

Management Discussion & Analysis

1. Business Environment

a. Global Economic Outlook

Global economic growth is projected at 3.6% in 2022 after a strong bounce back in 2021. The outlook is mixed with reopening of economies supporting greater demand coupled with challenges of Eastern Europe conflict having direct and global spillovers through commodity markets. In addition, there is the continued impact of lockdowns with new bottlenecks in global supply chains.

Inflation is expected to remain elevated for longer period driven by commodity price increases and broadening price pressures. For Calendar Year ('CY') 2022, inflation is projected at 5.7% in advanced economies and 8.7% in emerging markets and developing economies.

Energy prices have recorded unprecedented increases especially natural gas prices in Europe which rose sharply above baseline in 2022. Growth in the United States ('US') is expected to be 3.7% in CY 2022, moderating to 2.3% in CY 2023 due to faster withdrawal of monetary support as policy tightens to rein in inflation. The European Union ('EU') and the United Kingdom ('UK') economies are expected to grow by 2.8% and 1.2% respectively in CY 2022.

Among the Emerging Market and Developing Economies ('EMDE'), China is expected to grow by 4.4% in CY 2022. India is expected to grow at the rate of 8.2% for CY 2022 and 6.9% in CY 2023. Growth is forecasted to be 4.6% in Middle East & Central Asia while 3.8% in Sub-Saharan Africa region for CY 2022.

Source: IMF World Economic Outlook April 2022

b. India Economic Outlook

India's Gross Domestic Product ('GDP') growth is estimated to be 8.2% for CY 2022 as against the real GDP growth rate of 8.9% in CY 2021. This growth is despite the impact of higher oil and commodity prices weighing on private consumption and investment.

COVID-19 vaccination has played a critical role in minimising loss of lives, boosting confidence in the economy towards resumption of activity and containing the sequential decline in output. 96% of the adult population has been inoculated with the first dose, while 82% of the adult population and over 3.4 crore children in the 15 to 18 year age group are fully vaccinated. Vaccination drive has further been extended to the age group from 12 years which has further boosted people's confidence of returning to normal.

In India, Consumer Price Index ('CPI') inflation had moderated to 5.2% in FY 2021-22 (April-December) from 6.6% in the corresponding period of FY 2020-21 but has edged upto 6.1% as recorded in February 2022. Energy and food prices are major contributing factors to headline inflation. Risks are tilted to the upside amidst sanctions from the West and raw material shortages.

The Government revenues have been growing from robust tax incomes. In February 2022, Goods and Services Tax ('GST') collection recorded a year on year ('y-o-y') growth of 17.6%, crossing the ₹ 1.3 lakh crore mark. Total expenditure during April-January FY 2021-22 registered a growth of 11.6% over FY 2020-21, with capital expenditure and revenue expenditure recording growth of 22% and 9.9% respectively.

Export/Import: Exports registered a growth of 25% on a y-o-y basis. Export growth was broad-based, with ten major commodity groups accounting for around 80% of exports of the expansion above pre-COVID level. The improvement in export performance stemmed from higher value of shipments of engineering goods, petroleum products and chemicals. High import demand was driven by higher demand for petroleum products, electronic goods and gold. Import growth was broad-based, with major commodity groups accounting for more than 75% of imports recording an expansion above their pre-COVID levels. Crude imports increased by 41.7% in February 2022 over COVID levels, reflecting the rise in crude oil prices.

Source: IMF World Economic Outlook April 2022, State of the Economy- RBI Bulletin-March 2022



India's Gross Domestic Product ('GDP') growth is estimated to be 8.2% for CY 2022

2. Chemical Industry

a. Global Chemical Industry

The global chemical industry outlook in 2022 is expected to be cautiously optimistic. The industry grew ~6% in FY 2021-22 driven by strong demand recovery post pandemic and gradual easing of supply chains towards the end of the year. In 2022, the industry faces pressure from rising inflation (increase in energy and raw material costs), supply chain disruptions, ongoing geopolitical tensions and conflict in Europe.

While risks to the global economy remain, the global chemical industry is expected to grow in 2022 mainly led by Asia and America. Brazil, China, India and South-East Asian countries ('SEA') will emerge as the fastest-growing markets due to the rise in pent-up demand. The US Chemical Industry will continue to recover following the pandemic recovery and supply chain recovery. The European Chemical Council estimates that the output will slow down due to sharp rise in energy prices and continued supply chain disruptions caused by sanctions. The Association of the German Chemical Industry (VCI) forecasts that in 2022 production of chemicals (excluding pharmaceuticals) in Germany will increase by 1.5%.

The output growth of Chemical Industry is mainly supported by the continued recovery of the global economy and rising demand in downstream sectors. Most forecasts note that the expected recovery in the automotive industry, along with growth in the agriculture, construction, consumables, consumer durables and health and nutrition sectors, should underpin global chemical demand. A key feature of the global chemicals market is the shifting nature of its value streams, driven by demand for new products in a range of industries i.e. materials for microelectronics, advanced materials for construction applications, recycling technologies, Electric Vehicles (EV) and solar applications and new solvent cleaning technologies.

Most of the sub sectors are expected to grow in 2022 with Agrochemicals at ~2.3%, Consumer Chemicals ~3%, Inorganic Chemicals ~3.9%, Bulk Petrochemicals and Organic Chemicals ~3.8% and Specialty Chemicals at ~4%.

Source: American Chemical Council, European Chemical Industry Council, Association of German Chemical Industry, Various Industry Reports

b. Key Global Trends

Sustainability has increasingly become a focus for the chemical industry and many companies are responding with shift to green chemistry and commitments to decarbonisation, recycling and resource recovery. Large companies are leading the way to net-zero greenhouse gas emission commitments. Initiatives such as European plastic tax and green hydrogen stimulus packages in the US, Canada and Europe are accelerating the adoption of sustainable practices and goals.

Industry players are showing heightened focus on new and innovative technologies such as Carbon Capture and Utilisation (CCU). In addition, companies continue to advance work on chemical recycling, green hydrogen, etc. These will boost usage of renewables, improve energy efficiency, reduce emissions and create new market for carbon and other by-products as part of an increasingly circular economy.

Digital technologies will support the global chemical industry transformation. Chemical companies are exploring the potential of advanced data analytics, automation, connectivity and digital technologies to become more agile, innovative, responsive and efficient. Advances in sensors, cognitive computing and analytics present economically viable solutions for extracting more efficiencies and preventing production failures.

The changing composition and expectations of hyper-connected consumers and Government policies will trigger structural industry and consumption shifts towards investment in clean technology. There's a clear upward trend driven by public policies promoting environment friendly technologies. The transition towards EV will spur more investment. Large number of start-ups were launched with investments in hydrogen as a viable fuel for the industries and processes that need fuel other than electricity.

Chemical companies are likely to focus on repositioning their asset portfolios and balancing trade-offs between different strategic options with critical considerations such as scale, the scope of products and growth opportunities. To deliver strong growth and improve financial performance, firms may



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consider looking into few activities like investment in high value-added opportunities, consumer preference, etc.

Source: Various industry reports (Deloitte Chemical Industry Outlook 2022, C&EN World Chemical Outlook, etc.)

c. Indian Chemical Industry

While the Indian chemical industry was adversely affected due to COVID-19 in the first half of CY 2020, demand recovery was seen in CY 2021 and the trend is expected to continue through CY 2022. However, uncertainties exist due to rising costs of energy, unavailability of raw material on account of supply chain disruption and other inflationary pressures by virtue of continued pandemic and recent geopolitical conflict in Europe.

The Indian chemical industry makes up ~3.4% of the global chemicals industry and is expected to grow to US\$ 300 billion by 2025. The domestic chemicals sector is expected to showcase high revenue and volume growth in FY 2022-23, owing to an improvement in domestic demand, increased Government spending and better price realisation of chemicals. Bulk chemicals (Basic Chemistry) constitute 25% of the market, while Specialty chemicals, Petrochemicals, and Agrochemicals have 21%, 19% and 15% of the market, respectively. Biotech and pharmaceuticals (including active pharmaceutical ingredients and others) together constitute 20% of the market.

Basic Chemistry Products such as Alkali chemicals are the primary growth drivers for inorganic chemicals having a stable outlook. Specialty chemicals market is expected to increase at a Compound Annual Growth Rate ('CAGR') of 12% to US\$ 64 billion by 2025. Specialty chemical companies are seeking import substitutions while exploring export opportunities to accelerate their businesses. India is the 4th largest producer of agrochemicals globally. The agrochemicals market in India is expected to register 8.6% CAGR to reach US\$ 7.4 billion between 2021 and 2026.

From April 2021 to February 2022, exports of organic & inorganic chemicals* increased 15% y-o-y to reach US\$ 38.53 billion. Imports of organic and inorganic chemicals aggregated US\$ 82.68 billion up 52% y-o-y. Nearly 25% of India's imports of chemicals* is contributed by China.

Growth opportunities are largely driven by specialty segment due to rise in demand from end-user industries such as food processing, personal care and home care. Supply disruption has caused the global end-user industries to diversify their vendor base including Indian players. Closure of plants in the EU and China due to increasing environmental concerns have favoured Indian manufacturers to invest further in specialty chemicals.

The Indian Government aims to boost manufacturing share in GDP to 20% by 2025. The dedicated integrated manufacturing hubs under Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIR) Policy has the ability to attract an investment of ₹ 20 lakh crore (US\$ 276.46 billion) by 2035. The Government plans on production-linked incentive (PLI) schemes to promote domestic manufacturing of agrochemicals, advanced cell batteries, etc. An added advantage of skilled and low-cost labour, world-class engineering and strong R&D set-up has the potential to further boost growth.

Source: Various reports – IBEF Chemicals Industry Report February 2022, India: Global Chemicals & Petrochemicals Manufacturing Hub Report by Department of Chemicals & Petrochemicals, November 2021

**HS Code Chapter 28-32, 3301-3302, 3402-3404, 35,38, 3901-3914, 4001-4003, 4005*

3. Company Overview

A part of the US\$ 103 billion (revenue for FY 2020-21) Tata Group, Tata Chemicals Limited ('the Company' or 'TCL') is a sustainable chemistry solutions Company. The Company operates through two verticals - Basic Chemistry (Alkali Chemicals-soda ash, sodium bicarb, salt, silica & other halogen chemicals) and Specialty Products (specialty silica, prebiotics & formulations, agrochemicals and seeds). The Company's product portfolio provides key ingredients to many of the world's leading brands for glass, detergents, pharma, food, animal feed and other industries. The Company is a global major in soda ash and sodium bicarbonate (market position of 3rd and 6th respectively) with manufacturing facilities in India, US, UK and Kenya.



The domestic chemicals sector is expected to showcase high revenue and volume growth in FY 2022-23

The Specialty products with its focus on Green Chemistry solutions comprises Highly Dispersible Silica ('HDS') and Prebiotics. HDS was developed based on patented technology for rubber applications, food, feed, detergents and oral care. The Company has a domestic market leadership position in Prebiotics and has built a robust and high-growth fermentation platform that provides attractive future growth opportunities. The flagship product - FOSSENCE® (a fructo-oligosaccharide) is a prebiotic dietary fiber that promotes the growth of gut microbiome and improve digestive and immune health.

Rallis India Limited ('Rallis'), a subsidiary of the Company is a leading Agrochemicals company with a product portfolio offering comprehensive crop care solutions including formulations for crop protection, nutrition and seeds. It manufactures and markets a range of agri-inputs which include pesticides, fungicides, insecticides, seeds and plant growth nutrients. A strong distribution network with over 6,800 dealers and 93,000 retailers reaches a vast multitude of India's farmers covering 80% of districts and exports to over 31 countries. Its key products are Acephate, Hexaconazole, Pendimethalin and Metribuzin in which it holds a leadership position in the domestic market. Rallis is expected to drive its growth via manufacturing capacity expansion.

The Company's businesses are supported by pillars of safety, sustainability, operational excellence, customer focus, innovation and digitalisation. The Company has committed to the Science Based Targets initiative ('SBTi'), with a target of reducing carbon emission (Scope 1 & 2) by 30% by 2030. Its CCU plant in the UK is the first of its kind to be commissioned in that geography. It captures CO₂ emitted by the gas-powered energy system and uses it as a feedstock to manufacture high purity sodium bicarbonate for the pharma and food industries.

The Company supports key communities with development models that are sustainable and scalable. It also promotes biodiversity in a significant way through plantation, ecosystem creation, species conservation, water and resource conservation around its plants. Through its wholly owned subsidiary, Ncourage Social Enterprise Foundation, the Company is focussed on initiatives like livelihood creation,

capacity building, rural entrepreneurship development, market linkage and enriching lifestyle through quality products and services. These initiatives are woven around core intervention areas which include empowerment of rural women, youth, farmers, providing safe drinking water, animal care and clean energy.

Innovation at Tata Chemicals is focussed on delivering value to the customers by integrating chemistry with other sciences. At present, the Company has 3 centres for innovation located in Pune and Bengaluru.

Operational excellence permeates every aspect of the Company's operations and its people. Cost reduction, faster resolution of customer issues and world-class manufacturing are mainstays of a culture of continuous improvement.

The Company is on an accelerated path towards digitalisation. By adopting several digital initiatives and new age technologies like Industrial Internet of Things (IIoT), remote sensing, automation, etc., the Company is focussed on improving its manufacturing and process efficiencies.

4. Operational Performance

a. Tata Chemicals Overview

I. Impact of COVID-19

In early April 2021, a major second wave of COVID-19 infections took hold in the country which placed a temporary strain on the health care system including shortage of liquid oxygen and hospital beds across states and cities.

As part of the Corporate Social Responsibility (CSR) activities, the Company was able to extend support to the surrounding and extended communities through multiple initiatives:

Oxygen Support to the Government

1. Installed an oxygen manufacturing plant with 40 NM³/hr capacity in Ankleshwar, Gujarat
2. Installed a 200 LPH PSA oxygen plant and started a 50 oxygen bed facility at Mithapur, Gujarat
3. Supported Government with oxygen concentrators in Cuddalore, Tamil Nadu and Mambattu, Andhra Pradesh
4. Set up 200 beds with oxygen in the Government hospital for COVID-19 patients



Carbon Capture and Utilisation (CCU) plant in the UK is the first of its kind to be commissioned

Vaccination Drive & Awareness

1. More than 70,000 people were covered under the COVID-19 vaccination drive through ASHA workers (Okhamandal) & Rallis locations
2. Over 9,000 health kits were distributed in the villages of Okhamandal block
3. Awareness creation using information, education & communication material, social media, video, vaccines, hygiene, nutrition, immunity, do's and don'ts, etc.
4. Organised felicitation program for Corona Warriors

II. Annual Performance Overview

The Company achieved a consolidated revenue of ₹ 12,622 crore (24% increase over FY 2020-21) and EBITDA of ₹ 2,305 crore (54% increase over FY 2020-21).

Global soda ash market demand remained strong across all applications and recovered from the COVID impacted low of FY 2020-21. The consolidated soda ash sales volumes grew by 21% to 3,665k Metric Tonnes ('MT') in FY 2021-22 vs the previous year. The soda ash supply side situation remained tight with high operating rates across plants globally. The input cost environment on raw materials and energy increased during the year and remained at elevated levels through FY 2021-22. There was a further sharp spike in natural gas prices in Q4 FY 2021-22 on account of global geopolitical events. Market dynamics and input cost pressures led to higher soda ash realisations across geographies during the year. Despite a challenging input cost and supply chain environment, the Company was able to generate a record profitability in FY 2021-22.

While the overall execution of the expansion plans remained intact, supply chain disruptions and labour availability had marginal delays on the Company's capex project schedules.

All the geographies except UK had improved operating and financial performance in FY 2021-22 vs FY 2020-21. UK in particular had unprecedented cost increases in energy inputs and carbon pricing which had an impact on its profitability. The soda ash export markets which are in particular served by US and Kenyan units saw strong demand and pricing recovery during the latter half of FY 2021-22. The Indian market continues to be short supplied and remains

a net importer of soda ash which is expected to continue. This provides an opportunity for further capacity expansion and the Company has planned for phase 2 capacity expansion in Mithapur for soda ash, sodium bicarbonate and silica as a part of the growth plans.

Salt volumes grew at a steady pace of 2% to 1,609k MT in FY 2021-22 and volume of sodium bicarbonate was up 7% to 231k MT in FY 2021-22.

There has been no material change in the Company's liquidity position. Cash and bank balance (including current investments) of the Group as on March 31, 2022 stood at ₹ 2,635 crore vs ₹ 2,975 crore in the previous year with a positive liquidity position in India with no borrowings and sufficient credit lines available. The Company has also instituted, across all its operations, aggressive and focussed cost control program and an even more disciplined and prudent capital expenditure program to build up and conserve its already healthy cash position.

b. Basic Chemistry Products

Industry Structure & Developments

The Company serves customers across five continents through its Basic Chemistry Products ('BCP') business (soda ash, salt, sodium bicarbonate, cement and marine chemicals). The Company's global supply chain gives it the unique advantage of maintaining reliable supply and efficient service at competitive prices.

The Company has a soda ash capacity of 4.1 million tonnes. More than two-third of this is natural soda ash, located in Green River Basin, Wyoming, USA, where world's largest deposits of Trona occur and Lake Magadi in Kenya. In addition to having lower manufacturing costs, natural soda ash has a lower energy and environmental footprint. Synthetic soda ash and sodium bicarbonate are manufactured at Mithapur, India and Northwich, UK to cater to their respective domestic and export markets.

i. Soda Ash

World soda ash capacity which was 71 million tonnes in 2021 faced a net loss of 0.22 million tonnes in China and 0.45 million tonnes in the US. China's stand on pollution curbs kept tighter control on production. Soda ash demand exceeded supply during the year due to COVID-19 related delays in capacity addition



Despite a challenging input cost and supply chain environment, the Company was able to generate a record profitability in FY 2021-22

and strong bounce back in demand. This demand-supply imbalance was further aggravated by China turning into net importer coupled with disruptions in supply chains during the year. The combined effect of all of this led to operating rates exceeding 90%.

Aggressive focus on green energy is driving increased usage of glass for solar panels and Lithium Carbonate for EV battery applications with a consequent sharp demand growth for soda ash which is a vital ingredient in these two sectors.

Indian soda ash demand recovered in FY 2021-22 across all application sectors. Unplanned outages of domestic suppliers and limited import availability caused significant supply tightness. Increasing supply chain costs and rise in global soda ash prices resulted in import parcels coming at higher prices.

India's soda ash demand is expected to grow at 8% to 9% during FY 2022-23 to about 4.5 million tonnes. With both global and local supply tightness amidst firm demand growth, Indian soda ash market is expected to remain tight in the short to medium term.

ii. Sodium Bicarbonate

Sodium bicarbonate is a versatile product having a wide range of applications like food additives, animal feed, pharmaceuticals, dyes, textiles and emission control. The Company believes that given its wide range of current and emerging new applications, sodium bicarbonate will sustain consistent growth along with offering significant value addition potential in the future.

The Company has a total annual capacity of 0.24 million tonnes per annum in India and the UK. Sodium bicarbonate demand grew at a healthy rate of about 8% in FY 2021-22. Higher demand for processed food products, pharmaceuticals, textiles, specialty chemicals and animal feed will continue to drive bicarb demand in India at 6% to 7% CAGR for next five years. Indian bicarb capacity was flat in FY 2021-22 and overall demand-supply remained balanced to tight.

iii. Salt

Being an essential food ingredient, edible salt did not experience demand challenges in India even during the pandemic. However, in the UK market, the demand for both edible and non-edible applications was affected due to decline in leisure and hospitality sectors.

c. Specialty Products

I. Specialty Silica

TCL's wide range of conventional and HDS products allows it to participate in markets poised for growth driven by a push for sustainability across application sectors. In FY 2021-22, the overall market demand growth remained healthy. The Company believes that long-term trends like tightening of automotive labelling standards will drive demand for high-performance, low noise and fuel-efficient green tyres which need superior materials like HDS.

II. Prebiotics & Formulations

The Company has growing expertise in Fermentation platform for synthesis of products and solutions. The business offers solutions for human and animal gut health through its flagship product - FOSSENCE® - a prebiotic dietary fiber that promotes the growth of the gut microbiome which in turn positively improves digestive health, mineral absorption and immune health.

The Company's partnership with Indian and global academic institutions and research bodies to further understand the gut microbiota and related health effects is helping the Company build a leadership position in this space. This has created a base for extending the fermentation platform to several other green and sustainable solutions for a wider range of products and applications.

III. Agrochemicals & Seeds

Agriculture is the primary source of livelihood for about 58% of India's population. The sector was least impacted by the pandemic. India is one of the world's largest producers of farm products including milk and pulses, and the second largest producer of rice, wheat, sugarcane and groundnut. However, India's crop yields are lower than the Americas,



India's soda ash demand is expected to grow at 8% to 9% during FY 2022-23

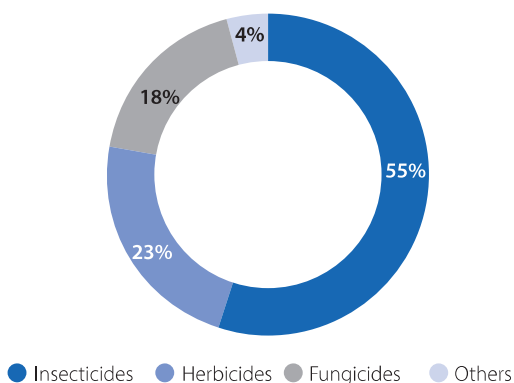
Europe and China. The average food grain yield was 2.99 MT per hectare in India against the global average of 3.97 MT per hectare.

India is among the 15 leading exporters of agricultural products in the world. Even during the current crisis in Europe, the world is looking at India for supplies of wheat and other food grains. The agricultural and allied sector exports have grown by 19.9% in FY 2021-22 to achieve a new milestone of crossing US\$ 50 billion.

Agrochemicals

With the need for increasing crop yields, demand for crop protection chemicals is increasing. India's crop protection chemicals market is projected to grow by 4.2% CAGR during 2020-25. Indian Agriculture is faced with the challenge of losses caused by pest attacks. About 20% of crop production is lost each year due to insects, weeds and diseases. Despite this, India's crop protection usage is one of the lowest worldwide.

Indian Agrochemicals usage pattern



Per capita consumption of pesticides in India is 0.6 kg/ha, compared to the world average of 3 kg/ha. Use of bio-pesticides is increasing in India as they affect only the target pest. The Government has adopted Integrated Pest Management Practices (IPM) with emphasis on the use of bio-pesticides.

Seeds

The organised seed market is estimated at ₹ 16,000 crore, led by hybridisation in crops like Cotton, Vegetables, Paddy and Corn. Cotton remains the only approved genetic modification (GM) crop in India. Industry is working closely

with the Government to enhance adoption of high quality hybrid seeds. This will support in making Indian agriculture more competitive.

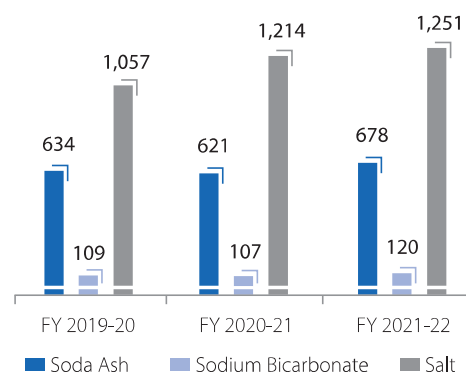
d. Entity-wise Performance

TCL India (Standalone)

i. Operations

Sales trend of Basic Chemistry Products is as follows:

TCL India - Basic Chemistry Products Sales Volume in '000 MT



Soda ash volumes as well as realisations improved during FY 2021-22 resulting in increase in revenues and EBITDA over FY 2020-21. Higher than expected demand coupled with supply constraints and a pressure of increased input and energy cost led to increased pricing. On the manufacturing side, solar salt production was affected due to brine dilution owing to extended rains and flooding. Proactive planning, strong customer relationships, robust processes and product configuration changes helped to overcome these challenges. Strict cost control measures and rapid digitisation helped mitigate some of these pressures.

TCL India is the largest manufacturer of edible iodised salt in the country. The Company recorded its highest ever sale of salt at 12.51 lakh tonnes during the year, an increase from 12.14 lakh tonnes in FY 2020-21. The Company is investing to increase its salt production capacity to meet growing demand of its key customer, Tata Consumer Products Limited ('TCPL').



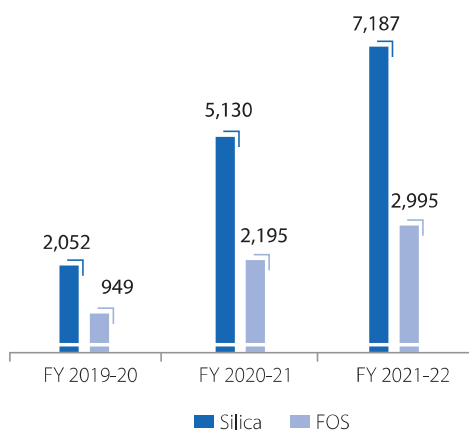
The Company recorded its highest ever sale of salt at 12.51 lakh tonnes during FY 2021-22

With favourable demand and higher production of sodium bicarbonate, the Company achieved higher volumes and realisations across branded and non-branded segments of the market. The Company continued focussing on growing its portfolio of high value branded sodium bicarbonate sales.

'Chem Connect', the Company's online customer portal and mobile app remained at the forefront with user-friendly dashboards for ease of customer support, engagement and navigation. Customer engagement activities such as Senior leader connect, annual reward and recognition events for channel partners, Club 15K meets, knowledge-sharing sessions, 'Web pe Charcha', were the hallmarks of staying connected with the supply chain partners.

Sales trend of Specialty products is as follows:

TCL India-Specialty Products Sales Volume (in MT)



Tyre demand rebounded during FY 2021-22 and is expected to grow by double digits during FY 2022-23 resulting in higher demand for silica. Tyre labelling norms will continue to drive HDS demand.

Silica margins in FY 2021-22 were impacted by steep increases in raw material and energy costs. Customer approvals are expected by early FY 2022-23, helping to improve realisation during FY 2022-23.

Prebiotics & Formulations

The Company stabilised its operations at its state-of-the-art greenfield facility in Mambattu, Andhra Pradesh. Food safety certifications (FSSAI, FSSC 22000, FAMI QS, Halal, Kosher) strong scientific backing, regulatory support, together with ongoing application development have enabled us to serve customers across the globe.

In addition to continuing growth from the USA and SEA markets, there has been encouraging potential also opening up from the EU. The facility has been qualified by some global customers putting the Company on the path of achieving full capacity utilisation in the coming year. There were specific intervention projects to improve efficiencies and cost of operations.

ii. Financials (continuing operations) ₹ in crore

| TCL India | FY 2021-22 | FY 2020-21 |
|-------------------------|------------|------------|
| Revenue from operations | 3,721 | 2,999 |
| EBITDA | 951 | 611 |
| Profit before tax (PBT) | 988 | 614 |
| Profit after tax (PAT) | 787 | 479 |

Subsidiaries

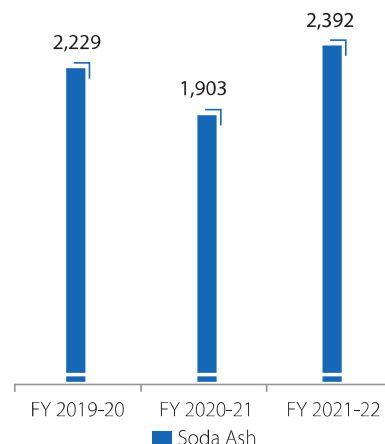
a. Basic Chemistry Products

Tata Chemicals North America Inc., USA ('TCNA')

i. Operations

Sales trend of Basic Chemistry Products is as follows:

TCNA Sales Volume in '000 MT



In FY 2021-22, sales volumes increased by over 25% compared to a COVID-19 impacted FY 2020-21 and 7% above FY 2019-20 primarily due to a sharp recovery in export demand. To support this growth, both surface and mine operations delivered record production which along with a focus on cost control, energy efficiency and waste recovery led to a strong recovery in business performance.

ii. Financials (continuing operations) ₹ in crore

| TCNA (USA) | FY 2021-22 | FY 2020-21 |
|---|---------------|---------------|
| Revenue from operations | 3,688 | 2,878 |
| EBITDA | 787 | 351 |
| PBT | 338 | (170) |
| Profit after tax and non-controlling interest | 270 | (197) |

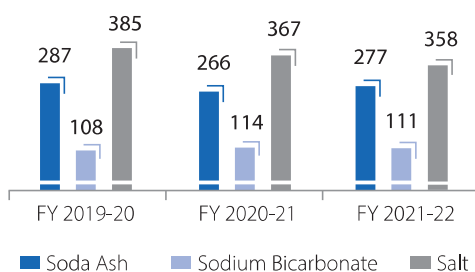
The revenue increase is a mixture of volume increase in export and domestic segments and price recovery in exports.

TCE Group Limited, UK ('TCE Group')

i. Operations

Sales trend of Basic Chemistry Products is as follows:

TCE Group Sales Volume in '000 MT



TCE catered to 50% of the UK market demand of soda ash from its manufacturing operations at Lostock. All input costs rose strongly particularly in the second half of the year. The Company engaging with its customers was able to secure mid-year price increases to cope with these unprecedented cost pressures.

The UK salt volumes in FY 2021-22 were stable vs FY 2020-21 with some growth in volumes in the second half as COVID-19 restrictions were lifted. The new power plant at salt is now fully operational and has already increased energy efficiency and lowered carbon emissions by 12%.

The UK sodium bicarbonate business had a good year including the full commissioning of the new CCU plant which is now providing European Industrial Gases Association (EIGA) standard CO₂ requirements for high grade sodium bicarbonate production and has also reduced emissions by over 10% in the process.

ii. Financials (continuing operations) ₹ in crore

| TCE Group (UK) | FY 2021-22 | FY 2020-21 |
|-------------------------|---------------|---------------|
| Revenue from operations | 1,949 | 1,409 |
| EBITDA | 118 | 138 |
| PBT | (85) | (40) |
| PAT | (85) | (56) |

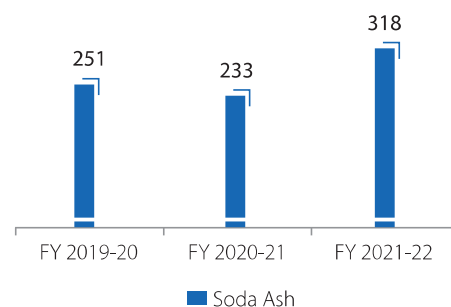
The revenue grew 38% compared to the previous year led by higher salt and sodium bicarbonate revenue along with steady soda ash revenues. PAT reduced due to impact of higher carbon price, higher fixed costs, higher depreciation and certain one-off tax related charges.

Tata Chemicals Magadi Limited, Kenya ('TCML')

i. Operations

Sales trend of Basic Chemistry Products is as follows:

TCML Sales Volume in '000 MT



Soda ash is the key product in TCML portfolio, mainly servicing the container glass and silicate sectors in the East African domestic market and export markets in SEA and Indian subcontinent.

ii. Financials (continuing operations) ₹ in crore

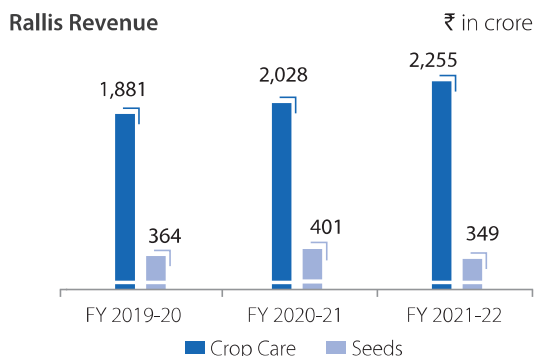
| TCML (Kenya) | FY 2021-22 | FY 2020-21 |
|-------------------------|---------------|---------------|
| Revenue from operations | 577 | 413 |
| EBITDA | 143 | 62 |
| PBT | 94 | 20 |
| PAT | 94 | 20 |

The revenue increased by 40% compared to the previous year on account of better realisations due to favourable market demand. Hence, PAT improved by ₹ 74 crore. A tight control on costs and especially lowering of fixed cost coupled with higher realisations resulted in better EBITDA.

b. Specialty Products

Rallis India Limited ('Rallis')

i. Operations:



Note: Excluding inter-company transactions

In a challenging business environment, consolidated revenue from operations continued to grow to ₹ 2,602 crore during FY 2021-22 compared with ₹ 2,424 crore recorded in the previous year. Rallis was able to transfer only part of the increasing input costs to the domestic and international customers resulting in Profit After Tax of ₹ 164 crore compared to ₹ 229 crore achieved during FY 2020-21.

ii. Financials

| Rallis | ₹ in crore | |
|-------------------------|------------|------------|
| | FY 2021-22 | FY 2020-21 |
| Revenue from operations | 2,602 | 2,424 |
| EBITDA | 276 | 325 |
| PBT | 222 | 303 |
| PAT | 164 | 229 |

Note: The figures are as per TCL's consolidated books

The revenue grew 7% compared to the previous year on account of growth in Crop Care. Growth in Crop Care business was positive at 11.2%, however, margins coming under pressure due to steep cost volatility. Seeds business had a challenging year resulting in degrowth of 13% impacted by both internal and external factors.

5. Business Outlook

The Company continues to focus on growth of its core businesses and develop new products that serve customer needs along the vectors of sustainability and green chemistry. The demand growth is in sectors such as food, feed and pharma and also in sustainability driven applications like solar glass, lithium carbonate and a shift from plastic to glass containers. These in turn would continue to drive the Company's current and future investments as ingredient supplier of choice to these sectors.

Globally, soda ash demand is increasing after the dip in FY 2020-21 with prices moving upward as a lag-effect of demand recovery. Much of this recovery has again been driven by sustainability trends like solar glass, lithium carbonate and the move from plastic to glass containers. With no capacity additions, operating rates have moved up to fulfil this demand. China's production will service the domestic demand leading to a fall in its export. With supplies from Turkey mainly getting absorbed in Europe, North Africa, few markets in SEA and India, USA could step in to meet the global demand growth.

Improving rural and urban demand in India and ongoing vaccination programs are the key positives which will play in the medium term. GDP has started registering good growth in the third and the fourth quarters of FY 2021-22 and the trend is expected to continue through FY 2022-23 with COVID-19 infections easing out.

In India, recovery in soda ash demand across application sectors, an anticipated reduction in imports and increasing energy and freight costs will necessitate increased focus on operating rates and the ongoing programs on driving cost reductions and efficiencies which are likely to yield benefits in margins. The phase I expansion plan under execution and projected phase II expansion in Mithapur will further drive growth across the Company's product portfolio in its core business.

Continuing push on growing value-added sodium bicarbonate sales into the growing food, feed and pharma sectors in line with the Company's transformation strategy and offering customers in these sectors a portfolio of products including its NQ range of prebiotics will be a focus area. This would also further ramp up capacity utilisation of the new prebiotics plant. Similarly, ongoing project to increase salt capacity in order to service long-term growth in demand from the key customer, TCPL will continue.

Sustainability driven trends in the rubber and tyre industry are calling for incorporation of specialty grades of silica which augurs well for the growth of the specialty silica business in terms of customer acquisition and capacity growth.

The outlook for TCNA, USA remains positive with soda ash operating rates at maximum levels driven by a continued ongoing recovery in export markets. At TCNA, continuous improvement, cost reduction and sustainability in operations will remain areas of focus to drive margin improvement. Generating free cash flow and prepaying debt remains a critical area of focus.

In TCE, UK, product demand across the range has built strongly throughout CY 2021 from a slightly hesitant start, with price rises occurring during the second half of the year

on the back of significantly increasing input price pressures. The sodium bicarbonate plant is now self-sufficient in carbon dioxide having successfully commissioned the CCU plant as part of the Company's overall sustainability push towards its SBTi targets. Future sodium bicarbonate and salt growth is being driven by focus and investment in high grade pharmaceutical grade applications including an investment in a pharmaceutical salt plant at the Middlewich site due on stream in 2024.

For TCML, Kenya, sustained demand in export markets with a focus on developing new and expanding the domestic East African market to maximise overall price realisation through strategic market mix would be an area of focus. In addition, ensuring plant reliability as well as optimising costs would continue to be key result areas. Generating free cash flow and prepaying debt remains a critical area of focus.

For Rallis, increased manufacturing capacity and introduction of new products will provide a growth platform for both exports business and domestic sales. Rallis is augmenting its product portfolio through co-marketing and inhouse research & development (R&D). Manufacturing capacity is being augmented, marketing activities are intensified and distribution networks are being strengthened in key states. Seeds business will address challenges to stabilise operations in FY 2022-23.

6. Risks and Opportunities

India

Higher energy costs is the most significant risk to our business performance. The Company continues to remain focussed towards keeping fixed costs low and controlling variable costs including fuel, salt and limestone through raw material securitisation and continuous improvement programs to help mitigate the adverse impact of these risks including working on changing fuel mix and different contracting strategies.

Adherence to more stringent environmental norms, packaging and improving safety performance in a sustainable manner are other key areas that the Company continues to focus on during FY 2022-23.

Excessive rains are leading to dilution of brine which is affecting captive solar salt production and availability leading to rise in cost of production due to rise in need of purchased salt.

Additional impact on cost of production can be from cost of carbon credits. The Company is developing a holistic carbon abatement strategy which will help in mitigating this risk.

Delay in product approval from major tyre and non-tyre customers will negatively impact the plant utilisation rates. Both R&D and business development teams are engaging

with critical customers on a constant basis to fast track the product approval and initiate commercial sales.

The Government's push towards renewables will accelerate soda ash consumption in India in a significant manner. Government's focus on "Atmanirbhar Bharat" opens up opportunities in terms of kick-up of demand from infrastructure development, boost to domestic manufacturing through several initiatives like PLI's, import restriction measures and softer finance facilities. This will have a positive impact on soda ash, bicarb and cement consumption either directly or through increase in demand of end segments.

Bicarb use in flue gas segment continues to be a promising opportunity but there still remains uncertainty in consistent off-take by power plants. The Company had started supplies in FY 2019-20 and expects the engagement to continue as the regulations are implemented.

In addition to enhanced ease of doing business, customer partnerships around themes of innovation and sustainability continue to offer opportunities for stronger customer connect. Increasing value-added products and sustainable supply chain practices like bulk material are some steps the Company will continue to focus on.

Using technology for digitalisation of the plants and making processes smoother for customers and internal stakeholders is going to be crucial as the Company heads into a digital age. Multiple projects around plant and supply chain automation, customer relationship management are being implemented.

Rallis has a robust and comprehensive framework to address the vagaries of monsoon and its impact on India's agriculture sector by deeper engagement with farmers. In addition, the steep increase in input costs is being addressed through combination of localisation of intermediates and appropriate engagement and contracting with suppliers. Increased domestic usage of agrochemicals and exports out of India are immediate opportunities. The long-term trend of shift to Biologics remains an area of product development focus.

Overseas

TCNA, US is well prepared to address the short-term export risks due to the American National Soda Ash Corporation ('ANSAC') exit in December 2022. Adherence to more stringent environmental and regulatory norms and sustainably improving safety performance are other key issues for the business. A focus on these initiatives including investment and resource prioritisation form a mitigation strategy to systematically address them. TCE, UK continues to address inflationary and energy environment with a focus on reduction of fixed costs and appropriate customer engagement. In Kenya, the focus is largely on quality and capacity utilisation.

7. Financial Performance (continuing operations)

(A) Standalone performance for the year ended March 31, 2022

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change | Remarks |
|---------------------------------|---------------|---------------|--------|-------------|--|
| Revenue from operations | 3,721 | 2,999 | 722 | 24 | Basic Chemistry Products: Higher realisation and higher volumes of soda ash, salt and bicarb have contributed in higher revenue for the Company. Specialty products: Revenue was high due to increase in volume of products related to Prebiotics and Formulations. |
| Other Income | 278 | 219 | 59 | 27 | Other income has increased mainly on account of interest received on a favourable refund order received on Income Tax and higher dividend during the year. |
| Cost of materials consumed | 814 | 600 | 214 | 36 | Cost of materials is higher due to higher input costs of raw materials. |
| Purchases of stock-in-trade | 160 | 153 | 7 | 5 | Purchases of stock-in-trade increased mainly on account of higher demand for chemistry and nutrition solutions related business. |
| Power and fuel | 670 | 489 | 181 | 37 | The increase in power and fuel cost is mainly on account of higher coal prices and other variants. |
| Employee benefit expenses | 248 | 250 | (2) | (1) | Overall Employee costs have remained constant and no major change compared to FY 2020-21. |
| Freight and forwarding expenses | 460 | 423 | 37 | 9 | Freight and forwarding charges have increased majorly due to higher sales volumes of soda ash and salt and increase in freight rates. |
| Finance costs | 19 | 19 | - | - | Finance costs have remained constant and no change compared to FY 2020-21. |

(B) Standalone Balance Sheet Analysis

1. Investments

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|---|---------------|---------------|--------------|-------------|
| Investments in equity instruments in subsidiaries | 3,606 | 3,606 | - | - |
| Investment in joint venture | 336 | 336 | - | - |
| Investment in preference shares in subsidiaries* | 751 | 815 | (64) | (8) |
| Investment in other companies** | 4,971 | 3,147 | 1,824 | 58 |
| Investments in non-convertible debentures | 150 | 150 | - | - |
| Investment in mutual funds | 1,113 | 1,282 | (169) | (13) |
| Total Investment | 10,927 | 9,336 | 1,591 | 17 |

* Reduction on account of re-payment made by a subsidiary.

** Increase in the value of investments in other companies is mainly due to changes in fair value of investments and rights issue subscription made by the Company.

2. Inventories:

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|-------------|---------------|---------------|--------|-------------|
| Inventories | 880 | 522 | 358 | 69 |

Inventories are higher primarily due to higher prices on inventory of raw materials and coal.

3. Trade Receivables:

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|-------------------|---------------|---------------|--------|-------------|
| Trade receivables | 182 | 145 | 37 | 26 |

Trade receivables are higher primarily due to the higher sales during the last quarter of FY 2021-22.

4. Loans, other financial assets, advance tax assets (net) and other assets:

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|--------------------------|---------------|---------------|--------------|-------------|
| Loans | 1 | 1 | - | - |
| Other financial assets | 64 | 127 | (63) | (50) |
| Advance tax assets (net) | 613 | 575 | 38 | 7 |
| Other assets | 279 | 407 | (128) | (31) |
| Total | 957 | 1,110 | (153) | (14) |

Decrease in other financial assets is mainly due to realisation of advances. Decrease in other assets is mainly due to settlement of advances given for capital goods procurement.

5. Cash & Cash Equivalent (net)

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|--|---------------|---------------|--------------|-------------|
| Cash and cash equivalent (including Bank balances) | 493 | 685 | (192) | (28) |
| Borrowings | | | | |
| Non-current finance lease obligations | - | (5) | 5 | (100) |
| Current maturities finance lease obligations | (3) | (4) | 1 | (25) |
| Total Borrowings | (3) | (9) | 6 | (67) |
| Cash and Cash equivalent (net) | 490 | 676 | (186) | (28) |

Lower cash and cash equivalents have been represented through higher outflow in investing and financing activities.

6. Trade payables, other financial liabilities, other liabilities, provisions, current tax liabilities (net) and deferred tax liabilities (net)

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|--------------------------------|---------------|---------------|------------|-------------|
| Trade payables | 561 | 482 | 79 | 16 |
| Other financial liabilities | 181 | 166 | 15 | 9 |
| Other liabilities | 75 | 58 | 17 | 29 |
| Provisions | 351 | 356 | (5) | (1) |
| Current tax liabilities (tax) | 107 | 135 | (28) | (21) |
| Deferred tax liabilities (net) | 397 | 202 | 195 | 97 |
| Total | 1,672 | 1,399 | 273 | 20 |

Increase in deferred tax liabilities (net) is mainly due to increase in fair value of non-current investments. Increase in trade payables is mainly due to higher cost of raw materials reflected through an overall increase in the cost base.

(C) Standalone Cash flow analysis

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 |
|--------------------------------|---------------|---------------|
| Cash from operating activities | 582 | 672 |
| Cash from investing activities | (355) | (403) |
| Cash from financing activities | (270) | (291) |

Net cash flow from operating activities: Lower operating cash flows in FY 2021-22 against FY 2020-21 is mainly on account of change in working capital.

Net cash flow from investing activities: Lower investing cash outflows in FY 2021-22 is mainly on account of redemption of current investments compensated by higher purchase of property, plant and equipment (including capital work-in-progress).

(D) Details of significant changes in key Standalone financial ratios:

- Interest Coverage Ratio (%)** of the Company has increased to 52% (FY 2020-21: 34%) due to increase in profits on account of higher price realisation and higher other income.
- Debt Equity Ratio (%)** of the Company has improved due to increase in equity (on account of profits earned during the year), while debt continue to remain almost negligible during the year.
- Operating Profit Margin (%)** of the Company has decreased to 26% (FY 2020-21: 35%) due to increase in revenue partially offset by higher cost of goods sold.
- Net Profit Margin (%)** of the Company has increased to 21% (FY 2020-21: 16%) due to higher price realisation and higher other income.

5. **Return on Net Worth (%)** of the Company has increased to 6% (FY 2020-21: 4%) due to higher operating profit and higher other income.

(E) Consolidated performance for the year ended March 31, 2022

i. Revenue from operations ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|--|---------------|---------------|--------------|-------------|
| Tata Chemicals Limited ('TCL'), India | 3,721 | 2,999 | 722 | 24 |
| Tata Chemicals North America Inc. ('TCNA'), USA | 3,688 | 2,878 | 810 | 28 |
| TCE Group Limited - Consolidated ('TCE Group'), UK | 1,949 | 1,409 | 540 | 38 |
| Tata Chemicals Magadi Limited ('TCML'), Kenya | 577 | 413 | 164 | 40 |
| Rallis India Limited ('Rallis'), India | 2,602 | 2,424 | 178 | 7 |
| Others and Eliminations | 85 | 77 | 8 | 10 |
| Total | 12,622 | 10,200 | 2,422 | 24 |

Higher realisation and volumes for soda ash across geographies compared to previous year.

ii. Cost of materials consumed ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|-------------------------|---------------|---------------|------------|-------------|
| TCL, India | 814 | 600 | 214 | 36 |
| TCE Group, UK | 181 | 174 | 7 | 4 |
| Rallis, India | 1,448 | 1,329 | 119 | 9 |
| Others and Eliminations | (19) | (22) | 3 | (14) |
| Total | 2,424 | 2,081 | 343 | 16 |

The increase in cost of materials reflects higher raw material costs across units. In case of TCNA and TCML, raw materials are primarily mined and do not involve external purchases and hence not reflected in cost of materials consumed.

iii. Purchases of stock-in-trade ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|-------------------------|---------------|---------------|-----------|-------------|
| TCL, India | 160 | 153 | 7 | 5 |
| TCNA, USA | 24 | 22 | 2 | 9 |
| Rallis, India | 120 | 137 | (17) | (12) |
| Others and Eliminations | 32 | 11 | 21 | 191 |
| Total | 336 | 323 | 13 | 4 |

iv. Power and fuel ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|---------------|---------------|---------------|------------|-------------|
| TCL, India | 670 | 489 | 181 | 37 |
| TCNA, USA | 392 | 341 | 51 | 15 |
| TCE Group, UK | 878 | 459 | 419 | 91 |
| TCML, Kenya | 103 | 94 | 9 | 10 |
| Rallis, India | 69 | 54 | 15 | 28 |
| Total | 2,112 | 1,437 | 675 | 47 |

Power and fuel costs have increased on account of higher coal and gas prices across units.

v. Employee Benefit Costs ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|---------------|---------------|---------------|------------|-------------|
| TCL, India | 248 | 250 | (2) | (1) |
| TCNA, USA | 763 | 654 | 109 | 17 |
| TCE Group, UK | 212 | 193 | 19 | 10 |
| TCML, Kenya | 69 | 80 | (11) | (14) |
| Rallis, India | 239 | 216 | 23 | 11 |
| Others | 9 | 7 | 2 | 28 |
| Total | 1,540 | 1,400 | 140 | 10 |

Employee benefit costs increased due to wage increase. However, employee benefit cost reduction in TCL and TCML was due to reduction in headcount.

vi. Freight and forwarding charges ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|---------------|---------------|---------------|------------|-------------|
| TCL, India | 460 | 423 | 37 | 9 |
| TCNA, USA | 953 | 727 | 226 | 31 |
| TCE Group, UK | 175 | 140 | 35 | 25 |
| TCML, Kenya | 101 | 76 | 25 | 33 |
| Rallis, India | 112 | 86 | 26 | 30 |
| Others | 5 | 5 | - | - |
| Total | 1,806 | 1,457 | 349 | 24 |

Freight and forwarding charges have increased primarily due to higher volumes and increase in freight cost over the period.

vii. Finance costs ₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|-------------------------|---------------|---------------|-------------|-------------|
| TCL, India | 19 | 19 | - | - |
| TCNA, USA | 127 | 201 | (74) | (37) |
| TCE Group, UK | 65 | 55 | 10 | 18 |
| TCML, Kenya | 14 | 17 | (3) | (18) |
| Rallis, India | 5 | 5 | - | - |
| Others and Eliminations | 73 | 70 | 3 | 4 |
| Total | 303 | 367 | (64) | (17) |

Decrease in finance cost in TCNA due to decrease in repricing/ refinancing of loans. In TCML, part loan was prepaid during the year leading to lower costs.

viii. Other expenses

₹ in crore

| Entity | FY 2021-22 | FY 2020-21 | Change | % Change |
|----------------------------|---------------|---------------|------------|-------------|
| TCL, India | 460 | 461 | (1) | - |
| TCNA, USA | 836 | 722 | 114 | 16 |
| TCE Group, UK | 354 | 321 | 33 | 10 |
| TCML, Kenya | 145 | 119 | 26 | 22 |
| Rallis, India | 396 | 347 | 49 | 14 |
| Others and Eliminations | 31 | 38 | (7) | (18) |
| Total | 2,222 | 2,008 | 214 | 11 |

Other expenses represent the following

₹ in crore

| Particulars | FY 2021-22 | FY 2020-21 | Change | % Change |
|---|---------------|---------------|------------|-------------|
| Stores and spares consumed | 314 | 279 | 35 | 13 |
| Packing materials consumed | 319 | 227 | 92 | 41 |
| Repairs | 448 | 421 | 27 | 6 |
| Rent | 43 | 52 | (9) | (17) |
| Royalty, rates and taxes | 378 | 283 | 95 | 34 |
| Distributor's service charges and sales promotion | 79 | 84 | (5) | (6) |
| Others* | 641 | 662 | (21) | (3) |
| Total | 2,222 | 2,008 | 214 | 11 |

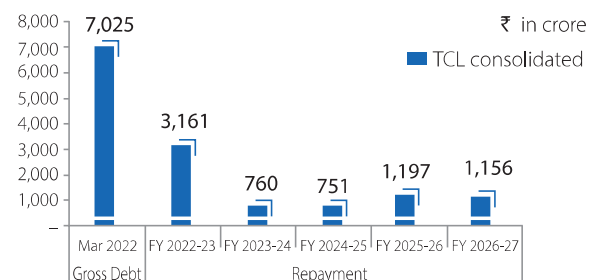
* Others include insurance charges, professional fees, foreign exchange loss, travelling expense, provision for doubtful debts and advances, directors' fees / commission, subcontracting cost, outsourcing cost and other expenses.

(F) Details of significant changes in key Consolidated financial ratios:

- Net Profit Margin (%)** of the Company has increased to 11% (FY 2020-21: 4%) due to overall improvement in volumes, revenue partly offset by higher costs across geography (Previous year lower profit/revenue from operations due to COVID-19 impact).
- Return on Net Worth (%)** of the Company has increased to 8% (FY 2020-21: 3%) due to increase in improved operating performance across geography (Previous year lower profit/revenue from operations due to COVID-19 impact)

(G) Total Debt and Amortisation Schedule

Repayment schedule of existing debt



Notes:

- Gross debt of ₹ 7,025 crore includes ₹ 236 crore of working capital loans/current borrowings.
- The repayment schedule for term loans has been prepared considering the existing repayment terms. Some of these loans/facilities may be refinanced in full or in part from time to time in future depending on the requirement and the business plans. Non-current portion of finance leases has been included in FY 2023-24 repayment.

8. Innovation and Technology

Innovation Centre

The Innovation Centre ('IC') at Pune is the Company's science and technology hub for seeding new businesses and accelerating the Company's businesses. IC supports the Company's businesses by providing cutting-edge technology solutions and a customer-centric, multi-disciplinary problem-solving approach for sustainable growth and differentiation. The Company has 177 patents (cumulative) and over 100 active applications. In FY 2021-22, IC published 4 research papers in international peer-reviewed journals.

During the year, IC significantly contributed to development of application specific grades of silica for tyre, rubber and textile applications and customised formulations using prebiotics (FOS) and development of Inulin. The Company won the prestigious CII's India's top 25 Most Innovative Companies in 2021 for the third time in a row, won 2 awards at ISQ Quality Innovation Awards at National Level and is the only Indian Company to win at the International Quality Innovation Awards. The Company received special appreciation award for its Intellectual Property ('IP') practices and portfolio from CII as well.

9. Digitalisation and Information Technology

The Company is looking at step improvements in its manufacturing efficiencies, process efficiencies and

improved productivity by adopting digital and new age technologies. Adoption of Industry 4.0 has already been yielding encouraging results. IT and digital transformation roadmap is being reviewed on a regular basis and realigned with industry trends and business needs. Digital initiatives are cutting across all functions like supply chain, sales, procurement, commercial & finance, human resources, R&D and SHE (Safety, Health and Environment). IT and cyber security has always been at the forefront to ensure secure operations while moving on the digitisation journey. The cloud adoption is under acceleration to bring better manageability, scalability and agility for supporting digital transformation. The Company also follows the practice of standardisation, harmonisation and simplification of applications and platforms to drive synergies between the Company and all its subsidiaries.

The Company has completed several digital transformational initiatives. The Transportation Management System (TMS) for the Company and its subsidiary Rallis is improving collaboration with transporters and managing the logistics function more effectively. The Robotic Process Automation (RPA) journey has been initiated within the finance function to automate several routine tasks and increase productivity of transaction processing. Integrated Business Planning (IBP) is being implemented at Rallis to improve planning collaboration, effectiveness and efficiency. The Human Resources Management System (HRMS) and payroll systems have been migrated to a modern platform to enhance user experience. The Laboratory Management and Information System (LIMS) has been implemented to enable smart R&D labs and plant labs in Tata Chemicals and Rallis. More IT-enabled workflows are being developed to support the functions like stores, procurement, finance and commercials for enabling paperless processes. The current safety and health application has been migrated to a modern cloud platform and new modules with functionality such as management of change, online permit to work, etc. are being added.

Under Industry 4.0 initiatives, IIoT applications have been developed and are being used to improve efficiencies at the Boiler and Carbonation Towers at Mithapur plant, India. Further, new applications at Mithapur plant are being explored which can be aligned with IIoT to predict and prevent issues earlier for key components like Induced Draught (ID) fans, evaporators etc. Similarly, for Rallis plants, preparatory work has been done for implementation of a data historian. This will lead in future to analytics led solutions such as algorithms for a golden batch for optimising production Key Performance Indicators (KPIs). Initial exploration work is also underway at other plants like Mambattu and Cuddalore. Salt pan operations automation is being explored with remote

sensing technology by using satellite images. Rallis is already using the platform 'Drishti' for decision intelligence and crop monitoring systems with remote sensing and predictive analytics. Recently developed analytics dashboards are finding good use in sales and marketing and safety functions.

To improve user experience and cyber security, the Company's email and collaboration platform is being migrated to an integrated platform with more modern features. The Company is having a 'cloud first' strategy to bring in agility and manageability where all new applications are being implemented on a cloud platform and the current on-premise applications are also being migrated to public cloud platforms. The Company has signed a managed enterprise cyber security model with a leading third party to ensure safe and secure digital operations. This includes continuous assessment, improvement and periodic benchmarking of cyber security and has already shown performance comparable to industry benchmarks. The Company is also focussing on Operational Technology (OT) security to secure plant operations from cyber threats. The IT infrastructure is regularly upgraded for covering endpoints, networks, security, bandwidths etc. to meet the business needs of IT and digital operations. Business continuity and disaster recovery plans are in place and mock drills are done periodically to ensure reliability and availability of all critical IT systems.

10. Human Resources

FY 2021-22 saw a continued impact of COVID-19 on the work, family and social life of the employees. Safety, health & well-being of employees, their families and the community around us remained an immediate concern of the Company. Employee connects & communication attained high importance. Our manufacturing units were 100% operational and new work protocols like rostering and staggered working were adopted for the office locations across all entities. Virtual office was managed using technology effectively.

There was a sharp focus on digitisation and the Company successfully launched our new myWOW (My World of Work) HRMS Oracle platform under the OTON (One Tata Operating Network) program. This migration has helped increase the efficiency of the people processes and helped address the needs and aspirations of the emerging multigenerational workforce.

In line with its commitment to increase diversity in the workforce, the Company has increased the hiring of women across its plants at Cuddalore, Mambattu and Mithapur. Graduate Engineer Trainees were hired in order to build a pipeline of engineers for production units of which around 50% were women.

During the year, two activities namely the restructuring process at Magadi and the pilot of 'One Rallis' (with an aim to leverage synergy across Rallis' Crop Care and Seeds business units) were implemented to make the organisation more agile and address customer needs effectively.

Our Employee Assistance Program 'We Care' supported India-based employees and their families for emotional and mental wellness support, access to counselling, coaching, self-help resources, etc. At Mithapur, the Workmen Union provided support and worked closely with the management in implementing necessary steps to combat the virus. Vaccination drives were conducted for employees and immediate family across locations.

During the year, the Company continued to introduce initiatives and tools that helped continuous learning and the development of new skills and adoption of digital learning solutions. Wide range of courses on the digital platform through the 'Enrich' initiative were curated. The employees had the flexibility to hone their skills and take up e-learning courses anytime and anywhere. Plants continued their functional capability programs supplemented with the centrally-run virtual trainings on POSH (Prevention of Sexual Harassment), ABAC (Anti-Bribery & Anti-Corruption), Ethics, D&I (Diversity & Inclusion), etc.

Frequent communication by leaders and team meetings, advisories and policy/process changes were in place to keep the employees engaged and motivated.

The details of number of employees as on March 31, 2022 are given on page no. 47 of this Integrated Annual Report.

11. Safety and Health

Driven by 'Target Zero Harm' – Zero Harm to People, Zero Harm to Asset and Zero Harm to Environment – Health and Safety forms one of the core values at the Company. There is a firm commitment to the continuous improvement of the organisation's safety performance.

The Company is committed to continuously employing world-class Safety, Health and Environment ('SHE') practices through benchmarking with the companies that are best in the business. The Company has a Board level Safety, Health, Environment and Sustainability ('SHES') Committee, chaired by an Independent Director. The Committee reviews and monitor the sustainability, safety, health and environmental policies and activities of the Tata Chemicals Group on behalf of the Board to ensure that the Group is in compliance with appropriate laws and legislation. This Committee also provides valuable direction and guidance to the Management to ensure that Safety

and Sustainability implications are duly addressed in all-new strategic initiatives, budgets, audit actions and improvement plans.

The Company has an integrated Safety, Health & Environment Policy. Each of the sites/subsidiaries have adopted the Corporate SHE Policy or have its own policy aligned to Corporate Policy and local regulatory requirement focussing on site-specific issues. The Corporate SHE Policy is aligned to other key policies and guidelines like the Group Safety Policy, Consequence Management guidelines, Corporate Sustainability, Corporate Mission Vision Values and International Labour Organisation (ILO) fundamentals. This policy covers clauses relating to the safety of key stakeholders across organisation and also confers accountability through the reporting performance.

To ensure steady improvement in the SHE performance, the Company is adopting voluntary standards such as Process Safety and Risk Management (PSRM), ISO 45001, Responsible Care and the British Safety Council guidelines. The Company's commitment to its safety management programs follows a top-down approach with the senior management determinedly working towards establishing, demonstrating, sustaining and improving the safety culture and incorporating the Company's core value of safety in their daily responsibilities. The employees are specially trained to tackle any potential hazards that may arise in the course of their work. Additionally, tailored periodic medical check-ups are carried out for the employees based on the risk profile of their work area in order to identify risks to human health. Adequate medical facilities are available at all manufacturing sites and specialised medical facilities are provided through tie-ups with other hospitals, nursing homes, etc.

In line with the continuous improvement journey of safety performance through Target Zero Harm, key lead and lag measures are identified and aligned to the functional process and strategic objectives. Targets for these measures are then set based on past performance, stakeholder, legal and voluntary requirements and industry benchmarks. The data associated with key lead and lag measures are captured through various predefined reports, log sheets and web portals to track the performance. Predefined reports are configured in portals for necessary data analysis and management reports. For data analysis, tools like trends analysis, Root Cause Analysis (RCA) and comparative performance analysis are used to assess current performance and the improvements required. Positive Assurance Matrix is also introduced at all the sites to track SHE, Fire Safety and Electrical Safety Performance which is reviewed by the SHES Committee of the Board.

The Company tracks 11 lead indicators under 5 Progressive Safety Index (PSI) elements to determine the safety progress. The elements of PSI have been selected through prevalent legislative requirements of the respective locations as well as the world-class frameworks for Safety Management Systems like ISO 45001, HSG 65, etc. Annual targets are set for each element, based on organisational requirements and past performance of the locations.

To assist individual units, the Company is working on digitisation and data analytics to forecast key vulnerable areas. Over the past 12 years, the Company has reduced its Total Recordable Injury Frequency Rate (TRIFR) by 55%.

At Rallis, safety culture is encouraged across hierarchies by promoting behaviour-based safety, process safety and road safety among its workforce. To further strengthen Process Safety Management, PSRM implementation initiated at the Dahej and Ankleshwar sites after carrying out a detailed gap assessment with the help of an external competent agency. Rallis is taking various measures to further strengthen its process safety through enhancing automation in chemical processes and unit operations. QRA (Quantitative Risk Assessment) and HAZOP (Hazard and Operability Analysis) reviews were done for the critical processes with the help of an external expert. Safety Audit conducted at all manufacturing sites by corporate safety team to identify and correct the gaps in workplace safety. TFS (Together for Sustainability) audit process was carried out to verify Rallis' sustainability performance against a defined set of audit criteria on environment, health & safety issues. Tata Group Safety standards are implemented at sites to align the site procedure with the Tata Group guidelines. Master Data Online (MDO), the e-portal, has also been implemented to record safety performance and take action on deviations.

12. Sustainability

At the Company, sustainability is aligned with the UN Sustainable Development Goals. It works towards 'inclusive growth' to achieve a robust triple bottom line encompassing economic, social and environmental aspects.

Aligned to the Tata Group's Sustainability Policy, the Company's Sustainability Policy encompasses actions towards responsible manufacturing, responsible extraction, supporting climate change disclosure, mitigation and adaptation, circular economy, biodiversity conservation and being a neighbor of choice for its key communities. It has adopted an innovative business approach to balance social, environmental and economic gain by embedding sustainability in the respective businesses' strategy.

The Company has developed an internal tool (Responsible Manufacturing Index) to monitor key sustainability indicators on monthly basis. Besides this, the Company has also developed an internal tool for business performance assessment (Sustainability Assessment) which acts as a feed to the strategy of the respective businesses.

Efficient energy, value addition to waste, zero groundwater withdrawal for plant operations, emphasis on recycling of water, recyclable packaging, commitment towards zero liquid discharge as well as Extended Producer's Responsibility (EPR), plastic waste consumption in cement kiln as a fuel, reuse/recycling of solid waste, fly ash utilisation, solid waste filtration, use of soda ash solids to minimise solid waste, watershed programs, natural capital, waste composting, biodiversity conservation measures, drinking water for the community are some of the sustainability measures that are followed.

TCL uses frameworks such as ISO 14001, OHSAS 18001, Global Reporting Initiative ('GRI'), Carbon Disclosure Project ('CDP'), International Integrated Reporting Council ('IIRC'), United Nations Global Compact ('UNGC'), Science Based Target initiatives (SBTi), India Business & Biodiversity Initiative (IBBI) reporting, etc. to disclose as well as to share its performance with stakeholders. This allows the Company to get feedback from the stakeholders and engage with the key customers under supply chain programs.

Integrated Report

The Company has adopted IIRC framework to establish integrated reporting within the mainstream business. In accordance with the IIRC Framework, the Company has included an Integrated Report <IR>. The <IR> seeks to provide a concise and integrated account of how the Company's Strategy, Governance, Performance and Prospects are delivering on its core purpose – being a global company. The <IR> encompasses all key financial and non-financial performance indicators which are material to the Company as per GRI, UNGC and CDP. It plays a crucial role in establishing the linkages between environmental and social sustainability as well as the financial growth of the organisation. The <IR> contains assured sustainability data for FY 2021-22 for entities across the enterprise. The financial information has been audited by B S R & Co. LLP and the non-financial information has been assured by Ernst & Young Associates LLP.

13. Business Excellence

The Company remains committed to continually raising the bar on performance in all aspects of its business. The Tata Business Excellence Model ('TBEM') serves as

a pivotal framework that allows the Company to gain insights into its performance and establish continuous improvement initiatives for attaining superior business results and maximising satisfaction and value to the customers. The TBEM framework comprises six core areas of business excellence: Leadership, Strategic Planning, Customer Focus, Analysis and Knowledge Management, Workforce Focus and Process Management. For the Company, a global organisation that has its manufacturing operations spread across four continents, with diverse business segments and employees from different cultures, TBEM serves as a platform to establish a consistent standard of excellence. The Company participated in the Tata Group level TBEM assessment in 2021 and achieved a coveted Industry Leader status. This affirms the Company's commitment to strengthen the culture of excellence and progress towards becoming a world-class organisation.

14. Internal Controls

The Company has an independent Internal Audit function with a well-established risk management framework. The scope and authority of the Internal Audit function are derived from the Internal Audit Charter approved by the Audit Committee. The Company has engaged a reputable external firm to support the Internal Audit function for carrying out the Internal Audit reviews.

Reviews are conducted on an ongoing basis based on a comprehensive risk-based audit plan which is approved by the Audit Committee at the beginning of each year. The Internal Audit team reviews and reports to the management and the Audit Committee about compliance with internal controls and the efficiency and effectiveness of operations as well as the key process risks.

The Audit Committee meets every quarter to review and discuss the various Internal Audit reports and follow up on action plans of past significant audit issues and compliance with the audit plan. The Chairperson of the Audit Committee has periodic one-on-one meetings with the Chief Internal Auditor to discuss any key concerns.

15. Risk Management Framework

The following section discusses various dimensions of the Company's Enterprise Risk Management ('ERM') system. The risk-related information outlined in this section is not exhaustive and is for information purposes only. The discussion may contain statements that may be forward-looking in nature.

The Company's business model is subject to uncertainties that may cause actual results to differ materially from those reflected in any forward-looking statements.

Overview

The Company has a well-defined ERM framework in place. The ERM framework has matured over several years. It is founded on sound organisation design principles and is enabled by an effective review mechanism.

Risks are identified proactively considering a balanced 'bottom-up' and 'top-down' approach considering inputs from exogenous as well as internal factors. Risk mitigation plans are devised to mitigate the identified risks. Mitigation plans with identified owners are set against target dates and the progress of mitigation actions are monitored and reviewed.

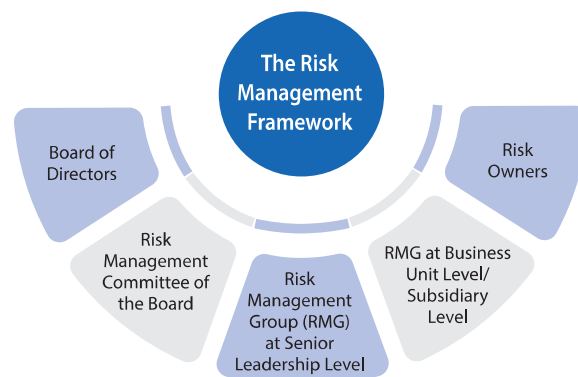
The ERM process framework is based on international standards including ISO 31000 and the Committee of Sponsoring Organisations (COSO) of the Treadway Commission with inputs drawn from the best practices of leading companies across industries but tailored to suit the Company's business needs. Risk Management and Internal Audit functions complement each other at the Company.

Risk Management: Governance Structure

The Company has constituted a robust governance structure consisting of 5 levels thereby ensuring both bottom-up and top-down approaches.

A Risk Management Committee ('RMC') is constituted to oversee the risk efforts in the Company. The RMC meets quarterly to review key risks and assess the status of mitigation measures. The Company's approach to risk management is designed to provide reasonable assurance that its assets are safeguarded; the risks facing the business are being assessed and mitigated.

The risk management framework is described below:



The key roles and responsibilities regarding risk management in the Company are summarised as follows:

1. Board of Directors

- Reviewing and guiding Risk Policy of the Company
- Ensuring the integrity of the systems for risk management

2. Risk Management Committee of the Board

- To formulate a detailed risk management policy which shall include:
 - o A framework for identification of internal and external risks specifically faced by the Company, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Committee
 - o Measures for risk mitigation including systems and processes for internal control of identified risks
 - o Business continuity plan
- To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company
- To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems
- To periodically review the risk management policy, at least once in two years by considering the changing industry dynamics and evolving complexity
- To keep the Board of Directors informed about the nature and content of its discussions, recommendations and actions to be taken
- The appointment, removal and terms of remuneration of the Chief Risk Officer (if any) shall be subject to review by the Risk Management Committee

3. Risk Management Group at Senior Leadership Level

- Identification and review of enterprise risks from time to time, initiating mitigation actions, identifying owners and reviewing progress
- Identification and review of risk appetite and risk trigger (at Enterprise Level)
- Implementation of Risk reduction strategies
- Formulating and deploying Risk Management Policy
- Deploying practices for identification, assessment, monitoring, mitigation and reporting of risks
- Providing updates to RMC from time to time on the enterprise risks and actions taken

4. Risk Management Group at Business Unit (BU) Level/ Subsidiary Level

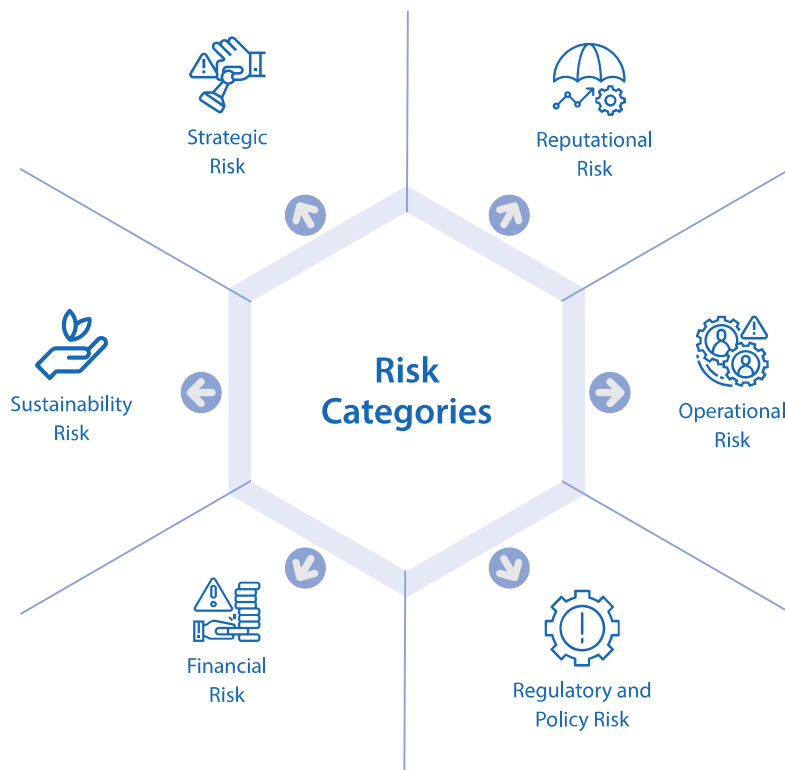
- Reviewing respective BU/Subsidiary risks from time to time, initiating mitigation actions, identifying owners and reviewing progress
- Identification and review of risk appetite and risk trigger (at BU/Subsidiary Level)
- Implementation of risk reduction strategies
- Deploying Risk Management Policy
- Deploying practices for identification, assessment, monitoring, mitigation and reporting of risks
- Providing updates to TCL Management Committee (RMG) and RMC level from time to time on the respective Business / Subsidiary level risks and actions taken

5. Risk Owners

- Responsible for developing and acting on the risk mitigation plan
- Providing periodic updates to RMC on risks with the mitigation plan

Risk Categories

The following categories of risks have been considered in the Risk Management Framework:



- **Strategic Risks** includes the range of external events and trends (like Government policy) that can adversely impact the Company's strategic growth trajectory and destroy stakeholder value. It also includes the risks arising out of the choices the Company has made in defining its strategy.
- **Sustainability Risks** are those risks arising out of adverse impacts that the business activities have on environment (planet) and communities (people).
- **Reputational Risks** includes a range of events that creates a mismatch between stakeholders' expectations and their perceptions of the Company's performance around those expectations.
- **Operational Risks** are those risks that are associated with operational uncertainties including failure in critical equipment, attrition, loss of data from cyber-attacks, etc.
- **Regulatory and Policy Risks** are risks on account of inadequate compliance of regulations, contractual obligations and intellectual property violations leading to litigation and loss of reputation.
- **Financial Risks** are risks faced by the organisation in terms of internal systems, planning and reporting.

For more details on key risks and their mitigation plans, please refer page no. 30 of this Integrated Annual Report.

Cautionary Statement

Statements in the Management Discussion & Analysis describing the objectives, projections, estimates and expectations of the Company, its direct and indirect subsidiaries and its associates, may be 'forward-looking statements' within the meaning of applicable laws and regulations. Actual results might differ substantially or materially from those expressed or implied. Important factors that could make a difference to the Company's operations include, among others, economic conditions affecting demand/supply, price conditions in the domestic and overseas markets in which the Company operates, changes in the Government regulations, tax laws and other statutes and incidental factors.