unlisted	63	50	33	48	Adequate
Federal Bank Ltd	Lending	Listed	58	62	76	66	Strong
Fine Organic Industries Ltd	Chemicals	Listed	26	44	57	43	Below average
Finolex Cables Ltd	Durables and electricals	Listed	34	39	57	45	Below average
Finolex Industries Ltd	Building material	Listed	34	41	74	52	Adequate
Firstsource Solutions Ltd	IT	Listed	58	47	72	61	Strong
Food Corp of India	Agri commodities	Unlisted	34	39	47	40	Below average
Fortis Healthcare Ltd	Healthcare	Listed	43	51	53	49	Adequate
Fsn E-Commerce Ventures Ltd (Nykaa)	Internet	Listed	43	39	68	52	Adequate
Fullerton India Credit Co. Ltd	Lending	Unlisted	63	57	55	58	Adequate
G R Infraproject Ltd	Transport infrastructure	Listed	20	32	69	43	Below average
Gabriel india Ltd	Auto ancillaries	Listed	38	46	70	53	Adequate
Gail (India) Ltd	Oil and gas - gas	Listed	59	68	62	63	Strong
Galaxy Surfactants Ltd	Chemicals	Listed	38	52	65	52	Adequate
Garden Reach Shipbuilders & Engineers Ltd	Ship Building	Listed	32	43	59	45	Below average
Gateway Distriparks Ltd	Logistics	Listed	34	43	66	49	Adequate
GE Power India Ltd	Heavy engineering	Listed	37	47	65	50	Adequate
GE T&D India Ltd	Heavy engineering	Listed	36	49	72	54	Adequate
General Insurance Corporation of India	Insurance	Listed	42	52	57	50	Adequate
GHCL Ltd	Chemicals	Listed	37	52	64	51	Adequate
GIC Housing Finance Ltd	Lending	Listed	62	57	64	62	Strong
Gillette India Ltd	FMCG	Listed	43	37	65	50	Adequate
Gland Pharma Ltd	Pharma	Listed	38	59	72	57	Adequate
Glaxo Smithkline Pharmaceuticals Ltd	Pharma	Listed	36	51	74	55	Adequate
Glenmark Pharmaceuticals Ltd	Pharma	Listed	52	57	67	60	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
GMM Pfaudler Ltd	Industrial	Listed	37	43	75	54	Adequate
GNA Axles Ltd	Auto ancillaries	Listed	32	32	61	44	Below average
Go Fashion (India) Ltd	Consumer retail	Listed	32	33	59	43	Below average
Godfrey Phillips India Ltd	FMCG	Listed	39	39	51	44	Below average
Godrej Agrovet Ltd	FMCG	Listed	42	50	72	56	Adequate
Godrej Consumer Products Ltd	FMCG	Listed	61	59	76	66	Strong
Goodyear India Ltd	Tyre	Listed	32	46	69	50	Adequate
Granules India Ltd	Pharma	Listed	37	54	69	54	Adequate
Graphite India Ltd	Metals	Listed	26	44	61	45	Below average
Grasim Industries	Diversified	Listed	60	58	68	63	Strong
Great Eastern Shipping Company Ltd	Shipping	Listed	36	42	68	51	Adequate
Greenlam Industries Ltd	Building material	Listed	39	40	72	53	Adequate
Greenpanel Industries Ltd	Building material	Listed	33	35	71	49	Adequate
Greenply Industries Ltd	Building material	Listed	36	44	61	48	Adequate
Grindwell Norton Ltd	Industrial	Listed	42	47	71	55	Adequate
Gujarat Gas Ltd	Oil and gas - gas	Listed	32	54	70	53	Adequate
Gujarat Industries Power Co Ltd	Power - thermal	Listed	26	39	60	43	Below average
Gujarat Narmada Valley Fertilisers Chemicals Ltd	Chemicals	Listed	23	45	65	45	Below average
Gujarat Pipavav Port Ltd	Transport infrastructure	Listed	21	41	68	45	Below average
Gujarat State Fertilizers & Chemicals Ltd	Chemicals	Listed	29	45	65	47	Adequate
Gujarat State Petronet Ltd	Oil and gas - gas	Listed	34	44	60	47	Adequate
Happiest Minds Technologies Ltd	IT	Listed	44	63	80	63	Strong
Hatsun Agro Product Ltd	FMCG	Listed	39	51	67	53	Adequate
Havells India Ltd	Durables and electricals	Listed	60	58	72	64	Strong
Hawkins Cookers Ltd	Consumer retail	Listed	37	41	62	48	Adequate
HCL Technologies Ltd	IT	Listed	67	63	79	71	Leadership

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
HDB Financial Services Ltd	Lending	Unlisted	59	53	65	60	Adequate
HDFC Asset Management Company Ltd	Financial services	Listed	50	55	77	62	Strong
HDFC Bank LTD	Lending	Listed	65	67	81	72	Leadership
HDFC Credila Financial Services Private Ltd	Lending	Unlisted	66	52	64	62	Strong
HDFC Life Insurance	Insurance	Listed	50	59	68	60	Adequate
HDFC Ltd	Lending	Listed	70	61	80	72	Leadership
HDFC Securities Ltd	Financial services	Unlisted	41	41	62	50	Adequate
Healthcare Global Enterprises Ltd	Healthcare	Listed	52	48	70	58	Adequate
Heidelberg Cement Ltd	Cement	Listed	44	52	68	56	Adequate
Heritage Foods (India) Ltd	FMCG	Listed	38	46	70	53	Adequate
Hero Fincorp Ltd	Lending	Unlisted	56	51	54	54	Adequate
Hero Motocorp Ltd	Auto OEM	Listed	61	59	71	64	Strong
HG Infra Engineering Ltd	Construction EPC	Listed	31	35	58	43	Below average
Himatsingka Seide Ltd	Textiles	Listed	47	47	64	54	Adequate
Hindalco Industries Ltd	Metals	Listed	43	60	71	58	Adequate
Hinduja Leyland Finance Ltd	Lending	Unlisted	56	52	61	57	Adequate
Hindustan Aeronautics Ltd	Industrial	Listed	43	52	59	52	Adequate
Hindustan Construction Company Ltd	Construction EPC	Listed	42	52	60	52	Adequate
Hindustan Copper Ltd	Metals	Listed	29	46	65	48	Adequate
Hindustan Petroleum Corporation Ltd	Oil and gas - OMC	Listed	53	64	64	60	Adequate
Hindustan Unilever Ltd	FMCG	Listed	55	51	78	63	Strong
Hindustan Zinc Ltd	Metals	Listed	54	60	56	56	Adequate
Hitachi Energy India Ltd	Industrial	Listed	41	49	67	54	Adequate
Home First Finance Company India Ltd	Lending	Listed	62	59	71	65	Strong
Honeywell Automation India Ltd	Industrial	Listed	43	48	74	57	Adequate
Housing and Urban Development Corporation Ltd	Lending	Listed	63	61	56	60	Adequate
ICICI Bank Ltd	Lending	Listed	61	66	78	69	Strong

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
ICICI Home Finance Co Ltd	Lending	Unlisted	62	56	62	61	Strong
ICICI Lombard General Insurance Co Ltd	Insurance	Listed	54	60	69	62	Strong
ICICI Prudential Life Insurance Co Ltd	Insurance	Listed	51	52	73	60	Adequate
ICICI Securities Ltd	Financial services	Listed	64	54	78	67	Strong
IDBI Bank Ltd	Lending	Listed	51	64	62	59	Adequate
IDFC First Bank Ltd	Lending	Listed	57	59	78	66	Strong
IDFC Ltd	Holding	Listed	57	59	74	64	Strong
IFGL Refractories Ltd	Industrial	Listed	34	44	72	52	Adequate
IIFL Home Finance Ltd	Lending	Unlisted	66	60	65	64	Strong
IIFL Wealth Management Ltd	Financial services	Listed	48	50	70	57	Adequate
India Grid Trust	InvIT	Listed	30	38	71	48	Adequate
India Infradebt Ltd	Lending	Unlisted	59	57	67	62	Strong
Indiabulls Commercial Credit Ltd	Lending	Unlisted	62	37	47	50	Adequate
Indiabulls Housing Finance Ltd	Lending	Listed	63	53	56	58	Adequate
Indiamart Intermesh Ltd	Internet	Listed	55	50	72	61	Strong
Indian Bank	Lending	Listed	55	67	58	59	Adequate
Indian Energy Exchange Ltd	Financial services	Listed	42	51	70	55	Adequate
Indian Hotel Company Ltd	Hotel	Listed	47	54	67	57	Adequate
Indian Oil Corporation Ltd	Oil and gas - OMC	Listed	43	70	68	60	Adequate
Indian Overseas Bank	Lending	Listed	59	66	56	60	Adequate
Indian Railway Catering and Tourism Corporation Ltd	Internet	Listed	50	55	62	56	Adequate
Indian Railway Finance Corporation Ltd	Lending	Listed	59	53	65	60	Adequate
Indigo Paints Ltd	Paints	Listed	35	40	69	50	Adequate
IndInfravit Trust	InvIT	Unlisted	28	22	47	34	Below average
Indoco Remedies Ltd	Pharma	Listed	36	55	72	55	Adequate
Indostar Capital Finance Ltd	Lending	Listed	59	51	65	59	Adequate
Indraprastha Gas Ltd	Oil and gas - gas	Listed	34	44	66	49	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Indus Towers Ltd	Telecom	Listed	39	58	75	58	Adequate
IndusInd Bank Ltd	Lending	Listed	70	65	66	67	Strong
Infibeam Avenues Ltd	Internet	Listed	50	52	42	47	Adequate
Info Edge (India) Ltd	Internet	Listed	59	60	75	66	Strong
Infosys Ltd	IT	Listed	81	62	80	76	Leadership
Ingersoll Rand (India) Ltd	Industrial	Listed	38	45	69	52	Adequate
Inox Leisures	Media	Listed	43	44	63	51	Adequate
Inox Wind Energy Ltd	Heavy engineering	Listed	32	33	61	44	Below average
Insecticides India Ltd	Chemicals	Listed	23	37	65	43	Below average
InterGlobe Aviation Ltd	Airlines	Listed	45	57	69	58	Adequate
IPCA Laboratories Ltd	Pharma	Listed	33	44	67	49	Adequate
IRB Infrastructure Developers Ltd	Transport infrastructure	Listed	22	43	54	40	Below average
IREDA	DFI	Unlisted	73	53	58	62	Strong
ISGEC Heavy Engineering Ltd	Heavy engineering	Listed	37	47	73	54	Adequate
ITC Ltd	FMCG	Listed	66	50	67	63	Strong
ITD Cementation India Ltd	Construction EPC	Listed	30	45	70	50	Adequate
J B Chemicals and Pharmaceuticals Ltd	Pharma	Listed	36	57	66	53	Adequate
J K Cement Ltd	Cement	Listed	48	60	61	56	Adequate
J K Lakshmi Cement Ltd	Cement	Listed	27	39	66	46	Adequate
J Kumar Infraprojects Ltd	Construction EPC	Listed	30	44	60	45	Below average
Jagran Prakashan Ltd	Media	Listed	44	46	57	50	Adequate
Jamna Auto Industries Ltd	Auto ancillaries	Listed	34	46	68	50	Adequate
Jamnagar Utilities & Power Pvt Ltd	Power - thermal	Unlisted	23	34	52	37	Below average
Jindal Steel & Power Ltd	Metals	Listed	34	52	56	47	Adequate
JK Tyres	Tyre	Listed	44	52	56	51	Adequate
JM Financial Asset Reconstruction Company Ltd	Financial services	Unlisted	41	37	55	46	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
JM Financial Credit Solutions Ltd	Lending	Unlisted	56	46	51	52	Adequate
JM Financial Ltd	Financial services	Listed	43	53	69	56	Adequate
JM Financial Products Pvt Ltd	Lending	Unlisted	59	50	56	56	Adequate
JM Financial Services Ltd	Financial services	Unlisted	41	28	53	43	Below average
JMC Projects (India) Ltd	Construction EPC	Listed	30	43	67	48	Adequate
John Deere Financial India Pvt Ltd	Lending	Unlisted	59	53	47	53	Adequate
Johnson Controls-Hitachi Air Conditioner India Ltd	Durables and electricals	Listed	37	47	61	49	Adequate
JSW Energy Ltd	Power - thermal	Listed	44	50	67	55	Adequate
JSW Steel Ltd	Metals	Listed	50	56	64	57	Adequate
Jubilant Foodworks Ltd	Food retail	Listed	34	48	69	51	Adequate
Jubilant Pharmova Ltd	Pharma	Listed	53	53	62	57	Adequate
Just Dial Ltd	Internet	Listed	53	55	58	55	Adequate
Jyothy Labs Ltd	FMCG	Listed	44	53	70	57	Adequate
K.P.R Mill	Textiles	Listed	34	50	66	51	Adequate
Kajaria Ceramics Ltd	Building material	Listed	35	41	63	48	Adequate
Kalpataru Power Transmission Ltd	Heavy engineering	Listed	38	46	66	51	Adequate
Kansai Nerolac Paints Ltd	Paints	Listed	68	70	73	71	Leadership
Karur Vysya Bank Ltd	Lending	Listed	60	68	72	67	Strong
KEC International Ltd	Heavy engineering	Listed	36	55	72	55	Adequate
KEI Industries Ltd	Industrial	Listed	34	40	70	50	Adequate
Kennametal India Ltd	Industrial	Listed	39	48	74	55	Adequate
Kirloskar Ferrous Industries Ltd	Metals	Listed	34	41	73	51	Adequate
Kirloskar Pneumatic Company Ltd	Industrial	Listed	42	44	71	54	Adequate
KNR Constructions Ltd	Construction EPC	Listed	30	37	53	41	Below average
Kotak Mahindra Bank Ltd	Lending	Listed	75	61	79	73	Leadership
Kotak Mahindra Investments Ltd	Lending	Unlisted	57	50	62	57	Adequate
Kotak Mahindra Prime Ltd	Lending	Unlisted	56	53	52	54	Adequate

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Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Kotak Securities Ltd	Financial services	Unlisted	41	41	62	49	Adequate
KPIT Technologies Ltd	IT	Listed	54	55	73	62	Strong
Krishna Institute of Medical Sciences Ltd	Healthcare	Listed	36	39	60	46	Adequate
KSB Ltd	Industrial	Listed	34	46	70	51	Adequate
L G Balakrishnan & Bros Ltd	Auto ancillaries	Listed	35	48	65	50	Adequate
L&T Finance Holdings Ltd	Holding	Listed	81	62	71	72	Leadership
L&T Finance Ltd	Lending	Unlisted	63	50	59	58	Adequate
L&T Technology Services Ltd	IT	Listed	50	53	72	59	Adequate
La Opala RG Ltd	Consumer retail	Listed	33	40	59	45	Below average
Lakshmi Machine Works Ltd	Industrial	Listed	40	43	64	50	Adequate
Larsen & Toubro Infotech Ltd	IT	Listed	73	61	75	70	Strong
Larsen & Toubro Ltd	Diversified	Listed	60	58	74	65	Strong
Latent View Analytics Ltd	IT	Listed	42	55	59	52	Adequate
Laurus Labs Ltd	Pharma	Listed	46	59	74	60	Adequate
Laxmi Organic Industries Ltd	Chemicals	Listed	27	41	63	45	Below average
Lemon Tree Hotels	Hotel	Listed	49	56	64	57	Adequate
LIC Housing Finance Ltd	Lending	Listed	63	57	75	66	Strong
Linde India Ltd	Industrial	Listed	34	53	73	54	Adequate
Lumax Industries Ltd	Auto ancillaries	Listed	34	52	67	52	Adequate
Lupin Ltd	Pharma	Listed	48	56	67	58	Adequate
Lux Industries Ltd	Consumer retail	Listed	37	46	71	53	Adequate
Macrotech Developers Ltd	Real estate	Listed	40	36	60	47	Adequate
Mahanagar Gas Ltd	Oil and gas - gas	Listed	34	47	71	52	Adequate
Mahanagar Telephone Nigam Ltd	Telecom	Listed	37	43	64	49	Adequate
Mahindra & Mahindra Financial Services Ltd	Lending	Listed	74	64	71	71	Leadership
Mahindra & Mahindra Ltd	Auto OEM	Listed	66	55	72	66	Strong
Mahindra Holidays & Resorts India Ltd	Hotel	Listed	46	47	73	57	Adequate
Mahindra Lifespace Developers Ltd	Real estate	Listed	51	51	61	55	Adequate

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Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Mahindra Logistics Ltd	Logistics	Listed	46	70	70	55	Adequate
Mahindra Rural Housing Finance Ltd	Lending	Unlisted	66	57	59	61	Strong
Manappuram Finance Ltd	Lending	Listed	63	64	72	67	Strong
Mangalam Cement Ltd	Cement	Listed	25	40	70	47	Adequate
Marico Ltd	FMCG	Listed	70	61	78	71	Leadership
Maruti Suzuki India Ltd	Auto OEM	Listed	58	57	64	60	Adequate
Mas Financial Services Ltd	Lending	Listed	62	50	65	60	Adequate
Mastek Ltd	IT	Listed	52	57	75	63	Strong
Max Financial Services Ltd	Insurance	Listed	43	41	65	52	Adequate
Max Healthcare Institute Ltd	Healthcare	Listed	55	45	73	60	Adequate
MEP Infrastructure Developers Ltd	Transport infrastructure	Listed	20	33	55	37	Below average
Metropolis Healthcare Ltd	Healthcare	Listed	43	54	71	57	Adequate
Minda Corporation Ltd	Auto ancillaries	Listed	36	47	68	52	Adequate
Minda Industries Ltd	Auto ancillaries	Listed	39	47	68	53	Adequate
Mindspace Business Park REIT	REIT	Listed	37	31	44	38	Below average
Mindtree Ltd	IT	Listed	83	69	75	76	Leadership
Mishra Dhatu Nigam Ltd	Metals	Listed	27	42	53	41	Below average
MM Forgings Ltd	Auto ancillaries	Listed	36	42	61	48	Adequate
Motherson Sumi System Ltd	Auto ancillaries	Listed	39	59	64	54	Adequate
Motilal Oswal Financial Services Ltd	Financial services	Listed	49	59	72	61	Strong
Motilal Oswal Home Finance Ltd	Lending	Unlisted	63	51	59	58	Adequate
Mphasis Ltd	IT	Listed	60	57	69	63	Strong
MPS Ltd	IT	Listed	45	48	70	55	Adequate
MRF Tyre	Tyre	Listed	34	49	64	49	Adequate
Mrs.Bectors Food Specialities Ltd	FMCG	Listed	38	48	74	55	Adequate
MTAR Technologies Ltd	Industrial	Listed	34	48	78	55	Adequate
Multi Commodity Exchange of India Ltd	Financial services	Listed	44	41	77	56	Adequate

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Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Muthoot Finance Ltd	Lending	Listed	64	63	72	67	Strong
NABARD	DFI	Unlisted	67	58	45	56	Adequate
Nabha Power Ltd	Power - thermal	Unlisted	23	34	61	41	Below average
Narayana Hrudayalaya Ltd	Healthcare	Listed	39	46	70	53	Adequate
Natco Pharma Ltd	Pharma	Listed	54	68	62	61	Strong
National Cooperative Development Corporation	DFI	Unlisted	62	39	32	44	Below average
National Housing Bank	DFI	Unlisted	62	46	48	52	Adequate
Navin Fluorine International Ltd	Chemicals	Listed	29	52	64	49	Adequate
Navneet Education Ltd	Education	Listed	49	49	64	55	Adequate
Nayara Energy Ltd	Oil and gas - OMC	Unlisted	26	50	50	42	Below average
Nazara Technologies Ltd	Internet	Listed	49	49	70	57	Adequate
NBCC (India) Ltd	Construction EPC	Listed	31	47	66	49	Adequate
NCC Ltd	Construction EPC	Listed	30	36	51	40	Below average
NCL Industries Ltd	Cement	Listed	26	31	70	45	Below average
Neogen Chemicals Ltd	Chemicals	Listed	25	45	65	46	Adequate
Nestle India Ltd	FMCG	Listed	48	56	75	60	Adequate
Network18 Media and Investments	Media	Listed	42	47	67	54	Adequate
Newgen Software Technologies Ltd	IT	Listed	45	54	73	59	Adequate
NHPC Ltd	Power - renewable	Listed	65	64	56	61	Strong
Nilkamal Ltd	Consumer retail	Listed	34	45	62	48	Adequate
Nippon Life India Asset Management Ltd	Financial services	Listed	47	47	69	55	Adequate
NLC India Ltd	Power - thermal	Listed	30	48	70	51	Adequate
NRB Bearings Ltd	Auto ancillaries	Listed	34	42	72	51	Adequate
NTPC Ltd	Power - thermal	Listed	45	63	66	58	Adequate
Nuclear Power Corporation of India Ltd	Power - renewable	Unlisted	50	41	66	54	Adequate
Nuvoco Vistas Corporation Ltd	Cement	Listed	29	51	59	46	Adequate
Oberoi Realty	Real estate	Listed	46	46	64	53	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
One 97 Communications Ltd	Financial services	Listed	41	37	50	43	Below average
Oracle Financial Services Software Ltd	IT	Listed	42	58	74	59	Adequate
Orient Cement Ltd	Cement	Listed	36	45	77	54	Adequate
Orient Electric Ltd	Durables and electricals	Listed	33	46	77	54	Adequate
Oriental Carbon & Chemicals Ltd	Chemicals	Listed	24	38	61	42	Below average
Page Industries Ltd	Consumer retail	Listed	58	51	62	58	Adequate
Panatone Finvest Ltd	Holding	Unlisted	68	63	40	56	Adequate
Paras Defence and Space Technologies Ltd	Industrial	Listed	33	37	59	44	Below average
PB Fintech Ltd	Financial services	Listed	41	45	54	47	Adequate
Persistent Systems Ltd	IT	Listed	54	60	74	64	Strong
Petronet LNG Ltd	Oil and gas - gas	Listed	34	50	70	52	Adequate
Pfizer Ltd	Pharma	Listed	37	46	68	51	Adequate
Phillips Carbon Black Ltd	Chemicals	Listed	48	43	66	54	Adequate
PI Industries Ltd	Chemicals	Listed	49	54	69	58	Adequate
Piramal Capital and Housing Finance Ltd	Lending	Unlisted	59	53	34	48	Adequate
Piramal Enterprises Ltd	Lending	Listed	57	50	64	58	Adequate
PNB Housing Finance Ltd	Lending	Listed	62	51	70	62	Strong
PNC Infratech Ltd	Transport infrastructure	Listed	20	41	61	42	Below average
Polycab India Ltd	Durables and electricals	Listed	41	56	68	56	Adequate
Power Finance Corporation Ltd	DFI	Listed	46	68	62	58	Adequate
Power Grid Corporation of India Ltd	Power - T&D	Listed	56	58	63	59	Adequate
Power Mech Projects Ltd	Construction EPC	Listed	30	44	62	46	Adequate
Premier Explosives Ltd	Industrial	Listed	32	37	63	46	Adequate
Prestige Estates Projects Ltd	Real estate	Listed	38	46	60	49	Adequate
Prince Pipes and Fittings Ltd	Building material	Listed	41	41	71	53	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Prism Johnson Ltd	Cement	Listed	45	44	68	54	Adequate
Procter & Gamble Health Ltd	FMCG	Listed	41	46	76	56	Adequate
Procter & Gamble Hygiene & Health Care Ltd	FMCG	Listed	46	43	70	55	Adequate
Pune Solapur Expressways Private Ltd	Transport infrastructure	Unlisted	20	26	39	29	Weak
Punjab and Sind Bank	Lending	Listed	62	61	54	59	Adequate
Punjab National Bank	Lending	Listed	57	62	53	57	Adequate
PVR	Media	Listed	47	48	61	52	Adequate
Quess Corp Ltd	Staffing	Listed	52	51	68	58	Adequate
Radico Khaitan Ltd	FMCG	Listed	47	37	67	52	Adequate
Railtel Corporation of India Ltd	Telecom	Listed	35	43	64	48	Adequate
Rajratan Global Wire Ltd	Metals	Listed	27	38	69	46	Adequate
Rallis India Ltd	Chemicals	Listed	43	61	69	58	Adequate
Ramco Systems Ltd	IT	Listed	44	61	71	59	Adequate
Ratnamani Metals & Tubes Ltd	Metals	Listed	28	42	60	44	Below average
RBL Bank Ltd	Lending	Listed	69	62	60	63	Strong
REC Ltd	DFI	Listed	49	66	61	58	Adequate
Redington (India) Ltd	Logistics	Listed	36	49	69	52	Adequate
Relaxo Footwears Ltd	Consumer retail	Listed	37	48	65	51	Adequate
Reliance Industries Ltd	Diversified	Listed	44	67	73	61	Strong
Reliance Jio Infocomm Ltd	Telecom	Unlisted	49	23	35	37	Below average
Reliance Power Ltd	Power - thermal	Listed	24	33	51	37	Below average
Reliance Retail Ventures Ltd	Multi-brand retail	Unlisted	31	41	50	41	Below average
Repco Home Finance Ltd	Lending	Listed	62	45	71	62	Strong
RHI Magnesita India Ltd	Industrial	Listed	36	48	64	50	Adequate
Rites Ltd	Construction EPC	Listed	31	59	71	54	Adequate
Rolex Rings Ltd	Auto ancillaries	Listed	36	37	50	42	Below average
Rossari Biotech Ltd	Chemicals	Listed	27	47	69	49	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Ruchi Soya Industries Ltd	FMCG	Listed	38	46	61	49	Adequate
S Chand & Company Ltd	Education	Listed	46	47	70	56	Adequate
Sadbhav Engineering Ltd	Construction EPC	Listed	30	34	62	44	Below average
Sadbhav Infrastructure Projects Ltd	Transport infrastructure	Listed	20	41	54	38	Below average
Sagar Cement Ltd	Cement	Listed	49	54	72	60	Adequate
Sanofi India Ltd	Pharma	Listed	36	49	69	53	Adequate
Sapphire Foods India Ltd	Food retail	Listed	29	29	60	42	Below average
Savita Oil Technologies Ltd	Lubricants	Listed	32	44	67	49	Adequate
State Bank of India	Lending	Listed	61	68	75	68	Strong
SBI Cards & Payment Services Ltd	Financial services	Listed	48	60	69	60	Adequate
SBI Life Insurance Co Ltd	Insurance	Listed	43	57	67	56	Adequate
Schaeffler India Ltd	Auto ancillaries	Listed	50	46	69	57	Adequate
Shaily Engineering Plastics Ltd	Industrial	Listed	34	44	68	50	Adequate
Sharda Cropchem Ltd	Chemicals	Listed	22	42	66	44	Below average
Sheela Foam Ltd	Consumer retail	Listed	35	47	64	49	Adequate
Shree Cement Ltd	Cement	Listed	54	58	69	61	Strong
Shriram City Union Finance Ltd	Lending	Listed	62	62	69	65	Strong
Shriram Transport Finance Company Ltd	Lending	Listed	57	64	71	64	Strong
Siemens Ltd	Industrial	Listed	46	54	69	57	Adequate
Sikka Ports & Terminals Ltd	Transport infrastructure	Unlisted	20	32	53	37	Below average
Simplex Infrastructures Ltd	Construction EPC	Listed	30	37	40	36	Below average
SJVN Ltd	Power - renewable	Listed	61	55	66	61	Strong
SKF India Ltd	Industrial	Listed	52	54	63	57	Adequate
Small Industries Development Bank of India	DFI	Unlisted	62	56	43	53	Adequate
Sobha Ltd	Real estate	Listed	35	46	69	51	Adequate
Solar Industries India Ltd	Industrial	Listed	50	40	72	56	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Solara Active Pharma Sciences Ltd	Pharma	Listed	34	56	74	56	Adequate
Sona BLW Precision Forgings Ltd	Auto ancillaries	Listed	45	41	71	55	Adequate
Sonata Software Ltd	IT	Listed	44	48	71	56	Adequate
SP Jammu Udhampur Highway Ltd	Transport infrastructure	Unlisted	20	29	41	30	Weak
Spicejet Ltd	Airlines	Listed	33	44	65	48	Adequate
Star Cement Ltd	Cement	Listed	29	43	56	43	Below average
Steel Authority of India Ltd	Metals	Listed	48	65	68	60	Adequate
Sterling & Wilson Renewable Energy Ltd	Construction EPC	Listed	32	41	53	43	Below average
Sterlite Technologies Ltd	Industrial	Listed	53	45	71	58	Adequate
Strides Pharma Science Ltd	Pharma	Listed	45	53	68	56	Adequate
Subros Ltd	Auto ancillaries	Listed	35	48	67	51	Adequate
Sudarshan Chemical Industries Ltd	Chemicals	Listed	26	39	61	43	Below average
Sumitomo Chemical India Ltd	Chemicals	Listed	33	44	69	50	Adequate
Sun Pharmaceutical Industries Ltd	Pharma	Listed	55	60	50	54	Adequate
Sun TV Network	Media	Listed	41	49	57	50	Adequate
Sundaram Finance Ltd	Lending	Listed	56	57	69	62	Strong
Sundaram Home Finance Ltd	Lending	Unlisted	62	50	60	58	Adequate
Sundaram-Clayton Ltd	Auto ancillaries	Listed	38	46	64	50	Adequate
Sundram Fasteners Ltd	Auto ancillaries	Listed	41	48	67	53	Adequate
Suprajit Engineering Ltd	Auto ancillaries	Listed	34	40	70	50	Adequate
Supreme Industries Ltd	Consumer retail	Listed	36	38	71	50	Adequate
Suven Pharmaceuticals Ltd	Pharma	Listed	34	52	66	51	Adequate
Swaraj Engines Ltd	Auto ancillaries	Listed	34	47	64	49	Adequate
Symphony Ltd	Durables and electricals	Listed	34	44	69	50	Adequate
Syngene International Ltd	Pharma	Listed	45	63	79	63	Strong

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Talwandi Sabo Power Ltd	Power - thermal	Unlisted	28	47	60	46	Adequate
Tamil Nadu Newsprint and Papers Ltd	Paper	Listed	36	52	71	54	Adequate
Tata Capital Financial Services Ltd	Lending	Unlisted	59	54	61	59	Adequate
Tata Capital Housing Finance Ltd	Lending	Unlisted	62	48	62	59	Adequate
Tata Capital Ltd	Holding	Unlisted	60	52	59	57	Adequate
Tata Chemicals Ltd	Chemicals	Listed	51	52	70	59	Adequate
Tata Communications Ltd	Telecom	Listed	68	63	70	68	Strong
Tata Consultancy Services Ltd	IT	Listed	70	66	78	72	Leadership
Tata Consumer Products Ltd	FMCG	Listed	60	53	82	67	Strong
Tata Elxsi Ltd	IT	Listed	43	62	75	61	Strong
Tata Housing Development Company Ltd	Real estate	Unlisted	34	29	55	41	Below average
Tata Metaliks Ltd	Metals	Listed	40	55	71	56	Adequate
Tata Motors Finance Ltd	Lending	Unlisted	61	55	68	62	Strong
Tata Motors Finance Solutions Pvt Ltd	Lending	Unlisted	61	46	66	59	Adequate
Tata Motors Ltd	Auto OEM	Listed	52	56	73	62	Strong
Tata Power Ltd	Power - thermal	Listed	59	60	73	65	Strong
Tata Power Renewable Energy Ltd	Power - renewable	Unlisted	51	46	58	53	Adequate
Tata Projects Ltd	Construction EPC	Unlisted	34	44	49	43	Below average
Tata Realty & Infrastructure Ltd	Real estate	Unlisted	35	27	52	40	Below average
Tata Sons Ltd	Holding	Unlisted	51	55	58	55	Adequate
Tata Steel Long Product Ltd	Metals	Listed	44	52	75	58	Adequate
Tata Steel Ltd	Metals	Listed	51	62	71	62	Strong
Tata Teleservices (Maharashtra) Ltd	Telecom	Listed	36	44	69	51	Adequate
Tata Teleservices Ltd	Telecom	Unlisted	37	29	60	44	Below average
Tatva Chintan Pharma Chem Ltd	Chemicals	Listed	24	36	59	41	Below average
TCI Express Ltd	Logistics	Listed	36	43	67	50	Adequate
Team Lease Services Ltd	Staffing	Listed	41	48	75	57	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Tech Mahindra Ltd	IT	Listed	75	60	78	72	Leadership
Techno Electric & Engineering Company Ltd	Heavy engineering	Listed	33	44	58	46	Adequate
Texmaco Rail & Engineering Ltd	Heavy engineering	Listed	34	37	64	47	Adequate
The Anup Engineering Ltd	Heavy engineering	Listed	34	38	68	49	Adequate
The India Cement Ltd	Cement	Listed	28	41	46	39	Below average
The Phoenix Mills Ltd	Real estate	Listed	48	48	62	54	Adequate
The Ramco Cements	Cement	Listed	39	47	66	52	Adequate
Thermax Ltd	Heavy engineering	Listed	43	53	69	56	Adequate
Thyrocare Technologies Ltd	Healthcare	Listed	39	52	64	52	Adequate
Time Technoplast Ltd	Industrial	Listed	33	39	67	48	Adequate
Timken India Ltd	Industrial	Listed	35	41	74	52	Adequate
Titagarh Wagons Ltd	Heavy engineering	Listed	34	45	73	53	Adequate
Titan Company Ltd	Consumer retail	Listed	46	58	68	57	Adequate
TMF Holdings Ltd	Holding	Unlisted	61	52	64	60	Adequate
Torrent Pharma Ltd	Pharma	Listed	56	63	65	61	Strong
Torrent Power Ltd	Power - T&D	Listed	43	55	68	56	Adequate
Transport Corporation of India Ltd	Logistics	Listed	37	44	66	50	Adequate
Trent Ltd	Multi-brand retail	Listed	35	45	67	50	Adequate
Triveni Turbine Ltd	Industrial	Listed	35	43	71	51	Adequate
TTK Prestige Ltd	Consumer retail	Listed	38	47	63	50	Adequate
Tube Investments of India Ltd	Auto ancillaries	Listed	36	48	76	55	Adequate
TV Today Ltd	Media	Listed	43	52	65	54	Adequate
TVS Motor Company LTD	Auto OEM	Listed	51	49	74	59	Adequate
UCO Bank	Lending	Listed	48	62	58	55	Adequate
Ujjivan Small Finance Bank Ltd	Lending	Listed	62	59	68	64	Strong
Ultratech Cement Ltd	Cement	Listed	48	61	71	61	Strong
Unichem Laboratories Ltd	Pharma	Listed	32	56	67	52	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Union Bank of India	Lending	Listed	52	66	57	57	Adequate
United Breweries Ltd	FMCG	Listed	47	38	65	52	Adequate
United Spirits Ltd	FMCG	Listed	50	46	71	57	Adequate
UPL Ltd	Chemicals	Listed	40	59	61	53	Adequate
UTI Asset Management Company Ltd	Financial services	Listed	51	57	74	62	Strong
Vardhman Textiles	Textiles	Listed	40	43	61	49	Adequate
Varroc Engineering Ltd	Auto ancillaries	Listed	34	53	63	50	Adequate
Varun Beverages Ltd	FMCG	Listed	42	39	66	51	Adequate
Vedanta Ltd	Metals	Listed	42	56	58	52	Adequate
Vesuvius India Ltd	Industrial	Listed	40	41	63	49	Adequate
V-Guard Industries Ltd	Durables and electricals	Listed	36	45	76	54	Adequate
Vinati Organics Ltd	Chemicals	Listed	26	41	58	43	Below average
VIP Industries Ltd	Consumer retail	Listed	36	44	66	50	Adequate
V-Mart Retail Ltd	Multi-brand retail	Listed	39	42	79	56	Adequate
Vodafone Idea Ltd	Telecom	Listed	41	48	52	47	Adequate
Voltamp Transformers Ltd	Industrial	Listed	34	36	67	48	Adequate
Voltas Ltd	Durables and electricals	Listed	58	56	75	64	Strong
VRL Logistics Ltd	Logistics	Listed	40	45	60	49	Adequate
VST Industries Ltd	FMCG	Listed	38	40	64	49	Adequate
Wabco India Ltd	Auto ancillaries	Listed	45	57	64	56	Adequate
Walwhan Renewable Energy Ltd	Power - renewable	Unlisted	50	49	58	53	Adequate
Welspun India	Textiles	Listed	58	59	70	63	Strong
Westlife Development Ltd	Food retail	Listed	34	44	64	49	Adequate
Wheels India Ltd	Auto ancillaries	Listed	35	50	66	51	Adequate
Whirlpool Of India Ltd	Durables and electricals	Listed	41	48	73	55	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Company name	Sector classification	Listed/Unlisted	E score	S score	G score	ESG score	Category
Wipro Ltd	IT	Listed	75	64	79	74	Leadership
Yes Bank Ltd	Lending	Listed	64	66	60	63	Strong
Zee Entertainment Enterprises	Media	Listed	43	50	55	50	Adequate
Zensar Technologies Ltd	IT	Listed	76	53	73	69	Strong
Zomato Ltd	Internet	Listed	46	41	57	49	Adequate
Zydus Wellness Ltd	FMCG	Listed	39	40	73	53	Adequate

Note: 0-30 - Weak, 31-45 - Below average, 46-60 - Adequate, 61-70 - Strong, 71-100 - Leadership

Annexure 2

ESG scores for MF categories

Categories	E parameter			S parameter			G parameter		
	Median	Min	Max	Median	Min	Max	Median	Min	Max
Dividend yield	55.34	54.37	59.12	57.27	55.02	59.17	70.94	67.73	72.24
ELSS	56.06	50.00	60.89	58.24	55.59	60.32	72.62	65.45	74.12
Flexi-cap	55.79	50.51	59.61	58.41	55.90	60.49	72.38	69.66	73.88
Focused	56.59	50.33	59.72	58.80	54.76	61.36	72.53	65.35	75.17
Large- and mid-cap	53.29	47.05	56.58	56.90	54.70	58.42	71.17	63.40	72.25
Large-cap	59.11	55.31	60.89	60.44	59.07	61.68	73.69	69.87	74.36
Mid-cap	46.98	43.02	49.64	52.52	49.84	54.22	68.40	64.05	70.46
Multi-cap	51.64	42.99	57.00	55.48	49.19	57.12	70.07	64.97	72.61
Small-cap	41.44	36.35	43.54	48.57	45.99	50.74	68.14	66.07	70.08
Value/contra	55.73	47.07	60.89	58.01	53.96	61.37	71.11	64.72	73.29
Banking and PSU	55.84	52.75	59.84	59.33	54.38	63.03	60.02	55.22	63.82
Corporate bond	55.93	49.50	57.97	57.10	53.81	60.74	61.35	56.64	65.56
Low duration	57.50	51.33	63.49	58.10	54.34	61.26	64.12	53.16	69.73
Money market	55.73	47.09	62.37	54.35	49.51	60.08	61.97	59.65	69.14
Short duration	56.49	53.90	60.30	57.38	54.93	60.87	63.37	59.89	66.80
Ultra-short duration	55.67	48.94	61.24	57.35	51.90	61.53	64.18	60.54	67.77

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