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ESG::readings

Series of analyses from the Indian financial and corporate sectors

CRISIL MI&A Research, leveraging its strong sectoral research capability, rich databases, track record of scoring Indian companies, and global and domestic expertise, brings to you sharp insights on various facets of environmental, social and governance (ESG) in India.

The Scope 3 series

Scope 3 is a mini-series of analyses within CRISIL MI&A Research's larger **ESG::readings** series, also launched this month. It focusses sharply on the materiality of the GHG Protocol's Scope 3 emissions — often the hardest to capture and least disclosed in any industry — in different sectors.

Through this series, we will keep our readers informed about the most material categories within Scope 3, assess the state of disclosures, and bring analytical perspectives on how Indian companies fare compared with their domestic and global peers, sector-wise.

In the first of this series, we turn the spotlight on the Indian tyre industry.



97.3%

Scope 3 emissions as a percentage of overall emissions from the global tyre industry



2

Of the four Indian tyre majors have made limited Scope 3 disclosures



0

Indian companies have disclosed material categories within Scope 3 emissions



0.04 vs 0.16

Average emissions intensity of domestic vs global companies (Scope 1 and 2)

The tyre industry's smoking gun

The global tyre market size is estimated at 2,321.3 million units, as of 2022. The International Market Analysis Research and Consulting Group expects the market to reach 2,741.2 million units by 2028, logging a compound annual growth rate (CAGR) of 2.88% between 2023 and 2028¹. A growing market size makes it critical to reduce carbon emissions not only from production but also at end use. Interestingly, if one considers the entire lifecycle of a tyre, a majority 87% of greenhouse gas emissions is found to occur during product use, and only 2.1% is attributed to manufacturing². Moreover, production of tyre-related raw materials such as natural rubber, synthetic rubber, and carbon black generates four times as much CO₂ emissions per tyre, than the manufacturing of the tyre itself. Categories such as transportation of raw materials, distribution and sales operations, end-of-life treatment such as waste, and commuting and business travel contribute to the remaining emissions.

¹<https://www.imarcgroup.com/tyre-manufacturing-plant>

²<https://core.ac.uk/download/pdf/196556605.pdf>

Companies analysed

For this report, we consider the following tyre majors based in Asia, Americas, and Europe for a peer comparison. The table below gives a snapshot of their revenue, production capacity, and Scope 1 and 2 emissions:

Sr no	Country	Company name	Revenue (Rs million)	Revenue (\$ million)	Production capacity (million)	Scope 1 and 2 emissions	Production intensity (Scope 1 and 2/Production capacity)
1	India	Apollo Tyres	209,476	2,812	5.5	421,107	0.077
2	India	CEAT	93,130	1,250	41.5	81,764	0.002
3	India	JK Tyre	120,200	1,613	32	93,056	0.003
4	India	MRF Tyres	189,890	2,549	74.51	8,550,000	0.115
5	Asia	Bridgestone	2,102,390	28,220	14.4	3,386,000	0.235
6	Asia	Yokohama	429,318	5,763	1.96	1,099,000	0.561
7	America	Goodyear	1,302,111	17,478	169.3	2,478,000	0.015
8	Europe	Pirelli	447,846	6,011	73	1,164,522	0.016
9	Europe	Continental	2,922,864	39,233	142	1,050,000	0.007
Average global intensity (Scope 1 and 2): 0.16							
Average domestic intensity (Scope 1 and 2): 0.04							

Source: CRISIL MI&A Research

Scope 3 emission categories

The Scope 3 emissions of the selected companies are monitored across 15 categories, including upstream production (of the business’s products or services) and downstream use (including disposal of a business’s products or services).

Scope 3 emission categories	
Upstream	Downstream
1. Purchased goods and services – upstream emissions of purchased goods and services	9. Transmission and distribution of sold products – Scope 1 and 2 emissions of transportation providers, distributors, and retailers that occur during use of vehicles and facilities
2. Capital goods – upstream emissions of purchased capital goods	10. Processing of sold products – Scope 1 and 2 emissions of downstream companies, that occur during processing
3. Fuel and energy related activities – upstream emissions excluding combustion (T&D, including combustion)	11. Use of sold products – The direct use-phase emissions of sold products over their expected lifetime
4. Upstream transportation and distribution – Scope 1 and 2 emissions of transportation and distribution providers that occur during use of vehicles and facilities	12. End-of-life treatment of sold products – Scope 1 and 2 emissions of waste management companies that occur during disposal or treatment of sold products
5. Waste generated in operations – transportation, direct and indirect emissions during disposal or treatment	13. Downstream leased assets – Scope 1 and 2 emissions of lessees that occur during operation of leased assets
6. Business travel – Scope 1 and 2 emissions of transportation carriers that occur during use of vehicles	14. Franchises – Scope 1 and 2 emissions of franchisees that occur during operation of franchises
7. Employee commuting – Scope 1 and 2 emissions of employees and transportation providers that occur during use of vehicles	15. Investments – emissions associated with the reporting company’s investments in the reporting year
8. Upstream leased assets – Scope 1 and scope 2 emissions of lessors that occur during the reporting company’s operation of leased assets	

The table below summarises the data for Scope 1, 2 and 3 emissions reported by the companies, and provides a brief assessment of the categories they capture under Scope 3

Indian tyre cos do not report on material Scope 3 categories

Sr no	Company name	Scope 1 (tCO ₂ e)	Scope 2 (tCO ₂ e)	Scope 3 (tCO ₂ e)	Scope 3 category reported
1	Apollo Tyres	3,54,92	3,85,615	1,48,012	9
2	CEAT	81,764	2,11,937	–	NA
3	JK Tyre	1,56,036.80	93,056	63,965	9
4	MRF Tyres	2,300,000	6,250,000	–	NA
5	Bridgestone	1,722,000	1,664,000	113,421,000	All categories excluding 8, 13 and 15
6	Yokohama	613,000	486,000	25,701,000	4, 7, 11 ,12
7	Goodyear	1,231,000	1,247,000	11,540,000	Excludes indirect product use phase emissions (2019 data for Scope 3)
8	Pirelli	187,510	977,012	41,117,000	1,2, 4, 11 and 12
9	Continental	820,000	230,000	108,890,000	All categories

Source: CRISIL MI&A Research

The table above shows that globally, only Continental provides data for all the Scope 3 emission categories. Bridgestone, Yokohoma, and Pirelli report data for most material categories, such as end use (Category 11). Significantly, the average percentage of Scope 3 emissions for the four companies represents ~97.3% of the overall emissions (including Scope 1, 2 and 3). The findings here are consistent with the literature that we examined in the context section.

The domestic side presents a sharply contrasting picture. While Indian companies perform better on disclosure of direct emissions (Scope 1 and 2) compared with their global peers, they fare poorly on disclosure of Scope 3 emissions, especially on the most material categories.

Of the four Indian tyre companies, only Apollo Tyres and JK Tyre have submitted data for Scope 3 emissions under the ‘transportation’ category. None reported on the most material categories. This is a significant miss, as the end-use category accounts for the bulk of the tyre industry’s Scope 3 emissions.

This brief analysis leads to an interesting conclusion. Based on the average percentage of Scope 3 emissions of the global corporations, we could extrapolate these figures to derive Scope 3 emissions for the Indian companies. The extrapolated data is shown in the table below:

Indian tyre companies’ Scope 3 emissions based on global norms

Sr no	Company name	Scope 1 + Scope 2 (tCO ₂ e) emissions	Scope 3 (tCO ₂ e) reported	Scope 3 (tCO ₂ e) extrapolated data (equivalent to 97.3%)	Remarks
1	Apollo Tyres	421,107	148,012	15,175,449	Calculations are based on our finding that Scope 3 emissions represent ~97.3% of the overall emissions
2	CEAT	81,764	–	2,946,532	
3	JK Tyre	93,056	63,965	3,353,457	
4	MRF Tyres	8,550,000	–	308,116,667	

Source: CRISIL MI&A Research

The extrapolated numbers thus show the extent of the huge gap in reporting of Scope 3 emissions by Indian tyre companies — for instance, MRF Tyres’ extrapolated Scope 3 emissions work out nearly thrice the largest reported Scope 3 emissions among global players (i.e., Continental’s).

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